

KHYBER PAKHTUNKHWA LIVESTOCK POLICY 2018



Agriculture, Livestock, Fisheries and Cooperatives Department
Government of Khyber Pakhtunkhwa

www.agriculture.kp.gov.pk [@agriculturekp](https://twitter.com/agriculturekp)

[@agriculturekp](https://www.facebook.com/agriculturekp)



KHYBER PAKHTUNKHWA LIVESTOCK POLICY 2018

Vision

A competitive, responsive, compliant and sustainable livestock sector supplying safe and affordable food of animal origin to domestic and international markets



Agriculture, Livestock, Fisheries and Cooperatives Department
Government of Khyber Pakhtunkhwa

Contents	Page No.
List of Abbreviations and Acronyms	ii
Acknowledgement	iv
Messages	vi
Executive Summary	xii
Chapter 1	
KHYBER PAKHTUNKHWA – SOME BASIC FACTS	
1 KHYBER PAKHTUNKHWA – SOME BASIC FACTS	1
1.1 Introduction	1
1.2 Livestock Sector Profile	2
1.2.1 Milk Production.....	3
1.2.2 Meat Production	4
1.2.3 Poultry Production	4
1.2.4 Wool Production	5
1.2.5 Animal Nutrition	5
1.2.6 Rangelands/Pastures	5
1.2.7 Services Deliverly	6
1.2.8 Live Animal and Poultry Markets.....	6
1.3 Constraints in the Development of Livestock Sector	7
Chapter 2	
WHY A POLICY FOR LIVESTOCK SECTOR IN KHYBER PAKHTUNKHWA	9
2 WHY A POLICY FOR LIVESTOCK SECTOR IN KHYBER PAKHTUNKHWA	10
2.1 Will of the Government of Khyber Pakhtunkhwa	10
2.2 National Responsibilities	10
2.3 International Obligations	10
Chapter 3	
MODUS OPERANDI FOR THE FORMULATION OF LIVESTOCK POLICY	12
3 MODUS OPERANDI FOR THE FORMULATION OF LIVESTOCK POLICY	13



Chapter 4	
THE POLICY FOR LIVESTOCK SECTOR.....	15
4 THE POLICY FOR LIVESTOCK SECTOR.....	16
4.1 The Vision, Goal, and Objectives	16
4.2 ANIMAL HEALTH AND DISEASE CONTROL.....	16
4.2.1 Animal Health Services	16
4.2.2 Disease Surveillance.....	19
4.2.3 Laboratory Services.....	20
4.2.4 Disease Control	21
4.2.5 Research Relating to Animal Health	22
4.2.6 Legislative Provisions	23
4.3 ANIMAL BREEDING AND GENETIC RESOURCE CONSERVATION	23
4.4 VETERINARY EDUCATION, RESEARCH, EXTENSION, AND HUMAN RESOURCE DEVELOPMENT.....	25
4.4.1 Veterinary Education and Research	25
4.4.2 Livestock Extension Services and Human Resource Development.....	26
4.5 ANIMAL NUTRITION	27
4.6 LIVESTOCK MARKETING.....	28
4.7 INSTITUTIONAL RESTRUCTURING FOR SPECIALIZED TASKS.....	29
4.7.1 Transhumant Livestock Production and Nomadic Herds	30
4.7.2 Coordination with Stakeholders	30
4.7.3 Animal Welfare	30
4.7.4 Livestock Insurance.....	31
4.7.5 Investment Facilitation	31
4.7.6 Environment and Climate Change	31
4.7.7 Livestock Policy Cell	31
Chapter 5	
CONSOLIDATED LIST OF POLICY RECOMMENDATIONS.....	33



List of Abbreviations and Acronyms

ABM:	Association for Biorisk Management
AHC:	Animal Husbandry Commissioner
AI:	Artificial semination
AJ&K:	Azad Jammu & Kashmir
AMR:	Anti-Microbial Resistance
CDS:	Comprehensive Development Strategy
CEO:	Chief Executive Officer
FATA:	Federally Administered Tribal Areas
FM:	Frequency Modulation
FMD:	Foot-and-mouth disease
FSC:	Farms Service Centers
FSMP:	Forestry Sector Master Plan
G-B:	Gilgit-Baltistan
GDP:	Gross Domestic Product
GIS:	Geographic Information System
ha:	hectare
HPAI:	Highly Pathogenic Avian Influenza
IDS:	Integrated Development Strategy
IEC:	Information, education and Communication
IHR:	International Health Regulation
Livestock:	Large & Small Ruminants and Poultry
L&DDD:	Livestock & Dairy Development Department
LFFS:	Livestock Farmer Field Schools
LS:	Livestock Sector
m:	Meter
NGO:	Non-Government Organization
OIE:	World Organization for Animal Health
PDS:	Participatory Disease Surveillance
PPR:	Peste des petits ruminants
PVMC:	Pakistan Veterinary Medical Council
PVS:	Performance of Veterinary Evaluation
FR:	Frontier Regions
RF:	Frontier Regions
SMS:	Short Messaging Service
ToR:	Terms of Reference
TV:	Television
USAID:	United States Agency for International Development
UTH:	Ultra High Temperature





Acknowledgement

It has always been a hard job when it comes to public policy formulation. It is more challenging when there exists none. That said, this *unique* policy document is the outcome of the persistently concerted efforts put in place by a number of dedicated officers of the Livestock Department who were equally encouraged, supported and facilitated by the Government of Khyber Pakhtunkhwa. It's a unique document in that never before, so many politicians, policy makers, specialists, entrepreneurs, retailers, business community representatives, supply chain actors, drug and vaccine dealers, international NGOs, even shepherds, were ever involved to openly express their views. This way, they had been able to educate us on how they wanted us to process and what they truly thought of the myriad of problems that sector faced. Their inputs were supported by an equally credible array of suggestions to improve the status of livestock and the related people.

After such a wonderful display of resilience, acumen, and inputs, they all deservedly have a place in the development of this policy document. In this regard, there is a long list of persons at the policy level. To count just a few, the names of the following persons stand tall:

- 1) Special Assistant to Chief Minister for Livestock, Fisheries and Cooperatives, Khyber Pakhtunkhwa, Mr. Mohib Ullah Khan;
- 2) Chief Secretary, Government of Khyber Pakhtunkhwa, Mr. Azam Khan;
- 3) Addl. Chief Secretary, Government of Khyber Pakhtunkhwa, Mr. Muhammad Shahzad Bangash; and
- 4) Secretary to Government of Khyber Pakhtunkhwa, Agriculture, Livestock, Fisheries, and Cooperatives Department, Mr. Muhammad Israr

Then there is another long list of equally dedicated professionals who made it their mission to help us success in our efforts. Again, a few are quoted as a reference:

- 1) Dr. Muhammad Afzal, National Coordinator, FAO, Islamabad
- 2) Mr. Khalil Ahmad Sattar, CEO, K&Ns, Karachi
- 3) Dr. Qurban Ali, Ex Animal Husbandry Commissioner, Islamabad
- 4) Dr. Muhammad Islam, Ex-Director, L&DD, Peshawar

It will be demeaning if we do not mention the organization that worked in the background and contributed generously in terms of financial support and technical inputs. Health Security Partners (HSP) and its Program Director Dr. Javed Khan, wholeheartedly supported the process in an amicable manner, and without his support the milestone could not have been achieved.

It will not be out of the context to mention the contribution of Association for Biorisk Management (ABM) – a national NGO – headed by Dr. Asghar Ali Khan. The Association aims to identify and rectify the deficiencies in Biorisk Management System through a number of relevant interventions.



And lastly, it was the support and cooperation, to the extent possible, that was accorded to us by the all cheerful and charismatic, Dr. Sher Muhammad Khan, Director General Livestock (Ext.) who had been so resilient, so persistent and so untiring and selfless in his efforts, that without him, things might not have been what they are.

Once again, we are indeed thankful to all those whose names have been mentioned and those who could not be mentioned because of space constraints, in supporting us in our efforts that led to the development of this policy document.

Congratulations to all!

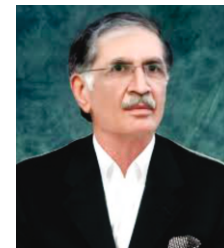
Peter Roeder, OBE

Iqbal Muhammad

May 2018



Message by the Chief Minister



Pervez Khattak

The Livestock Policy for Khyber Pakhtunkhwa is the first effort that can be rightly called a document developed with full involvement and backing of all stakeholders. Right from the outset, a unique approach was adopted, involving the basic stakeholders in the regional consultative workshops, and the recommendations thus derived were presented to the sector experts in the National Workshop for further refinement. The final outcome was shared and finalized with the help of international experts. As a consequence, their efforts were shaped in to a Policy that makes me proud to endorse.

According to the Economic Review of Khyber Pakhtunkhwa, 2016-17, Livestock sector is contributing 16% to the GDP, while its share in the total Agriculture value added is 78%, with a steady growth of 5%. The Sector employs 46% direct labor force and is an integral part of livelihood of about 30 to 35 million rural people.

I am especially impressed by the inclusion of a number of bold initiatives in the Policy that the Livestock Department has so developed, which, if put to practice through a robust implementation strategy, would do great service to the development of Livestock Sector, both in terms of output and income enhancement of the rural poor – the backbone of our rural economy.

As for myself, I assure the Livestock Department and all the other concerned stakeholders that my Government is there to support in whatever capacity we can, to ensure that the legacy that we will leave behind, will make all our coming generations proud of our contribution to their wellbeing. I also assure that the sector will be given priority in financial allocations in the forthcoming ADPs, and hope that given the significance of this attempt, international donors would be definitely forthcoming to assist us, both in terms of technical and financial outlays.

God bless us all.



Message by the Chief Secretary



Muhammad Azam Khan

Only those policies can make an impact in any sector where all the key stakeholders are involved for the development of guidelines to adequately address the real problems that impede the development in that sector. True to the spirit of this maxim, the Livestock and Dairy Development Department of Khyber Pakhtunkhwa has developed a policy that exactly fits into scheme that will lead to the betterment of the livestock owners and the consumers of livestock products. This is important because the development in livestock sector would be meaningless without addressing the issue of poverty and enhancing the investment capacity of the resource poor farmers.

In this regard, the Government of Khyber Pakhtunkhwa has resolved to embark on the pro-poor programs through diversifying the product line of livestock sector by improving income generating skills of the people, greatly dependent on livestock rearing and marketing its various products. Keeping in view the tremendous potential of livestock sector in alleviating poverty and creating employment opportunities, the provincial Livestock & Dairy Development was tasked to embark upon the formulation of a comprehensive livestock policy. It is indeed a pleasure to see that the department has accomplished the task in an amicable manner.

The presence of the livestock policy shows the resolve of the Government of Khyber Pakhtunkhwa to make every effort to bring investments in the livestock sector. These will enhance economic activities in the province and will guarantee better returns to the producers, quality and safe livestock products to the consumers on reasonable prices.

By selflessly resolving to act upon the provisions of the Policy for Livestock, I believe that sooner rather than later, we would be able to reduce the woes of the majority of poor rural dwellers and enable them to live with honor and dignity.



**Message by the Special Assistant to
Chief Minister for Livestock, Fisheries
and Cooperatives**



Mohibullah Khan

The Government of Khyber Pakhtunkhwa has formulated its first ever Livestock Policy to guide the effective implementation of activities and programs in the livestock sector. Being in-charge of the ministry, I feel honored to present this first ever comprehensive livestock policy. The Policy defines the overall objectives and sets specific priority guidelines in six core areas, i.e. Animal Health and Disease Control; Animal Breeding and Genetic Resource Conservation; Veterinary Education, Research, Extension, and HRD; Animal Nutrition; Livestock Marketing; and Institutional Restructuring. This Policy will later become the vehicle for coordinating and providing a common framework for interventions in line with its stated objectives.

Needless to say that the livestock sector contributes significantly to the economy of the Province. Rural economy is solely dependent upon the livestock, and is the source of livelihoods of majority of the rural population. Top of all, livestock offers an economic and social buffer against crisis and agriculture failures, and therefore contributes to the natural rural risk management strategy.

Under the dynamic leadership of Dr. Sher Muhammad, the Livestock & Dairy Development Department has made tremendous strides making it a hub of meaningful development of the Sector. Many initiatives for the improvement of livestock in the Province have been taken which will, in the near future, lead to higher incomes, lower operational and maintenance costs, greater efficiency in resource use, and better outputs, leading to meaningful outcomes of rural poverty alleviation economic growth.

I believe that the actual potential of livestock sector is far more than what it contributes today. And the incremental contribution could be achieved if we resolve to follow the policy guidelines in the form of a robust implementation strategy.

To all those who contributed to this superb policy document, I say thank you for a job very well done.



Message by the Secretary Agriculture, Livestock, Fisheries and Cooperatives Department



Muhammad Israr

Livestock plays an important role in the lives of more than 80% population of rural Khyber Pakhtunkhwa. It is contributing 16% to the provincial GDP, while its share in the total Agriculture value added is 78%, with an annual growth of 5%. Despite of this enormous contribution, the livestock sector could not attract the support it deserved, mainly because of the absence of clearly defined objectives. After realizing the fact, the government took a step to provide a comprehensive Policy to the livestock sector.

To accomplish the task a series of consultations with stakeholders and specialists were carried out in the form of five regional Workshops, Focused Group Discussions and a National Workshop. Based on the identified key issues, this policy document is formulated with recommendations for future development of the sector and meeting national responsibilities and international obligations.

The policy focused on gradual shift away from the treatment of animals into regulatory matters and disease prevention and control. The new system will require restructuring of the physical infrastructure and developing human resources at central and district levels. The level of professionalism of officers at all levels will be raised by paying attention to the university curriculum as well as post-graduate training and private sector veterinarians will be gradually involved in delivering services.

Policy encompasses allied specialized areas like transhumant livestock production system, animal welfare, climate change, gender mainstreaming and coordination at different levels. The policy, therefore, provides an overall Vision for “a competitive, responsive, compliant and sustainable livestock sector supplying safe and affordable food of animal origin to domestic and international markets.”



**Message by the Director General
Livestock & Dairy Development
Department (Extension)**



Dr. Sher Muhammad

It gives me immense pleasure to present Khyber Pakhtunkhwa Livestock Policy 2018, which is one of the major reform initiatives of Government of Khyber Pakhtunkhwa. The livestock policy is formulated after holding a series of stakeholder consultative workshops and focus group discussions, and got its present shape after going through a number of reviews by national and international experts.

The policy has identified a need to improve the service provider-farmer interface, for which a rearrangement of the physical infrastructure and developing human resources at all levels will be carried out. There will be a greater focus on the involvement of the private sector in service delivery, with a progressive shift away from public sector production of semen, vaccines and treatment of livestock, while government will take its role of supervising and regulating the service delivery, production and quality control.

The policy has also highlighted the need for complying with the international obligations and fulfilling the national responsibilities. At the same time policy has addressed the issue of gender mainstreaming, and has elaborated the role of women in livestock management.

This policy document shall be followed by a 10 years Business plan and implementation plan, backed by corresponding Legislative Framework. The livestock policy will be kept as a flexible document for accommodating the ever changing requirement of the livestock sector.

Given the huge size of the task and time constraint, our team carried out untiring efforts for achievement of the target by formulating a comprehensive policy for the livestock sector of Khyber Pakhtunkhwa, for which all members of the team deserve admiration and praise. Keeping in view their selfless efforts, I am sure that our team shall be able to accomplish the goal and objectives of the policy very soon.



Executive Summary

Livestock make a significant contribution to the food security and livelihoods for a majority of the people in Khyber Pakhtunkhwa as well as to the economy of the province. It is realized that the support provided to the livestock sector is not as desired. After realizing the need for reforms, the Government of Khyber Pakhtunkhwa took necessary measures for the formulation of a comprehensive Livestock Policy. Its objective is to ensure efficient delivery of services in the livestock sector in order to improve the health, efficiency, and productivity of livestock. It will further promote investment in the sector for the provision of quality and safe food for domestic and international markets. The policy also addresses emerging and reemerging Zoonotic diseases and public health threats. These diseases impact directly on livestock production and indirectly on agriculture in general due to debility of the farming community.

Intensive series of consultations with stakeholders and subject matter specialists across the region, at national-level workshop and meetings, have identified certain challenges faced by the livestock sector. Based on the identified key issues, this policy document is formulated with recommendations for future development of the sector. This document also provides recommendations for meeting national responsibilities and international obligations.

Constraints relating to animal health are arguably the most serious and pressing to address; there is an urgent need to redesign the animal health and disease control program. Policy requirements for disease surveillance and reporting, diagnosis, disease control, and epidemiological services are outlined in detail. To develop a new system which provides the level of service needed requires restructuring of the physical infrastructure and developing human resources at central- and district levels. The level of professionalism of officers at all levels will be raised by paying attention to the university curriculum as well as post-graduate training. Then, there will be a qualitative shift away from the treatment of animals into regulatory matters and disease prevention and control. Private sector veterinarians will be gradually involved in delivering services. A progressive shift away from public sector production of vaccines and semen shall be encouraged and facilitated while government concentrating on regulatory role. Efforts will be made to improve the veterinary/farmer interface through strengthening the extension services and livestock farmers field schools (LFFS). Attention is paid to animal breeding and genetic resource conservation with the preservation of indigenous livestock breeds being a priority. Strategy for forage conservation and pasture management will be formulated together with establishing standards for feeds and contamination.

The policy has also recommended a vision to have a competitive livestock industry leading to food security and commercialization based on efficient livestock marketing system. Policy encompasses allied specialized areas like transhumant livestock production system, animal welfare, climate change, gender mainstreaming and coordination at different levels.

The policy, therefore, provides an overall Vision, “a competitive, responsive, compliant and sustainable livestock sector supplying safe and affordable food of animal origin to domestic and international markets.”



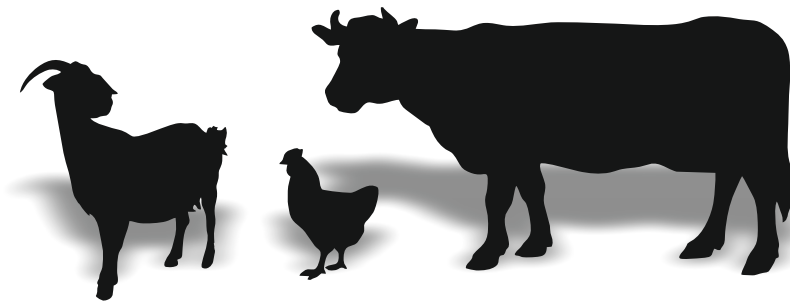
This policy document shall be followed by a detailed Action Plan (including a Business Plan and Budgetary Actions), Implementation Plan, and corresponding Regulations, through a special policy cell established in the L&DD.





Chapter 1

KHYBER PAKHTUNKHWA – SOME BASIC FACTS





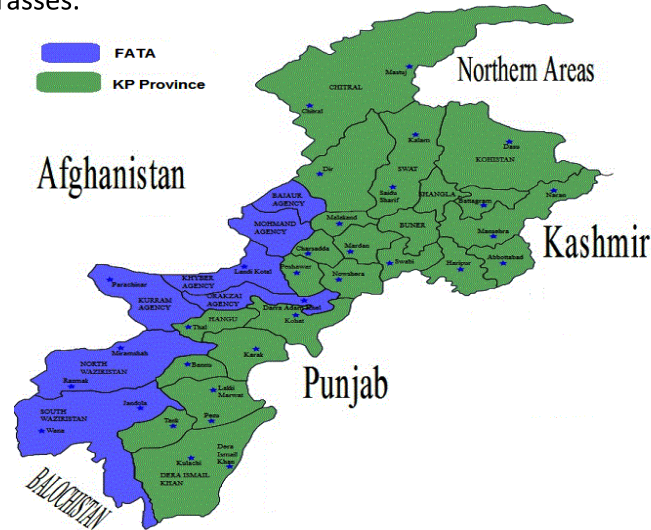
1. KHYBER PAKHTUNKHWA – SOME BASIC FACTS

1.1 INTRODUCTION

Khyber Pakhtunkhwa is geographically the smallest of the four provinces of Pakistan yet it contributes 10.5 percent to the economy and is home to 11.9 percent of the total population. The Province is surrounded by Hindukush Mountains in the north, Afghanistan in the Northwest, Balochistan to its south-west and Punjab to its south-east. In the north-east, it is flanked by Gilgit-Baltistan (G-B) and Azad Jammu & Kashmir (AJ&K). Its southern tip is only 250 meters above mean sea level while in the north elevation rises quickly, reaching the high mountains of the Hindu Kush and Karakorum within a few hundred kilometers. On average, these mountains are 3,000 meters high; Trich Mir in Chitral District is the highest scale of 7,708 meters. The Federally Administered Tribal Areas form the border areas with Afghanistan and consist of seven tribal agencies and six frontier regions, and are directly governed by the Federal Government.

The climate of Khyber Pakhtunkhwa varies with elevation. The mountain ranges experience colder winters and cool summers, as one moves toward south, the temperature rises markedly toward the south. Precipitation over the province is variable but averages about 400 mm annually, with much of this occurring during the monsoon period (July-August).

The mountain slopes in the north support stands of evergreen oak and coniferous forests. There are also extensive mountain grasslands. The hills to the south are sparsely covered with bushes, acacia, and grasses.



The Province has been divided into two distinct regions – the northern region and the southern region. This has been done based on the extent of vegetation available in winter and summer. The northern zone has massive vegetation in summers (because of monsoon) while the southern zone is hardly affected by monsoons.

Khyber Pakhtunkhwa (including FATA), is divided into four **agro-ecological zones** based on climate, rainfall, temperature, altitude, and topography. This Zonal distribution has been used to identify the potential future impacts from external factors such as climate change.



Zone	Description	Districts
A	Higher northern mountains, northern mountains	Buner, Shangla, Dir/Lower and Upper, Swat, Chitral, and Bajaur
B	Sub-humid eastern mountains and wet mountains	Haripur, Batagram, Mansehra, Abbottabad, Kohistan, Torghar
C	Central Valley Plain	Peshawar, Mardan, Charsadda, Nowshera, Swabi, Kohat, Hangu, Kurram, Orakzai, Khyber and Mohmand
D	Piedmont plain, Suleiman piedmont	Bannu, Karak, Lakki Marwat, Tank, D.I. Khan, North and South Waziristan.

1.2 LIVESTOCK SECTOR PROFILE

The livestock sector provides food of animal origin to a population of more than 30.52 million people of which 82% are rural dwellers having great dependence on agriculture and livestock. The province produced 2.041-million-ton fodder, 5.896-million-ton milk, and 580.410 ton meat during 2016-17¹.

Livestock farming is a major source of livelihood in the Khyber Pakhtunkhwa and FATA. Milk animals used to be mainly local breeds of cows and buffaloes but over the last few years, it has become common to keep exotic/crossbred cows. Both rural and commercial poultry farming is practiced in a sizable manner in the province.

The livestock farming is predominantly subsistence, with 1-4 animals, which keeps more than 70% livestock population. Only 3% of the livestock population is in the peri-urban commercial farms of over 30 animals each. Similarly, over 60 % of the goat population is kept in flocks of less than 30 animals. 40% of the sheep population, however, is kept in units of 50 to 350 animals. As the demand for livestock products increases the small holder subsistence livestock farming has slowly started getting replaced by the semi-commercial farming setups in the rural and peri-urban areas.

In Khyber Pakhtunkhwa 30-40% of the livestock is kept by transhumant/nomadic livestock farmers. In the winter months they graze their animals on the uncultivated areas and on crop stubble after the harvests and in the summer months, they move their animals to alpine pastures.

Women play an active role in livestock production and rearing and help in various chores such as feeding, cleaning, and milking. Women are solely responsible for homemade milk products. Generally, the women have great attachment with the livestock and poultry due to economic reasons and raise them as family members. However, the role of women in livestock rearing has always been underestimated.

¹ Bureau of statistic, P&D department, Khyber Pakhtunkhwa, Development Statistic of KHYBER PAKHTUNKHWA-2014)



Khyber Pakhtunkhwa has a large livestock population, which gives a reasonable production base with a steady annual growth of around 5%. The following table shows the animal population trend in the province (in millions):

Type of Animals	Livestock Census 1996	Livestock Census 2006	Projected for 2016
Cattle	4.23	5.97	8.91
Buffalo	1.39	1.92	2.79
Sheep	2.82	3.36	3.98
Goat	6.76	9.59	13.84
Camel	0.06	0.06	0.06
Horses	0.05	0.07	0.08
Mules	0.06	0.06	0.10
Asses/Donkeys	0.53	0.56	0.56
Rural Poultry	22.50	27.69	27.70

As per report of the Economic Review of Khyber Pakhtunkhwa, 2016-17, Livestock sector is contributing 16% to the GDP, while its share in the total Agriculture value added is 78%, with a steady growth of 5%.

1.2.1 Milk Production

Milk is the largest product of livestock sector, which accounts for around 60% of the total value of livestock produce. Only 30-35% of the total milk output is channeled into the urban marketing system. Small dairy farmers account for more than 80 percent of the marketed milk. With the increase of milk prices and higher cost of production, even small-scale milk producers sell part of their milk after their household consumption. The family's decision to sell milk, and the amount to sell, is clearly poverty driven.

With high population growth, urbanization, income growth and diversification of diet towards high-value agricultural products, per capita milk consumption has increased from 51 liters per annum to 211 liters per annum. Fresh milk, packed Ultra High Temperature (UHT) milk, butter and yogurt are major dairy items consumed in Khyber Pakhtunkhwa. The preference for fresh milk is based on consideration of quality, taste and affordability.

The milk marketing system is disorganized and only morning milk is collected by the milk collectors and marketed in the urban areas, while the evening milk is converted into dairy products i.e. yogurt, lassi and ghee. Earlier some interventions were made through organizing farmers with the provision of milk cooling tanks in some areas. However, the intervention was not successful due to improper management system.



About 70% of the milk produced in the province is consumed at home. The remaining 30 % is marketed through traditional marketing channels, which are as under:

- a) Producer – Consumer
- b) Producer – middlemen – Consumer
- c) Producer – middlemen – Milk shop – Consumer
- d) Producer – middlemen – Sweets shops/others traditional processors

There are no milk processing plants in Khyber Pakhtunkhwa and traditional milk marketing is the only marketing channel. The milk is sold as fresh and a small quantity is also converted into milk products. As the dairy herds are small and widespread, milk collection, transportation, and marketing is the major challenge faced by the dairy farmers in Khyber Pakhtunkhwa.

1.2.2 Meat Production

Besides milk, meat is the main livestock product for which demand is continuously increasing due to population growth, rising income and increasing trend of urbanization. The international concept and demand of Halal food has blended the meat market most favorably to countries like Pakistan having 4% annual growth in its livestock population. In Khyber Pakhtunkhwa vast rangelands exist that are suitable for grazing. While most of the efforts to promote livestock sector have been focused on irrigated areas, the extensive livestock production on rangelands is still practiced on traditional lines.

There are great opportunities for Khyber Pakhtunkhwa to enter into Halal Food Market and earn handsome foreign exchange. This is because the livestock reared in Khyber Pakhtunkhwa is mostly organically-grown that produces meat with unique taste and flavor. That is why the Government of Khyber Pakhtunkhwa can have a sizeable share in the international market for Halal Meat provided that the established standards of production and processing are followed. A very big Halal market is thus awaiting the processors and exporters of Khyber Pakhtunkhwa to avail this opportunity and earn foreign exchange besides generating thousands of jobs for the people of Khyber Pakhtunkhwa.

Locally the meat and poultry is sold in small unhygienic shops opened in every commercial and residential area. These shops follow no sanitary standards and are potential threat to human health.

1.2.3 Poultry Production

The poultry sector is one of the vibrant segments of livestock sector in Pakistan. This sector provides employment to over 1.5 million people. The current investment in Poultry Industry is more than Rs.200.00 billion. Pakistan has become the 11th largest poultry producer in the world with the production of 1.02 billion broilers annually. Poultry today has been a balancing force to keep check on the prices of mutton and beef, but also serving as backbone of agriculture sector, as it consumes over 7 million tons of agro-residues. Poultry meat contributes 30 percent of the total meat production in the country. Poultry sector has shown



a growth @ 8-10 percent annually which reflects its inherent potential. The poultry has contributed 1.4 percent in GDP during 2015-16 while its contribution in agriculture and livestock value-added stood at 6.9 percent and 11.7 percent respectively. The poultry value added at current factor cost has increased from Rs.140.5 billion (2014-15) to Rs.151.2 billion (2015-16) showing an increase of 7.6 percent compared to the last year.

1.2.4 Wool Production

Transhumant livestock production is very important and is well known for specially the wool and mutton animals. The government of Khyber Pakhtunkhwa through Livestock and Dairy Development Department developed a new sheep breed called “Ramghani” through crossing of local Kaghani sheep breed with the exotic Rambouillet sheep breed. The new breed is famous for semi-fine wool production. The Ramghani sheep breed is spread all over Hazara and Malakand Divisions, and its population in the region is more than 3.00 million, producing about 3000 metric tons of fine wool. A major portion of wool is used in making useless materials like rope, etc. and a nominal portion of wool is used in cottage industries making shawls, garments, blankets etc. If proper wool value addition and processing facilities are created in the area, the farmers will be encouraged, and wool production will increase manifold because huge national and international market exists for woolen products.

1.2.5 Animal Nutrition

Livestock feed and fodder are of crucial importance in livestock production. To meet the nutritional requirements of livestock, a variety of fodder and feed resources are utilized. Green fodder and other crops and crop residues form the bulk of feed for livestock. Concentrates are fed mostly to lactating animals for higher milk yield. In addition, dry fodder is fed to animals in the periods of green fodder shortages that occurs in winters and in peak summers.

Wheat, oat, berseem, maize, and sorghum are grown and fed to livestock. Dry fodders include mainly wheat straw and maize stalk. In certain areas, maize is grown specifically for fodder purposes and used either as a green fodder or carried over as dry stalks and used during fodder scarcity period. Wheat straw is also fed during green fodder shortage period, mostly mixed with wheat roughage. In addition, concentrates (oil seed cake, wheat bran, rice polishing and gur), vegetable oil and salts are also fed to livestock.

1.2.6 Rangelands/Pastures

Rangelands are the major land use in Khyber Pakhtunkhwa which make up to 26.5 % of the total land area in the province. Rangelands provide a source of livelihoods to a vast number of poor and marginalized people in the rural and remote areas of the province through the provision of pastures for livestock grazing, source of fuelwood, timber and other products. Rangelands produce forage for livestock which constitutes the backbone of the rural pastoral economy. It is estimated that 60% of the livestock is supported by the rangelands/pastures of Khyber Pakhtunkhwa, are exposed to many threats.



The livestock population is rapidly increasing due to which the pressure on the range resources has already reached alarming level. The rangelands are generally exploited in excess of their carrying capacities, leading to decline in range productivity. According to Forestry Sector Master Plan (FSMP), 1992, rangeland productivity is estimated to be only one-third of its potential. The local communities are predominantly poor and illiterate who are unaware about the conservation and sustainable management of range resources. Being common property resource, rangelands are overexploited by everyone, but owned and cared by none: thus are presenting a gloomy picture of “*tragedy of the commons*”.

1.2.7 Service Deliverly

- a) Livestock services are provided to the livestock farmers by the government of Khyber Pakhtunkhwa through the Livestock & Dairy Development Department (L&DD), and majority of the services are aimed to facilitate the subsistence farmers. Around 2500 staff is deployed in 2200 service delivery units, both in Khyber Pakhtunkhwa and FATA, to provide a variety of services including;
 - a. treatment of sick animals and outbreak handling,
 - b. diagnostic services to livestock and poultry farmers,
 - c. disease surveillance and vaccination of healthy animals,
 - d. special campaigns for the eradication of ticks for the control of CCHF,
 - e. breed improvement, artificial insemination and conservation services,
 - f. rural poultry improvement,
 - g. livestock production extension services,
 - h. training of staff and farmers, and
 - i. vaccine and semen production, etc.

There is also a sizeable private sector, providing the animal health and artificial insemination services in disorganized manner, outside the government’s regulatory sphere.

- b) Commercial poultry farming is flourishing with the passage of time and is mostly taken care of by a somewhat organized private sector.
- c) L&DD is also providing part-time veterinarians for anti-mortem and postmortem examination of animals in the municipal slaughter houses. Live animal markets, milk, meat and drug inspection are not mandated to L&DD.
- d) Certain services are also provided to the farmers by various Area Development Organizations and NGOs, for which there exists a certain level of coordination, which needs further strengthening, especially in the fields of disease surveillance and outbreak reporting.



1.2.8 Live Animal and Poultry Markets

The marketing system guides the production trends, and ideally should facilitate both the producers and the consumers. In Khyber Pakhtunkhwa, most of the live animal markets are under the control of Local Government Department. No attention is ever being given either to animal welfare, nor for the facilitation of farmers and buyers. No standards and sanitary protocols are established for these markets and the poor sanitation and hygienic measures are posing threat to animal and human health. In fact, the livestock farmers and the buyers, both are exploited in these markets, as no market information system exists in these markets. The uneducated farmers and the transhumant livestock producers are the special target for exploitation.

Poultry farmers are very much exploited by the middlemen, and the trend has compelled many small poultry farmers leaving their farming.

1.3 CONSTRAINTS IN THE DEVELOPMENT OF LIVESTOCK SECTOR

The livestock under subsistence production system is inherently prone to several constraints. The resource base is weak and the management practices obsolete. Feeding is improper and protection against diseases haphazard and undefined. The breeding practices are faulty. Livestock remains exposed to one or another problem without ever attaining the genetic potential. Broadly speaking, the following are some of the more important problem areas:

- a. Livestock diseases are limiting factor to productivity. A major problem is the lack of proper knowledge and awareness about the productive benefits of disease control. Animal production systems are affected by different types of diseases to varying extent; some are more fatal, while others are inflicting huge economic losses. At the same time there are certain other livestock diseases which pose potential threat to human health. No timely diagnosis of diseases is also a limiting factor in the production system.
- b. Quacks are very active in curing animals in the rural areas. These non-technical persons mostly treat animals with hit and trial methods.
- c. Inadequate nutrition is a major problem in livestock production in Khyber Pakhtunkhwa. Without providing required nutrition to the animals, the production potential cannot be exploited. The availability of green fodder is not sufficient, and livestock of the subsistence farmers are mainly fed on the wheat straw, with little or no concentrates. There is lack of understanding and practice of preservations of fodder. Some advancement has been made in this regard however a lot needs to be done.
- d. Currently, no effective institutional setup is in place in Khyber Pakhtunkhwa to look after the vast and diverse resources of rangelands. The existing management system by the Forest Department is more focused on the protection and development of forests rather than rangelands. There is also lack of coordination and integration with other agencies including Wildlife, Agriculture and Livestock Departments.

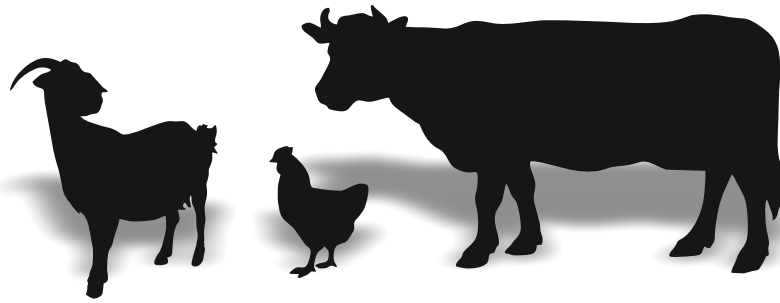


- e. The majority of the farmers in Khyber Pakhtunkhwa are small farmers who keep non-descript animals on their farms. The local pure breeds of cattle and buffaloes are at the verge of extinction due to indiscriminate crossbreeding.
- f. Unlike crop sector, livestock sector requires more investment. The absence of credit disbursement to small and medium-scale farmers is a hurdle in the development of the sector on modern lines.
- g. Most of the farmers are not aware of the best practices to exploit the full potential of their livestock. They are even unaware from where to get veterinary and AI services. Feeding and management are, therefore, very poor which lead to diseases and production losses.
- h. Poor marketing system is one of the biggest limitation in the livestock sector development. Regarding marketing farmers are at the mercy of milkmen and commission agents (middlemen). These market players very much exploit the poor farmers. There is no systematic marketing system which could ensure the profit share of the farmers. Currently the marketing information system is non-existent and the farmers have to rely on the dubious information/advice provided by the commission agents.
- i. There is no weight system for the sale and purchase of meat animals, which is a big retarding factor for the promotion of Feedlot Fattening Farms.
- j. Wool market in its current shape is especially a big constraint to the development of the sector, where the transhumant and nomadic farmers are exploited, and the wool is bartered for food items at a very cheaper rate.
- k. The capping of prices of milk and meat by the district administration leads to adulteration and malpractices and is a big hurdle in the development of the livestock sector.
- l. The livestock farming is dominated by small holders who are widely dispersed and produce small marketable surpluses of milk. Milk collection under this situation and particularly in the absence of groups/associations/cooperatives becomes difficult and expensive.
- m. Institutional support is very weak. All relevant institutions are working in isolation. There is no coordination mechanism. As a result, there is duplication of activities at one place and absence at the other.
- n. Slaughter houses, which function under the control of Local Government Department, provide little facilitation for the implementation of quality standards. Cleanliness and sanitary measures are very poor. No designated places available for various activities and no chilling facilities exist. Carcasses and meat is transported in open vehicles, which pose a threat to human health.
- o. There are certain areas of the livestock sector, where lack of legislation and institutional arrangements constrain the sector from further development. Also, enactment and amendments are required for the existing legislation in the eve of 18th constitutional amendment.



Chapter 2

WHY A POLICY FOR LIVESTOCK SECTOR IN KHYBERPAKHTUNKHWA





2. WHY A POLICY FOR LIVESTOCK IN KHYBER PAKHTUNKHWA

In Khyber Pakhtunkhwa, the livestock development is constrained by the limited public-sector investment and weak, ineffective support services, in addition to the problems mentioned earlier. Policies related to the livestock sector are often incoherent with ill-defined goals and with little or no assessment of their likely impact. The lack of consistent, integrated strategies that focus limited resources on identified and attainable goals remains a major limitation to livestock development. As for any other area, Khyber Pakhtunkhwa also needs to have an effective policy and planning framework that will optimize development resources and provide the necessary support and economic environment to allow livestock resources to express its true potential. In addition to these, following driving forces made way for the current efforts for the formulation of a comprehensive livestock policy:

2.1 Will of the Government of Khyber Pakhtunkhwa

Khyber Pakhtunkhwa Government has a strong will towards bringing reforms in the livestock sector, and has mandated the Agriculture, Livestock, Fisheries and Cooperative Department to formulate a policy for the sector as a Reform Initiative. Promoting livestock sector and increasing livestock productivity has been one of the major focuses in all developmental strategies of the provincial government such as Integrated Development Strategy (IDS 2014-18) and Khyber Pakhtunkhwa Comprehensive Development Strategy (CDS,2010-2017).

2.2 National Responsibilities

In order to achieve the sustainable improvement of veterinary services, it is the responsibility of provincial Government to maintain the minimum national standards for veterinary services in compliance with the National standards. With the technical assistance of International Organization for Epizootics (OIE), Evaluation of Performance of Veterinary Services (PVS) both at national and provincial level was conducted in October 2013. In light of the recommendations of the evaluation report, it is timely needed to have an effective livestock policy to address the gaps and challenges identified in the evaluation report, so that the existing services are improved as per the requirement of OIE.

2.3 International Obligations

Pakistan is a member of World Health Organization and it is legally required under International Health Regulation² (IHR,2005) to develop, strengthen and maintain minimum core public health capacities to detect, assess, notify and respond health threats and to ensure that these core capacities are present and functioning throughout their territories. Livestock sector being the important partner in achieving the IHR standards, has to develop its core capacities in major technical areas needed for IHR compliance.

Moreover, Antimicrobial Resistance (AMR) has been a growing threat of effective treatment of an ever increasing range of infections caused by bacteria, parasites, viruses, and fungi. Pakistan being signatory of World Health Assembly has to ensure the adoption of effective



measures to address the issue of AMR. At this stage, a clearly defined livestock policy is needed to prepare a provincial strategic plan for containment of AMR in the province.

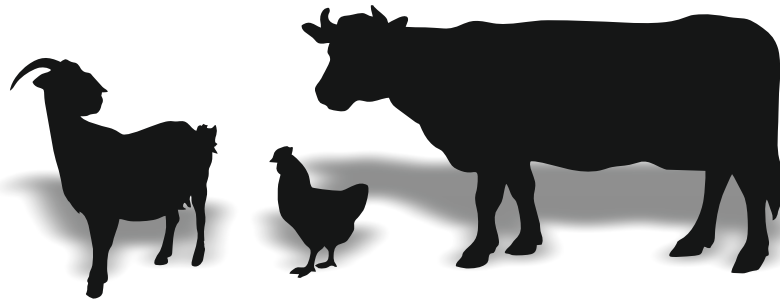
The livestock industry also demands a framework which provides an enabling environment for investment, with well-defined role of government and private sector. This will allow stakeholders to optimize the productivity and profitability of livestock to take advantage of existing demand and to generate more economic activity with the rational use of resources.

² International Health Regulation (IHR,2005) is a legally binding framework adopted by all WHO member states for events that may constitute public health emergency of international concerns.



Chapter 3

MODUS OPERANDI FOR THE FORMULATION OF LIVESTOCK POLICY





3. MODUS OPERANDI FOR THE FORMULATION OF LIVESTOCK POLICY

In order to formulate a comprehensive livestock policy, five regional consultative workshops and focused group discussions were held. This led to the identification of certain specific thematic areas that were later grouped into six core areas. These areas were further discussed, refined and finalized in one national and two international workshops. The entire exercise ultimately leads to the formulation of a Policy for the Livestock sector of Khyber Pakhtunkhwa encompassing the following areas:

- 1. Animal Health and Disease Control**
 - a. Animal Health Services
 - b. Disease Surveillance
 - c. Laboratory Services
 - d. Disease Control
 - e. Research Relating to Animal Health
 - f. Legislative Provisions
- 2. Animal Breeding and Genetic Resource Conservation**
 - a. Conservation of the local Breeds
 - b. Crossbreeding of the Non-descript breeds with exotic blood
 - c. Semen Production
 - d. Legislative Provision
- 3. Veterinary Education, Research, Extension, and Human Resource Development**
 - a. Veterinary Education
 - b. Livestock Research and Development
 - c. Livestock Extension and Communication Services
 - d. Human Resource Development
- 4. Animal Nutrition**
 - a. Fodder and forages
 - b. Rangeland and pastures
 - c. Feed and Feed Ingredients quality standards
 - d. Use of alternate Feed Resources



5. Livestock Marketing

- a. Management of Live Animal and Poultry Markets
- b. Management of Slaughter Houses
- c. Meat Marketing System
- d. Milk Marketing System
- e. Other Livestock Products and Byproducts Marketing
- f. Poultry and Eggs Marketing

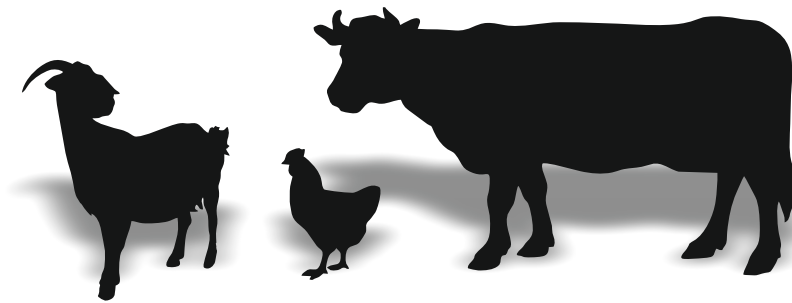
6. Institutional Restructuring for Specialized Tasks

- a. Transhumant Livestock Production and Nomadic Herds
- b. National and Internal Coordination
- c. Animal Welfare
- d. Livestock Insurance
- e. Investment Facilitation
- f. Climate Change
- g. Livestock Policy Cell



Chapter 4

THE POLICY FOR LIVESTOCK SECTOR





4. THE POLICY FOR LIVESTOCK SECTOR

4.1 THE VISION, GOAL, AND OBJECTIVES

Vision:

A competitive, responsive, compliant and sustainable livestock sector supplying safe and affordable food of animal origin to domestic and international markets

Goal:

Improved livestock efficiency and production for the benefit of livestock producers and consumers.

Objectives:

The following are the objectives that the Policy aims to achieve:

- To ensure efficient delivery of services in the livestock sector in order to improve health, efficiency, and productivity of livestock with sustainable use of natural resources
- To conserve, improve and develop local livestock breeds
- To promote the production of safe and healthy food
- To promote one health approach to minimize the incidence of zoonoses³

4.2 ANIMAL HEALTH AND DISEASE CONTROL

4.2.1 Animal Health Services

Numerous health factors impede livestock production, amongst which are diseases caused by infectious agents such as viruses and bacteria, external and internal parasite infestations and deficiencies and intoxications. Arguably the most important are those infectious agents that are capable of spreading rapidly between animals and across borders, causing major losses in terms of mortality and production loss. Rinderpest, once one of the most dreaded plagues in Pakistan and globally, has been eradicated, however, there are many ravaging diseases still present in Pakistan. Examples include foot-and-mouth disease, small ruminant plague (PPR), avian influenza, Newcastle disease and Haemorrhagic septicaemia. One class of infectious diseases can spread between animals and humans and can cause considerable human suffering as well as production loss, for example in Khyber Pakhtunkhwa brucellosis³, rabies and Congo Crimean haemorrhagic fever are of major significance. In addition to the endemic disease problems, the livestock and people of Khyber Pakhtunkhwa Province are at high risk of disease introductions from Afghanistan and neighboring provinces. Migrations across the borders are a potent source of disease spread. Innovative means must be sought to bring the migratory livestock keepers into mainstream veterinary services.

Prevention and control of the contagious diseases is a major issue for official veterinary services. Historically, veterinary services saw their main role to be provision of clinics and hospitals for the treatment of sick animals but this is now accepted as being a relatively



ineffective use of resources. Prevention is far more efficient and economically viable than control after disease has developed, even when a rapid response is ensured. The control of endemic production diseases is now considered to be an activity which is more appropriate for private veterinary services even if interim arrangements, such as shared responsibility, are necessary during transition. Private veterinarians have much to offer in terms of official disease control activities by being contracted to deliver services, such as vaccination and sampling.

Official veterinary services are therefore primarily charged with preventing disease from occurring and fighting outbreaks and epidemics when they do occur.

Surveillance is fundamental to understanding disease patterns, formulating prevention and control programs and ensuring implementation. Many activities summate to provide a surveillance system. Diagnostic support is essential for surveillance to function well. Although valuable and necessary, clinical skills alone are generally not sufficient to provide the degree of certainty required in identifying the cause of outbreaks of disease.

Quality assurance of chemotherapeutic agents and vaccines requires considerable attention to strengthen regulatory processes. This regulatory activity is a core function of an official veterinary service.

General Policy Requirements Relating to Animal Health Services

- (a) The animal health policy of the L&DD will be modified to lay greater emphasis on surveillance, control of especially dangerous pathogens and biosecurity. Resources are limited and, therefore, however desirable it would be, not all diseases can be addressed immediately. Prioritization is therefore essential and this needs to be based on sound epidemiological and socio-economic knowledge.
- (b) The animal health services will be restructured in accord with the new vision. At the central level this will involve establishing a central epidemiology unit with the broad spectrum of required skills. This will operate at district level from district centres created through modification of existing structures to form a hub for epidemiology and disease control. Where necessary additional hubs will be created in each district. The district hubs will be key to disease reporting, disease investigation and implementing control programs. This network will operate as the eyes and ears of the Director General.
- (c) Despite the possibility of reallocation of human resources, the reorganization will require a significant input into human resource development; there will be a need for training of official veterinarians in epidemiology, disease surveillance, disease investigation and diagnosis, and disease control as well as the re-orientation of animal health services. To support long-term development, it is important to develop subject matter specialists through training overseas in appropriate institutions. A program of appropriate training assignments with internal funding will be developed. External

³ Infectious diseases that can be transmitted between animals and humans.

⁴ A serious disease of both small ruminants and humans caused by *Brucella mellitensis*.



funding arrangements will be explored and short-term study tours will be given due consideration.

- (d) The Department will work closely with veterinary faculties and other stakeholders to ensure that the curriculum for undergraduates and post-graduates, and research meets the requirements of national services.
- (e) Private veterinarians will be encouraged to undertake the delivery of quality clinical services to farmers. In addition, a significant number of current official duties can be delivered more economically and effectively through the private sector; opportunities to strengthen and support alternative delivery systems will be sought. The role of private veterinary practitioners will be reassessed and training/orientation programs will be organized for them. The provision of an operations center for private practitioners within the district hubs will be considered.
- (f) One very serious constraint to disease control is the generally deficient relationship between livestock owners and official veterinarians. Improving the veterinary-farmer interface, through such means as extending the farmer field school system and communication exercises will be priority activities as will be ending the disincentive to reporting disease outbreaks caused by the current operational system. Improved operational standards are essential and achieving this will require professional involvement of the Pakistan Veterinary Medical Council and veterinary faculties.
- (g) Systematic control programs, with a sound epidemiological basis, for prioritised diseases will be formulated and implemented. Wherever possible these will be integrated with federal initiatives for disease control, such as Peste des petits ruminants (PPR), foot-and-mouth disease (FMD) and highly pathogenic avian influenza (HPAI). Initially, PPR and small ruminant brucellosis⁴ will be prioritised to develop focused control programs. The roles played by nomadic peoples and trading practices in generating disease persistence and outbreaks will be the subject of study by the epidemiology unit.
- (h) Mainstreaming veterinary activities in FATAs with those of Khyber Pakhtunkhwa province will be undertaken.
- (i) Regulations governing the production and supply of vaccines and chemotherapeutic agents will be strengthened to ensure that only quality products are offered for sale.
- (j) Given the growing menace of zoonotic diseases, dialogue and practical cooperation with medical services will be actively strengthened at every opportunity.
- (k) The Department shall establish a forum for improving the relationship between livestock health services, migratory livestock keepers, livestock traders and market administrators. Improving biosecurity in animal trade will be a subject of special attention.
- (l) Field staff will receive official Terms of Reference (ToR) and a manual of official duties and procedures to govern their conduct.



- (m) Animal movement control is an important component of the control of contagious diseases. Existing conditions will be reviewed and action taken to strengthen the system of movement control.
- (n) The Department will develop a dialogue with the veterinary faculties and the Pakistan Veterinary Medical Council to ensure that veterinary education relates directly to the priorities of the Department. This must be included in the curriculum together with professional ethics.
- (o) A central Policy Planning Cell will be established in the Livestock Department.
- (p) The epidemiology network will undertake emergency preparedness planning and develop a realistic emergency plan for funding; it will also undertake the socioeconomic studies essential for planning control strategies.

4.2.2 Disease Surveillance

Fundamental to discharging the mandate of targeting the most serious diseases through implementing systematic disease control programs is operating a disease surveillance system⁵ to understand disease patterns, formulate prevention and control programs and provide for their implementation. Operating an effective surveillance system is the responsibility of a skilled epidemiology service with a variety of tools at its disposal. These extend to:

- A passive disease reporting system feeding into a computerized database
- A geographical information system⁶ for analysis of data
- Outbreak investigation capacity conducted in response to reports of disease using skilled teams mobilised at district level with the participation of the central laboratory and epidemiology services, including participatory disease surveillance⁷.
- The use of case definitions in syndromic surveillance⁸
- Wildlife disease surveillance in partnership with wildlife authorities

Policy Requirements for Disease Surveillance

- (a) A strengthened epidemiology service will be constructed by building the capacity of the central unit to undertake all the activities outlined above and linking it to district epidemiologists established in a district animal health hub.
- (b) Passive disease reporting will be strengthened and its efficiency monitored by the use of performance indicators to ensure its value. A system of SMS based digital reporting will be developed to increase the timeliness of disease reporting. The epidemiology unit will produce timely, monthly reports of disease events and communicate these to all levels of the veterinary services.
- (c) Staff operating from the district epidemiology hub, charged with undertaking disease investigations, will be supplied with sample collection kits, appropriate protective equipment and transport. Their operations will be guided by strict protocols aimed at ensuring biosecurity.



- (d) The system of farmer field schools will be used to improve communication with livestock owners about the roles of stakeholders in disease control.
- (e) In addition to broad development of professional epidemiological skills, participatory disease surveillance will be accorded special significance. Teams in each district, linked to the headquarters epidemiology unit and district hubs will receive theoretical and practical training to the appropriate level. These teams will be able to undertake both general studies and those aimed at specific disease control.
- (f) Communication programs with supportive materials will be developed to address shortcomings in knowledge of strategic control (prevention) of endemic diseases and the means of preventing and controlling the major infectious diseases. These will be used to improve the understanding of official veterinarians, private veterinarians and livestock farmers.
- (g) Pakistan has international disease reporting obligations which need to function from the federal level. This is not functioning well because of the disruption of the reporting system caused by devolution of responsibilities to provincial level. Close collaboration between the Provincial and Federal Government will be ensured.
- (h) Among the studies to be undertaken by the epidemiology unit will be developing an in-depth understanding of animal migrations and trade movements both within Khyber Pakhtunkhwa Province and neighboring provinces and Afghanistan.

4.2.3 Laboratory Services

Laboratories are required to confirm suspicions of the major infectious diseases, to provide a service for private veterinarians and livestock owners, and to conduct surveys such as sero-monitoring for the quality control of vaccination programs and sero-surveillance to monitor the progress of control programs. Diagnostic services are important but the driving force must come from epidemiology and should be more focused on answering specific questions and using rapid field tests for specific diseases.

Policy Requirements for Laboratory Services

- (a) The diagnostic services in the Province shall be closely linked at district level and coordinated with central services.

⁵ Surveillance for disease refers to the monitoring of a population of animals and humans to detect disease events of significance to enable their control; it provides information for action.

⁶ A geographic information system (GIS) is a system designed to capture, store, manipulate, analyze, manage, and present spatial or geographic data.

⁷ Participatory disease surveillance (PDS) is a branch of participatory epidemiology to search for and investigate outbreaks of disease; it relies on the knowledge of livestock owners.

⁸ Syndromic surveillance relies on broadly based case definitions which will provide information on a number of diseases which can be difficult to tell apart. It increases the sensitivity of surveillance and when combined with the use of rapid field tests greatly increases the speed of detection of outbreaks, providing for rapid interventions.



- (b) The role of the central laboratory in testing for the major infectious diseases will be emphasised with district laboratories being responsible for collecting and sending samples to the central laboratory for examination. District laboratories will be strengthened to diagnose endemic, production-limiting diseases using fit-for-purpose tests. Rationalization and revamping of diagnostic services will take place to adopt more appropriate modern technology. After an audit of the diagnostic capability and capacity of the central and district laboratories, upgrading of labs and skills will be done to ensure that they are fit for purpose and to emphasise targeted diagnostic testing.
- (c) Laboratory diagnosis shall be the mandate of the L&DD Department with certain diagnostic responsibilities being assigned to research institutes.
- (d) Rapid diagnostic tests⁹ will be employed in the field as far as possible and their use maximised in specific control programs.
- (e) Protocols for the collection of diagnostic samples directed at answering specific questions will be developed together with an efficient system of sending samples to the central laboratory and laboratory workers will be trained in their use.
- (f) Biocontainment procedures will be stressed with respect to zoonotic infectious agents at field and laboratory levels.
- (g) Diagnostic services relating to diseases of national importance for livestock production shall be provided free of charge to farmers and also to veterinarians dealing with livestock owners.
- (h) The central provincial laboratory shall undertake official accreditation.

4.2.4 Disease Control

In future, a greater emphasis than currently will be placed on prevention of diseases through implementing strategic, epidemiology focused programs for the most serious endemic diseases. The Department will decide on its priorities and either provide vaccination free-of-charge or provide a means for veterinarians and livestock owners to protect livestock on a cost-sharing basis. Individual epidemic diseases will be the subjects of systematic, progressive disease control programs. The production of vaccines belongs ideally in the private sector provided that sufficient expertise exists there. The need for effective management of the risks associated with handling pathogens is relevant to all aspects of animal health services.

Policy Requirements for Disease Control

- (a) There will be a qualitative shift progressively away from public sector production of vaccines while the role of regulating vaccine production and sales is strengthened; only vaccines that are fit for purpose in terms of safety and efficacy in accord with OIE Guidelines will be used by government. Care will be taken to ensure high standards for vaccine handling (including cold chain) and vaccination procedures.

⁹ Rapid diagnostic tests (sometimes called *pendide tests*) are those which can be used in the field to rapidly confirm the cause of a disease observed. For example, the rapid diagnostic test for PPR enables confirmation of the cause of a disease outbreak within a few minutes. A growing number of such tests are becoming available enabling considerable cost savings. These tests are also appropriate for use in district laboratories.



- (b) Wherever possible and economically feasible vaccines will be obtained only from high quality private commercial companies using internationally accepted norms of production and quality control¹⁰. Maximum effort shall be applied to ensure that vaccines used are fit for purpose in terms of efficacy and innocuity.
- (c) While vaccines continue to be produced by government-run institutes, production shall be practiced only in dedicated, licensed facilities and shall not take place in laboratory facilities used for diagnosis.
- (d) Response systems for disease outbreaks will be strengthened with the elaboration of protocols linked to emergency preparedness planning.
- (e) Identification of land holdings where livestock are kept will be initiated and a searchable database created to store information.
- (f) The needs of migratory livestock keepers in terms of disease control will be defined and innovative means of bringing them into the mainstream of health management will be devised.
- (g) The Department shall develop a policy instrument concerning the management of laboratory biosafety and biosecurity to ensure that the overall Biorisk management objectives are achieved.

4.2.5 Research Relating to Animal Health

Research and development in animal health is a relatively low priority for the Department for the immediate future apart from studies needed to underpin the development of disease control strategies and trialing of novel diagnostic methodology; epidemiological and socioeconomic studies are urgently needed. This information is required for the formulation of sound disease control strategies.

Policy Requirements Relating to Research

- (a) Epidemiological studies of brucellosis and PPR are urgently needed to guide strategy setting for systematic disease control programs.
- (b) Socio-economic studies of the impact of the major diseases and their control will be conducted. These are required urgently to help justify the vision of enhanced control of the major infectious diseases.
- (c) Demographic studies including a livestock census will be taken on and in particular, the numbers and movements of migratory livestock keepers will be clearly defined.
- (d) Research and development for improvement of existing vaccines for the major diseases and development of new ones will remain the responsibility of the DG of Livestock Research.

¹⁰ Essentially this means compliance with guidelines produced by the World Organization for Animal Health (OIE) as prescribed in the Manual of Diagnostic Tests and Vaccines for Terrestrial Animals



4.2.6 Legislative Provisions

Given the changes that have occurred, and which will continue to occur, it is necessary to review the requirements of the LD&D Department and related departments such as the Food Safety and Halal Food Authority, the Local Government Department, and Municipal Authorities, to create the necessary legislative framework. Special attention needs to be paid to ensuring that there is enabling legislation in place to facilitate control of the major diseases.

Policy Requirements Relating to Legislative Provisions for Animal Health

- (a) LD&D's mandate needs to be reviewed and a legal framework designed on the basis of consultation and agreement with stakeholders. A review of the required legislation will be done and compared with the existing provisions to identify gaps where action is needed.
- (b) Authority is probably required to:
 - declare notifiable diseases;
 - enter premises and collect samples;
 - register of animals / premises;
 - call for compulsory vaccination;
 - control movement of animals from farm, market, area, etc.;
 - registration of livestock / equine business;
 - establish interprovincial quarantine;
 - cull animals where required to control disease and compensation;
 - appoint veterinary drug inspectors;
 - provide legal protection of registered veterinary practitioners;
 - share disease data with provinces and federal authorities;
 - licensing and censure of veterinarians for professional misconduct.

4.3 ANIMAL BREEDING AND GENETIC RESOURCE CONSERVATION

Khyber Pakhtunkhwa has a number of livestock breeds that have the potential to feed the growing population of the province. Animal breeding is a mandated activity and the Livestock & Dairy Development, Khyber Pakhtunkhwa has taken many steps for the improvement of Livestock breeds in the province. In this regard, initiatives like conservation and improvement of local breeds, and improvement of nondescript animals through cross breeding with exotic blood is practiced for many decades.

The Department has started an organized breeding program since the 1980s for large ruminants, which is focusing on the cross breeding of local non-descript animals with the semen of Frisian and Jersey breeds of cattle to improve its genetic potential. Similarly, nucleolus herds of Pure Nili Ravi and Kundi Buffaloes are maintained to provide bulls and



semen for the breed improvement of the local non-descript buffaloes. The Existing breeding program is also emphasizing on the conservation and selection of the pure local livestock breeds, and currently one breed of cattle with name of “Achai” and one breed of Buffalo with the name of “Azikheli” has been selected for the breed conservation program.

There are twelve breed of sheep in Khyber Pakhtunkhwa of which three are at the verge of extinction while the purity of Hashatnagri and Tirahi breeds is questionable. Crossing of the local kaghani breeds with exotic Rambouillete has resulted in in the creation of a new breed called Ramghani. In Khyber Pakhtunkhwa, 60-80% mutton comes from sheep that uses ground vegetation and the post-harvest stubbles which otherwise could not be utilized by other livestock. The entire carpet industry of the province is dependent on the wool obtained from sheep. Similarly, there are six goat breeds in Khyber Pakhtunkhwa, of which only three are documented. Goat is raised in mix flocks with sheep and cattle. It is a good source of milk and meat, while in alpine ranges goat cheese is prepared and relished as a food supplement. The Artificial Insemination services are now being also extending to sheep and goats, to conserve the local breeds and enhance its productivity.

On the other hand, the gene pool of local equines, camels and rural poultry has been threatened due to indiscriminate breeding hence the genetic potential got diluted. Camels are generally raised for draught-purpose, with milk, meat and hair as secondary products. Camels and donkeys are mostly kept by the poor, landless farmers for their livelihoods.

The animal breeding and genetic resource conservation efforts are constrained by the following issues:

- Lack of baseline information about population sizes, distribution, and morphological as well as molecular characteristics
- Late maturity, sub estrous, long calving intervals and low fertility of the livestock
- Non-existence of organizational structure i.e., breed societies
- Lack of conservation & development farms of indigenous small ruminants
- Limited research and collaborative efforts between the Academia and Livestock Department
- Depleting genetic potential, diversity and diminishing feed resources base

General Policy Requirements Relating to Animal Breeding and Genetic Resource Conservation

- (a) The Academia and the Livestock Department will work closely for Documentation of Livestock breeds both at phenotypic and molecular genetics level including its population & distribution
- (b) The existing breeding program will be reviewed by all stake holders to redefine conservation strategies for local breeds as well as cross breeding for each breed and variety; Livestock breeding shall be closely regulated by the Livestock Department and indiscriminate breeding and breeding in contradiction to the approved program of the department must be discouraged.



- (c) L&DD shall regulate and develop standards for private semen production and imported and traded semen, and provide technical support for commercial breed development organizations.
- (d) The Livestock Department will develop a database of pure breed animals, each breed and variety in its home track and encourage its conservation and improvement.
- (e) The Livestock Department will work closely with veterinary faculties, the Research wing and other stakeholders to ensure that the curriculum for undergraduates and post-graduates as well as the research program and related services are aligned with the breeding program.
- (f) In order to conserve, improve and develop local resource of Sheep, Goat, Camels, Donkeys, Horses and rural poultry, the Livestock Department shall encourage the private sector to provide the required breed improvement services as per policy of the government.

4.4 VETERINARY EDUCATION, RESEARCH, EXTENSION, AND HUMAN RESOURCE DEVELOPMENT

4.4.1 Veterinary Education and Research

There are two Veterinary Sciences Faculties in Public Sector Universities of Khyber Pakhtunkhwa awarding graduate and postgraduate degrees in Veterinary Sciences, regulated by Pakistan Veterinary Medical Council (PVMC). The curriculum is prepared by the Pakistan Veterinary Medical Council, keeping in view the national requirements of the field. Similarly, there are also three institutes imparting Para-veterinary education programs. The Para veterinary staff is an important work force of the Livestock department in the field. Apart from education the Universities are also mandated to undertake research mandatory requirement of the relevant degree programs.

The Livestock Research and Development Department is also striving for the betterment of Livestock Sector of the Province. However, in the current scenario, lack of need-based research and effective coordination among relevant stakeholder is the key limiting factor in critical issue identification and solving. Though the Universities and the department are playing their role, it is not at the level it is supposed to be.

In this regard the following issues are related to Veterinary Education and Research:

- The existing infrastructure of the faculties and laboratories are not sufficient according to the requirements of the degree/certificate programs, thus the graduates are facing difficulties in the field conditions.
- The existing infrastructure of the research establishment is below the required international standards
- There is lack of meaningful coordination among academia and Livestock Department in the field of issue based research.



- The Human Resource is not equipped with the latest skills and education to meet the international standards of livestock research.

General Policy Requirements Relating to Veterinary Education and Research

- (a) The existing infrastructure of the faculties and laboratories shall be reorganized and upgraded to meet the course requirements and produce better professionals and Para professionals for the field
- (b) The infrastructure of the research establishment shall be brought at par with the required international standards
- (c) Meaningful and paid internship programs of veterinary graduates and Para vets shall be implemented
- (d) The Livestock Department and academia will closely collaborate in research programs to identify and solve livestock related problems in the province
- (e) Private sector will be encouraged to support research programs in the province

4.4.2 Livestock Extension Services and Human Resource Development

Earlier, the Livestock and Dairy Development Department was mandated to provide extension services through its Animal Health work force. Of late, a separate Directorate of Livestock Production Extension and Communication has been established to look after the field extension services. The Directorate of Livestock Production Extension and Communication is also working on human resource management and its development. Due to increased productivity and efficiency of livestock, importance of knowledge in human resource management cannot be underestimated.

Livestock Extension Services and Human Resource Development is constrained by the following issues:

- Inadequate extension services to address the needs of farming communities
- Lack of the use of conventional and modern tools of communication
- Lack of resources to strengthen Farmer Field Schools approach, Livestock Extension through women workers, and need-based trainings
- Insufficient on job training and capacity building programs for workers in the relevant fields

General Policy Requirements Relating to Livestock Extension Services and Human Resource Development

- (a) The Extension services shall be strengthened with the use conventional and modern tools of communication
- (b) Appropriate Information, education and Communication material (IEC) shall be developed and disseminated.
- (c) Community elders, prayer leaders and schools shall be involved for effective extension services



- (d) Human Resource Development shall be accorded a high priority, and appropriate in-house and external training will be institutionalized.

4.5 ANIMAL NUTRITION

Nutrients and minerals are of as much importance for the animals as they are for humans. Many metabolic disorders of animals, with potential of severely retarding their growth and productivity are due to shortage of appropriate quantity of nutrients and minerals. Feed and fodder production is an important component playing a vital role in livestock production. It is estimated that around 60 to 70% of the total cost of the livestock business is due to feed and fodder. For any successful livestock business operations, regular and adequate supply of nutrient is essential. Due to weather extremes, fodder scarcity periods occurs during calendar years, which adversely affects livestock production. The area under fodder production is continuously decreasing due to population growth and expansion in housing societies. Presently, the major component of livestock feed is derived from agricultural waste. Furthermore, the conventional grazing practices without any regards to pastures readiness or its capacity to support livestock, are regularly degrading the available pasture land. Such practices tend to over use the resources. Safety of animal feed is equally important for animal as well as human health. If animal feed, having toxins, is consumed by the animal, its products or by-products are hazardous for human consumption.

Following issues and constraints are hindering the field of animal nutrition:

- Scarcity of land for fodder production
- Scarcity of water leading to shortage of green fodder
- Lack of alternate feed resources (Silage & Hay) during green fodder scarcity periods
- Variable quality of feed stuff in the market
- No integrated program for sustainable rehabilitation of pastures
- Non-defined and non-secure seasonal travelling routes for nomads
- Lack of farmer's awareness regarding modern techniques and technologies for fodder production/preservation
- Improper rotational grazing schedules
- Lack of monitoring mechanism for animal feed contaminants
- Limited knowledge of nutrient deficiency of different agro-ecological zones of the province

General Policy Requirements Relating to Animal Nutrition

- (a) Sufficient round the year fodder availability shall be encouraged and accordingly feed storage and preservation practices for fodder and forage shall be facilitated.
- (b) Awareness regarding the benefits of feeding balanced ration shall be enhanced
- (c) Proper labeling of feed stuff shall be enforced



- (d) Integrated program for sustainable rehabilitation of pastures / communal/ barren land shall be introduced
- (e) Seasonal migratory routes of livestock shall be identified, mapped and secured/facilitated
- (f) High-quality summer legumes, perennial grasses, fodder trees and high-quality fodder seed supply shall be promoted
- (g) Standardization regime for the feed and nutrition (feed and nutrition mapping) shall be put in place
- (h) Subsidized production for packaging material and customized machinery for the silage packing shall be promoted.

4.6 LIVESTOCK MARKETING

With the overall vision to have a competitive and efficient livestock industry leading to food security and commercialization, the provincial government of Khyber Pakhtunkhwa is willing to promote great role for private sector in the poultry, dairy and meat value chain. The prevailing marketing system has resulted in sub-optimal performance of the sector characterized by lack of grading of livestock and livestock products, low awareness about fattening of animals, inadequate infrastructure and poor handling of livestock products etc. There has been a significant increase in the production and consumption of livestock products, a trend that is expected to continue. While traditional livestock farming systems mainly contribute to the livelihoods of around three-fourths of the rural population of Khyber Pakhtunkhwa, the future lies in a paradigm shift towards intensive commercial farming. Moreover, processing cost is high and farmers generally have inadequate knowledge, facilities and skills for small-scale processing. Added to it are the challenges of climate change and socio-economic pressures, making it to be more important to gear up the sector to vast international opportunities but at the same time reposition the industry's competitiveness.

Following are certain issues highlighted in terms of livestock marketing.

- Lack of value addition in the livestock products at affordable cost and at a scale suitable for rural community.
- Lack of livestock producers' organization.
- Weak linkages or coordination among actors in livestock value chain.
- Inadequate financial support/ incentivization.
- Poor and costly transportation system for livestock and livestock products.
- Input prices and controlled milk and meat prices discourage investments in dairy and meat production.
- Weak monitoring and management of slaughterhouses and live animal and poultry markets, with poor infrastructure.



- Import of dry milk powder, whey powder, reconstituted milk and dairy products with low duties
- Inadequate quality control on the feed ingredients, compound feed and drugs compromising food safety.
- Faulty pricing mechanism of live animals (not based on age, body condition and weight).

General Policy Requirements Relating to Livestock Marketing

- (a) The Government of Khyber Pakhtunkhwa will establish livestock market practices, standards and market information system.
- (b) The Government of Khyber Pakhtunkhwa will shift the focus from regulating prices to monitoring quality and will gradually phase out price capping of milk and meat leading to open market mechanisms determining the prices.
- (c) The dairy and meat production will be enhanced in private sector through incentive based programs in support of commercial farming, incentive being determined at a level through international competitiveness analysis.
- (d) Process-based quality systems will be introduced in support of developing market for quality fresh dairy and meat products, branding will be encouraging, and meat and dairy products will be regulated according to defined process standards in conformity with international standards.
- (e) Mechanisms will be developed for greater participation of private sector in management of slaughterhouses, livestock markets, breeding and feed industry under the regulatory control of livestock department.
- (f) Regulation with regards to slaughterhouse control, breeding and breed inspections, feed ingredients, compound feed and drugs will be improved.

4.7 INSTITUTIONAL RESTRUCTURING FOR SPECIALIZED TASKS

As per its approved Rules of Business, the L&DD Department is responsible for matters relating to livestock health, production, breeding, research & development, extension & communication, veterinary public health and capacity building of the stakeholders. These functions are carried out by two independent line departments, the L&DD (Extension) and L&DD (Research). During the discharge of these responsibilities, many a times duplication occurs, which causes considerable loss of resources. It occurs because of the lack of a clear assigned mandate to each line department.

The policy proposes a number of new and challenging tasks for L&DD department, for which reorganization of the service structure of the department is required. Also due attention shall be given to the risks involved with the job of the employees of the L&DD in the perspective for compensation.

Following are a few of the new and improved tasks, which the current policy is recommending for the Livestock & Dairy Development, Khyber Pakhtunkhwa:



4.7.1 Transhumant Livestock Production and Nomadic Herds

Transhumant livestock production system in Khyber Pakhtunkhwa evolved since immemorial times and occupies the territory between the plains down the mountain valley and uplands. The transhumant animal keepers contribute approximately 35% of the total number of small ruminants produced in the province and approximately 0.46 million sheep and goat are annually shifted from the mountain region of Khyber Pakhtunkhwa for slaughter down the country earning approximately 2.8 billion rupees' annual revenue for the province. According to a survey 5500 landless households with an average herd size of 140 animals are involved in the long distance transhumance. The transhumant livestock are still important contributors to the food security of the ever increasing population and economy of the province.

One of the major challenges faced by transhumant herders is diminishing of the traditional migratory routes and resting places. Hence, the distance between lowland and upland that was covered during six weeks has now to be covered in approximately two weeks through round the clock movement. The herders thus reach the upland earlier than scheduled and start grazing when the forage seedlings have just emerged with negative implications in shape of pasture degradation in Khyber Pakhtunkhwa. In addition, the transhumant livestock keepers face many constraints like pasture degradation, land tenure, marketing their animals and animal products and above all the zoonotic diseases, due to which they suffer a lot.

4.7.2 Coordination with Stakeholders

Keeping in view the current status of globalization, there is a need for better coordination at every level. It is felt strongly that there is lack of workable coordination between the L&DD and neighboring countries, as well as various area development projects, for timely sharing of information.

Moreover, there is a lack of effective and productive coordination between the potential livestock farmers, poultry farmers, nomads, processors and other stakeholders. All the stakeholders work in isolation and there is no recognized official forum which can provide an opportunity to them to sit together and make some productive discussions.

4.7.3 Animal Welfare

At the moment there is lack of any public sector Animal welfare organization in the province, who can take care of the issues relating to animal cruelty, animal transportation, animal gaming and animal welfare. Animal Welfare refers to the relationships people have with animals and the duty they have to assure that the animals under their care are treated humanely and responsibly. Animal Welfare is thus the well-being of animals. While Cruelty to animals, also called animal abuse or animal neglect, is the intentional infliction by humans of suffering or harm upon any non-human animal, for purposes other than self-defense or survival. Any good animal welfare regime should have the components of proper disease prevention and treatment, appropriate shelter, better management, proper nutrition, access to drinking water, humane handling and humane slaughter/killing.



Transportation protocols of live animals do not exist. The same results in cruelty purported to the animals and economic loss in terms of stress that is induced to the animals, rendering them prone to diseases and weight loss. Some laws regarding animal welfare have been practiced in 1960s based on “The Prevention of Cruelty to Animals Act -1890”. This act was devised by British Government before Independence and later in 1960s was amended by Government of Pakistan. The above mentioned law exists but the implementation organ has since been abolished.

4.7.4 Livestock Insurance

Currently there is no sound mechanism to compensate the owners of livestock in case of natural calamities and other mortalities to their livestock. There is also a lack of proper compensation mechanism in case of stamping out a herd or animal due to the outbreak of notifiable diseases.

4.7.5 Investment Facilitation

Promotion of investment in the province is a top priority of the Government of Khyber Pakhtunkhwa, and has taken a lot of initiatives in that direction. It is a fact that proposals submitted by the L&DD department are of developmental nature, on the contrary these should be business models/feasibilities if these have to woo the investors. Keeping in view the potential of the livestock sector, it is needed that an economist or business development consultant may be attached to L&DD for the preparation of investment proposals.

4.7.6 Environment and Climate Change

Currently no solid impact assessment study has been carried out by L&DD to collect and analyze the negative effects on the environment as a result of livestock management, transport, marketing or processing, or disposal of waste associated with feedlots and livestock industries.

There are visible signs of climatic change in Khyber Pakhtunkhwa, which scenario will definitely effect the livestock population, fodder production and pastures. Mitigation and adaptation measures need to be put in place for addressing such issues.

4.7.7 Livestock Policy Cell

During the implementation of the livestock policy, and in the near future, a lot of timely adjustments and correction will be needed in various policy areas. It is therefor, needed the policy should be flexible and should have the capacity to absorb all such adjustments.

General Policy Requirements Relating to Institutional Restructuring:

- (a) Livelihood interventions for traditional grazing communities shall be supported, for example in the preparation and marketing of wool and hair products.



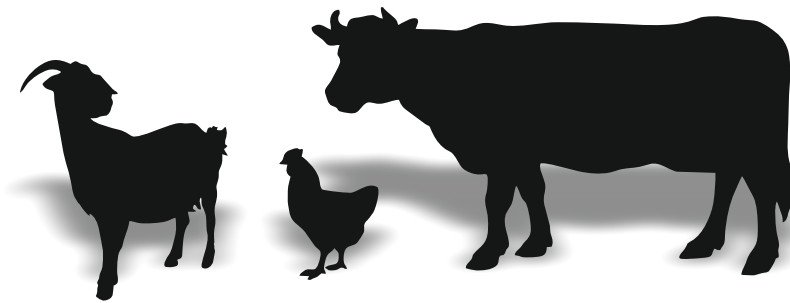
- (b) The seasonal migratory routes of the transhumant herds shall be secured and resting places established for the provision of animal health facilities.
- (c) The government shall support the traditional grazing practices and management of range lands by these transhumant livestock communities.
- (d) The government shall facilitate the establishment of Livestock & Dairy Development Board and Poultry Development Board.
- (e) The Animal Cruelty Act, 1890 shall be replaced by a new Animal Welfare Act according to the current situation and implementation needs
- (f) L&DD shall work towards adopting OIE (World Organization for Animal Health) standards/ guidelines for animal welfare.
- (g) Appropriate code of practice shall be developed involving community for animal welfare in markets, slaughter, transport, research, and commercial production, including nutrition and management of farm animals
- (h) Animal welfare organizations shall be enlisted to monitor and report neglect and cruelty.
- (i) The government shall introduce general livestock insurance program.
- (j) L&DD (Research) in coordination with academia shall study and document the impact of livestock activities on the environment.
- (k) Government shall establish a coordination body among Livestock, agriculture and Forest departments for rehabilitation and management of rangelands and pastures in the wake changed climatic conditions.
- (l) A Livestock Policy Cell will address various issues pertaining to the implementation of the Livestock Policy, and to pursue achievement of the Legal Framework and 10 years Strategic Plan (including Business and Budgetary Plan).
- (m) The Livestock & Dairy Development Department shall be restructured and reorganized for carrying out the new initiatives, with redefined mandates for both the components of the L&DD.
- (n) The government shall take account of the risks involved with the job of livestock professionals and shall contribute towards their job satisfaction.





Chapter 5

CONSOLIDATED LIST OF POLICY RECOMMENDATIONS





5. CONSOLIDATED LIST OF POLICY RECOMMENDATIONS

5.1 Animal Health and Disease Control

5.1.1 Animal Health Services

- (a) The animal health policy of the L&DD will be modified to lay greater emphasis on surveillance, control of especially dangerous pathogens and biosecurity with prioritization of diseases based on sound epidemiological and socio-economic knowledge.
- (b) Restructuring of the existing facilities of the department with the creation of provincial and district epidemiology hubs for disease control, which will operate as the eyes and ears of the Director General.
- (c) Significant input will be put into human resource development at all levels and for all activities.
- (d) The Department will work closely with veterinary faculties, Pakistan Veterinary Medical Council and other stakeholders to ensure that the curriculum and code of professional ethics for undergraduates and post-graduates, and research meets the requirements of national services.
- (e) Private veterinarians will be encouraged to undertake the delivery of quality clinical services to farmers. In addition, a significant number of current official duties can be delivered more economically and effectively through the private sector; opportunities to strengthen and support alternative delivery systems will be sought.
- (f) Improving the veterinary-farmer interface, through such means as extending the farmer field school system and communication exercises will be priority activities.
- (g) Systematic control programs, with a sound epidemiological basis, for prioritised diseases will be formulated and implemented.
- (h) Mainstreaming veterinary activities in FATAs with those of Khyber Pakhtunkhwa province will be undertaken.
- (i) Regulations governing the production and supply of vaccines and chemotherapeutic agents will be strengthened to ensure that only quality products are offered for sale.
- (j) Given the growing menace of zoonotic diseases, dialogue and practical cooperation with medical services will be actively strengthened at every opportunity.
- (k) The Department shall establish a forum for improving the relationship between livestock health services, migratory livestock keepers, livestock traders and market administrators. Improving biosecurity in animal trade will be a subject of special attention.
- (l) Field staff will receive official Terms of Reference (ToR) and a manual of official duties and procedures to govern their conduct.
- (m) Animal movement control is an important component of the control of contagious diseases. Existing conditions will be reviewed and action taken to strengthen the system of movement control.
- (n) A central Policy Planning Cell will be established in the Livestock Department.



5.1.2 Disease Surveillance

- (a) A strengthened epidemiology service will be constructed by building the capacity of the central unit to undertake all the activities outlined above and linking it to district epidemiologists established in a district animal health hub.
- (b) Passive disease reporting will be strengthened and its efficiency monitored by the use of performance indicators to ensure its value.
- (c) Staff operating from the district epidemiology hub, charged with undertaking disease investigations, will be supplied with sample collection kits, appropriate protective equipment and transport. Their operations will be guided by strict protocols aimed at ensuring biosecurity.
- (d) In addition to broad development of professional epidemiological skills, participatory disease surveillance (PDS) will be accorded special significance.
- (e) Communication programs with supportive materials will be developed to address shortcomings in knowledge of strategic control (prevention) of endemic diseases and the means of preventing and controlling the major infectious diseases.
- (f) Pakistan has international disease reporting obligations, for which close collaboration between the Provincial and Federal Government will be ensured.
- (g) Among the studies to be undertaken by the epidemiology unit will be developing an in-depth understanding of animal migrations and trade movements both within Khyber Pakhtunkhwa Province and neighboring provinces and Afghanistan.

5.1.3 Laboratory Services

- (a) The diagnostic services in the Province shall be closely linked at district level and coordinated with central services.
- (b) The role of the central laboratory in testing for the major infectious diseases will be emphasised with district laboratories being responsible for collecting and sending samples to the central laboratory for examination. District laboratories will be strengthened to diagnose endemic, production-limiting diseases using fit-for-purpose tests. After an audit of the diagnostic capability and capacity of the central and district laboratories, upgrading of labs and skills will be done to ensure that they are fit for purpose and to emphasise targeted diagnostic testing.
- (c) Laboratory diagnosis shall be the mandate of the L&DD (Extension) Department with certain diagnostic responsibilities being assigned to research institutes.
- (d) Rapid diagnostic tests will be employed in the field as far as possible and their use maximised in specific control programs.
- (e) Protocols for the collection and sending samples to the laboratories will be developed.
- (f) Biocontainment procedures will be stressed with respect to zoonotic infectious agents at field and laboratory levels.
- (g) Diagnostic services relating to diseases of national importance for livestock production shall be provided free of charge to farmers and also to veterinarians dealing with livestock owners.



- (h) The central provincial laboratory shall undertake official accreditation.

5.1.4 Disease Control

- (a) There will be a qualitative shift progressively away from public sector production of vaccines while the L&DD role of regulating vaccine production and sales is strengthened.
- (b) While vaccines continue to be produced by government-run institutes, production shall be practiced only in dedicated, licensed facilities and shall not take place in laboratory facilities used for diagnosis.

5.2 Animal Breeding and Genetic Resource Conservation

- (a) The Academia and the Livestock Department will work closely for Documentation of Livestock breeds both at phenotypic and molecular genetics level including its population & distribution
- (b) The existing breeding program will be reviewed by all stake holders to redefine conservation strategies for local breeds as well as cross breeding for each breed and variety; Livestock breeding shall be closely regulated by the Livestock Department and indiscriminate breeding and breeding in contradiction to the approved program of the department must be discouraged.
- (c) L&DD shall regulate and develop standards for private semen production and imported and traded semen, and provide technical support for commercial breed development organizations.
- (d) The Livestock Department will develop a database of pure breed animals, each breed and variety in its home track and encourage its conservation and improvement.
- (e) The Livestock Department will work closely with veterinary faculties, the Research wing and other stakeholders to ensure that the curriculum for undergraduates and post-graduates as well as the research program and related services are aligned with the breeding program.
- (f) In order to conserve, improve and develop local resource of Sheep, Goat, Camels, Donkeys, Horses and rural poultry, the Livestock Department shall encourage the private sector to provide the required breed improvement services as per policy of the government.

5.3 Veterinary Education, Research, Extension, and Human Resource Development

5.3.2 Veterinary Education and Research

- (a) The existing infrastructure of the faculties and laboratories shall be reorganized and upgraded to meet the course requirements and produce better professionals and Para professionals for the field
- (b) The infrastructure of the research establishment shall be brought at par with the required international standards



- (c) Meaningful and paid internship programs of veterinary graduates and Para vets shall be implemented
- (d) The Livestock Department and academia will closely collaborate in research programs to identify and solve livestock related problems in the province
- (e) Private sector will be encouraged to support research programs in the province

5.3.3 Livestock Extension Services and Human Resource Development

- (a) The Extension services shall be strengthened with the use conventional and modern tools of communication
- (b) Appropriate Information, education and Communication material (IEC) shall be developed and disseminated.
- (c) Community elders, prayer leaders and schools shall be involved for effective extension services
- (d) Human Resource Development shall be accorded a high priority, and appropriate in-house and external training will be institutionalized.

5.4 Animal Nutrition

- (a) Sufficient round the year fodder availability shall be encouraged and accordingly feed storage and preservation practices for fodder and forage shall be facilitated.
- (b) Awareness regarding the benefits of feeding balanced ration shall be enhanced
- (c) Proper labeling of feed stuff shall be enforced
- (d) Integrated program for sustainable rehabilitation of pastures / communal/ barren land shall be introduced
- (e) Seasonal migratory routes of livestock shall be identified, mapped and secured/facilitated
- (f) High-quality summer legumes, perennial grasses, fodder trees and high-quality fodder seed supply shall be promoted
- (g) Standardization regime for the feed and nutrition (feed and nutrition mapping) shall be put in place
- (h) Subsidized production for packaging material and customized machinery for the silage packing shall be promoted.

5.5 Livestock Marketing

- (a) The Government of Khyber Pakhtunkhwa will establish livestock market practices, standards and market information system.



- (b) The Government of Khyber Pakhtunkhwa will shift the focus from regulating prices to monitoring quality and will gradually phase out price capping of milk and meat leading to open market mechanisms determining the prices.
- (c) The dairy and meat production will be enhanced in private sector through incentive based programs in support of commercial farming, incentive being determined at a level through international competitiveness analysis.
- (d) Process-based quality systems will be introduced in support of developing market for quality fresh dairy and meat products, branding will be encouraging, and meat and dairy products will be regulated according to defined process standards in conformity with international standards.
- (e) Mechanisms will be developed for greater participation of private sector in management of slaughterhouses, livestock markets, breeding and feed industry under the regulatory control of livestock department.
- (f) Regulation with regards to slaughterhouse control, breeding and breed inspections, feed ingredients, compound feed and drugs will be improved.

5.6 Institutional Restructuring for Specialized Tasks

- (a) Livelihood interventions for traditional grazing communities shall be supported, for example in the preparation and marketing of wool and hair products.
- (b) The seasonal migratory routes of the transhumant herds shall be secured and resting places established for the provision of animal health facilities.
- (c) The government shall support the traditional grazing practices and management of range lands by these transhumant livestock communities.
- (d) The government shall facilitate the establishment of Livestock & Dairy Development Board and Poultry Development Board.
- (e) The Animal Cruelty Act, 1890 shall be replaced by a new Animal Welfare Act according to the current situation and implementation needs
- (f) L&DD shall work towards adopting OIE (World Organization for Animal Health) standards/ guidelines for animal welfare.
- (g) Appropriate code of practice shall be developed involving community for animal welfare in markets, slaughter, transport, research, and commercial production, including nutrition and management of farm animals
- (h) Animal welfare organizations shall be enlisted to monitor and report neglect and cruelty.
- (i) The government shall introduce general livestock insurance program.



- (j) L&DD (Research) in coordination with academia shall study and document the impact of livestock activities on the environment.
- (k) Government shall establish a coordination body among Livestock, agriculture and Forest departments for rehabilitation and management of rangelands and pastures in the wake changed climatic conditions.
- (l) A Livestock Policy Cell will address various issues pertaining to the implementation of the Livestock Policy, and to pursue achievement of the Legal Framework and 10 years Strategic Plan (including Business and Budgetary Plan).
- (m) The Livestock & Dairy Development Department shall be restructured and reorganized for carrying out the new initiatives, with redefined mandates for both the components of the L&DD.
- (n) The government shall take account of the risks involved with the job of livestock professionals and shall contribute towards their job satisfaction.





ALIHAMZA ADVERTISER
03448588444