



# Role of Productive Sectors in the Socioeconomic Development of Azad Jammu and Kashmir

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AJ&K SDGs Support Unit

**SDGs Support Unit**

Planning and Development Department

Azad Government of the State of Jammu and Kashmir





## Author Information

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Dr. Jasim Anwar is an international development consultant and applied scientist, specialized in the areas of policy formulation, strategic development, socio-economic assessments, Civil Registration and Vital Statistics (CRVS), mortality estimations, Information System, Health System Strengthening, and Demography. He is qualified with MBBS, Master of Applied Science from the University of Sydney, and Ph.D. from the University of New South Wales, Sydney, Austral

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## Contribution

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Communication and Design Coordination by Zuhair Shabbir,  
Communications Analyst, Federal SDGs Support Unit, UNDP & Ministry of Planning,  
Development & Special Initiatives.

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## Foreword

It is a matter of pleasure for me to express my views on the study "Role of Productive Sectors in the Socioeconomic Development of Azad Jammu & Kashmir". This study identifies and analyses challenges and opportunities in harnessing the full potential of productive sectors of the State of Azad Jammu & Kashmir with a view to enhancing the socio-economic development of the State. It sheds light on two major contributing factors of the development landscape of AJ&K. Firstly, it provides an insight into the impact of development initiatives by the Government in the productive sectors and secondly, it provides a socioeconomic profile, which can greatly help relevant stakeholders in planning development initiatives and ensuring their successful implementation.

The State of AJ&K is blessed with diverse natural resources as well as an educated human resource which, if fully harnessed, can contribute to the socio-economic growth of the State in line with the aims/objectives spelled out in the Sustainable Development Goals. The productive sectors can play an important role in the development of the State by generating optimum agricultural and forest produce and producing skilled and trained manpower to be in demand at the national and international levels.

This study is based on fieldwork and a survey encompassing eight districts of AJ&K, which is the first of its kind as far as productive sectors are concerned. Households' survey, undertaken during the course of the study, brings out the strengths and opportunities that the State possess, like an emerging educated populous, environmentally conducive rural economy, land ownership, limited issues of path dependency



and sizeable remittances sent by AJ&K diaspora. The document also identifies challenges faced by the productive sectors, including non-availability of skilled human resource, coordination issues between relevant stakeholders, limited income generation opportunities, absence of market linkages and commercialization opportunities for small businesses.

As AJ&K has no industrial base, she needs to focus on increasing agricultural productivity by adopting advanced and innovative techniques. It is a matter of concern that even subsistence farming is declining as people are giving up physically demanding practice of tilling the land because the yield and return are limited. So, more investment in agriculture sector by the Government along with a catalytic role by the Agriculture Department may motivate people to resume cultivation of their lands. The same applies to dairy, fish and poultry farming. Similarly, Technical Education & Vocational Training Authority (TEVTA) needs to upgrade and modernize its courses to produce competitive people equipped with compatible skill sets.

This study is useful for the stakeholders associated with the productive sectors who may benefit from the information it contains.

**Muhammad Zafar Khan**

Secretary,

Planning and Development Department, GoAJ&K



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**Dr. Jasim Anwar**  
Consultant

### Livestock and Dairy Development Department

- Dr. Shahid Gardazi, Deputy Director  
Livestock Extension, Muzaffarabad
- Dr. Shahid Sheikh, DLPDO, Muzaffarabad
- Dr. Touqeer Qureshi, Assistant Director,  
Artificial Insemination, Mirpur
- Dr. Mujahid Younis, DLPDO, Mirpur
- Dr. Mehmood Aziz, In-charge Disease  
Diagnostic Lab, Mirpur
- Dr. Khalid Butt, Assistant Director,  
Livestock and Dairy Development, Bhimber
- Dr. M Ayub, DLPDO, Bhimber
- Dr. Mubashir Adeel, Veterinary Officer,  
Bhimber
- Dr. Hamza, Veterinary Officer, Kotli
- Dr. Fareed, Kotli
- Dr. Tahir Mehmood, Assistant Director,  
Veterinary Health, Sudhnoti
- Dr. Shahid, Veterinary Officer, Sudhnoti
- Dr. Shabir Sheikh, DLPDO, Bagh
- Dr. Syed Zahoor, Veterinary Officer, Bagh
- Dr. Shazia Nazir, Veterinary Officer, Bagh
- Mr. Syed Basharat, In-charge Poultry  
Complex, Bagh
- Dr. Adeel, Bagh
- Mr. Nazir Hussain, Bagh
- Dr. Tariq Mehmood, DLPDO, Poonch
- Dr. Zafar Iqbal, Assistant Director, Animal  
Health, Poonch

### Sericulture Department

- Mr. M Hayat, ADIO, Bhimber
- Mr. Muzafar, District Officer, Bhimber
- Mr. Muneef, Field Assistant, Bhimber
- Mr. Kashif, Assistant Director, Kotli
- Mr. M. Bashir, ASDO, Sudhnoti

### Agriculture Department

- Mr. Raja Maqbool, Deputy Director, Bagh
- Mr. Sardar Zareen, Deputy Director,  
Poonch
- Mrs. Amna Rafi, Deputy Director,  
Muzaffarabad
- Mr. Raja Faraz Saeed, Deputy Director,  
Neelum
- Mr. Tassaduq Hussain, Assistant Director,  
Bagh
- Mr. Mehnaz Akram, Assistant Director,  
Poonch
- Mrs. Samia Nawaz, Agriculture Officer,  
Poonch
- Mr. Javed Ahmad Kar, AHO, Muzaffarabad
- Mr. Raza Ahmed, Bagh
- Mr. M Asghar, Agricultural Inspector, Bagh
- Mr. Raja Waqar, Agriculture Officer, Neelum
- Mrs. Ruksana Butt, Lady Extension Officer,  
Neelum
- Mrs. Shaheen Sarwar, Lady Extension  
Officer, Neelum

### Health Department

- Dr. Saeed Awan, District Health Officer,  
Muzaffarabad
- Dr. Fida Hussain, District Health Officer,  
Mirpur
- Dr. Sardar Manzoor Hussain, District Health  
Officer, Bagh
- Dr. Shafqat Hussain, District Health Officer,  
Kotli
- Dr. Abdul Raouf Nishtar, Medical  
Superintendent DHQ Hospital, Sudhnoti
- Dr. Hayat Khan, District Health Officer,  
Poonch
- Dr. Iqbal, District Health Officer, Bhimber
- Dr. Ghulam Nabi, District Health Officer,  
Neelum

### Small Industries/Akhuwat

- Mr. Faisal Mehmood, Area Manager, Akhuwat Program
- Mr. Ramzan Arshad, Branch Manager, Akhuwat Program

### Wildlife and Fisheries Department

- Mr. Sajid, Assistant Director, Mirpur
- Mr. Muhammad Ashraf, Assistant Warden, Neelum

### Technical Education and Vocational Training Authority

- Mr. Abdul Rasheed, Principal GCT, Mirpur
- Mr. Iftikhar, Principal GCT, Kotli

### Social Welfare Department

- Mr. Malik Nisar, Social Welfare Officer, Mirpur
- Mr. Mukhtar Awan, Social Welfare Officer, Muzaffarabad

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# Abbreviations

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<b>ADP</b>	Annual Development Programme
<b>AI</b>	Artificial Insemination
<b>AJ&amp;K</b>	Azad Jammu & Kashmir
<b>AKSIC</b>	Azad Kashmir Small Industries Corporation
<b>BISP</b>	Benazir Income Support Programme
<b>BR</b>	Birth Registration
<b>CBN</b>	Cost of Basic Needs
<b>CRVS</b>	Civil Registration and Vital Statistics
<b>EPI</b>	Expanded Program on Immunization
<b>ERRA</b>	Earthquake Reconstruction and Rehabilitation Authority.
<b>FAO</b>	Food and Agriculture Organization
<b>FY</b>	Financial Year
<b>GDP</b>	Gross Domestic Product
<b>GEF</b>	Global Environmental Fund
<b>HDI</b>	Human Development Index
<b>HH</b>	Household
<b>IT</b>	Information Technology
<b>LG&amp;RDD</b>	Local Government and Rural Development Department
<b>LoC</b>	Line of Control
<b>LPG</b>	Liquid Petroleum Gas
<b>MDGs</b>	Millennium Development Goals
<b>NADRA</b>	National Database and Registration Authority
<b>P&amp;DD</b>	Planning & Development Department
<b>PDO</b>	Power Development Organization
<b>SDGs</b>	Sustainable Development Goals
<b>TDCP</b>	Tourism Development Corporation of Pakistan
<b>TEVTA</b>	Technical Education & Vocational Training Authority
<b>UC</b>	Union Council

## Executive Summary

Socio-economic development is characterized by the transformation of economies and societies from lower strata to the upper levels where resource deficiencies are adequately addressed, and the vast majority enjoys a good living standard. Productive sectors, like agriculture, livestock, tourism, sericulture, small industry, and services, on the other hand, provide the platform for maximizing the economic potential of a rural economy like Azad Jammu and Kashmir (AJ&K).

This report assessed the major productive sectors in AJ&K through a multi-pronged approach. The assessment methodology included a review of published and grey literature, in-depth interviews of key officials from productive sectors, and a household survey. The development plans of the last five years from 2014 to 2019 were examined, and fiscal analysis was carried out to present an appraisal of the contributions and potential of these departments towards the socio-economic uplift of AJ&K. **Chapter 1** of the report comprehensively elaborates on the functions and fiscal analysis of major productive sectors in AJ&K.

**Chapter 2** presents the development potentials of the productive sectors in AJ&K. The findings presented in this chapter were based on detailed field assessments conducted in eight districts of AJ&K and focus group discussions with key stakeholders. The SWOT analysis of the productive sectors was carried out with the Section Chiefs of the Planning and Development Department of AJ&K and representatives of productive sectors' departments. Ongoing interventions of the Government through different development projects have been examined. The analysis has revealed many factors like inappropriate beneficiary selection, political influence, lack of proper planning, and the dearth of skilled workforce as the primary reasons for the sub-optimal performance of

productive sectors in the AJ&K economy. On the flip side, the high endowment of natural resources, adoption of new technologies, and government support emerge as the silver lining on the horizon to fully tap the potential of productive sectors of AJ&K.

The socio-economic profile of the productive sectors in AJ&K is presented in **Chapter 3** of the report. A comprehensive household survey was conducted, which covered 69% of the population of the AJ&K. The study has provided disaggregated data on the socio-economic status, household income, demography, education, agriculture, livestock, household assets, Civil Registration, and Vital Statistics, infrastructure development, household fuel consumption, sewerage and water sources and coverage of government schemes directed towards increasing employability, and promoting economic growth at the district level. The survey findings presented in **Chapter 3** were derived from the data of 2,730 households in eight districts of AJ&K. The study has shown that the literacy rate in AJ&K is 78%, with technical education at ten percent.

Unemployment was recorded at eight percent. Trade workers, labourers, government servants, and government pensioners represent the significant share in occupations with their share of 29%, 25%, 11%, and 9%, respectively. The agriculture sector is expected to grow, but its growth is constrained by low productivity, fewer profits, poor farm management, and inadequate rural transportation and irrigation systems. Productivity in the agricultural sector in AJ&K varies considerably across various districts. The study finds that agriculture accounted for 8% of the total workforce. Around 72% of households own agricultural land, while average agricultural land per household is 1.1 acre. Wheat, maize, vegetables, and fruits are major crops. An overwhelming majority of more than



87% of farmers grow crops for subsistence only, and of those, only 31% can fulfil the needs of their households.

The livestock profile of the AJ&K showed that 53% of the household raised cattle, while 34% of the households raising cattle sell milk. The findings also showed that 36% of the households were engaged in backyard poultry, but only 17% of these households use poultry for commercial purposes. AI has been instrumental worldwide in increasing milk production of indigenous cattle. AJ&K has been successful in increasing the milk production from an average of 2.7 litres/day in local breeds to 8.1 litres/days in AI improved breeds (Holstein Friesian).

To enhance productivity and uplift the economic status of people in AJ&K, the Government of AJ&K has introduced several schemes and initiatives. The analysis reveals that 10% of the sample population has received benefits from these schemes/initiatives in AJ&K. To gain the full potential of productive sector schemes in AJ&K, the coverage of initiatives and services required expansion. A gradual increase in coverage of service at the household level to 100% of the farmers raising livestock and engaged with agriculture may improve the productivity of these sectors in AJ&K.

The potentials of wildlife and fisheries are not utilized sustainably in AJ&K. A very small proportion of the workforce (0.3%) is engaged in this occupation. The Department of Wildlife and Fisheries has limited capacities in terms of infrastructure and human resources. Initiatives like Community-Based Trophy Hunting and the promotion of ecotourism may improve the productivity of wildlife and fisheries in AJ&K. In the sericulture sector, only 0.11% of the persons are employed in the sericulture industry. This industry can augment the income of small landholding farmers and may improve the waged employment of women at the household levels. In addition to the employment and income potential, the silkworm production may capture

a reasonable share in the total foreign exchange earnings. Linkages with microfinancing initiatives may have a significant effect on improving employability and income generation in the sericulture industry.

The development schemes of livestock, agriculture, sericulture, and tourism have been instrumental in improving the sector's performance. However, these schemes lack strategic directions and fiscal stability. Assistance programs to farmers through linking microfinancing initiatives and improving access to markets and pricing systems may be beneficial to farmers in improving production in these sectors.

Rural economies, such as AJ&K, could experience an increase in labour productivity through increasing women's participation in productive sectors. In AJ&K, only 8% of women are engaged in waged or income-generating activities. Whereas there is a huge potential for women entrepreneurship in agriculture and livestock sectors; strategies that address access to markets will significantly improve women's participation in the productive sectors.

The policy recommendations for improvement of the productive sectors have been comprehensively given in **Chapter 4**. Well-directed interventions can tap the potential of productive sectors through consistent policies at the government level. The targeting of beneficiaries for government intervention is a very crucial aspect as it reduces the wastage of rare resources, and ultimately, the economy gets the premium in the form of enhanced production. Improvement in marketing, commercialization, and raising of human capital through skill enhancement of the workforce are other important areas where policymakers will have to focus. Side by side, investment in infrastructure cannot be ignored as robust infrastructure provides the mainstay for many of the productive sectors like agriculture, tourism, livestock, etc. Further, engagement of women

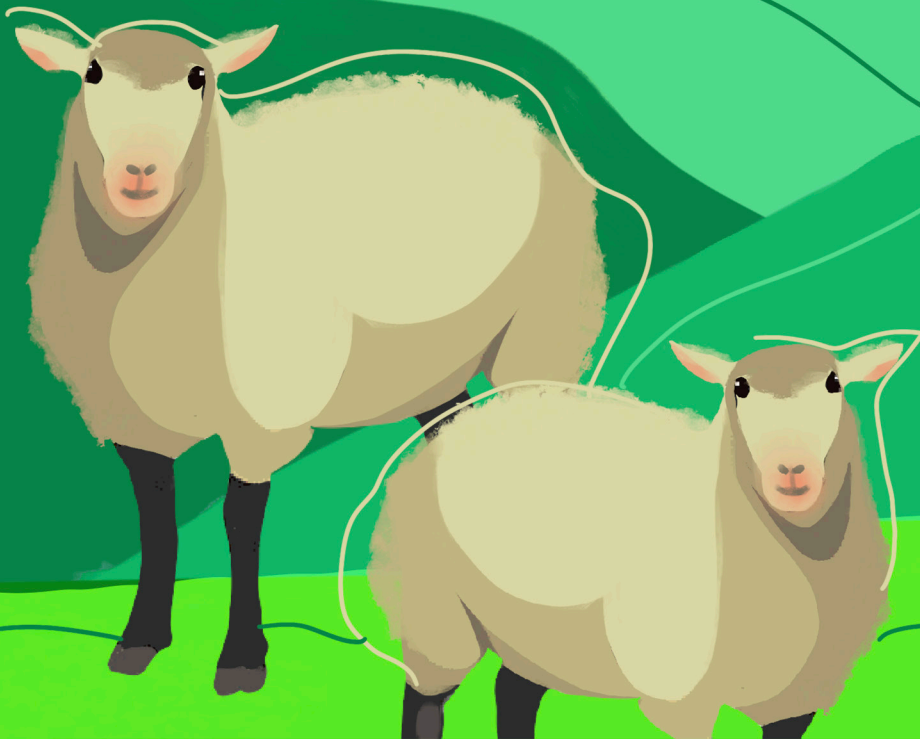
and strengthening of the microfinance networks is also required to reap the full benefits of the productive sectors in AJ&K. In like manner, the Government of AJ&K will have to strengthen the overall technical and vocational education system, including the labour market information system to enhance the human capital so that a modern workforce, well equipped to meet the requirements of 21st century is there to steer it towards a self-reliant and sustainable growth trajectory.

The demographic transition of AJ&K, through a reduction in growth rate from 2.4% over the last decade to estimated 1.6% per year in 2019, and

improving the life expectancy of the population, is likely to favour AJ&K's economic development through increasing the proportion of working-age individuals (15-60 years) to more than 60% over the next few years (20% of the population in 2019 is 9-14 years). These changes in population size and age structure are likely to contribute to economic growth by supplying a growing and young labour force to the economy. Enhancing the knowledge and skills of human capital in productive sectors, especially agriculture, livestock, sericulture, and tourism, are likely to improve the economic status of AJ&K over the coming years.

# 01

## REVIEW AND ASSESSMENT OF THE PRODUCTIVE SECTORS IN ADMINISTERED



## 1.1 Introduction

Economic development has been defined as the process by which economies are transformed from ones in which most people have minimal resources and choices to ones in which the vast majority have the availability of higher levels of resources and opportunities. Economic development, therefore, is the transformation of economies from low-resource and limited choices to economies with better resources and maximum opportunities (Smelser & Baltes, 2001).

With regard to the role of the productive sectors in the economic development of countries, it is understood that economic development mainly rests upon overcoming collective action and coordination problems in constructing competitive sectors (Whitfield & Therkildsen, 2011). The productive sector, thus, plays a critical role in the socio-economic development of developing and underdeveloped economies by providing the basic building blocks for economic growth and social transformation in the country.

## 1.2 Sustainable Development Goals

The United Nations General Assembly adopted the Millennium Declaration in 2000, which states that “in addition to our separate responsibilities to our societies, we have a collective responsibility to uphold the principles of human dignity, equality and equity at the global level” (UN 2000: para 2). Following this declaration, the Millennium Development Goals (MDGs) were adopted with a primary focus on international and national development policy with a set of

targets to achieve by 2015 (Battersby, 2017). In 2015, world leaders adopted the 17 Sustainable Development Goals (SDGs), including its 169 targets and 232 indicators to be achieved by 2030. These SDGs go further than the MDGs with both developed and developing countries held responsible for meeting 169 targets, with emphasis on eradicating extreme poverty, inclusive socio-economic development, and ecological sustainability.

## 1.3 Socio-Economic Development in AJ&K

A review of the literature suggests that Azad Jammu and Kashmir’s (AJ&K) economy primarily depends on agriculture, livestock, and remittances (both local and foreign) (Shah, 2017). Unemployment is an important indicator to measure economic activity. Unemployment in AJ&K increased from 6% in 1998 to 11% in 2014–15. According to the Labour Force Survey (2017–18), a slight decrease in the overall unemployment rate was noted with the new rate at 10.3%. In AJ&K, a significant proportion of the population migrated over the last few decades to the United Kingdom and other developed countries. The majority of these emigrants are from Mirpur, Bhimber, or the southern parts of Kotli. In AJ&K, 27% of the employment is

related to community, social & personal services, followed by 19% in construction, 19% pertaining to agriculture and allied activities, and 17% in wholesale and retail businesses (Labour Force Survey 2017–18). Labour workforce engaged in the informal sector contribute 74% of non-agriculture employment. Although there is no published data on employment contributions by the private sector, employees engaged in informal sectors can be taken as a proxy measure of private-sector employment.

Further strengthening of the private sector in AJ&K, for achieving socio-economic development may be considered, particularly through the development of Small and Medium

Enterprises in the State. The importance of private sector involvement through Small and Medium Enterprises has been recognized in SDGs as well. The SDG Target 8.3 aims explicitly to “promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro, small, and medium-sized enterprises, including through access to financial

services.” Evidence from the literature suggests that multinational corporations play a significant role in improving the economy by sharing new technologies and improved management practices with local firms (Kim & Milner, 2019). By partnering with Small and Medium Enterprises, multinational firms strengthen local entrepreneurship, create skilled employment, and promote knowledge and technology transfers.

## 1.4 Human Development Index of AJ&K

According to the Pakistan Human Development Index (HDI) Report 2015, the HDI of AJ&K is comparatively better than the other provinces of Pakistan. According to the report, the HDI of AJ&K is 0.734, followed by Punjab with 0.732 and Sindh with 0.640. The HDI of Khyber Pakhtunkhwa (KPK) is 0.628, Gilgit-Baltistan has a

score of 0.523, while Balochistan stands at 0.421 and Newly Merged Districts (previously known as Federally Administered Tribal Areas) of KPK has a very low HDI of 0.216 (Najam & Bari, 2017). Table 1 shows the various development indices of AJ&K.

Table 1. Human Development Index and key indicators of Azad Jammu & Kashmir 2017.

Human Development Index 2015 <sup>a</sup>	0.734
Human Development Index 2013 <sup>b</sup>	0.726
Immunization Rate (%) <sup>a</sup>	86.7
Satisfaction with Health Facility (%) <sup>a</sup>	66.3
Expected Years of Schooling <sup>a</sup>	12.2
Mean Years of Schooling <sup>a</sup>	4.8
Living Standard (%) <sup>a</sup>	80

<sup>a</sup>= HDI stats of 2015

<sup>b</sup>= HDI stats of 2013

Source: Najam A and Bari F, Pakistan Human Development Index Report 2017

## 1.5 Natural Disasters and Socio-Economic Development

Natural disasters are recognized as one of the significant causes that hinder socio-economic development. Asia is the most disaster-prone region in the world. During the past 100 years, nine of the ten worst disasters occurred in Asia (Udomratn, 2008). Earthquakes are one of the

most frequently occurring natural disasters that are particularly common in the Asian region because East and South-east Asia are situated on the ‘Circum-Pacific Seismic Belt’ (Kokai, Fujii, Shinfuku, & Edwards, 2004); AJ&K lies within this belt. Earthquakes of large magnitude pose a

significant risk to those who survive by damaging or destroying the public infrastructure and livelihood opportunities (Briggs, 2006). One such earth earthquake struck AJ&K on 8th October 2005, having a magnitude of 7.8 on the Richter Scale. The devastations were massive, with more than 80,000 casualties. Communications, roads, irrigation systems were destroyed, and up to 80% of the livestock population vanished in the disaster (Stefan & Hermann, 2011). More

recently, another earthquake struck southern parts (Mirpur) of AJ&K, with 39 fatalities and 749 individuals injured. More than 500 houses were completely damaged and around 4000 partially damaged (NDMA, 2019). A devastating avalanche struck in the Neelum Valley of AJ&K on 15 January 2020, which swept more than three villages, with a death toll of 74. More than 300 houses were partially or completely damaged (The News, 2020).

## 1.6 The Productive Sectors and Socio-Economic Development

The major productive sectors in AJ&K include agriculture, livestock, mining, small industry, and services. These sectors in the context of rural economies have their peculiar importance. This study analyzed the productive sectors that contributed to socio-economic development. The socio-economic profile of AJ&K was also developed. Strengths, weaknesses,

opportunities, and threats in all development dimensions were examined. Chapter 1 of the study reviews the productive sectors of AJ&K with regard to their initiatives, programs that are being currently undertaken, and a review of their annual development expenditure. Sector-wise policy recommendations are provided in Chapter 4 of the report.

## 1.7 Demography of Azad Jammu and Kashmir

The State of Azad Jammu and Kashmir is a nominally self-governed jurisdiction administered by Pakistan. The territory shares a border with Gilgit-Baltistan, together with which it is referred to by the United Nations and other international organizations as "Pakistan Administered Kashmir." The territory also borders Pakistan's Punjab province to the south and Khyber Pakhtunkhwa province to the west. To the east, the State of Azad Jammu & Kashmir is separated by the Indian Occupied Kashmir through the Line of Control, the de-facto border between India and Pakistan. Azad Jammu and Kashmir consist of three divisions; 1) Muzaffarabad; 2) Poonch, and 3) Mirpur. These

divisions are divided into ten districts named Muzaffarabad, Neelum, Jhelum Valley (Hattian Bala), Bagh, Haveli, Poonch, Sudhnoti, Kotli, Mirpur, and Bhimber. These districts are further divided into 32 Tehsils.

The population of AJ&K, according to government statistics for 2019, is 4.11 million, with 2.01 million males and 2.10 million females. A total of 17% of the population lives in urban areas, and 83% live in rural areas. The annual population growth rate of AJ&K is 1.64%. The population density of AJ&K is 309 persons per sq. km. with a total area of 13,297 sq. km (P&DD, 2019).



Table 2. The population of AJ&K according to the census of 1998 and 2017.

Sr. No	Division	District	Census Population (Millions)				Population Proportion %
			1998		2017		
			N	Growth Rate %	N	Growth Rate %	
1		Muzaffarabad	0.454	2.80	0.650	1.91	16.0
2	Muzaffarabad	Neelum	0.126	2.80	0.191	2.23	4.7
3		Jhelum	0.166	2.80	0.231	1.74	5.7
4		Bagh	0.282	2.00	0.372	1.47	9.2
5	Poonch	Haveli	0.112	2.00	0.152	1.64	3.8
6		Poonch	0.411	2.24	0.500	1.04	12.3
7		Sudhnoti	0.224	1.99	0.298	1.50	7.4
8		Kotli	0.563	2.59	0.774	1.69	19.1
9	Mirpur	Mirpur	0.333	2.09	0.456	1.66	11.2
10		Bhimber	0.302	2.60	0.421	1.77	10.4
		<b>Total</b>	<b>2.973</b>	<b>2.41</b>	<b>4.045</b>	<b>1.64</b>	<b>100.0</b>

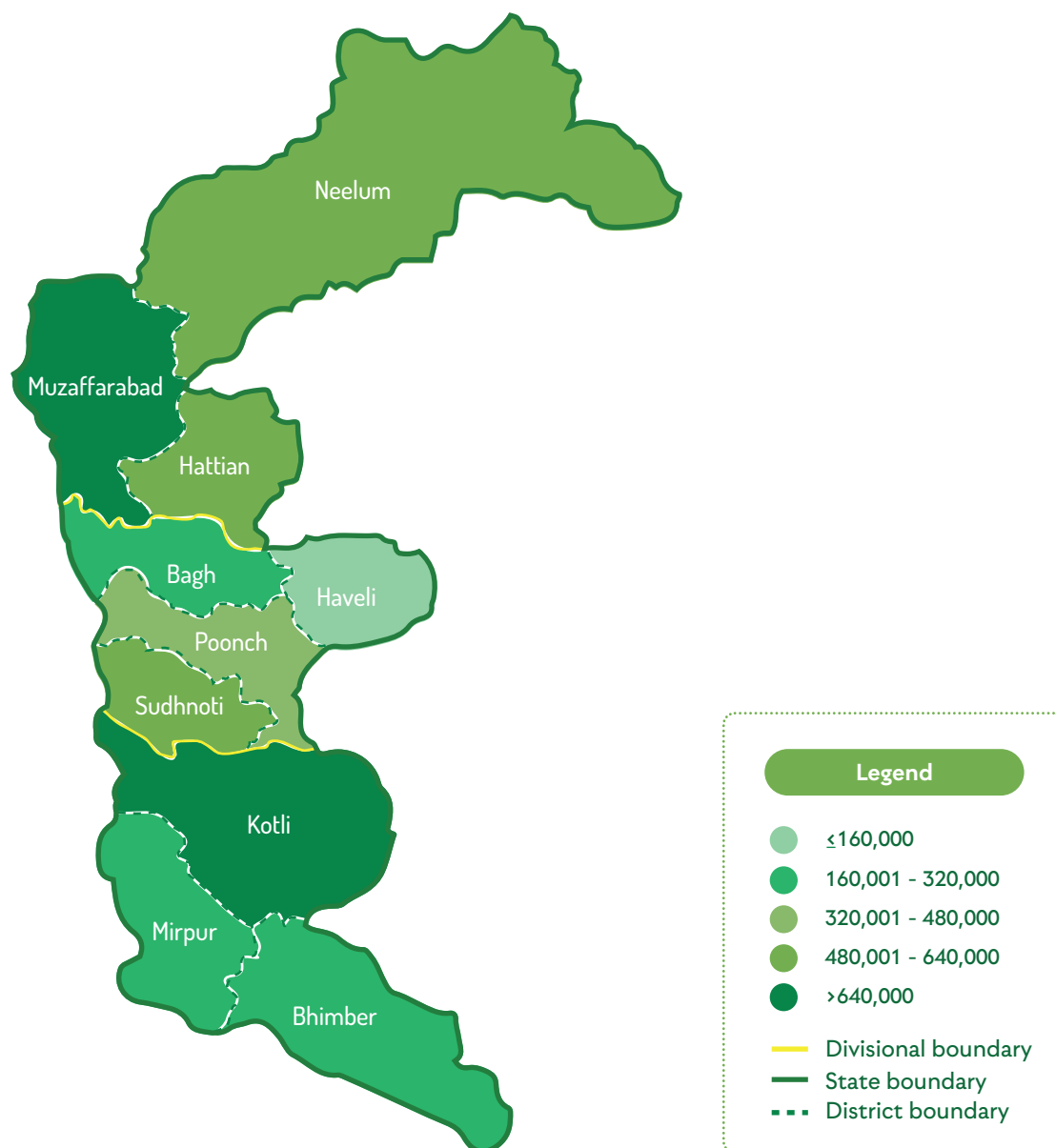


Figure 1. Population density map of Azad Jammu & Kashmir 2019.

## 1.8 Socio-economic Indicators

The socio-economic indicators of AJ&K are comparatively better than the national average. For instance, the maternal mortality ratio for AJ&K according to Multiple Indicator Cluster Survey 2007-08 was 201 per 100,000 live births (UNICEF, 2007-08), whereas according to the Pakistan Demographic and Health Survey 2006-07 the maternal mortality ratio for Pakistan was 276 per 100,000 live births (National Institute of

Population Studies, 2008). According to 'Pakistan Maternal Mortality Survey 2019: Key Indicator Report' published by the National Institute of Population Studies (NIPS) in August, 2020, the MMR is 186 for Pakistan, and 104 in Azad Jammu and Kashmir per 100,000 live births. The infant mortality rate of AJ&K for 2017 was 47 per 1,000 live births (Health Department GoAJK, 2017), and that of Pakistan estimated by

Demographic Health Surveys 2017-18 is 62 per 1,000 live births (National Institute of Population Studies (Pakistan) and ICF International, 2018). The life expectancy at birth is 67.7 years. It is

slightly higher in females (70 years) than in males (66 years). The immunization coverage of AJ&K has decreased from 94% in 2017 to 73% in 2019 (P&DD, 2019).

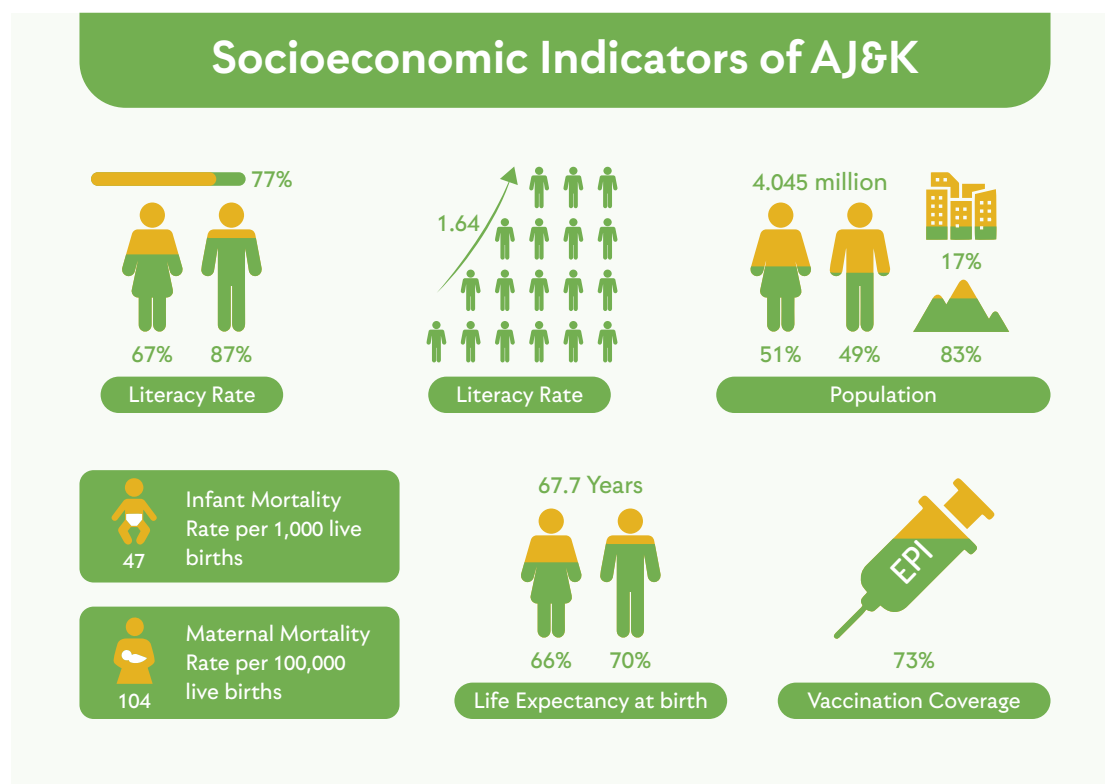


Figure 2. Socio-economic indicators of Azad Jammu & Kashmir

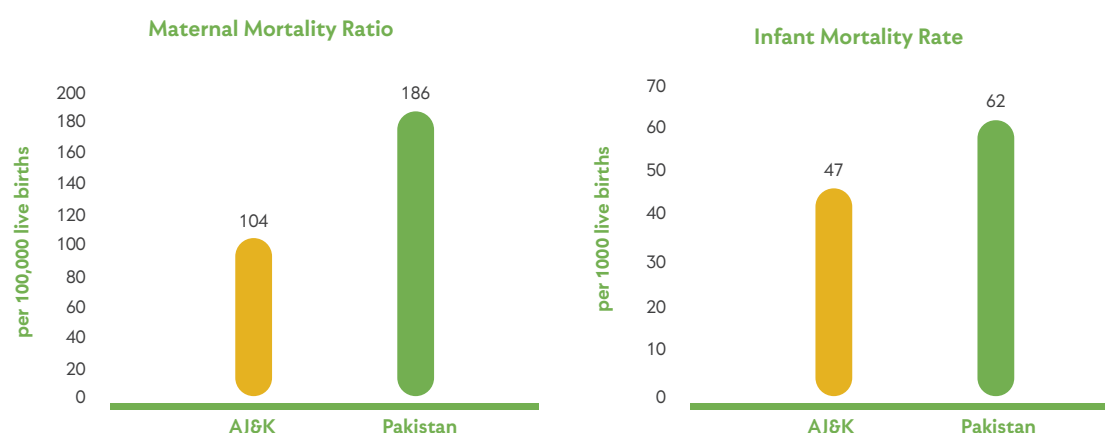


Figure 3. Comparison of maternal mortality and infant mortality between Pakistan and AJ&K.

According to the Labour Force Survey, 2017–18, the literacy rate of AJ&K was 77% (Pakistan Bureau of Statistics, 2017-2018b), with a higher percentage in males (87%) compared to females

(67%). The literacy rate of AJ&K for 2017 is better than the literacy rate of 62% in Pakistan for the same year of 2017 (Pakistan Bureau of Statistics, 2017-2018a) Figure 4.

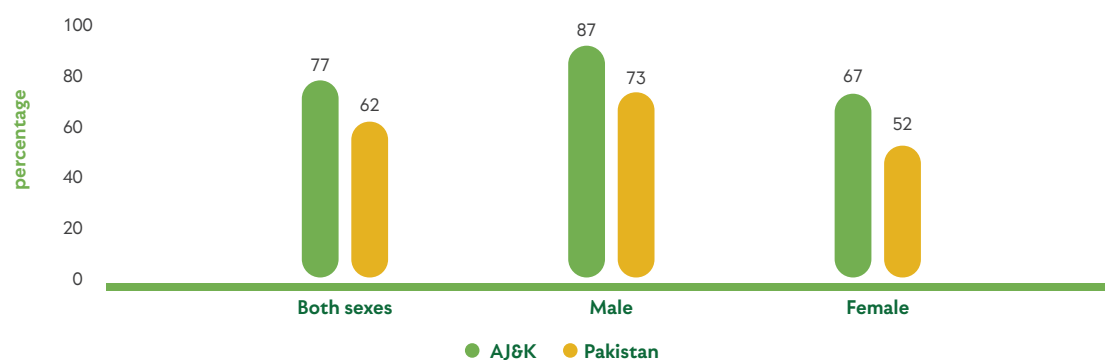


Figure 4. Comparison of literacy rates between Pakistan and AJ&K.

## 1.9 Labour and Employment Status in AJ&K

According to the Labour Force Survey, 2017-18, unemployment in AJ&K stands at 10.3%. No significant difference is observed in the unemployment rates in the rural and urban areas in Table 3. A higher percentage of

unemployment is noted in females of both urban and rural areas. In urban areas, 19% of the females are unemployed, whereas this rate is significantly higher at 24% in rural areas (Table 3).

Table 3. Employment status in AJ&K, 2017-18.

Indicator	Total	Male	Female
	%	%	%
<b>Unemployment</b>			
All Areas	10.3	8.4	22.6
Urban	10.9	9.2	19.4
Rural	10.1	8.1	23.9
<b>Employment in Major Occupational Groups</b>			
Managers	1.7	1.7	1.2
Professionals	12.6	8.6	43.3
Technicians & associate professionals	3.2	2.8	5.8
Clerks support workers	3	3.4	0.2
Service and sales workers	21.3	23.9	1.7
Skilled agricultural, forestry & fishery workers	18.9	16.7	35.5
Craft & related trades workers	13.1	14	5.7
Plant/ machine operators & assemblers	7.1	8	0.5
Elementary occupations	19.2	20.9	6.1

Source: Labour Force Survey 2017-18

A higher proportion (43%) of females are employed in professional jobs compared to 9% of males (Pakistan Bureau of Statistics, 2017-2018b). The Labour Force Survey did not define the occupations included in the professional category in their report, however, according to the International Standard Classification of Occupations, the professionals with skill level 4 are included in this occupation group and includes sales and marketing managers, civil engineers, secondary school teachers,

medical practitioners, nurses and computer system analysts (ILO, 2012). The engagement of males in service and sales works was at 24%, whereas that of females was 2%. Females among the skilled agricultural, forestry & fishery workers' occupational category are 35%, which is almost two times the proportion of males in this occupational group (17%). Elementary occupations make 19% of all occupational groups in AJ&K (Pakistan Bureau of Statistics, 2017-2018b).

### 1.10 Poverty in AJ&K

The Planning Commission estimated the poverty line of Rs. 3250.28 per adult equivalent per month in FY2015–16, through Cost-of-Basic Needs (Planning Commission, 2016). This method is based on estimations of average spending on food and non-food expenditures (clothing, shelter, education) that are necessary for the households. This poverty line is updated using CPI-based inflation. AJ&K followed the poverty line estimated by Benazir Income Support Programme through a Proxy Mean Test (PMT) score. National Socio-Economic Registry, in its analysis of 2010–11, reported that approximately 18% of the AJ&K population lives below the

national poverty line. The Multidimensional Poverty Index (MPI) of AJ&K is 24.9% (Planning Commission of Pakistan & UNDP, 2016). According to Benazir-Income Support Program (BISP), National Socio-economic Registry 2010–11, a mean test score of 16.17 was set as a cut-off point for a proxy measure of poverty at a household level. AJ&K has a mean score of 29, which is higher than the mean poverty scores of all provinces and regions. The overall incidence of poverty (or proportion of households below the 16.17 cut-off on proxy mean test score) in Pakistan is estimated at 28%, whereas the incidence of poverty in AJ&K is 18% (Arif GM, 2015).

Table 4. District-wise and category-wise ranking by the poverty status of AJ&K.

Districts	Poverty	
	Category	Population (%)
Bhimber	Least poor	8.3
Poonch	Least poor	8.3
Sudhnoti	Least poor	9.7
Kotli	Least poor	13.4
Bagh	Vulnerable	14.1
Mirpur	Vulnerable	14.8
Muzaffarabad	Vulnerable	23.2
Jhelum Valley	Poor	30.8
Haveli	Poor	37.6
Neelum	Extremely poor	56.1

Source: An Analysis of National Socio-economic Registry 2010–11

Gross Regional Product, which is an essential measure of socio-economic status, is not available for AJ&K. The measure of poverty at the local level with disaggregated data is helpful in the targeting of the resources and assistance where needed the most. District-wise and category-wise ranking by poverty status show that four districts (Poonch, Sudhnoti, Kotli, and Bhimber) lie in the category of least poor districts (Table 4). The district Neelum lies in the category of the extremely poor district with 56%

of the population living below the poverty line (NSER 2010-11).

Several factors contribute to poverty and vulnerability. Inadequate access to clean water and nutritious food, little or no access to livelihoods or jobs, conflicts, inequality, poor education, climatic extremes, lack of infrastructure, limited capacity of the Government, lack of reserves are among the significant factors reported globally (US, 2019).

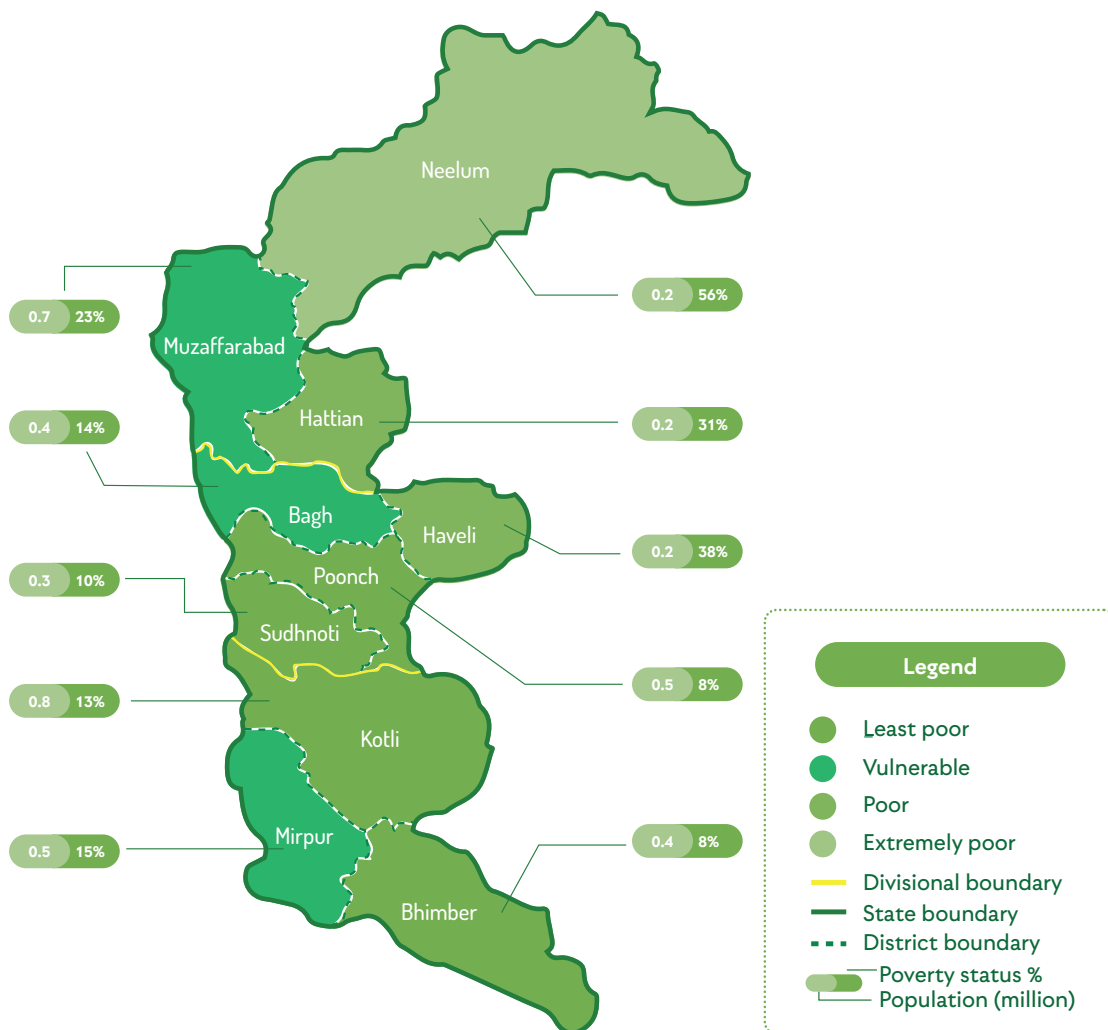


Figure 5. Map of AJ&K with district-wise poverty categories.

In the context of Azad Jammu & Kashmir, the impact of these factors can vary compared to other regions of the world and warrants

a detailed study to examine the factors contributing to poverty in Azad Jammu & Kashmir.



## 1.11 Analysis of Recurrent and Development Expenditure and Incomes

The study conducted a financial analysis of the recurrent expenditure, development expenditure, and the departmental incomes for the five years from FY2014-15 to FY2018-19. The total development expenditure of AJ&K was PKR 10,500 million in FY2014-2015. Over the last five years, it reached PKR 22,275 million in FY2018-2019,

reflecting an increase of 112% over the reference period. The development expenditure of the productive sectors remained around 15% of the total development expenditure from FY2014-2015 to FY2018-2019. Table 5 shows the proportion of development expenditure against the total development expenditure from FY2014-2019.

Table 5. Development expenditure of the productive sectors, AJ&K, 2019.

Financial Year	Development Expenditure (PKR millions)		
	Total of AJ&K	Total of Productive Sectors*	%
2014-15	10,500	1,704	16
2015-16	11,500	1,578	14
2016-17	12,551	2,312	18
2017-18	23,280	3,168	14
2018-19	22,275	3,418	15
2019-20	24,615	4,442	18

\* Include Agriculture, Livestock, Small Industries, Minerals, Tourism, Wildlife & Fisheries, Forest, Sericulture, TEVTA, and Local Government & Rural Development.

### 1.11.1 Recurrent Expenditure on Productive Sectors

Overall, the recurrent expenditure of departments related to the productive sectors has increased in the last five years. The expenditure of the Agriculture Department was Rs. 502.5 million in FY2014-2015. The recurrent expenditure increased to Rs. 680.1 million in FY2018-19, with a 35%

increase over the five years. The expenditure of the Livestock and Dairy Development Department was Rs. 506 million in FY2014-15, with an increase of 27%, it became Rs. 641.8 million in FY2018-19. Figure 6 shows the analysis of recurrent expenditure in the productive sectors of AJ&K.

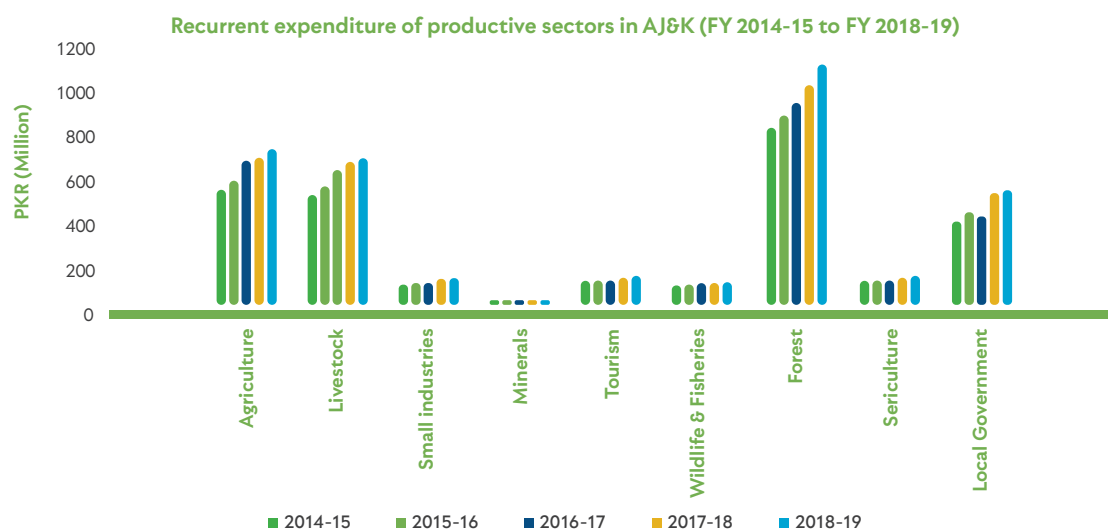


Figure 6. Analysis of recurrent expenditure in the productive sectors of AJ&K from 2014-19.

The Forest Department has the highest expenditure as well as the highest increase during the past five years. In 2014, it was Rs. 689 million, which increased to Rs. 1,037 million in FY2018-19 with a 51% increment. The recurrent expenditure of Small Industries Corporation increased from Rs. 58 million in FY2014-15 to Rs. 83 million in FY2018-19, reflecting a 43% increase in recurrent expenditure. The expenditure of the Mineral Resources Department has increased by 35%, from Rs. 12 million in FY2014-15 to Rs. 16

million in FY2018-19. Similarly, the expenditure of the Sericulture Department increased by 39%, from Rs. 63 million in FY2014-15 to Rs. 88 million in FY2018-19. The Tourism Department had an expenditure of Rs. 60 million in FY2014-15. This became Rs. 84 million in FY2018-19, reflecting a 40% increase in the recurrent expenditure. Table 6 shows the year-wise details of the recurrent expenditure of the departments, as mentioned above. Further financial details are attached at Annex IX of this report.

Table 6. Recurrent expenditure of productive sectors in AJ&K (2014-19).

Budget Code	Departments / Sectors	Financial Year (Rs. millions)				
		2014-15	2015-16	2016-17	2017-18	2018-19
KC21019	Agriculture	502.5	541.7	613.6	625.5	680.1
KC21020	Livestock	506.0	533.7	607.8	621.3	641.8
KC21027	Industries & Mineral Resources	69.6	75.5	77.9	90.2	98.5
-	Industries	58.0	63.4	65.3	76.5	82.9
-	Mineral Resources	11.6	12.1	12.6	13.7	15.6
KC21030	Tourism, Wildlife/Fisheries	112.6	119.2	123.5	142.5	156.0
-	Tourism	59.8	62.9	65.0	74.7	83.7
-	Wildlife /Fisheries	52.7	56.3	58.5	67.8	72.3
KC21023	Forests	688.7	724.2	781.5	897.0	1,036.8
KC21029	Sericulture	63.0	67.6	81.0	81.9	87.5
KC21026	Local Government	376.7	429.3	421.2	494.7	542.2

The Wildlife and Fisheries Department had an expenditure of Rs. 53 million in FY2014-15, and Rs. 72 million in FY2018-19, which shows an increase of 37% in the expenditure. The Department of Local

Govt. and Rural Development had an increase of 44%, from Rs. 377 million in FY2014-15 to 542 million in FY2018-19 in their expenditure (Finance Department Government of AJ&K, 2019).

### 1.11.2 Development Expenditure on Productive Sectors

Similar to recurrent (regular) expenditure, development expenditure on the productive sectors also increased over the last five years (FY2014-15 to FY2018-19). The development expenditure of the Agriculture Department was Rs. 94 million in FY2014-15. With an increase of 65%, the development expenditure was Rs. 155 million

in FY2018-19. The development expenditure of the Livestock and Dairy Development Department increased from Rs. 87 million in FY2014-15 to Rs. 152 million in FY2018-19. This is a 75% increase in development expenditure. Figure 7 shows the analysis of development expenditure in the productive sectors of AJ&K.

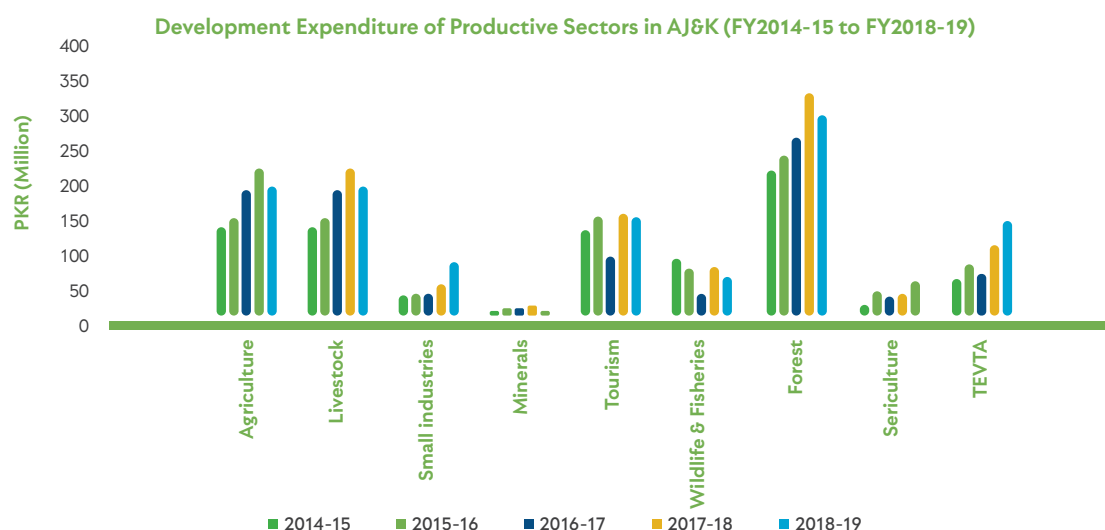


Figure 7. Analysis of development expenditure in the productive sectors of AJ&K from 2014-19.

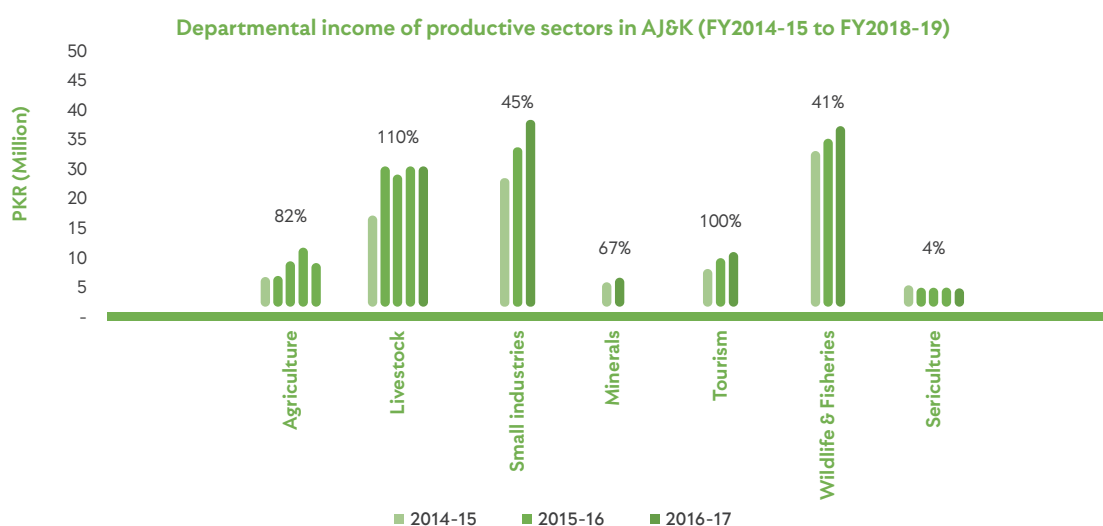
The development expenditure of the Forest Department increased from Rs. 127 million in FY2014-15 to Rs. 297 million in FY2018-19. The development expenditure of Small Industries increased by 172%, from Rs. 25 million to Rs. 68 million, and that of the Mineral Resources Department increased by 113%, from Rs. 04 million to Rs. 09 million over the same period of five years. The expenditure of the Sericulture Department was Rs. 35 million in FY2015-16 (No previous expenditures available) and increased to Rs. 55 million in FY2018-19. This is a 57%

increase in development expenditure over the same reference period. The development expenditure of the Tourism Department increased by 40%, from Rs. 115 million in FY2014-15 to Rs. 161 million in FY2018-19. The development expenditure of the Wildlife and Fisheries Department in FY2014-15 was Rs. 105 million and Rs. 53 million in FY2018-19. This is a decrease of 49% in the development expenditure for this sector. Year-wise details of the development expenditure are presented at Annex XI.

### 1.11.3 Departmental Revenue from Productive Sectors

The comparison of departmental revenue from taxes, licensing, and services fees of the productive sectors show a gradual increase in the income of the Agriculture Department from Rs. 3.30 million to Rs. 6.00 million, which is an 82% increase from FY2014-15 to FY2018-19. The Livestock and Dairy Development Department has a significant increase in the departmental income from Rs. 14.3 million to Rs. 30.0 million, which is a 110% increase in income over the reference period. The

Small Industries Corporation has an increase of 45% in the departmental revenue from Rs. 28 million in FY2014-15 to Rs. 40 million FY2016-17 (data for FY2017-18 and FY2018-19 not available). The income of the Minerals Resources Department had an increase of 67% from Rs. 3 million in FY2015-16 to Rs. 5 million in FY2016-17. Figure 8 shows the analysis of the departmental income of the productive sectors of AJ&K from FY2014-15 to FY2018-19.



\* Income not available for FY 2017-18 and FY 2018-19  
Source: Finance Department, Azad Government of AJ&K (2019)

Figure 8. Analysis of departmental income of the productive sectors of AJ&K from 2014-19.

The Sericulture Department has an income of Rs. 3.5 million in FY2014-15, which became Rs. 3.7 million in FY2018-19. This reflects a slight increase of 4% in the income of the Sericulture Department. The income of the Tourism Department increased from Rs. 6

million in FY2014-15 to Rs. 12 million in FY2016-17. The Department of Wildlife and Fisheries had an income of Rs. 32.0 million in FY2014-15, which has become Rs. 45 million in FY2016-17, showing a 41% increase in the departmental income.

## 1.12 An Analysis of Productive Sectors in AJ&K

A desk review of the major productive sectors was carried out in AJ&K. The details of the review are presented below.

### 1.12.1 Department of Agriculture

The Department of Agriculture was established in 1952 with the primary focus on demonstration of improved farm practices and promoting the use of the improved seed, chemical fertilizers, pesticides, and planting material for increasing the productivity of the crops. After that, need-based efforts were made for establishing the required facilities/labs from time to time through various development projects such as the establishment of entomology lab, soil science

lab, fruit plant nurseries for promotion of horticultural activities, procurement, and supplies wing, etc. The Department was re-organized in 1995 by separating the extension wing under a newly established Extension, Training & Adaptive Research Directorate while, the Soil Lab, *Integrated Pest Management* Lab, Horticulture and Agronomy sections were consolidated under the newly organized Directorate of Agriculture Research and Technical Support Services.

#### 1.12.1.1 Projects of Agriculture Department

A desk review of major development projects of the Agriculture Department implemented over the last five years (2014 to 2019) was performed to assess their impact on the socio-economic development of AJ&K. The review was performed on the following development schemes.

- Promotion of Agribusiness Enterprise Development and Marketing in AJ&K
- Fruit Development Program for Improving Existing Wild Fruit Flora in AJ&K
- Strengthening of Agriculture Extension Service for the Adoption of New Technologies
- Re-construction of Soil & Water Testing Labs and Directorate General of Agriculture Office Muzaffarabad
- Management and Control of Major Pests and Diseases with Special focus on Controlling Moth, Fruit Fly, Walnut Borer and Mango Mealy Bug in AJ&K
- Crop Maximization Program to Enhance Agricultural Productivity in AJ&K Including Mountainous Research
- Maintenance of Jalalabad Park & Demonstration of Tulip Garden
- On-farm Soil Conservation and Productivity Enhancement through Mechanized Farming in AJ&K
- Agro-Ecological Based Fruit, Vegetables & Apiculture Development as Enterprise in AJ&K
- Promotion of Kitchen Gardening in AJ&K
- Promotion of Cash Crops for Rural Poverty Alleviation in AJ&K
- Crop Maximization Project II Special Program for Food Security & Productivity Enhancement of Small Farmers in 1012 Villages of AJ&K
- Provision of Revolving Fund (up to Rs. 4 Million) to Village Organization

The review could not identify previous data where the impact assessment of schemes was carried out with regard to enhancement in economic productivity. The major issue reported by the Department was that there was no mechanism to provide crop insurance to the farmers so that they can be protected from risks.

### 1.12.1.2 Trends in Land Utilization

The total land area of AJ&K is 13,29,700 hectares. According to the Pakistan Economic Survey 2018–19, the agriculture sector contributed 18.5% to Pakistan’s GDP in 2018–19. Its employment share was 38.5% in the overall job market (Economic Adviser’s Wing Finance Division Government of Pakistan, 2019). Published literature is not available on these estimates for AJ&K. However, a similar value is estimated for AJ&K by the Department of Agriculture. The total farm area of AJ&K in 2014 (636,728 hectares), was about 47% of the total land area of AJ&K. This increased

to 641,142 hectares in 2018, which reflects a 0.7% increase. The area under cultivation was about 31% of the total farm area in 2014. This increased to 196,798 hectares in 2018, which is a 1.3% increase. The irrigated area of AJ&K was 6.2% of the cultivated area in 2014. There was no remarkable change in the irrigated area in AJ&K over the reference period of 2014 to 2018 (P&DD, 2018). The Department may undertake a survey regarding agricultural land utilization in AJ&K in order to establish a reliable baseline and devise appropriate interventions for sustainable agricultural production in the region.

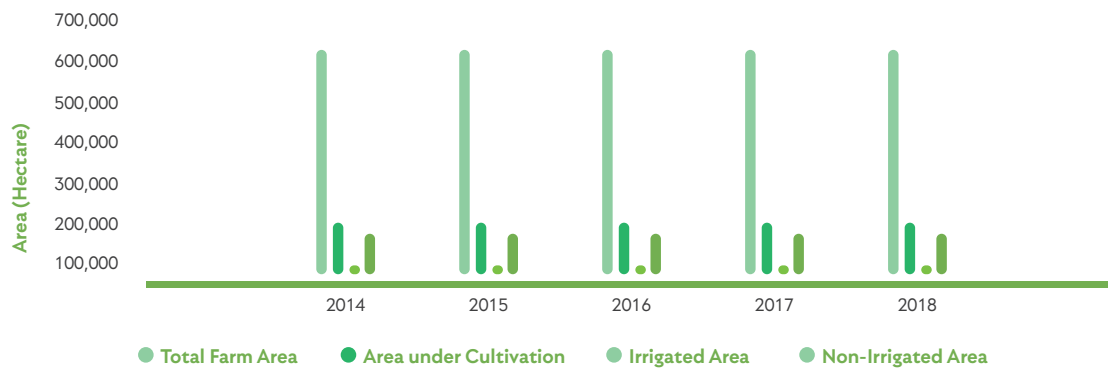


Figure 9. Trends in agriculture land utilization in AJ&K from 2014 to 2018.

### 1.12.1.3 Fiscal Analysis of Agriculture Department

In 2014, the development expenditure of the Agriculture Department was Rs. 94 million, against which an income of Rs. 3 million was generated by the Department in FY2014-15. Whereas

in FY2018-19, an income of Rs. 6 million was generated against the development expenditure of Rs. 155 million.

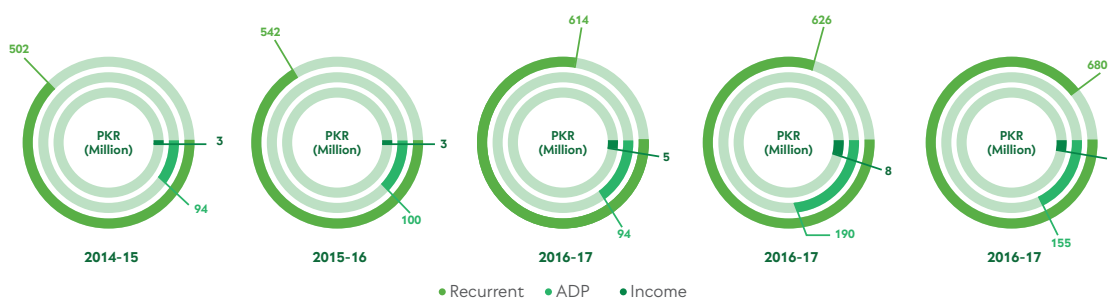


Figure 10. Recurrent and development expenditure versus income of the Agriculture Department (2014 to 2019).

However, since Agriculture Department is a service provider, and not an income generating department, the emphasis may only be placed on comparing development expenditure with the income (Figure 10). The reason being, the

departmental income is generated only by-product of research trials, and other nursery activities that are established to provide certified plants and bud wood on a limited scale.

### 1.12.2 Livestock and Dairy Development Department

The Livestock and Dairy Development Department is providing services to farmers in all districts of AJ&K. According to recent statistics of 2019 by the Department, published in the report "AJ&K at a Glance", the total number of cattle (cows) was 566,513, buffalos 707,012, 243,557 sheep, and 1,807,164 were goats. The total poultry stock was 4,330,690 (P&DD, 2019). As per the Labour Force Survey of AJ&K, 2017–18, a total of 19.4% of the employed persons were engaged in agriculture and allied activities, including livestock (Pakistan Bureau of Statistics, 2017-2018b). The livestock sector constitutes 60.5% of the Agriculture Sector in Pakistan and contributed 11.2% in the overall GDP of Pakistan (Economic Adviser's Wing Finance Division Government of Pakistan, 2019). No published and grey literature is available on the contributions of the livestock sector in the GDP of AJ&K.

According to the Livestock and Dairy Development Department of AJ&K, there are 254 animal health care centres and 167 extension centres facilitating farmers in AJ&K. Four hatcheries are operational in Mirpur, Kotli, Bagh, and Sudhnoti. The Department is also managing six diagnostic labs across AJ&K. From 2013 to 2019, an ADP scheme for dairy farming was introduced in which a loan of Rs. 750,000 was given by the Bank of Azad Jammu and Kashmir to identified potential farmers to enhance dairy products in AJ&K. A total of Rs. 250 million was disbursed over seven years. The Department provided mark-up against the loan

amount provided by the Bank to the borrowers.

Livestock Department is striving to bridge the gap between the production of the protein of animal origin (milk, meat, and eggs) and other consumption requirements. The livestock population has increased in number substantially, but the genetic potential has not increased up to the needed standard. Department of Livestock is endeavouring to upgrade and increase the genetic potential of their non-descript cattle and buffalo in AJ&K State through crossbreeding with high genetic potential germs plasm of Friesian, Jersey cattle and Nili Ravi Buffalo.

Over the past few decades, the Department has launched many breed improvement programmes to enhance the productivity of local breeds of cattle and buffalo. The Livestock and Dairy Development Department launched its first breed improvement pilot project in the 1970's with the introduction of semen of "Brown Swiss" and "Welsh Black" cattle breeds to enhance the productive traits of indigenous breeds. Later on, it was further improved as per the recommendation of Pakistan Agriculture Research Council Islamabad, and the Department switched over to the Friesian and Jersey cattle breeds. Since then, the Department is focusing on these two breeds, has made remarkable achievements and improved the productive traits of local breeds. It is worth mentioning that approximately more than 250,000 F1 progeny has been produced so far in the field through the Artificial Insemination<sup>1</sup> (AI)

1 Artificial insemination is the process of collecting sperm cells from a male animal and manually depositing them into the reproductive tract of a female animal.

programme. The following projects have been successfully completed by the Department.

- Cattle Breed Improvement Project in AJ&K.
- Strengthening of Livestock Breed Improvement Programme in AJ&K (Phase-I).
- Strengthening of Livestock Breed Improvement Programme in AJ&K (Phase-II).

In the more recent project on breed improvement, 50 Artificial Insemination (AI) Centres were established. The average increase in milk production from the offspring conceived by the Livestock and Dairy Development Department after insemination was from 312 litres per cow per day. At an average conception rate of 60%, the sex ratio of 50% with 5% mortality (progeny), approximately 12,825 cattle will be available to produce 153,900 litres of milk daily after three years of the start of the project. During 2018, 75,000 cattle were artificially inseminated, at the average conception rate of 60%. After deducting the estimated mortality of 5,000 cattle, the Livestock, and Dairy Development Department is estimating around 40,000 artificially inseminated cattle with increased milk production by 2020 (M. Khan, Jalali, Shahid, & Shami, 2014; M. I. Khan, Jalali, Shahid, & Shami).

Backyard poultry is one of the most important productive sectors in AJ&K. Development of backyard poultry and introduction of rural poultry production programme is an essential part of food security and a source of cheap protein, which is a vital component for the growth and maintenance of human health. Moreover, it is also a source of livelihood generation at the household level and enhances the productivity of rural poultry. Currently,

the poultry facilities of the Department are not fulfilling the poultry demands in AJ&K due to the low production capacity. One of the Department's strategies is to provide day-old chicks and vaccination services for promoting backyard poultry. There are only six functional poultry multiplication centres in AJ&K (Muzaffarabad, Mirpur, Kotli, Bagh, Sudhnoti and Poonch), wherein the production of day-old chicks and pullets (birds of 12 weeks of age) is going on at a regular basis. These centres are not able to cater to the growing demands of poultry in AJ&K as limited infrastructure and electricity load shedding hampers the production of these units. Vaccination centres are providing services at the Union Council level.

Various schemes have been designed and implemented by the Livestock and Dairy Development Department for improving the overall poultry production in AJ&K over the last few years. The following schemes were implemented or are currently in operation in AJ&K from FY2014–15 to FY2018–19:

- Provision of 300 to 2,000, a day-old chick to commercial farmers, and 20 days old chicks to rural women at the household level
- Promotion of commercial poultry farms and hatcheries for the production of eggs and broiler parent folks in AJ&K
- Rural poultry production for women in AJ&K
- Establishment of poultry complex Sudhnoti (Operational Phase)
- Prime Minister's Initiative for backyard Poultry

### 1.12.2.1 Fiscal Analysis of Livestock and Dairy Development Department

The fiscal analysis of the Livestock and Dairy Development Department showed a steady income generated against the development expenditure over the last five years. The

Department generated an income of Rs. 14.3 million in FY2014–15 against a development expenditure of Rs. 87 million. However, a similar amount of income is noted from FY2014–15 to FY2018–19,



which is Rs. 30 million against a steadily increasing development expenditure every mentioned year. The development expenditure of the Livestock and Dairy Development Department in FY2018–19 was Rs. 152 million. However, it is worth mentioning that the Department has

been successful in achieving the departmental revenue (income) generation targets are set by the Department of Finance GoAJ&K. The scheme-wise development expenditure of the Livestock and Dairy Development Department is available in Annex VIII.

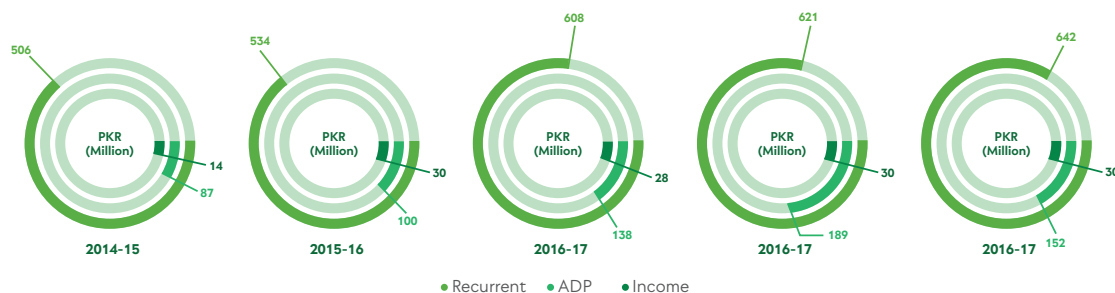


Figure 11. Recurrent and development expenditure versus income of the Livestock and Dairy Development Department (2014 to 2019).

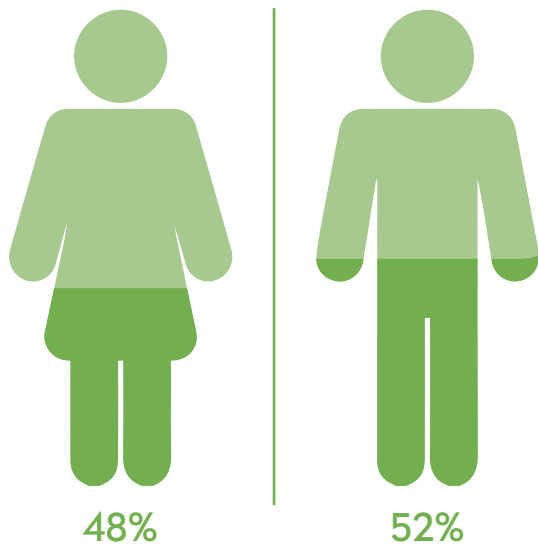
### 1.12.3 Small Industries Corporation

Azad Kashmir Small Industries Corporation was established in 1990. It serves as an instrument for microeconomic development, employment generation, and poverty alleviation. The administration and management are vested with the Board of Members. The Managing Director is the Chief Executive, as per Act, 1993, and 1996 (Amended). The main objective of this Corporation is the overall economic growth of the State through small & cottage industries initiatives.

The Corporation provides training to generate skilled human resources in small/cottage industries and handicrafts. It also provides credit assistance to small enterprises in the private sector from the ADP, corporation's funds, and banks. It also supports the micro-sector through a marketing network of handicraft shops and Craft Development Centres. It procures and distributes raw material, machinery, tools, and kits to the skilled/unskilled artisans for training/

production purposes. In training centres, a stipend of Rs. 1,000 per month is provided to students, along with the raw material for embroidery.

Small Industries Corporation also provides micro-loans to potential applicants, including through the Akhuwat Program Punjab, which has provided Rs. 750 million for micro-lending. The Government of AJ&K is paying the mark-up through an ADP scheme of Rs. 298 million. An amount of Rs. 10,000 to 40,000 was provided to potential entrepreneurs, and the recovery rate of the loans provided is a hundred percent. The principal amount of Rs. 750 million has now increased to Rs. 949 million. Last year, a project titled, "One Village One Product" was launched. In this project, wood carving and shawl (a fabric) making centres were established in Kel (Neelum Valley) and Leepa areas (Jhelum Valley), whereas zari (golden threads) embroidery centres were established in Mirpur.



According to the Directorate of Industries Muzaffarabad, there is no improvement in the volume of industries since 2010; instead, there is a downward trend mostly due to lack of skilled human resources. Industries of AJ&K are mostly located in Muzaffarabad, Poonch, Kotli, Mirpur, and Bhimber. A total of 226 woodworking and furniture industries are located in these districts. In 2010, there were 12 units of textile/weaving mills in AJ&K, which were reduced to one in 2018. The reasons reported by the Department include lack of skilled human resources and taxation policies in AJ&K (Planning and Development Department AJK, 2019).

Figure 12. Disbursement of interest-free loan schemes by Small Industries Corporation, 2019.

### 1.12.3.1 Fiscal Analysis of Small Industries Corporation

The Small Industries Corporation’s recurrent expenditure increased from Rs. 58 million in FY2014-15 to 83 million in FY2018-19. Against this, the development expenditure gradually increased from Rs. 25 million in FY2014-15 to Rs. 68 million in FY2018-19. The income

increased from Rs. 28 million to Rs. 40 million in FY2016-17 with a 45% increase. Figure 13 shows the comparison of recurrent and development expenditure, and departmental income of the Small Industries Corporation of AJ&K.

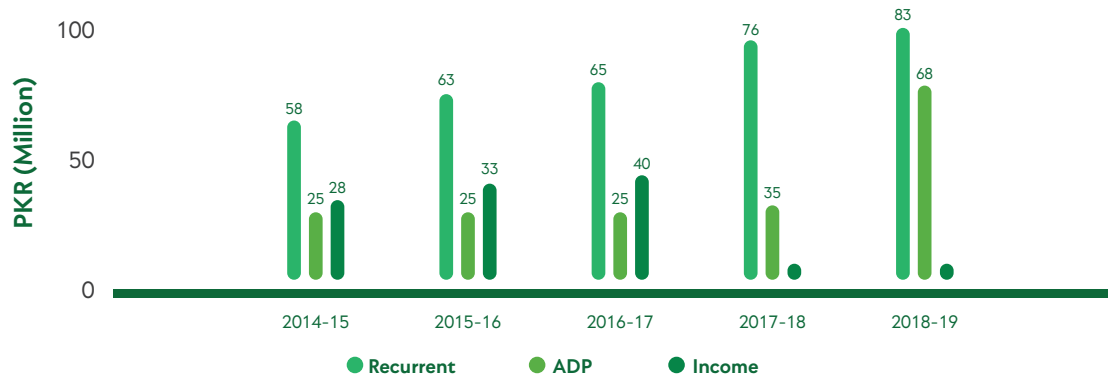


Figure 13. Recurrent and development expenditure versus income of the Small Industries Corporation (2014-19).

### 1.12.4 Department of Mineral Resources

The Department of Minerals Resources was established as a separate entity in 2002. The functions of the Department in AJ&K, include the exploration of minerals, issuing permits, and managing leases. It also regulates the safety of mine workers and enforces labour laws in the mining sector. The mandate of the Department also includes attracting foreign investments

and providing advisory services to mineral title holders. The State of AJ&K has abundant mineral resources. Several precious minerals are present in various districts of AJ&K. Table 7 presents, types and estimated amounts of various minerals found in AJ&K as per the Departmental of Mineral Resources records.

Table 7. Estimated quantity and value of mineral reserves in AJ&K, 2019.

Sr. No	Mineral Type	District	Reserves (Million Tons)	Value (Rs. Millions)
1	Bentonite	Mirpur & Bhimber	4.5	6,750
2	Granite	Muzaffarabad & Neelum	500.0	400,000
3	Marble	Muzaffarabad, Neelum & Kotli	34.0	34,000
4	Coal	Muzaffarabad & Kotli	30.0	120,000
5	Limestone	Muzaffarabad	1,000.0	20,000
6	Gypsum	Muzaffarabad, Jhelum Valley	5.0	1,000
7	Bauxite	Kotli	7.0	1,400
8	Fireclay	Kotli	7.0	1,400
9	Quartzite	Kotli	7.0	1,400
10	Ruby (million grams)	Neelum	50.0	25,000

Source: Statistical Yearbook AJ&K, 2018–19

#### 1.12.4.1 Fiscal Analysis of Minerals Department

A review of the development expenditure and income of the Minerals Department for the last five years (from FY2014-15 to FY2018-19) showed an increase of 113% in the development expenditure, i.e., from Rs. 4 million in FY2014-

15 to Rs. 9 million in FY2018-19, whereas, the Department generated an income of Rs. 3 million in 2015-16 and Rs. 5 million in FY2016-17. This showed an increase of 67% in the departmental income.

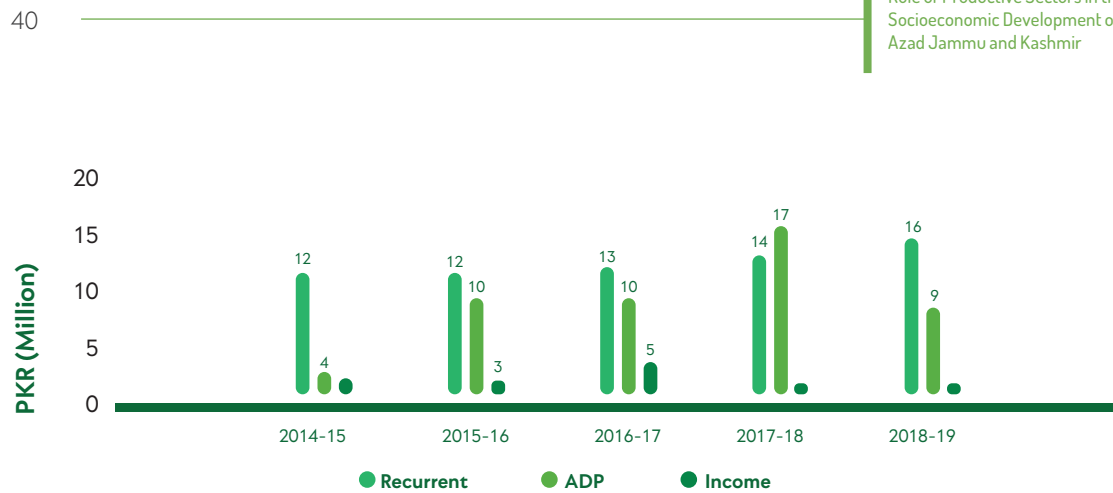


Figure 14. Comparison of recurrent expenditure, development expenditure, and income of Mineral Resources Department, AJ&K (2014-19)

### 1.12.5 Technical Education and Vocational Training Authority

The Technical Education & Vocational Training Authority (TEVTA) is managing the institutes responsible for providing technical education in Azad Jammu & Kashmir. It plays a significant role in developing human capital and has an impact on economic development and productivity.

In AJ&K, the authority lacks a systematic approach to produce a skilful labour force. There is no strategy with other productive sectors to balance the needs for skilled labour. TEVTA in AJ&K has 68 public vocational training centres and 110 private centres, which are providing technical training on different trades. The public sector centres include eight

polytechnical institutes providing education in the fields of mechanical training, industrial arts and the applied sciences. The electronic database and website of TEVTA are in the process of development. In terms of economic productivity and employability of the human resource trained by the TEVTA, an estimated 50% of students remain in the field after training from technical institutes. In comparison, approximately 30% of students change the field due to poor economic returns and the non-availability of jobs in that sector. Around 20% of trained persons proceed abroad for employment in their relevant fields.

### 1.12.6 Department of Tourism

Tourism is one of the most rapidly growing industries in the world which appreciably adds to the GDP. It is an important source of income generation, jobs creation, poverty reduction, foreign exchange earnings, promotion of cross-cultural understanding and cooperation. Tourism comprises of several service activities including transportation, communication, hospitality, catering, entertainment and advertising etc. It is the quality of these services that promotes effectiveness of tourism efforts.

Azad Jammu & Kashmir is blessed with abundant natural resources. It has hilly and mountainous

topography characterized by deep ravines, rugged and undulating terrain. It is endowed with natural beauty with thick forests, fast flowing rivers and winding streams, lakes, waterfalls, valleys, beautiful landscapes, biodiversity and other tourist attractions. It has a good number of archaeological and historical heritages which have withstood the ravages of time and other factors to unfold the ancient history of the State of Azad Jammu & Kashmir. The State, however, has not yet capitalized on its tremendous tourism potential due to lack of market-oriented approaches and geopolitical situation. The AJ&K Tourism & Archaeology Department has evolved

and received approval for the State Tourism Policy 2019 from the Government of AJ&K with the vision to be the "Best Tourist Destination through sustainable tourism development & inclusive growth".

This vision is aimed to be achieved by providing enabling environment for investment, best facilitation for tourists and by keeping intact empathy towards custodian communities. The AJ&K Tourism & Archaeology Department has taken various initiatives, keeping in view the modern practices under the charter of World Tourism Organization, to promote tourism in the State. The Sustainable Tourism Development is the priority areas in this regard under which sustained economic growth, higher levels of productivity and technological innovation are emphasized to be achieved. The "development-oriented policies" of the Government of AJ&K have led to productive activities, decent job creation, entrepreneurship, creativity and innovation, and encouraged the formalization and growth of micro, small- and medium-sized enterprises, including through access to financial services in the tourism sector.

The Government of AJ&K has taken steps regarding legislation to promote tourism in AJ&K. After the 13<sup>th</sup> constitutional amendments in AJ&K's Interim Constitution 1974, the registration and licensing authority (to grant licenses to tour operators, tour guides, hotel & restaurants etc.) has been transferred from the Department of Tourism Services, Pakistan to AJK Government. The Acts & Rules (AJK Hotel & Restaurants Act, AJK Travel Agencies Acts and the AJK Tour Guides Act) have been reviewed, updated and forwarded to AJK Law & Parliamentary Affairs Department for vetting and to seek Government approval for better implementation and to promote tourism in the State with sustained/ responsible approach.

Approval and enactment of Tourism Promotion Act-2019 is the landmark achievement by the Government of AJ&K. The Act has been

legitimized to develop tourism in the State through private sector investment and for development of exemplary ecotourism sites by engaging local communities of potential tourist areas by establishing Destination Management Organizations under said Act. The objective of this Act is to provide avenues to private sector for investment in tourism related small, medium and largescale projects. Further, under this Act, civil society and local community is emphasized to be motivated to step forward in playing their role in the promotion of tourism in their own areas having tourism potential with the main focus to create employment opportunities and income enhancement for local communities.

Tourism Corridor is one of the signature projects to promote tourism through Public Private Partnership at identified potential tourist spots under this project.

The Government of AJ&K, with the support of the Pakistan Poverty Alleviation Fund initiated a project in Neelum Valley and selected 100 houses and guided the community to upgrade the most scenic room according to modern standards where the tourists could stay as guests. The main focus of the upgradation was on water and sanitation as tourists are more concerned about hygiene. Further, Akhuwat Foundation provided a loan of Rs. 125,000 for the upgradation of the rooms while another Civil Society Organization provided training to the locals on basic housekeeping and serving etiquette. Basic trainings on tourist handling were also provided to the owner of houses. This intervention has provided access to decent and respectable job opportunities to the community of Neelum Valley particularly the women have been empowered and motivated to adopt tourism as their future career.

Besides establishing a network of about 42 tourist lodges/ huts in all over AJ&K, the Department is motivating the private sector for construction of hotels, motels and lodges at potential tourist spots to provide appropriate

accommodation for ever increasing tourists in the State. The Department has signed various MOUs with tourism and archaeology related organizations. The purpose of engaging such

organizations is to seek expertise and to train and involve the youth of the State in the fields of adventure, leisure, hospitality, food, transport and conservation.

### 1.12.6.1 Fiscal Analysis of Tourism Department

The recurrent and development expenditure of the Tourism Department increased by 40% over the last five years from FY2014–15 to FY2018–19. The development expenditure of the Department increased from Rs. 115 million on FY2014–15 to Rs. 161 million in FY2018–19. The proportionate

departmental income of the Tourism Department increased from Rs. 6 million in FY2014–15 to Rs. 12 million in FY2016–17 (income data for year FY2017–18 and FY2018–19 not available). Details of the income with budget codes (Heads) are provided at Annex VII of this report.

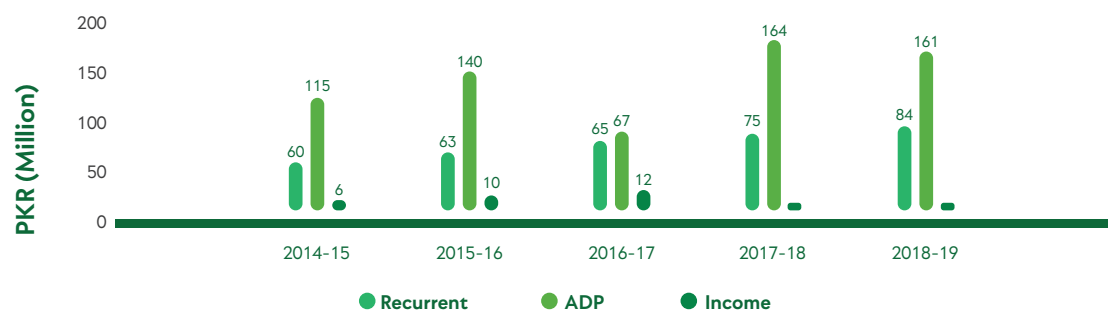


Figure 15. Comparison of recurrent expenditure, development expenditure, and income of Tourism Department, AJ&K (2014-19)

### 1.12.7 Wildlife and Fisheries Department

The Department of Wildlife and Fisheries was established in 2003. Currently, approximately 186 employees are working in the Department, of which 65 are working on the administrative posts while the remaining 121 employees work in the field. There are only two district offices, located at Mirpur and Muzaffarabad. The Wildlife and Fisheries Department has five cold water hatcheries in the Neelum district and one warm water hatchery in Muzaffarabad, and all of these are functional. One hatchery was established at Mangla (District) Mirpur in 2009, which is partially functional due to construction issues. Another hatchery recently developed at Kotli mid-stream on the Poonch river (also declared as Mahsher National Park) is non-functional due to budgetary constraints (lack of recurrent expenditure).

The Wildlife and Fisheries Department has eight national parks: two in Neelum; one in Bhimber; one in Kotli; one in Sudhnoti; one in Muzaffarabad; one in Poonch, and one stretched across Kotli, Sudhnoti, and Poonch. The Poonch river was declared a first-ever National Park for globally threatened fish species, the Himalayan Golden Mahseer, on 15<sup>th</sup> December 2010, by the Government of AJ&K. The Department is also managing 11 game reserves (three in Bagh, three in Haveli, one in Neelum, two in Jhelum Valley, one in Poonch, one Sudhnoti). A game reserve is an area where controlled hunting is allowed, whereas, in National Parks, hunting is prohibited and illegal. Another game sanctuary is located in Mirpur, which was established for the breeding of pheasant. The Wildlife and Fisheries Department has established 105 warm

water fish farms and nine cold-water fish farms. An amount of Rs. 93 million was allocated in FY2013–14 for these farms, and approximately 50% of the amount has been spent till Dec. 2019.

The Department is in the process of developing management plans for schemes and programs to build an interest in wildlife and fisheries. Increasing the population of “Himalayan Ibex” is also being considered by the Wildlife and Fisheries Department for introducing trophy hunting of these animals through controlled and regulated hunting licenses. Three captive breeding centres and zoos are under development in Peer Chinasi, Mangla, and Banjosa.

The Department has organized a community organization system under the “Convention on Biological Diversity” targets and biodiversity programs. They are achieving most of the targets as well as forming 160 communities, which were supported by the Green Pakistan Project and Ten Billion Tree Tsunami Program. These communities are playing their role in respect of public-private partnerships in different sectors related to wildlife and fisheries. Global Environment Facility funded project provided Rs. 54.00 million for Machiara National Park. This amount deposited by the Ministry of Climate Change in fixed accounts. The annual profit of the deposited amount is Rs. 5–6 million, which is then provided to the communities to support community proposed projects. Several initiatives have been taken to facilitate the communities on using alternate environment-friendly means instead of destroying nature. One of the initiatives is

to preserve the forests and reduce the wood burning in houses for cooking by providing liquid petroleum gas cylinders on a 50% cost-sharing basis. According to SDGs targets set by the Department, 17% of the total area of AJ&K must be protected, but only 9% of it is currently protected (figures are provided by the Wildlife and Fisheries Department – published data not available).

The Department is generating revenue (approx. Rs. 30–40 million) by issuing fishing licenses of Mangla Dam and hunting of small birds, chakor, and partridges. The Department is managing the provision of licenses to hunt fish daily in northern areas; trout hatcheries are to be developed to maintain the quantity of fish in these areas. Permits to catch fish are being issued against the payment of Rs. 300 to 1,000 per day, and the Department earns revenue of Rs. 1 to 2 lacs per year from selling these permits. However, there is no mechanism to determine the number of daily limits to regulate the fish population.

A Wildlife Conservation Fund was established in which Rs. 10 million seed money was provided by the Government of AJ&K, and other funds are expected from sources, including local communities, donor organizations, and funds through Corporate Social Responsibility. The Department is also generating funds from dam construction companies for hydro power through their Corporate Social Responsibility fund and plans to utilize it for improving the infrastructure of the local communities.

#### 1.12.7.1 Fiscal Analysis of the Wildlife and Fisheries Department

Budgetary analysis of development expenditure and income of the Wildlife and Fisheries Department shows a constant increase in development expenditure during the last five years, but income generation against the expenditure is fluctuating. In 2014, the

development expenditure of the Department was Rs. 105 million against which the income generated by the Department was Rs. 32 million. The income in the year FY2016–17 was Rs. 45 million, against the budget allocation of Rs. 30 million.

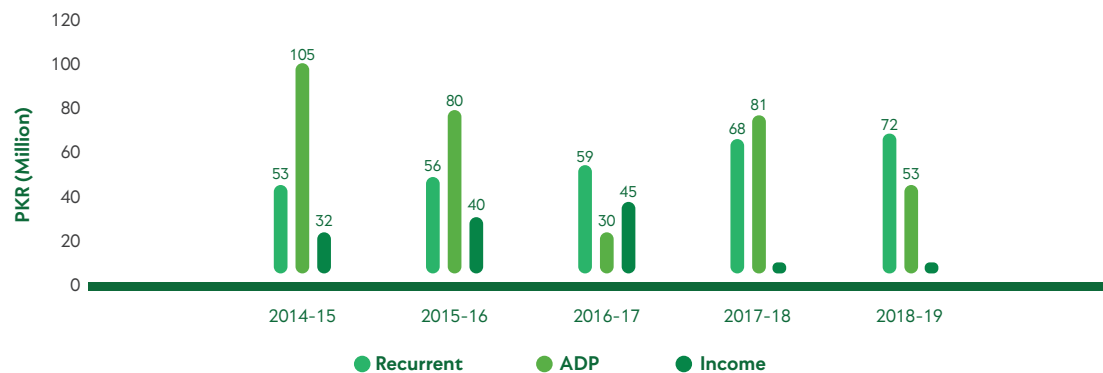


Figure 16. Comparison of recurrent expenditure, development expenditure, and income of Wildlife and Fisheries Department, AJ&K (2014-19).

### 1.12.8 Information Technology Board

Information technology is emerging to play its role in the productive sector. Several schemes were introduced to enhance productivity, but there is no mechanism to assess the impact of these schemes in any regard. To enhance the total number of IT - trained personnel, the universities

in AJ&K are delivering IT courses in all major districts of the State. The IT Board introduced IT centres in various districts of AJ&K to deliver six-months computer courses to train public and private candidates. Approximately 9,000 persons have benefited from these centres.

### 1.12.9 Sericulture Department

In AJ&K, the sericulture industry was present even before 1947. After 1952, the Office of Deputy Director was established, and in 2002, a separate department was created to promote sericulture in AJ&K. The Sericulture Department is providing mulberry and silkworm eggs to people of different areas in AJ&K. Nurturing silkworm to get pure and natural silk is a very inexpensive, simple, and profitable household industry that has been almost established all

over the AJ&K, with approximately 800 families attached to this industry. During the spring and autumn seasons, using three to four packets of silkworm eggs, an estimated income of Rs. 50,000 to 60,000 can be generated in 35 days. This cash crop can play a significant role in the economic growth of households. However, little attention has been paid to this Department, and there was no data available to assess the market share of sericulture in AJ&K.

#### 1.12.9.1 Silkworm Rearing

The Sericulture Department has launched several schemes to improve sericulture in AJ&K. According to the departmental sources, in 2018, 1304 packets (each packet contained 20,000 silkworm eggs) of silkworm eggs were provided to 900 farmers. This resulted in an estimated quantity of 27,550 kg of cocoon

production in 2018, generating an economic activity estimated at Rs. 17.9 million. Whereas, in 2019, 1922 packets were provided to 772 farmers engaged with sericulture. During 2019, the cocoon production from these 1922 packets was 47,100 kg generating an income of Rs. 25.626 million.



### 1.12.9.2 Fiscal Analysis of the Sericulture Department

A total of Rs. 88 million recurrent expenditure (regular) was allocated for the Sericulture Department in FY2018-19, of which Rs. 82.30 million (94%) is disbursed for salaries of 232 employees. An amount of Rs. 5.7 million is being spent on various operations of the Sericulture Department. The development expenditure in FY2015-16 was Rs. 35 million against which the Department generated an income Rs. 3 million.

It is noted that the development expenditure of the Department has slightly increased in FY2018-19 to Rs. 55 million, but the income generated against the allocated development expenditure was similar, i.e., Rs. 3.7 million. Figure 17 shows the comparison of recurrent, development expenditure, and income of the Sericulture Department from FY2014-15 to FY2018-19.

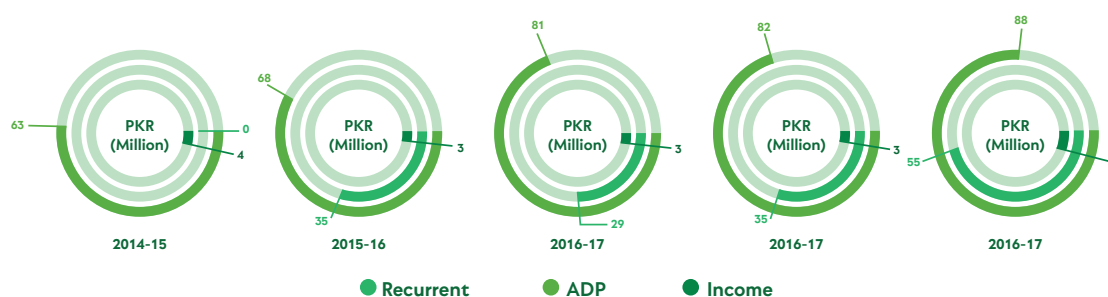


Figure 17. Comparison of recurrent expenditure, development expenditure and income of Sericulture Department, AJ&K (2014-19)

### 1.12.10 Local Government & Rural Development Department

In 1978–79 Local Government and Rural Development Department (LG&RDD) was established by integrating/merging the Peoples Works Program and Integrated Rural Development Program. Since 1978, the Local Government and Rural Development Department has been working for the socio-economic uplift of the rural population (83%) of the State of Azad Jammu & Kashmir. Besides the Annual Development Program, LG&RDD is also working as line department for implementation of many projects funded by international agencies/donors, such as (World Bank, IDA, UNICEF, FAO, Asian Development Bank) for socio-economic uplift of the rural population by providing necessary facilities and rural infrastructure. LG&RDD is responsible for the following:

1. To prepare and implement development programs for rural areas.

2. To uplift the socio-economic condition of rural masses.
3. To implement Annual Development Programmes and donor assisted projects as agreed by the Government of AJ&K.
4. To promote and utilize local resources.
5. To mobilize and organize rural masses for participatory rural development.

Local Government & Rural Development Department has been significantly contributing to the local development in AJ&K since its inception. Working for local development through the active involvement of communities has been its hallmark. In the sector of rural water supply and rural roads, its key role has been well acknowledged. LG&RDD, as an organization, has been closely linked to the communities in the entire AJ&K territory.

### 1.12.10.1 Fiscal Analysis of the Local Government and Rural Development Department

The budgetary analysis of the Local Government & Rural Development Department showed that the development expenditure had increased from Rs. 1,080 million in FY2014-15 to Rs. 2,318 million in FY2018-19, which is approximately a 188% increase in development expenditure of the Department during the mentioned period. The recurrent expenditure of the Department was Rs. 377 million in FY2014-15. With an increase of 44%, it raised to Rs. 542 million in FY2018-

19. The Local Government is responsible only for the first-time installation of infrastructure. Later the community bears all subsequent costs related to maintenance and replacement. Thus, there is no source of income for the Union Councils. Figure 18 shows the comparisons of recurrent and development expenditure of the Local Government and Rural Development Department of AJ&K.

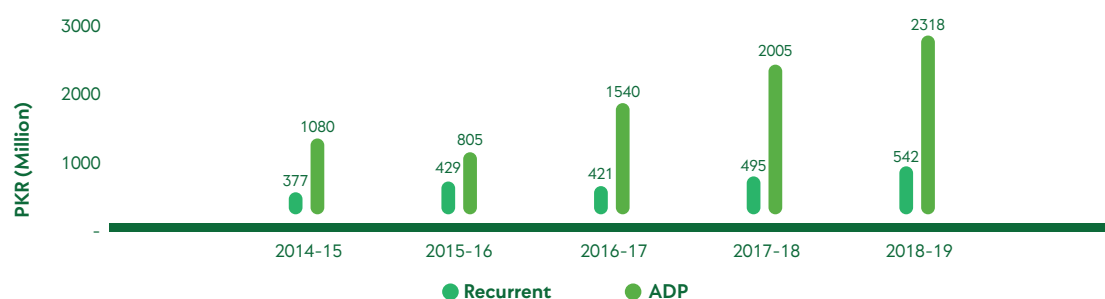


Figure 18. Comparison of recurrent expenditure, development expenditure and income of Local Government and Rural Development Department, AJ&K (2014-19)

# 02

## AN ASSESSMENT OF DEVELOPMENT POTENTIAL OF PRODUCTIVE SECTORS OF AJ&K



## 2.1 Introduction

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The developmental dimensions of major productive sectors, including agriculture, livestock, wildlife and fisheries, small industries, vocational training, and sericulture, were assessed through in-depth interviews with departmental officials and focus-groups discussions with development planners in the Planning and Development Department of AJ&K. Detailed field visits were conducted in eight districts including Mirpur, Bhimber, Kotli, Sudhnoti, Poonch, Bagh, Muzaffarabad, and

Neelum of AJ&K (80% of districts) to identify gaps in implementation, strengths, weaknesses, and opportunities of various initiatives and schemes currently undertaken through the development expenditure or those completed over the last five years. Household visits were conducted to interview the beneficiaries of various schemes for the assessment of selection criteria and the socio-economic status of the beneficiaries. The details of these activities are described below.

## 2.2 Focus Group Discussions

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Focus Group Discussions were conducted with departmental officials, including Directors General, Directors, Deputy Directors as well as Section Chiefs of Productive Sectors from

the Planning and Development Department of AJ&K. Sector-wise strengths, weaknesses, opportunities, and threats are presented in the figures below.

### 2.2.1 Livestock Sector

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The Livestock Department is providing services at the grass-root level with sufficient skilled staff to train farmers in all districts of AJ&K. The Department has a strong research base for the improvement of animal breeds to enhance the production of milk and meat. With field services and the latest diagnostic labs, the Livestock Department has good surveillance of diseases. Committed and dedicated leadership is a source of energy for the field staff to provide good quality services. The large rural economy and supportive government policies are a great opportunity to develop the livestock sector in AJ&K.

However, the weak infrastructure is a major hurdle in expanding the services network at the household level. Moreover, marketing systems for livestock products, mechanism of tracing the animal movement and keeping record does not exist. The Department lacks a Management Information System of livestock farmers. Breed improvement (Artificial Insemination) program has very little coverage of livestock farmers. Poultry production does not meet the requirements of the population in AJ&K, and small landholding discourages commercial livestock farming. Rapid urbanization, natural disasters, extreme weather conditions, and unstable geopolitical situation are among the major threats for the livestock sector in AJ&K.



Figure 19. SWOT Analysis of the Livestock Sector

### 2.2.2 Agriculture Sector

AJ&K is blessed with fertile lands, good weather, and suitable terrain for various types of crops and fruits. The traditional farming system in AJ&K offers a unique strength because of its eco-friendly nature. Different ecological zones spread across ten districts of AJ&K offer environmental conditions suitable to growing varieties of crops at the same time.

Lack of financial resources and inadequate industrial sector, advanced research, and development facilities are major weaknesses towards the development of the agriculture sector in AJ&K. In addition, poor pricing control and marketing mechanism is another factor contributing to lack of interest by the farming

community in AJ&K. The production of quality seeds is also a challenge. Small landholdings affect the production of crops on a commercial level. The Agriculture Department has an opportunity to develop strategies for organic farming and improvement of quality crops. Extension programs can be developed on the interest of farmers, and focusing on the production of high-value crops can enhance agriculture production in AJ&K. Moreover, marketing and prices of crops are a continuous challenge for the farmers to continue with agriculture as their primary occupation. Fewer rains, natural disasters, diseases, parasites, and storms also affect agri produce.

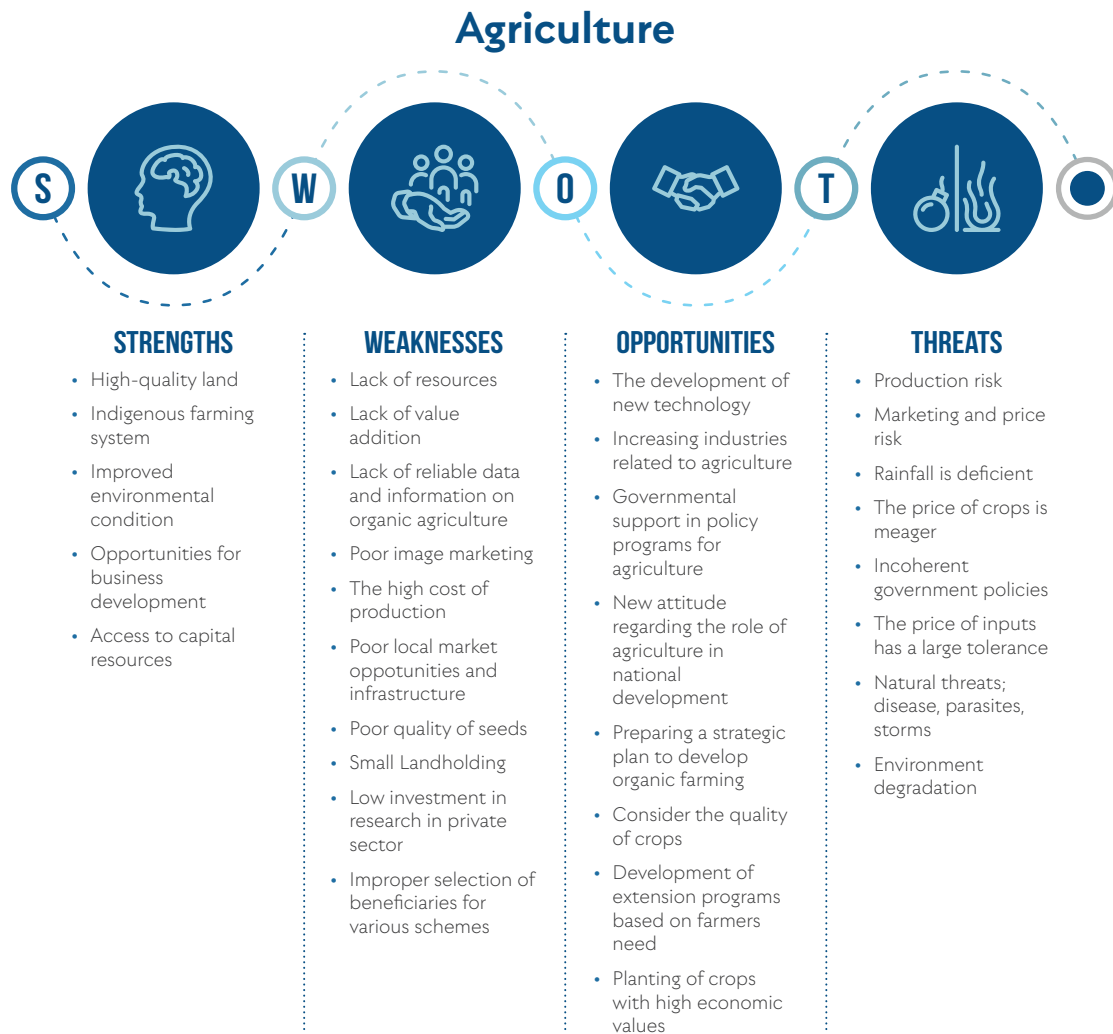


Figure 20. SWOT Analysis of the Agriculture Sector

### 2.2.3 Forestry, Wildlife, and Fisheries

A significant proportion of the AJ&K population lives in rural areas. This offers great strength to developing forestry, wildlife, and fisheries in AJ&K. Moreover, the abundance of forests, warm and cold-water sources offer opportunities for developing fish farming in AJ&K. The major weaknesses of this sector are the undue political influence, lack of a legal framework, and inadequate infrastructure.

Rapid and unplanned urbanization is reducing forests, which directly affects wildlife and indirectly affects the fisheries sector. Among the major threats include deforestation, encroachment in forest land, lack of political will, and the unstable geopolitical situation. Natural disasters, including floods, drought, and wildfires, cause a reduction in forests and threaten wildlife.

## Forestry, Wildlife and Fisheries Sector



Figure 21. SWOT Analysis of the Forestry, Wildlife and Fisheries Sector

### 2.2.4 Tourism Sector

The tourism sector has a huge potential and can play a vital role in the development of the economy. An abundance of natural, historical, and religious places can support the development of tourism in AJ&K. High mountains and diverse landscapes attract adventure tourism. The distinctive culture and soft-hearted people of AJ&K provide a unique strength to the tourism sector. However, lack of adequate infrastructure and tourism facilities, lack of connectivity to various locations, deficient communication and information facilities are some of the major issues in promoting tourism in AJ&K. In addition, lack of (budget) tourist accommodations at tourist locations or in the neighbourhoods is another constraint. There are a number of scenic

places alongside the LoC, but due to continuous shelling and unstable conditions, tourism has been discouraged in those areas. Encouraging the private sector to invest in tourism through developing a Public-Private Partnership may contribute to the promotion of tourism in AJ&K.

Due to natural terrains, forest, and wildlife, eco-tourism also offers a unique opportunity for developing tourism in AJ&K. The unique geopolitical situation and issues at the LoC discourage national and international tourists from visiting. Inadequate resources and lack of facilities for tourists are hurdles to the development of tourism in AJ&K. Local customs and traditions are threatened due to a lack of cultural heritage preservation strategy.



Figure 22. SWOT Analysis of the Tourism Sector

### 2.2.5 Information Technology Sector

Information Technology is a powerful tool to facilitate service delivery. The IT sector provides solutions to cope with international markets. The software industry is a low-investment, environment-friendly, and highly growing global industry. However, ineffective planning and execution of the technical projects and poor organizational setup are continuous weaknesses in the IT sector. Lack

of policy and non-strategic directions are hurdles in the development of the IT sector in AJ&K. Internet services and bandwidth of networks are very limited, which is a huge barrier in the development of IT infrastructure. In addition, the lack of a legal framework to regulate the use of IT services at the commercial level is a hurdle to develop the IT sector.



## Information Technology



Figure 23. SWOT Analysis of the Information Technology Sector

### 2.3 Field Assessment of Productive Sectors

The major productive sectors in AJ&K include Livestock, Agriculture, Sericulture, Wildlife and Fisheries, Tourism, and TEVTA. The departments working on these sectors have developed and implemented various schemes and programs to enhance economic productivity, increase employability, and reduce poverty among the population engaged with the productive sectors in AJ&K. A two-stage assessment was designed to assess the effects of productive sectors on the socio-economic development

of AJ&K. In stage one, the initiatives and schemes developed by various departments in AJ&K were selected in consultation with the Government Officials of the concerned Departments. In the second stage, a comprehensive household survey in eight out of ten districts was conducted through Lady Health Workers. In this section, the effects of various schemes on income generation are presented. Details about the household survey are presented in Chapter 3 of this report.

### 2.3.1 Livestock and Dairy Development Department

The Livestock and Dairy Development Department is working on increasing milk and meat production through breed improvement, poultry development, and providing animal health care facilities at hospitals and dispensaries across Azad Jammu and Kashmir. Vaccination of selected diseases is performed seasonally throughout AJ&K to large and small animals, and poultry. Day-old chicks/ pullets are being sold to farmers to promote backyard poultry. Artificial insemination services are provided at the farmer's doorstep through the departmental staff. A semen production unit has been established to maintain a regular supply of semen straws to all districts of AJ&K. Training workshops, meetings, and awareness seminars are being held regularly to educate farmers in advance animal husbandry practices. The research team, in consultation with the Department officials, assessed the following schemes with a focus on their effects on income enhancement at the household level.

- Strengthening of Livestock Breed Improvement Program

- Poverty Reduction through Establishment of Production Units for Small Land Holders in AJ&K (Phase I and II)
- Strengthening of Poultry Complex and promotion of backyard poultry

A total of seven districts, including Mirpur, Bhimber, Kotli, Sudhnoti, Bagh, Poonch, and Muzaffarabad, were assessed in consultation and coordination with the officers and field staff of the Livestock and Dairy Development Department. Research teams visited animal healthcare centres/hospitals, poultry complexes, artificial insemination centres, and interviewed the farmers and livestock breeders. To measure the socio-economic status and assess the impact of the above-mentioned schemes, beneficiaries, and farmers were randomly selected from the registers available at livestock offices, vet hospitals, Artificial Insemination (AI) centres, and poultry complexes. The beneficiaries were visited at their farms or households where they kept their animals and poultry to assess the situation, and interviews of the farmers were conducted. The socio-economic status of the household was captured using a standard household questionnaire.

#### 2.3.1.1 Artificial Insemination Strengthening of Livestock Breed Improvement Program

The research teams visited the AI centres at various Union Councils in seven districts of AJ&K and checked yearly maintained record registers and the beneficiaries' data. The conception rate of artificial insemination was also measured. The randomly selected beneficiaries of AI were visited, and the increase in milk production was assessed. A control sample was also selected in the same locations which had cows of local breeds and had not benefited by AI services offered by the Livestock and Dairy Development Department.

A significant increase in milk production was observed in first generation crossbreds (F1) as compared to the local breed of the cows. Acclimatization of the F1 generation was successfully achieved in all districts of AJ&K. Better immunity against parasitic diseases, a decrease in the age of puberty, and enhanced fertility in the F1 generation of the Friesian and Jersey cows were observed in the field. The Livestock and Dairy Development Department prepared straws with the semen of Friesian Bulls for Artificial Insemination of

the local breed of cows in AJ&K and labeled the straws as F-853. Whereas for buffalo, the AI straws are prepared with the semen of "Nili Ravi" breed, and straws are labelled as B-47. The research team during the field visits noted that cow breeds developed through F-853 semen showed a 100% increase in milk production, i.e., from an average of eight litres to 16 litres per day. Whereas, it was noted that milk production of buffalos increased to 9.4 litres/day in F1 Buffaloes (AI of Nili Ravi) using B-47 semen compared with milk of local breed

of buffalos at 6.6 litres/day. The data collected by research teams were not disaggregated by cattle parity, age, and pregnancy status, which may have direct effects on the production of milk. Further research may be required to quantify the milk productions with respect to heterogeneity, parity, and age of the cattle in AJ&K. Most of the farmers are not gaining the full benefit of Friesian Breed due to nutritional deficiency. The results of the findings collected by the research teams during their field visits are presented in Table 8.

Table 8. Household income of farmers utilizing Artificial Insemination services for cattle milk production, AJ&K 2019.

Household Characteristics	Annual Income	
	AI Beneficiary (n=16)	Non-AI Beneficiaries (n=12)
	Mean	Mean
Household Members	8.0	7.8
Annual Family Income <sup>a</sup>	774,000	544,000
Foreign Remittances <sup>a</sup>	111,818	24,000

<sup>a</sup> Rs. per year

Abbreviations: AI, Artificial Insemination.

It was observed that the household income of farmers utilizing the services of AI for their cattle is higher compared to the income of non-AI farmers. This may be due to the reasons that farmers with other sources of income and economically stable households are engaged with cattle farming and use AI for milk enhancement.

The milk production by the cows was also assessed and presented in Table 9. The F1 generation of Friesian cows is producing an average of 16 litres of milk per day compared to five litres of milk per day by local cow breeds.

Table 9. Milk enhancements in Artificially Inseminated cattle and local breed cattle, AJ&amp;K 2019

Artificially Inseminations	Animal (Breed)	Households n	Animal			Milk Production (ltr/milking)	
			Total n	Lactating <sup>a</sup>	Mean*	Total	Mean
Yes	Cows (Holstein Friesian)	16	88	62	3.9	982	15.8
	Buffalos (Nili Ravi)	16	79	50	3.1	470	9.4
No	Cows (Local)	12	21	18	1.5	95	5.3
	Buffalos (Local)	5	18	16	3.2	105	6.6

<sup>a</sup> Numbers of lactating animals include cattle with different lactation periods and different parity

\* average lactating cattle per household.

The observed rate of AI conception was found better than reported by the Department. The conception rate (success rate) of AI was reported at 60% by the Livestock and Dairy Development Department. The research team estimated the AI conception rates through the available records at the livestock extension centres in

Kotli. A total of 15 positive cases out of 24 were noted at Civil Veterinary Hospital Kotli, giving an AI conception rate of 63%. In Bhimber (AI Centre Sokosan), data of 1304 cattle served for AI during the year 2018–19 were analyzed and noted that 761 cattle delivered calves, generating a success rate (AI conception rate) of 58%.

### 2.3.1.2 Poverty Reduction Through Establishment of Production Units for Small Land Holders in AJ&K

The scheme was launched by the Livestock and Dairy Development Department in collaboration with the Bank of AJ&K with objectives to reduce poverty through the provision of interest-free loans to poor farmers to buy cattle for increasing milk production in AJ&K. Phase-I of this scheme was initiated in FY2013–14 and completed in FY2017–18. Phase-II of this scheme was initiated in FY2017–18 and is currently in progress. In Phase-I, 30 units were established in each district of AJ&K, and in Phase-II, ten dairy units will be established in every constituency. The development of sheep and goat farms were also included in Phase-I. However, these goats and sheep farms were excluded in Phase-II of this scheme due to various issues, including lack of interest by farmers due to

requirements of bank securities and large landholding. Beneficiaries of Phase I and II were randomly selected from the records of District offices in consultation with the district officer in seven districts of AJ&K and dairy units were visited. Three to four beneficiaries were selected from each of Phase-I and Phase-II of the schemes in each of the study districts of AJ&K. The selected beneficiaries in the sample make approximately 20% of the total beneficiaries of Phase-I and Phase-II. The milk enhancements were also noted in the sample units. It was reported that of the 301 production units established from 2014 to 2017 in Phase-I, 172 (57%) were functional. Of the total, 43% of units were found to be non-functional when visited by the research team. The reasons for the closure of these

production units include lack of interest by farmers, higher bank securities, and change of occupation. District-wise status of diary production units established during Phase-I

are presented in Table 10. While in Phase-II, all diary units established during 2019 are functional and engaged in milk selling in the local markets and nearby houses.

Table 10. Production units developed in Phase I for small landholders in AJ&K (Phase I), 2019.

Sr. No	District Name	Production Units		
		Total n	Active n	%
1	Muzaffarabad	120	70	58.3
2	Neelum	8	5	62.5
3	Jhelum	29	22	75.9
4	Bagh	27	10	37.0
5	Haveli	0	0	0.0
6	Poonch	20	8	40.0
7	Sudhnoti	2	2	100.0
8	Kotli	60	25	41.7
9	Mirpur	11	11	100.0
10	Bhimber	24	19	79.2
<b>Total</b>		<b>301</b>	<b>172</b>	<b>57.1</b>

### 2.3.1.3 Strengthening of Poultry Complex and Promotion of Backyard Poultry

The Livestock and Dairy Development Department has established a number of poultry complexes for improving the poultry breed at the household and farms levels in AJ&K. Three chicken breeds known for increased egg production were introduced, including Black Australorp, Rhode Island Red (RIR), and Fayoumi. These breeds lay 240 to 260 eggs per year. The research teams visited 100% of the poultry complexes in districts Kotli, Mirpur, Sudhnoti, and Muzaffarabad and

found all of them functional and distributing day-old chicks and pullets to farmers in their respective area. The successful progression of the three above mentioned chicken species (Black Australorp, Rhode Island Red (RIR) and Fayoumi) at the household level was also observed during the field visits. Few small level backyard farmers were also visited who have adapted the poultry egg production business and were selling 2-3 dozen eggs on a daily basis.

### 2.3.2 Wildlife and Fisheries Sector

Activities of the Wildlife and Fisheries in AJ&K are on a limited scale. The economic effects attributed to households engaged with the Wildlife and Fisheries were assessed in Mirpur and Neelum Valley. The Department is generating an income of Rs. 33 million per year from the annual contracts of fishing at Mangla Dam. A total of Rs. 0.4 million is generated annually through permits and licenses for hunting in Mirpur district. An amount of Rs. 5,000 is fixed for six months for residents of AJ&K, while for residents of Pakistan, the license fee for the hunting of Partridge, Ducks, and Pheasants is Rs. 25,000.

The Wildlife and Fisheries Department

developed an ADP scheme on "Promotion of commercial fish production on public-private partnership in AJ&K." The scheme was launched in FY2014–15, with an estimated expenditure of Rs. 93.5 million. The objective of the scheme was to promote fish farming and encourage the farmers toward this business in AJ&K. The Department provided technical and financial assistance to the fish farmers. The financial assistance ranged from Rs. 150,000 to 170,000 towards the infrastructure of the farms. Three fish farms have the capacity to nurture 1000 fish while the other three farms have the capacity of 2000 fish. The research team visited these farms in districts Mirpur, Bhimber, and Neelum.

Table 11. Fish farms developed with the support of the Wildlife and Fisheries Department, AJ&K, 2019.

District	Total Constructed <sup>a</sup> n	Functional <sup>b</sup>	
		n	%
Mirpur	60	55	92
Bhimber	50	40	80
Neelum	4	1	25

<sup>a</sup>Constructed over the duration of ADP scheme

<sup>b</sup>Producing and selling fish

In Mirpur, 60 fish farms were developed through this scheme of public-private partnership, of which 55 (92%) were functional. Whereas in Bhimber, 40 (80%) of 50 were functional. In Neelum, of a total of six approved, four were completed, and two are under construction. Of the completed, one was functional at the time of the visit. The other three farms were not functional due to the harsh weather and the bad situation at LoC.

Overall, this initiative is contributing positively to meet the fish needs of the local population in the South Region of AJ&K (Bhimber and Mirpur). Farmers engaged in fish production have adapted fish farming as their full-time business.

On average, the annual income of the farmers interviewed by the team was approximately Rs. 1.0 million per annum. No measurable effects in the income attributed to trout fish farming developed with the support of Wildlife and Fishery Department was observed in District Neelum.

A trout fish hatchery (owned and operated by the Wildlife and Fisheries Department) was also visited at District Neelum (Salkhala). This hatchery was developed and operationalized in 2014. The Department generated an approximate income of Rs. 1 million over five years, i.e., from FY2014-15 to FY2018-19 through selling the trout fish to farmers from this

hatchery in Salhala. Currently, this hatchery contains 48 egg-laying trout fish and raising 58

more fish, which will start laying eggs after three years.

### 2.3.3 Sericulture Industry

To assess the potential of the sericulture industry and evaluate its economic impact in AJ&K, the research team visited District Bhimber (Samahni area), District Kotli, District Sudhnoti, and District Poonch. During the field visits at District Sudhnoti (Sudhnoti), it was noted that 307 kg of cocoons were produced out of 120 packets by 39 farmers, yielding an estimated rate of 2.6 kg of cocoons per packet. This production rate is very low compared with the production rate of 27 kg of cocoons per packets estimated by a study conducted in Punjab, Pakistan (Ahmad & Shami, 1999). Most of the farmers (interviewed), complained about the poor quality of eggs, resulting in the death of silkworms at the last stage of cocoon development. In Kotli and Bhimber, similar trends of low production of cocoons from the silkworm egg packets provided by the Sericulture Department were noted. The Department procured silkworm eggs imported from China in FY2017-18, which reportedly produced better quantities of cocoons per packet (15 kg cocoons/packet). The farmers in Sudhnoti sold these cocoons at an

average rate of Rs. 1500 per kg, which is similar to the rate offered in other parts of Pakistan.

The Department is also providing mulberry plants at the rate of five rupees per plant to promote mulberry cultivation in areas known for silkworm rearing. The research teams during their visits to the field could not find clusters of mulberry trees developed by the farmers on their lands/farms. One of the reasons for this is the longer period required by the mulberry plant to reach maturity. In rain-fed areas, one mulberry plant requires 3 feet X 3 feet to 10 feet X 10 feet areas (Datta, 2002). Normally, it takes four years for a mulberry plant to reach a stage where its leaves are sufficient to cater to the need of silkworm rearing. Among the other reasons for the limited scale of silkworm rearing in AJ&K includes lack of awareness among most farmers interviewed on the potential benefits of the sericulture industry and limited access to market and limited number and knowledge of the field staff of the Sericulture Department in AJ&K.

### 2.3.4 Agriculture Department (Crops and Horticulture)

The Agriculture Department is running several schemes under the development expenditure for the enhancement of crop production, improving the quality of crops, and productivity through improved technology. To study the role of the Agriculture Department on economic

productivity, two schemes were assessed: 1) Crop Maximization Program to Enhance Agricultural Productivity in AJ&K including Mountainous Research (2017–2020); and 2) Fruit Development Program by improving existing Wild Fruit Flora in AJ&K (2013–2018).

#### 2.3.4.1 Crop Maximization Program to Enhance Agricultural Productivity

Crop Maximization Program (CMP) was launched to enhance the productivity of crops in AJ&K. The total approved budget for this program was around Rs. 149.347 million. In 2018, the total operational and capital cost of

the project was Rs. 73.125 million. The cost in terms of providing seeds, fertilizers, and plants to the farmers on subsidized rates was Rs. 76.22 million. As per the records of the Agriculture Department, approximately 1,860 acres of land

in AJ&K was cultivated through this project. Beneficiaries of this scheme, selected by the Agriculture Department, were provided good quality seeds and fertilizers on 50% subsidized rates to enhance the production of crops. The project was started in FY2013–14 and was extended till FY2019–20. In this program, seeds and fertilizers for wheat and maize crops were

provided to farmers on subsidized rates. The establishment of fruit plant orchards was also a part of this program in which the Agriculture Department helped those farmers who used to grow good quality fruits, including orange, apple, apricot, pear, guava, pomegranate, and all other fruits which the land of AJ&K favours to grow.

#### 2.3.4.1.1 Field Assessments

Three districts were selected in consultation with the Department officials, including Mirpur, Kotli, and Bhimber. These districts were selected because of the implementation of CMP initiated in these three districts in 2013. In district Bhimber, 2,356 farmers benefited from this scheme in

2018, in Kotli 2,810 farmer benefited, and in Mirpur, 287 farmers benefited in 2019. Thirty beneficiaries of CMP were randomly selected in the three districts of AJ&K. Table 12 shows the number of total and selected beneficiaries in Bhimber, Kotli, and Mirpur.

Table 12. Beneficiaries selection from Crop Maximization Programme, AJ&K 2019.

District	Union Councils	Total beneficiaries (n)	Sample (n)
Bhimber	13	2,356	10
Kotli	15	2,810	10
Mirpur	10	287	10

The 30 selected beneficiaries were interviewed to assess the effects of CMP on their crop production and income enhancement. For a comparison, few farmers who were not getting any benefits from the Agriculture Department, and residents of the same area were also

selected and interviewed. Only 32% of farmers were engaged in the production of crops for commercial use. Of those growing crops, 62% were able to fulfil the household needs. Table 13 shows the household characteristics of the sample interviewed for CMP.



Table 13. Household characteristics of beneficiaries of Crop Maximization Program, AJ&amp;K, 2019.

Characteristics	CMP Farmers <sup>a</sup>		Non-CMP Farmer <sup>b</sup>	
	n	%	n	%
Total Households	29		5	
Household Members	216		30	
Crops Type*				
Maze	17	58.6	3	60.0
Wheat	19	65.5	4	80.0
Purpose of Farming				
Personal Use	19	67.9	5	100.0
Commercial	9	32.1	-	-
Sufficient for Household				
Yes	18	62.1	3	60.0
No	11	37.9	2	40.0

<sup>a</sup> Farmers benefited from the scheme

<sup>b</sup> Farmers not getting CMP benefited (controlled)

<sup>c</sup> Sum of % may exceed 100, due to more than one crop cultivated by farmers

Abbreviations: CMP, Crop Maximization Program

#### 2.3.4.1.2 Economic Effects of CMP

The mean household income of those who received benefits from the CMP was estimated at Rs. 781,034 compared to the income of general farmers of Rs. 357,600 per annum. In addition to this household income, the farmers selected for CMP had higher foreign remittance and other sources of income compared to the income of non-CMP beneficiaries. However, the difference in the income of CMP compared to non-CMP was statistically non-significant

( $p > 0.05$ ). When income from the crops per harvest was analyzed, it was noted that the mean income of farmers getting benefited from CMP was Rs. 187,333 per harvest compared to those farmers who did not get any benefits from CMP. The sample of the household survey presented in the next Chapter was of 2,730, and results are presented with greater details. Table 14 shows the differentials of income with greater details.

Table 14. Annual household income of beneficiaries of Crop Maximization Program, AJ&amp;K, 2019.

Income Source	CMP Farmer <sup>a</sup> (PKR)	Non-CMP Farmer <sup>b</sup> (PKR)	p-value
	Mean Income	Mean Income	
Household Family Members	781,034	357,600	0.400
Foreign Remittance	366,207	168,000	0.632
Other Sources <sup>c</sup>	88,138	48,000	0.737
Crops <sup>d</sup>	187,333	66,666	0.183

<sup>a</sup> Farmers benefited from the scheme

<sup>b</sup> Farmers not getting CMP benefited (controlled)

<sup>c</sup> Rental from the property, and any other source

<sup>d</sup> Per Harvest

Abbreviations: CMP, Crop Maximization Program

Few farmers who were the beneficiaries of CMP also complained that the quality of wheat seeds provided by the Department in the year 2018 was not appropriate. As per the Department of Agriculture, combined effects of poor seed quality and fewer rains in 2018, resulted in

decreased production of wheat compared to earlier years. Farmers in Bhimber (Sumani), Sudhnoti, and Poonch were very much satisfied by the quality of maize seeds provided by the Department and the resulting quantity of the crop.

#### 2.3.4.2 Fruit Development Program

Fruit Development Program (FDP) was launched to improve the wild fruit flora that already exists in AJ&K. The project was started in 2017 with an approved budget of Rs. 392.409 million. The overall objective of FDP was to maximize and promote fruit production on a commercial basis through the utilization of existing wild flora in AJ&K. The project aimed to shift the existing fruits flora from low return crops to high-value crops with the introduction of new crops and value additions. The rich agro-climate with high biodiversity, especially with respect to scattered wild fruit flora including wild apricot, peaches, plums, persimmons, olives, pomegranates, figs, berries, walnuts, cherries, and apples are abundant in AJ&K. One of the activities in this scheme is the training of farmers on budding and grafting for the transformation of existing wild rootstocks into quality fruit-bearing, identified commercial fruit varieties.

In addition, engaging local farmers in budding and grafting was envisaged to increase the economic activity of the poor farmers and a long-term effect on income enhancement through the transformation of 4.318 million wild plants into fruit trees of different species. The project consisted of two parts. One was to provide the "Progeny Bud Wood Orchards" to the fruit farmers from which bud wood could be produced. While providing progeny orchards, it was agreed with the farmers that they would provide bud woods from the orchard to the Department when required for budding and grafting on other plants either on existing wild fruits flora or fruit farms. The other was the provision of "Budding and Grafting" services for existing wild flora to increase both the quality and quantity of fruit grown by the farmers. The project trained 1,080 farmers till June 2019 in all districts of AJ&K against the target of 3,220.

Progeny Orchards were developed in districts as per their agro-climatic conditions to meet the demands of quality bud woods for budding and grafting activities on wild flora in AJ&K. A total of 2,133 progeny orchards (0.5 acres each)

were planned, and 1,660 progeny orchards were established on an area of 830 acres till June 2019. The only criteria to select the farmer was the interest and willingness to develop the progeny orchards.

#### 2.3.4.2.1 Economic Effects of FDP

A total of 14 beneficiaries were interviewed to assess the effects of FDP on fruits production and income enhancement. The beneficiaries were randomly selected from the available records in the district offices of the Agriculture Department and were interviewed by the

research teams in the presence of the field staff of the Department. For the purpose of comparison, few farmers from the same location who were not getting any benefits from the Agriculture Department were also interviewed.

Table 15. Comparison of beneficiaries of Fruit Development Program AJ&K, 2019.

Variable	Beneficiaries	General Farmers	% Difference
	n	n	
Total Households	14	4	-
Household Members	92	28	-
Source of Income	<b>Mean (Rs.)</b>	<b>Mean (Rs.)</b>	-
Annual Income of Household Members	873,429	426,000	51.2
Foreign Remittance	480,000	30,000	93.7
Other Sources <sup>a</sup>	9,600	0	-

<sup>a</sup> Includes rental from the property, and any other source

The mean income of the farmers who were provided the progeny orchard or budding and grafting was 51% higher than general farmers in the same area (Table 15). However, none of the farmers in seven of the study districts (8 total) were selling fruits on a commercial basis obtained from wild flora or the progeny orchards, except in Neelum, where a beneficiary was selling fruits developed with the support of FDP. It was also observed

that budding grafting was scattered over the area, whereas it could have been developed in clusters (wild flora was available). No mechanism was noticed to monitor the targets given to farmers trained for budding and grafting. Records of budding and grafting were not maintained in most of the districts. It is also reported by a few of the farmers that the orange plants provided by the Agriculture Department were not of good quality.

### 2.3.5 Technical Education and Vocational Authority

Technical Education and Vocational Training Authority (TEVTA) is working to enhance the skills of the youth of AJ&K. The program in Azad Jammu & Kashmir is similar to that in the other provinces of Pakistan. A total of 159 vocational training centers are currently operational in AJ&K,

of which 69 fall under the public sector, and 90 are managed by the private sector. TEVTA is imparting various courses of six months to two years duration. Details about the institutes managed by TEVTA, number of students, and students-teacher ratios are presented in Table 16.

Table 16. Students-teacher ratios in institutions managed by TEVTA, AJ&K, 2019.

Name of Institute	Total				Teachers	Student Per Teacher	Student Per Institute	Teacher Per Institute
	Institute	Enrolments						
		CBT	Traditional	Total				
Govt. College of Technology	2	91	430	521	37	14.08	260.50	18.50
Vocational Training Institute (Male)	10	814	126	940	102	9.22	94.00	10.20
Industrial Training Center (Male)	2	0	33	33	6	5.50	16.50	3.00
Vocational Training Center (Male)	5	59	42	101	15	6.73	20.20	3.00
Vocational Training Center (Female)	47	1,892	21	1,913	189	10.12	40.70	4.02
Total	66	2,856	652	3,508	349	10.05	53.15	5.29

Abbreviation: CBT, Competency-Based Training

\* For Industrial Training Centers and Vocational Training Centers, both for males and females, students are enrolled subject to approved institutional capacity

It has regular programs offered by Government Vocational Institutes, and schemes are introduced through development expenditure. Both the regular

courses and those offered through the ADP schemes, implemented through Public-Private Partnership (Paradigm Shift), were assessed in terms of employability.

#### 2.3.5.1 Regular Courses

For assessment of regular courses, Government Vocational Training Institute, Mirpur was visited, and students from various disciplines who graduated more than one year ago were randomly selected in the presence of Principal of the Institute. The trainees were contacted to assess their current employment

status, and results were noted. The highest employability was noted in the trades of automobile mechanics, civil draftsman, and electricians. Table 17 shows the detailed employability of various trades offered by TEVTA at Government College of Technology Mirpur.

Table 17. Regular training programs in Govt. Vocational Training Institute Mirpur (2017-18).

Trade	Total Trainees	Employed	
		n	%
Aluminum Fabricator	25	11	44
Automobile	10	9	90
Civil Draftsman	9	8	89
Civil Surveyor	14	8	57
Computer Operator	61	21	34
Diploma in IT	21	12	57
Electrician	15	12	80
Fitter General	3	1	33
Graphic Designing	21	10	48
Heating Ventilation Air Conditioning	18	15	83
Machinist	22	11	50
Social Media Marketing	25	13	52

### 2.3.5.2 Paradigm Shift ADP Scheme

An ADP scheme was developed to shift the paradigm from conventional training to internationally accepted standards of Competency-Based Training. The scheme was approved in FY2017-18 with a budget of Rs. 353.539 million. The training was imparted in two batches. The 1<sup>st</sup> batch of training was conducted from April to October 2018. The total duration of the courses was six months. In

the 1<sup>st</sup> batch, a total of 631 trainees were trained with an estimated cost of Rs. 32.4 million. The courses conducted for this batch included Allied Health, Hotel Management & Cooking, Chinese Language, Software Application Development, Computerised Accounting, Control Room Engineering, Photography, Short Film Making, Video Making, Camera Lighting, and Sounds.

Table 18. Outsourced training program "paradigm shift" batch II (Feb – July 2019) in AJ&amp;K, 2019.

Institute	Total Budget (Rs.)	Trade	Total		Trainees Assessed		
			Districts	n	Employed		
					N	n	%
Pearl Continental Hotel Muzaffarabad	4,150,424	Hotel Management (N = 25)	Muzaffarabad	14	8	2	25
			Neelum	2			
			Haveli	1			
			Poonch	5			
			Kotli	3			
		Cooking (N = 25)	Muzaffarabad	14	-	-	-
			Jhelum	2			
			Sudhnoti	3			
			Haveli	1			
			Poonch	3			
Bagh		2					
Vocational Training Institute Muzaffarabad	592,000	Motor-cycle Mechanic (N = 20)	Muzaffarabad	19	3	1	33
			Neelum	1			
National Logistics Cell Dina	5,917,900	Heavy Transport Vehicle Driving (N = 100)	Muzaffarabad	12	4	1	25
			Jhelum	3			
			Neelum	10			
			Bagh	7			
			Haveli	2			
			Poonch	24			
			Sudhnoti	19			
			Bhimber	9			
			Mirpur	6			
			Kotli	8			
Post Graduate College Dhirkot Bagh	586,000	Computerized Accounting (N = 20)	Bagh	20	4	1	25

The second batch of the training program was conducted between February - July 2019 with a duration of three to six months. In this batch, training courses were provided on Allied Health, Hotel Management, Cooking, Motorcycle Mechanics, Zari Embroidery, Laptop and Mobile Repairing, Heavy Machine Operators, Heavy Transport Vehicle Driving, Steel Fixer, and Computerized Accounting. A total of 525

trainees were inducted and an amount of Rs. 37.2 million was allocated for the program. The research team randomly selected trainees from Batch I and II and assessed their employment status. The results of the assessment were presented in Table 18. It was noted that the employability of courses conducted through this scheme was significantly low and requires market research before designing such schemes.

### 2.3.6 Small Industries

The economic and employment impact of the Small Industries Corporation in AJ&K was assessed through a microfinancing scheme implemented in all districts. Through this scheme, a small interest-free loan of Rs. 10,000 to Rs. 40,000 was initially granted to persons fulfilling the criteria. Upon successful return of the loan over the allocated period, the person can apply for an amount up to Rs. 75,000. The loan has to be returned over a 10–36 months period in installments. So far,

30,293 persons have been granted small loans of worth Rs. 950 million. Efforts were made to select the beneficiaries in equal proportions of males (52%) and females (48%). The beneficiaries of these loans in the agriculture sector constitute 3%, livestock development 38%, and enterprise development constitute 59%. The recovery rate was noted to be 100%. District-wise disbursements of the beneficiaries of the microfinancing are presented in Table 19 below.

Table 19. District-wise proportions of loan disbursement through the Small Industries Corporation's Akhuwat Scheme in AJ&K, 2019.

S. No	District	Total Borrowers	%	Total Amount (Rs. Million)
1	Neelum	1,756	6	54.065
2	Muzaffarabad	6,383	21	194.265
3	Jhelum Valley	1,077	4	32.375
4	Bagh	2,203	7	69.461
5	Havelli	1,680	6	51.146
6	Poonch	4,079	13	128.189
7	Sudhnoti	3,674	12	117.94
8	Kotli	5,013	17	166.196
9	Mirpur	1,686	6	51.685
10	Bhimber	2,742	9	84.215
<b>Total</b>		<b>30,293</b>	<b>100</b>	<b>949.537</b>

The research teams selected districts Mirpur and Muzaffarabad in consultation with the officials of the Small Industries Corporation of AJ&K. In Mirpur, the Akhuwat Branch in Bankhurma was visited by the research team. A random sample of three beneficiaries was selected and visited in Mirpur to assess their status with regard to income enhancements and employability after

receiving the microloan through the Akhuwat program. It was noted that two of the three selected beneficiaries had a 50% and 100% increase in their income, respectively. Table 20 shows the results of these assessments in detail. In Muzaffarabad, Akhuwat branches located in Gari-Dupatta and Muzaffarabad city were visited by the research team.

Table 20. Impact of microfinancing on income and employment, AJ&K, 2019.

District	Sanction No	Loan Amount	Purpose	Income			Status
				Before Loan	After Loan	% increase	
Mirpur	D012-00356	30,000	Purchase of Sewing Machine to extend the tailoring business	25,000	37,500	50	Employment and income increased
	D012-00332	30,000	Start of small business (General grocery store)	Nil	10,000	100	Employability and income increased
	D012-00524	30,000	Purchase of Pico Machine	10,000	10,000	0	Sold Pico machine and bought a sewing machine. No change in income.
Muzaffarabad	D001-01980	30,000	Livestock	-	-	-	Not working in livestock
	D001-02027	30,000	Embroidery	15,000	20,000	25	Employability and income increased
	D001-01989	30,000	Livestock	-	-	-	No contact
	D001-01990	30,000	Livestock (Hen)	0	0	0	All Hens died
	D001-01949	30,000	Transportation	-	-	-	No contact
	D001-01992	30,000	Beauty Parlor	-	-	-	No contact
	D001-01963	30,000	Poultry	-	-	-	No contact
	D001-01957	30,000	Embroidery	10,000	15,000	50	Employed and income increased
	D001-01956	30,000	Embroidery	35,000	50,000	43	Employed and income increased



A total of nine beneficiaries were randomly selected and contacted to assess their status with regard to an increase in income and employment after receiving the micro loan. Of the nine selected beneficiaries, four could not be contacted due to incorrect numbers or powered off mobiles. Out of the remaining five beneficiaries, three had shown a significant increase in their income after

acquiring a loan. The other two had changed the occupation for which they obtained the loan. It shows that the expansion of micro-financing has a positive impact on household income, particularly on those who are poor and have no collateral. This also has an impact on employment as the number of workers increases with the expansion of the business.

## 2.4 Limitations

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A representative sample to analyse the income enhancement and employment generation from various development schemes (ADP Schemes) of productive sectors could not be drawn due to budget constraints. Results are

only applicable to those who were reached during the study. Therefore, the results of this section cannot be generalized to the population (all beneficiaries) of AJ&K.

# 03

## SOCIOECONOMIC PROFILE OF PRODUCTIVE SECTORS IN AZAD JAMMU AND KASHMIR



### 3.1 Assessment of Productive Sectors in Azad Jammu and Kashmir

A comprehensive state representative survey was conducted to assess the status of productive sectors and their effects on the socio-economic development of Azad Jammu and Kashmir. The survey was conducted with the support of the Health Department through Lady Health Workers, covering 69% of the population of AJ&K. The objective of the survey was to provide district-level disaggregated

data on the socio-economic status, household income, demography, education, agriculture, livestock, household assets, Civil Registration, and Vital Statistics (CRVS), infrastructure development, household fuel consumption, sewerage and water sources and coverage of government schemes directed towards increasing employability, and promoting economic growth.

### 3.2 Study Area

The household survey was conducted in eight districts of Azad Jammu and Kashmir. The total population of these districts is 3.66 million, representing 90.5% of the total population (4.045

million) of Azad Jammu and Kashmir. Figure 24 shows the population density of ten districts of Azad Jammu and Kashmir along with the population coverage by the Lady Health Workers.

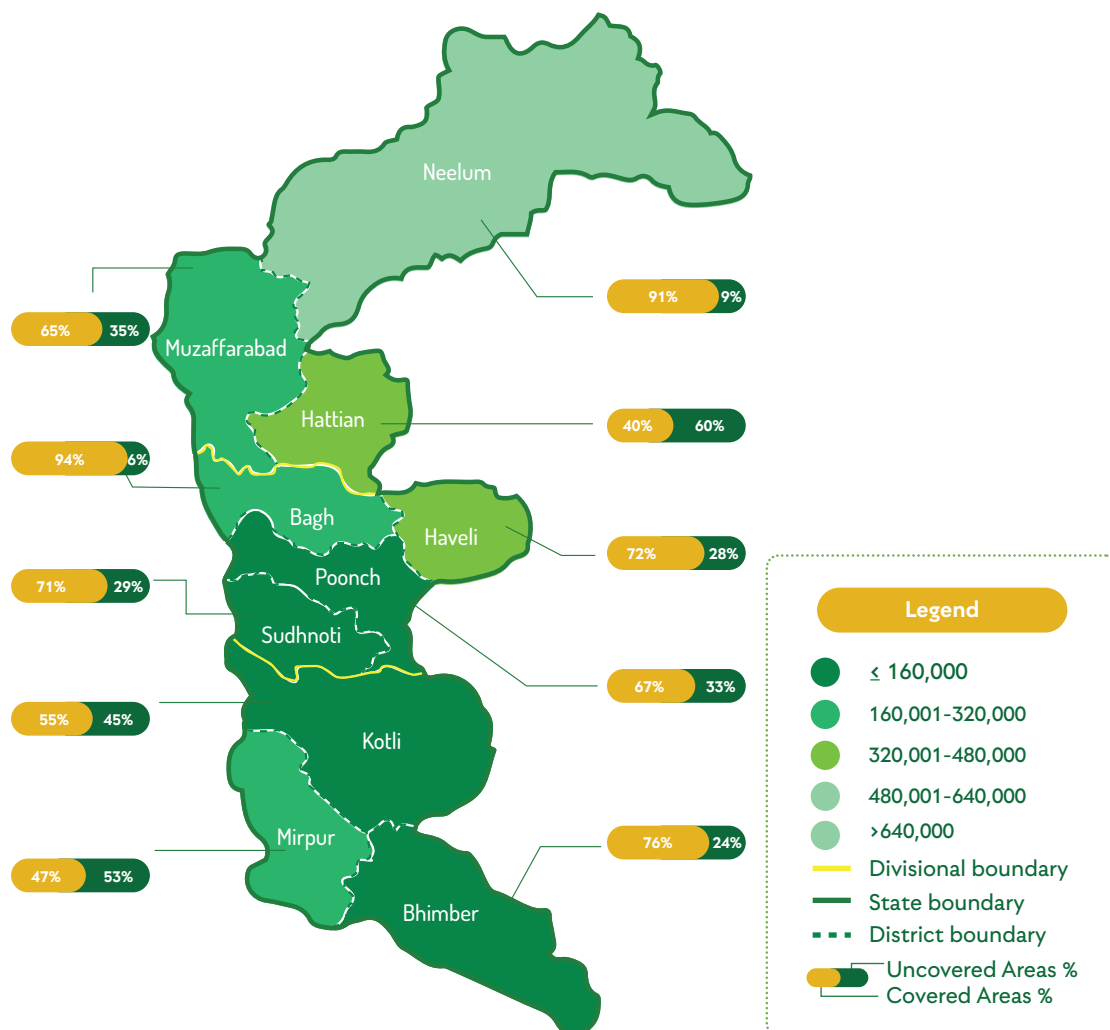


Figure 24. Population density map and Lady Health Workers Coverage in AJ&K, 2019

### 3.3 Sample Size

The sample size was calculated to measure the several key indicators at the level of union councils with statistically significant power. The sample was calculated using the population covered by the Lady Health Workers in eight study districts out of a total of ten districts of Azad Jammu and Kashmir. The sample size for the household survey is measured using the unemployment rate of 10.3% (in 2018) for Azad Jammu and Kashmir. The labour workforce age 14-60 years normally constitutes 65% of the population. Using the population proportion of the labour force and the unemployment rate, the following formula is applied to measure the sample size for the household survey conducted by the LHWs.

**Where:**

$n$  = Number of households in the sample

$z$  = Confidence Interval (Valued at 1.96 for 95% CI)

$r$  = Estimate key Indicator to be measured by the survey

$f$  = Sample design effect (deff, default value at 2)

$k$  = Anticipated rate of non-response

$p$  = Proportion of the total population accounted for by the target population and upon which the parameter,  $r$ , is based

$\bar{n}$  = Average household size (persons per household)

$e$  = Margin of error

Keeping the margin of relative error at the 95% confidence; margin of error at 0.06; non-response rate of 20%; design effect at 2 and average household size at 6.7 persons per household, a sample of **3,176** is calculated for the household survey. The sample of **3,176** is stratified at the total population of the study districts as per their population proportion. The details of the distribution of population and the study sample are shown in Table 21.

Table 21. District-wise total households, population, and sample distribution, for socio-economic study, AJ&K, 2019.

Districts	Total Households		Total Population		Sample Distribution
	n	%	N	%	n
Bagh	55,772	15.3	387,498	15.0	476
Bhimber	45,773	12.5	337,111	13.0	416
Kotli	59,906	16.4	450,496	17.4	556
Mirpur	30,074	8.2	212,744	8.2	260
Muzaffarabad	66,278	18.1	443,868	17.2	546
Poonch	25,492	7.0	345,457	13.4	424
Sudhnoti	48,959	13.4	175,884	6.8	214
Neelum	33,287	9.1	231,099	8.9	284
<b>Total</b>	<b>365,541</b>	<b>100</b>	<b>2,584,157</b>	<b>100.0</b>	<b>3,176</b>

The sampling frame consists of all households (365,541) of the study districts. The population of

the selected households is 643,886. This constitutes 25% of the total population of the survey districts.

### 3.4 Sampling Method

A two-stage random sampling technique was applied to the sampling frame. In stage one, each of the total 127 Lady Health Supervisors in eight study districts was asked to mark every fourth LHW working in her assigned area on the payroll list. The method of selection of the LHW at the first stage is systematic through sequential numbers; thus, an equal selection probability is maintained for each LHW. In stage one, a total of 654 LHWs (25%) were selected to participate in the study to conduct the interviews at the household level out of the total 2,716 Lady Health Workers. The areas (population) covered by these selected LHWs can be labeled as the Primary Sampling Unit. A total population of 643,886 is assigned to these Lady Health Workers. This population represented 25% of the population in the study areas. These 654 LHWs were assigned

a total of 91,979 households. LHWs maintain a family register (Annex XIX) that has detailed information on the family, including the total members in the household, date of birth, mortality, and social indicators, including water sources and living conditions. LHWs assign each family a unique code in the family register.

In stage 2, Lady Health Supervisors were requested to ask each selected LHW (654) to mark every 25<sup>th</sup> household in their family register. These households are selected from the registers of 654 LHWs through a sequential, systematic number, thus maintaining an equal probability to be selected for the survey. A total of 3,176 households were selected for 654 LHWs to be included in the study. Each LHW maintains a family register of the households assigned to them for their routine work.

### 3.5 Household Socio-economic Questionnaire

A structured close-ended household questionnaire was developed for the socio-economic assessment of productive sectors in AJ&K. The household questionnaire was adapted from the questionnaire used in the Pakistan Demographic and Health Survey and the Household Income and Expenditure Survey of Pakistan Bureau of Statistics (Annex XVII and Annex XVIII). The questionnaire contains information on socio-economic characteristics of the sample households, including age; sex;

literacy; education level; technical or vocational education; engagement in income generation activities; occupation of household members; household income with sources of income; availability of household assets, landholdings, livestock and benefits from various government schemes. The questionnaire was translated from English to Urdu by bilingual experts and then reverse translated into English by another expert to ensure the validity and accuracy of the translation.

### 3.6 Pilot Testing of Household Questionnaire

Pilot testing of the translated questionnaire was carried out before the final application of the data collection in November 2019 to ensure that the translated questionnaire was understandable by the Lady Health Workers.

A few mistakes were identified in the skip pattern of the questionnaire as well as a few grammatical and typographical errors, which were all corrected before the implementation of the questionnaire for data collection.

### 3.7 Results

This is the first-ever study of the socio-economic assessment of productive sectors of AJ&K. The district-level data on the demographic and socio-economic status of the households was analyzed and reported. The household survey provided the socio-economic status of sample households in eight districts of Azad Jammu and Kashmir. This covers 80% of the districts of AJ&K. Descriptive statistics were used, and data

disaggregated by gender, urban-rural locality, as well as districts and were estimated using SPSS (Ver, 25). A total of 2,730 households responded out of the 3,176 households approached to participate in this socio-economic household survey. Of the households included in the survey, 84% responded and completed the interviews. Table 22 shows the district-wise completion rates of the households included in this study.

Table 22. Status of household interviews for the study on the socio-economic status of productive sectors in AJ&K, 2019.

Districts	Total Sample		Completed		Incomplete <sup>a</sup>		Not submitted	
	N	n	%	n	%	N	%	
Bagh	476	423	89	12	3	41	9	
Bhimber	416	336	81	1	0	79	19	
Kotli	556	413	74	13	3	130	23	
Mirpur	260	212	82	-	-	48	18	
Muzaffarabad	546	538	98	-	-	8	2	
Poonch	424	358	84	16	4	50	12	
Sudhnoti	214	201	94	13	6	0	0	
Neelum	284	174	61	18	10	92	32	
<b>Total</b>	<b>3176</b>	<b>2655</b>	<b>84</b>	<b>73</b>	<b>2</b>	<b>448</b>	<b>14</b>	

<sup>a</sup> includes partially filled or refused

### 3.8 Demographic Profile

Ninety-three percent of the surveyed households were located in rural areas, and seven percent of the households were in urban areas. The district-wise variation in the rural to urban ratio varies because of the difference in the population coverage of Lady Health Workers

in AJ&K. The average household size (members) in study districts of AJ&K is 6.5. Table 23 shows the district-wise rural and urban proportion of households in AJ&K. District Bagh, Bhimber, and Muzaffarabad have 98% of households from rural areas.

Table 23. Rural and urban distribution of the sample population, AJ&K, 2019.

Area	Sample	Rural		Urban	
	n	n	%	n	%
AJ&K	17,672	2552	96.1	178	6.7
Bagh	2,805	427	100.9	17	4.0
Bhimber	2,252	335	99.7	2	0.6
Kotli	2,752	411	99.5	15	3.6
Mirpur	1,358	140	66.0	72	34.0
Muzaffarabad	3,518	526	97.8	15	2.8
Poonch	2,289	184	105.7	8	4.6
Sudhnoti	1,356	323	90.2	38	10.6
<b>Neelum</b>	<b>1,342</b>	<b>206</b>	<b>102.5</b>	<b>11</b>	<b>5.5</b>

Approximately 60% of the population in the study sample is between 15 to 60 years of age. The population of the surveyed households represents

50.5% of males and 49.5% females. The rural to urban gender differentials were similar to the overall population of the study areas (Figure 25).



Figure 25. Demographic profile of study population, Azad Jammu and Kashmir, 2019.

### 3.9 Household Area and Structure

The analysis of the household data observed that the average household area in AJ&K is approximately eight marlas. It is observed that 55% of the houses are constructed with mud, whereas 45% of the houses are cemented. Majority (97%) of the houses in the study area were owned by their residents. The district-

wise comparison showed that Bhimber has the largest household area of approximately 11 marlas. Sudhnoti has the highest percentage of mudded households (62%), followed by Bagh with 60%. Mirpur has the highest proportion of 79% cemented households (constructed with bricks and cement) in AJ&K (Table 24).

Table 24. Household size and structure in AJ&K 2019 (N=2655).

Areas	Total n	Mean Area <sup>a</sup>	Households			
			Mudded		Cemented	
			n	%	n	%
AJ&K	2,582	7.5	1,130	44	1,457	56
Bagh	407	6	244	60	163	40
Bhimber	328	11	119	36	210	64
Kotli	395	8	169	43	228	57
Mirpur	208	10	44	21	166	79
Muzaffarabad	525	6	210	40	315	60
Poonch	354	7	146	41	208	59
Sudhnoti	190	8	118	62	72	38
Neelum	175	4	80	46	95	54

<sup>a</sup> Marlas



### 3.10 Literacy Rate

A total of 78% of the population in the study districts were literate (age ten years and above). The highest literacy rate of 91% was noted in Mirpur, whereas the lowest was in Neelum at

55%. The overall literacy rate of males in AJ&K was higher than in females. Approximately 85% of the males in AJ&K are literate, whereas 72% of the female population is literate in AJ&K.

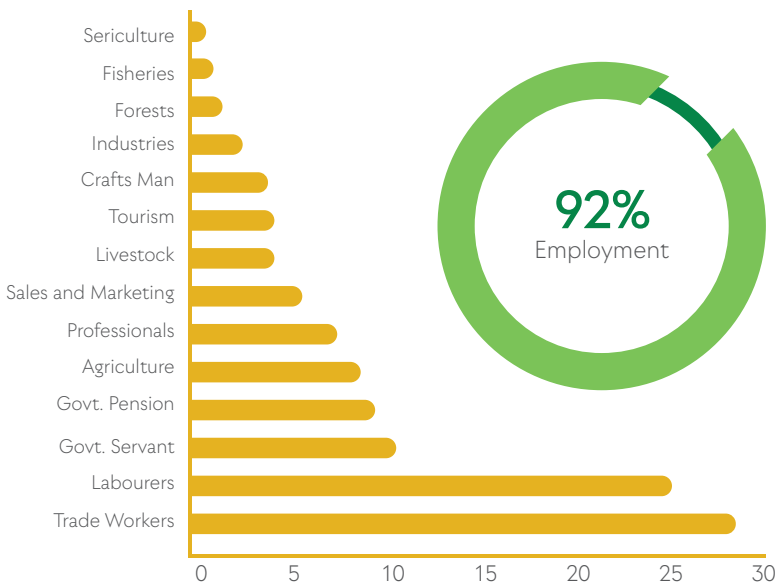
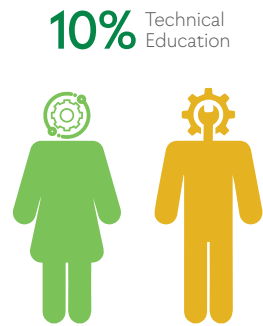
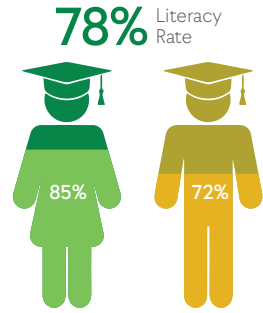
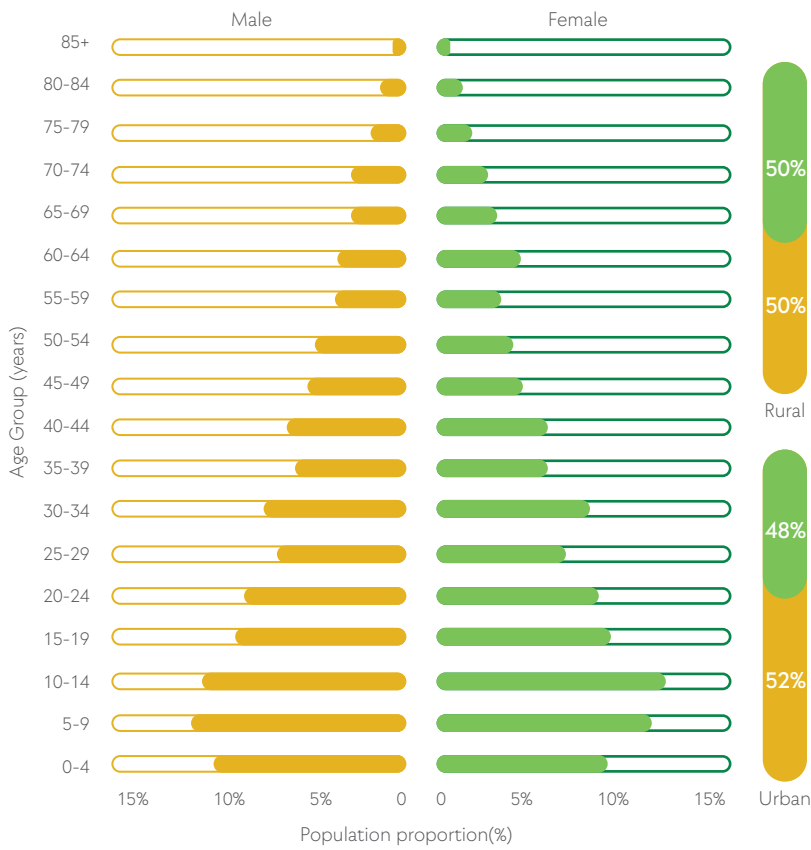
Table 25. Literacy rate (10 years and above) of AJ&K 2019.

Area	Total n <sup>a</sup>	Both genders		Male			Female		
		Literate		Total n <sup>a</sup>	Literate		Total n <sup>a</sup>	Literate	
		n	%		n	%		n	%
AJ&K	12,985	10,159	78	6,492	5,504	85	6,493	4,655	72
Bagh	2,123	1,697	80	1,053	917	87	1,070	780	73
Bhimber	1,748	1,517	87	883	791	90	865	726	84
Kotli	2,095	1,639	78	1,072	898	84	1,023	741	72
Mirpur	1,070	979	91	523	487	93	547	492	90
Muzaffarabad	2,314	1,713	74	1,156	964	83	1,158	749	65
Poonch	1,676	1,293	77	815	691	85	861	602	70
Sudhnoti	993	793	80	496	421	85	497	372	75
Neelum	966	528	55	494	335	68	472	193	41

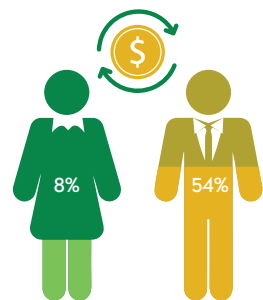
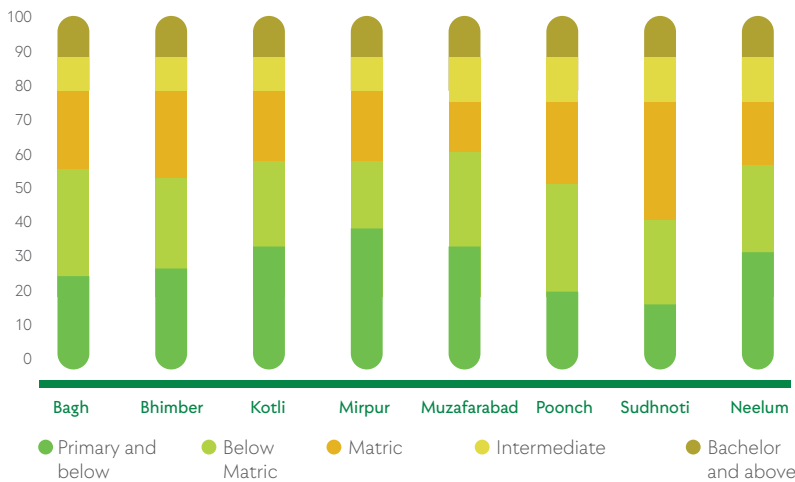
<sup>a</sup> includes ten years and above

The literacy of both males and females was highest in District Mirpur at 93% and 90%, respectively, whereas the lowest literacy rate of both males and females was noted in District Neelum at 68% and 41%, respectively. Table 25 presents literacy rates of age ten years and

above by gender and by districts in AJ&K. Youth literacy rate (age 15 years to 24 years) was also measured for international comparisons. The youth literacy rate for males in AJ&K was estimated at 89%, and the youth literacy rate for females is estimated at 86%.



<b>Bagh</b>	6.6	53.7
<b>Bhimber</b>	8.3	52.9
<b>Kotli</b>	9.7	52.3
<b>Mirpur</b>	11.9	52.4
<b>Muaffarabad</b>	5.9	56.0
<b>Poonch</b>	5.3	56.7
<b>Sundhnoti</b>	10.4	55.8
<b>Neelum</b>	3.2	44.6



Engaged with waged or income-related activity during the last six months

### 3.11 Education Levels

In AJ&K, around 33% of the literate population received primary education or was below this level. Education attained at bachelor or above was at 10%. No significant difference was observed when these education categories were analyzed gender-wise. Table 26 presents the distribution of household members by education level. Primary Education indicates that the respondent attended school from

grades 1 to 5, middle education indicates that the household member attended school completing up to grade 8, and matric level education indicates that the household member has completed all ten grades of the formal schooling system. The intermediate level represents 12 grades of completed formal education. Graduates include those who have a bachelor's degree and above.

Table 26. Levels of educational attainment in AJ&K 2019.

Education Levels	Total		Male		Female	
	n	%	n	%	n	%
Primary and below	3,371	33.3	1,662	30.3	1,709	36.8
Below Matric	2,487	24.5	1,372	25.0	1,115	24.0
Matric	2,217	21.9	1,342	24.4	875	18.9
Intermediate	1,090	10.8	606	11.0	484	10.4
Bachelor and above	969	9.6	512	9.3	457	9.8
<b>Total Literate</b>	<b>10,134</b>	<b>100.0</b>		<b>100.0</b>		<b>100.0</b>

Figure 26 shows gender-wise disaggregated data in various districts of AJ&K. Details are presented at Annex III.

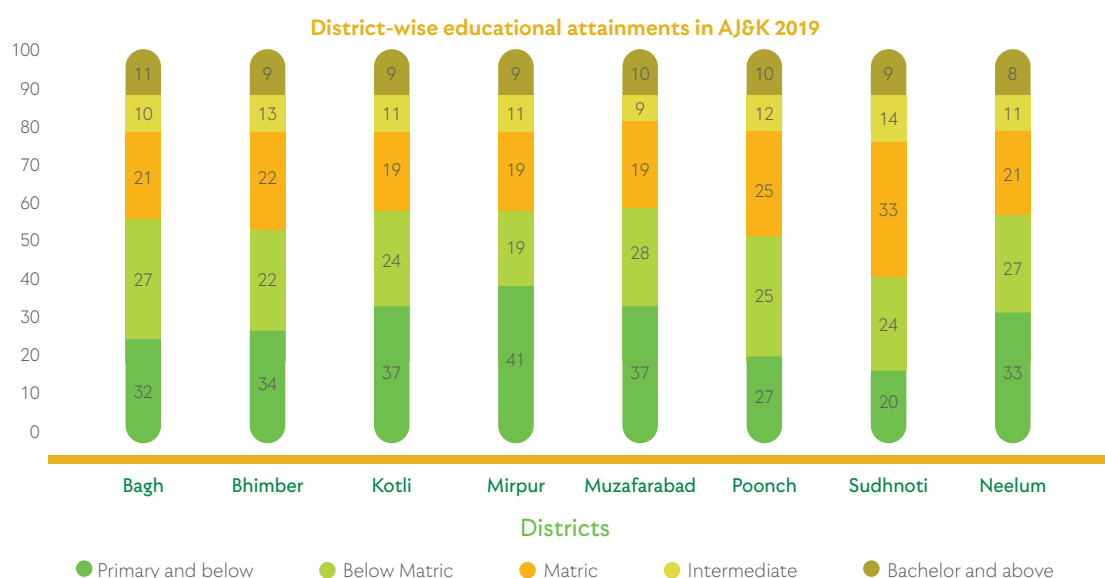


Figure 26. District-wise education attainment, AJ&K, 2019.

### 3.12 Technical or Vocational Training

Among the households (n=2730) that participated in the survey, 10% of the household members (age 15 years and above) received technical education over the last two years at the time of the survey. Of those trained in technical education, 74% were males, and 26% were females. The district-wise comparison shows that Kotli has the highest number of

technically trained persons (20%), whereas the lowest technically trained persons were noted in Neelum (3%). District-wise and gender-wise comparisons are shown in Table 27.

Technical training indicates that the member has attended a vocational training course of six months or more.

Table 27. District-wise attainment of technical education in AJ&K 2019.

Areas	Both Genders			Male			Female		
	n	n	%	n	n	%	n	n	%
AJ&K	4,276	413	9.7	2,460	306	74.1	1,816	107	25.9
Bagh	704	60	8.5	398	43	71.7	306	17	28.3
Bhimber	668	35	5.2	385	26	74.3	283	9	25.7
Kotli	647	132	20.4	388	98	74.2	259	34	25.8
Mirpur	395	19	4.8	208	15	78.9	187	4	21.1
Muzaffarabad	599	99	16.5	371	76	76.8	228	23	23.2
Poonch	617	39	6.3	324	24	61.5	293	15	38.5
Sudhnoti	436	23	5.3	243	19	82.6	193	4	17.4
Neelum	210	6	2.9	143	5	83.3	67	1	16.7

### 3.13 Employment Status

Approximately 92% of the active labour force was engaged in employment. Unemployment was estimated at 7.8%. Among those employed, a total of 54% of males were engaged with income generation or receiving remunerations

for work, and 8% of females were engaged with income generation or receiving remunerations for work. The district-wise comparison showed no significant difference in employment status with regards to gender or remunerations.

Table 28. Labour force engaged in waged labour or income-generation, during the last six months, AJ&amp;K 2019.

Districts	Male			Female		
	Total n	Worked		Total n	Worked	
		n	%		n	%
AJ&K	5,525	2,958	53.5	5,044	381	7.6
Bagh	892	479	53.7	803	53	6.6
Bhimber	767	406	52.9	686	57	8.3
Kotli	910	476	52.3	816	79	9.7
Mirpur	460	241	52.4	436	52	11.9
Muzaffarabad	1,013	567	56.0	925	55	5.9
Poonch	688	390	56.7	665	35	5.3
Sudhnoti	398	222	55.8	374	39	10.4
Neelum	397	177	44.6	339	11	3.2

When the reasons for not being engaged in waged or income-generating activities were analyzed, it was noted that 48% were housewives, 26% were students, 5% reported they could not find a job, 4% were retired

personnel and around 2% were not working due to illness, disability or were pregnant women. Two percent were not working because they either did not need to work or due to other reasons not shared.

Table 29. Reasons for not being engaged in waged or salaried work, AJ&amp;K, 2019.

Reasons	n	%
Housewife	2,084	47.8
Student	1,130	25.9
Too Young	297	6.8
Too Old	233	5.3
Cannot find a Job	204	4.7
Retired	182	4.2
Others	69	1.6
Handicapped	62	1.4
Illness	54	1.2
Do not Need to Work	29	0.7
Pregnant	16	0.4

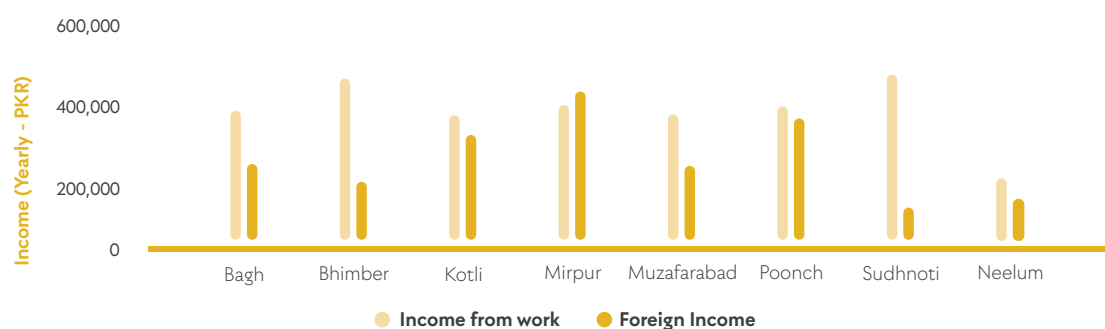


Figure 27. Annual income from work and foreign remittances at the household level, AJ&K, 2019.

### 3.14 Major Occupations

Sector-wise analysis of the employed workforce showed that around 25% of the workforce is engaged as manual laborers (informal), which include daily wagers, drivers, peddlers, and routine labour. Those working with Government or Armed Forces personnel

represent 11% of employment share in AJ&K. Workforce engaged in the agriculture sector for employment purposes constitute 8% of the active labour force. Pensioners (both Govt. and Army) were around 9% of the population.

Table 30. Sector-wise distribution of major occupations in AJ&K, 2019.

Sectors	n	%
Trade Workers	1,046	28.73
Laborer	920	25.27
Govt. Servant	396	10.88
Govt. Pension	322	8.84
Agriculture	292	8.02
Professionals	181	4.97
Sales & Marketing	158	4.34
Livestock	97	2.66
Tourism	95	2.61
Crafts Man	81	2.22
Industries	24	0.66
Forest	15	0.41
Fisheries	10	0.27
Sericulture	4	0.11
<b>Total</b>	<b>3,641</b>	<b>100</b>



AJ&K	2,639	1,886	71.5	1138	1233.0	1.1	1,632	86.5
Bagh	427	304	71.2	189	192.3	1.0	238	78.3
Bhimber	335	253	75.5	186	238.0	1.3	239	94.5
Kotli	401	265	66.1	149	199.3	1.3	242	91.3
Mirpur	212	160	75.5	78	108.3	1.4	123	76.9
Muzaffarabad	528	378	71.6	227	239.0	1.1	328	86.8
Poonch	359	251	69.9	159	139.4	0.9	211	84.1
Sudhnoti	196	141	71.9	81	87.3	1.1	119	84.4
Neelum	181	134	74.0	69	29.6	0.4	132	98.5

Only one farmer per household was interviewed, their land per farmer can be considered as land per household

In AJ&K, around 87% (1632) of the sample households grow crops. About 90% of the households usually grow crops for their personal use (subsistence), and only 10% of the households sell crops in AJ&K. Of those who grow crops for personal use (n=1,429), 31% can fulfill the needs of the household. Of the 10%

(154) who grow crops for commercial purposes, an average income of Rs. 81,086 was generated by a farmer per harvest. Mirpur has the highest proportion (31%) of households growing crops for commercial use. District Sudhnoti has the highest mean amount of Rs. 110,750 earned by households annually by selling crops.

Table 32. Crop growers and the mean income of household, AJ&K, 2019.

Areas	Grow crops	Personal Use		Commercial Use		Declared income	
	n	n	%	n	%	n	Mean (Rs.)



AJ&K	1,583	1,429	90.3	154	9.7	143	81,086
Bagh	247	215	87.0	32	13.0	32	39,094
Bhimber	239	210	87.9	29	12.1	27	114,519
Kotli	239	212	88.7	27	11.3	27	93,267
Mirpur	78	54	69.2	24	30.8	16	110,750
Muzaffarabad	316	296	93.7	20	6.3	19	94,211
Poonch	210	198	94.3	12	5.7	12	51,517
Sudhnoti	123	115	93.5	8	6.5	8	53,000
Neelum	131	129	98.5	2	1.5	2	65,000



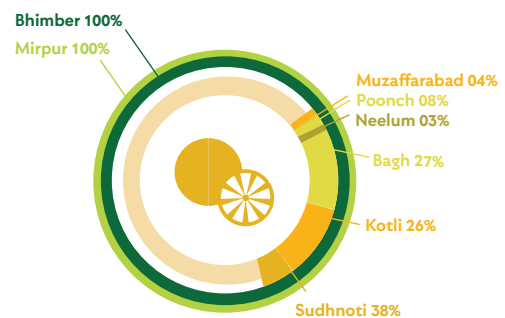
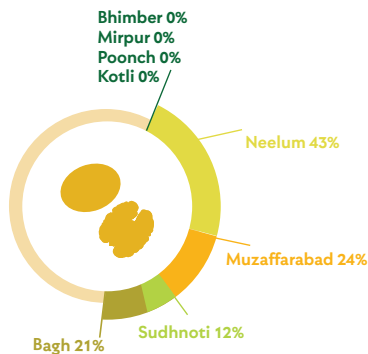
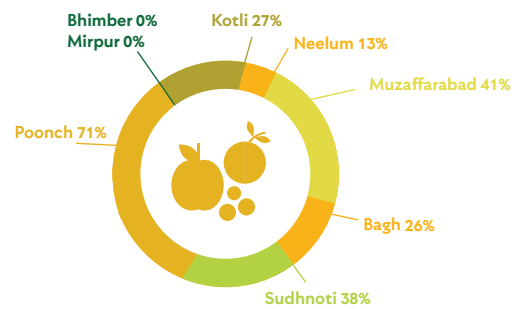
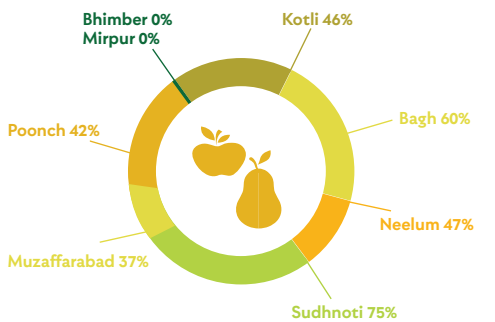
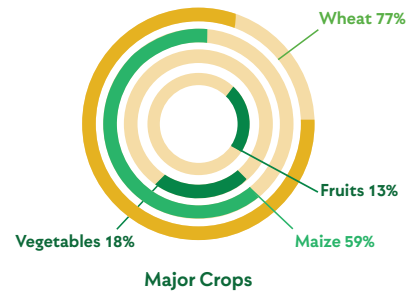
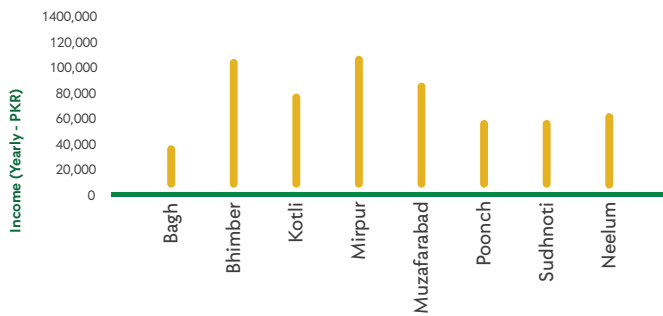
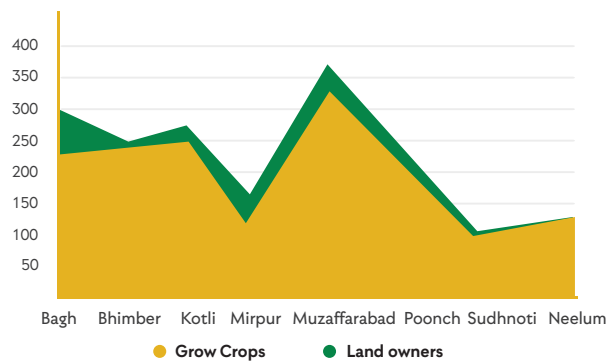
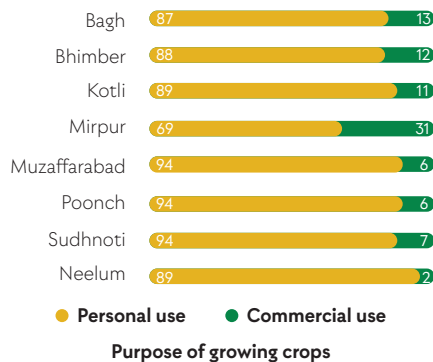
**71.5%**  
household own agriculture land



**86.5%**  
Agricultural land owners growing crops



Average agricultural land per household is **1.1 Acre**



Distribution of crop production by types showed that 77.2% of the sample farmers are growing maize in AJ&K. The percentage of wheat growers is about

59.4%. Around 3.2% of farmers are growing pulses and rice. Vegetable growers are around 18.4%, and fruit growers are around 12.8% (Table 33).

Table 33. Production of crops by type in AJ&K, 2019 (n=1760).

Types	n	%
Maize	1,191	77.2
Wheat	916	59.4
Pulses	49	3.2
Vegetables	284	18.4
Fruits	198	12.8

District-wise distribution of crops shows that the highest proportion of farmers (98%) grow maize in Neelum, whereas the production of maize is the lowest at 21% in District Mirpur. The highest proportions of farmers that grow wheat were noted in District Mirpur (96%),

whereas the lowest proportions were noted at 12% in District Neelum. Approximately 25% of the farmers in Mirpur and 10% of farmers in District Muzaffarabad grow pulses, whereas the production of pulses is much lower in other districts.

Table 34. Type of crops by farmers in AJ&K, 2019,

Districts	n	Maize		Wheat		Pulses		Vegetables		Fruits	
		n	%	n	%	n	%	n	%	n	%
Bagh	238	197	82.8	121	50.8	4	1.7	53	22.3	23	9.7
Bhimber	239	100	41.8	195	81.6	1	0.4	9	3.8	2	0.8
Kotli	242	152	62.8	140	57.9	3	1.2	20	8.3	41	16.9
Mirpur	78	12	15.4	54	69.2	3	3.8	2	2.6	3	3.8
Muzaffarabad	328	304	92.7	166	50.6	29	8.8	102	31.1	51	15.5
Poonch	211	201	95.3	137	64.9	2	0.9	40	19.0	38	18.0
Sudhnoti	119	97	81.5	88	73.9	5	4.2	9	7.6	8	6.7
Neelum	132	128	97.0	15	11.4	2	1.5	49	37.1	32	24.2

Vegetable farming is practiced in three districts, with a proportion of 37% in Neelum, 31% in Muzaffarabad, and 23% in Bagh. Fruit farming is also dominant in District Neelum, with 24% of the farmers growing fruits, whereas Kotli

and Poonch have 18% of the farmers that grow fruits. District-wise distribution of fruits showed that the highest proportion (70%) of apple and pear farmers were in Bagh, whereas the highest concentration of apricot, peach, and plum

farming was seen in the District Muzaffarabad. 44% of walnuts farmers were found in District Neelum. Bhimber and Mirpur are rich with

citrus fruit, where 100% of farmers surveyed, were growing oranges, lemons, or other types of citrus.

Table 35. Type of fruits by districts in AJ&K, 2019 (n = 198).

District	n	Apple/Pear		Apricot/Peach/Plum		Walnuts		Citrus	
		n	%*	n	%*	n	%*	n	%*
Bagh	23	14	60.9	6	26.1	5	21.7	5	21.7
Bhimber	5	0	0.0	0	0.0	0	0.0	5	100.0
Kotli	41	19	46.3	11	26.8	0	0.0	11	26.8
Mirpur	7	0	0.0	0	0.0	0	0.0	7	100.0
Muzaffarabad	51	19	37.3	21	41.2	12	23.5	2	3.9
Poonch	38	16	42.1	27	71.1	0	0.0	3	7.9
Sudhnoti	8	6	75.0	3	37.5	1	12.5	1	12.5
Neelum	32	15	46.9	4	12.5	14	43.8	1	3.1

\*The percentage may exceed 100 because farmers grow more than one type of fruit.

### 3.16 Livestock Profile

It is noted that 53% of the sample households raise cattle (cows, buffaloes, goats), whereas only 34% of households sell the milk of their cattle. Average milk sold by a household is 6.3 litres a day. District Bhimber has the highest proportion

(61%) of households raising cattle as well as the highest percentage (46%) of households raising cattle for commercial use. District Mirpur has the highest average of 7.6 litres of milk sold by a household every day.

Table 36. Distribution of households raising cattle and selling milk, AJ&K 2019.

Areas	Total	Households				Milk (Litres) Mean
		Raising cattle <sup>a</sup>		Selling Milk		
	n	N	%	n	%	
AJ&K	2,655	1,364	53	468	34	6.3
Bagh	423	223	53	62	28	4.6
Bhimber	336	205	61	95	46	6.0
Kotli	413	187	45	60	32	7.3
Mirpur	212	93	44	35	28	7.6
Muzaffarabad	538	288	54	117	41	6.0
Poonch	358	165	46	48	29	5.7
Sudhnoti	201	107	53	38	36	7.0
Neelum	174	96	55	13	14	6.0

<sup>a</sup> Cows, Buffaloes, Goats, Sheep

The analysis of milk production in AJ&K shows that amongst the 1,501 households surveyed that raise livestock, 584 cows were producing a total of 2,523 litres of milk per day, and 3,300

litres of milk was produced by 624 buffaloes per day. The highest milk production per cow was noted in Poonch, Mirpur, and Bhimber districts.

**53%**  
Household Raising Cattle



**34%**  
Household Raising Cattle and Selling Milk



**6.3** Litter/Day  
Average Milk Sold by a Household



### Artificial Insemination

**2.7**  
Litters

Average Milk Produced by Local Cow

**8.1**  
Litters

Average Milk Produced by Friesian Cow

District	Local Cow (Litters)	Friesian Cow (Litters)
Bagh	2.3	8.1
Bhimber	3.1	6.8
Kotli	2.8	8.6
Mirpur	3.8	7.7
Muaffarabad	2.8	10.7
Poonch	3.4	8.0
Sudhnoti	3.3	6.7
Neelum	1.8	6.0

Average Milk Production Per Day

**36%**  
Household with Backyard Poultry



**4.2**  
Average Chicken/  
Households with Poultry

**11** Eggs/Week  
Average Production Per Household with Poultry



**17%**  
Households with Poultry and Selling Eggs

District	Local Cow (Litters)	Friesian Cow (Litters)
Bagh	3.9	4.7
Bhimber	5.1	5.9
Kotli	4.5	5.5
Mirpur	8.9	6.6
Muaffarabad	4.0	4.9
Poonch	6.2	5.5
Sudhnoti	5.5	3.9
Neelum	3.1	4.5

Average Milk Production by cows and Buffalows at various districts

### Household Poultry

District	Household with Poultry (%)	Household Selling Eggs (%)
Bagh	42%	21%
Bhimber	29%	13%
Kotli	34%	21%
Mirpur	17%	23%
Muzaffarabad	36%	14%
Poonch	46%	16%
Sudhnoti	52%	14%
Neelum	26%	11%

● Household with Poultry  
● Household Selling Eggs

Table 37. Average milk production for households having livestock, AJ&K 2019.

Areas	Cows			Buffalo		
	Total	Milk Quantity <sup>a</sup>		Total	Milk Quantity <sup>a</sup>	
		Total	Mean		Total	Mean
AJ&K	584	2,678	4.6	624	3,300	5.3
Bagh	75	289	3.9	104	492	4.7
Bhimber	94	481	5.1	124	736	5.9
Kotli	73	331	4.5	124	676	5.5
Mirpur	26	232	8.9	34	226	6.6
Muzaffarabad	140	565	4.0	97	471	4.9
Poonch	31	192	6.2	94	516	5.5
Sudhnoti	60	327	5.5	45	175	3.9
Neelum	85	263	3.1	2	9	4.5

<sup>a</sup>Litres per day

There is a significant difference in milk production between the improved breed of cows, raised through artificial insemination and local breeds. The average milk production of the Friesian and Jersey cross-breed is 8.1 litres per day. It is noted that the Friesian

breed at district Mirpur and Muzaffarabad is producing the highest quantity of milk, which is almost 11 litres per day, whereas local breed is producing the highest quantity of milk in Mirpur, i.e., four litres per day.

Table 38. Difference in milk production among local breed cows and artificially inseminated Friesian cows, AJ&K 2019.

Areas	AI (Friesian)				Non-AI (Local Breed)			
	Households N	n	Milk Quantity <sup>a</sup>		Households N	n	Milk Quantity <sup>a</sup>	
			Total	Mean			Total	Mean
AJ&K	44	138	1,118	8.1	561	768	2,102	2.7
Bagh	8	23	157	6.8	72	95	217	2.3
Bhimber	11	39	335	8.6	82	105	325	3.1
Kotli	6	16	123	7.7	67	89	245	2.8
Mirpur	2	7	75	10.7	27	53	201	3.8
Muzaffarabad	6	20	200	10	137	174	489	2.8
Poonch	3	7	56	8	29	41	140	3.4
Sudhnoti	7	24	160	6.7	53	69	228	3.3
Neelum	1	2	12	6	94	142	257	1.8

Abbreviation: AI, Artificially Inseminated; n, number.

A statistically significant difference was observed in the milk production from Artificially Inseminated cows with the semen of Holstein

Friesians breed compared to non-artificially inseminated cows of local breeds.

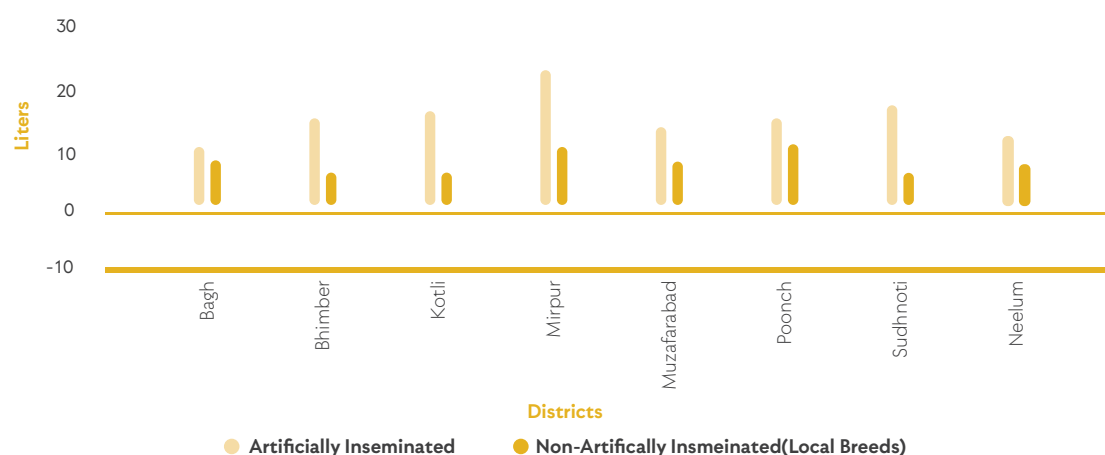


Figure 29. Milk production (mean) from Artificially Inseminated Cows (Holstein Friesians) versus Non-Artificially Inseminated Cows (local breed), AJ&K, 2019.

Analysis of the data of cattle at the household level showed that, on average, 2.4 cattle are raised in households having livestock (95%CI

1.9-2.8). Figure 30 shows the average number of cattle per household raising livestock in the study districts of AJ&K.



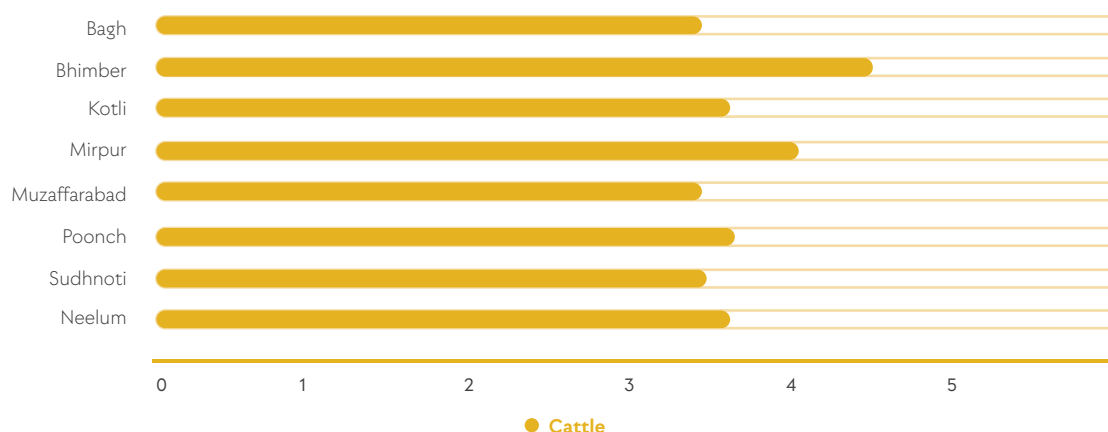


Figure 30. Average cattle per household raising livestock, AJK, 2019

### 3.17 Poultry Profile

In AJ&K, around 36% of the sample households are raising chickens. These households have an average of 4 hens, with an average production of 10 eggs per week. Only 17% of the households are engaged with poultry for commercial use in AJ&K. It is noted that

district Sudhnoti has the highest percentage (52%) of households having poultry. The analysis shows that the highest proportion (23%) of households engaged with poultry for commercial use were noted in district Mirpur.

Table 39. Backyard poultry in AJ&K, 2019 (N=2655).

Areas	Total N	Households having Poultry		Poultry		Eggs per week		Household selling eggs	
		n	%	n	Mean	n	Mean	n	%
AJ&K	2,655	958	36.1	3,976	4.2	10,160	11	165	17.2
Bagh	423	178	42.1	759	4.3	1883	11	36	20.5
Bhimber	336	99	29.5	399	4.0	995	10	13	13.1
Kotli	413	139	33.7	624	4.5	1248	9	29	20.9
Mirpur	212	35	16.5	137	3.9	399	11	8	22.9
Muzaffarabad	538	194	36.1	764	3.9	1952	10	28	14.3
Poonch	358	164	45.8	756	4.6	2319	14	31	18.9
Sudhnoti	201	104	51.7	395	3.8	901	9	15	14.4
Neelum	174	45	25.9	142	3.2	463	10	5	11.1

### 3.18 Population Coverage of Government Schemes

To enhance productivity and uplift the economic status of people in AJ&K, the Government of AJ&K has introduced several schemes and initiatives. These initiatives are launched in different productive sectors through various line departments, including Agriculture, Livestock, Fisheries, Industries,

Technical Education, Forestry, Wildlife, Tourism, and IT Board. The analysis reveals that 10% of the sample population has received benefits from these schemes/initiatives in AJ&K, with the highest proportion of the beneficiary population located in district Bhimber (20%).

Table 40. Coverage of government initiatives and schemes at the household level, AJ&K 2019.

Areas	Total Respondents	Schemes	
	n	n	%
AJ&K	2,557	260	10
Bagh	384	43	11
Bhimber	334	67	20
Kotli	371	28	8
Mirpur	212	15	7
Muzaffarabad	536	53	10
Poonch	354	18	5
Sudhnoti	181	27	15
Neelum	185	9	5

Government schemes/initiatives include: Seeds, Fertilizers, Pesticides Spray, Machinery for Agriculture, Flower Plants or seeds, Animal Health Care, Budding, Grafting, Nursery/Orchard, Vaccination of Livestock, Treatment of Animal, Artificial Insemination, Backyard Poultry, Poultry Development Support, Govt. Small Loans, Fish Farm Development, Subsidized LPG Gas Cylinders, TEVTA Courses, and Others.

An analysis of agricultural schemes shows that 7% of sample households involved in agriculture benefited from Government schemes on agriculture. A district-wise breakdown shows

that the highest proportion of beneficiaries were recorded in district Bagh (16%), whereas no beneficiary of agricultural schemes was noted in the household sample of Mirpur.

Table 41. District-wise proportions of agricultural schemes at the household level, AJ&K, 2019.

District	Households grow crops		Seeds		Fertilizers		Pesticides Spray		Machinery for Agriculture		Flower plants or seeds		Budding Grafting		Nursery/ Orchard		
	n	%	n	%	n	%	n	%	n	%	n	%	N	%	n	%	
Bagh	238	8	3.4	7	2.9	5	2.1	2	0.8	2	0.8	2	0.8	6	2.5	1	0.4
Bhimber	239	10	4.2	9	3.8	2	0.8	0	0.0	1	0.4	1	0.4	4	1.7	2	0.8
Kotli	242	6	2.5	6	2.5	1	0.4	0	0.0	0	0.0	0	0.0	3	1.2	0	0.0
Mirpur	123	6	4.9	6	4.9	4	3.3	0	0.0	1	0.8	1	0.8	5	4.1	2	1.6
Muzaffarabad	328	9	2.7	8	2.4	4	1.2	1	0.3	2	0.6	2	0.6	8	2.4	1	0.3
Poonch	211	5	2.4	4	1.9	2	0.9	1	0.5	1	0.5	0	0.0	5	2.4	1	0.5
Sudhnoti	119	3	2.5	2	1.7	1	0.8	0	0.0	0	0.0	0	0.0	4	3.4	0	0.0
Neelum	132	2	1.5	1	0.8	0	0.0	0	0.0	0	0.0	0	0.0	7	5.3	1	0.8
<b>Total</b>	<b>1,632</b>	<b>49</b>	<b>3.0</b>	<b>43</b>	<b>2.6</b>	<b>19</b>	<b>1.2</b>	<b>4</b>	<b>0.2</b>	<b>6</b>	<b>0.4</b>	<b>42</b>	<b>2.6</b>	<b>8</b>	<b>0.5</b>		

Analysis of livestock schemes shows that around 46% of sample households benefitted from schemes/initiatives of the Livestock and Dairy Development Department. Bhimber has the highest percentage of livestock beneficiaries (80%) for different schemes. Ten percent of livestock breeders received benefits of animal health care, and 13% of breeders benefitted from vaccination services as well as the treatment of animals. It is noted that 4.7% of breeders artificially inseminated their cattle to improve the breed. About 6% of the sample population raising livestock are receiving services for the poultry.

Table 42. Coverage of livestock services at the household level, AJ&amp;K, 2019.

District	HH Raising cattle		Animal health care		Vaccination of livestock		Treatment of Animal		Artificial Insemination		Backyard Poultry		Poultry development support	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Bagh	223	16	7.2	18	8.1	18	8.1	8	3.6	4	1.8	1	0.4	
Bhimber	205	41	20.0	54	26.3	50	24.4	15	7.3	3	1.5	0	0.0	
Kotli	187	25	13.4	29	15.5	29	15.5	7	3.7	30	16.0	0	0.0	
Mirpur	93	13	14.0	14	15.1	12	12.9	14	15.1	7	7.5	0	0.0	
Muzaffarabad	288	28	9.7	37	12.8	38	13.2	8	2.8	20	6.9	0	0.0	
Poonch	165	8	4.8	15	9.1	10	6.1	4	2.4	4	2.4	0	0.0	
Sudhnoti	107	10	9.3	13	12.1	15	14.0	9	8.4	9	8.4	1	0.9	
Neelum	96	3	3.1	6	6.3	4	4.2	1	1.0	0	0.0	0	0.0	
<b>Total</b>	<b>1,364</b>	<b>144</b>	<b>10.6</b>	<b>186</b>	<b>13.6</b>	<b>176</b>	<b>12.9</b>	<b>66</b>	<b>4.8</b>	<b>77</b>	<b>5.6</b>	<b>2</b>	<b>0.1</b>	

# 04

## POLICY RECOMMENDATIONS



## 4.1 Policy Recommendations

Rural economies, like AJ&K, can play a crucial role in moving towards environmentally sustainable growth. Rural economies provide essential goods and services that cannot be generated in an urban context. In AJ&K, where more than 80% of the population lives in rural areas, the output per worker in the productive sector, especially agriculture, livestock, fisheries, sericulture, and tourism may be enhanced through improving skills and introducing modern innovative approaches. Most modern rural economies of the world are characterized by better physical and digital communications infrastructure, skilled workforce, and creation of employment opportunities through entrepreneurs, as well as small and medium-sized enterprises. Economic growth is driven by a combination of increased employment and increased productivity of workers.

This socio-economic assessment of AJ&K noted that development in the productive sectors had not seen significant growth in terms of employment shares. Twenty-five percent of the

workforce is engaged with manual labour, 28% are trade workers, and 20% are currently serving for government or retired from government services. Agriculture contributes 8%, livestock 3%, and tourism 3% to the overall employment in AJ&K. Further analysis to estimate the productivity of various sectors, identification of gaps, and potential areas of improvement were noted. Overall, there are vast opportunities in the productive sectors for the AJ&K economy, which may be tapped by prudent policies. Targeted approaches and interventions, and weak institutional infrastructure in the productive sectors hamper the full utilization of the potentials in the sectors. This assessment has shown that AJ&K can maximize the contribution of productive sectors, which can render it into a self-sufficient economy and transform the living standards of its population. Keeping aforesaid in view, the sector-wise policy recommendations for the productive sectors in AJ&K are presented below:

## 4.2 Livestock

The livestock sector is recognized as a major contributor to the rural economy of the world. Livestock is a major source of income and employment, particularly for women. The

following recommendations are suggested for improvement in the productivity of the livestock sector in AJ&K.

### 4.2.1 Coverage of Livestock Initiatives

The Livestock and Dairy Development Department is providing excellent coverage of vaccination, animal healthcare, and diagnostics services at the household level. However, improvement in the household coverage of breed improvement and poultry services are needed. The current coverage of the breed improvement program in AJ&K estimated through this study is five percent of the household raising cattle. Huge variations are noted in districts, with 15% in Mirpur to one percent in Neelum. A gradual

increase in coverage of service at the household level to 100% of the farmers raising livestock may improve the productivity of the livestock sector in AJ&K. Similarly, the coverage of poultry services and the provision of day-old chicks of improved species at the household level currently stand at 6% of the total households. Increasing both the production capacity and areas of coverage for the introduction of better varieties of poultry breeds can have a significant impact on improving the production over the next few years.

### 4.2.2 Targeting Mechanism

The study could not find a standardized mechanism to identify the beneficiaries of various livestock schemes and initiatives with a focus on increasing milk production or improving the breed of cattle. For instance, the average annual income of the household benefited from AI was Rs. 0.77 million, whereas the non-AI household income

with, was Rs. 0.54 million per year. Although the household income may not be the only selection criteria, other factors including access to market, scalability, substantiality, and skill set should also be considered when selecting beneficiaries for livestock or poultry initiatives with a target to increase milk or egg production.

### 4.2.3 Increasing Milk Production

Improving farm management practices, gradually introducing improved breeding stock, and improving the availability of credit and marketing networks may enhance the productivity of the livestock sector in AJ&K. The study noted a significant enhancement in milk production among the cows produced through artificial inseminations from better quantity breeds. Most of the AI activities are currently performed through developmental expenditure. It is strongly recommended to take measures to ensure the sustainability of such an initiative that has a direct effect on milk production and economic growth. Initiatives that increase the production and delivery of better-quality breeds are required as currently, there is only one centre in the North, which is insufficient to meet the increasing demand of the population.

To further sustain milk production, initiatives are required that maintain a genetic pool that has traits of better-quality milk production. The line departments of AJ&K should develop their animal breeding farms (nucleus farms) at different ecological zones where quality breeds can be raised with protected genetic potential on scientific grounds and can then be sold by keeping breeding and genomic protection rights with the Departments themselves.

Artificial Insemination services in Neelum need to be strengthened and expanded throughout the district. The Department has launched a project to distribute elite animals (Heifers) in the district of Neelum as well as other far-flung areas of AJ&K, particularly near the Line of Control.

### 4.2.4 Production of Fodder

Optimum milk production cannot be achieved even with the best breeds of the cattle if the nutritional requirements of the cattle are not met. In AJ&K, with an average farm size of 1 acre, it may not be possible for farmers to grow their fodder. In this case, they rely on local markets

to purchase fodder or forage. A scheme with the focus on the large-scale production of fodder, silage, and forage within each district may be useful to maximize the full potential of breed improvement program and increase milk production by the local livestock breeders.

### 4.2.5 Increasing the Poultry Breeding Capacity

In AJ&K, 36% of the households have backyard poultry, whereas only 17% are selling eggs.

The Livestock and Dairy Development Department has the hatcheries to produce >

200,000, a day-old chicks of improved poultry breeds. However, there is no infrastructure (poultry sheds) for the rearing of the poultry birds that could ensure the availability of vaccinated pullets of 12 weeks to the rural

areas. Measures that improve the outreach of the pullets to the household with better egg-laying varieties may have a sustainable effect on egg production and household income over 5-6 years.

#### 4.2.6 Strengthening Infrastructure

The veterinary labs and animal health services through veterinary hospitals require strengthening of infrastructure, as most of the structures were constructed in the 1960's and 1970's. In addition,

adequate funds are required for health and vaccination coverage (veterinary medicine and vaccine) for the emerging transboundary animal diseases/zoonotic diseases.

### 4.3 Wildlife and Fisheries

AJ&K is bestowed with abundant natural resources, including forests and rivers. The area is characterized by an overwhelming mountainous terrain, a large rural population, and an active literary populous. The population explosion and rapid urbanization resulting in unplanned urban

sprawl have come as a severe detriment to the sector. The staff posted, particularly in fisheries and wildlife sectors, has been found lacking in technical skills required to guide the sector. Wildlife and Fisheries can play a significant role in increasing economic growth in AJ&K.

#### 4.3.1 Improving Coverage

This assessment noted that the fisheries contribute only 0.3% of the employment share. Keeping in view the abundance of freshwater

resources in AJ&K, developmental schemes with higher coverage and scope may be beneficial to improve the economic productivity of AJ&K.

#### 4.3.2 Skill Enhancement

Currently, the Department lacks skilled human resource training and capacity building programs for the Wildlife and Fishers Department with a

focus on the latest technologies and innovative approaches, which may be helpful to increase fish production in AJ&K.

#### 4.3.3 Community-Based Trophy Hunting

Trophy hunting is globally recognized as a wildlife conservation tool. Trophy Hunting generates a significant income in many African countries. South Africa generates 100 million USD of revenue through trophy hunting each year (Lindsey, Roulet, & Románach, 2007). Community-Based Trophy Hunting is recognized for the conservation and protection of the wild resources by local communities through incentives in the form of

hunting fees. These Community Based Trophy Hunting programs are successfully being practiced in Northern Areas of Pakistan for Markhor and have resulted in increased employment opportunities, income enhancement through the development of roads and water channels. A similar initiative is recommended for AJ&K for habitat suitable for ibex and pheasants breeding. It may result in improving the economic activities of those areas.



#### 4.3.4 Promotion of Ecotourism

Ecotourism, which involves traveling to relatively undisturbed natural areas with the specific objectives of studying, admiring, and enjoying the scenery and its wild animals and plants, is recognized worldwide for its

role in the socio-economic development of local communities. In AJ&K, diverse wildlife, rich flora, rivers, and mountains provide great potential for the introduction of community-based ecotourism.

### 4.4 Agriculture

A prosperous agricultural sector helps to decrease rural poverty, increase demand for products from the urban industrial sector, and also lowers the rate of rural-to-urban migration (Junankar, 2016). This study has shown that AJ&K is endowed with high-quality land. Over a while, the local populace has evolved indigenous farming systems according to the topographical conditions. The environmental conditions, despite the threat of natural disasters, are favorable. The opportunity of access to capital resources for farmers of AJ&K has improved, which may enhance the business potential of AJ&K's agriculture sector.

The agriculture potential is not being fully harnessed as many issues stymie the AJ&K agriculture sector. The agriculture sector accounts for eight percent of the employment share in AJ&K. Around 72% of the total households own agricultural land in AJ&K. The average farm area is estimated at 1.1 acres per farmer. Eighty-seven percent of the households that grow crops, mostly grow for subsistence use (90%), and a very small fraction is growing crops for commercial purposes (10%). Of those who grow crops for personal use, only 31% can fulfill the needs of the household. Of the 10% who

grow crops for commercial purposes, an average amount income of Rs. 81,086 was generated by a farmer per harvest.

The requisite number of resources as per the needs of the sector are lacking. The agriculture sector's performance is affected by low levels of value addition, poor marketing, and high cost of production. The seed quality is also of a low standard, which lowers the margin of benefit/profit for the farmers. Ultimately, productivity gets hampered. Small landholdings are a perpetual weakness in the agriculture sector of AJ&K. The Department is currently working on bringing waste land under cultivation through a new federal funded programme. Again, as is in other sectors also, the Government schemes carry an inherent flaw as the selection of beneficiaries is never done on the scientific lines, rather patronage and connections are mostly the measuring rods for the allotment of the government-sponsored schemes. Resultantly, the outcome of the interventions towards productivity is very low as the beneficiaries feel little incentive in carrying out the production on a commercial basis. Following policy measures are therefore recommended to enhance the productivity of the agriculture sector in AJ&K:

#### 4.4.1 Development of New Techniques and Deployment of Latest Technologies

The Government of AJ&K may transform the agriculture sector by giving a strategic roadmap with clear timelines for the stakeholders and thus support the implementation of policies and programs for enhancing agricultural

productivity. The introduction of new technologies will give a boost to productivity in the sector. This warrants the need for investments in appropriate technologies to counter unfavorable weather shocks.

Investments in breeding drought-tolerant varieties and smallholder irrigation are some

of the efforts that are required to address the issues of low rainfall in arid areas.

#### 4.4.2 Improvement in the Marketing Strategies

There are rudimentary or almost non-existent methods of marketing in AJ&K. Besides, there is a disconnect of farm and market in AJ&K; although, the disconnect has a lot to do with the inherent challenges like mountainous terrain. Therefore, a workable strategy needs to be devised to equip the farmers with marketing skills and

opportunities to make their products reach the market in a less costly and speedier way. For instance, fruits have significant potential in AJ&K's agricultural business, but the considerable potential can only be realized when the farmers get access to the market, have recourse to proper storage and packaging facilities are provided.

#### 4.4.3 Maximizing the Benefits from Small Landholdings

The average farm size estimated by this study in AJ&K is 1.1 acres. However, the low landholding ratio gives another opportunity of getting the maximum out of the small landholding. Commercializing smallholder agricultural production is one of the effective ways to boost farmers' income, employ labor, and stimulate rural economies. However, small landholder market participation can only be achieved through interventions that increase

smallholder production of marketable surpluses by increasing productivity at an affordable cost. AJ&K's population is predominantly rural; a significant proportion of this population owns agriculture land, though at a small scale. Therefore, the interventions that enhance the productivity of existing farmers are required, and programs that encourage landowners to utilize non-productive lands should be introduced.

#### 4.4.4 Strengthening Technical Support

The technical support in the shape of enhanced knowledge and provisioning of interventions like improved varieties of seeds and fertilizers need to be boosted to equip the farmers with better knowledge and skills for proper agronomic practices. The study noted inadequate

monitoring mechanism to evaluate the impact of the agricultural initiatives like FDP and CMP schemes. The advisory support system, monitoring, and evaluation mechanism may help to realign the schemes for achieving the desired objectives.

#### 4.4.5 Development of Horticulture and Fruits Farms

The AJ&K has a terrain that can best be used for fruit and vegetable cultivation. The CMP and FDP have good initiatives, still, for an impact on

productivity, a sustained effort is required by the Agriculture Department for the development of horticulture and fruit farming as a priority.

#### 4.4.6 Beneficiaries Selection

As in other Government schemes, the beneficiary selection is a big challenge in the AJ&K agriculture sector. This study noted that the beneficiaries selected for the CMP and FDP schemes had higher mean incomes with other sources of income like foreign remittances

etc. As such, the natural tendency for commercial undertaking diminishes with other income sources, hence losses of productivity. Therefore, for targeted intervention, the process of beneficiaries' selection may be reassessed.

#### 4.4.7 Farm Size and Productivity

This assessment showed that 90% of farmers rely on subsistence farming for their livelihood and food security. Of these, only 31% of crop growers could fulfill their household needs. This study found that the average farm size in AJ&K is approximately one acre. According to FAO, small farms that operate on an area less than 1-hectare account for 72% of agricultural holdings worldwide and produce more than 80% of the world's food (FAO, 2014). Several studies reported that small farms, on average, employed more inputs per acre and, as a result, had a higher output per acre. Increasing the agriculture production per acre in the mountainous areas of AJ&K may improve the economic growth and socio-economic status of AJ&K. Interventions should be designed to improve the crop productions of farmers who are already engaged in the agriculture sector of AJ&K. The increase in agricultural production

requires that farmers have improved access to productivity-enhancing inputs such as improved varieties of seeds and breeds, fertilizers and knowledge on proper agronomic and management practices.

Investments may be made in the introduction to new technologies like remote sensing (via satellites), crop, and soil health monitoring; farm management may also help in increasing farm productions. Weather advisories at the preharvest and harvest stages, disease, and pest-related assistance at the postharvest stage may be very beneficial for farmers in AJ&K. Adequate and reliable rainfall is an essential contributor to agricultural productivity in rain-fed areas of AJ&K. Investments in breeding drought-tolerant varieties and smallholder irrigation interventions may also improve the productivity of the agriculture sector in AJ&K.

#### 4.4.8 Purchase Guarantees

Although buy-back guarantee is under practice for activities like certified seed production through contact growers, the Agriculture Department may introduce schemes for market chain, and value addition. Buy-back guarantee for crops like wheat and maize seed is possible by adopting price support mechanism as practiced in other parts of the country. However, for other crops especially fruits and vegetables do not need any buy-back guarantee. Along with these technical skills, affordable inputs may lead to additional

household income. This may also encourage farmers to grow crops with higher cash values and reduce the risk of post-harvest losses. Small landholder farmers respond to expected prices, irrespective of commodity type. Higher expected prices offer incentives for market entry and motivate the sale of increased quantities for those able to produce a marketable surplus. A market pricing system and farmers' access to price information are very crucial to enhance the economic productivity of the agriculture sector in AJ&K.

#### 4.4.9 Agricultural Commercialization

Several studies suggest that small-scale agriculture is a significant contributor to the growth of rural economies (Hazell, 2013). Taking into account 90% of farmers in AJ&K who grow crops for subsistence use, a paradigm shift is required to improve crop productivity, thus moving towards semi-subsistence farming systems. This may gradually enhance

rural incomes and improve agriculture commercialization. This requires a contextual understanding of high-yield commodities and value chains by a large number of smallholder farmers. Interventions that enhance the productivity of existing farmers are required, and programs that encourage landowners to utilize non-productive lands should be introduced.

#### 4.4.10 Establishment of Mountain Agriculture Research Center

Soil and climatic conditions are variable and or highly rain-fed nature in different agro-ecological zones of AJ&K. A profitable farming under such conditions need crop varieties developed

specifically for mountain areas and the post-cultivation practices during the crop season. It is recommended to develop a research institute with a focus on Mountain Agriculture.

#### 4.4.11 Strengthening of Seed Certification Unit

A quality seed is a basic unit of a production function in the Agriculture Sector. Certified planting material like cereal, pulses, fodder, crop seeds, vegetable seeds, fruit plant varieties is compulsory for a profitable

farming. It is recommended to establish a seed certification unit in the Agriculture Department. The Unit can play a vital role to promote and ensure cultivation of certified planting materials.

#### 4.4.12 Establishment of AJ&K Seed Corporation

The establishment of AJ&K Seed Council is a basic requirement of Agri. business to make it

a profitable enterprise. It fetches a market of millions during every crop season.

### 4.5 Sericulture

The socio-economic assessment of the sericulture sector revealed that only 0.11% of the persons are employed in the Sericulture industry. This industry can augment the income of small landholding farmers and may improve the waged employment of women at the household levels. In addition to the employment and income potential, the silkworm production may capture a reasonable share in the total foreign exchange earnings.

Keeping in view the significantly lower proportion of labour market share and productivity by the sericulture in rural areas, it is

imperative to explore all possible means by which employments opportunities can be generated, and farmers' income can be enhanced. Because most areas of AJ&K are climatically favorable for growing mulberry plants and rearing silkworms, motivating farmers may invest in this sector that may be beneficial to increase the labour market share in sericulture.

This is also evident from the literature that Kashmir, in the late 18<sup>th</sup> and early 19<sup>th</sup> centuries, was famous for its silk industry. In addition to employment and income generation, the

silk industry carries an excellent potential for export. The study also observed that farmers, who are already engaged in silkworm rearing, are being exploited by the middleman. Direct industrial linkages are required to be made

by the Sericulture Department with the silk manufacturers to facilitate farmers already engaged in this sector. The following policy recommendation may help to revive the sericulture industry in AJ&K.

#### 4.5.1 Linkages with Microfinancing Initiatives

Although the Government is selling mulberry plants and silkworm eggs at very nominal rates, the number of farmers engaged with silkworm rearing is very low in AJ&K. Linking small industries and bringing microfinancing initiatives

to small farmers for minor equipment, e.g., trays, racks, moistures, and temperature maintenance, may have a significant effect on improving employability and income generation in the sericulture industry.

#### 4.5.2 Quality Assurance Process

The study noted that both the quality and quantity of seeds (silkworm eggs) were not appropriate and resulted in lower production of cocoons. It is recommended that the quality

assurance process may be introduced for seed purchase, and a sufficient quantity of eggs should be provided as per the needs of the farmers.

#### 4.5.3 Technical Competence

The Sericulture Department of AJ&K lacks capacity both in terms of infrastructure and trained human resource. It is recommended that the Department's technical competence

in providing advisory services to the farmers be built to introduce modern techniques in the silkworm industry. Farmers' participation in the workforce is generally low in AJ&K.

#### 4.5.4 Mulberry Cultivation

Among the other environmental factors, mulberry cultivation in AJ&K can produce sufficient leaves required for the rearing of silkworms due to its

low cost, and lower requirements of irrigation. Moreover, it is a perennial crop, and its active life span is reported to be 30 years.

#### 4.5.5 Marketing Systems of Sericulture Industry

In any competitive market, fair price plays an essential role in marketing management. A

system may be developed that helps link existing farmers to markets with a fair pricing mechanism.

#### 4.5.6 Women Engagement in Sericulture

Taking into account a very low female participation in the labour market, it is also recommended that measures should be taken to bring female entrepreneurs in the sericulture

industry, through grants and interest-free loans. These policy recommendations may be adapted to revive the sericulture industry in AJ&K.

## 4.6 Tourism

Tourism is one of the most rapidly growing industries around the world. Tourism contributes to economic development in both direct and indirect ways. The direct effects usually involve changes in sales, employment, tax revenues, and income levels due to the immediate impacts of tourist spending. The indirect effects are generally changes in prices, quality, and quantity of goods and services, property values, and other taxes. There are a number of hilly and mountainous scenic areas, which are endowed with thick forests, beautiful lakes, rivers, waterfalls, valleys, historical heritage, and monuments. The study noted that only 3% of the workforce is engaged in employment related to tourism in

AJ&K. This is a significantly low figure. In addition to the lack of market-oriented approaches, the geopolitical situation, poor road infrastructure and communications facilities for which the Government of AJ&K is spending a significant proportion of their development expenditure are hurdles towards the slow growth in the tourism sector. Besides, due to its distinct topography and exposure to natural calamities such as landslides and earthquakes, concrete efforts are yet to make. A vast potential of the tourism industry is yet to be utilized to enhance the economic productivity of AJ&K. Following medium-term policy, interventions are recommended for improving the tourism sector in AJ&K.

### 4.6.1 Community-Based Tourism Initiatives

In rural economies like AJ&K, the tourism industry can provide a significant economic benefit to local communities. Community-Based Tourism (CBT) is widely recognized as one of the strategies that are built on the principle of supporting and encouraging a community's self-help and empowerment.

The CBT involves community control over management and tourism development. The Department of Tourism may consider the introduction of the CBT initiatives in a few areas of AJ&K and evaluate its impact on economic growth and potentials for scalability.

### 4.6.2 Diversification of Tourist Sites

AJ&K has one of the most favorable tourist sites in the country. The potential of tourism, therefore, is huge and untapped, and only the right set of policies may convert the AJ&K tourism sector into a very high-income producing sector of the AJ&K economy. The area

has a historical stature as well as natural beauty in abundance. Besides, there are opportunities for religious tourism and avenues for adventure sports. Therefore, besides the tourism attached to scenic sites, religious and sports tourism may also be promoted.

### 4.6.3 Improving Infrastructure and Facilities

The lack of infrastructure and facilities for tourists is a significant stumbling block in the fulfillment of the full potential of tourism in AJ&K. The tourism sites are not being adequately maintained, so do not provide the requisite standards, especially to international tourists. On the other hand, intermittent standoffs with the forces across the border,

accompanied by shelling, etc. make tourism development a big challenge. Infrastructural improvement, especially road infrastructure, assured information available for the tourists, and standardization of hoteling and lodging is, therefore, urgently required to attract the tourists and retain their interest to maximize the true potential of the tourism in AJ&K.

#### 4.6.4 Tourism and Political Stability

The political instability, terrorism in the country, and competition by peer countries pose serious challenges. Besides, it needs to be recognized that tourism has unhealthy effects on the local

socio-cultural ethos, and the populace feels uneasy and sometimes antagonistic towards cultural invasion. It, therefore, may be given due consideration in the publicity material.

#### 4.6.5 Public-Private Partnership for Promoting Tourism

The study showed that the Tourism Department in the recent past had taken initiatives to further improve the tourism sector in the State. Public-Private Partnership may prove to be an excellent avenue to start in the tourism sector so that the

capital/resource deficiency may be overcome. However, a level playing field and security are pre-requisites for this. It may generate the needed expertise and investment to transform tourist sites into world-class tourist destinations.

### 4.7 Technical Education and Vocational Training Authority

Skilled human resource is essential for boosting industrialization. For sustainable economic growth, a significant portion of human resources should come from local districts. This leads to a decrease in the cost of production as well as an increase in employment opportunities in the State. The socio-economic assessment of AJ&K estimated that 10% of the AJ&K population has received formalized technical training over the last two years. Trade workers had 29% of the employment share in AJ&K. Among the reasons for this low contribution of TEVTA in improving the skill set of the labour force is largely attributed to limited funds for consumables, market-oriented research, weak pay structure and other operational support. This lack of focus on improving the performance of TEVTA may be largely because it is not demand-driven, lack of uniformity in standards, which resulted in the inability to attract professionals with skills demanded by the market.

Although the lack of employment opportunities in AJ&K's domestic economy and the existence of a large diaspora have contributed to the substantial male out-migration of the strong workforce, inadequate skill development efforts have rendered these emigrants unable to integrate into the national and international labour markets for higher quality skills. Therefore, the labour force, either at home or after migration, relies for a living principally on daily, casual wage labour or provision of unskilled labour in low value-added services in the catering industry as dishwashers, waiters and cooks or as taxi-drivers, etc. Moreover, the underdevelopment of the region and poor access to markets disincentivizes the private sector from investing in skills to create human capital. In order to maximize potential of the domestic labour force in national and international markets, the budgetary and infrastructure issues of the sector need to be resolved.

## 4.8 Information Technology Enhancement

Information Technology can play a significant role in improving the socio-economic status of any country. Worldwide, economies are rapidly evolving by improving their digital infrastructure, IT regulations, workforce training, and business transformation. The Government of AJ&K

may consider investing in improving the digital infrastructure, IT-oriented capacity building of the workforce, and paradigm shift in service provision, from manual paper-based to paper-less IT-based systems. These steps may lead to increase access to citizens and improve their participation.

## 4.9 Investment in Human Capital

The demographic transition of AJ&K, through a reduction in population growth rate from 2.4% over the last decade is estimated 1.6% per year in 2019, and improving the life expectancy of the population, is likely to favor AJ&K economic development through increasing the proportion of working-age (15-60 years) to more than 60% over the next few years (20% of the population in 2019 is between 9-14 years). This will generate spurts in labour supply with a corresponding decrease in dependency rates (fertility rates are declining in AJ&K). These changes in population size and age structure are likely to contribute to economic growth by supplying a growing and young labour force to the economy.

Enhancing the knowledge and skills of human capital in productive sectors, especially agriculture, livestock, sericulture, and tourism, are likely to improve the economic status of AJ&K over the coming years. Sustainable human capital strategies are required in these sectors that have clearly defined objectives, contextual curriculum, measuring the outcome, and the impact of such human capital strategies on productive sectors in AJ&K. A collaborative effort of productive sectors (departments), universities, and TEVTA may be helpful to develop and implement such a human capital strategy for productive sectors in AJ&K.

## 4.10 Labour Market Information System

A Labour Market Information System needs to be established to evaluate emerging market needs with regard to the skilled workforce required. Strong collaboration and

interlinkages of the Labour Department and TEVTA with various productive sectors are required in AJ&K to improve the skill sets of the labour force.



### 4.11 Women Labour Force Participation

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While it is globally recognized that women's workforce contributes significantly to the economic growth of any country, it was noted during the study that women's representation in the productive labour market in AJ&K was significantly low. This assessment noted that only 11% of the women in AJ&K are engaged with waged or income-related work. This may be because of the perceived role of women to manage the household and raise children in most parts of AJ&K.

Skill development through training programs was designed keeping in view the sociocultural context, family obligations, and local perceptions as to what fields are appropriate for women to pursue, and financial constraints are recommended for AJ&K. The program should not only improve skills but encourages female entrepreneurs by linking successful participants with microcredit initiatives like Akhuwat or other programs being managed by the Small Industrial Corporation of AJ&K.

### 4.12 Markets and Pricing System

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Price remains the purported key variable in consumption and production decisions by farmers across the world. The State of AJ&K lacks a comprehensive market and pricing system for food and other commodities, including milk and dairy products. Currently, the District Administration, through various Town and Municipal Committees fixes the

prices for milk and other dairy products. In a competitive market, the quality of a product and fair price in any business plays a vital role in rural economies. A market-based pricing system is recommended for AJ&K, where dairy and agricultural producers can get easy access to the markets with reasonable compensation for their products.

## Conclusion

The productive sectors play a very crucial and catalytic role in a rural economy like AJ&K. The international experience suggests that goal of the socio-economic transformation of society and economy can be achieved more steadily and reliably if productive sectors are harnessed to contribute their due share towards economic growth, employment, and resource generation. In AJ&K's context, agriculture, livestock, sericulture, mining, small industry, and services are the major productive sectors.

The analysis sheds light on their current roles and potentials for the future. Although AJ&K is a mountainous area and with its own peculiar geopolitical situation, it enjoys a better socio-economic status than the other provinces of the country. For instance, AJ&K has a 78% literacy rate, and resource endowment is also very good. Nevertheless, self-sufficiency for sustainable socio-economic development is still a formidable challenge as the sectors which could have played a role in societal transformation are still performing below par. It, therefore, can be easily concluded that more than enhancement in resources, it is of cardinal importance to review how existing resources can be best utilized for achieving the Government's various objectives.

The departments engaged with productive sectors and discussed at length in various chapters of this report may require reorientation. Due importance needs to be given to TEVTA, and human capital as the technical needs of the economy can only be fulfilled through a workforce that is aligned with new trends and equipped with new skills.

Agriculture, livestock, sericulture, tourism, wildlife, and forestry are natural endowments of AJ&K just as natural disasters, remoteness, and inclement weather are a perennial challenge. However, even a cursory glance at the in-

depth analysis carried out in this report makes it abundantly clear that the odds are low while potential opportunities are there on the horizon to be capitalized for making the productive sectors resilient and can contribute handsomely towards the betterment of citizens of AJ&K. The robust, workable, and mutually coherent policies by the Government are therefore required alongside an unremitting commitment by all concerned stakeholders.

For sustainable growth in productive sectors, there is a need to improve returns to farming which would include the adoption of new technologies to increase farm productivity, improvement in water resources and irrigation management, facilitation of agricultural diversification to higher-value commodities, improvements in logistics and warehousing, development of new markets, and improvement in access to microfinancing initiative. Improving the ease of doing business through better functioning credit markets, competitive business regulations, and flexible labour regulations would bolster competitiveness and expedite dynamic reallocation.

Finally, sustainable investments are required in skill development for making the present and future workforce productive and employable. Bridging the skills gap would support industrialization, and right-skilling would allow the youth mobility to higher productivity sectors. Technical and vocational education and training can improve the employability and productivity of the growing workforce by focusing on the emerging needs and introducing international benchmarking. Policy interventions focusing on developing human capital, improving labour force participation, better access to markets, increased production, and ease of business is essential for achieving sustainable development goals in rural economies like AJ&K.

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# ANNEXES



## Annex I Definitions and Terminologies

### **Literacy rate:**

The literacy rate expresses all those persons ten years of age and above who can read and write in any language with understanding, as a percentage of the population ten years and above.

### **Education Level:**

Level of education is categorized as follows: i) Below primary, Primary (5 years of schooling), Matric (10 years of schooling), Intermediate (12 years of education). Degree (14 or above years of education).

### **Household members:**

All those persons who usually live together and share their meals. A household may consist of one person or more who may or may not be related to each other.

### **Employment:**

Employment comprises all persons ten years of age and above who worked at least one hour during the reference period and were either "paid employed" or "self-employed."

### **Occupation**

#### **Agriculture:**

Market-oriented, skilled agriculture workers, and subsistence crop farmers.

#### **Livestock:**

Market-oriented livestock and dairy producers, poultry producers, and subsistence livestock farmers.

#### **Forest:**

Market-oriented Skilled Forestry workers and Subsistence Forest workers.

### **Professionals:**

Doctors, Engineers, Teachers, IT professionals, Bankers.

### **Labourers:**

Include manual workers, Security Guards, Peddlers, Cleaners or Janitors, Construction workers, Barbers.

### **Technical/Trade Work:**

Drivers, Auto-mechanics, Welders, Carpenters, Tailors.

### **Sales & Trading:**

Shopkeepers, Merchants, Suppliers, Property Dealers, Butchers.

### **Industries:**

Mining, Small Industries.

### **Sericulture:**

Sericulture industry workers.

### **Tourism:**

Tour guides, Travel attendants, Hotel cooks, and waiters, hotel managers.

### **Government Servant:**

Include all types of public workers.

### **Government Pension:**

Include all kinds of pensioners.

### **Fisheries:**

Market-oriented skilled Fishery workers and Subsistence Fishers, Hunters and Trappers

### **Craftsmen:**

Handicraft workers, Woodworkers,

## Annex II. Year-wise development expenditure of productive sectors, AJ&K (2014-15 to 2018-19).

Departments	Financial Years				
	2014-15	2015-16	2016-17	2017-18	2018-19
Agriculture	94.0	100.0	162.0	190.0	155.0
Livestock and Dairy Development	87.0	100.0	138.0	189.0	152.0
Forests	127.5	189.2	235.3	336.8	297.4
Industries, Labour and Minerals Resources	29.0	35.0	35.0	52.0	76.5
Sericulture	0.0	35.0	29.0	34.8	55.0
Tourism, Wild Life and Fisheries	32.5	45.2	28.5	22.2	16.4

## Annex III. District-wise educational attainments in AJ&amp;K, 2019.

Areas	Literate n	Primary and below		Below Matric		Matric		Intermediate		Bachelor and above	
		n	%	n	%	n	%	n	%	n	%
AJ&K	10,134	3,371	33	2,487	25	2,217	22	1,090	11	969	10
Bagh	1,683	532	32	447	27	349	21	175	10	180	11
Bhimber	1,518	518	34	332	22	332	22	202	13	134	9
Kotli	1,636	599	37	390	24	316	19	177	11	154	9
Mirpur	985	404	41	186	19	192	19	111	11	92	9
Muzaffarabad	1,707	632	37	476	28	331	19	105	6	163	10
Poonch	1,288	349	27	322	25	328	25	154	12	135	10
Sudhnoti	791	162	20	193	24	258	33	108	14	70	9
Neelum	526	175	33	141	27	111	21	58	11	41	8



## Annex IV. District-wise annual income of the survey households in AJ&K, 2019.

Income Type	Districts	n	Annual Income (Rs. Million)		95% Confidence Interval
			Total	Mean	
Income from work/ employment	Bagh	373	137	0.366	0.340–0.393
	Bhimber	297	128	0.432	0.387–0.477
	Kotli	361	127	0.351	0.318–0.384
	Mirpur	196	77	0.393	0.353–0.432
	Muzaffarabad	492	178	0.362	0.336–0.388
	Poonch	302	112	0.371	0.333–0.408
	Sudhnoti	187	83	0.444	0.379–0.481
	Neelum	152	36	0.238	0.199–0.276
Foreign remittance	Bagh	36	9	0.251	0.150–0.352
	Bhimber	78	16	0.204	0.153–0.256
	Kotli	67	18	0.271	0.186–0.355
	Mirpur	43	19	0.430	0.331–0.530
	Muzaffarabad	26	7	0.275	0.146–0.403
	Poonch	86	30	0.345	0.259–0.432
	Sudhnoti	23	2	0.093	0.032–0.153
	Neelum	6	1	0.163	0.001–0.326
Property rents	Bagh	10	0	0.046	0.021–0.071
	Bhimber	15	1	0.070	0.049–0.092
	Kotli	10	1	0.099	0.048–0.150
	Mirpur	6	0	0.079	0.023–0.134
	Muzaffarabad	8	1	0.074	0.041–0.107
	Poonch	8	1	0.165	-0.031–0.632
	Sudhnoti	2	0	0.052	-0.304–0.408
	Neelum	3	0	0.040	-0.022–0.102

#### Annex IV. District-wise annual income of the survey households in AJ&K, 2019.

Income Type	Districts	n	Annual Income (Rs. Million)		95% Confidence Interval
			Total	Mean	
Total income of household	Bagh	384	146	0.381	0.353–0.409
	Bhimber	314	145	0.463	0.415–0.512
	Kotli	377	146	0.387	0.345–0.428
	Mirpur	202	96	0.475	0.422–0.528
	Muzaffarabad	509	186	0.365	0.339–0.391
	Poonch	342	143	0.418	0.377–0.459
	Sudhnoti	188	85	0.454	0.389–0.491
	Neelum	154	37	0.242	0.203–0.281

#### Annex V. Standard Deviations and Errors of Means of Annual Incomes of Survey Households in AJ&K, 2019.

Income Type	Districts	n	Income (Rs. Million)		S. D	Std. Error Mean
			Total	Mean		
Income from work/ employment	Bagh	373	136.68	0.366	0.264	0.014
	Bhimber	297	128.39	0.432	0.393	0.023
	Kotli	361	126.68	0.351	0.317	0.017
	Mirpur	196	76.97	0.393	0.281	0.020
	Muzaffarabad	492	178.13	0.362	0.289	0.013
	Poonch	302	111.91	0.371	0.328	0.019
	Sudhnoti	187	83.12	0.444	0.352	0.026
	Neelum	152	36.16	0.238	0.240	0.019

### Annex V. Standard Deviations and Errors of Means of Annual Incomes of Survey Households in AJ&K, 2019.

Income Type	Districts	n	Income (Rs. Million)		S. D	Std. Error Mean
			Total	Mean		
Foreign remittance	Bagh	36	9.03	0.251	0.298	0.050
	Bhimber	78	15.95	0.204	0.229	0.026
	Kotli	67	18.13	0.271	0.346	0.042
	Mirpur	43	18.50	0.430	0.324	0.049
	Muzaffarabad	26	7.14	0.275	0.317	0.062
	Poonch	86	29.70	0.345	0.402	0.043
	Sudhnoti	23	2.13	0.093	0.140	0.029
	Neelum	6	0.98	0.163	0.155	0.063
Property rents	Bagh	10	0.46	0.046	0.009	0.011
	Bhimber	15	1.06	0.070	0.017	0.010
	Kotli	10	0.99	0.099	0.018	0.023
	Mirpur	6	0.47	0.079	0.015	0.022
	Muzaffarabad	8	0.59	0.074	0.010	0.014
	Poonch	8	1.32	0.165	0.041	0.083
	Sudhnoti	2	0.10	0.052	0.006	0.028
	Neelum	3	0.12	0.040	0.006	0.014
Total income of household	Bagh	384	146.17	0.381	0.280	0.014
	Bhimber	314	145.40	0.463	0.437	0.025
	Kotli	377	145.81	0.387	0.410	0.021
	Mirpur	202	95.94	0.475	0.385	0.027
	Muzaffarabad	509	185.86	0.365	0.295	0.013
	Poonch	342	142.93	0.418	0.383	0.021
	Sudhnoti	188	85.35	0.454	0.355	0.026
	Neelum	154	37.26	0.242	0.242	0.020

## Annex VI. Trends in agriculture land utilization in AJ&K from 2014 to 2018.

Year	Total Farm Area		Area Under cultivation		Irrigated Area		Non-Irrigated Area	
	n	%	n	%	n	%	n	%
2014	636,728	47.885	194,260	30.509	12,102	6.230	182,158	93.770
2015	637,368	47.933	194,082	30.451	12,102	6.236	181,979	93.764
2016	637,139	47.916	197,683	31.027	12,103	6.122	185,578	93.877
2017	642,149	48.293	196,927	30.667	12,103	6.146	184,822	93.853
2018	641,142	48.217	196,798	30.695	12,103	6.150	184,822	93.915

### Annex VII. Regular Income of Productive Sectors AJ&K (Revised Estimates)

Budget Code	Source of income	Departments / Sectors	Income generated in financial years (PKR Millions)					
			2014-15	2015-16	2016-17	2017-18	2018-19	
C03541	Industries Receipts	Industries	27.52	33.11	40.00	-	-	
C03808	Receipt-Mines Oilfield & Mineral Dev. Act. & Mineral Royalties	Mineral Resources	-	3.00	5.00	-	-	
C03821	Tourism Receipts incl. Rent of Rest Houses	Tourism	6.00	10.00	12.00	-	-	
C03201	Ordinary Receipts-Fisheries	Wildlife /Fisheries	32.00	40.00	45.00	-	-	
C03116	Agriculture Receipts	Agriculture	3.30	3.00	4.64	8.00	6.00	
C03223	Receipts from Poultry & Livestock Farms	Livestock & Dairy Development	14.30	30.00	28.00	30.00	30.00	
C03459	Others-Sale of Silk Thread/Silk Seeds	Sericulture	3.50	3.00	3.00	3.00	3.65	
- Data not available on the finance department website.								

### Annex VIII. ADP Schemes of productive sectors in AJ&K (Approved budget and revised estimates from 2013-14 to 2018-19).

Department	Budget Code	Project/Scheme Name	Years	Approved Budget	Revised Estimates					
					2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Agriculture	AGR-170	Fruit Development Program (FDP) by Improving Existing Wild Fruit Flora in AJ&K	2013-2018	392,409,250	15.2	17	10,334	16	44	102,534
	AGR-327	Crop Maximization Program to Enhance Agricultural Productivity in AJ&K including Mountainous Research	2017-2020	149,347	10	29.7	59,127	98,827		

### Annex VIII. ADP Schemes of productive sectors in AJ&K (Approved budget and revised estimates from 2013-14 to 2018-19).

Department	Budget Code	Project/Scheme Name	Years	Approved Budget	Revised Estimates						
					2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	6 Years Total
Livestock	AGR-144	Poverty Reduction through Establishment of Production Units for Small Land Holders in AJ&K	2013-2018	236.3	1.4	20.625	34.518	53.539	34.753	31.015	175.85
	AGR-142	Strengthening of Livestock Breed Improvement Program in AJ&K	2009-2012	140.08 150.053	37.404	40.117	22.247				99.768
	AGR-331	Strengthening of Livestock Breed Improvement Program in AJ&K (Phase II)	2017-2020	196.314			8.3	37.7		62.42	108.42
	AGR-336	Establishment of Poultry Complex Sudhnoti (Operational Phase)	2017-2020	65.401				25.225	16.64		41.865
	AGR-337	Poverty Reduction through Establishment of Production Units for Small Land Holders in AJ&K through PPP (Phase-II)	2017-2022	186.1				0.7	4.1		4.8
	AGR-161	Expansion of Semen Production Unit (SPU)	2012-2015	68.416	3.434	3.1	8.491	14.051	0.5195	No	29.5955
Small Industries	IND-316	Interest-Free Loan for Self-Employment in AJ&K through AKHUWAT	2018-2023	298.976				4.336	46		50.336
TEVTA	IND-265	Paradigm Shift in Training and Assessment for Conventional to Internationally accepted CBT&A Standards	2018-2021	353.539				55.801	115	115	285.801
Sericulture	IND-317	Farmers Training and Demonstration of Products of Sericulture Department	2019-2022	52.032					6.579		6.579
Fisheries	FOR-151	Promotion of Commercial Fish Production on Public-Private Partnership in AJ&K	2017-2014	93.472	18.546	2.5	5.523	7.12	6.5	16.359	56.548
Wildlife	FOR-137	Captive Breeding of Sports Species in AJ&K	2011-2014	128.524 206.054 (REV)	34.841	50.765	25.505	0	27.605	33.125	171.841

## Annex IX. Recurrent Expenditure (Revised Estimates)

Budget Code	Drawing and Disbursing Officer	Financial Years (Rs. million)				
		2014-15	2015-16	2016-17	2017-18	2018-19
KC21019	Agriculture	502.47	541.72	613.57	625.50	680.10
KC21020	Animal Husbandry	505.98	533.72	607.76	621.25	641.80
KC21027	Industries, Labour & Mineral Resources	97.30	106.21	109.68	132.30	144.50
<b>Sub-totals of each sector</b>						
<b>Industries</b>						
MZ0229	Secretariat Industries	13.43	14.83	15.42	19.78	22.03
MZ0230	Directorate & Field Staff Industries, Muzaffarabad	19.37	20.95	21.09	27.13	29.49
MZ0231	Industrial Estate Muzaffarabad	2.07	2.22	2.20	2.23	2.36
PO0073	Industrial Estate Poonch	1.33	1.42	1.49	1.84	1.88
KJ0068	Industrial Estate Kotli	2.69	2.79	3.02	3.17	3.40
MJ0074	Joint Directorate Field Staff Industries Mirpur	3.54	5.72	6.24	7.54	8.08
MJ0076	Industrial Estate Mirpur	13.14	13.30	13.63	14.83	15.50
MJ0400	New Industrial Area Mirpur	7.51	8.64	8.85	9.63	10.13
BB0038	Industrial Estate Bhimber	3.99	4.40	4.52	5.56	6.16
MJ0075	Deputy Registrar of Companies Mirpur	4.41	3.97	4.28	4.52	5.95
<b>Total Industries</b>		<b>58.05</b>	<b>63.41</b>	<b>65.32</b>	<b>76.46</b>	<b>82.94</b>
<b>Minerals</b>						
MZ0233	Directorate (Minerals)	14.27	15.89	16.34	22.32	23.93
<b>Labour Department</b>						
MZ0232	Director Labour Muzaffarabad	5.30	5.44	5.58	5.81	7.04
PO0074	Labour Poonch	0.91	0.89	0.92	1.14	1.28
KJ0069	Labour Kotli	0.85	0.89	0.95	1.14	1.18
MJ0077	Deputy Director Labour Mirpur	4.50	4.85	5.16	5.65	6.10
KC21030	Tourism, Wildlife/Fisheries	112.56	119.18	123.54	142.50	156.00
<b>Total Labour Department</b>		<b>11.56</b>	<b>12.08</b>	<b>12.61</b>	<b>13.74</b>	<b>15.60</b>

## Tourism

MZ0238	Director General Tourism	21.91	22.36	22.79	25.21	28.47
MZ0239	District Office Tourism Muzaffarabad	9.69	10.55	10.88	12.80	14.61
NM0031	District Office Tourism Neelum	8.70	9.41	9.82	11.48	12.59
BG0064	District Office Tourism Bagh	4.12	4.39	4.58	4.88	5.37
HV0316	District Office Tourism Haveli	2.29	2.42	2.50	2.95	3.34
PO0076	District Office Tourism Poonch	4.93	5.23	5.51	6.40	6.96
KJ0071	District Office Tourism Kotli	6.20	6.50	6.82	8.03	8.99
MJ0079	District Office Tourism Mirpur	1.97	2.07	2.11	2.99	3.34
<b>Total of Tourism</b>		<b>59.82</b>	<b>62.92</b>	<b>64.99</b>	<b>74.73</b>	<b>83.65</b>

## Wildlife and Fisheries

MZ0240	Directorate Wild Life / Fisheries Muzaffarabad	43.30	45.70	48.18	55.91	59.40
MJ0080	Deputy Director Wild Life / Fisheries Mirpur	9.44	10.56	10.36	11.86	12.94
<b>Total Of Wild Life &amp; Fisheries</b>		<b>52.74</b>	<b>56.26</b>	<b>58.55</b>	<b>67.77</b>	<b>72.35</b>
KC21023	Forests	688.66	724.17	781.54	897.00	1036.80
KC21029	Sericulture	63.00	67.63	81.00	81.86	87.50
KC21026	Local Government	376.66	429.29	421.16	494.69	542.20

Annex X. Year-wise recurrent expenditure of  
productive sectors in AJ&K (2014-15 to 2018-19).

Code	Departments / Sectors	Financial Year (Rs. millions)				
		2014-15	2015-16	2016-17	2017-18	2018-19
KC21019	Agriculture	502.5	541.7	613.6	625.5	680.1
KC21020	Animal Husbandry	506.0	533.7	607.8	621.3	641.8
KC21027	Industries & Mineral Resources	69.6	75.5	77.9	90.2	98.5
-	Industries	58.0	63.4	65.3	76.5	82.9
-	Mineral Resources	11.6	12.1	12.6	13.7	15.6



### Annex X. Year-wise recurrent expenditure of productive sectors in AJ&K (2014-15 to 2018-19).

Code	Departments / Sectors	Financial Year (Rs. millions)				
		2014-15	2015-16	2016-17	2017-18	2018-19
KC21030	Tourism, Wildlife/Fisheries	112.6	119.2	123.5	142.5	156.0
-	Tourism	59.8	62.9	65.0	74.7	83.7
-	Wildlife and Fisheries	52.7	56.3	58.5	67.8	72.3
KC21023	Forests	688.7	724.2	781.5	897.0	1,036.8
KC21029	Sericulture	63.0	67.6	81.0	81.9	87.5
KC21026	Local Government	376.7	429.3	421.2	494.7	542.2

### Annex XI. Year-wise development expenditure of productive sectors in AJ&K (2014-15 to 2018-19).

Departments	Financial Year (Rs. millions)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Agriculture	94	100	162	190	155
Livestock	87	100	138	189	152
Small Industries	25	25	25	35	68
Minerals	4	10	10	17	9
Tourism	115	140	67	164	161
Wildlife & Fisheries	105	80	30	81	53
Forest	127	189	235	337	297
Sericulture	0	35	29	35	55
TEVTA	67	94	76	115	150
Local Govt & RD.	1080	805	1540	2005	2318

Annex XII. Sector-wise and gender-wise distribution of major occupations in AJ&amp;K, 2019.

Sectors	Grand Total		Male				Female							
			Total		Primary		Secondary		Total		Primary		Secondary	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Trade Workers	1046	28.73	937	28.98	896	30.03	41	16.47	109	26.72	100	26.18	9	34.62
Labourer	920	25.27	873	27.00	801	26.84	72	28.92	47	11.52	44	11.52	3	11.54
Govt. Servants	396	10.88	354	10.95	340	11.39	14	5.62	42	10.29	40	10.47	2	7.69
Govt. Pensioners	322	8.84	277	8.57	254	8.51	23	9.24	45	11.03	45	11.78	0	0.00
Agriculture	292	8.02	249	7.70	203	6.80	46	18.47	43	10.54	36	9.42	7	26.92
Professionals	181	4.97	123	3.80	117	3.92	6	2.41	58	14.22	58	15.18	0	0.00
Sales and Marketing	158	4.34	152	4.70	145	4.86	7	2.81	6	1.47	6	1.57	0	0.00
Livestock	97	2.66	71	2.20	51	1.71	20	8.03	26	6.37	24	6.28	2	7.69
Tourism	95	2.61	88	2.72	84	2.82	4	1.61	7	1.72	6	1.57	1	3.85
Craftsmen	81	2.22	65	2.01	55	1.84	10	4.02	16	3.92	15	3.93	1	3.85
Industries	24	0.66	22	0.68	19	0.64	3	1.20	2	0.49	2	0.52	0	0.00
Forest	15	0.41	13	0.40	10	0.34	3	1.20	2	0.49	1	0.26	1	3.85
Fisheries	10	0.27	6	0.19	6	0.20	0	0.00	4	0.98	4	1.05	0	0.00
Sericulture	4	0.11	3	0.09	3	0.10	0	0.00	1	0.25	1	0.26	0	0.00
<b>Total</b>	<b>3641</b>	<b>100</b>	<b>3233</b>	<b>100</b>	<b>2984</b>	<b>100</b>	<b>249</b>	<b>100</b>	<b>408</b>	<b>100</b>	<b>382</b>	<b>100</b>	<b>26</b>	<b>100</b>

### Annex XIII. Sector-wise and district-wise distribution of major occupations in AJ&K 2019.

Occupations	AJ&K		Districts															
	Bagh		Bhimber		Kotli		Mirpur		Muzaffarabad		Poonch		Sudhnoti		Neelum			
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%		
Trade Workers	1,043	28.8	170	30.0	123	23.5	188	31.7	125	36.0	188	25.9	111	27.7	108	38.3	30	16.9
Labourer	930	25.7	119	21.0	98	18.7	199	33.6	91	26.2	215	29.6	91	22.7	40	14.2	77	43.3
Govt. Servants	399	11.0	65	11.5	71	13.6	32	5.4	33	9.5	109	15.0	45	11.2	17	6.0	27	15.2
Agriculture	293	8.1	28	4.9	92	17.6	63	10.6	36	10.4	36	4.9	16	4.0	14	5.0	8	4.5
Govt. Pensions	283	7.8	39	6.9	60	11.5	19	3.2	9	2.6	52	7.2	38	9.5	58	20.6	8	4.5
Professionals	183	5.1	33	5.8	30	5.7	23	3.9	15	4.3	34	4.7	25	6.2	16	5.7	7	3.9
Merchants	159	4.4	22	3.9	10	1.9	22	3.7	7	2.0	36	4.9	37	9.2	10	3.6	15	8.4
Livestock	97	2.7	11	1.9	17	3.3	22	3.7	15	4.3	11	1.5	9	2.2	10	3.6	2	1.1
Tourism	96	2.7	57	10.1	5	10.0	6	1.0	2	0.6	10	1.4	13	3.2	2	0.7	1	0.6
Craftsmen	77	2.1	13	2.3	9	1.7	11	1.8	7	2.0	21	2.9	10	2.5	3	1.1	3	1.7
Industries	28	0.8	9	1.6	7	1.3	4	0.7	1	0.3	5	0.7	2	0.5	-	0.0	-	0.0
Forest	15	0.4	-	0.0	1	0.2	3	0.5	5	1.4	2	0.3	2	0.5	2	0.7	-	0.0
Fisheries	10	0.3	-	0.0	-	0.0	1	0.2	1	0.3	5	0.7	1	0.3	2	0.7	-	0.0
Sericulture	4	0.1	-	0.0	-	0.0	-	0.0	-	0.0	3	0.4	1	0.3	-	0.0	-	0.0
<b>Total</b>	<b>3,617</b>	<b>100.0</b>	<b>566</b>	<b>100.0</b>	<b>523</b>	<b>100.0</b>	<b>593</b>	<b>100.0</b>	<b>347</b>	<b>100.0</b>	<b>727</b>	<b>100.0</b>	<b>401</b>	<b>100.0</b>	<b>282</b>	<b>100.0</b>	<b>178</b>	<b>100.0</b>

## Annex XIV. Participants of In-depth Interviews – Study of socio-economic assessment of AJ&K, 2019.

Sr. No	Name	Designation	Department
1	Mr. Muhammad Ahsen	Secretary	Industries, and Minerals Department
2	Ms. Midhat Shahzad	Secretary	Information, IT & Tourism
3	Mr. Ch. Shoukat Ali	Secretary	Technical Education & Vocational Training Authority
4	Mr. Syed Sabir Hussain Trimzi	Chief Planning	Forest Department
5	Mr. Shakoor Khataria	Deputy Director	Wildlife and Fisheries Department
6	Mr. Javed Ayub	Managing Director	Small Industries Corporation
9	Mr. Khaliq Abbasi	Deputy Director	Small Industries Corporation
10	Mr. Liaquat Abbasi	Director	Minerals Department
11	Dr. Matloob Hussain Raja	Director-General	Livestock and Dairy Development Department
12	Dr. Muhammad Bashir Butt	Director-General	Agriculture Department
13	Mr. Muhammad Shafique	Director Research	Agriculture Department
14	Dr. Adnan	Director	Livestock and Dairy Development
15	Dr. Asghar Ali Shah	Director	Sericulture Department

Annex XV. Attendance sheet of  
Focus Group Discussions on Productive Sectors in AJ&K



**Role of Productive Sector in Socioeconomic Development of  
Azad Jammu & Kashmir**

**ATTENDANCE SHEET**

**SWOT Analysis and Focus Group Discussions on Productive Sector in AJ&K**

Date: 13-December-2019

Venue: Planning & Development Department AJ&K

Sr.	Name	Designation	Department
1	Raja Manzoor Hussain	Sr Chief.	PE DD.
2	Aamir Latif Awam	Chief CW	PE DD.
3	Sultan Alam	Sr Chief Agri	PE DD.
4	Mahnaz Kant-	Chief Res	PE DD
5	Neha Farooq	S.O (Admin)	PE DD.
6	Danial Hassan	DPO	PE DD
7	Dr. Tasim Anwar	Consultant	PE DD.
8			
9			
10			
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12			
13			
14			
15			

## Annex XVI. Field visit plans for the assessment of productive sectors in the socio-economic development of AJ&K, 2019

District	Department	Activity	Focal Persons/Contact Points			Meeting /Visit Date
			Name	Designation	Contact	
Mirpur	Agriculture	Crop Maximization Program				
		Fruit Development Program (Citrus)	Hafiz Zafar	Assistant Director	0346-5445200	30-31 December 2019
	Small Industries	Akhuwat Program	Mr. Fahad	Branch Manager	0346-6749252	
	Fisheries	Fish Farms & Hatcheries	Mr. Naheem	Deputy Director	0355-6750173	
		Breed Improvement Program, Hatcheries, AI centre, Dairy farm development (Pub-Private Partnership), Distribution of Poultry pullets	Dr. Touqeer Qureshi	Assistant Director	0344-4488808	1 January 2020
	Health	Laboratory Training of LHSs for on Household Questionnaire	Dr. Mehmood Aziz	Incharge Mirpur Lab	0344-5806789	
Agriculture		Crop Maximization Program	Asif Jamil	Assistant director	0343-5056787	
		Fruit Development Program	Zaheer	ARO	0313-5232812	
		Breed Improvement Program				
		Hatcheries, AI centres				
Bhimber	Livestock	Dairy farm development (Pub-Private Partnership)	Dr. Touqeer Qureshi	Assistant Director	0344-4488808	2 January 2020
		Distribution of Poultry pullets				
Sericulture	Farmers Training	Mr. Muzafar	DO	0342-5473155		
Health	Training of LHSs for on Household Questionnaire		DHO Bhimber			

## Annex XVI. Field visit plans for the assessment of productive sectors in the socio-economic development of AJ&K, 2019

District	Department	Activity	Focal Persons/Contact Points			Meeting /Visit Date
			Name	Designation	Contact	
Kotli	Agriculture	Crop Maximization Program	Zahoor	AHO	0346-5619245	3 January 2020
		Fruit Development Program (Olive)	Mazhar Ameen	Retired official	0344-5837401	
	Livestock	Breed Improvement Program, AI centre, Hatcheries				
		Dairy Farm Development (Pub-Private Partnership)	Dr. Touqeer Qureshi	Assistant Director	0344-4488808	
		Distribution of Poultry pullets				
Sericulture	Farmers Training	Mr. Kashif Azad	Assistant Director	0333-5723148		
Health	Training of LHSs for on Household Questionnaire		DHO Kotli			
Sudhnoti	Livestock	Hatcheries, Poultry Complex	Dr. Tahir	Incharge Poultry Complex Sudhnoti	0322-9478084	4 January 2020
	Health	Training of LHSs for on Household Questionnaire		DHO Sudhnoti		
Bagh	Agriculture	Fruit Development Program (Peach, Olive, Persimmon)	Tasaduq Hussain	Assistant director	0343-5056844	6 January 2020
			Rashid	AO	0333-5719353	
			Yasir Abbasi	Field Assistant	0345-5369208	
	Livestock	Hatcheries, Distribution of Poultrys, Dairy Farm Development (Pub-Private Partnership)	Khawaja Fazal	ARO	0344-5022894	
			Dr. Shabir Sheikh	DL PDO	0346-5916709	
Health	Training of LHSs for on Household Questionnaire		DHO Bagh			

### Annex XVI. Field visit plans for the assessment of productive sectors in the socio-economic development of AJ&K, 2019

District	Department	Activity	Focal Persons/Contact Points			Meeting /Visit Date
			Name	Designation	Contact	
Poonch	Agriculture	Fruit Development Program (Apple)	Naheem Ullah	ARO	0334-4163123	7 January 2020
	Livestock	Hatcheries, Distribution of Poultryes, Dairy Farm Development	Mehnaz Akram	Assistant director	0345-5403263	
	Health	Training of LHSs for on Household Questionnaire	Dr. Tariq	DL PDO	0344-5640773	
Neelum	Agriculture	Fruit Development Program (Walnut and Cherr)	M. Azam/Ali Asghar	FA/ Retd. FA	0355-8149670	8 January 2020
	Fisheries	Trout Fish Farm	Fida Hussain	Budder	0355-7500575	
	Hydro-power	Ghajran - Neelum Project	Sardar Manzoor	Supervisor	0355-8025250	
	Communication & Works	Pirchanci, Cutton, Sharda-Khel (Road)	Mr. Ashraf	Supervisor	0355-8136699	
	Health	Training of LHSs for on Household Questionnaire		Director PDO		
				Xen Highways Neelum		
			DHO Neelum			



### Annex XVI. Field visit plans for the assessment of productive sectors in the socio-economic development of AJ&K, 2019

District	Department	Activity	Focal Persons/Contact Points			Meeting /Visit Date
			Name	Designation	Contact	
Muzaffarabad	Agriculture	Fruit Development Program (Apricot and Pear)	Asif Awan	Field Assistant	0341-8867771	
			Rashida Khwaja	AO	0334-5508272	
			Javed Qar	AHO	0347-1554969	
Muzaffarabad	Livestock	Breed Improvement Hatcheries, Distribution of Poultry and Dairy Farm Development (Pub-Private Partnership)	Dr. Shahid M Gardezi	Deputy Director	0301-8098821	9-10 January 2020
			Shahid Sheikh	DL PDO	0301-5982245	
			Abdul Khaliq Abasi	Deputy Director	0300-5293362	
			Faisal Mehmood	Branch Manager		
Muzaffarabad	Small Industries	Akhwat Program Beneficiaries assessment	M. Tahir	Deputy Director	0341-5025198	
Muzaffarabad	Sericulture	Farmers Training				
Muzaffarabad	Health	Training of LHSs for on Household Questionnaire				



**Household Questionnaire for  
Assessment of Productive Sector in Socioeconomic Development of  
Azad Jammu & Kashmir**

Data Entry Code				
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<b>Respondent Name:</b>	_____		<b>Name of Interviewer (LHW):</b>	_____	
<b>Respondent Address:</b>	Area:	Urban      Rural	<b>Interview Date:</b>	_____	
	Village:	_____		DD	MM
	U.C.:	_____	<b>Status of Interview</b>	Completed =1 Partially Refused =2 Refusal=3 Non-Contacted=4 (If code =3 & 4 then go to Q-5)	
	Tehsil:	_____			
	District:	_____			
State:	Azad Jammu & Kashmir		.....		
<b>Verification by Supervisor:</b>	Name:	_____	<b>Verification Date:</b>	_____	
	Signature	_____	DD	MM	YYYY







**Section- 4: Neonatal death/stillbirth Information**

**Q401.** Any death of a child of age under 5 years occurred during the last five years (1<sup>st</sup> January 2015 to 31<sup>st</sup> December 2019) (if the answer is Yes, fill the questionnaire and give details of each death. If the answer is No, go to next section) 1=Yes  Total No. of Deaths ..... 2=No

Q402. Sr. No of Mother  Write Sr. No of a woman from household information or deaths information form	Q403. Date of death of the baby? (for stillbirth/born dead babies, please write the date of birth)  dd/mm/yyyy	Q404. Sex of dead new born/still birth?  1. Male 3. Female	Q405. Age of Newborn when died?	Q406. How old was the baby? 1. < 7 days old 2. 7 - 27 days 3. 28 days - 12 months 4. >12 months - 5 Years 00. No Response

**Section- 5: Deaths Information**

**Q501.** Any death of a person with age more than 5 years occurred during last five years (1<sup>st</sup> January 2015 to 31<sup>st</sup> December 2019) (if the answer is Yes, fill the questionnaire and give details of each death. If the answer is No, go to next section) 1=Yes  Total No. of Deaths ..... 2=No

Q502. Sr. No.	Q503. Name of Deceased	Q504. Relationship of deceased to the head of household (For code consult Roster)	Q505. Sex of deceased 1=Male → Q.7 2=Female → Q.506	Q506. Was she married? 1. Yes → 2. No	Q507. Please choose one of the following for married women? 1. Died during pregnancy 2. Died during delivery 3. Died after delivery within 42 days of birth 4. Died after 42 days of delivery 5. Death not related to pregnancy/childbirth	Q509. Nature of Death (mention the Cause) 1= Sickness → Q8 2=Not clear 3=others → Q8	Q510. Cause of Death

**Section- 6: Household relation to the productive sector**

Q. No.	Questions
q601.	Is the house owned or rented? Owned <input type="checkbox"/> Rented <input type="checkbox"/>
q602.	Area of the house? (write in marlas) Marlas _____ Total Rooms _____ Household Structure: Cemented <input type="checkbox"/> Mudded <input type="checkbox"/>
q603.	What is the source of drinking water? Inhouse: Tap water <input type="checkbox"/> Hand Pump <input type="checkbox"/> Boring <input type="checkbox"/> Tube Well <input type="checkbox"/> Closed Well <input type="checkbox"/> Open Well <input type="checkbox"/> Outside: Tap water <input type="checkbox"/> Hand Pump <input type="checkbox"/> Boring <input type="checkbox"/> Tube Well <input type="checkbox"/> Closed Well <input type="checkbox"/> Open Well <input type="checkbox"/> Stream <input type="checkbox"/>
q604.	What type of toilet is in use in the household? Flush with underground sewage system <input type="checkbox"/> No toilet inside the household <input type="checkbox"/> Flush connected to gutter or drained outside openly <input type="checkbox"/> Others _____
q605.	Which of these items are present in the household? Refrigerator/Fridge <input type="checkbox"/> Television <input type="checkbox"/> Motorcycle <input type="checkbox"/> Motor car <input type="checkbox"/> Other _____
q606.	Do you own agricultural land? Yes <input type="checkbox"/> No <input type="checkbox"/> → Q612
q607.	Area of the agricultural land? Acers _____ Kanals _____
q608.	Do you grow crops on your agricultural land? Yes <input type="checkbox"/> No <input type="checkbox"/>
q609.	What do you grow on your agricultural land? 1. Maize <input type="checkbox"/> 2. Wheat <input type="checkbox"/> 3. Pulses <input type="checkbox"/> 4. Vegetables <input type="checkbox"/> 5. Fruits <input type="checkbox"/> 6. Flowers <input type="checkbox"/> 7. Millets <input type="checkbox"/> 8. Fodders <input type="checkbox"/> 9. Other _____ if fruits then write types
q610.	For what purpose do you grow crops? Personal use <input type="checkbox"/> Commercial use <input type="checkbox"/>
q611.	Does the crop fulfil the needs of the household? Yes <input type="checkbox"/> No <input type="checkbox"/>
q612.	How much do you earn from these crops? Amount _____ Do you raise livestock? Yes <input type="checkbox"/> No <input type="checkbox"/>
q613.	What type of livestock do you have? (write number of animals) 1. Cow <input type="checkbox"/> 2. Buffalo <input type="checkbox"/> 3. Goat <input type="checkbox"/> 4. Sheep <input type="checkbox"/> 5. Hen <input type="checkbox"/>
q614.	If cattle, how much milk per animal per day do you get? (write litres in the box) 1. Cow <input type="checkbox"/> 2. Buffalo <input type="checkbox"/> 3. Goat <input type="checkbox"/> 4. Sheep <input type="checkbox"/> 5. Hen <input type="checkbox"/>
q615.	Do you use milk in your own household? Yes <input type="checkbox"/> No <input type="checkbox"/> If No, where do you get milk for household use _____
q616.	Do you sell the milk of your cattle or buffalo? Yes <input type="checkbox"/> No <input type="checkbox"/> → Q612
q617.	Where do you sell the milk? 1. Local nearby houses <input type="checkbox"/> 2. Nearby shops/hotel <input type="checkbox"/> 3. Any company (nestle etc.) <input type="checkbox"/>
q618.	How many litres do you sell per day? Litters _____
q619.	If you keep hen, how many eggs do you get in a week? Number of eggs _____

Q620.	Do you keep eggs for household use?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	If No, where do you get eggs for household use _____
Q621.	Do you sell eggs?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Q622.	Where do you sell eggs?	Nearby households <input type="checkbox"/> Local shops / Hotels <input type="checkbox"/>		
Q623. Have you ever benefited from any government scheme? Yes <input type="checkbox"/> No <input type="checkbox"/> → Q624				
Mark tick ✓ on the following schemes and write the year of getting the benefit.				
	Schemes	✓	Year	
1.	Subsidized or free seeds (Wheat, Maize)			Q624. What is the condition of the access road to your house? Paved <input type="checkbox"/> Dirt road <input type="checkbox"/>
2.	Subsidized or free fertilizers			Q625. If paved, in which year it was built? Year _____
3.	Pesticides Spray			Q626. What type of material is used to build the road? Cement <input type="checkbox"/> Asphalt <input type="checkbox"/>
4.	Machinery for Agriculture			Q627. Is the electricity available in your household? Yes <input type="checkbox"/> No <input type="checkbox"/>
5.	Providing flower plants or seeds			Q628. In which year you availed the electricity? Year _____
6.	Visit by livestock officials for the care of animals			Q629. What kind of fuel do you use for cooking at home? Wood <input type="checkbox"/>
7.	Providing budding and grafting support			Electricity <input type="checkbox"/>
8.	Nursery/Orchard development support			Gas Cylinder (LPG) <input type="checkbox"/>
9.	Vaccination of livestock			Kerosene stove <input type="checkbox"/>
10.	Treatment of Animal diseases			Dung cake <input type="checkbox"/>
11.	Providing injection for Artificial Insemination			Coal <input type="checkbox"/>
12.	Backyard Poultry Development Support			
13.	Support for poultry development (provisioning of chicks)			
14.	Providing small loans by the Government			
15.	Fish Farm Development			
16.	Subsidized LPG Gas Cylinders			
17.	Any government (TEVTA) supported training/course			
18.	Any other support not listed above			
<b>The End</b>				











حصہ چہارم: پانچ سال سے کم عمر بچوں کی اموات سے متعلق معلومات (بشمول مرد پیدا کتنیں)

401 Q کیا اس گھر میں پچھلے پانچ سالوں میں 5 سال سے کم عمر بچوں کی وفات یا مرد بچے کی پیداوار ہوئی؟ (1 جنوری 2015 سے 31 دسمبر 2019 تک)  ہاں  نہیں

(اگر جواب ہاں ہے تو نیچے دیے گئے سوالات کے جواب تحریر کریں اور اگر جواب "نہیں" ہے تو نیچے دیے گئے سوالات کے جواب چھپے ہوئے ہوں گے۔)

406 Q - وفات کرنے والے بچے کی عمر ذیل کے مطابق کیا تھی؟	404 Q - مرد پیدا ہونے والے بچے امرنے والے بچے کی جنس کیا تھی؟	403 Q - بچے کی وفات کی تاریخ کیا تھی؟	402 Q - نمبر شمار
ذیل کے مطابق کیا تھی؟ 1- 7 دن سے کم 2- 7 سے 27 دن 3- 28 دن سے 12 ماہ 4- 1 سال سے 5 سال 5- 5 سال سے کم	1- لڑکا 2- لڑکی	(اگر مرد بچے کی پیداوار ہوئی تو تاریخ پیدائش درج کریں) (دن / ماہ / سال)	(اگر بچہ گھر میں پیدا ہوا ہے تو تاریخ پیدائش درج کریں)

حصہ پنجم: گھر میں پانچ سال سے زائد عمر کے افراد کی اموات سے متعلق معلومات

501 Q کیا اس گھر میں پچھلے پانچ سالوں میں کسی کی وفات ہوئی ہے جن کی عمر 5 سال سے زائد ہو؟ (1 جنوری 2015 سے 31 دسمبر 2019 تک)  ہاں  نہیں

(اگر جواب ہاں ہے تو نیچے دیے گئے سوالات کے جواب تحریر کریں اور اگر جواب "نہیں" ہے تو نیچے دیے گئے سوالات کے جواب چھپے ہوئے ہوں گے۔)

509 Q - وفات کی وجہ کیا تھی؟	508 Q - وفات کس نوعیت کی تھی؟	507 Q - اگر خود شادی شدہ تھی تو ذیل میں سے کسی ایک کا انتخاب کریں۔	506 Q - کیا خود شادی شدہ تھی؟	505 Q - مرد نے والے کی جنس کیا تھی؟	504 Q - تاریخ پیدائش درج کریں۔	503 Q - گھر کے سربراہ سے محرم / امر خود کا رشتہ کیا تھا؟	502 Q - مرد / عورت کا نام	501 Q - نمبر شمار
1- بیماری کے دوران 2- طبی موت 3- حادثاتی 4- وجہ معلوم نہیں 5- دیگر (مشافحہ کریں)	1- حمل کے دوران وفات پائی 2- زچنگ کے دوران وفات پائی 3- زچنگ کے بعد 42 دنوں کے اندر وفات پائی 4- زچنگ کے بعد 42 دنوں کے بعد وفات پائی 5- موت کا تعلق حمل / زچنگ سے نہیں تھا	1- ہاں 2- نہیں	1- مرد 2- عورت (اگر عورت کی عمر 15 سے 49 سال 505 Q)	تاریخ پیدائش درج کریں۔	دن / ماہ / سال			

## حصہ ششم: زراعت، مویشی و دیگر معلومات برائے معاشی ترقی

سوال نمبر	سوالات
-601 Q	کیا یہ رہائش گاہ، آپ کی ذاتی ہے یا پرہ ہے؟ ذاتی ملکیت <input type="checkbox"/> کرایہ پر <input type="checkbox"/>
-602 Q	مکان کار قوت پتتا ہے؟ مرلے <input type="checkbox"/> گل کرے <input type="checkbox"/>
-603 Q	گھرمیں پینے کے پانی کا ذریعہ کیا ہے؟ گھر کے انور: <input type="checkbox"/> ٹکے پانی <input type="checkbox"/> ہاتھ والا پمپ <input type="checkbox"/> موٹر والا پمپ (بور) <input type="checkbox"/> ٹیوب ویل <input type="checkbox"/> بند کوا <input type="checkbox"/> گھا کوا <input type="checkbox"/> گھر کے باہر: <input type="checkbox"/> ٹکے پانی <input type="checkbox"/> ہاتھ والا پمپ <input type="checkbox"/> موٹر والا پمپ (بور) <input type="checkbox"/> ٹیوب ویل <input type="checkbox"/> بند کوا <input type="checkbox"/> گھا کوا <input type="checkbox"/> چشمہ <input type="checkbox"/>
-604 Q	گھرمیں کس قسم کا بیت اٹھا (ایئرین) استعمال ہوتا ہے؟ فلش جو زمین دوزنگ کی کے نظام سے بڑا ہوتا ہے <input type="checkbox"/> فلش جو گھرمیں یا باہر خارج ہوتا ہے <input type="checkbox"/> موجود نہیں <input type="checkbox"/> دیگر <input type="checkbox"/>
-605 Q	ان میں سے کون سی اینڈیگر میں موجود ہیں؟ فرنیچ / فریور <input type="checkbox"/> ٹیلی ویژن <input type="checkbox"/> موٹر سائیکل / سکوتر <input type="checkbox"/> موٹر کار <input type="checkbox"/> دیگر <input type="checkbox"/>
-606 Q	کیا آپ کے پاس زرعی زمین ہے؟ ہاں <input type="checkbox"/> نہیں <input type="checkbox"/> 612 Q
-607 Q	تپ کے پاس کل کتنا زرعی زمین ہے؟ ایکر <input type="checkbox"/> کنال <input type="checkbox"/>
-608 Q	کیا آپ کی زرعی زمین پچھلے ایک سال سے زیر کاشت ہے؟ ہاں <input type="checkbox"/> نہیں <input type="checkbox"/> 612 Q
-609 Q	آپ نے اپنی زرعی زمین سے پچھلے ایک سال میں کون سی فصلیں یا پھل حاصل کئے؟ 1- کئی <input type="checkbox"/> 2- گندم <input type="checkbox"/> 3- دالیں <input type="checkbox"/> 4- بویاں <input type="checkbox"/> 5- پھل <input type="checkbox"/> 6- پھول <input type="checkbox"/> 7- باجڑہ <input type="checkbox"/> 8- پٹاہ <input type="checkbox"/> 9- دیگر <input type="checkbox"/> اگر پھل حاصل کئے تو ان کی اقسام درج کریں۔
-610 Q	آپ کس مقصد کے لئے فصلیں لگاتے ہیں؟ کیا یہ فصل آپ کی گھریلے ضروریات کو پورا کرنے کے لئے کافی ہوتی ہے؟ ہاں <input type="checkbox"/> نہیں <input type="checkbox"/>
-611 Q	آپ فصل کو لچ کر کتنے پیسے کا لینے ہیں؟ (رقم درج کریں) رقم <input type="checkbox"/>
-612 Q	کیا آپ مال مویشی پالتے ہیں؟ ہاں <input type="checkbox"/> نہیں <input type="checkbox"/> 619 Q
-613 Q	تپ کے پاس کس قسم کے مویشی ہیں؟ (دیئے گئے ذبے میں تعداد درج کریں) 1- گائے <input type="checkbox"/> 2- بھینس <input type="checkbox"/> 3- بکری <input type="checkbox"/> 4- بھیر <input type="checkbox"/> 5- مرغیاں <input type="checkbox"/>
-614 Q	اگر مویشی تو ان سے روزانہ کتنا دودھ حاصل ہوتا ہے؟ (پے میں لپڑ درج کریں) 1- گائے <input type="checkbox"/> 2- بھینس <input type="checkbox"/> 3- بکری <input type="checkbox"/> 4- بھیر <input type="checkbox"/>
-615 Q	کیا آپ دودھ لپچے گھرمیں استعمال کرتے ہیں؟ ہاں <input type="checkbox"/> نہیں <input type="checkbox"/> اگر نہیں تو آپ گھر کے استعمال کے لئے دودھ کہاں سے حاصل کرتے ہیں؟
-616 Q	کیا آپ حاصل ہونے والا دودھ فروخت کرتے ہیں؟ ہاں <input type="checkbox"/> نہیں <input type="checkbox"/> 619 Q
-617 Q	آپ دودھ کہاں بیچتے ہیں؟ 1- قریبی گروں میں <input type="checkbox"/> 2- قریبی دکانوں / بول پل <input type="checkbox"/> 3- کسی گھنٹی کو (بیک ڈیگری) <input type="checkbox"/>
-618 Q	آپ ایک دن میں کتنے لپڑ دودھ فروخت کرتے ہیں؟ لپڑ <input type="checkbox"/>
-619 Q	اگر مرغیاں ہاں رکھی ہیں تو، ایک ہفتے کے دوران کتنے انڈے حاصل کرتے ہیں؟ تعداد <input type="checkbox"/>

620 Q	کیا آپ انڈے اچھے گھریلو استعمال کے لئے رکھتے ہیں؟	ہاں <input type="checkbox"/> نہیں <input type="checkbox"/>	اگر نہیں تو آپ اچھے گھریلو استعمال کے لئے انڈے کہاں سے حاصل کرتے ہیں؟		
621 Q	کیا آپ انڈے فروخت کرتے ہیں؟	ہاں <input type="checkbox"/> نہیں <input type="checkbox"/>			
622 Q	آپ انڈے کہاں فروخت کرتے ہیں؟	1- قریبی گھروں میں <input type="checkbox"/>	2- قریبی دکانوں / ہوٹل پر <input type="checkbox"/>		
623 Q	کیا آپ گورنمنٹ کی کسی سہولیت سے مستفید ہوئے ہیں؟	ہاں <input type="checkbox"/> نہیں <input type="checkbox"/>	624 Q	آپ کے گھر تک رسائی کے لئے روڈ کی کیا کیفیت ہے؟	پختہ روڈ <input type="checkbox"/> کچی روڈ <input type="checkbox"/>
<p>جہاں سہولتیں / سہولیات سے مستفید ہوئے ہیں ان کے سامنے دئے گئے نمبروں میں <input checked="" type="checkbox"/> لگائیں اور استفادے کا سال درج کریں۔</p>					
<p>سہولتیں / سہولیات</p>					
(1)	گنہگار پانے کے بیج				
(2)	معمولی کھاد				
(3)	کپڑے اور ادویات کی فراہمی				
(4)	زراعت کے لئے مشینوں / آلات کی فراہمی				
(5)	پھولوں اگانے کے لئے فراہمی				
(6)	مال مویشیوں کی نگہداشت کے لئے علیحدہ حیوانات کا علیحدہ رجوع کرنا				
(7)	پھل دار پودوں کے بیج اور بیجوں کی فراہمی				
(8)	نرسری / پانچنے لگانے کی سہولت				
(9)	جانوروں کے حفاظتی نیکے کی فراہمی				
(10)	جانوروں کی پٹاریوں کا علاج				
(11)	معمولی افزائش نسل کے بیج				
(12)	گھریلو سرخ بانی کے لئے سرخیوں فراہم کرنا				
(13)	اعداد برائے افزائش مرغ بانی (چوزوں کی فراہمی)				
(14)	حکومت کی طرف سے چھوٹے چھوٹے قرضوں کی فراہمی				
(15)	ماہی پروری کے لئے سہولیات کی فراہمی				
(16)	گیس کے سیلنڈر کی رعایتی قیمت پر فراہمی				
(17)	گورنمنٹ (TEVTA) کی طرف سے فزی لریٹیگ کیوزوں				
<p>درج بالا سہولت کے علاوہ کسی سہولت کی فراہمی (وضاحت کریں)</p>					
625 Q	اگر پختہ ہے تو کس سال میں تعمیر ہوئی؟	سال <input type="checkbox"/>			
626 Q	اگر پختہ ہے تو کس قسم کے تعمیر کی گئی ہے؟	سینٹ <input type="checkbox"/> تارکول <input type="checkbox"/>			
627 Q	کیا آپ کے گھر میں بجلی کی سہولت میسر ہے؟	ہاں <input type="checkbox"/> نہیں <input type="checkbox"/>			
628 Q	اگر بجلی موجود ہے تو کس سال میں لگی؟	سال <input type="checkbox"/>			
629 Q	آپ کے گھر میں کھانا پکانے کے لیے کون سا ایندھن استعمال کرتے ہیں؟	کڑیاں <input type="checkbox"/> بجلی کا چولہا <input type="checkbox"/> گیس سیلنڈر (LPG) <input type="checkbox"/> مٹی کے تیل کا چولہا <input type="checkbox"/>			
		گوبر <input type="checkbox"/> کوئلہ <input type="checkbox"/>			

ختم شد









AJ&K SDGs Unit,  
Planning and Development Department,  
Kashmir plan house, Block # 11,  
New Secretariat, Muzaffarabad, AJ&K.

Tel: 05822-921139

[www.sdgpakistan.pk](http://www.sdgpakistan.pk)