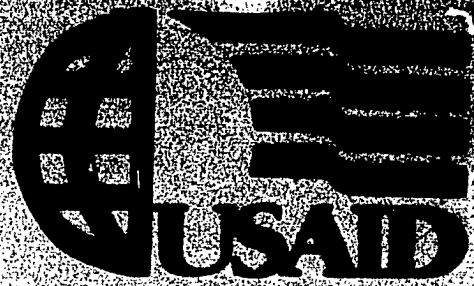


PN-ABU-633

# PHIO-ECONOMIC PROCEEDINGS OF KHYBER AGENCY

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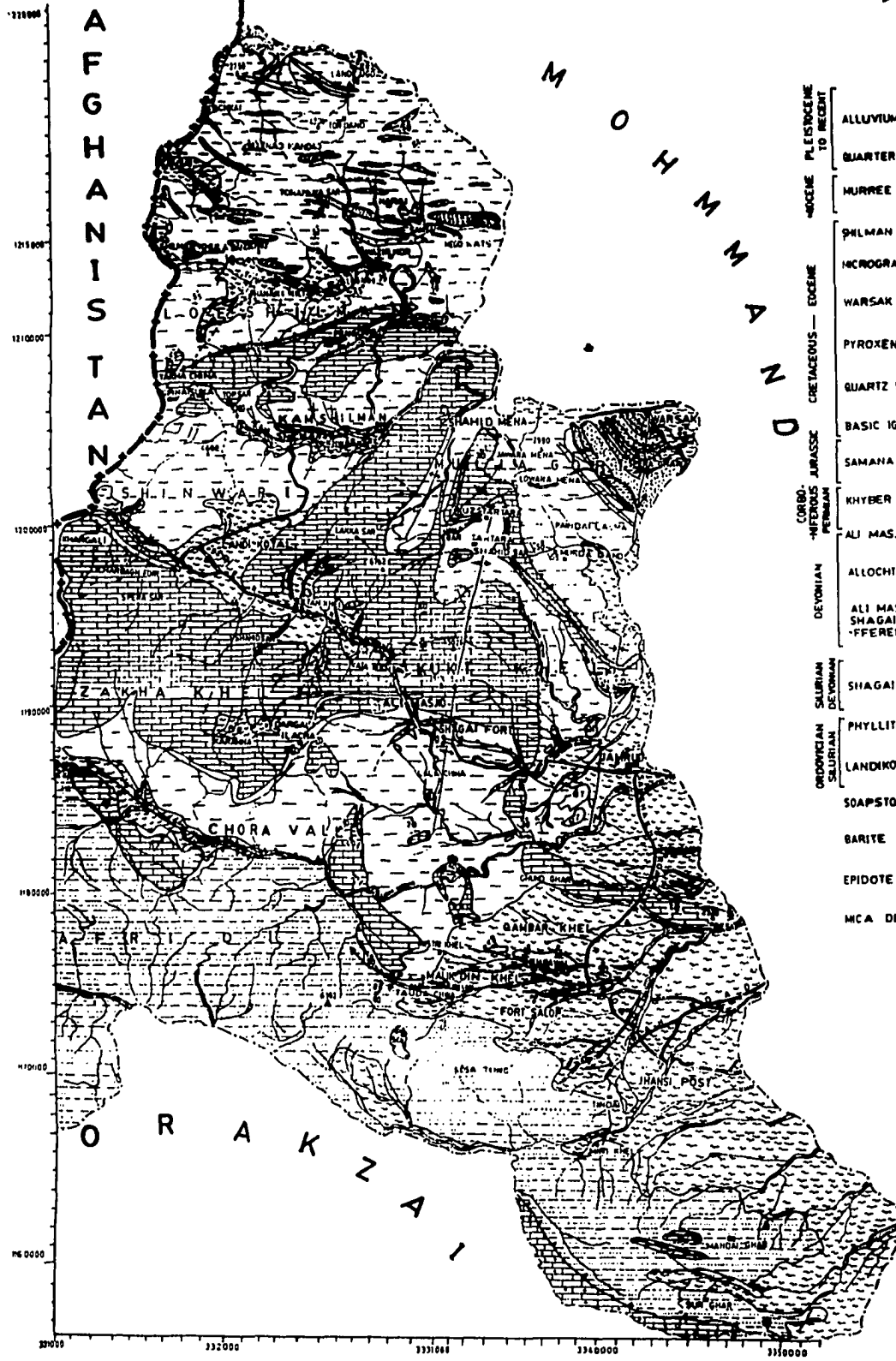
PN-ABU-633

**Prepared for**

**The Planning, Environment and Development Department  
The Government of North West Frontier Province**

**December, 1993**

# GEOLOGICAL MAP OF KHYBER AGENCY



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	SYNCLINE	
	THRUST FAULT	
	NORMAL FAULT	
	STREAM	
	ROAD	
	INTERNATIONAL BOUNDARY	

PREPARED BY:-  
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Source: FATA D.C

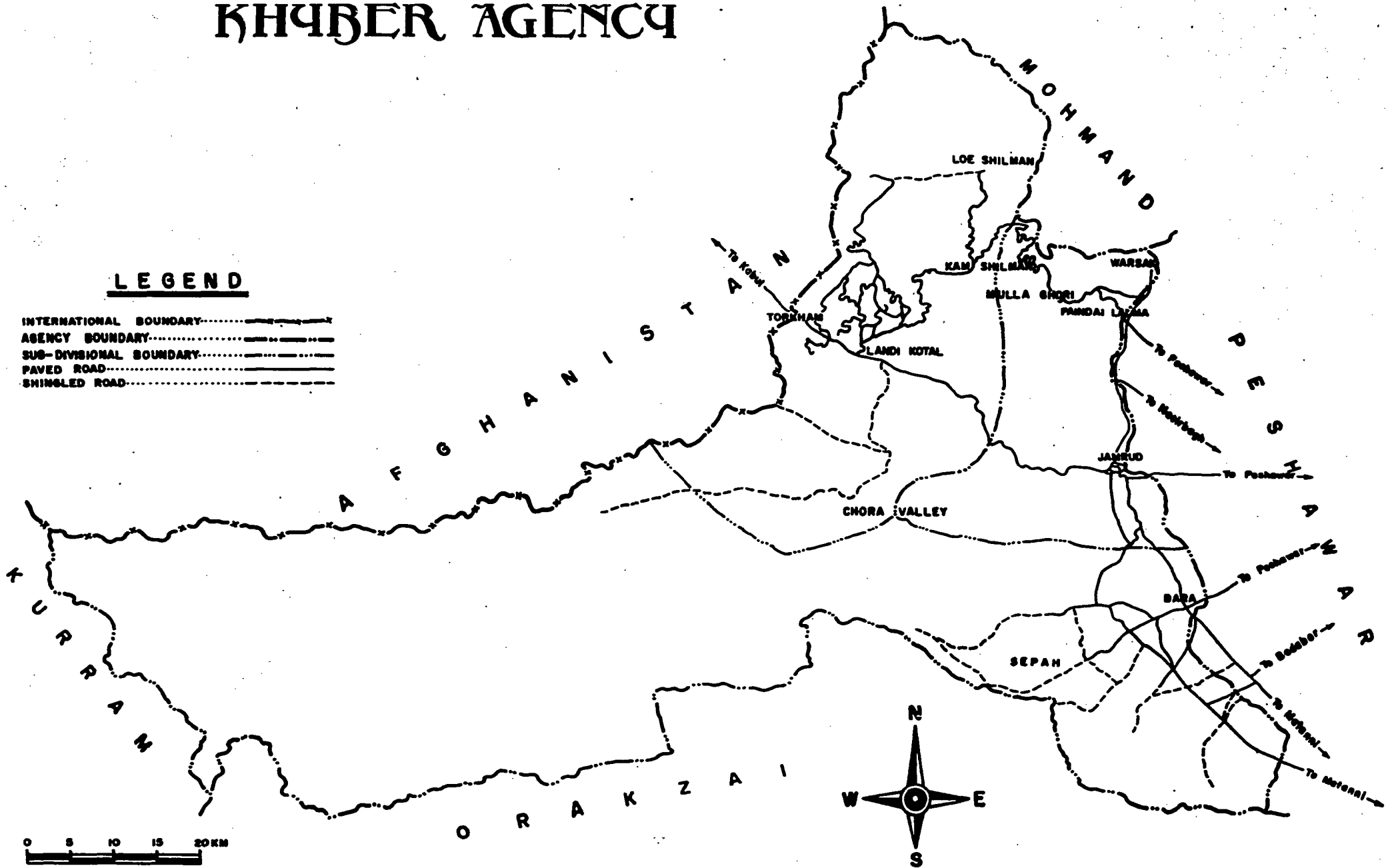
SCALE



# KHIBER AGENCY

## LEGEND

- INTERNATIONAL BOUNDARY.....
- AGENCY BOUNDARY.....
- SUB-DIVISIONAL BOUNDARY.....
- PAVED ROAD.....
- SHINGLED ROAD.....



## **PREFACE**

This is the seventh and the last in a series of seven profiles of the tribal agencies. All profiles are funded by the Tribal Areas Development Project (TADP). The six completed cover Kurram, Orakzai, North Waziristan, South Waziristan, Bajaur and Mohmand. Each profile is accompanied by a base map with 11 overlays depicting:

- o Area under cultivation
- o Irrigation facilities
- o Agricultural facilities
- o Forestry areas such as plantations and nurseries
- o Animal husbandry facilities
- o Health facilities and potable water supply schemes
- o Boys' Schools
- o Girls' Schools
- o Roads under construction
- o Electrification
- o Refugee camps

The purpose of these profiles is to make available to the public what is known about the present conditions within each tribal agency. Baseline data is often difficult to obtain and the reliability of the data is sometimes questionable. However, within these limitations, primary and secondary data has been collected and analyzed. The basic limitation is reliable population statistics since no population census has been undertaken in over eleven years. Previous census data has been disputed by various government agencies. The scheduled population census of 1991 has not yet taken place.

USAID would like to thank Mr. Abdul Karim Kasuria, the Political Agent from Khyber Agency and his staff, Mr. Masood Khan Bangash Project Director, Tribal Areas Development Project, Mr. Said Badshah, Additional Director Minerals, FATA D.C, Mr. Shahid Hussain SDO, C&W Department, the line agency staffs, and officials of the Planning, Environment and Development Department for providing information in this report and sharing their views.

The research was implemented by Mr. Ziauddin, Senior Research Consultant. Other contributor was Mr. Mohammad Ahmad Khan, Agriculture-Economic Research Consultant. The maps were completed by Mr. Riaz Ahmad, Cartographer, and Miss Shaheen Kausar, Draftsperson. Mr. Mansoor Arif did most of the typing.

## Salient Features of Khyber Agency (Year 1992-93).

<b>Area</b> .....	2,576 Square kilometers
<b>Population</b> .....	422,000
(estimated in 1993)	
<b>Population density</b> .....	169 persons per
(estimated in 1993)	square kilometer
<b><u>Administrative Units</u></b>	
Agency Headquarters.....	Peshawar
<b><u>Sub-Divisions</u></b>	<b><u>Tehsils</u></b>
Bara.....	Bara
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Jamrud.....	Jamrud
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Veterinary Dispensaries.....	9
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Area covered by block plantation....	4,035 acres
Number of Forest nurseries.....	6
<b><u>Communications Status</u></b>	
Paved Roads.....	346 km
Shingled Roads.....	332 km
Public Telephone exchanges.....	5
Telephone connections.....	1400
Telegraph office.....	1
Post offices.....	16

**Education Facilities****For Boys**

Primary schools.....	159
Middle schools.....	20
High schools.....	16
Higher secondary schools.....	2
Private schools.....	22
Colleges.....	1
Teachers training colleges.....	2
Commercial training institutes.....	1
Technical training institutes.....	1

**For Girls**

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Middle schools.....	5
High schools.....	2

**Health Facilities**

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Total investment in 1992-93.....	80 million rupees

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## LIST OF ACRONYMS

ADA	Agriculture Development Authority
ADBP	Agricultural Development Bank of Pakistan
ADP	Annual Development Program
AI	Artificial Insemination
APA	Assistant Political Agent
APO	Assistant Political Officer
BCG	Bacillus Calmette Gurine
BHU	Basic Health Unit
C&W	Communication and Works Department
DPT	Diphtheria, Pertussis, Tetanus
EADA	Extra Assistant Director of Agriculture
EPI	Expanded Program for Immunization
EXEN	Executive Engineer
FATA	Federally Administered Tribal Areas
FATA-DC	Federally Administered Tribal Areas Development Corporation
FR	Frontier Region
GOP	Government of Pakistan
IGP	Income Generating Project
LG&RDD	Local Government and Rural Development Department
MNA	Member, National Assembly
NAS	Narcotics Affairs Section
NGO	Non Governmental Organization
NRC	Norwegian Refugee Council
NWFP	Northwest Frontier Province
OPV	Oral Polio Vaccine
PA	Political Agent
PE&D	Planning Environment and Development
PHED	Public Health Engineering Department
RTV	Refugee Tented Village
SDO	Sub-Divisional Officer
SHU	Sub Health Unit
TT	Tetanus Toxoid
UNHCR	United Nations High Commission for Refugees
USAID	United States Agency for International Development
WAPDA	Water and Power Development Authority.

### Introduction to the Maps

We relied on Survey of Pakistan maps in drawing a new base map of Khyber Agency. The new base map is on a scale of 1:75,000 and contains roads (shingled, paved and tracks), rivers, towns, contours and Agency boundaries. We updated the base maps for paved and shingled roads. Subdivision and tehsil boundaries were drawn with the help of people knowledgeable of the area.

The maps are as follows:

- 1) 1:75,000 base map with villages, roads, rivers, stream beds, subdivision and tehsil boundaries.
- 2) 1:75,000 transparent overlay for the base map, showing elevation and vegetation shadings. Areas of vegetation may have changed since data were collected from the Survey of Pakistan maps.
- 3) 1:75,000 transparent overlays for the base map, one showing girls' schools and the other boys' schools as of December 1992.
- 4) 1:75,000 transparent overlay for the base map, showing ground and surface water irrigation schemes.
- 5) 1:75,000 transparent overlay for the base map showing health facilities and potable water projects.
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- 8) 1:75,000 transparent overlay for the base map showing animal husbandry facilities.
- 9) 1:75,000 transparent for the base map showing the electricity grid.
- 10) 1:75,000 transparent for the base map showing planned roads.

These maps will require annual revision as new projects become completed. New schools or the upgrading of existing schools, roads, health facilities, irrigation schemes, and the like will need to be added if the maps are to continue to be useful.

# EXECUTIVE SUMMARY

## Geography

Khyber Agency is named after the world famous Khyber Pass, the most vital and important pass connecting Pakistan with Afghanistan. Khyber Agency lies between 33° - 45' and 34° - 20' North latitudes and 70° - 30' and 71° - 27' East longitudes. Khyber Agency is bounded by Mohmand Agency on the north east, by Afghanistan on the north west, by Peshawar on the east, by Orakzai Agency on the south and by Kurram Agency on the west. Khyber Agency consists mostly of hilly tracts and mountains with some narrow strips of valleys. The major plains are the Khajuri Plain and Bara Plain. The Bara River flows from west to east while the Kabul River flows from Afghanistan south east between the areas inhabited by the Shalmanis and Mullagories. The important hills are Lakasar, Naroghar, Lauzaka Northa, Kalaud, Takhtakai, Sandapal, Malai Ghar and Torghar. The Khyber Agency boasts extreme temperature from cold to severe cold winters and warm to hot summers.

## Mineral Potentials

Mineral deposits in Khyber Agency include marble, soap stone, lime stone, dolomite, ciliate, silica sand, barite, mica and graphite. Marble deposits are found in Mullagori, Sultan khel, Ghundai Sar and Loe Shalman. The Mullagori marble deposits are one of the largest marble deposits of the world. Soapstone is the second most important mineral of Khyber Agency. The major deposit lies 7 kilometers from Jamrud bazaar. Limestone is abundantly available, extending from Loe Shalman in the north to Aka khel area in the south. Dolomite reserves are available at the Shalman and Mullagori areas of Khyber Agency. Extensive beds of silica have been found in Loe-Shalman area. Infrastructure is needed to facilitate the movement of minerals from mines to market. The implementation of proper mining practices is also needed.

## Administration and Economy

The Agency is administratively headed by a Political Agent, and each subdivision is over seen by an Assistant Political Agent. Large areas within the Agency are inaccessible, such as Afridi Tirah in Bara subdivision, Zakha khel in Landikotal subdivision and Toda Mela and Chooria in Jamrud subdivision.

There are no general indicators that yield information concerning income, employment and remittances, though trade seems to be the main source of income. Due to the extended border with Afghanistan and the Khyber pass, the smuggling of goods from Afghanistan to Pakistan is a major activity. There are large markets of smuggled goods at Landikhana, Landikotal, Jamrud and Hyattabad near Peshawar. There are four main bazaars located at Jamrud,

Landikotal, Bara and Maidan. The Agricultural sector only provides a return for subsistence levels. Remittances from the Gulf countries have been a source of income for a long time however they are slowly declining. The private sector consists of one ghee mill, one ice factory and one cigarette factory located at Bara.

### **Population**

According to 1981 Population Census, Khyber Agency was fifth in terms of total population and third among all seven tribal agencies in terms of population density. The average household size was 8 persons in 1981. While the sex ratio was 102 males for every 100 females. The literacy ratio was 11% which was the highest among all seven Tribal Agencies.

The population is made up almost entirely of Sunni Muslims. The dominant tribe of the Agency is the Afridi tribe, which is divided into eight sub-tribes, Shinwari, Shalmani and Mullagori are the other three main tribes living in the Khyber Agency.

Maximum precautions must be taken so that the data for any future population censuses will be accurate so that it can be used for planning purposes. Before a census is conducted, elders of the area, members of Parliament and NGOs should be briefed about the importance of accurate data so that they can further persuade people to provide reliable data.

### **Land Use**

Only 5% of the Agency's total area is under cultivation. The land to man ratio is very high; one hectare of cultivated land for as many as 24 persons. The Agency has, however, vast tracts of culturable waste land totalling about 75,000 hectares and accounting for about 23% of the Agency's total reported area. This land can be brought under plough developing the Agency's irrigation system; this however will be a long term proposition that entails a lot of investment. Taking the arable land availability factor as given for the next 10 - 15 years, it would be advisable to promote cultivation of high value crops, diversify the cropping pattern, and promote livestock and horticultural sectors' development. A definite, but slow, transition is already taking place. This should be maintained and encouraged through conscious planning.

### **Agriculture**

The agricultural sector is poorly developed but has medium to high level development potentials, especially in the irrigated zones. Plans are already afoot to bring more area under irrigation and induce crop diversification.

The Agency's biggest development constraint is its limited arable land resource base. At present only 5% of its total land is under the plough. The average farm size in 1980 was 1.26 hectares, where as in 1993, figures reflect that farm sizes have decreased. Fragmentation of farm holdings in Khyber Agency is widespread, however it is relatively less severe in comparison to the other Tribal Agencies.

Tenanted cultivation is negligible. The bulk of tenanted area is operated by share croppers.

Wheat and maize are the Agency's major crops. Sugarcane cultivation has increased considerably during the last few years, but the area is still less than 5% of the total cropped area of the Agency. Similarly, vegetables and fruit are grown on a much larger scale now than ten years ago, but the total area has not yet exceeded a thousand hectares. Crop diversification, though taking place very slowly, reflects a change in the farmers mode of thinking; giving up traditional methods in favour of modernized farming systems and practices. These trends however are, restricted almost entirely to the irrigated zones.

The farmers appear more aware of the improved inputs as well as the modern cultivation practices. Use of chemical fertilizers, plant protection measures, agricultural machinery, and other improved inputs are much higher now than a decade ago. This is clearly indicated by the fact that demand for all improved inputs far exceed their supply. Increasing the quantity of inputs sold at a reasonable price would further increase their use, which would consequently increase productivity.

The agricultural marketing system is dominated by middlemen. Marketable surpluses in the farm sector are small. The Agency is a net importer of agricultural products brought in from the adjoining district of Peshawar. Among its exports, the vegetables grown in Bara circle are most prominent.

The needs of the Agency's farmers are almost identical to those found in the neighbouring Mohmand Agency and elsewhere in the tribal agencies. The most widely reported needs are: irrigation facilities; more and timely credit; assured supply of the needed improved seed; cheaper and adequate insecticides/pesticides, fertilizers, threshers, and other inputs. The farmers also want the Agriculture Department to lay a larger number of demonstration plots. Many farmers have voiced the need for a larger number of lower and middle level extension workers (Field workers and Field Assistant) and for a more frequent contact with them.

Although the existing level of agricultural development is low, dramatic improvements in crop yields, cropping pattern, and farm enterprise mix can be achieved by strengthening the agriculture sector related agencies and mobilizing them. The momentum of

development activity should be maintained at a high level for a sufficiently long period spanning over several years. This would help achieve good results especially in the irrigated zones.

#### **Water Resources**

The principal sources of irrigation are canals and tubewells which account for 98% of the Agency's irrigated area. Nearly three quarters of all cultivated area is irrigated. Work is underway for expansion in irrigation water supply through the construction of more dams, tubewells, and dug wells.

The extension of potable water supply to more and more people is steadily improving. By June, 1992 the PHED had completed 53 schemes providing potable water to 64% of the Agency's population. Tubewells are the main source of drinking water.

#### **Animal Husbandry**

Due to the shortage of staff and funds, animal husbandry activities in the Khyber Agency are very limited. The large inaccessible area of Afridi Tirah also contributes to the region's low activity levels. There is also a shortage of nitrogen gas for insemination and vaccines for immunizations. More funds must be provided so that the facilities can be utilized to its maximum potential.

#### **Forestry**

The species indigenous to the Agency are prosapis, phulai, kao, zizippus, gurgura, blue pine, sanatha and oak. The Forest Department usually plants eucalyptus in the plains area, and phulai in the mountains. Although the Forest Department has some on going activities in the Khyber Agency, the main forested areas are located in the inaccessible Tirah area where the Department has no access. Natural forests are generally owned by certain tribes who cut down trees at their discretion.

#### **Communications**

The main entry point to the Khyber Agency is through Peshawar via the Torkham road. This road enters the Agency near Jamrud and leaves the Agency at Torkham at the Afghan border crossing through the Khyber Pass. Other entrances to the Agency are from Peshawar, Mohmand Agency and from Matani. The Agency's road network is very good. Parts of the road network are extended into the Shalman and Mullagori areas. In the Tirah area, metalled roads are under construction though certain tribes are strongly opposed to it.

## **Education**

Khyber Agency has the highest enrollment figures and the fewest number of schools amongst all seven Tribal Agencies. The enrollment figures are high despite the fact that the large inaccessible Tirah has no schools. Jamrud subdivision has the highest concentration of schools. There is a strong need to open more schools as primary schools are generally overcrowded. Girls' education is very limited. A major problem that needs to be addressed is the lack of technical education versus general education. The Commercial Training Institute at Jamrud and Vocational school at Bara are under utilized with low enrollment while higher secondary schools and colleges have many students. Emphasis on technical education can be accomplished through motivation, incentives and proper allocations.

## **Health**

The utilization of health facilities in Khyber Agency varies from location to location. In towns such as Landikotal, Jamrud and Bara, the facilities are properly utilized. In the remote areas of Khyber Agency, such as Shalman and Mullagori, the health facilities are under utilized, absenteeism is common and medicines are not available. The improvement and utilization of the health facilities in remote areas must be improved for the benefit of that population.

## **Electrification**

Electricity is supplied through five grid stations; as Landikotal grid, Jamrud industrial estate grid, Kohat Road grid, Mattani grid and Bada Bair Bazaar Grid stations. The electricity operations of Jamrud and Landikotal subdivisions are managed by WAPDA which is located at the Jamrud industrial estate and the Bara subdivision is managed by WAPDA, which is based in Peshawar. There are 7379 domestic connections, 1044 commercial connections, 166 industrial connections and 12 tubewell connection in Jamrud and Landikotal subdivisions. In Bara subdivision, there are 5,483 domestic connections, 516 commercial connections and 318 industrial connections. Besides the legal domestic connections, there are equal number of illegal domestic connections.

Electricity is highly subsidized. The average monthly household consumption in Khyber Agency is around 1800 KWh. If used in the settled areas, this consumption would cost more than 2000 rupees but in the tribal areas, each consumer is charged a flat rate of 90 rupees. Even this low flat fee of 90 rupees per domestic connection is not paid by many of the Agency's legal consumers.

**Investment**

From 1973-74 to 1992-93 Khyber Agency ranked sixth among all seven tribal agencies in terms of total allocations. Only Mohmand Agency received fewer allocations than Khyber Agency for this time period. In all sectors except rural development, allocations increased from a low base in 1973-74. Co-ordination of various sectoral activities is needed to improve planning. Irrigation allocations should be linked with the agriculture sector so that an increase in irrigated area would also benefit the agriculture extension facilities. In the same way, technical education must be given more emphasis, as compared to general education.



# I. GEOGRAPHY<sup>1</sup>

In order to understand the reasons why invasions of the Indo-Pakistan sub-continent took place through the Khyber Pass, it is necessary to understand the geographical conditions of this area.

The region was like a fort, a castle during all expeditions of the foreign powers. Therefore, it was appropriately named Khyber, which in Hebrew means "a palace or castle". The Khyber region the whole of Ghandhara, is also mentioned by the famous Chinese travellers Fahien and Huen Tsang during 500 AD to 700 AD. The famous ruins of the Buddhist monastery, Kafir Kot, Shopla Stupa, Khyber Topa, Ali Masjid Stupa and many other archaeological findings are testimony to Khyber's glorious past.

Tirah, a hill station, is the center of the Khyber. The importance of Tirah is told through the book, Avesta, which is two to three thousand years old. In it a place by the name of 'Stirah' is mentioned.

According to Avesta, the sacred plant of 'Suma' was sent from the heaven on the soil of Tirah. Mentioned in paragraph 6 and in chapter 10. Tirah is portrayed as a mountainous place, the peak that reaches the sky and stars.

Therefore, Tirah, which is the heart of Khyber and Land of the Afridis and Orakzais, has a great historical importance.

1. Social and Political Organization of Tribal Societies in Pakistan (A study of Social and Political Organization of Afridi Pathans) by Mohmand Ahsan Zahir Afridi. Forest school of Susse England, UK, August, 1972.

## A) Topography

The country of the Afridis west and south of Peshawar, lies between north latitude,  $33^{\circ} 32'$  and  $34^{\circ} 51'$  and between east longitude,  $70^{\circ} 37'$  and  $77^{\circ} 56'$ . It is contained in the fork formed by the Sufaid Koh (white mountain) range at Witugar Peak in longitude  $70^{\circ} 37'$ . The north prong of this fork runs eastward for nearly 60 miles and falls into the Peshawar valley around Jamrud and Khajuri areas, having thrown out the spurs that contain and divide the Bazar, Khyber, and Shalman valleys and runs south, then east forming the water parting between Peshawar and Kohat valleys and connecting the Kohat Pass with Adam Khel territory, which runs down through Khattak tribe country to the Indus river opposite Attock. Its boundaries are more precisely defined as follows:

### 1) North and East:

A line starting from the Mitughar peak of the Sufaid Koh, and running due east to the Laka Sar Peak (Tahtara) of the Khyber following the crest of the main range, and passing through the following points, viz. Thabai Pass, Bazar Pass and the village of Lalabeg, where the line crosses the Khyber. From Lakasar, the boundary follows the watershed between the Khyber and the valleys which drain into the Kabul river, running over the Sapuri Kandao, the Mautanai Shahid and Badpukht Hills down to Ghundai on the western frontier of the Peshawar district. From Ghundai, the boundary is that of Pakistan territory. From Ghundi southward, viz. Jamrud and Bara forts, to the Kohat Pass, where it again turns eastward and follows the northern foot of the Khattak range of hills as far as the police post of Shamshatu. From Shamshatu, the boundary again turns south and crosses the Khattak range over the Jalala Sar Peak; crosses the Musadara Valley at Takhtakai and then over the Hindki Sar peak and onward to the Kohat-Khushalgarh road close to Gumbat.

### 2) South and West:

Starting from the same point on the Mitughar, the southern and western boundary runs first due south, along the crest of the ridge bounding Tirah on the west via the Torghar Kharaghar, and Kahughar peaks, to the Ublan Pass. At the latter point it turns eastward, and still skirting Tirah, follows the crest of the ridge separating Tirah and Waran from the Orakzai valley and crossing the lower end of the Waran valley ascends to the Uchpal pass, where it follows the ridge separating the two branches of the Bara up to the junction of the latter whence it runs via the Ranja Ghar, to the Kohat Kotal, about 4 miles north of Kohat. Then again, turning eastward it follows the general line of the Kohat-Khushalgarh road to the above mentioned point near Gumbat. The territory of the Afridis then consists of some 3,200 square miles (80 miles length and 40 miles breadth), of elevated hilly country, sloping eastward and drained by the Bara, Bazar, Dara and Khyber rivers into the

Peshawar valley. The valleys lying round the sources of both branches of the Bara river the source of Khanki, flowing into the Kohat district, and the source of Kharmana, flowing into Kurum, are included in the general name of Tirah, a tract composing an area of from 800 to 1000 square miles, with an elevation of 5000 to 7000 feet above sea level. Tirah includes the Bara valley above Tora Waila the south Bara valley above Hisar, the Khanki valley above Sadarai and the Kharmana valley above Khazina. It is the summer resort of the greater portion of both the Afridis and Orakzais and it contains the following known places:

1. At the head of the north branch of the Bara valley of Maidan and Rajgal.
2. At the head of the south branch of the Bara the valleys of Mastura, Bezoti and Waran.
3. At the head of the Khanki the Kahu Dara and Minjan Dara.
4. At the head of the Khurmana, the Ganda, Lozaka, Landai, Ghundai and Thabidaras.

The principal summer seats of the Afridis are at Maidan and Fajgal. Maidan is a circular valley or basin, some 10 miles in diameter. Miadan is rounded by wooded mountains rising to 8,000 feet and 9,000 feet. The south western side of the Maidan valley is parted from the Kharmana by the Karagh or Kahu Ghar spur of the Sufaid Koh. A pass over this spur (the Lozaka Pass) leads with a good road into the Kurram valley. The pine forests round Maidan cease where the slope from the mountains subside as they converge to the center, and there is a perennial spring at a place called Bagh, a garden and a big mosque used for the meetings of Jirga in the very middle of the valley. The central portion is drained by three or four large water sources, which unite at the Malikdin Khel settlements and under the name of the Silobar Toi, flows for 3 miles through the Kharapa Tangi, a narrow, rocky gorge commanded by heights rising to 1000 feet on either side, and then for 2 or 3 miles through open country until joined by the Rajgal stream at Dwa Toi, after which the water is known as the Bara river. Of the above mentioned affluents, the Sherdara from the coast runs through the Zakha Khel country. The Manaka Dara and Kshu Dara from the south, water the lands to the Kamar Khel and of a few Kala Khel families; whilst the Malikdin Khel are located on the Silobar, the stream that on the confluence of the others, gives its name to the united waters they become the Bara. During the greater part of the year, water is plentiful in Maidan; but like all other streams in these hills, it is apt to disappear and come to the surface lower down.

The banks of the streams are said to be honeycombed with cave dwellings. There are numerous stone towers, but no large or walled villages. The houses are three storied with a laped parapet. On the ground floor are cattle, the top is the dwelling place and the center is barren. Rajgal is drained by a stream rising near the Mitu Pass, which receives water from tributaries in Rajgal. The length of the valley is 10 miles and the breadth of the open

country is from 4 to 5 miles where widest, the elevation at that point being probably over 5,000 feet. This level position is cultivated, the chief crops being wheat and barley on the north of the valley stands the main northern western and falling to 9,000 at its eastern end.

This forms the boundary between the Afridis and the Sangukhel and Mirjan Khel Shinwaris. On the south, Rajgal is separated from Maidan by a steep, rocky, but well wooded spur, 8,000 to 9,000 feet high called Michni.

## **B. Rivers**

Two rivers flow in the heart of Khyber Agency, one is Bara and the other is Chora. The river Kabul flows between the area of Shilmanis and Mullagoris and separates Khyber Agency from Mohmand Agency.

### **1. Bara River:**

The united drainage of the Rajgal and Maidan valley becomes the Bara river. The Bara valley attains an elevation of 5,000 feet at Dwa Toi, which sinks to 2,000 feet at Khajorai. The Soorghar range, the elevation of which is from 6,000 to 7,000 feet, separates the Bara from the Bazar or Chora valley whilst the Torghar, an equally lofty range, separates it on the south from the Aka khel and Orakzai country joined by the Khyber stream. The Bara river eventually falls into the Kabul opposite Nisatta, after passing within 2 miles of Peshawar.

### **2. Chora River**

The Chora river, flows with an easterly and north easterly course north of the Soorghar range eventually debouching on the Peshawar plain and joining the Khyber stream south of Mathra Thana.

The Bazar valley is scantily supplied with water except at Chena, where there is said to be an abundance all the year round. The other Bazar villages depend chiefly on rain water caught in ponds and follows:

## **C. Important Places**

The important places in Afridi country are as follows:  
Maidan, Sandapal, Bara, Takhtakai, Luzaka, Esaka, Khajorai, Bazar, Chura, Jamrud, Qadam, Lalal China, Sapurai, Khyber and Dara Adam khel

#### D. Important Peaks

The known mountains and peaks are as follows:

Lakasar	Rotaz
Naraghar	Luzaka
Takhtakai	Sandapal
Torghar	Soor Ghar
Ganjai Murgha	Malai Ghar

The peaks mentioned have heights ranging from 6,000 to 10,000 feet.

#### E. Climate

Khyber Agency has extreme climate with cold to severe cold winters and warm to hot summers. On the highland precipitation in the form of snow is common in winter. During summer months the Tirah region is pleasant. In the rest of the Agency, the day temperature in the open is high, but is pleasant under the shade in hilly areas. The summer nights are moderately cool. The rainfall is very scanty. The winter rain is brought by the western disturbances, while the summer rain is associated with monsoon.

The data on temperatures and rainfall for the Agency is given in Table 1.1 and 1.2. There are two stations recording this data, one located at Agriculture office, Jamrud road and the other at Agriculture office Landikotal.

Table 1.1

**MAXIMUM AND MINIMUM TEMPERATURE (C°)  
IN KHYBER AGENCY  
YEAR 1991-92  
MEAN TEMPERATURE (C°)**

<u>Month</u>	<u>Maximum</u>	<u>Minimum</u>
July	40	37
August	38	24
September	39	22
October	34	19
November	32	18
December	26	12
January	18	03
February	24	04
March	28	06
April	29	08
May	32	14
June	38	24

Source: Agriculture office, Khyber Agency.

Table 1.2

**MONTHLY RAINFALL DATA  
IN KHYBER AGENCY  
(1988-89 TO 1992-93)**

<b>Month</b>	<b>1988-89 millimeter</b>	<b>89-90 millimeter</b>	<b>90-91 millimeter</b>	<b>91-92 millimeter</b>	<b>92-93 millimeter</b>
July	97	21	N.R	34	58
August	69	20	N.R	22	36
September	4	4	N.R	N.R	18
October	N.R	N.R	N.R	10	N.R
November	N.R	N.R	N.R	N.R	8
December	14	4	18	N.R	14
January	N.R	6	11	N.R	N.R
February	3	10	12	36	164
March	7	20	19	12	N.R
April	8	22	118	141	N.R
May	N.R	N.R	46	8	N.R
June	N.R	N.R	96	6	N.R

N.R = NOT Recorded

Sources: FATA Development Statistics, 1990  
Agriculture office, Khyber Agency

## II. Mineral Potentials'

Khyber Agency boasts a wide variety of mineral reserves. These deposits include marble, soapstone, limestone, dolomite, silica sand, barite, mica and graphite. Semiprecious stones are also found at certain places within the Agency. These mineral prospects are briefly discussed as follows:

### A. Marble Deposits

Marble deposits are found in the Mullagori, Sultan Khel, Ghundai Sar and Loe Shalman areas of the Khyber Agency. From these, the Mullagori marble deposits are amongst the three most famous marble deposits in the world, the other two being Carrara in Italy and Makrana in India.

Stratigraphically, the rocks containing marble extend continuously for about 14 km between Ghundai Sar in the South and Shahid Mena in the North. Its' width ranges from 200 meters to 1500 meters.

Two large marble deposits occur in the Mullagori area. The reserve at Shahid Mena lies at latitude  $34^{\circ} 08' 30''$  North and longitude  $71^{\circ} 19' 30''$  East. Both localities are accessible through Peshawar Mullagori road.

#### 1. Marble Deposits of Shahid Mena

At Shahid Mena, crystalline limestone beds are associated with dolomite, quartzite, phyllite and schistose rocks. These rocks are highly folded and fractured. The regional strike of the beds swing between N 10 E and N 10 W. The dips range from  $30^{\circ}$  to  $60^{\circ}$ E.

The marble quarries are located at a spur where the Mullagori road begins to descend down to Tauda Oba Khwar. Here at a place called Thaus Morga, about 35 meters of thick rock is exposed, interceded with marble which is workable at a depth of 10 to 12 meters. About 65,000 cubic meters of marble deposits have been estimated at this section. The scree covered slope below the rock section leads down to Shahid Mena village.

The marble at Shahid Mena is generally white with subordinate yellow, grey and brown varieties. It is medium to fine grained, saccharoidal, calcitic and free from impurities. Ferruginous staining coats the cracks and joint planes. Analysis of the Shahid Mena marble samples have shown that it is similar to the Makrana (India) and the Carrara (Italy) marble. The percentage of silica in the Shahid Mena marble is less than 0.05%, which is extraordinarily good.

Source: Geology of Khyber Agency by Azhar Khan and younas Khan, Federally Administered Tribal Areas Development Corporation, Peshawar.

## 2. Marble Deposits of Kambela Khwar

These deposits consist of metamorphosed limestone associated with dolomite, quartzite and phyllite. Basic igneous intrusions occur at places. The limestone, dolomite and quartzite form cliffs on both sides of Kambela Khwar. The following three lithological units have been recognized.

1. Upper marble unit with average thickness of 150 meters.
2. Middle quartzitic unit measuring 21 to 60 meters in thickness.
3. Lower marble unit measuring 50 meters in thickness.

The same sequence is maintained up to Ghundai Sar. Towards Ghundai Sar the thickness of upper marble unit decreases to about 3 meters where it finally pinches out. The lower marble unit, however, maintains its thickness which is approximately 30 - 45 meters.

The quartzitic unit is white and pinkish at places. It is cross bedded and has gradational contacts with the marble units. The upper marble unit is exposed to the wear and tear of nature and it presents the common scene of Karst topography, e.g. sink holes and small scale caving. The rocks of the area generally strike NW and dip  $20^{\circ}$  to  $60^{\circ}$  in the NE.

The Kambela Khwar marble is thick bedded, massive, and generally white to yellowish white with grayish or greenish bands at places. It is medium to fine grained. Several sets of widely spaced joints are developed hence few problem are encountered when extracting large blocks of marble.

Reserves of the Kambela Khwar marble deposits are estimated at about 282 million cubic meters (764.2 million tons). Out of this, about 9 million cubic meters (19.53 million tons) of marble deposits are estimated to be minable up to 15 meters depth. More information is given below in Table 1.3.



Table II.1

## MINABLE RESERVES ESTIMATION OF KAMBELA KHWAR

Unit	Length (meters)	Width (meters)	Depth (meters)	Total Reserves
Upper Marble Unit.	Block (i) 750	400	15	= 7.98 million cubic meters
	Block (ii) 800	150	15	
	Block (iii) 750	150	15	
Lower Marble Unit.	400	150	15	= 0.96 million cubic meters
Total				= 8.94 million cubic meters
Say				= 9.0 million cubic meters

Source: Geology of Khyber Agency, FATA D.C

Mullagori marble has attracted people since long ago. It is believed that marble from Shahid Mena has been worked on a small scale by the locals for the last 60 years. The scree covered slope at Shahid Mena contains marble boulders. Initially, few quarries were established on this slope, thus the exploitation of marble started on a limited scale. As time passed, more quarries were established. At present, there are more than 60 quarries at Shahid Mena. All the quarry-owners are Mullagoris.

Due to the disputes amongst various Mullagori tribes over mining rights, at present, the Kambela Khwar marble deposits can not be exploited.

Elsewhere in the area the quarry workers use very primitive and unscientific methods for the exploitation of marble. Sickles and spades are used to remove scree and alluvium which cover the marble boulders. With chisels and hammers, holes are made in the big blocks and boulders of marble, which is then blasted these into chunks. Large pieces are loaded on trucks while the rest is left as waste. Only recently have the use of small drill machines and chain pulley-blocks introduced.

In the quarries safety measures are not practiced, deaths and injuries are common due to blasting and rock slides. Also, workers don't have access to first aid facilities on site. Injured workers are taken to a dispensary at Lowara Mena, 2 km off the site or to Peshawar which is 20 km away.

Despite many difficulties, the quarrying of marble is still going on at Shahid Mena. Approximately twenty trucks load of rock are supplied to various marble factories in the districts every day.

The government may extend help in the form of machinery and equipment to improve the exploitation of one of the world's largest and finest marble reserves.

### 3. Marble Deposits of Sultan Khel

Sultan Khel lies at Lat.  $30^{\circ}04' 45''$  N; and Long;  $71^{\circ}12' 40''$  E;. It is easily accessible from Peshawar by the main Jamrud road. The area consists of rugged mountains. Limestone beds are exposed near the road. This limestone is grey to dark grey, fine grained and medium to thick bedded. It is partially metamorphosed and technically does not possess all the properties of a good marble. The limestone contains pyrite crystals, hence it can not be cut and polished easily as the pyrite crystals damage the cutters. The rock carries alternate dark and light coloured bands and is named Black-Zebra marble in the market. Reserves are believed to be in the order of about 8 million metric tons.

### 4. Marble Deposits of Ghundai Sar

Ghundai Sar lies about 5 km north of Jamrud town. Rock formations include the Landikotal Slates, the Ali Masjid Group and the Khyber Limestone. The marble is generally white with grey, green and brown bands at places. It is medium to thick bedded. This marble is of good quality and can be utilized for decorative purposes. Reserves of about 2 million tons have been estimated up to 15 meters in depth.

## B. Soapstone Deposits

Soapstone is the second most important mineral of Khyber Agency after marble. The major deposit is about 5 miles north of Jamrud town. The soapstone exists in the form of replacement veins in dolomitized limestone. One such vein lies south of Osinala and is easily accessible by a metalled road. Another such vein north of Osinala is inaccessible from approach point of view. Although most of the production is from the southern vein, the northern vein, with less surface exposure, may give better results. The vein south of Osinala has an estimated reserve of about 20,000 short tons, half of which has already been exploited. The northern vein with minor scattered excavation, remains untouched. This body is estimated to have about 35,000 short tons of soapstone reserves. Mining methods are simple and most of the deposits are being quarried by blasting. This practice has been going on since 1954.

Mining in the area is risky because of the steeply dipped vein and lack of adequate facilities. The compact and sound nature of the host rock however, reduces the possible chances of the mines collapsing.

### Uses

The chemical composition of Jamrud soapstone shows that it has low percentage of iron oxide (0.14 - 1.02) and can be used in ceramic industries for glazing the pottery and tiles. High loss on ignition is mainly due to high carbonate content which precludes its use as a filler in the manufacture of paper. However, it may be used in the manufacture of papers other than writing paper. It has a high degree of brightness and could be used in cosmetic and textile industries.

## C. Limestone

Limestone is abundantly available in the area. The greater parts of almost all the high mountains of the area extending from Loe Shilman in the north to Aka Khel in the south are composed of limestone. Due to the proximity of the Khyber Limestone to the roads, it is the main source of building material for the area. Analysis of some limestone samples indicated it is fit for use in sugar and paper industries.

## D. Dolomite

Sizable reserves of dolomite are available in the Khyber Agency at Shilman and Mullagori area. In most cases, dolomite is associated with limestone. Samples of dolomite from Shilman were analyzed by FATA DC geologists and preliminary studies indicated that dolomite might be used as flux stone in metallurgy.

### **E. Silica Sand**

Extensive beds of silica sand are located in Loe-Shalman area. Detailed field and laboratory studies are required to evaluate its quality and quantity.

### **F. Calcite**

Landikotal Slate contains carbonaceous material at some places. At Tor Tsapar and Inzari Kando (Kam Shilman), for example, carbonaceous beds cover a large area. Geochemical analyses show that these beds yield as high as 80% of ash. The fixed carbon ratio is low. Detailed studies are required.

### **G. Barite**

Barite mineralization exists to the north of Tangi village of Qambar khel area. Mineralization is present in the form of lenses and veins in the upper part of the rusty brown limestone bed. One such barite lens attains a length of about 300 feet and a width of about 5 feet. Chemical analyses of four barite samples show 32% to 96% BaSo<sub>4</sub> content. Results are encouraging. Detailed studies are required.

### **H. Mica**

Biotite occurrences have been noted at Sheneoli village in Loe Shalman. Detailed surface mapping indicated that the zone extends over 0.42 sq.km area. The mica occurs as lenses and pockets. Pyroxenite serves as the host rock for the biotite.

### **I. Semi-Precious Minerals**

Epidote mineralization was found about 1 km south-east of Torasukasar in Loe Shilman area. Phyllites and schists are the dominant rocks of the area. Quartz and calcite veins traverse the country rocks. Epidote mineralization is restricted to calcite veins in calcareous schists. The crystals are light yellow to deep yellow in colour and transparent to translucent. The crystals are mostly small and fractured. Rarely can gem quality crystals be seen.

### III. ADMINISTRATION AND ECONOMY

#### A. Administration

The Agency administration is headed by a Political Agent based at Peshawar. Overall, he is in charge of the political administration of the Agency. He acts as a district magistrate as well as a session judge. He is also a collection agent for government revenues. The Political Agent is responsible for coordinating the functions of all line agencies operating in the Agency. Moreover he is to maintain law and order within the Agency.

The Khyber Agency has been divided into three subdivisions and four tehsils.

Subdivisions -----	Tehsils -----
Bara	Bara
Jamrud	Jamrud
	Mulagori
Landikotal	Landikotal

Each subdivision is headed by an Assistant Political Agent (APA). Whose office is located in the respective subregion. The Assistant Tehsildar in charge of the Mullagori tehsil sits at Pendilalma. The Assistant Political Agent is responsible for his respective subdivision. He functions as an additional district magistrate. He also monitors the law and order situation and progress of the development in his respective subdivision. An Assistant Political Agent's staff consists of a reader, a stenographer and political muharars.

The Jamrud subdivision is accessible except for the areas of Toda Mela, Chooria and Ghalani Jamrud. In the Landikotal subdivision, The Zakha khel is presently inaccessible, although roads are planned for that area. In Bara subdivision, much of the Afridi Tirah area is inaccessible.

#### B. Economy

There are no existing indicators that give us a sense of Khyber's productivity, the contribution of various sectors to productivity, remittances, employment or income. Trade seems to be the major source of income. Due to the long boundary with Afghanistan and the Khyber Pass, the smuggling of foreign goods from Afghanistan to Pakistan is a major activity. There are large markets at Landikhana, Landikotal, Jamrud and Hyattabad near Peshawar. Some of the big traders from Khyber Agency deal with international businesses.

Agriculture is another source of income. Generally the agricultural sector provides a return only enough for subsistence living. People own livestock, but generally do not raise animals for commercial use. Animals generally provide the family's milk and meat consumption.

Remittances from the Gulf countries have been a source of income for a long period of time. However, as there are fewer job opportunities in the Gulf states at present these remittances are now declining. There are many locals who work within Pakistan's urban centers such as Peshawar, Lahore and Karachi. There is no available data concerning the remittances coming into the Agency and the exact number of Agency residents living abroad is not available.

There are four main bazaars in Khyber Agency. These are located at Jamrud, Landikotal, Bara and Maidan. The bazaar at Maidan, inside Tirah, is not accessible by road. It but it has around 200 shops that provide goods and services for the people living in the Tirah valley. In the bazaars most of the shops carry foreign goods and items for daily use. There are also a few ammunition shops in these bazaars.

FATA-DC completed a cigarette factory at Bara at a cost of 13.686 million rupees in August 1976. This factory provided jobs for 105 local people. This factory was closed down in October 1984 due to losses. Another factory completed by FATA-DC was a marble factory at Paine Lalma at Mullagori area. This factory was completed at a cost of 12.91 million rupees in February 1980 and closed down on September 1986 due to losses. This factory had created 147 jobs. The losses of these factories were due to poor planning, government control, and the high cost of transportation of finished goods. Industrial skills were not available and the quality of the final product was poor. In the private sector, there is one ghee mill, one ice factory and one cigarette factory at Bara. There are 10 branches of nationalized and private banks in Khyber Agency.

## IV. POPULATION AND TRIBES

### A. Government Census Data

According to the 1961 Population Census, the population of Khyber Agency was estimated at 301,319. In 1972 ten years later, the Census population figures increased to 378,032. In the 1981 population Census, these figures decreased by (-)3.31% annually to 284,256 persons as described in Table IV.1

Table No. IV.1

#### POPULATION SIZE, INTERCENSAL CHANGE AND ANNUAL GROWTH OF KHYBER AGENCY

Description	1961	1972	1981	1993 (estimated)
Population	301,319	378,032	284,256	422,738
Intercensal change	-	25.5%	(-)24.8%	-
Average annual growth rate	-	2.0%	(-)3.3%	(+)3.1%

Compared to the other Tribal Agencies, Khyber Agency was ranked fifth in terms of total population in 1981. The four other highly populated Agencies were Orakzai, South Waziristan, Kurram and Bajaur. Khyber was third after Orakzai and Bajaur in terms of population density with 110.3 persons per square Km.

According to the 1981 Census, Khyber Agency's population was scattered among the three sub-divisions as follows:

Table IV.2

#### POPULATION BY SUB DIVISION IN KHYBER AGENCY

Name of Subdivision	Population as of 1981	%age of Agency Population
Bara	142,501	51 %
Jamrud	60,748	21 %
Landikotal	81,007	28 %

Source: 1981, Population Census

Comprised of 20 prominent villages, the Bara subdivision is highly populated and contains more than 50% of Agency's population. Landikotal subdivision is the second most highly populated and has 20 prominent villages. Jamrud subdivision is least populated compared to other subdivisions and consists of 8 prominent villages

The average household size was 8.1, second only to Orakzai Agency. According to the 1981 Census, the population below 10 years of age was around 30%.

At the time of the 1981 census, the Agency's overall sex ratio was 102.8 males for every 100 females. These figures placed Khyber Agency fifth among all other Agencies, where the male population was greater than the female population. The sex ratio in Bara subdivision was 108.2 males for 100 females, in Landikotal subdivision 98.7 males for every 100 females and in Jamrud subdivision 96.3 males for every 100 females. Bara sub-division has large, inaccessible areas of Afridi Tirah where the communication network is poor and a large percent of female population does not have access to modern health facilities. These factors may explain the high mortality rate in the Bara subdivision. Jamrud and Landikotal sub-division are relatively more developed and also have easy access to Peshawar.

## B. Population Growth

It is very interesting to note that the population in Pakistan as a whole has approximately doubled from 1971 to 1993. Pakistan is the ninth most populous country in the world, its population has been growing at a rate of around 3 percent per annum. The population doubling time for Pakistan is twenty three years. The 1981 population Census resulted in a negative population growth rate of 1.5% of FATA in general and 3.3% average negative annual growth rate was recorded in Khyber in particular. The reasons which were given in the preface of the of the 1981 Census report, claimed that it was the first time in FATA that a proper census providing for individual enumeration was carried out. Whereas, in all of FATA's previous censuses, population estimates were provided by the Political Agents with some insignificant exceptions where individual enumeration was carried out.

FATA Population Census results are very controversial because of various reasons such as:

1. There are many areas in FATA which are inaccessible for data collectors to collect data.
2. Main source of the provision of data is a Malik of a particular area who does not provide accurate data because of certain reasons such as
  - i) Vested interests ii) illiteracy iii) suspicion iv) not realizing the importance of data for planning.



In the Tribal Areas, there are certain reasons which provide good arguments in favour of positive population growth such as

- 1) Immense urge for greater manpower which is a symbol of status and strength for tribesmen.
- 2) High rate of illiteracy among women and the lack of awareness and access to services for family planning.
- 3) Trend for early marriages.

There are also strong factors supporting negative population growth. These factors are as follows:

- a) There is a mass migration from Tribal Areas to urban areas of Pakistan and to the Gulf States mainly because of economic reasons.
- b) There is Infant mortality (IMR) among the majority of poor families who lack financial and protective medical services.

In the censuses of 1961 and 1972, population figures were provided by political authorities. At that time, tribes were given subsidized food. Therefore, it was suspected that Maliks provided political authorities and census authorities with exaggerated figures. The major drop in population in 1981 could be attributed to the inaccuracy of earlier censuses and to a very high rate of migration to the Gulf States and urban centers of Pakistan for employment in the eighties. In the future the acquisition of accurate data will remain a problem unless serious precautionary measures are taken. These steps include creating awareness among locals about the importance of accurate data for planning and field checks to verify the accuracy of collected data.

It is, of course, a gigantic task to collect accurate and valid upto date data about the Tribal Areas. A researcher has no option or alternative but to utilize the available data collected by government agencies. Although the 1981 census failed to provide a basis for forecasting population growth, current figures can be extrapolated by using the national 3.1% annual growth rate. Using this figure, the expected population of Khyber in 1993 would be 422,738, with a total increase of 138,482 from 1981. This would bring the population density to 164 persons per sq.km.

### C. Literacy

According to the 1981 census, the literacy rate in the Khyber Agency for those "10 years and above" was 10.94%. It was 20.18% for males and 0.67% for females. The overall literacy rate in FATA was 6.38% in 1981. Khyber Agency had the highest literacy rate among all the tribal agencies. Among the three sub-divisions, Jamrud had the highest literacy rate of 15.22% (28.32% for male and

1.29% for females) followed by Landikotal sub-division with a 13.58% literacy rate (25.82% for males and 0.47% for females).

Bara subdivision had the lowest literacy rate of 8.10% (14.65% for males and 0.55% for females).

#### D. Religious Groups

The tribesmen of Khyber Agency are predominately Muslim and belong to the Sunni sect of Islam. According to the 1981 Census, there were also 88 Ahmadis, 387 Christians, 242 Hindus and 233 Sikhs residing in Khyber Agency.

#### E. Tribal Groups<sup>1</sup>

The Afridis are the dominant tribe of Khyber Agency. Other tribal groups living in the region are the Mullagaris, Shinwaris and Shilmanis. The distribution of these tribes and their sections in three sub-divisions of Khyber Agency are as follows:

Table IV.3

#### DISTRIBUTION OF TRIBES ON SUB-DIVISION BASIS

Name of Sub-division	Major Tribes	Sections
Jamrud	Afridi Mullagori	Kuki khel Tar khel Par khel Ahmad khel Daulat khel
Bara	Afridi	Malik Din khel Qambar khel Aka khel Sipah Kamar khel Adam khel
Landikotal	Afridi Shinwari Shalamani	Pakhai Zakha khel Bazar Zakha khel Khuga khel Sheikh Mal khel Manz Sokai Kam Shalman Loe Shalman

<sup>1</sup>Politico Administrative System of Tribal Areas, A case study of Kurram & Khyber by Mumtaz Ali Bangash, Area Study Center, University of Peshawar, 1993.

This description of various tribes and sub-tribes in terms of their characteristics is mostly of a historical nature. The current situation may vary due to a higher degree of education, awareness and economic prosperity among tribes.

### 1. Afridis

The most powerful and dominant tribe of the Agency is the Afridis who live entirely within Pakistani territory. However, one major clan, Adam khel is located in the Kohat Frontier Region. The central fact of the Afridis' history is their guardianship and control of the Khyber Pass as far back as historical records exist. They lay claim to an inaccessible upland area of refuge, the Tirah, and its central place, Maidan and the Jamia Masjid (mosque) at Bagh. As a result, they have literally been able to force every passing conqueror to pay toll tax for use of the Khyber pass.

The Afridis are divided into eight large subtribes, clans or khels, which are duly considered in all political, religious and economic affairs of the Agency. The system of collective gains and losses are entirely based on this tribal 'wesh' (distribution) of clans. These clans are as follows:

- |                        |                    |
|------------------------|--------------------|
| I. Adam khel           | II. Aka khel       |
| III. Kamar (or Kamrai) | IV. Qamber khel    |
| V. Koki khel           | VI. Malik Din khel |
| VII. Sipah             | VIII. Zakha khel.  |

With the exception of the Adam khel and Aka khel, the remaining six sections are commonly spoken of as the Khyber Afridis, because, to them pertains the right of safe guarding the Khyber Pass, in which some of them hold land.

Discussion on each Afridi clan is as follows:

#### a) Adam khel

The Adam khel clan is distinct from the rest of the Afridi sections, because they are located in a small strip of valley, to the east of the Khyber Pass lying between Peshawar and Kohat known as Darra Adam khel. Though they are of the same Afridi origin, administratively they are attached with the Deputy Commissioner, Kohat. Therefore, their interests and dealings with the government are quite different from those of the Afridis of the Khyber Agency. Only two small sub-sections of Kala khel and Jawakai are politically and administratively associated with the Khyber Agency. A section of Adam khel also live in Tirah, the common home of Afridis.

**b) Aka khel**

The Aka khel clan lives in the south-eastern part of the Bara river, attached with Bara sub-division. This section has very limited concern with the politics of Khyber. As result, this clan was not included in the 1881 agreement between the British Raj and Afridis to pay money (Mawajib) and therefore did not own any Mawajib from the British Government. However, in 1903, with great insistence of other Afridi sections, a separate agreement was signed with the British India and Mawajib was allocated to this section.

**c) Kamar khel or Kamrai**

Of all the Afridi tribes, the Kamarais are the smallest in number. According to the 1972 Census, the population of this clan was 15,062. Though they are permanently settled in the west of the Bara valley during, unwinter some of them migrate to Khajuri plain, where Malik Din khel tribe lives to the north and south of them. On the Khyber road, their responsibility extends from Shagi to Kotagai.

Their sole importance lies in their being the owner of the Tsaok Pass, which leads from Bara valley into the Maidan of Tirah. As it is easily accessible, the road is largely used by most sections of the Afridi tribe.

**d) Qambar khel**

Numerically Qambar khel is the most powerful Afridi clan. According to 1972 Census, the population of this section was 96,000 and divided into many smaller sections. Qamber khel residing in 'Shalobar' area are known as Shalober Qambar khels and those in 'Kao area' as the Kao Qambar khel. Qambar khel and Malik Din khel sections are the descendants of, Mir Ahmad. Their collective strength, should they both unite would form a powerful combination. But, this allianse would be difficult, if not impossible as their historical divide and intertribal rivalries are too strong to overcome.

The Qambar khel clan has permanent settlements in the Maidan area of Tirah, as well as in the Bara valley. They have small settlements in the Chena area in the lower portion of the Bazar valley in Tirah and also occupy some areas amongst the Masuzai and Ali Sherzai Orakzais in the Kharmana valley.

In the Khyber Agency, Qambar khel's share of the Khyber Pass road extends from Sultan Tara to the Shahgai Fort.

**e) Kuki khel**

Kuki khel is politically one of the most powerful clans of Afridi tribe. Their cultures enables them to live in villages with big enclosures and traditional towers. Generally, the Koki khel have seized the chance to migrate to Tirah from Khyber. Their area begins at Ali Masjid, and touches the Malik Din khel settlement of choora on the south, and down to Fort Jamrud. From there, it takes a turn to the north, by embracing 'Gudar' and the 'lashora valley' meets the Mullagore area. Their important villages are Lala Chena, Jabbagai, Tauda Ucha Gagri, Bibri, Kadam, Sarkai, Jam, Gudar and several others in Lashora valley. This tribe plays a prominent and dominant role in the political and administrative affairs of the Khyber Agency.

The powerful Kuki khel clan has produced prominent Maliks, politicians and soldiers. The Tirah section of Kuki khel lives in villages at the western end of the Bara, Rajgal and part of Bazar valley. They come down to the plains in winter and return to their hills in spring.

Kuki khel and Zakha khel, are the dominant tribes and main guardians of the Khyber Pass from Jamrud to Landikotal; however, other clans like Kamrai, Qambar khel and Sipah also control some portion of the main road.

**f) Malik Din khel**

According to the 1972 Census, this clan had a population of 62,258. Previously the Malik Din khel section was considered to be "the Khan khel", meaning the premier or head tribe of the Afridis. They are also closely connected with Qambar khel. Their leadership, comprising of Maliks and Spingeris (elders) safeguarded the interests of their people Viz-a-Viz their own selfish gains. This rightly distinguished them amongst the rest of the clans, and it was believed, that whichever party the Malik Din khel joined, the rest of the Afridis were almost certain to follow.

The Malik Din khels live in the Maidan of Tirah, Choorā, at the eastern entrance of the Bazar valley, and Khajuri plain. Their share of the main Khyber Pass encompasses the mosque below Ali Masjid to the ravine just east of Gurgurra and the Katta-Kushta area as well.

**g) Sipah**

Their main settlement is in the upper portion of the Bara valley in Tirah while in winter their tertiary dwellings are located in the Khajuri valley. The population of Sipah according to the 1972 Census, was 20,083. They hold a length of about five miles from Ucha Gagrai to the Bara river, and to Sandana, which lies at the Bara end of the Jarobi Pass. Within two miles of Bara Fort lies

the Sipah village of Alamgudar, situated on the left bank of Bara river, extending westward for two to three miles. Alamgudar, which is noted for the manufacturing of rifles and daggers, is now a center for loom production.

Sipah section owns productive land in the Bara valley. In the Khyber Pass road their charge extends from Shadi Bagyar to Shahgai Fort.

#### **h) Zakha khel**

This is one of the largest most powerful and most troublesome clan in the Khyber Agency. According to the 1972 Census, they numbered 45,335. They own the strip in the Khyber Pass road between Katta Kashtia and Loargai.

The Zakha khel clan owns the part of the Khyber Pass road which begins at the ravine west of the Gurgurra post and terminates at the Kandara ravine near Garhi Lala Baig. From here onward, the Shinwaris are in control. The area, which is occupied by the strong Zakha khel tribesmen, is known as Khyber. Apart from this, the whole of the Bazar valley, along with one third of the Maidan area of Tirah is occupied by the Zakha khel tribe. A portion of land between Aka khel and Sipah in the Bara valley also belongs to this tribe. Thus, they live diagonally across the Afridi territory. Their geo-strategic location not only places them in control of the Khyber Pass, but also allows them to travel in the Khyber Agency from one quarter to another, without being compelled to press a foot on the land of any other Afridi clan. This privilege alone gives them an additional advantage over all the Afridi tribes of the Khyber Agency. Therefore, all other Afridi tribes want to be on good terms with the Zakha khels.

#### **Other Tribes of the Khyber Agency:**

Along with the Afridis, there are three other main tribal groups living in Khyber Agency. They are the Shinwaris, the Shalmanis, and the Mullagoris.

#### **2. Shinwaris**

In the late 15th century, the Yousafzai and Mohmand tribes occupied Peshawar and Swat valleys, accompanied by a famous tribe of Shinwaris. This tribe, however, settled in Ningrahar province of Afghanistan where the major portion of the Shinwari tribe lives and only one clan, the Ali Sher khel, lives around Landi Khana across the Pak-Afghan border near Landikotal on the eastern side of the Pak-Afghan border and did not move further into the Peshawar valley.

This tribe is divided into three sections, Mandehzai, Sangu khel, and Ali Sher khel. Of these tribes the last, the Ali Sher khel, is the only one which comes under the Pakistani sphere of influence, and owns the Landikotal and the hills to the south of Khyber route between the Kanda ravine and Torkham.

As Shinwaris live on both sides of the Pak-Afghan border, they enjoy a very important position in the Khyber Agency alongwith the Afridis, with whom they have lived in harmony for centuries. The Shinwaris, as a whole are a fine race of people. They are tall with strong bodies and handsome features. Historically they have defended the Khyber Pass from invaders and their bravery and courage is well established. For example, Nadir Shah, a King of Iran paid Rs. 1.3 million to the Shinwaris and Afridis for a safe passage through Khyber Pass.

The Ali Sher khel or the Khyber Shinwaris are generally well off. They own, substantial, fortified homesteads and most of them are involved in business and commercial activities alongwith a share of the transport business. They are relatively clean and tidy and are highly travelled people. The celebrated Khyber Pass, as a trade route has equally culminated the gems of trade politics as the Shinwaris are considered the experts to harvest the fruits of both countries of Pakistan and Afghanistan.

The Khyber Shinwari's numbered 17,930 according to 1972 census. The valley occupied by the Shinwaris is roughly 7 miles long and 4 miles wide. The lowest part of the plateau stands 3500 feet above sea level which rises up gradually to over 5,000 feet.

### 3. Mullagoris

Mullagoris are Sarbani Pukhtoos of the Ghoria khel branch. They are divided into two major clans of Ahmad khel and Ismail khel. The Ahmed khel is further subdivided into, sub-branches of Shah Khan khel and Bekhan khel. The Ismail khel are divided into three sub-divisions of Tar khel, Pahar khel and Daulat khel. This tribe is situated to the north of the Khyber pass in the Tartara range. Their area extends from a little west of Chauki Sparsang to the crest of the Dabrai hill and from the Kabul River on the north to Lakka Sar on the south touching the land of the Kuki khel and Zakha khel Afridis, and a clan of the Shinwaris. Their neighbors on the west are the Shalmanis and on the north, the Tarakzai Mohmands.

As compared to Shinwaris, Kuki khel and Zakha khels, the Mullagories are relatively uneducated and, poor. However, they are well know for their unity and good spirit. They are also expert mountaineers and reign over every tribe of the Khyber range. Time after time, they have been victorious over both the Kuki khel and Zakh khel Afridis. As a result, none of the Afridis care to be on bad terms with this small clan whose population according to the 1972 Census was only 7,215.

The famous Warsak Dam is located in the Mullagori area. The white Mullagori marble is known for its quality throughout the world.

#### 4. Shalmanis

Officially, the Shalmains were treated as a separate tribe since the Khyber agreement of 1881 between the British Government of India and tribes of the Khyber Agency. The Shalmanis are divided as Loe Shalman and Kam Shalmanis and are a part of the Mohmands who reside to the north of the Kabul River. As the Shalmanis are closer to Mohmand in their characteristics, it is believed that they might be close kinsmen of the Mohmands.

Their area extends from the Dabrai Kotal on the east to the Shalman Ghakha on the west. On the north is the Kabul River, and on the south lies the Landikotal Plateau. Before the Khyber Pass was permanently opened in 1878 the main trade routes between Kabul and Peshawar were carried through the areas of the Shalmanis and Mullagoris.



## V. LAND USE

This section is devoted to an analysis of the land use pattern in Khyber Agency. The analysis is based on the Agricultural Statistics of NWFP.

### A. Total Reported Area and Its Utilization

In 1990-91 out of the Agency's total land area of 257,654 hectares only 5 percent was cultivated. The culturable waste land constituted 23 percent of the Agency's total land.

Table V.1

LAND USE IN KHYBER AGENCY IN 1990-91

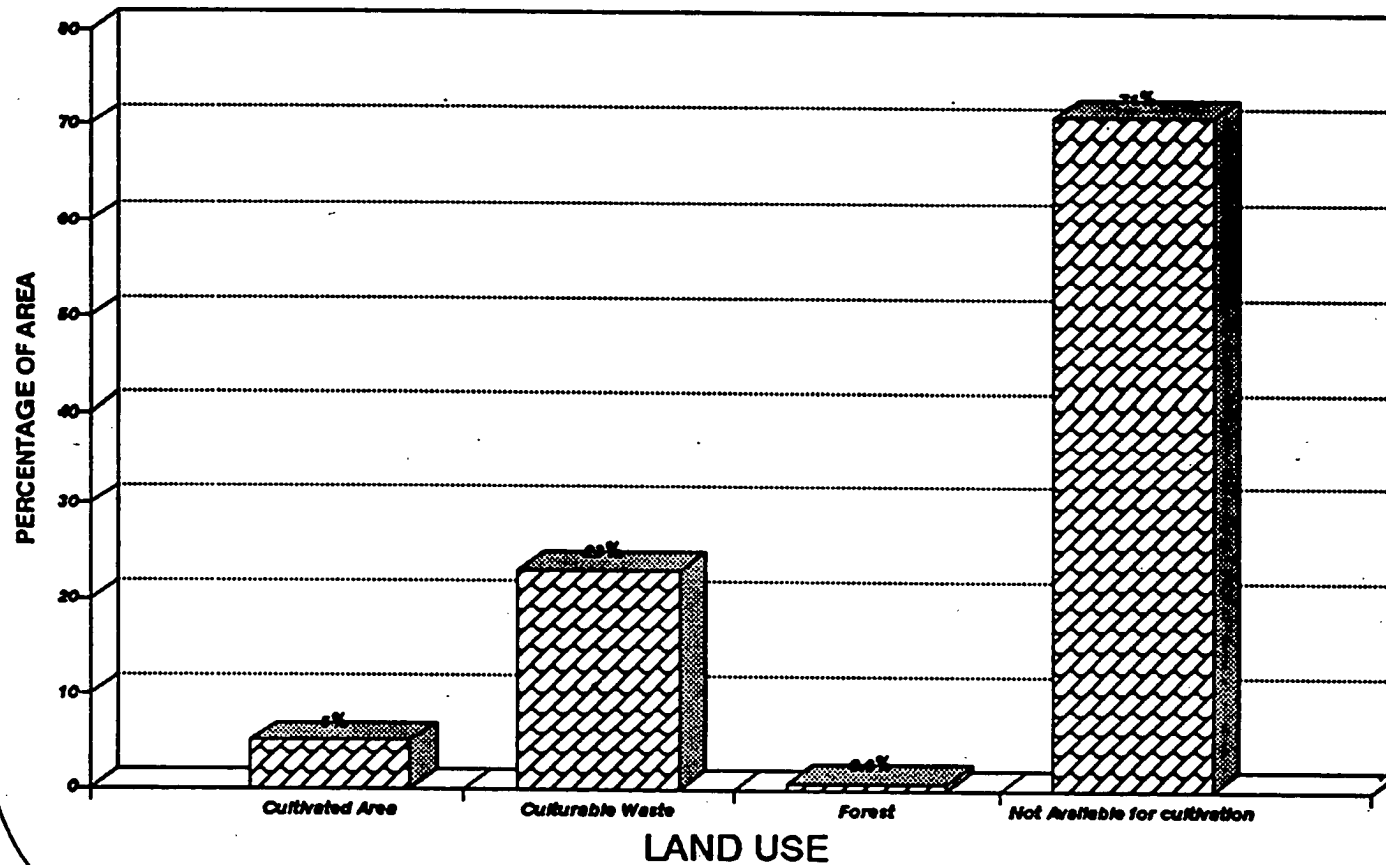
Land Use Classification	Area	
	Hectares	% of total
1. Cultivated area	13,600	5.3
2. Culturable waste	59,732	23.2
3. Forest	1,640	0.6
4. Not available for cultivation	182,682	70.9
5. Total reported area	257,654	100.00

Source: Agricultural Statistics of NWFP, 1991-92, Agriculture Department, NWFP, Peshawar.

Khyber Agency is largely a mountainous region interspersed with small tracts of cultivated land. The culturable waste land figure of about 60,000 hectares suggests that the Agency has vast resources of land that can be brought under the plough. However, as land development costs are high, little progress has been made during the last decade in increasing the arable land size.

Accuracy of land statistics within the tribal agencies is rather dubious. It is generally thought that arable land is under reported. However, even on the assumption that the reported arable land resources of the Agency is only half of what it actually is, its land resource and land use profiles do not present an encouraging picture. Arable land is under heavy population

## LAND USE IN KHYBER AGENCY 1990-91



Source: Based on Table V.1

Graph V.1

pressure which is growing rapidly over time. The Agency's population was estimated at 423,000. Assuming that the cultivated area remains unchanged at 13,600 hectares, the arable land-man ratio comes to 31 persons per hectare.

A big and ever present threat to the Agency's arable land resources is posed by hill torrents. In a number of places, especially in the Ghundi and Mandi Kas circles, farmers have mentioned hill torrents as their main problem. Torrents damage farm lands during the rainy season. The floods erode lands and spread sheets of stones over a large area. Thus, in many places farmers have spent a good deal of time, labour, and money protecting and reclaiming their flood affected lands.

#### **B. Land Use Pattern: 1980-81 through 1988-89\***

Cultivated area of the Agency increased by 2246 hectares during 1980-81 through 1989-90. In percentage terms the increase was of the order of 15.22%. This increase, however, was too small to make a significant difference in the land use profile of the Agency which is evident from the fact that the share of cultivated area increased from 14,754 hectares i.e., 4.49% of total area in 1980-81 to 17,000 hectares i.e; only 5.18% of the total area in 1988-89 (Table V.2). A change of this order would have hardly any impact on the area's agricultural economy.

Increase in the Agency's cultivated area occurred mainly during 1982-84 and 1988-89. As will be seen in Table V.2, the cultivated area in 1982-83 was 454 hectares more than the previous year, and in 1983-84 the area increased by 184 hectares. The largest increase (1400 hectares) in a single year took place in 1988-89 when the cultivated area was 17,000 hectares as compared with 15,600 in 1987-88. No explanation is given in the published agricultural statistics of NWFP as to the source of increase in cultivated area. Nor could that be ascertained from the officers of the Agriculture Department. Statistics on irrigated area in 1981-82 through 1990-91 indicate that the cultivated area's increase cannot be attributed to irrigation factor because the irrigated area actually declined during the last part of eighties. This implies that the additional cultivated area under reference must be entirely or largely un-irrigated. Farmers in different parts of the Agency are known to have developed culturable wasteland into cultivated land during the last decade or so. Availability of a large number of tractors has facilitated land development for farming.

\* Statistical inconsistencies persist from year to year. Therefore, the 1988-89 data shows 19,000 hectares of cultivated land but in 1990-91 only 13,600 hectares.

Table V.2

**LAND USE PATTERN IN KHYBER AGENCY  
1980-81 TO 1988-89**

(Hectares)

Year	Total reported area of Khyber Agency	Cultivated Area			Area sown more than once	Total cropped area (3+6)	Un-cultivated Area			
		Net sown	Current Fallow	Total (3+4)			Culturable Waste	Forest	Not available for cultivation	Total
1	2	3	4	5	6	7	8	9	10	11
1980-81	328354 (25,834)	13303	1451	14754						313600
1981-82	328354 (25,834)	13303	1451	14754						313600
1982-83	328354	13000	2200	15200	2300	15300	77200	384	235570	313154
1983-84	328354	13157	2227	15384	2708	15865	76773	627	235570	312970
1984-85	328354	13157	2227	15384	3156	16313	76670	730	235570	312970
1985-86	328354	13357	2227	15584	3483	16840	76289	911	235570	312770
1986-87	328354	13357	2218	15575	3499	16856	76289	920	235570	312779
1987-88	328354	13700	1900	15600	3510	17210	76250	1102	235402	312754
1988-89	328354	13700	3300	17000	3510	17210	74561	1223	235570	311354

Source: Agricultural Statistics of NWFP (1981-82 to 1989-90 reports), Agriculture Department, NWFP, Peshawar.

Note: 1. The Break-up of uncultivated area for the year 1980-81 and 1981-82 as given in the Agricultural Statistics of NWFP for these years is erroneous and is, therefore, not given in this table. Instead the aggregate edited figure of total uncultivated area is given.

2. The figure in parentheses under column 2 for 1980-81 and 1981-82 are taken from the Agricultural Statistics of NWFP. These are obviously incorrect, a case of error of computation/printing. The correct figure for the total reported area of the Agency is 328,354.

It is gratifying to note that the area under forests, though still small, has maintained an upward trend. Thus as compared with only 384 hectares in 1982-83 the area under forest was 1640 hectares in 1990-91.

**Concluding Note:**

The agricultural land resource base of the Khyber Agency is rather small. Even doubling of the existing cultivated area - a rather difficult task in the short run, would raise it to only 34,000 hectares which is not an impressive figure in an area with nearly half a million population. Crop yield potentials are, however, high. Scientific methods of farming, introduction of high value crops, adoption of appropriate mix of crop-livestock enterprises, and other farming systems improvement can greatly help improve the farming community's socio-economic condition, and greatly offset

## VI. AGRICULTURE

The agricultural sector of Khyber Agency is similar to that of its neighbour, Mohmand Agency, as they are both in a state of stagnation. The Agency's existing cultivated area is only 13,600 hectares. Cultivated land to man ratio is high at one hectare for every 31 persons while the arable land potential is extremely low in the short run. Diversification in cropping pattern has been taking place for the past few years. The land, however, is still heavily dominated by wheat and maize. Yields remain low but are slowly improving. Poppy is the most profitable crop and is still cultivated widely despite the ban. The percentage of farmers using improved inputs is higher than a decade ago, but the level of inputs used and methods of application are not as high as recommended.

Although the present level of development is far from satisfactory, the Agency has good potential, especially in the irrigated zones. Introduction of high yielding varieties, improved inputs and cultural practices, new and high value crops, credit, and extension services can rapidly improve the Agency's agricultural sector.

### A. Land Holdings

In this section five aspects of the land holdings are studied i) average farm size; ii) distribution of farms by size of farms; iii) tenure classification of farms; iv) tenancy system; and v) fragmentation of farm holdings. The main source of information is the Pakistan Census of Agriculture, 1980. The 1980 census data is not obsolete as the land holding pattern has not changed and the broad characteristics of the farm sector are nearly, if not exactly, what they were over ten years ago. Changes as observed and reported by other sources, are mentioned and described at appropriate places.

#### 1. Farm Size

The 1980 Census of Agriculture counted 10,730 farms in Khyber Agency. The average farm size was 1.26 hectares as against the corresponding figure of 2.16 hectare for FATA taken as a whole. In this respect the Khyber Agency stood close to Kurram and North Waziristan (Table VI.1).

Table VI.1

## AVERAGE FARM SIZE IN TRIBAL AGENCIES IN 1980

Agency	Farms (No.)	Total farm area (hectares)	Average farm size (hectares)
1. Khyber	10,730	13,478	1.26
2. Bajaur	25,039	88,676	2.54
3. Mohmand	8,505	21,700	2.55
4. Kurram	9,257	11,818	1.28
5. North Waziristan	17,040	21,056	1.24
6. South Waziristan	19,223	51,029	2.65
7. Orakzai	15,424	19,883	11.29
8. All Agencies	105,218	227,640	2.16

Source: Based on Pakistan Census of Agriculture, 1980, Volume III, Table 1.1 p.31-32.

A recent estimate of the average farm size in this Agency is not available. As gathered from interviews with groups of farmers in the Agency, the average farm size is slightly smaller than reported in the 1980 Census of Agriculture. Despite an increase in the number of owners to a given piece of land due to inheritances, the land is not necessarily, physically partitioned. A large number of the Agency's farmers have migrated to the settled areas and also work abroad. This factor has kept the partitioning of farms in check.

## 2. Distribution of Farms by Size

The farm area is characterized by a highly skewed distribution, which is a feature common to all the tribal agencies. The most recent statistical data dates back to the year 1980. According to the 1980 census of Agriculture, 79% of the total farms covered only 43% of the total farm area. On the other extreme, a handful of farms accounted for a disproportionately large part of total farm area, as shown below in Table VI.2.

Table VI.2

### DISTRIBUTION OF FARMS AND FARM AREA BY SIZE OF FARM IN KHYBER AGENCY IN 1980

Farm size (hectares)	Farms		Area	
	Number	%	Hectare	%
Under 1.0	6,308	58.78	2,803	20.80
1 - 2.0	2,225	20.74	3,032	22.50
2 - 3.0	1,236	11.52	2,837	21.05
3 - 5.0	678	6.32	2,498	18.53
5 - 10.0	219	2.04	1,439	10.67
10 - 20.0	57	0.53	726	5.39
20 and above	7	0.07	143	1.06
<b>All sizes</b>	<b>10,730</b>	<b>100.00</b>	<b>13,478</b>	<b>100.00</b>

Source: Based on Pakistan Census of Agriculture, 1980, Volume III, Table 1.1 p.31.



### 3. Tenure Classification of Farms

As reported by the 1980 Census of Agriculture and as ascertained from interviews with groups of farmers in different parts of the Agency, the farms are overwhelmingly owner operated. In 1980, the latter category accounted for 98% of the total farms. The present figure is presumed to be approximately the same. Tenure status of farms distributed by size of farms, as recorded in the 1980 Census of Agriculture, is shown in Table VI.3.

Table VI.3

#### TENURE CLASSIFICATION OF FARMS IN KHYBER AGENCY: 1980 (Percentages)

Farm size (hectare)	Owners	Owner cum tenant	Tenants
Under 1.0	100	-	-
1 < 2.0	98	1	*
2 < 3.0	96	3	1
3 < 5.0	93	6	1
5 < 10.0	87	13	-
10 < 20.0	100	-	-
20 and above	100	-	-
All sizes	98	1	*

\* Less than 0.5%

Source: Based on Pakistan Census of Agriculture, 1980, Volume III, Table 1.2 p.40.

### 4. Tenancy Systems

The tenancy systems in vogue in Khyber Agency are:

- i- Batai: Share cropping system
- ii- Cash rent/lease, system
- iii- Free lease not involving cash rent or sharecropping but requiring the lease holder to provide free services to the land lord

The terms and conditions of the three systems are identical to those in vogue in the neighbouring tribal agencies, Mohmand and Bajaur.

Under the Batai system, produce and costs are shared in pre-agreed proportions. The most common proportion is 50:50 produce sharing in which case the tenant provides all manual and animal power and shares equally with the owner the cost of purchased inputs. There is no written tenancy contract, but normally as long as the tenant pays his dues he can retain the land. Often the land is operated on this basis for generations.

Land on cash rent is given out for fixed terms, normally for one or two crop years. This rental system is limited to irrigated land, fit for raising cash crops like sugarcane. The lease has to be renewed after each stipulated period.

In 1980, as recorded by the Census of Agriculture, 73% of the tenanted area was held by tenants on a share cropping basis. The rest of the area (27%) was held on lease. Comparative corresponding data for the other tribal agencies are given below in Table VI.4.

Table VI.4

**TENANT OPERATED AREA CLASSIFIED BY FORM  
OF RENT IN TRIBAL AGENCIES IN 1980**

Sr. No.	Agency	Share cropped	Leased	Other
1.	Khyber	72.8	27.2	-
2.	Mohmand	46.0	40.0	14.0
3.	Bajaur	75.1	22.0	2.9
4.	Kurram	82.9	16.8	0.3
5.	North Waziristan	43.1	26.5	0.4
6.	South Waziristan	47.0	40.0	13.0
7.	Orakzai	70.6	11.7	12.7

Source: Based on Pakistan Census of Agriculture, 1980, Volume III, Table 1.6, p.57-58.

### 5. Fragmentation

The problem concerning fragmentation of farms is widespread in this Agency. However, it is relatively less severe than most other tribal agencies. The 1980 Census of Agriculture recorded 63% of the Agency's farms fragmented averaging 3 fragments per farm. (See Table VI.5)

Table VI.5

#### FARMS CLASSIFIED BY NUMBER OF FRAGMENTS AND BY SIZE OF FARM IN KHYBER AGENCY

Farm size (hectare)	Total farms No (=100)	Farms not fragmented		Number of fragments per farm
		No.	% of Col.2	
1	2	3	4	5
Under 1.0	6,308	3,518	55.8	2.2
1 < 2.0	2,225	360	16.2	2.7
2 < 3.0	1,236	92	7.4	3.3
3 < 5.0	678	21	3.1	4.1
5 < 10.0	219	14	6.4	6.5
10 < 20.0	57	7	12.3	3.5
20 and above	7	Nil	Nil	4.0
<b>All sizes</b>	<b>10,730</b>	<b>4,012</b>	<b>37.4</b>	<b>2.9</b>

Source: Based on Pakistan Census of Agriculture, 1980, Volume III, Table 2.1 p.61.

The frequency of fragmentation, varies with farm size. Overall, the rate of fragmentation has declined since 1980. Comparative statistics on fragmentation in Khyber and other tribal agencies are given in Table VI.6.

Table VI.6

**LAND FRAGMENTATION IN KHYBER AND OTHER TRIBAL AGENCIES  
AS RECORDED IN THE 1980 CENSUS OF AGRICULTURE**

Sr. No.	Agency	Farms reported fragmented (%)	Number of fragments per farm
1.	Khyber	62.61	2.9
2.	Mohmand	75.54	3.1
3.	Bajaur	86.86	4.8
4.	Kurram	84.80	5.0
5.	North Waziristan	33.75	3.6
6.	South Waziristan	90.19	4.4
7.	Orakzai	85.10	4.7

Source: Based on Pakistan Census of Agriculture, 1980, Volume III, Table 2.1, p.61-62.

### B. Crops

Wheat and maize are the major crops. Sugarcane, barley and vegetables are emerging as important crops. Orchards crops are also becoming more popular even though they are grown on a smaller scale. The variety of crops grown in Khyber is larger than before. More vegetables and fruit are grown now than a decade ago. However, the cropping pattern is still dominated by cereal crops. As seen in Table VI.7, wheat and maize accounted for 98% of the area under all major crops during 1975-80 and 90% during 1985-90.

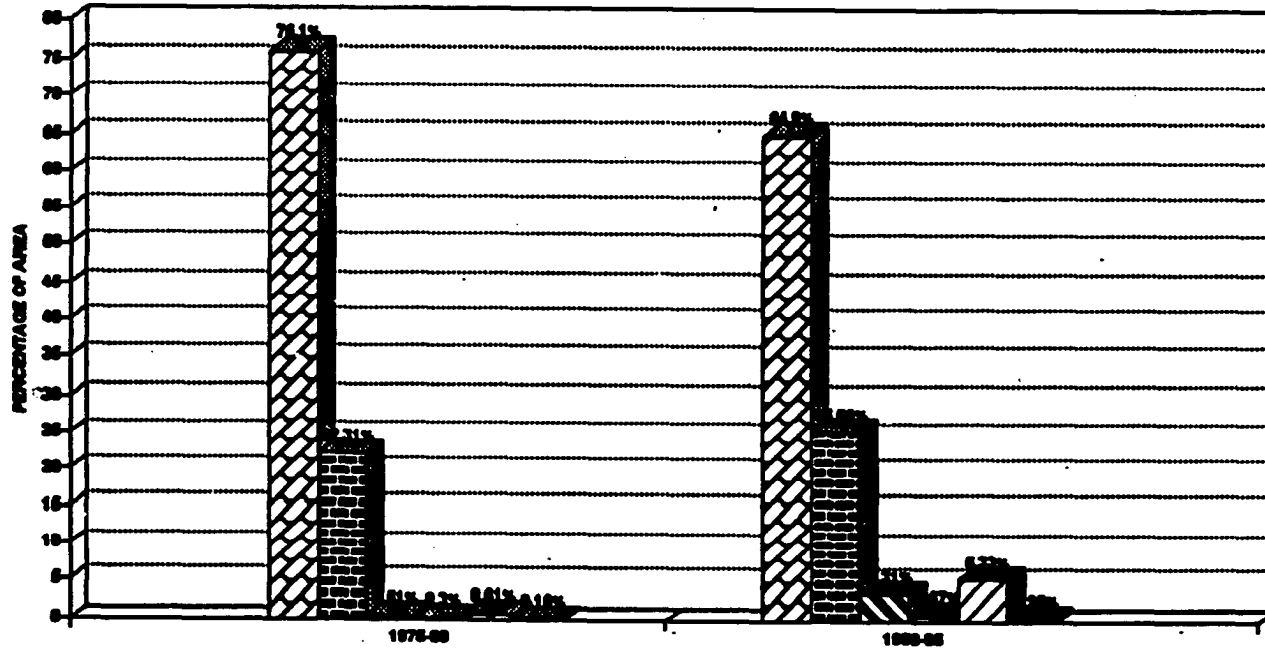
Table VI.7

**AREA UNDER MAJOR CROPS IN KHYBER AGENCY  
1975-80 AND 1985-89**

S.No	Crops	1975-80		1985-91	
		Hectare	% age	Hectare	% age
1.	Wheat	10,156	76.10	10,317	64.90
2.	Barley	40	0.30	106	0.66
3.	Maize	2,978	22.31	4,063	25.56
4.	Sugarcane	68	0.51	526	3.31
5.	Vegetables	82	0.61	847	5.33
6.	Orchard crops	22	0.17	39	0.24
		13,346	100.00	15,898	100.00

Source: Compiled from Agricultural Statistics of NWFP 1975-76 to 1990-91 reports, Agricultural Department, NWFP.

## AREA UNDER MAJOR CROPS IN KHYBER AGENCY



PERIOD

Graph VL.1

Source: Based on Table VL.7

- |           |        |               |
|-----------|--------|---------------|
| Wheat     | Barley | Maize         |
| Sugarcane | Onion  | Orchard Crops |

The Agriculture Department does not publish or provide, tehsil/agricultural circle level data. In order to discover what changes in area under crops have taken place in different parts of the Agency, groups of farmers were interviewed through a specially designed schedule. Some of the questions were: what crops were grown ten years ago? what crops are grown now? and what change has taken place in the area under the crops concerned? Findings to these questions, are presented in Table VI.8. Important changes in cropping patterns are taking place in some circles of the Agency. These changes are not large enough to significantly alter the Agency's aggregate character but are noteworthy as they indicate the likely trend in future cropping patterns. A circle by circle account of the cropping pattern changes is given in Table VI.8.

Barley is experiencing the fastest decline in the area. This crop experienced a decline in four out of ten agricultural circles in Khyber. The column on 'new crops' introduced during the past 10 years presents an interesting picture. All but one of the new crops belong to the vegetable group. Sugarcane is the other solitary crop. All the crops under reference are high value crops. Though grown on a small area, this trend is an important one.

Table VI. 8

**CROPPING PATTERN TREND DURING 1983-93 IN  
DIFFERENT AGRICULTURAL CIRCLES OF KHYBER AGENCY**

Sr. No.	Tehsil/Circle	Trend in area of the crops grown now and also ten years ago		New crops introduced during past 10 years	Who helped the change?
		Up	Down		
I.	<u>Jamrud Tehsil</u>				
	1. Jamrud Circle	• Wheat	• Barley • Maize	• L.finger • Potato • Tomato	Ag. extension department
	2. Ghundi Circle	• Barley • Sugarcane • Onion • Soybean • Sunflower	• Wheat • Maize • Rape & Mustard	• L.finger • Potato • Tomato • Pumpkin • Cauliflowers	"
	3. Gandau Circle				
II.	<u>Landi Kotal Tehsil</u>				
	1. L.Kotal Circle	• Wheat • Barley	• Rape & Mustard	None	None
	2. Khyber Circle	• Wheat • Barley • Rape & Mustard • Sunflower		• Onion • L.finger • Potato • Tomato	None
	3. Shalman Circle	• Wheat • Barley • Maize • Onion • Lady Finger • Potato • Tomato	• Maize	None	None
III.	<u>Bara Tehsil</u>				
	1. Bara Circle	• Wheat • Maize • Onion • Potato • Tomato			Ag. extension department
	2. John Khans Killi Circle	• Wheat • Maize • Onion • Rape & Mustard • Garlic	• Barley	None	None
	3. Mandi Kas Circle	• Wheat • Maize • R & Mustard • Soybean • Sunflower	• Barley	• Onion • L.finger • Potato • Tomato	None
	4. Akakhail Circle	• Wheat • Maize • Barley • Onion • R & Mustard • Soybean		• Sugarcane • Garlic • L.finger • Tomato • Pumpkin	None

### Crop Rotations

The most widely practiced crop rotations are:

Wheat - Maize - Wheat  
Wheat - Fallow - Wheat

In poppy concentrated areas poppy substitutes for wheat. Poppy is grown mainly on unirrigated land and the normal rotation is poppy - fallow - poppy.

In the sugarcane growing zones, inter-cropping of wheat with sugarcane is a common practice.

### Crop Seasons

The Agency has two crop seasons identical to those of neighbouring Mohmand Agency.

Rabi: October/November until April/May  
Kharif: May/June until November

The growing periods of different crops are almost identical to those of neighbouring Mohmand Agency and the Peshawar district. Relevant information about selected crops of this Agency is as follows:

Operation	Wheat	Period when performed		Sugarcane	Poppy
		Barley	Maize		
Land Preparation					
January		Oct/Nov.	September	June	Nov./March
Farm Yard Manure application	November	October	June	May/June	Jan. to February
Fertilizer application	November	October	June	July	Jan. to February
Sowing	November	October	June	Nov. to March	February
Hoing/Weeding	Jan - Feb.	Jan - Feb.	July	July	March/May
Pesticide application	Jan - Feb.	Jan - Feb.	July-Aug.	Aug. to October	March/May
Herbicide application	January	January	-	-	March/May
Irrigation	Dec. to March	Nov./Feb.	July	June/July	
Harvesting	May/June	March	July/Oct.	November	April/May

**BEST AVAILABLE DOCUMENT**



## B. Crop Area and Production Analysis

In this section, the trend of different crops is analyzed. The analysis is based on statistics compiled and published by the Agriculture Department, NWFP.

### 1. Wheat

Wheat is the most widely grown crop in the Agency. It is a Rabi crop sown during October and November and harvested during May and June. It is grown in all agricultural zones of the Agency.

#### a) Area

The area under wheat has not changed much during the last decade and a half. It has ranged from 11,000 to 8,500 hectares but has averaged around 10,000 hectares. As shown in Table VI.9, during 1975-80 wheat was grown in an area of 10,600 hectares annually. This rose to 11,150 during 1980-85 period but then declined to 10,317 during 1985-91. The highest point was reached in 1987-88 when the area was 11,500 hectares, and the lowest figure of 8,500 hectares was recorded the very next year (1988-89). No explanation is available for this decline of 3,000 hectares in a single year. The area statistics of the wheat crop, like those of almost all others, doesn't appear to be based on scientific methods. This doubt arises from the stagnation or near stagnation of the wheat growing area for several years in a row. For instance, during 1975-80 the area was reported to be identical or nearly so for three years in a row. In the next quinquennium this was the case for a full five years. During 1985-91, for three years continuously, the area stayed unchanged at 11,500 hectares. In real life, the area trends can hardly be like that. Some rough guess work is suspected in the statistics.

#### b) Production

The total wheat output in the Agency in the closing year of the eighties was only a little higher (3%) as compared with that recorded in 1979-80. A comparison of the averages of more recent periods, however, reveals that there has been a decline in output. As will be seen in Table VI.9, average annual total production during 1981-85 was 14679 MT while the corresponding figure for 1985-91 is 14492 MT. Thus, on the whole the total and per hectare output of wheat in the Agency was characterized by long periods of stagnation and, at times, decline. This is true of the wheat farming in general and also if irrigated and the un-irrigated wheat agriculture is considered separately. Some relevant information in that regard is presented as follows.

Wheat yield on irrigated lands rose sharply (27%) in 1977-78 over the previous year, and further improved by a good 14 percent in

1978-79

1983-84 after a five-year long period of stagnation at 1.4 MT/Hectare. In the post 1983-84, the yield oscillated up and down. The second half of the eighties was just a fraction better than the first half in respect of yield, but due to a decline in irrigated area under the crop, the average annual production of wheat during 1985-91 was 8% less than that recorded during 1981-85 (Table VI.9)

The crop's yield trend on un-irrigated lands was no better. After rising to the figure of 0.8 MT/hectare in 1978-79, the yield on un-irrigated lands varied between 0.7 - 0.9 MT/hectare staying mostly at the figure of 0.7 MT/hectare (Table VI.9).

Thus, as a whole, the wheat crop has been characterized by stagnation for the greater part of the post 1975-76 period. The farmers have obviously not been using appropriate agricultural practices and improved inputs, nor do they seem to have been making the best use of yield maximization opportunities afforded by investment in the irrigation and agricultural extension systems.

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Table VI.9

**AREA, TOTAL PRODUCTION AND YIELD OF WHEAT  
IN KHYBER AGENCY**

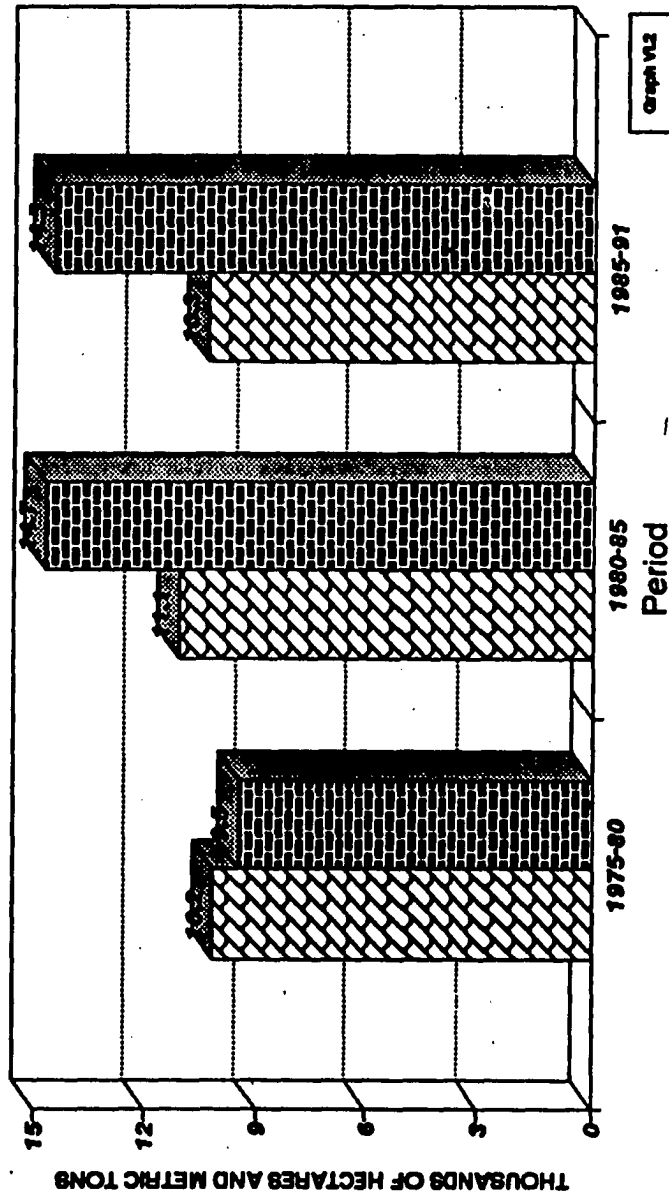
Year	Area (hectare)		Production (Metric Tons)		Yield/Hectare (Metric Ton)				
	Irr.	Un-irri.	Total	Irr.	Un-irri.	Total			
1	2	3	4	5	6	7	8	9	10
1975-76	2347	7602	9949	2642	3607	6249	1.1	0.5	0.6
1976-77	2347	7608	9955	2642	3616	6252	1.1	0.5	0.6
1977-78	2347	7608	9955	3236	5473	8709	1.4	0.7	0.9
1978-79	7447	2873	10319	10574	2250	12824	1.4	0.8	1.2
1979-80	7700	2900	10600	10950	2400	13350	1.4	0.8	1.3
<b>Avg. 1975-80</b>	<b>4437.4</b>	<b>5718.2</b>	<b>10155.6</b>	<b>6008.8</b>	<b>3469.2</b>	<b>9476.8</b>	<b>1.4</b>	<b>0.6</b>	<b>0.9</b>
1980-81	8000	2900	10900	11376	2400	13776	1.4	0.8	1.3
1981-82	8100	3000	11100	11518	2482	14000	1.4	0.8	1.3
1982-83	8100	3100	11200	11520	2565	14085	1.4	0.8	1.3
1983-84	8200	2900	11100	13500	2235	15735	1.6	0.8	1.4
1984-85	8200	2950	11150	13500	2300	15800	1.6	0.8	1.4
<b>Avg. 1981-85</b>	<b>8120</b>	<b>2970</b>	<b>11090</b>	<b>12282.8</b>	<b>2396.4</b>	<b>14679.2</b>	<b>1.5</b>	<b>0.8</b>	<b>1.3</b>
1985-86	8200	3300	11500	13500	2837	16337	1.6	0.9	1.4
1986-87	8000	3500	11500	13500	2800	16300	1.7	0.8	1.4
1987-88	9000	2500	11500	13900	2000	15900	1.8	0.8	1.4
1988-89	7000	1500	8500	10611	1072	11683	1.5	0.7	1.4
1989-90	6200	3200	9400	10602	2368	12970	1.7	0.7	1.4
1990-91	6300	3200	9500	11104	2656	13760	1.8	0.8	1.4
<b>Avg. 1985-91</b>	<b>7450</b>	<b>2866.7</b>	<b>10316.7</b>	<b>12202.8</b>	<b>2288.8</b>	<b>14491.7</b>	<b>1.6</b>	<b>0.8</b>	<b>1.4</b>
1991-92	7330	2170	9500	12,250	1500	13,750	1.7	0.7	1.4

Source: Various volumes of Agricultural Statistics of N.W.F.P.; issued by the Agriculture Department, N.W.F.P.

Like the area statistics, there are serious doubts about the reliability of the yield statistics. Identical figures are reported for several years in a row. It appears that instead of undertaking actual surveys for yield estimations each year, the previous year's data is repeated or modified arbitrarily. It would be a worthwhile exercise to undertake a detailed wheat yield survey every three years.

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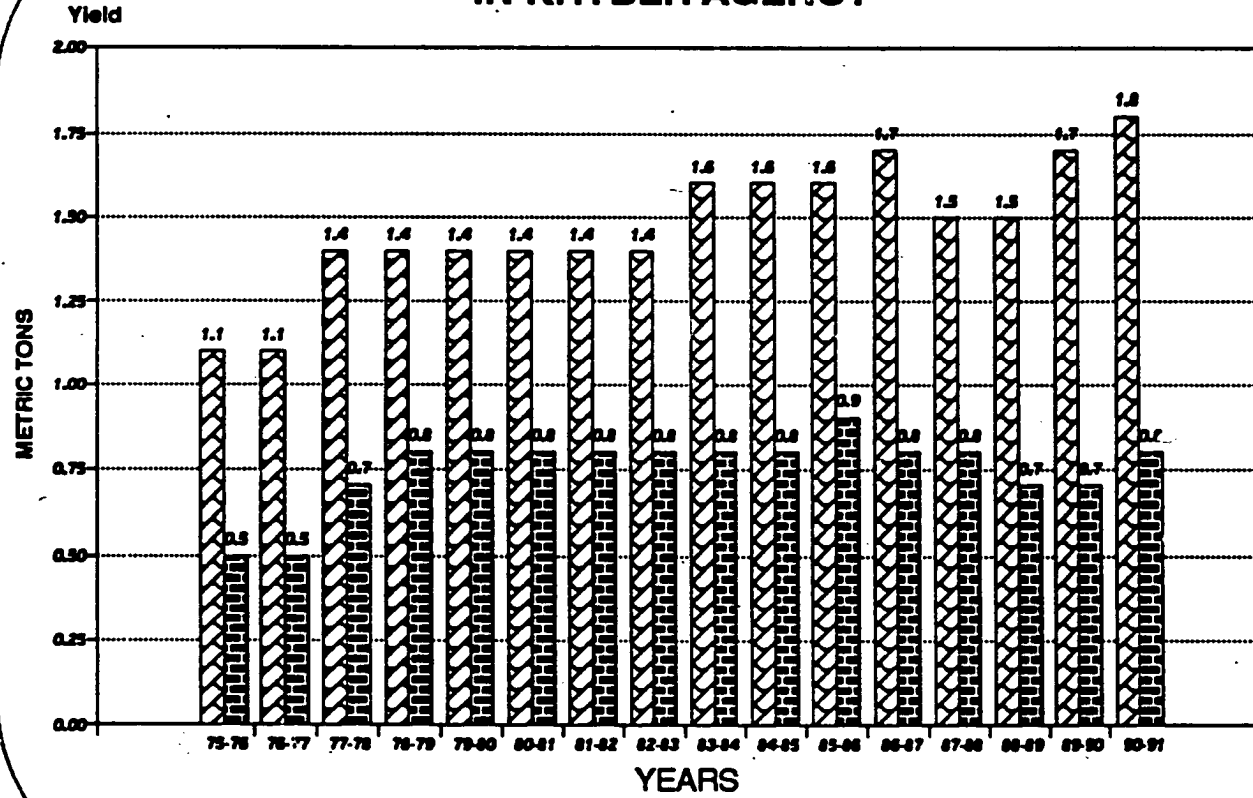
# WHEAT AREA AND PRODUCTION IN KHYBER AGENCY



Source: Based on Table VI.9

Area (Hectares) Production (M.T)

### YIELD/HECTARE OF WHEAT IN KHYBER AGENCY



Source: Based on Table VI.9 Col. 8 and 9

Irrigated
  Un-Irrigated

Graph VI.3

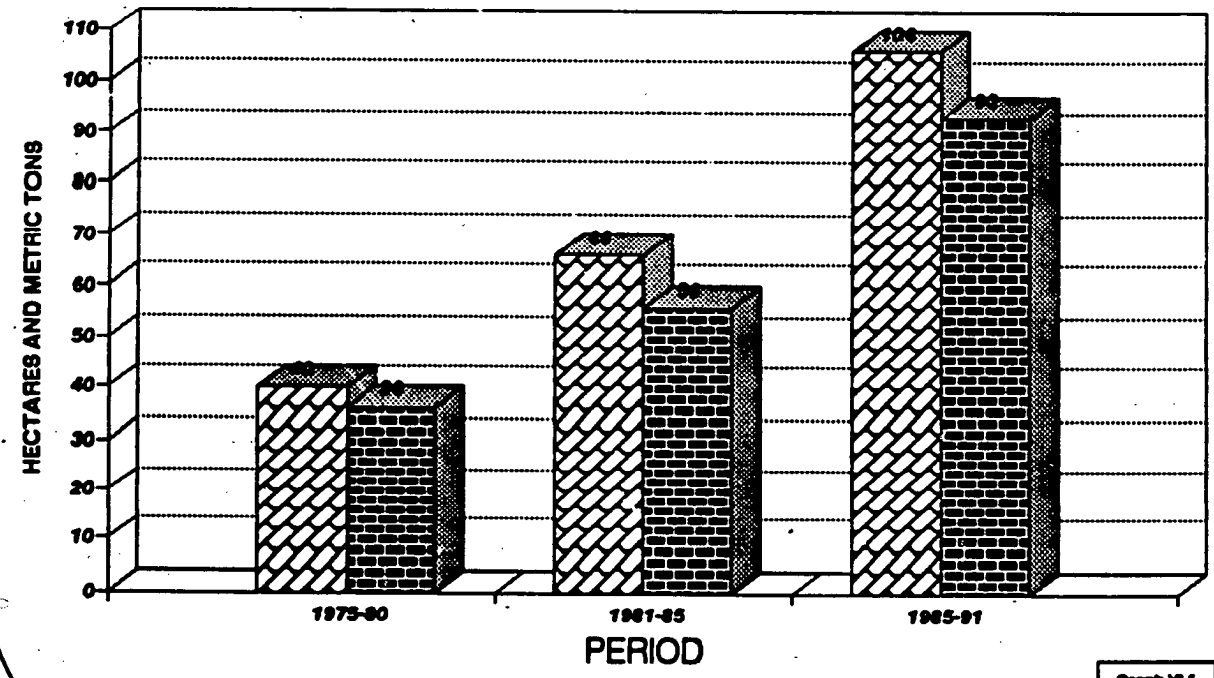
## 2. Barley

Barley is grown in Khyber, but it is not an important crop as indicated by the area statistics published by the Agriculture Department. During 1975-83, its area stayed stationary at 40 hectares. It jumped to 250 hectares in 1983-84 and from 1984-85 till 1986-87 no area was reported to be under this crop. The area statistics re-appeared in Agriculture Department's reports in 1987-88 when the barley area was shown as 220 hectares. It rose to 230 hectares in 1988-89, fell to 60 hectares in 1988-89 and to 55 hectares in 1990-91. The entire data in Table VI.10 appear to be unreliable. No analysis is possible on the basis of the statistics given in this table.

In all probability, as indicated by interviews with farmers groups, barley is grown on a much larger area than reported by the Agriculture Department. As will be seen in Table VI.8, this crop is grown in all but one agricultural circles (the Bara circle, of the Agency). In Ghundi circle, Landi Kotal circle, Khyber Circle, Shalman circle, and Akakail circle it is grown over a larger area than ten years ago. In Jamrud circle, John Khan Kili circle, and Mandi Kas circle, its area has declined over the same period. The farmers however spoke of barley as one of the important crops and in a manner that suggests that it must be occupying an area of hundreds of hectares rather than in two digits as reported by the Agriculture Department.

Barley is grown both for grain and fodder. Fodder is its primary use. Since the influx of refugees from Afghanistan, livestock population in this Agency has increased considerably. This must have had a demand for barley in the area. A detailed survey of the Agency needs to be undertaken to update and correct the production area and production statistics.

### BARLEY AREA AND PRODUCTION IN KHYBER AGENCY



Source: Based on Table VI.10

▨ Area (Hectares)    ▤ Production (M.T)

Graph VI.4

Table VI.10

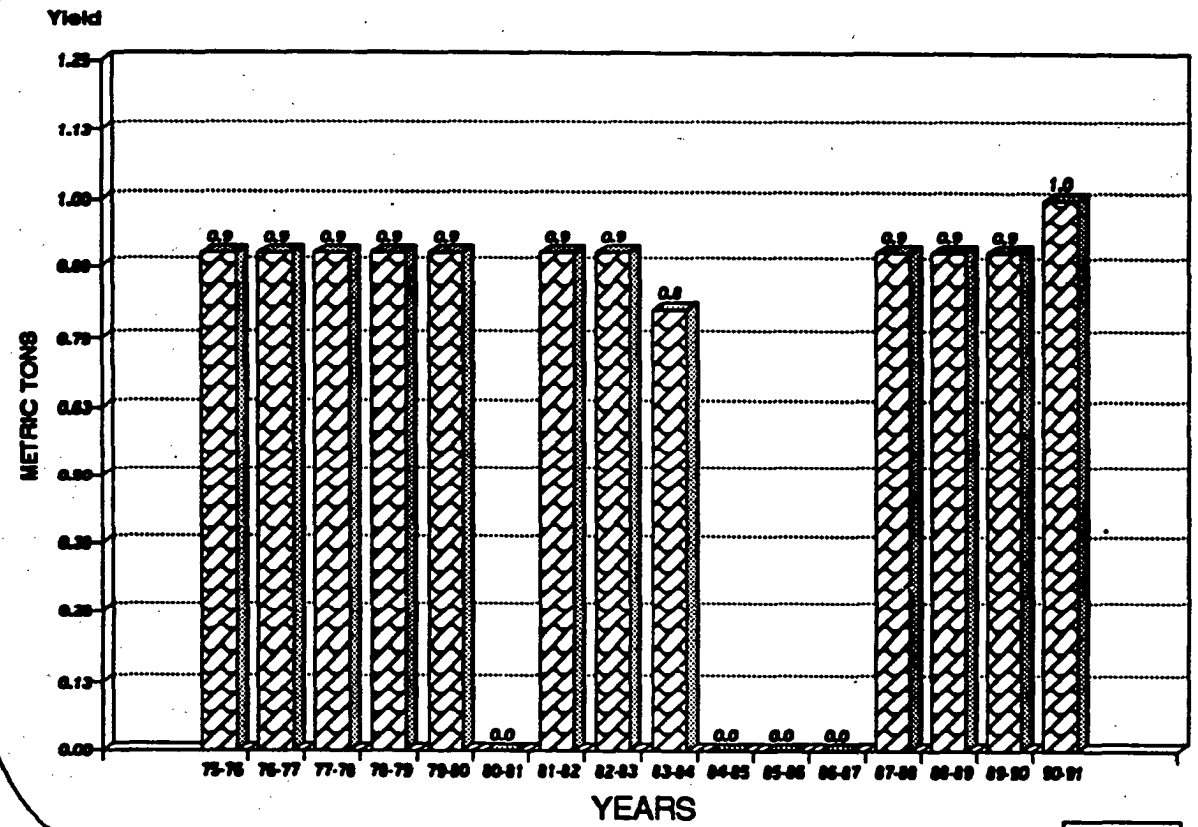
**AREA, TOTAL PRODUCTION AND YIELD OF BARLEY  
IN KHYBER AGENCY**

Year	Area (hectares)			Production (Metric Tons)			Yield/Hectares (Metric Tons)		
	Irri.	Unirri.	Total	Irri.	Unirri.	Total	Irri.	Unirri.	Total
1	2	3	4	5	6	7	8	9	10
1975-76	40		40	36		36	0.9		0.9
1976-77	40		40	36		36	0.9		0.9
1977-78	40		40	36		36	0.9		0.9
1978-79	40		40	36		36	0.9		0.9
1979-80	40		40	36		36	0.9		0.9
Avg. 1975-80	40		40	36		36	0.9		0.9
1980-81									
1981-82	40		40	36		36	0.9		0.9
1982-83	40		40	36		36	0.9		0.9
1983-84	250		250	207		207	0.8		0.8
1984-85									
Avg. 1980-85									
1985-86									
1986-87									
1987-88	220	30	250	200	15	215	0.9	0.5	0.9
1988-89	230	30	260	205	20	225	0.9	0.7	0.9
1989-90	60	-	60	55	-	55	0.9	-	0.9
1990-91	55	10	65	58	5	63	1.1	0.5	1.0
Avg. 1985-91	94.2	11.7	105.8	86.3	6.7	93.0	0.9	0.6	0.9

Source: Agricultural Statistics of NWFP, Agriculture Department, N.W.F.P.



### YIELD/HECTARE OF BARLEY IN KHYBER AGENCY



Source: Based on Table VI.10 Col.10

Graph VI.6

### 3. Poppy

Although a banned crop, poppy is still cultivated widely in Khyber Agency. It is grown in the Rabi season. The Agriculture Department does not publish or provide statistics on the area under this crop. Therefore, nothing definite can be said about the trend in its cultivation. However, gathered from field observations and interviews with farmers in the Agency, Poppy cultivation has declined in areas easily accessible to the authorities but has increased in the remote areas of Landikotal, Jamrud, Shalman, and Qadam circles. The Qadam circle is well known all over the tribal agencies for its heroin factories.

Following the increase in poppy cultivation and the resulting rise in opium production within Afghanistan, the smuggling of cheap opium Khyber Agency has increased considerably. This is said to have had some depressing effect on poppy cultivation in parts of the Agency. However, poppies strong foothold in the Agency's cropping pattern has remained more or less intact despite a ban on its cultivation and smuggling from Afghanistan. This is due to its because of its unmatched profitability locally.

### 4. Maize

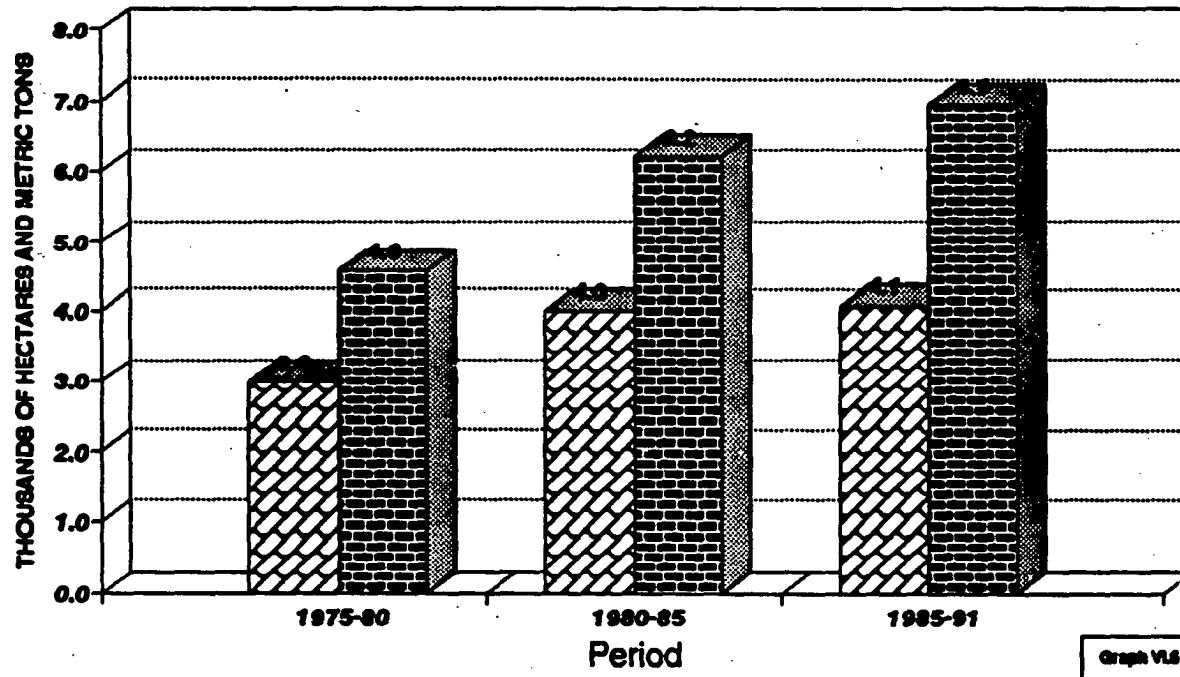
Maize is grown in the Kharif season. It is sown in June and harvested in October/November. It occupies a larger area than any other Kharif crop, and is the second largest crop grown after wheat.

#### a) Area

During 1975-76 through 1990-91, the area under maize registered a substantial increase. The average annual area was 2,978 hectares during 1975-80, while the corresponding figure was 4,062 hectares during 1985-91; showing an increase of 36%. The peak figure, 4,550 hectares, was reached in 1988-89 while the lowest, 1,016 hectares, was recorded in 1975-76 (Table VI.11).

The lack of reliable statistics is as visible in the case of maize as in the cases of wheat and barley. Based on the Agriculture Department report in 1990-91 the Agency had less area under this crop than ten years ago (Table VI.11). Compared with the figure of 1016 hectares in 1975-76, the area under maize rose as much as 4,550 hectares in 1988-89 and declined by over 1,200 hectares in following years. This trend, however, is not substantiated by the reports of groups of farmers interviewed in different agricultural circles of the Agency in 1993. According to the Agency's farmers, the area under maize registered an increase in six out of the nine agricultural circles during 1983-93 (Table VI.8). As ascertained from the farm interviews, the magnitude of the increase in maize area was larger than that of a decline. This suggests that the overall area under maize should be more than it was a decade ago. This discrepancy is yet one more reason why the Agency should be surveyed scientifically in order to more accurately estimate crop area and production.

## MAIZE AREA AND PRODUCTION IN KHYBER AGENCY



Source: Based on Table VI.11



Area (Hectares)



Production (M.T)

### b) Production

During 1975-80 the average annual production of maize was 4,564 MT while the corresponding figure for 1985-91 was 6,942 MT. The gross increase reflects a 52% increase in production and a 36% increase in area. This increase was due to improvement in yield per hectare. The yield during 1985-91 was generally higher than that recorded during 1975-80. As shown in Table VI.11, maize yields during 1975-91 were characterised by slow improvement and long periods of stagnation. For the greater part of this period, it ranged from 1.7-1.5 MT/hectare. In this respect the maize yield in Khyber Agency is almost identical to that of Mohmand Agency

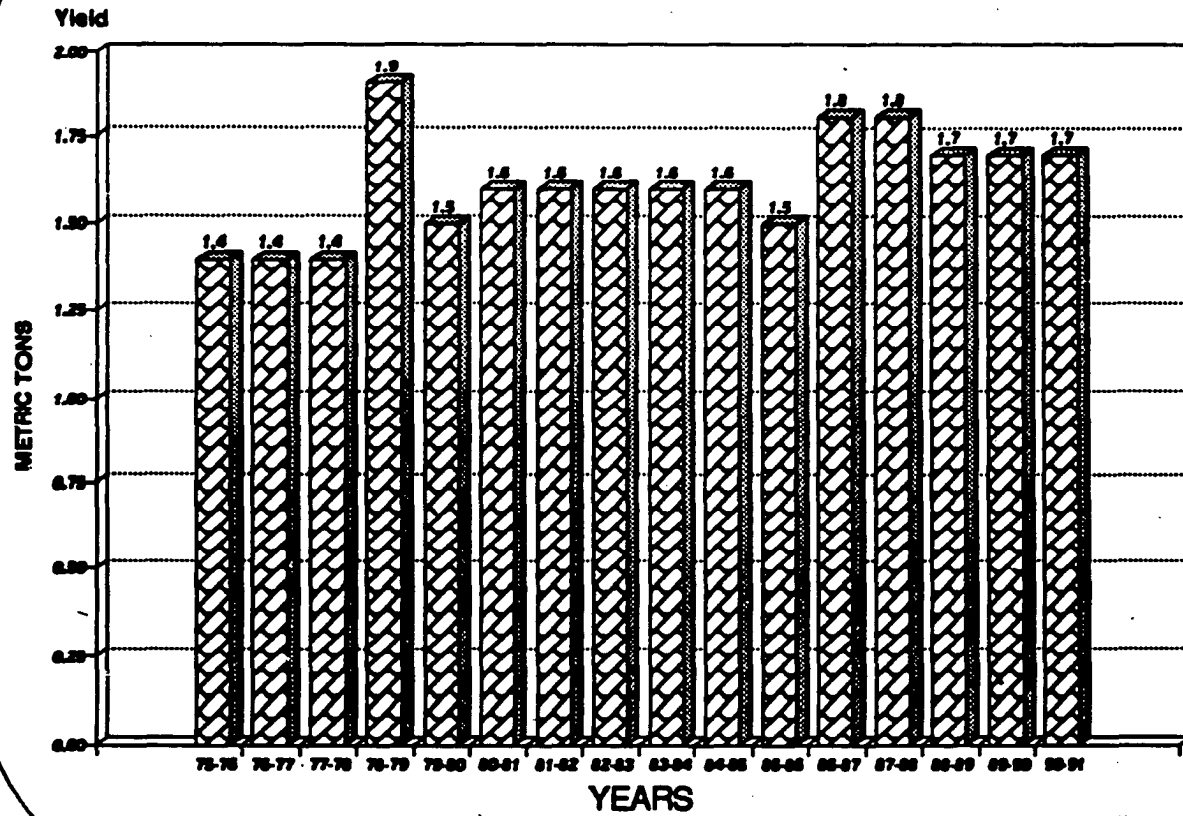
Table VI.11

#### AREA, TOTAL PRODUCTION AND YIELD OF MAIZE IN KHYBER AGENCY

Year	(Area (hectare))	Production (Metric Tons)	Yield/Hectare (Metric Tons)
1	2	3	4
1975-76	1016	1422	1.4
1976-77	3516	5001	1.4
1977-78	3516	5001	1.4
1978-79	2938	5505	1.9
1979-80	3850	5890	1.5
<b>Avg. 1975-80</b>	<b>2978</b>	<b>4564</b>	<b>1.5</b>
1980-81	3855	6045	1.6
1981-82	3900	6161	1.6
1982-83	3950	6194	1.6
1983-84	4000	6280	1.6
1984-85	4200	6314	1.5
<b>Avg. 1980-85</b>	<b>3981</b>	<b>61989</b>	<b>1.6</b>
1985-86	4300	6464	1.5
1986-87	4350	7700	1.8
1987-88	4500	7950	1.8
1988-89	4550	7890	1.7
1989-90	3335	5815	1.7
1990-91	3340	5835	1.7
<b>Avg. 1985-91</b>	<b>4063</b>	<b>6942</b>	<b>1.7</b>

Source: Various issues of Agricultural Statistics of N.W.F.P., Agriculture Department, N.W.F.P.

### YIELD/HECTARE OF MAIZE IN KHYBER AGENCY



Source: Based on Table VI.16 Col.4

Graph VI.7

## 5. Sugarcane

Sugarcane, a ratoon crop, is grown year-round. It is planted during November-March and harvested in September through March. Inter-cropping of sugarcane with wheat is a common practice.

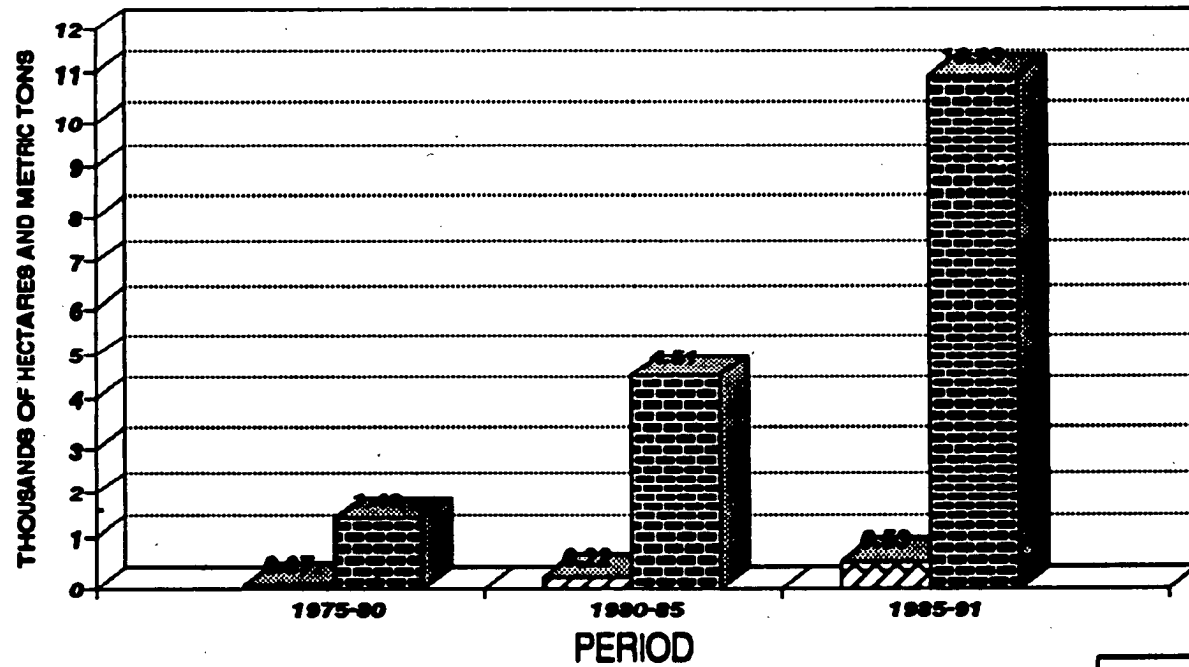
### a) Area

Compared with an average annual area of only 68 hectares during 1975-80, the corresponding figure for 1985-91 was 526 hectares. During 1985-91 sugarcane accounted for 3.31% of the average annual cropped area under major crops in the Agency and ranked third in terms of area under any individual crop. The bulk of this crop is grown in Bara and Ghundi circles. As can be seen in Table VI.12 and Table VI.8, sugarcane area registered a significant increase during the last ten years. Despite more than tripling during the last decade, the area under this crop is still only 540 hectares. Sugarcane is only grown on irrigated land. This puts a limit to the amount cultivated. Another limiting factor is the availability of large marketable surpluses in the adjoining district Peshawar.

### b) Production

The average annual production of sugarcane grew from 1,395 MT during 1975-80 to 10,929 during 1985-90. Yield per hectare were characterized by long periods of stagnation during 1975-91, a feature common to most of the sugarcane growing areas of NWFP and FATA. This can will be seen in Table VI.12 where, sugarcane yield remained a fraction higher than 20 MT/hectare during the entire 1975-91 period.

## SUGARCANE AREA AND PRODUCTION IN KHYBER AGENCY



Source: Based on Table VI.12    ▨ Area (Hectares)    ▤ Production (M.T)

Graph VI.8



Table VI.12

**AREA, TOTAL PRODUCTION AND YIELD OF SUGARCANE  
IN KHYBER AGENCY**

Year	Area # (hectares)	Production (Metric Tons)	Yield/Hectare (Metric Tons)
1	2	3	4
1975-76	24	758	31.6
1976-77	41	610	14.9
1977-78	81	1727	21.3
1978-79	93	1869	20.1
1979-80	100	2009	21.6
<b>Av. 1975-80</b>	<b>68</b>	<b>1395</b>	<b>20.1</b>
1980-81	110	2210	20.1
1981-82	120	2413	20.1
1982-83	125	2514	20.1
1983-84	350	7039	20.1
1984-85	415	8350	20.1
<b>Av. 1981-85</b>	<b>224</b>	<b>4505</b>	<b>20.1</b>
1985-86	500	10060	20.1
1986-87	516	10380	20.1
1987-88	520	10460	20.1
1988-89	550	11200	20.4
1989-90	532	11005	20.7
1990-91	540	12454	23.1
<b>Av. 1985-91</b>	<b>526</b>	<b>10927</b>	<b>20.8</b>

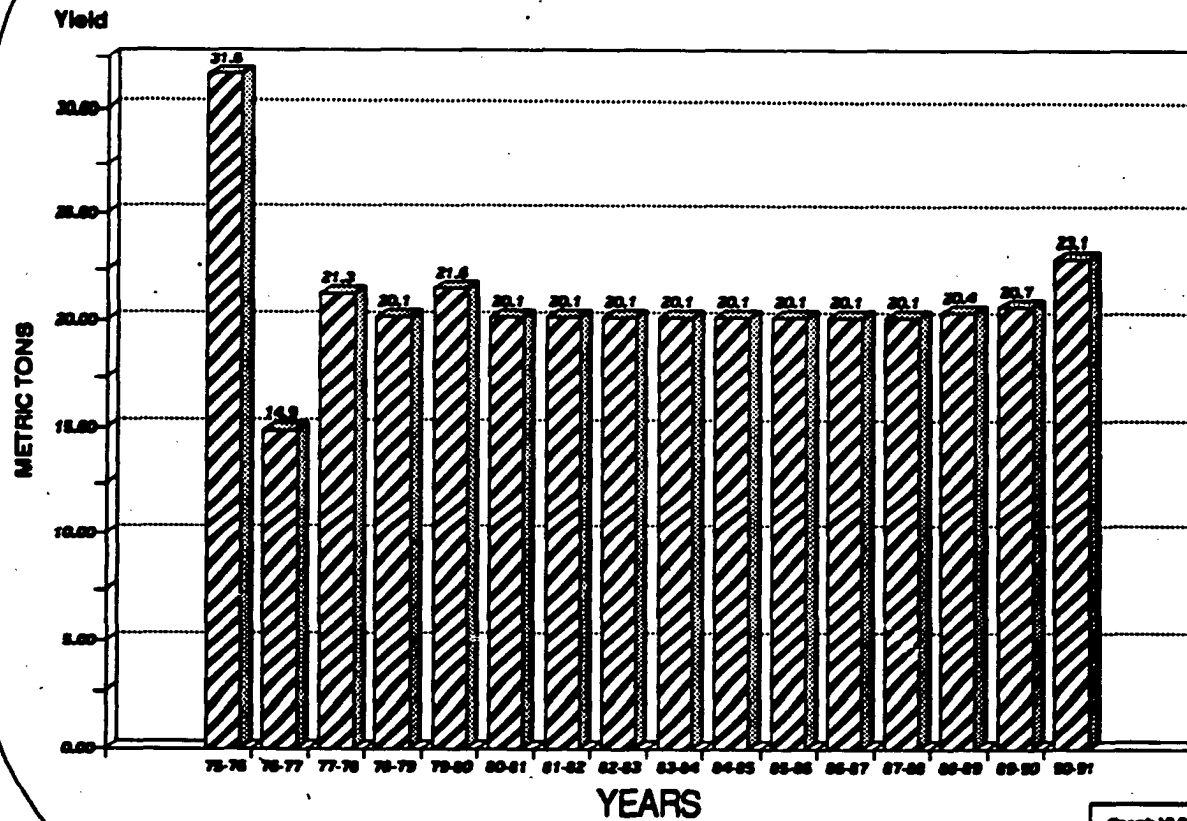
Source: Agricultural Statistics of NWFP

A considerable increase in yield per hectare, combined with a rise in income, can be achieved by utilizing improve varieties of sugarcane, improved inputs, and scientific practices. These improvements not only will benefit sugarcane production, they will have a spill over effect on other crops. Close contact between the agriculture extension agencies and the farmers is essential for initiating and facilitating these improvements.

#### 6. Rape & Mustard

Area and production statistics of rape and mustard crop are available from 1987-88 onwards. However, the farmers interviewed in relation to this study reported that this crop was in cultivation ten years ago, although the area under cultivation was negligible.

## YIELD/HECTARE OF SUGARCANE IN KHYBER AGENCY



Source: Based on Table VI.12 Col.4

Graph VI.8

**Table VI.13**  
**AREA AND PRODUCTION OF RAPE AND MUSTARD**  
**IN KHYBER AGENCY**

Year	Area (hectares)			Production (Metric Tons)		
	Irri.	Unirri.	Total	Irri.	Unirri.	Total
1	2	3	4	5	6	7
1987-88		30	30		10	10
1988-89						
1989-90	40	20	60	22	8	30
1990-91	25	40	65	14	21	35

Source: Agricultural Statistics of NWFP, Agriculture Department, NWFP.

Rape and Mustard is grown in seven out of eleven agricultural circles of the Agency (Table VI.8). In Ghundi and Landikotal circles, it occupies less area than it did ten years ago. In Khyber, Bara, Mandi Kas, and Akakhail circles its area has increased. As gathered from farmers, it is most likely that this crop occupies more area than reported in the agricultural statistics issued by the Agriculture Department.

#### 7. Groundnut

The Agricultural Statistics of NWFP reported cultivation of this crop only for the year 1984-85. The area under this crop consisted of four hectares. It can be gathered from the Agency's farmers that although this crop is not very popular, groundnut are grown on a much larger area and more regularly than the official statistics indicate.

#### 8. Fodder Crops

Fodder crops were grown in 1990-91 over an area of 131 hectares. The available statistics go back only to the year 1988-89. During 1988-89 through 1990-91, the area under these crops increased by 31½ or 15 hectares annually (Table VI.14).

**Table VI.14**  
**AREA AND PRODUCTION OF FODDER CROPS**  
**IN KHYBER AGENCY**

Sr. No.	Fodder Crop	Area (Hectare)			Production/Metric Tons		
		1988-89	1989-90	1990-91	1988-89	1989-90	1990-91
1.	Berseem	50	30	30	730	480	456
2.	Shaftal	50	60	40	750	900	608
3.	Barley fodder		12	46		130	710
4.	Other fodders			15			221
5.	Total	100	112	131	1480	1510	1995

Source: Agricultural Statistics of NWFP, Agriculture Department, NWFP.

In addition to the area exclusively devoted to fodder production, as shown in Table VI.14, other crops such as wheat, maize and sugarcane may be grown for this purpose. They may also be used for animal feed.

### 9. Orchard Crops

Orchard crops are sparsely grown in the Agency. In 1990-91, the latest year for which statistics are available, orchards were grown over an area of 51 hectares. The corresponding figure for 1975-76 and 1979-80 are 19 and 22 hectares respectively. This indicates that an expansion of in orchard crops occurred largely after 1980 as shown in Table VI.15. Apricots, plums, and apples were the principle trees grown as duplicated in Table VI.16.

Table VI.15

**AREA UNDER ORCHARDS CROPS  
IN KHYBER AGENCY  
(Hectares)**

Years	Apricot	Citrus	Apple	Guava	Lauqat	Plums	Walnut	Almond	Pears	Peaches	Total
1	2	3	4	5	6	7	8	9	10	11	12
1975-76	7					12					19
1976-77	8					13					21
1977-78	8					13					21
1978-79	8					14					22
1979-80	8					14					22
<b>Avg. 1975-80</b>	<b>8</b>					<b>13</b>					<b>21</b>
1980-81	10					20					30
1981-82	10					20					30
1982-83	15					30					45
1983-84	20					40			5		65
1984-85	21					40			5		66
<b>Avg. 1980-85</b>	<b>15</b>					<b>30</b>			<b>2</b>		<b>47</b>
1985-86	20					40			5		65
1986-87	20					40			5		65
1987-88	20					10			10	10	50
1988-89	10					10			5	5	30
1989-90	10	2	7	1	1	10			5	5	36
1990-91	15	2	10	1	2	12	3	2	4	5	51
<b>Avg. 1985-91</b>	<b>15.8</b>	<b>0.7</b>	<b>2.8</b>	<b>0.3</b>	<b>0.5</b>	<b>20.3</b>	<b>0.5</b>	<b>0.3</b>	<b>5.0</b>	<b>3.3</b>	<b>49.5</b>

Source: Agricultural Statistics of NWFP, Agriculture Department, NWFP.

Fruit produced in the Agency averaged at 61 MT annually during 1979-81. The corresponding figure for 1985-91 is 495 MT.

Table VI.16

**FRUIT PRODUCTION IN KHYBER AGENCY**  
(Metric Tons)

Years	Apricot	Citrus	Apple	Guava	Lauqat	Plums	Walnut	Almond	Pears	Peaches	Total
1	2	3	4	5	6	7	8	9	10	11	12
1975-76	26					30					56
1976-77	29					31					60
1977-78	29					34					63
1978-79	29					34					63
1979-80	29					34					63
<b>Avg. 1975-80</b>	<b>28.4</b>					<b>32.6</b>					<b>61.0</b>
1980-81	36					48					84
1981-82	36					48					84
1982-83	54					72					126
1983-84	72					96					168
1984-85	75					97			90		262
<b>Avg. 1980-85</b>	<b>54.6</b>					<b>72.2</b>					<b>144.8</b>
1985-86	71					97			90		258
1986-87	300					400			100		800
1987-88	300					100			105	100	615
1988-89	300					108			80	60	368
1989-90	120	11	100	5	8	110			N.A	60	414
1990-91	120	12	130		6	150	3	2	55	N.A	518
<b>Avg. 1985-91</b>	<b>201.8</b>					<b>160.8</b>					<b>495.5</b>

Source: Agricultural Statistics of NWFP, Agriculture Department, NWFP

### 10. Vegetables

Most of the popular vegetables are produced in this Agency. Although the total area under vegetables is rather small, it is on an upward trend.

#### a) Area

Compared with only 28 hectares in 1975-76, the area increased to 847 hectares in 1990-91. In 1975-76, only three kinds of vegetables were reported to be in cultivation. Their number increased to more than fifteen in 1990-91; (Table VI.20). The relative importance of different vegetables during 1979-80 and 1990-91 is shown in Table VI.17.

**Table VI.17**  
**AREA UNDER DIFFERENT VEGETABLES DURING**  
**1979-80 AND 1990-91 IN KHYBER AGENCY**

Sr. No.	Vegetables	Area:			
		1979-80		1990-91	
		Hectare	% age	Hectare	% age
1.	Onion	12	14.63	275	32.47
2.	Better Gourd	8	9.76	12	1.42
3.	Lady finger	10	12.20	83	9.80
4.	Tinda	4	4.88	25	2.95
5.	Bringal				
6.	Tomato	30	36.59	85	10.04
7.	Carrot			10	1.18
8.	Mattor			40	4.72
9.	Turnip	8	9.76	50	5.90
10.	Bringal			95	11.22
11.	Spinach			20	2.36
12.	Cauliflower			80	9.45
13.	Cabbage			20	2.36
14.	Peas			2	2.36
15.	Radish	10	12.20	10	1.18
16.	Pumpkin			22	2.60
17.	Total	82	100.00	847	100.00

Source: Agricultural Statistics of NWFP, Agriculture Department, NWFP

Onions are the most important vegetable in terms of area. During 1979-80, it accounted for 14.63% of the Agency's total vegetable area. The corresponding figure for 1990-91 is 32.46%. In absolute terms, the area under onions increased 22 folds during 1979-91.

The variety of vegetables grown in the Agency has increased in recent years. In 1975-76, only three vegetables appeared in the agricultural statistics of NWFP, whereas their number was more than a dozen in 1990-91. Among the eight new crops introduced into the Agency's farm sector during the last ten years, seven belong to the 'vegetable group (Table VI.18).

Table VI.18

**NEW VEGETABLES INTRODUCED IN DIFFERENT  
CIRCLES OF KHYBER AGENCY DURING 1992-93**

Sr. No.	Name of Agricultural circle	New vegetable introduced mentioned in col.2						
		Lady finger	Potato	Tomato	Pumpkin	Cauliflower	Onion	Garlic
1	2	3	4	5	6	7	8	9
1.	Jamrud	-----						
2.	Ghundi	-----						
3.	Khyber	-----					-----	
4.	Mandi Kas	-----					-----	
5.	Akakail	-----		-----				-----

Source: Table VI.8

Vegetables are grown in the localities shown in Table VI.18 as well as in other agricultural circles. The Bara Circle, however, is well known for its quality vegetables as it has been growing all or most of the popular vegetables now grows for over ten years. Bara Circle has increased last years. Table VI.20 shows the area under various vegetable over the its vegetable production.

Official statistics on the Agency's vegetable area and production areas does not appear to be accurate. Interviews with the Agency's farmers indicate that the area and production of vegetables is much larger than reported in official statistical books. All farmers grow vegetables for domestic use and a large number of them grow them for commercial reasons. In Bara, Ghundi and Mandi Kas circles, vegetables are grown on a commercial scale. The volume of vegetables traded within the Agency and the vegetables consigned to outside places, suggests that the vegetable area and production is more than what it appears to be in the official statistics.

#### b) Production

With the increase in the number of vegetables produced and the area devoted to them, the Agency's vegetable production has gone up considerably during the last decade and a half. Data on total production of different vegetables in the years 1975-76 through 1990-91 are given in the Table VI.21. The trend, though erratic, has on the whole remained upwards. Summary statistics on the of production of selected vegetables are given in Table VI.19.

Table VI.19

**PRODUCTION OF SELECTED VEGETABLES  
IN 1978-80, 1989-90 AND 1990-91**

Sr. No.	Vegetables	Production (Metric Tons)	
		1979-80	1990-91
1.	Onion	128	3172
2.	Lady finger	76	566
3.	Tinda	9	170
4.	Bringal	(Nil)	650
5.	Tomato	178	500
6.	Turnip	9	348
7.	Cauliflower	(Nil)	555
8.	All other vegetables	105	935
9.	All Vegetables	505	6896

Source Agriculture Statistics of NWFP, Agriculture Department, NWFP

Table VI.20

**AREA UNDER VEGETABLES IN KHYBER AGENCY**

Years	(Hectares)									
	Onion	Potato	Lady finger	Tinda	Bitter gourd	Bringal	Bottle Gourd	Turnip	Carrot	Spinach
1	2	3	4	5	6	7	8	9	10	11
1975-76	18							5		4
1976-77	10	11						6		4
1977-78	12	12						4		2
1978-79	12	12	10	4	8			6		3
1979-80	12		10	4	8			8		
Avg. 1975-80	12.8	11.7	10	4	8			5.8		
1980-81	12		20	5	8	2		10		15
1981-82	30		12	5	10	2		10		15
1982-83	14		15	5	12	2	2			
1983-84	-		20	10	14	2	4			
1984-85	275		20	10	15	2	4	50		
Avg. 1980-85	82.8		17.4	7	11.8	2	3.3	23.3		15
1985-86	375							50		
1986-87	300							50		
1987-88	200							50		10
1988-89	210							10	10	
1989-90	230		80	20	10	90	10	25	25	
1990-91	275		83	25	12	95		50	10	20
Avg. 1985-91	265		81.5	22.5	11	92.5	10	39.2	15	15

(Contd....)



Table VI.20 (Continued)

**AREA UNDER VEGETABLES  
IN KHYBER AGENCY  
(Hectares)**

Years	Tomato	Cauliflower	Cabbage	Peas	Radish	Pumpkin	Mattor	Others	Total
	12	13	14	15	16	17	18	19	20
1975-76									27
1976-77									31
1977-78									28
1978-79									55
1979-80	30				10				82
Avg. 1975-80	30				10				44.6
1980-81	30				10				112
1981-82	30				10				124
1982-83	40								90
1983-84	50								100
1984-85	52				50				469
Avg. 1980-85	40.4				50				179
1985-86					50				475
1986-87					50			25	425
1987-88	50			20	5			25	360
1988-89	40	20	20	35	20			20	385
1989-90	60	22	20	32	22	20	30	42	728
1990-91	85	80	20	20	10	22	40		847
Avg. 1985-91	58.8	40.7	20	26.8	31.4	21	35	28	644

Source: Agriculture Statistics of NWFP, Agriculture Department, NWFP.

(Concluded)

Table VI.21

## PRODUCTION OF VEGETABLES IN KHYBER AGENCY

(Metric Tons)

Years	Onion	Potato	Lady finger	Tinda	Bitter gourd	Bringal	Bottle Gourd	Turnip	Carrot	Spinach
1	2	3	4	5	6	7	8	9	10	11
1975-76	195							41		50
1976-77	107	53						40		46
1977-78	128	61						5		1
1978-79	128	61	76	9	30			7		2
1979-80	128		76	9	30			9		
Avg. 1975-80	137.2	58.3	76	9	30			20.4		24.8
1980-81	128		150	11	30	15		74		97
1981-82	438		91	11	37	15		11		10
1982-83	149		114	11	45	15	7			
1983-84			52	22	52	19	14			
1984-85	3000		152	22	56	19	14	350		
Avg. 1980-85	928.8		111.8	15.4	44	16.6	11.7	145		53.5
1985-86	4085							350		
1986-87	3260							400		
1987-88	2173							500		350
1988-89	2282							50	50	400
1989-90	2505		510	140	50	645	65	130	135	
1990-91	3172		566	170	60	650		348	54	300
Avg. 1985-91	2912.8		538	155	55	647.5	65	296.3	79.7	525

Source:

(Contd....)

**Table VI.21 (Continued)**  
**PRODUCTION OF VEGETABLES IN KHYBER AGENCY**  
**(Metric Tons)**

Years	Tomato	Cauliflo wer	Cabbag e	Peas	Radish	Pumpk in	Mattor	Other s	Total
	12	13	14	15	16	17	18	19	20
1975-76									286
1976-77									246
1977-78									195
1978-79									313
1979-80	178				75				505
<b>Avg. 1975-80</b>	<b>178</b>				<b>75</b>				<b>309</b>
1980-81	178				75				758
1981-82	178				75				866
1982-83	280								621
1983-84	350								509
1984-85	364				310				4287
<b>Avg. 1980-85</b>	<b>270</b>				<b>230</b>				<b>1408.</b>
									<b>2</b>
1985-86					315				4750
1986-87					350			100	4110
1987-88				70	20			140	3253
1988-89		100	100	300	100			100	3482
1989-90	450	130	120	250	130	140	16	355	5771
1990-91	500	555	150	140	55	154	22		6896
<b>Avg. 1985-91</b>	<b>475</b>	<b>261.7</b>	<b>123.3</b>	<b>190</b>	<b>161.7</b>	<b>147</b>	<b>19</b>	<b>173.8</b>	<b>4710.</b>
									<b>3</b>

Source: Agriculture Statistics of NWFP, Agriculture Department, NWFP

Concluded)

### C. Farm Power

The use of tractors is widespread throughout the Agency. Wheat threshers are also becoming popular. The number of these machines in the Khyber Agency in various years is given in Table VI.22

Table VI.22

#### NUMBER OF TRACTORS AND WHEAT THRESHERS IN KHYBER AGENCY

Year	Tractors	Wheat threshers
1980-81	74	N.A
1984-85	84	21
1985-86	84	21
1986-87	50	26
1987-88	50	26
1988-89	42	16
1989-90	44	17

Source: Agricultural Statistics of NWFP, Agricultural Department, NWFP

The number of tractors and wheat threshers existing or operating in the Khyber Agency is believed to be much larger than indicated in Table VI.23. This impression was gathered during visits to the Agency in connection with this study. As a tractor thresher is one of the first items a tribesman and/or farmer purchases, it is likely that they would number in the high hundreds.

The use of tractors for cultivation purposes was quite common more than a decade ago. In the 1980 Census of Agriculture, 34% of Khyber Agency's farmers were found to have ploughed their lands with tractors while 47% used both tractors and animals.

Table VI.23

**FARMS REPORTING USE OF TRACTORS, ANIMALS, OR BOTH,  
FOR CULTIVATION IN TRIBAL AGENCIES IN 1980**

Agency	(Percentage)		
	Farm Reporting use of:		
	Tractors only	Animals only	Both tractors and animals
1. Khyber	33	14	53
2. Mohmand	3	84	13
3. Bajour	34	19	47
4. Kurram	8	34	58
5. N.Waziristan	10	17	72
6. S.Waziristan	5	70	25
7. Orakzai	7	48	45

Source: Pakistan Census of Agriculture, 1980 Volume III

Even more than a decade ago, the Agency's farmers compared quite favourably with the farmers in other agencies in respect to tractorization (Table VI.23). The corresponding data for 1993 is not yet available, but it is gathered from interviews with groups of farmers in the Agency, that the use of "tractors only" is far more extensive than before. Farmers shall use "both tractors and animals", but on a much smaller scale than in 1980, and those using "animals only" must be in the single digits.

#### D) Farm Labour

The farmer's family itself is the principal source of labour. Very few farms employ permanent workers. Ploughing and harvesting are the only occasions when a relatively large number of short term workers are engaged.

The broad characteristic features of farm labour in the tribal agencies has not changed since 1980. The relevant 1980 census data is given in Table VI.24.

Table VI.24

**PARTICIPATION OF WOMEN IN AGRICULTURAL WORK ON THEIR  
FAMILY HOLDINGS IN TRIBAL AGENCIES IN 1980**

Sr. No.	Agency	Total workers (Male + Female)	Women workers as % of total workers	Percentage of Women worker who worked full-time
0	1	2	3	4
1.	Khyber	100	52.75	7.32
2.	Mohmand	100	44.11	90.00
3.	Bajour	100	47.93	76.48
4.	Kurram	100	49.21	12.04
5.	N.Waziristan	100	35.26	45.41
6.	S.Waziristan	100	49.48	37.48
7.	Orakzai	100	48.59	66.11

Source: Based on Pakistan Census of Agriculture, 1980, Volume III

Women accounted for as much as 53% of the farm labour force in 1980. As many as 60% of total women participate in farm work. However, only 7% of the women workers work on a full time basis. As suggested by these statistics and other sources, although a large percentage of women took part in farm activity their involvement was relatively light and limited to some irrigation, weeding, and harvest/post harvest operations. The broad features of their participation are still the same. However, from interviews with farmers, it appears that the participation of women in farm activities has declined since 1980. The large influx of money into the Agency in the eighties benefitted the farm households. For this reason and because of the disturbed conditions due to the Afghan refugees fewer women are doing farm work than in the past.

## **E. Agricultural Inputs and services**

This section describes the existing situation with regards to availability of agricultural inputs and services. The inputs and services are: improved seeds, fertilizers, agro-chemicals, agricultural extension staff, government nurseries, demonstration plots, and agricultural credit.

### **1. Improved Seed**

The Agency's farmers purchase improved seeds from the Agriculture Department's contact farmers as well as in the open market in the adjoining Peshawar district. It is not possible to ascertain which of these two sources is more important. However, field interviews with farmers show that the contact farmers have been playing an increasingly important role in improved seed multiplication and its supply to fellow farmers. The established practice is that the Agriculture Department establishes improved seed demonstration plots on farmers' field. The farmer retains a portion of the seed produced on his farm and sells the rest to other farmers. The latter do the same when they have surplus improved seed.

In the 1980 Census of Agriculture, only the use of improved varieties of wheat were enumerated. According to the Census, approximately 61 percent of the wheat area was under improved seed. A large number of improved seed plots of wheat have been laid out since 1980, and many farmers must have purchased improved seed from other sources. Therefore, in all probability the wheat area under improved seed in 1993 must be much more than the figure of 61% recorded in 1980.

## 2. Chemical Fertilizers

Farmers buy chemical fertilizers from the Agricultural Development Authority (ADA) and also from the open market both in and outside the Agency. Available data on the quantity of fertilizers consumed in the Agency in various years are not accurate. However, interviews with the Agency's farmers have revealed that, most of the farmers use fertilizers. All the respondents voiced the need for establishing regular fertilizer sale points in the Agency as well as the need for unrestricted entry of fertilizers into the Agency from the settled areas.

According to the 1980 Census of Agriculture, 52% of the Agency's total farmers used both fertilizer and manure, 5% used fertilizer only, and 27% used manure only. According to the farmers interviewed in connection with this study, the percentage of farmers who use "fertilizers only" is larger than those who use "manure only". Therefore, the share of manure as a percentage of total nutrients put into the land has declined overtime. The respondents ascribed the rapid rise in the use of fertilizers and the decline in using manure to two factors. First the land use and cropping intensity have increased substantially and second is the supply of manure is relatively inelastic.

## 3. Agro-Chemicals

Upto 1980, 51% of the Agency's farmers have used insecticides according to the Census of Agriculture (1980). The corresponding percentage at present (1993) is much higher, based on the interviews held with the Agency's farmers. The farmers both buy agro-chemicals in the market and from the Agriculture Department. The Agriculture Department carried out plant protection facilities during 1988-89 through 1991-92 as shown in Table VI.25.



Table VI.25

**PLANT PROTECTION ACTIVITIES IN  
KHYBER AGENCY  
(Hectares)**

Sr. No.	Items of Service	1988-89	1989-90	1990-91	1991-92
1.	Spray on				
	a) Vegetables	524	803	-	408
	b) Maize	453	205	158	59
	c) Sugarcane	-	-	35	12
	d) Fruit Orchards	131	19	127	227
2.	Soil treatment	365	671	338	127
3.	Rodent control	210	324	1187	280
4.	Store fumigation	139500 (CFT)	396900 (CFT)	1369435 (CFT)	11000 (CFT)
5.	Weed control	303	343	-	200

Source: Office of Extra Assistant Director of Agriculture, Khyber Agency.

#### 4. FATA Agriculture Extension Department

Agricultural extension in the Agency is managed by the Office of EADA located in Peshawar. The Agency is divided into ten agricultural circles and the staffing pattern is shown in Table VI.26.

Table VI.26

**STAFF OF FATA AGRICULTURE (EXTENSION)  
DEPARTMENT, KHYBER AGENCY**

Sr. No.	Post	Number
1.	Extra Assistant Director Agriculture (EADA)	1
2.	Agricultural Officers	4
3.	Field Assistants	15
4.	Field Workers	20

#### 5. Government Fruit Nursery and Demonstration Plots

##### a) Fruit Nursery

The Agriculture Department has one fruit nursery at Bara which was established in 1981. During the period 1981-93, it distributed 137,681 nursery trees among tribesmen against the target of 180,000 trees.

Table VI.27

**YEAR-WISE TARGET AND ACHIEVEMENTS OF FRUITS  
NURSERY FARM IN KHYBER AGENCY**

Years	Fruits plant target	Achievements
1981-82	15,000	15,347
1982-83	15,000	15,583
1983-84	15,000	6,310
1984-85	15,000	12,660
1985-86	15,000	15,700
1986-87	15,000	14,140
1987-88	15,000	12,050
1988-89	15,000	7,005
1989-90	15,000	8,538
1990-91	15,000	15,228
1991-92	15,000	15,120
1992-93	15,000	N.A

Source: Office of Extra Assistant Director Agriculture,  
Khyber Agency

**b) Demonstration Plots**

The Agriculture Department regularly lays plots to demonstrate performance of improved varieties of maize, wheat, and oilseed crops. The number of plots laid during 1985-93 is given in Table VI.28.

Table VI.28

**DEMONSTRATION PLOTS LAID OUT  
IN KHYBER AGENCY**

Years	Maize	Wheat	Oilseed	Total
1985-86	6	16	12	34
1986-87	16	42	10	68
1987-88	20	87	40	147
1988-89	74	112	20	206
1989-90	118	134	80	332
1990-91	80	135	20	235
1991-92	100	130	106	336
1992-93	105	105	64	274

Source: Office of Extra Assistant Director Agriculture,  
Khyber Agency.

## 6. Credit

The only institutional source of agricultural credit in the Agency is the solitary branch of the Agricultural Development Bank of Pakistan. It is located at Bara and was established in 1989. Upto March 1993, the Bank had given out loans totalling Rs.16,473,000 for tractors, poultry farms, pickups, bulldozers and tubewells.

Table VI.29

### YEAR-WISE LOANS DISBURSEMENT OF ADBP IN KHYBER AGENCY

Years	Disbursement	Recoveries
1989-90	45,22,000	20,04,000
1990-91	74,27,000	13,27,000
1991-92	31,46,000	34,90,000
1992-93*	13,78,000	34,82,000

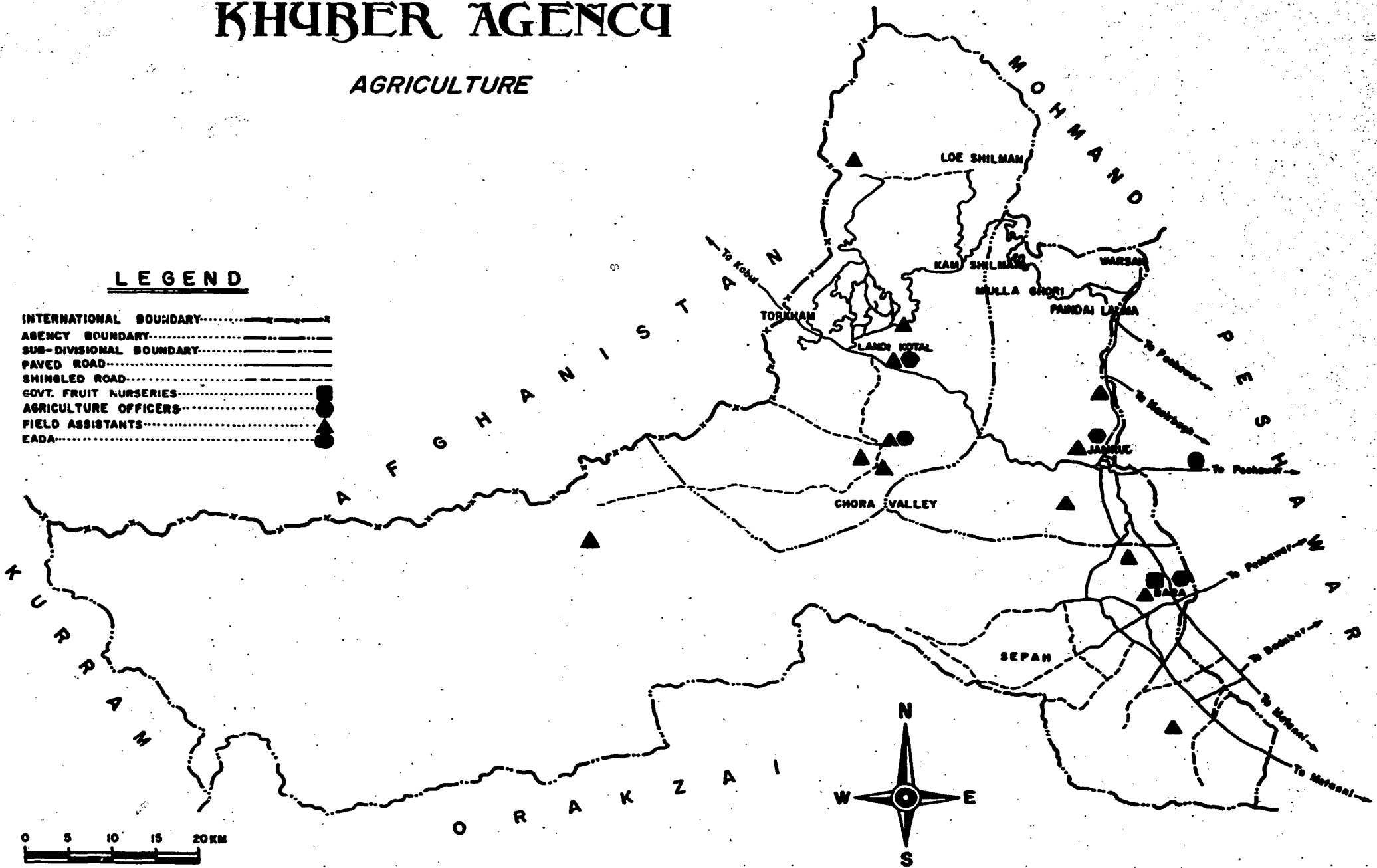
Source: ADBP, Bara Branch, Khyber Agency  
\* Upto March 1993 only

# KHIBER AGENCY

## AGRICULTURE

### LEGEND

- INTERNATIONAL BOUNDARY.....
- AGENCY BOUNDARY.....
- SUB-DIVISIONAL BOUNDARY.....
- PAVED ROAD.....
- SHINGLED ROAD.....
- GOVT. FRUIT NURSERIES.....
- AGRICULTURE OFFICERS.....
- FIELD ASSISTANTS.....
- EADA.....



## **F. Agricultural Marketing**

The main agricultural marketing centers in the agency are Landikotal, Jamrud, and Bara. Outside the Agency, Peshawar is the most important market for the Agency's farmers. The farmers buy most of their agricultural inputs in these four market places. The village shopkeepers' role in the supply of agricultural inputs is not very important.

The agricultural input shops in Landikotal, Jamrud, and Bara draw their supplies from the Peshawar shops. Many farmers also buy their seeds, fertilizers, insecticides directly from Peshawar city's shopkeepers. The relative share of these four shopping centers in the farmers total purchases of inputs could not be ascertained. However, Peshawar city seems to be the single largest source of supply of inputs to the Agency's farmers.

The cost of agricultural supplies to the Agency's farmers is much higher than their Peshawar district's counterparts. Long distance from the Peshawar market and lack of competition among the Agency's input suppliers are the main factors responsible for this situation.

The marketable surplus of the farmers produce is rather small and is restricted mainly to sugarcane and vegetables. The surplus sugarcane is sold to the Khazana Sugarmill located 30 km from Peshawar. The surplus vegetables are sold in Peshawar city through the normal channel of commission agents and wholesalers.

The farmers didn't report any abnormal situation in the agricultural marketing sector. It seems which seems to be fairly well developed to take care of input needs and the disposal of marketable surpluses. It is, however, cost inefficient. Most of the farmers, who were interviewed in the Agency, complained of high prices of inputs. None mentioned the problem of the large margin between the wholesale and farm gate prices.

Much of the Agency's farming is done in remote areas, far off from the market towns and metalled roads. The agricultural marketing problems in these areas may be more complex than reported above. It would be a worthwhile investment of time and money to conduct a full fledged study of agricultural marketing on the basis of a suitable sample of the Agency's villages.

## VII. WATER RESOURCES

Khyber Agency is drained by the Bara River and a number of smaller perennial and non-perennial streams. Its surface and ground water resources provide irrigation to nearly 90 percent of its total cultivated area. The potable water schemes provide water to two-thirds of the Agency's total population. There are plans to increase the supply of both irrigation and potable water.

### Overview of Irrigation System

Canals and tubewells are the principal sources of irrigation in Khyber. Together they account for 98% of the total irrigated area in 1990-91. The relative importance of different sources of irrigation during the past decade is shown in Table VII.1.

Table VII.1

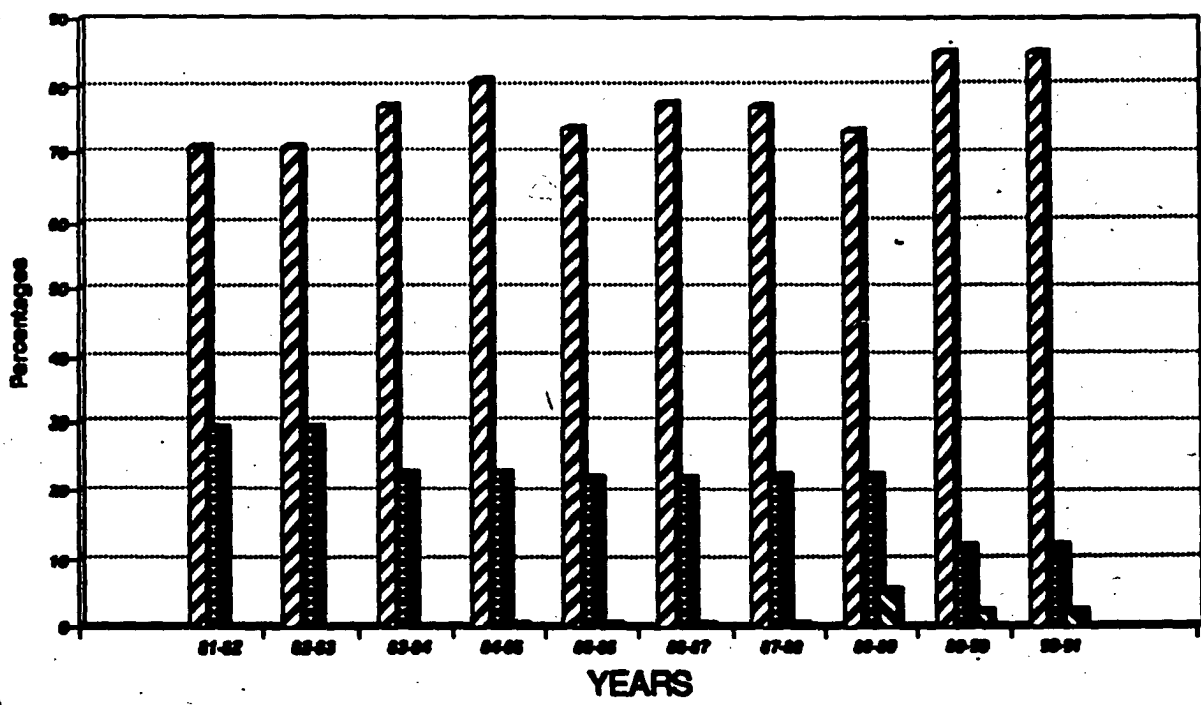
DISTRIBUTION OF IRRIGATED AREA BY SOURCE  
OF IRRIGATION IN KHYBER AGENCY

Year	All sources: Hectare (=100)	Area irrigated by:									
		Canals		Tubewells		Open wells		Lift pumps		Other Sources	
		Hect.	%	Hect.	%	Hect.	%	Hect.	%	Hect.	%
1981-82	14,100	10,000	70.92	4,100	29.08						
1982-83	14,270	10,120	70.92	4,150	29.08						
1983-84	12,965	10,000	77.13	2,965	22.87						
1984-85	13,000	10,500	80.77	2,965	22.81	35	0.27				
1985-86	13,540	10,000	73.86	3,005	22.19	35	0.26				
1986-87	13,540	10,500	77.55	3,000	22.16	40	0.30				
1987-88	15,590	10,500	67.35	3,050	19.56	40	0.26			2,000	12.83
1988-89	15,590	10,500	67.35	3,050	19.56	250	1.60	500	3.21	1,290	8.27
1989-90	12,100	10,253	84.74	1,590	13.14	50	0.41	200	1.65	7	0.06
1990-91	12,100	10,253	84.74	1,590	13.14	50	0.41	200	1.65	7	0.06

Source: Agricultural Statistics of NWFP; Agriculture Department, NWFP, Peshawar; 1981-82 to 1991-92 issues.

**Note:** What are the "Other Sources" of irrigation? Why these were not available before 1987-88 and why did they almost disappear after 1988-89? The reports on Agricultural Statistics do not provide any information in this regard. These "Other Sources" were most probably reservoirs made out of blood water by the Agency's people for irrigating their lands. Their inclusion among means of irrigation thus seems rather misleading.

### DISTRIBUTION OF IRRIGATED AREA BY SOURCE OF IRRIGATION IN KHYBER AGENCY



Source: Based on Table VI.1

Canals
  Tubewells
  All other sources
 Graph VI.1

Canal irrigated area varied from 10,000 to 10,500 hectares during the eighties. The area irrigated by this source in the closing year was only two percent more than the first year of the decade. On the other hand, tubewell irrigated area in 1990-91 was 61% less than 1981-82. The decline is attributable to closure of some tubewells due to the low water table and mechanical defects. The highly erratic trend in area irrigated by "other sources" is notable. Steep falls in area irrigated by wells and lift pumps after 1988-89 is quite striking. Errors in reporting rather than any other factor seems to explain this erratic trend.

In Table VII.1 no area is shown to have been irrigated by open wells, lift pumps, and 'other sources' prior to the years 1983-84, 1987-88, and 1986-87 respectively. The factual position, however, is that these sources provided some irrigation during the period under reference, but the area was so small that the officials responsible for reporting the area failed to take it into account.

#### A. Surface Irrigation

The principal means of surface irrigation are the canals taking off from Warsak and Bara Dams. Other surface irrigation systems are lift irrigation and irrigation channels. Sites have been selected for construction of a large number of small dams.

#### Canal Irrigation

The Agency is irrigated by six canals which have a total discharge capacity of 1,453 cassoaks as shown in Table VII.2

Table VII.2

#### CANALS OF KHYBER AGENCY

Sr. No.	Name of Canal	Water discharge capacity (cassoaks)	Source
1.	Warsak lift canal	805	Warsak Dam
2.	Bara River (B.R) canal	279	Bara Dam
3.	B.R. Right Bank canal	211	"
4.	B.R. Left Bank canal	68	"
5.	B.R. Minor D	54	"
6.	B.R. Minor E	36	"

Source: 1. Central Irrigation Circle, Peshawar.  
2-6. S.D.O's Office, FATA, DC, Bara, Khyber Agency



The canals are operated and maintained by the government. Water course maintenance is the responsibility of the water users. The water courses are generally speaking in satisfactory condition and no serious maintenance problem has been reported by the Irrigation Department. However, the Irrigation Department is experiencing difficulty in the implementation of water course improvement schemes providing for the cementing of parts of the water courses for prevention of water loss. A pre-condition of undertaking water course improvement is that the water users should bear 20% of the expenses in the form of labour and material. The other 80% will be borne by the government. The water users are unwilling to comply with this condition. Hence, there is an impasse in the water course improvement.

### Irrigation Water Charges

Irrigation water users are charged Abiana (water rates) for the water drawn by them. The amount of Abiana varies from crop to crop. The rates to farmers who draw water from the Warsak Lift Canal are given in Table VII.3.

Table VII.3

#### ABIANA RATES APPLICABLE TO AREA IRRIGATED BY WARSAK LIFT CANAL IN KHYBER AGENCY

C r o p	Abiana payable per hectare per annum (Rs)
1. Sugarcane	407.06
2. Vegetables	264.80
3. Tobacco	213.40
4. Rice	185.74
5. Oilseed	150.18
6. Arher	138.32
7. Maize	118.56
8. Wheat	118.56
9. Masoor	110.66
10. Fodder	86.94

Source: Divisional Canal Officer, Warsak Canal, Central Irrigation Circle, Irrigation Department, Peshawar.

The Abiana rates for water supplied by Bara River canals, owned by the government of Pakistan, are half of those given in Table VII.3. The Bara River canals are gravity canals, hence the cost of irrigation water is less as compared with that of Warsak Lift Canal to which water is lifted by electric power operated pumps.

The farmers drawing irrigation water from the government owned canals are supposed to pay Abiana. The farmers in the command area of Warsak Lift Canal actually pay Abiana. In 1990-91 they had paid Rs. 23,978 on this account, according to the Warsak Central Irrigation Circle's officials concerned. The Bara canals' water users, however, do not pay any Abiana, although they are supposed to.

### Lift Irrigation

In contrast to the neighbouring Mohmand Agency, lift irrigation is done on a nominal scale in this Agency. In 1983-84, according to official statistics the Agency had only eight lift pumps which irrigated a negligible area as suggested by the irrigated area statistics in Table VII.1. In 1991-92 the number of pumps was 13.

Table VII.4

#### NUMBER OF LIFT PUMPS IN KHYBER AGENCY

Year	Lift pumps
1983-84	8
1984-85	8
1985-86	16
1986-87	18
1987-88	18
1988-89	18
1989-90	12
1990-91	13
1991-92	13

Source: Agricultural Statistics of NWFP: Agriculture Department NWFP.

The actual number of lift pumps, as gathered from interviews with government officials and farmers in the Agency, is much larger than the official figures given in Table VII.4. Farmers use these for drawing water from open wells and also from the canals; the latter, of course, illegally.

### **Dams**

The Agency has one dam in operation and another one, the Millwat Dam, is under construction. A number of sites have been selected and surveyed for more dams.

**Existing Dam:** The only existing dam is the Spara Dam which is popularly known as Bara Dam. It was constructed at a cost of Rs 58.865 million. Relevant statistics on the dam and the canals taking off from it are given in Table VII.5.

Table VII.5

**BARA RIVER CANAL SCHEME:  
KHYBER AGENCY**

Sr. No.	Particulars	
1.	Cost of scheme	58.865 Million Rupees
2.	Year of commencement	1967-68
3.	Area irrigated in:	
	a. Khyber Agency	15,519 Hectares
	b. Peshawar District	2,688 Hectares
	c. Total area irrigated (3a+3b)	18,207 Hectares
4.	Command area:	
	a. Left Bank Canal	7,967 Hectares
	b. Right Bank Canal	10,240 Hectares
	c. Total	18,207 Hectares
5.	Designed discharge	648 Cassocks
6.	Committed water for Peshawar Cantt	10 "
7.	Committed water for irrigation of Sangu and Sheikhan area	20 "

Source: SDO's Office, FATA DC, Bara, Khyber Agency

**Proposed Dams:** In order to conserve rain and flood water for irrigation purposes, the FATA Development Corporation has chalked out a plan for construction of small dams at various places in Khyber Agency. The search for sites for small dams started in 1988-89. So far 18 sites have been selected and feasibility studies have been prepared. The proposed sites and the estimated costs of the proposed dams and the expected command land are shown in Table VII.6.

Table VII.6

**PROSPECTIVE SITES FOR SMALL DAMS IN KHYBER AGENCY  
AS DELINEATED BY FATA, DC**

S.No	Name of Scheme	Command Land (hectares)	Estimated Cost (Rs. in Million)
1.	Aziz Khawar	95.06	7.50
2.	Sray China Khawar	101.13	7.47
3.	Pasta Malla Khawar	60.68	7.20
4.	Cata Kushta Khawar	50.57	6.25
5.	Qara Wala Khawar	63.51	7.50
6.	Tanga Khawar	66.75	7.42
7.	Loe Nala Sar	73.62	6.37
8.	Bori Khawar	75.65	6.54
9.	Volue Mela Khawar	60.68	5.21
10.	Lashora Khawar	79.29	9.00
11.	Ghalani Khawar	70.79	6.50
12.	Lala Chinar Khawar	80.91	9.50
13.	Cum Shelman Khawar	76.05	6.58
14.	Prang Dara Khawar	70.79	7.25
15.	Tarkho Khawar	117.31	14.00
16.	Pata Khel Khawar	101.13	12.50
17.	Spin Dand Khawar	91.02	12.50
18.	Hindo Khel Khawar	115.29	9.97
19.	<b>Total</b>	<b>1,450.23</b>	<b>149.26</b>

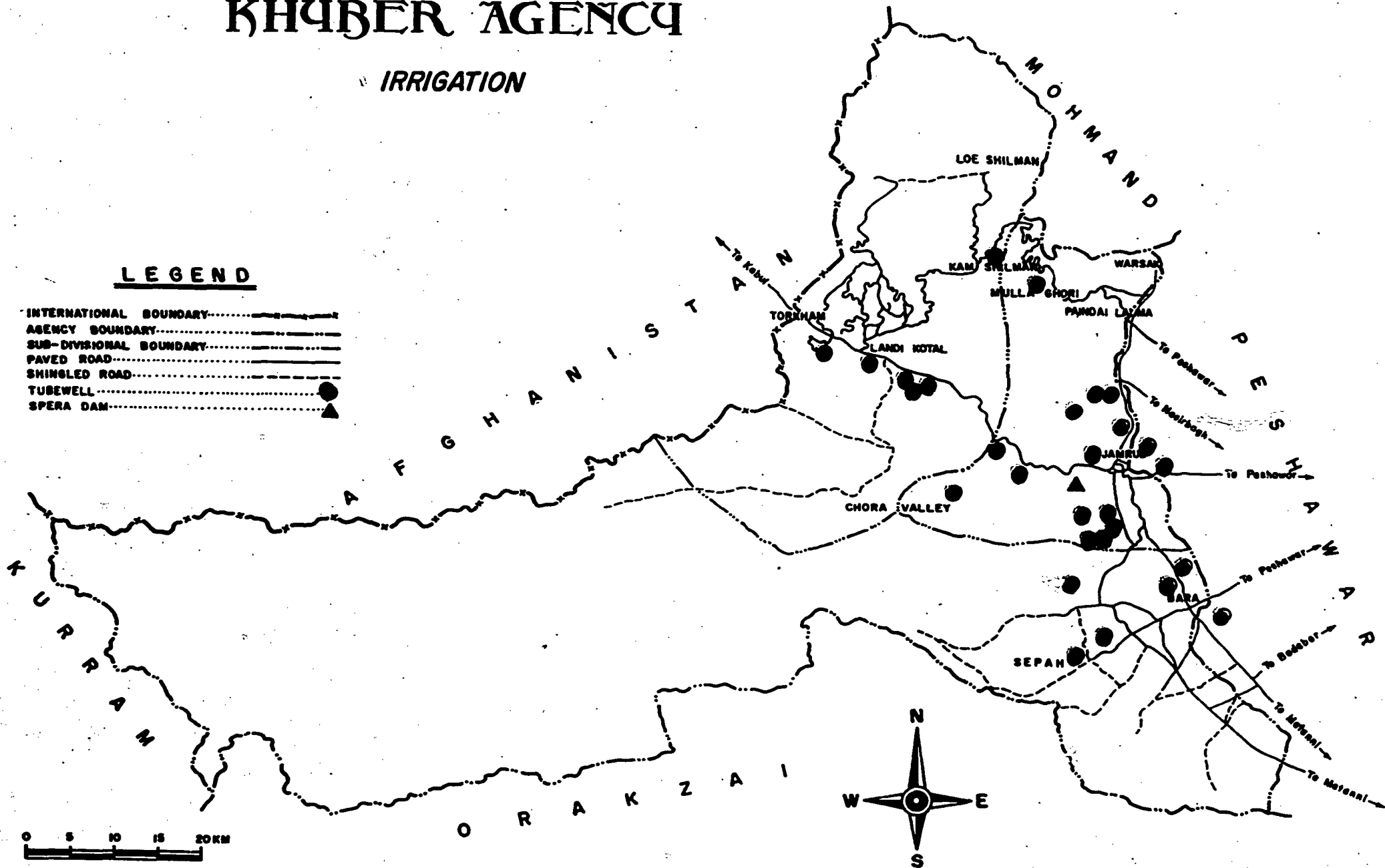
Source: FATA, DC, 1993

# KHIBER AGENCY

## IRRIGATION

### LEGEND

- INTERNATIONAL BOUNDARY.....
- AGENCY BOUNDARY.....
- SUB-DIVISIONAL BOUNDARY.....
- PAVED ROAD.....
- SHINGLED ROAD.....
- TUBEWELL.....●
- SPERA DAM.....▲



**Warsak Dam:**

As stated earlier in this section, the Agency draws on Warsak Dam for a part of its irrigation water. The Warsak Dam is located between Khyber and Mohmand Agencies. Some introductory information about this dam is given in Table VII.7.

The FATA DC proposes to conduct surveys of the following Khawars (storm water drains) for selection of sites for small dams and to determine their feasibility.

1. Nurai Khawar
2. Spange Khawar
3. Ugda Zarmina Khawar
4. Bary Khawar
5. Mashari, Waran Toi
6. Ugzano Kili, Tasank
7. Yego Mela, Tirrah Area
8. Dando Khawar
9. Chingai Nao
10. Bara Dara, Taoda Oba Khawar
11. Gadat Mela
12. Shah Zada Talao
13. Mandata, Ozuka Nullah
14. Ghora Khawar

Table VII.7

**INTRODUCTORY INFORMATION ABOUT  
WARSAK DAM WHICH CONTRIBUTES  
TO IRRIGATION IN KHYBER AGENCY**

1.	When Commissioned	1960		
2.	Capacity:			
	a) Power Generation	240 mw		
	b) Irrigation			
	Right Bank Canals .....	108,000 acres		
	Left Bank Canal .....	11,000 acres		
3.	Location:	Between Khyber and Mohmand Agencies		
4.	Length of Reservoir:	<ul style="list-style-type: none"> <li>• 26 miles</li> <li>• Surface area = 4 Sq. miles</li> <li>• Storage Capacity = 25,300 acre feet</li> </ul>		
5.	Canal System:			
	<u>Name of Canal</u>	<u>Length (ft)</u>	<u>Discharge</u>	<u>Hectare/Irrigated in 1989-90</u>
	1. Warsak Gravity Canal	226,000	311 cassoaks	42372
	2. Warsak Lift Canal	186,400	200 cassoaks	24269
	3. Warsak Left Bank Canal	92,536	45 cassoaks	9337
	4. Minor Canals	102,200	-	16581
6.	Localities Irrigated:	<ol style="list-style-type: none"> <li>1. Warsak</li> <li>2. Shahi Bala</li> <li>3. Palosi</li> <li>4. Tehkal</li> <li>5. Sorizai</li> <li>6. Urmar</li> <li>7. Pabbi</li> <li>8. Regi</li> <li>9. Mashogagar</li> <li>10. Badaber and a large number of small villages on the Left Bank Canal.</li> </ol>		
8.	Administration	Chief Engineer, Hydel North Warsak (WAPDA)		
9.	The FATA authorities are not associated with the Dam administration in any way.			

Sources: 1. Operation Engineer, Warsak Power Station, Warsak.  
2. Executive Engineer Warsak Canal Division,  
University Road, Peshawar.

## B. Ground Water

Ground water is utilized for irrigation purposes. Tubewells and dug wells have been sunk at different places in the Agency.

### 1. Tubewells

As early as 1981, the Agency had 40 tubewells. The number remained unchanged until 1986, when it rose to 42. In 1987, there were 46 and in 1988 it steeply declined to 15. Reasons for this steep decline could not be ascertained authentically, but it is believed that it happened largely due to the fall in the water table and repair/mechanical breakdown problems.

Table VII.8

#### TUBEWELLS IN KHYBER AGENCY

Year	Tubewells		
	Government	Private	Total
1980-81	39	1	40
1981-82	39	1	40
1982-83	39	1	40
1983-84	39	2	41
1984-85	39	2	41
1985-86	39	2	41
1986-87	40	2	42
1987-88	44	2	46
1988-89	10	5	15
1989-90	13	7	20
1990-91	13	7	20
1991-92	13	7	20
1992-93 (April)	28	7	35

Source: 1980-81 to 1991-92: Relevant yearly bulletins on Agricultural Statistics of NWFP, Agriculture Department, NWFP, Peshawar.

1992-93: For government tubewells the source is FATA, DC (unpublished). Official statistics of private tubewells in 1992-93 are not available, but these are believed to be unchanged at the 1991-92 number.



In April 1993, the installation of 39 new tubewells was in progress in different parts of the Agency. When these 39 tubewells are commissioned, the number of government owned irrigation tubewells will rise to 67. Table VII.9 shows the status of 52 drilled wells and the depth of the water in these locations.

Table-VII.9

## TUBEWELLS/TESTWELLS SCHEMES IN KHYBER AGENCY

Sr NO	Location	Drilled depth (Feet)	W.S.L (Feet)	Remarks
1.	Mula Gori Marble Factory	150	-	Abandoned
2.	Bara Cigarette Factory	600	-	Abandoned
3.	Kala Khel	171	78	Commissioned
4.	Kala Khel	255	104	Commissioned (for drinking water supply) scheme
5.	Kala Khel	280	58	Commissioned
6.	Kala Khel	178	90	Commissioned
7.	Right side of Right Bank Canal	400	-	Abandoned
8.	Right side of Right Bank Canal	440	-	Abandoned
9.	Shalman	227	-	Commissioned
10.	Qamber Khel	238	124	(Less discharge)
11.	Jamrud Near Railway line	350	138	Commissioned
12.	Bara-Madas Khel	332	183	Commissioned
13.	Jamrud Warsak Road	400	106	Commissioned
14.	Left side of Left Bank Canal (Malik)	226	170	Abandoned
15.	Din Khel)	425	319	Commissioned
16.	Nikki Khel	155	112	Less discharged
17.	Landi Kotal Ghundi	189	45	Commissioned
18.	Jamrud Lala Khel	304	140	Handed over to PHED
19.	Jamrud Lala Khel	290	118	Commissioned
20.	Ghundi	190	50	Pelted with stones
21.	Jamrud Drusi Khel	286	90	Commissioned
22.	Ghundi	160	24	Commissioned
23.	Kuki Khel (Bara)	255	-	Abandoned
24.	Kuki Khel (Bara)	101	125	Abandoned
25.	Kuki Khel (Gandau)	245	106	Commissioned
26.	Malik Din Khel	300	160	Commissioned
27.	Nikki Khel	446	350	Commissioned
28.	Nikki Khel	450	351	Commissioned
29.	Sultan Khel	455	360	Commissioned
30.	Kakhta Baig	485	270	Commissioned
31.	Namal Khel	496	311	Commissioned
32.	Mastal Khel	415	190	Commissioned
33.	Shah Kas	340	280	Abandoned
34.	Shah Kas	400	255	Commissioned
35.	Shah Kas	455	311	Commissioned
36.	Shah Kas	472	289	Commissioned
37.	Shah Kas	451	290	Energization in prog.
38.	Shah Kas	455	298	Energization in prog.
39.	Mada Khel	455	206	Energization in Progress
40.	Hassan Khel Kili	520	144	Commissioned
41.	Samagari	540	70	Commissioned
42.	Karrapa	570	28	Commissioned
43.	Manajan Kili	462	153	Energization in progress
44.	Nazir Gul Kili	500	144	Commissioned
45.	Dobrai Talou	470	69	Energization in progress
49.	Shalober	508	97	Commissioned
50.	Dawal Haq	470	110	Energization in progress
51.	Haji Gul Mar	295	115	Energization in progress
52.	Haji Ibrahim	310	-	Less discharge

W.S.L. = Water Surface Level

Source: FATA DC. Inventory of Completed tubewells schemes in Mohmand Agency (unpublished Feb. 1993).

## 2. Dug Wells

Construction of an additional 123 dugwells is in progress in different parts of the Agency. They are expected to be completed during 1993.

## 3. Potable Water Supply

Slow but steady progress has been made by the Public Health Engineering Department (PHED) during the last two decades in the potable water sector. According to PHED, by June of 1992, 64% of the Agency's population had been extended potable water supply facilities through house connections, community tanks, and public stand posts. As shown in Table VII.10, in terms of population served by the potable water supply schemes, only North Waziristan Agency leads this Agency.

Table VII.10

**POTABLE WATER SUPPLY SCHEMES  
COMPLETED UPTO JUNE, 1992  
IN TRIBAL AGENCIES**

Sr. No.	Tribal Agency	Schemes Completed	%age of Agency's total population served by the schemes
1.	Bajaur	47	36
2.	Mohmand	39	43
3.	Khyber	53	64
4.	Kurram	48	43
5.	Orakzai	35	25
6.	North Waziristan	62	72
7.	South Waziristan	52	31

Source: PHED, NWFP, Peshawar.

Tubewells are the most important source of potable water. The Agency has 44 tubewells for supply of drinking water. The other sources are infiltration galleries, canals, and springs in that order.

Water is supplied in most places through community stand posts. Community tanks and home connections rank second and third in the order of importance as a means of water supply.

The 53 potable water supply schemes completed by June, 1992 are listed in Table VII.11.

# KHIBER AGENCY

## POTABLE WATER

### LEGEND

- INTERNATIONAL BOUNDARY.....
- AGENCY BOUNDARY.....
- SUB-DIVISIONAL BOUNDARY.....
- PAVED ROAD.....
- SHINGLED ROAD.....
- TUBEWELLS FOR POTABLE WATER.....●

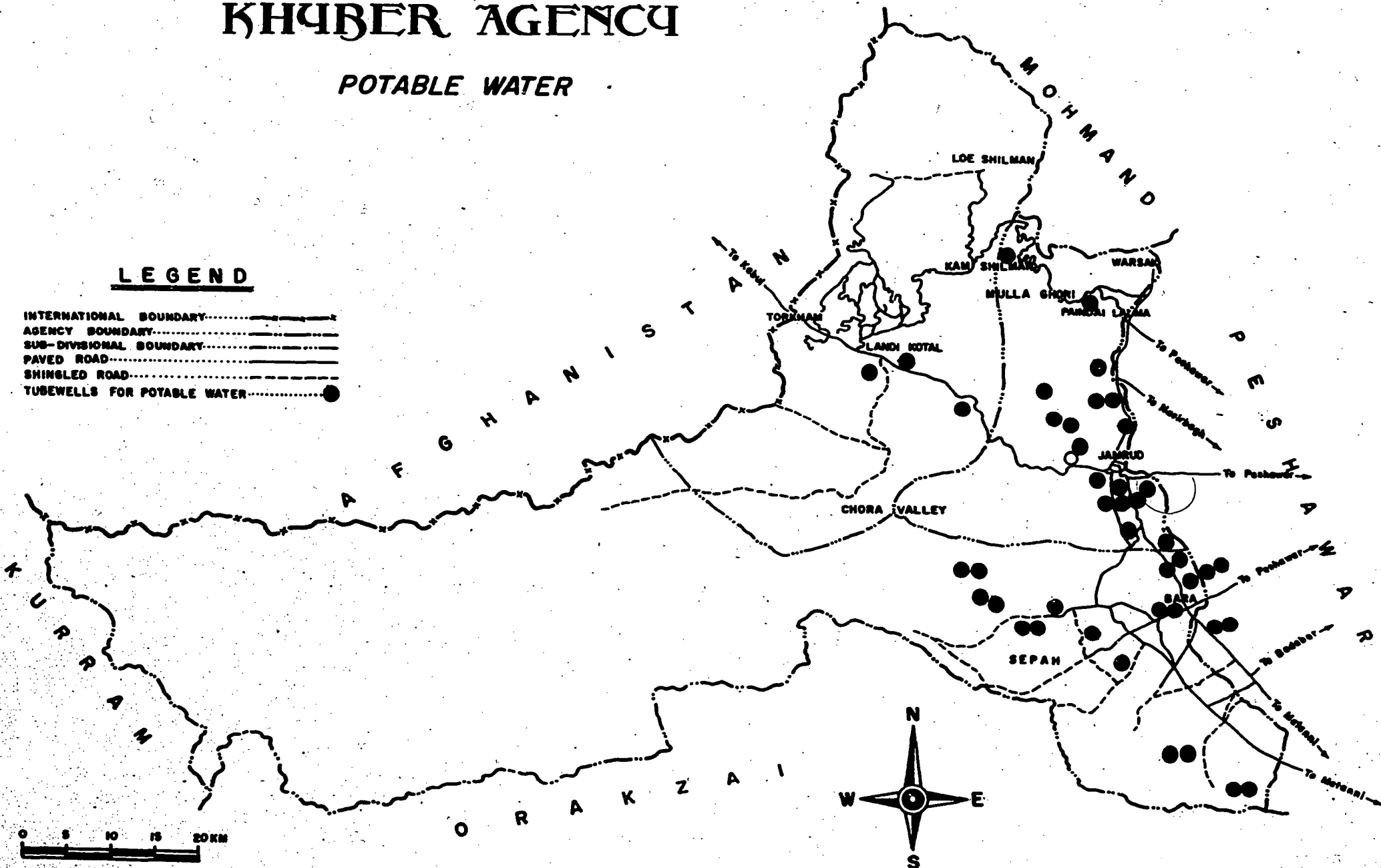


Table VII.11

**POTABLE WATER SUPPLY SCHEMES COMPLETED  
IN KHYBER AGENCY AS OF JUNE 1992**

Sr. No.	Name of Scheme	Year of Completion	Source of Water	Service Provided	Completion cost (Rs/million)
1.	Khyber Pass	1974-75	IG	CT/HC/SP	8.708
2.	Jamrud Phase-I	1972-73	CT	CT	1.083
3.	Jamrud Phase-II	1977-78	TW	SP/HC	0.807
4.	Qamber Khel	1979-80	TW	SP/HC	3.030
5.	Shah Lubar	1979-80	TW	CT	1.178
6.	Shah Lubar P-II	1980-81	TW	CT	0.979
7.	E of Jamrud P-II	1980-81	TW	CT	0.100
8.	Lowre Miana	1980-81	IG	CT	2.131
9.	Alam Guddar	1981-82	CT	CT	4.138
10.	Khajori	1983-84	IG	HC/SP	0.261
11.	Extn: WSS Jamrud	1984-85	TW	SP	1.776
12.	I/E WSS Toda Cheena	1984-85	IG	CT	0.290
13.	WSS Khojori Plan	1985-86	TW	SP	0.558
14.	WSS Khyber Pass by Ground Water	1985-86	TW	CT	2.775
15.	WSS Bala Rogha	1985-86	IG	HC/SP	0.199
16.	WSS Kharkai Jamrud	1985-86	TW	SP	0.447
17.	Wazir Dhand Shah Kas	1986-87	TW	SP/HC	0.700
18.	I/E of WSS K/Agency	1986-87	TW	SP	1.871
19.	WSS Katia Khel, Sahbas Koroon	1986-87	TW	CT	1.898
20.	WSS Bara Tehsil	1986-87	TW	SP	0.450
21.	WSS Guder Jamrud	1986-87	TW	SP	0.755
22.	Toor Khel Jamrud	1987-88	TW	SP	0.722
23.	Sheikh Mal Khel Gandhi Khel village	1987-88	TW	SP	0.728
24.	I/of WSS Alamguddar	1987-88	TW	SP	1.931
25.	WSS Tangi	1987-88	S	CT	0.677
26.	Fort Slop	1987-88	TW	SP	0.998

(Contd....)

Table VII.11 (Cont..)

**POTABLE WATER SUPPLY SCHEMES COMPLETED  
IN KHYBER AGENCY AS OF JUNE 1992**

Sr. No.	Name of Scheme	Year of Completion	Source of Water	Service Provided	Completion cost (Rs/million)
27.	WSS Haji Zarif & Hakim village	1987-88	TW	HC	2.082
28.	WSS Hisara	1987-88	TW	SP	0.700
29.	Hospital and Residence Dogra Picket	1987-88	TW	SP	0.500
30.	Construction of OHR 20,000 Glns: FC Fort Bara.	1987-88	TW	HC	0.509
31.	Ground water investigation for drinking purpose in Khyber Agency	1988-89	TW	CT	0.109
32.	WSS Qamber Khel (Add: service)	1988-89	TW	CT	0.693
33.	WSS New Abadi	1988-89	TW	CT	0.939
34.	WSS Kas Area Jamrud	1988-89	TW	SP	0.805
35.	WSS Bar Qamber Khel	1988-89	TW	SP	0.925
36.	WSS Sher Khan Khel (Jamrud)	1988-89	TW	CT	0.250
37.	WSS Warsak Road (Jamrud)	1989-90	TW	SP	0.6678
38.	WSS Shalman	1989-90	TW	SP	0.968
39.	WSS Toda China	1989-90	TW	SP	0.417
40.	WSS Drey Khuley	1989-90	IG	SP	1.627
41.	Intermediate Booster Pumping station for Ali Masjid	1989-90	TW	SP	1.921
42.	WSS Morgazi Bada	TW1990-91	TW	SP	0.7938
43.	WSS spary village	1990-91	TW	SP/CT	0.9164
44.	WSS Milward area Akakhel Bara	1990-91	TW	SP	2.426
45.	WSS Mania Khel	1990-91	TW	SP	0.650
46.	Inst: of Automatic Regulator at Ali Masjid	1990-91	TW	SP	N.A
47.	Imp: of WSS Lowera Maina	1991-92	TW	CT	2.4470
48.	WSS Ghundi Mania Khel	1991-92	TW	HC	1.107
49.	WSS Ghundi Sher Khan Khel	1991-92	TW	CT	0.913
50.	WSS Farsh Killi Khajori Bar Qamber Khel	1991-92	TW	TW	2.134
51.	WSS Remaining area of Qalanga Ake Khel Bara Tehsil	1991-92	TW	TW-2	1.410
52.	WSS Allah Dhand	1991-92	TW	SP	2.763
53.	G.Water investigation in Zakha Khel Area	1991-92	TW	CT	0.978
<b>Total Cost</b>					<b>85.809</b>

IG = Infiltration gallery  
CT = Community tank

HC = House connection  
SP = Stand posts

TW = Tubewells  
S = Spring

Source: PHED, FATA DC, June 1992

## VIII. ANIMAL HUSBANDRY

The prospects for animal husbandry activities in Khyber Agency are good. Presently animal husbandry activities are limited due to the shortage of staff and funds. The inaccessibility of the larger Afridi Tirah area, which has a large potential for agriculture related activities, has also limited animal husbandry activities. Like other Tribal Agencies, sheep and goats comprise the majority of livestock in Khyber Agency. They are kept for milk consumption by the owners and are not generally sold for commercial purposes. They graze and feed on maize and wheat stalk which are stored for fodder purposes in winter. Cattle are also reared in large numbers, second only to sheep and goats. Buffalos are rare in the Agency. Mules and donkeys are kept to transport goods, water and fire-wood. They are also used for construction purposes. In addition, poultry is raised for egg production and occasionally eggs and chickens are sold within the local community.

A Livestock Census was conducted in 1986. The results for Khyber are presented below in Table VIII.1. The census's introduction recommends, however, that the Census Tribal Agency findings should be taken with a "grain of salt".

Table VIII.1

### 1986 ANIMAL CENSUS KHYBER AGENCY

Type of Animals -----	Numbers as of 1986 -----
Cattle	36,035
Buffaloes	2,022
Sheep	45,499
Goats	95,257
Camels	75
Horses	30
Mules	1,555
Poultry	306,104

Source: Livestock Census, 1986

Based on these figures, the Agency has 14 cattle per square kilometer, 1 buffalo per square kilometer, 18 sheep per square kilometer, 39 goats per square kilometer and 120 poultry per square kilometer. These statistics reflect a limited number of livestock concentrated in Khyber Agency.

There are 20 veterinary facilities located in Khyber Agency. These include three veterinary hospitals, nine veterinary dispensaries and eight veterinary centers. These facilities provide the following services:

- 1) Curative functions in the treatment of animals.
- 2) Vaccination against contagious disease.

The location and staffing of these facilities is shown in Table VIII.2.

**Table VIII.2**

**PLACEMENT OF VETERINARY FACILITIES**

Locations	Subdivision	Veterinary Officers	Stock Assistants Veterinary Compounders	Inseminator
-----	-----	-----	-----	-----
<b>Hospitals</b>				
Landikotal	Landikotal	1	1	1
Jamrud	Jamrud	1	1	
Bara	Bara	1	1	
<b>Dispensaries</b>				
Kam Shalman	Landikotal		1	
Loe Shalman	"		1	
Ali Masjid	"		1	
Mullagori	Jamrud		1	
Jabba	"		1	
Chappari	"		1	
Choorra	"		2	
Fort slope	Bara		1	
Milward	"		1	
<b>Veterinary Centers</b>				
			Stock Assistants/ Veterinary Compounder	
			-----	
Breg	Landikotal		1	
Shinaloo	"		1	
Karamna	"		1	
Lowar Maina	Jamrud		1	
Toda Chena	Bara		1	
Sara Chena	"		1	
Shalobar	"		1	
Akhun Talab	"		1	
Source:				



Veterinary hospitals have more facilities, equipment and veterinary officers than the veterinary dispensaries/centers which are assigned a limited staff, generally consisting of a single veterinary compounder or stock assistant.

Besides these facilities, there is one insemination facility at Landikotal. One inseminator is assigned to this facility and on average, 60 cows are inseminated monthly. The percentage of veterinary dispensaries and centers per subdivision are given in Table VIII.3.

**Table VIII.3**

**Percentage distribution of veterinary dispensaries and centers by sub-division**

Sub-division	Percentage of Agency Population	Percentage of Agency Veterinary facilities
-----	-----	-----
	%	%
Bara	51	35
Jamrud	21	30
Landikotal	28	35

Though Bara subdivision has the highest population figures of all three subdivisions, it has fewer veterinary facilities compared to Jamrud and Landikotal.

The types of animal diseases found in the Agency are listed below:

**A. Types of diseases:**

**1) Contagious diseases**

Diseases prevalent in cattle and buffalo are Foot and Mouth (FM), Hemorrhagic septicaemia (HS) and Black Quarter (BQ), Anthrax and Pleuropneumonia are commonplace among sheep and goats.

**2) Non-Contagious diseases**

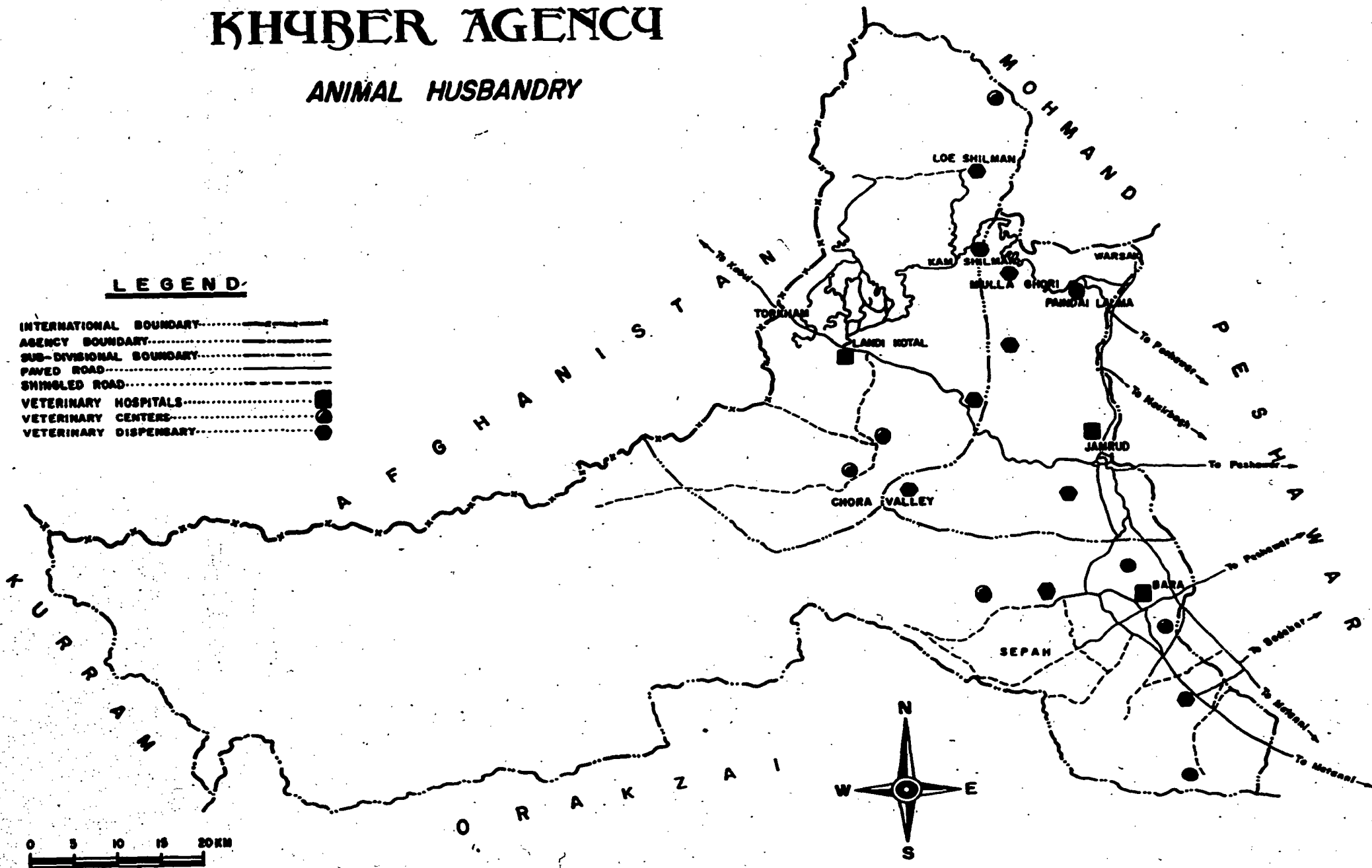
Veterinary institutions have recorded tympanitis, impaction, white scores, dermatitis, pneumonia, brucellosis, metritis, pregnancy toxemia, anaplasmosis, trypanosomiasis, babesiosis, coccidiosis, and diarrhea of all kinds as the common diseases found in the region's livestock.

# KHIBER AGENCY

## ANIMAL HUSBANDRY

### LEGEND

- INTERNATIONAL BOUNDARY.....
- AGENCY BOUNDARY.....
- SUB-DIVISIONAL BOUNDARY.....
- PAVED ROAD.....
- SHINGLED ROAD.....
- VETERINARY HOSPITALS.....
- VETERINARY CENTERS.....
- VETERINARY DISPENSARY.....



### 3) Parasitic Infestation:

The liver fluke disease, which is caused by *Fasciola hepatica* and *Fasciola gigantica* is one of the Agency's main problems. Various types of round worm and severe tapeworm infections are found in the area's livestock. Lungworm infection is prevalent amongst the Agency's, sheep and goats.

A wide range of ectoparasite infestation is encountered within the region. Tick infestation, however, is the most hazardous as heavy losses are often incurred.

#### Treatment

The total number of animals treated at veterinary facilities from 1989-90 to 1991-92 are as follows:

Table VIII.4

#### NUMBER OF ANIMALS TREATED

Animals treated -----	1989-90 -----	1990-91 -----	1991-92 -----
1) Out Patients	11,382	12,163	12,873
2) Artificial Insemination			
a) Cows,	600	515	400
b) Buffaloes	113	73	40

The number of animals treated has risen during the past three years while the number of inseminations have decreased.

#### Vaccination

Vaccinations are an important part of the veterinary facilities, workload. According to the data provided by the Livestock department, the vaccination trend from 1989-90 to 1991-92 is on a gradual rise. The data on vaccinations are as follows:

Table VIII.5

#### VACCINATION STATISTICS

Vaccinations -----	1989-90 -----	1990-91 -----	1991-92 -----
Animals	9,700	10,600	10,850
Poultry	60,000	59,400	63,590

Source: Livestock office, Khyber Agency

## B. Agency Livestock Administration

Located in Peshawar, an Assistant Director of Livestock oversees all of the Khyber Agency's operations. The Department's efficiency and effectiveness is inhibited by a lack of funds; the Assistant Director does not even have a phone. There is no official transport from the Livestock Department to the 20 veterinary facilities scattered in various areas of Khyber Agency as there are no funds to pay for travelling expenses. The veterinary staff's morale is very low as there are limited promotional opportunities.

The Headquarter's office annually distributes around 15 Bethel bucks and 12 Awasi sheep to various people for improved breeding. The distribution list is established by both the Livestock Department and the political authorities. There lacks a selection process which is based on rational criteria. Monitors must also be hired so that results can be recorded accurately.

The insemination center at Landikotal has a shortage of liquid nitrogen gas. Semen must be kept in liquid nitrogen for preservation. Due to shortages, inseminations only take place a few days each month. People that bring their cattle in to be serviced often leave without positive results.

There is also a shortage of vaccine due to insufficient funds. Moreover the enterotoxemia disease found in sheep and goat (common in winter season) and the black garter disease found in cattle cause high mortality rates due to the shortage of vaccines.

None of the veterinary facilities have boarding arrangements to keep animals for treatment.

The Field staff stationed at the dispensaries and centers only visit villages to vaccinate poultry and animals.

## IX. FORESTRY

### A. Forest Resources

The total area of Khyber Agency is 644,618 acres. Only 20,000 acres are covered by natural vegetation. The total estimated area under block plantation forests is 4,035 acres. This entire area is privately owned by different tribes whose members cut down the trees as they wish.

The major forested areas in Khyber Agency are as follows:

1. Madan valley
2. Bazar valley
3. Area near Pak-Afghan border
4. Area near the border of Khyber and Orakzai Agencies

The following species are indigenous to the Agency.

- |                    |                    |
|--------------------|--------------------|
| 1. Prosopis        | Prosopis juliflora |
| 2. Phulai          | Acacia modesta     |
| 3. Kao             | Olea cuspidata     |
| 4. Bair (Ziziphus) | Ziziphus memularia |
| 5. Gurgura         | Monothea boxifolia |
| 6. Blue Pine       | Pinus wallichidna  |
| 7. Cedar           | Cedrus deodar      |
| 8. Oak             | Quercus incan      |
| 9. Sanatha         | Dodonia viscosa    |

According to the Forest officer, none of the communities prohibit the cutting of immature trees. Moreover all the forested areas are located in inaccessible areas of Khyber Agency where the Forest Department has no control.

At present, no logging operations are conducted by the Forest Department. In addition, the Department hasn't any data pertaining to private and commercial logging operations underway.

### Forest Department Activities

The Forest Department staff in the Agency consists of one Forest Officer, 12 Foresters and 28 Forest Guards. The Forest office responsible for Khyber Agency is located in Peshawar. The responsibilities of a Forester varies and depends on the size of the block plantation. There is one forest guard for each nursery and block plantation. There are no river side plantations owned by the Government.

The Forest Department has established block plantations on 4,034 acres in Khyber Agency from 1976-77 to 1991-92. The Department acquires a piece of land from the local people on a contract basis

planting 450 trees per acre. Generally, the Forest Department does not acquire land for plantations less than 30 acres. The owner also gets one job of guard for every 150 acres of land and receives 750 rupees per month from the Forest Department. The Department takes care of the plantation for 3 years and then gives it back to the owner. Usually a forest is developed in eight to ten years. Normally, eight acres of forest can earn about one lakh rupees for the owner. After cutting the trees, it takes six to eight years for the trees to grow again. Eucalyptus, phulai, kikar and ailanthus are the most commonly grown species.

There are six nurseries providing trees for use in Khyber Agency. Details of these six nurseries are as follows:

Table IX.1

LOCATION AND NUMBER OF PLANTS IN NURSERIES

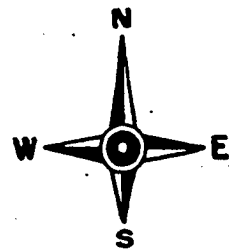
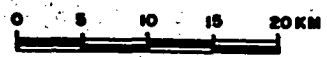
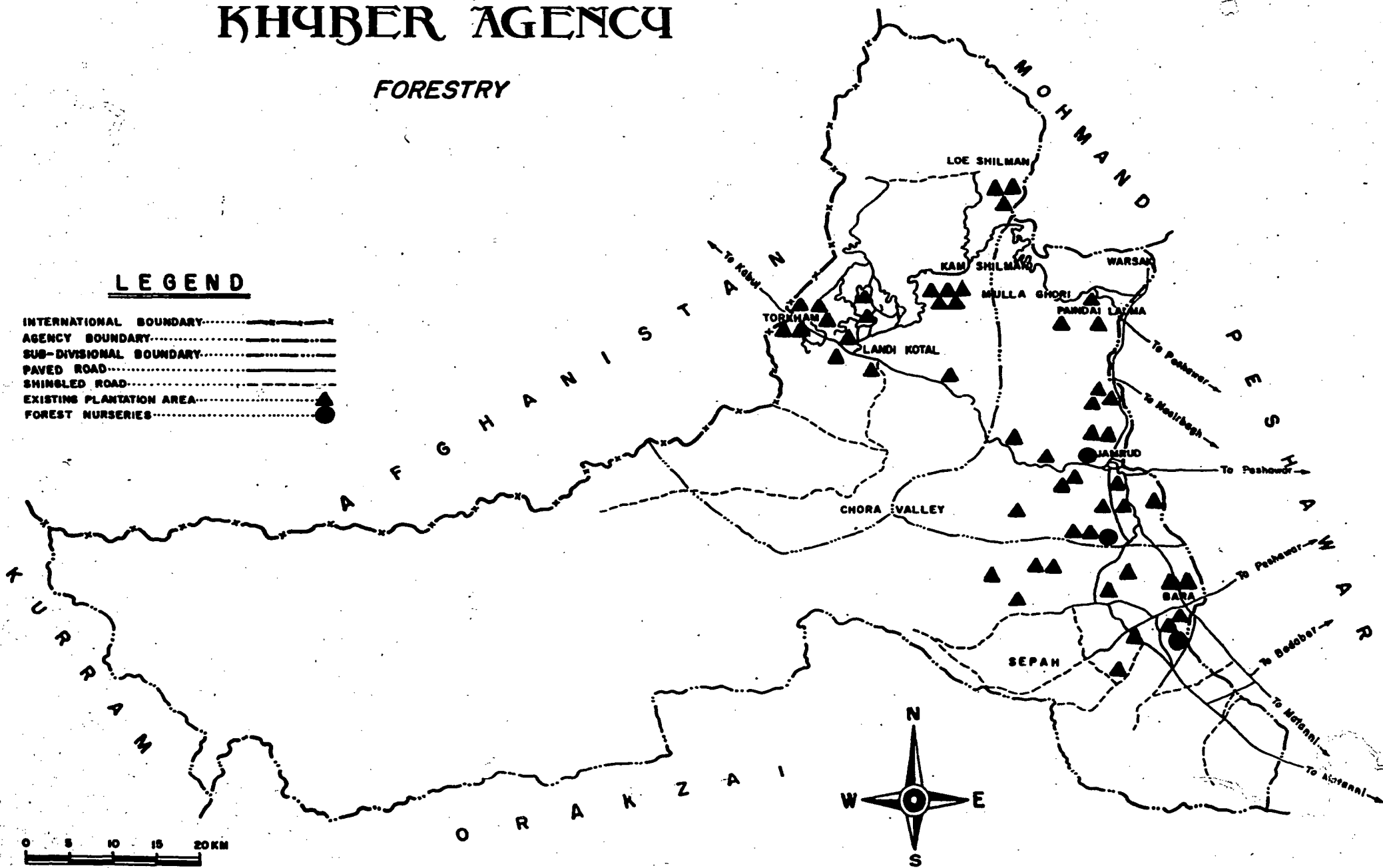
S.No	Location	Species	Number of Plants in April, 1993
1.	Headquarters Nursery at Peshawar	Eucalyptus Kikar, Samtha etc.	500,000
2.	Khalid Abad Nursery at Raigi	Eucalyptus Simal, Sires Poplar, Toot Ailanthus Shisham Mulberry	300,000
3.	Jamrud Nursery	Eucalyptus, Kikar, Phulai Iple, Olenndar Farash	230,000
4.	Akea Khel Nursery at Bara	Eucalyptus Kikar, Dilenthus Poplar, Sires Amred	900,000
5.	Tandail Nursery at Bara	Eucalyptus Kikar, Phulai, etc.	500,000
6.	Khattak Pull near Baghbanah	Eucalyptus Kikar, Phulai, etc.	250,000

# KHUBER AGENCY

## FORESTRY

### LEGEND

- INTERNATIONAL BOUNDARY.....
- AGENCY BOUNDARY.....
- SUB-DIVISIONAL BOUNDARY.....
- PAVED ROAD.....
- SHINGLED ROAD.....
- EXISTING PLANTATION AREA.....▲
- FOREST NURSERIES.....●



The department normally charges Rs. 0.25 per plant in a plastic bag and 0.10 per bare-rooted plant. About 50,000 plants were distributed free of cost to the Agency residents and various government agencies. The rest of the trees were utilized by the Forest Department for its own purposes.

According to the Forest Department, during May of 1993, approximately 150,000 plants were being raised in the farmers' nurseries at three different locations in Bara subdivision. The Forest Department will purchase the plants from the farmers and distribute them, free of cost, to the Agency residents.



## X. COMMUNICATIONS

### A. Roads

There are many points of entry into Khyber Agency from Pakistan. Starting at Peshawar, the main Peshawar-Jamrud road enters the Khyber Agency 20 kilometers away and leads to Jamrud, a main town of Khyber, which is 25 kilometers away from Peshawar. The same road crosses the Agency via Khyber Pass through Landikotal (a big town) and to Torkhum, (Pak-Afghan border) which is 41 kilometers from Jamrud. From Torkhum, the GT Road leads to Kabul, the capital of Afghanistan via Jalalabad, another major city of Afghanistan. Another main entry point to Khyber Agency is through Bara which is approximately 12 kilometers from Peshawar. There are also roads to Khyber Agency through Mattani and entry points from Mohmand Agency via Warsak Dam.

The Communications and Works (C&W) Department is responsible for the maintenance of roads in Khyber Agency. It has an Agency office at Jamrud with an Executive Engineer (XEN) as its head.

As of March 1993, the Agency had 678 kilometers of roads in which 346 kilometers were black-topped and 332 kilometers shingled. Description of major roads are given in Table X.1.

Table X.1

**MAJOR ROAD STATISTICS  
AS OF APRIL 1993**

S.No	Name of Road	Length in Kilometers		Subdivision
		Black Topped	Shingled	
1)	Jamrud - Torkham Road (M-5) (GT Road)	41 Km.		
	i) Jamrud - Ali Masjid Section	15 Km.		Jamrud
	ii) Ali Masjid - Torkham Section	26 Km.		Landikotal
2)	Mullagori Road Landikotal to Warsak Road (at Shangai village)	41 Km.	23 Km.	Landikotal
	i) Landikotal to Kom Shalman Section	16 Km.		
	ii) Kam Shalman to Shaheed Mina Section (Marble mines)		23 Km.	Landikotal
	iii) Shaheed Mina to Warsak Road Section	25 Km.		Jamrud
3)	Frontier Road-I Jamrud to Bara			Jamrud
	i) From Takhta Bag Piquet to Enzero Piquet	7 Km.		Jamrud
	ii) Enzero Piquet to Bara Tehsil	5.87 Km.		Bara
4)	Frontier Road-II Bara to Mattani	16 Km.		Bara
5)	Frontier Road to Fort Salop Road Via Samghakhi	9 Km.		
	i) Samghakhi to Samghakhi (J - 3)	3 Km.		Jamrud
	ii) Shanghakhi to Kohi Sher Haider	6 Km.		Bara

S.No	Name of Road	Length in Kilometers		Subdivision
		Black Topped	Shingled	
6)	Gundi Sar Road (From Warsak Road to Ghundi Sar Post)		7.11 Km.	Jamrud
7)	Jamrud to Samghakhi	6 Km.		Jamrud
8)	Bara Tehsil to Spin Qamar/Gandow Via Dogra Piquet	11 Km.	4.5 Km	Bara
9)	Dogra to Fort Salop (Khazani)	8.37 Km.		Bara.
10)	Spin Qambar to Milward via Jhansi camp	10.65 Km.		Bara
11)	Milward to Mattani (A - 3)	10 Km.		Bara
12)	Milward to Frontier Road (A - 8)	4.70 Km.		Bara
13)	Aka Khel-2 (A - 2) (Sanda Chap at Bara - Mattani road to Alam Killi		9 Km.	Bara
14)	Ajab Talao at Bara - Mattani road to Zawa (A-5)		21 Km.	Bara
15)	Shin Kamar Road (From Zarabdin Killi (Nami Qamar) to Shin Qamar		8 Km.	Bara
16)	Fort Salop to Nami Qamar	5 Km.		Bara
17)	Landikotal to Loe Shalman via Inzari	21 Km.		Landikotal

S.No	Name of Road	Length in Kilometers		Subdivision
		Black Topped	Shingled	
18)	Landikotal to Char Bagh at Chargali Road	7.75 Km.		Landikotal
19)	Kam Shalman to Loe Shalman	16 Km.		Landikotal
20)	Bazar Road Phase I (From Ziarai village (N-5 road) to Karmna		25 Km.	

#### Roads Under Construction

1)	Sheikhan to Khajuri Via Killi Bara	6.50 Km.		
2)	Qamber Abid to Shin Kog	16 Km.		Bara.
3)	Bazar Road Phase II (From Karmna to Mehmood Killi)		20 Km.	

#### Planned Roads

i)	From Karamana to Satsubi Via Taghyan	10 Km. (Under Construction)	6 Km. (Planned)	Landikotal
ii)	From Zarabdin Killi to Bagh	83 Km.		Bara
iii)	Extension of Bazar Road to Proposed Tirrah Road		25 Km	Bara

Percentage share of each subdivision from overall Agency road network is given in Table X.2.

Table X.2

#### PERCENTAGE SHARE OF AGENCY'S ROAD NETWORK ON SUBDIVISION BASIS

S.No	Subdivision	%age share of Agency's Population %	%age share of Black topped road network %	%age share of Agency's Shingled road network %
1	Bara	51	23	7
2	Jamrud	21	33	44
3	Landikotal	28	44	49

Bara subdivision has a large inaccessible area, Tirah. Only the parts of Bara that are close to Peshawar have a road network. A road from Fort Slop in the Bara subdivision to the Bazar area of Tirah is under construction. In Afridi Tirah, there are, for the most part, no existing roads. Construction of roads in the Tirah area is opposed by some tribes.

The Jamrud subdivision in the Mulagori area is being connected to the Shalman area in Landikotal subdivision through a road network. In Landikotal subdivision, there is a road network in the Shalman areas which is being improved.

**B. Telephone, Telegraph and Post offices:**

There are 16 Post offices in the Agency and five telephone exchanges that provide 1394 telephone connections to the Agency residents. There is also one telegraph office in the Agency located at Landikotal.

## XI. EDUCATION

### A. Primary Level

Most primary schools offer classes one to four. A few offer class five. Class V enrollment is counted as part of the middle school since the majority of class four students must have to transfer to a middle school if they want to attend class five.

#### 1. Girls' Primary Education

The number of girls' primary schools in each subdivision up to May 1993 was as follows:

Table XI.1

#### NUMBER OF GIRLS' PRIMARY SCHOOLS BY SUBDIVISIONS

Sub-division -----	Number of Schools -----
Bara	18
Jamrud	22
Landikotal	11
	-----
Total	51
	-----

Source: Agency Education office

The percentage of population and schools by sub-division are given in Table XI.2

Table XI.2

#### POPULATION VERSUS GIRLS' PRIMARY SCHOOLS

Sub-division -----	Percentage of Agency Population %	Percentage of Agencies' Girls' Primary Schools %
	-----	-----
Bara	51	35
Jamrud	21	43
Landikotal	28	22

Source: Researcher

The concentration of girls' primary schools is in Jamrud sub-division where 43% of Agency's schools are located for 21% of the Agency's population. The reason for this concentration is the close proximity of Jamrud with Peshawar. The Bara sub-division has a large inaccessible area of Tirah and the Landikotal sub-division has remote areas of Shalman. Hence, they have fewer schools.

Table XI.3 shows the number of Girls enrolled at the primary level from 1990-91 to 1992-93. This data also includes the enrollment of the primary sections of the middle and high schools as most of them have primary sections attached to them.

**Table XI.3**

**GIRLS' PRIMARY LEVEL ENROLLMENT**

Year	1Jr	1Sr	2nd	3rd	4th	Total
----	---	---	---	---	---	-----
1990-91	922	815	614	655	614	3,624
1991-92	1,297	813	514	294	518	3,436
1992-93	1,117	717	424	273	138	2,669

Source: Agency Education office

Using the 1981 Census data for the number of males age 5 to 9, assuming there would be approximately the same number of females, and by taking the 3.1% annual population growth rate, we can derive a female participation rate of roughly 7%.

The recruitment of female teachers from the Agency is a serious problem. Teachers are mainly recruited from outside the Agency. Out of 144 female primary teachers, only 9 are local. Though some of the non-local teachers are trained as a part of the Agency's quota, they later transfer to the settled areas to teach. Access of female teachers in remote areas such as Shalman is difficult. This problem will persist until numerous Agency domiciled teachers are available. In almost all the primary schools, children under five years of age attend even though they are not officially admitted. Parents send their children under age 5 to school along with their sisters in order to get them familiarized with the system. At present, there is one seriously overcrowded school at Wali Khel in Bara with 224 girls enrolled.

## 2. Boys' Primary Education

The number of boys' primary schools in each subdivision in 1993 was as follows:

Table XI.4

**NUMBER OF BOYS' PRIMARY SCHOOLS  
BY SUBDIVISION**

Subdivision	Number of Schools
Bara	55
Jamrud	63
Landikotal	41
Total	159

Source: Agency Education office

The percentage of population and schools by subdivision are given in Table XI.5

Table XI.5

**POPULATION VERSUS BOYS'  
PRIMARY SCHOOL**

Subdivision	Percentage of Agency Population %	Percentage of Agency's boys Primary Schools %
Bara	51	34
Jamrud	21	40
Landikotal	28	26

Source: Researcher

The concentration of boys' primary schools is in Jamrud subdivision. Table XI.6 shows boys' primary level enrollment from 1990-91 to 1992-93. This data also includes the enrollment of the primary section of the middle and high schools as most of them have primary sections attached to them.



# KHIBER AGENCY

## GIRLS SCHOOL

### LEGEND

- INTERNATIONAL BOUNDARY.....
- AGENCY BOUNDARY.....
- SUB-DIVISIONAL BOUNDARY.....
- PAVED ROAD.....
- SHINGLED ROAD.....
- MIDDLE SCHOOL.....
- HIGH SCHOOL.....

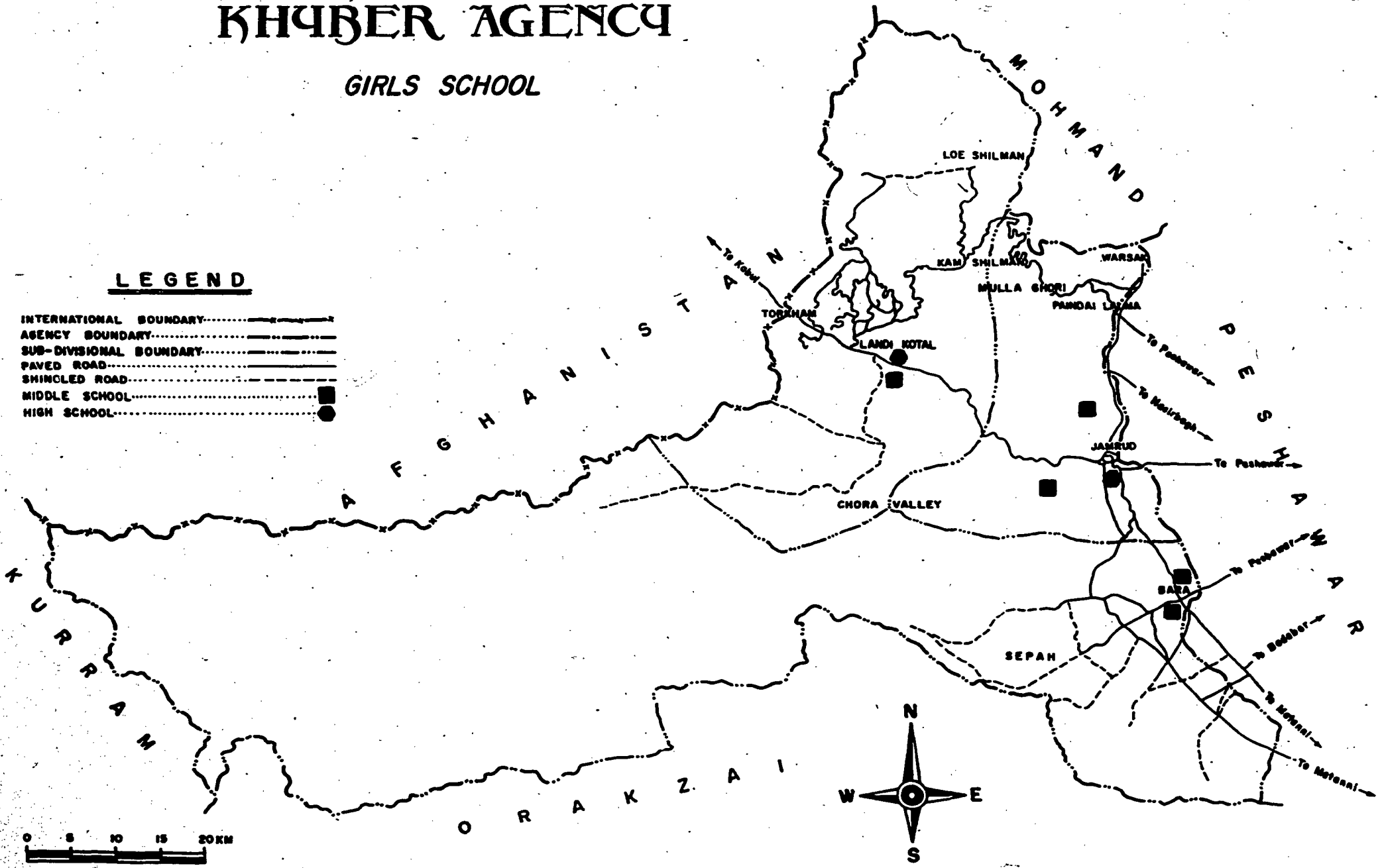


Table XI.6

**BOYS' PRIMARY LEVEL ENROLLMENTS**

Year	1Jr	1Sr	2nd	3rd	4th	Total
1990-91	6,390	4,733	3,922	3,370	2,406	20,821
1991-92	6,488	5,284	4,194	3,359	2,789	22,104
1992-93	7,605	6,267	5,172	4,194	3,477	26,715

Source: Agency Education office

Using the 1981 Census data and the 3.1% annual population growth rate, the number of males age 5-9 is estimated to equal 23,188, which in 1993 equals 34,484. The total boys' primary enrollment in 1993 is 26,715. This indicates approximately an 77% participation rate. These figures seem very high and can be explained by inaccurate data collection as the census may not have included data from the large inaccessible area of Tirah.

Most of the boys' primary schools in Khyber Agency are overcrowded. Children under five years of age attend the school unregistered. Almost all teachers are local and have completed the prescribed teachers' training courses.

A comparison of boys' primary education facilities in seven Tribal Agencies is as follows:

Table XI.7

**COMPARISON OF BOYS' PRIMARY SCHOOLS  
ENROLLMENTS OF ALL  
TRIBAL AGENCIES**

Agency	No. of Boys' Primary Schools in 1992-93	Enrollments 1992-93	Estimated Population in 1993	Area Sq. Km
Kurram	204	20,058	435,632	3,380
SWA	210	18,100	446,304	6,619
NWA	228	19,857	344,615	4,707
Orakzai	163	11,207	534,267	1,538
Bajaur	182	22,185	405,689	1,290
Mohmand	168	12,446	237,130	2,396
Khyber	159	26,715	422,738	2,576
<b>Total:</b>	<b>1,314</b>	<b>130,568</b>	<b>2,826,375</b>	<b>22,506</b>

Source: Directorate of Education, FATA

Khyber Agency has the lowest number of boys' primary schools of the seven Tribal Agencies, but in terms of enrollments it has the highest. This also indicates the over crowded conditions of the schools and the need to open more of them.

## B. Middle Level

All middle schools offer class V while some of the primary schools do too. Fifth class is, in this assessment, therefore counted with the middle class enrollment. Middle school is comprised of classes five through eight.

### 1. Girls' Middle Education

Upto May 1993, there were 5 girls' middle schools with two each located in Bara and Jamrud and one in Landikotal subdivisions. In all these schools, only the girls in the surrounding area attended. Middle schools enrollment is given in Table XI.8

Table XI.8

#### GIRLS' MIDDLE LEVEL ENROLLMENTS

Year	5th	6th	7th	8th	Total
----	----	----	----	----	----
1990-91	75	56	42	31	204
1991-92	97	42	30	16	185
1992-93	77	23	22	13	135

Source: Agency Education office

Enrollment figure are very low. Parents are not interested in sending their daughters to schools because of non availability of girls' schools in every village, family feuds, socio-cultural constraints and non availability of transport. There is also a problem of retaining and recruiting teachers. Because of these reasons, the female participation rate is negligible.

### 2. Boys' Middle Education

As of May 1993, there were 20 middle schools for boys' in Khyber Agency. The number of boys' middle schools by subdivision are as follows:

# KHIBER AGENCY

## BOYS SCHOOL

### LEGEND

- INTERNATIONAL BOUNDARY.....
- AGENCY BOUNDARY.....
- SUB-DIVISIONAL BOUNDARY.....
- PAVED ROAD.....
- SHINGLED ROAD.....
- MIDDLE SCHOOL.....
- HIGH SCHOOL.....
- DEGREE COLLEGE.....
- COLLEGE OF EDUCATION FOR  
ELEMENTARY TEACHERS.....
- INSERVICE TEACHERS TRAINING COLLEGE.....
- COMMERCIAL TRAINING INSTITUTE.....
- VOCATIONAL INSTITUTE.....

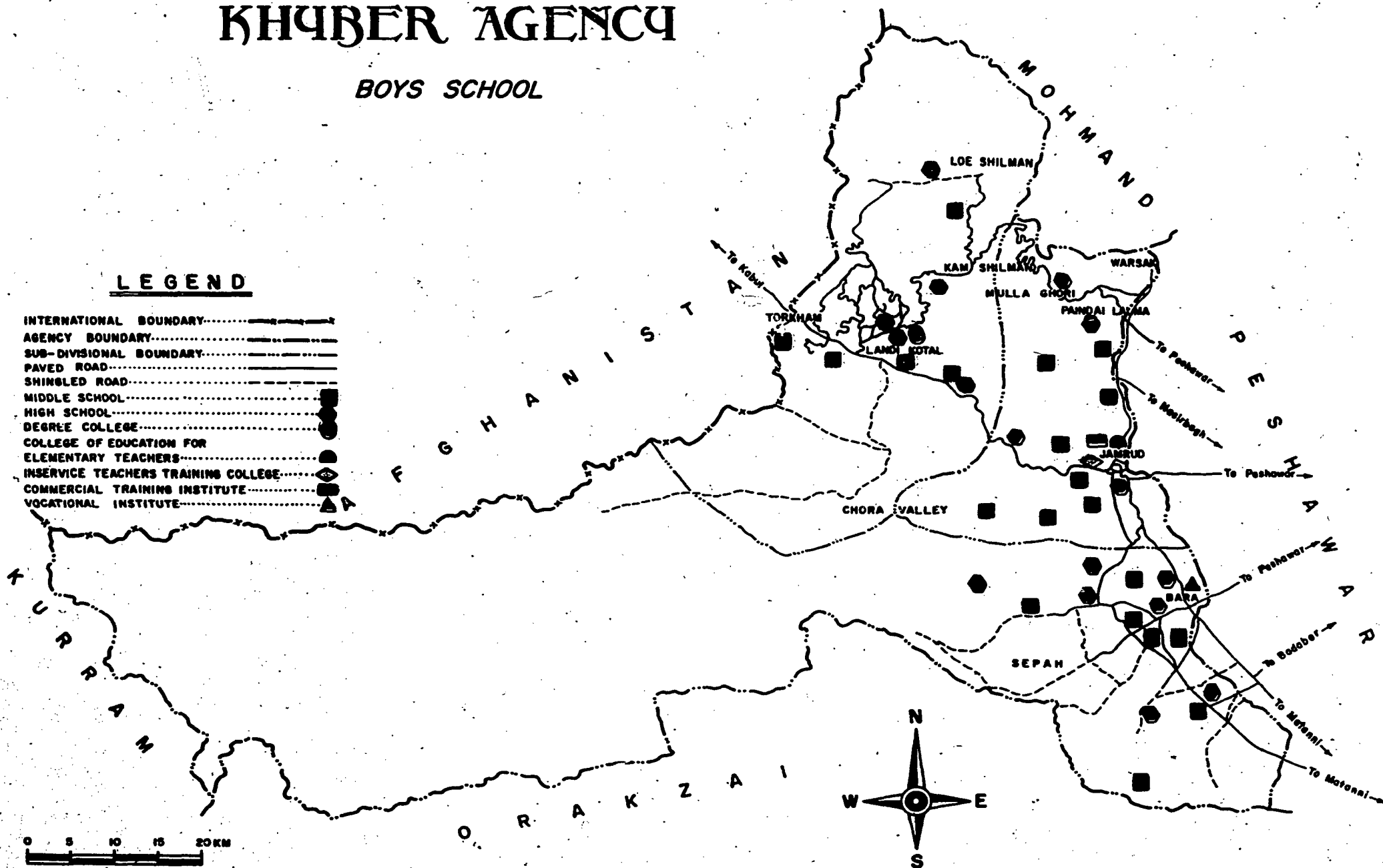


Table XI.9

## POPULATION VERSUS BOYS' MIDDLE SCHOOLS

Subdivision	Percentage of Agency Population	Number of Middle Schools	Percentage of Agency's Boys Middle Schools
	%		%
-----	-----	-----	-----
Bara	51	7	35
Jamrud	21	8	35
Landikotal	<u>28</u>	<u>5</u>	<u>30</u>
	1002	20	1002

Source: Researcher

The enrollments in the middle classes from 1990-91 to 1992-93 are given in Table XI.10

Table XI.10

## BOYS' MIDDLE LEVEL ENROLLMENT

Year	5th	6th	7th	8th	Total
-----	-----	-----	-----	-----	-----
1990-91	1,803	1,680	1,496	1,043	6,022
1991-92	1,745	1,562	1,269	963	5,539
1992-93	1,809	2,430	1,800	1,462	7,501

Source: Agency Education office

The participation rate of eligible male children from age 10-14 years is roughly 22%.

A comparison of boys' middle schools facilities in Khyber Agency with six other Tribal Agencies is as follows:

Table XI.11

**COMPARISON OF BOYS' MIDDLE SCHOOLS IN  
DIFFERENT TRIBAL AGENCIES**

Agency	No. of middle Schools in 1992-93	Enrollments 1992-93	Estimated Population in 1992-93	Areas Sq.Km
Kurram	25	5,623	435,632	3,380
SWA	37	3,791	446,304	6,619
NWA	40	5,330	344,615	4,707
Orakzai	14	2,042	534,267	1,538
Bajaur	17	5,266	405,689	1,290
Mohmand	22	3,859	237,130	2,396
Khyber	20	7,501	422,738	2,576
<b>Total:</b>	<b>175</b>	<b>33,412</b>	<b>2,826,375</b>	<b>22,506</b>

Source: Directorate of Education, FATA

Khyber Agency has lowest number of middle schools in all of the seven Tribal Agencies, but has the highest enrollment figures. This explains why the middle school sections are overcrowded.

### C. Secondary Level

Secondary schools include 9th and 10th classes. All secondary schools in the Agency have lower grades as well.

#### 1. Girls' Secondary Education

As of May 1993, there were two high schools for girls in the Agency. One is located at Jamrud and the other at Landikotal. Enrollments are very low as given in Table XI.12

Table XI.12

**GIRLS' SECONDARY LEVEL ENROLLMENT**

Year	9th	10th	Total
1990-91	18	18	36
1991-92	16	14	30
1992-93	11	8	19

Source: Agency Education office

Enrollment is very low, due to cultural pressures, early marriages, and the absence of transportation.

## 2. Boys' Secondary Education

As of May 1993, there were 16 secondary schools for boys in the Agency. Distribution of these schools on subdivision basis are given in Table XI.13

Table XI.13

### BOYS' SECONDARY SCHOOLS BY SUBDIVISIONS

Subdivision	Percentage of Agency Population	Number of School	Percentage of Agency's High School %
Bara	51	7	44
Jamrud	21	4	25
Landikotal	28	5	31
	<u>100%</u>	<u>16</u>	<u>100%</u>

Source: Researcher

The enrollment in secondary schools for the last three years are given as follows:

Table XI.14

### BOYS' SECONDARY SCHOOL ENROLLMENTS

Year	9th	10th	Total
1990-91	592	482	1,074
1991-92	674	573	1,247
1992-93	865	606	1,471

Source: Agency Education office

The participation rate for the eligible males from 15-19 is roughly 5 %.

A comparison of the Khyber Agency secondary schools with the other six Tribal Agencies is as follows:

Table XI.15

**COMPARISON OF BOYS' SECONDARY SCHOOLS AMONG  
THE TRIBAL AGENCIES**

Agency	No. of Secondary Schools in 1992-93	Enrollments 1992-93	Estimated Population in 1993	Area (Sq. Km)
Kurram	20	1,289	435,632	3,380
SWA	19	719	446,304	6,619
NWA	16	1,176	344,615	4,707
Orakzai	12	485	534,267	1,538
Bajaur	12	980	405,689	1,290
Mohmand	10	930	237,130	2,396
Khyber	16	1,471	422,237	2,576
<b>Total:</b>	<b>105</b>	<b>7,050</b>	<b>2,826,375</b>	<b>22,506</b>

Source: Directorate of Education, FATA

**D. Higher Secondary Schools**

There are two higher secondary schools in Khyber Agency. One is located at Jamrud and is functional while the other located at Bara will open in late 1993. There were 58 students enrolled in class 11 and 64 in class 12 at the higher secondary school in Jamrud during the 1992-93 school year.

**E. Private Schools**

There are 22 private schools operating in Khyber Agency. One of them is located at Jamrud, 11 at Bara and 10 at Landikotal. Total enrollment for the 22 schools in 1992-93 was 7,253 and the number of teachers employed was 246.

**F. Colleges**

There is only one degree college at Landikotal in Khyber Agency. This college was started in 1975 as inter college and was upgraded in 1980 to a degree college. In 1993, the college enrolled 300 students and employed 20 teachers. Every student is given a scholarship of Rs. 1500/- per month. The college offers both arts and science classes. It has 20 rooms with a science laboratory.



## G. Teachers training Colleges

All professors, teaching government schools, whether or not they are trained or untrained, are required to complete a teachers training courses relevant to the classes they teach. Though both are required to take a training course, trained teachers are given preference during recruitment.

There are two training institutes in Khyber Agency.

### 1) Government College of Education for Elementary Teachers (FATA), Jamrud:-

This institute at Landikotal was upgraded from a training institute to a college in 1970. It offers the following three courses:

Primary teaching certificate (PTC)	duration	9 months
Certificate of teaching (CT)		"
Arts & Craft certificate		"

The PTC course is for primary school teachers and CT is for middle school teachers. The Arts and craft certification course is for drawing teachers. Each Tribal Agency has a specific, set quota for each course. These teachers are selected from many applicants on the basis of merit. Student teachers also get Rs. 1200/- per year scholarship from the Government.

Total enrollment for 1993 is as follows:

PTC Course	=	120 students
CT	=	60 students
Arts & Drafts certificate	=	45 students

There is one principal, 9 subject specialist, 2 drawing teachers, 3 technical and 1 physical education teacher on the staff. Students have hostel accommodations and teachers have 20 residential quarters.

### 2) Government In Service Teachers Training College at Jamrud.

This college provides different courses to FATA teachers already in service. The Education department sends teachers here for specific courses training. This college has one Principal and eight subject specialists on its staff.

## H. Alternate Education

### 1. Mohallah and Mosque schools.

Out of five mohallah schools in the Agency, four are located at Jamrud and one at Bara. Total enrollment of mohallah schools in 1992-93 was 135. One part time teacher is assigned to each school.

There are 36 mosque schools in Khyber Agency. Total enrollment of all schools combined in 1992-93 was 2,047. Each mosque school employs one trained professor and one theology teacher on a part-time basis.

## **2. Adult Literacy Centers**

There are 6 Adult Literacy Centers in Khyber Agency. Two are located at Bara, 2 at Jamrud and 2 at Landikotal.

## **3. Industrial Homes**

There are 6 Industrial Homes in Khyber Agency. One is located in Landikotal and 5 in Jamrud. These industrial homes offer courses in sewing and embroidery that generally last for a 6 month period. Total enrollment in all the industrial homes in 1992-93 was 89. According to the Assistant Education Officer for Females, not all the sewing machines were operational due to the lack of funds for maintenance. No funds are available for purchasing raw material used for practical work. Therefore, all work is done by hand.

### **I. Administration of Agency Education**

The Agency Educational Officer is located in Peshawar. There are five Assistant Educational Officers responsible for subdivisions. There is one Assistant Education Officer in charge of female education and one for mohallah and mosque schools. There is one Literacy supervisor for the literacy centers. The office has only one vehicle. Therefore, most of the staff use their own private vehicles for official work.

### **J. Technical Education**

There are two technical training centers operating in Khyber. One is for commercial training and the other for technical training. Details are as follows:

#### **1. Government Commercial Training Institute, Jamrud**

This institute was established in 1978 at Jamrud. It offers a two year training program in commerce. The 1st year level, C com (Certificate in commerce), includes 40 students and the 2nd year level, D com (Diploma in commerce), has 16 students. It has a staff consisting of a principal, 4 teachers and 2 junior teachers. The institute has 80 typewriters and 2 computers for practical training. It has residential quarters for teachers and hostel accommodations for students.

Only agency domiciled students can obtain admission to this institute. After completing the 2 year course, 50% of the students continue with higher education and the others secure jobs in the FATA.

## 2. Vocational Institute, Bara

This technical vocational institute offers course work relevant to electricians, turners, welders, pipe fitters and automobile traders. Electricians are required to take two years of studies while all others complete their course work in one year. There were 47 students enrolled in 1992-93 session and the majority of them took electrician courses. Though the enrollment capacity is 20 students per year, per course, enrollment is low due to the lack of interest in technical fields. Most people prefer to their own business than to spending time on technical education.

The staff consists of a principal, a senior trade instructor, five trade instructors and four junior trade instructors. Therefore, only 47 students are being trained by 10 instructors.

## **XII. HEALTH**

Khyber Agency is provided with the following facilities.

- 5 Civil Hospitals
- 9 Basic Health Units
- 11 Civil Dispensaries

Some of the facilities have Expanded Program for Immunization (EPI) Centers with designated staff including mobile and outreach teams.

The Agency Surgeon and his Field Senior Medical Officer (FSMO) are stationed at Landikotal and are responsible for supervising the facilities mentioned above. The Agency Surgeon office is responsible for 1) curative functions 2) expanded program for immunization (EPI) and 3) malaria control.

Medical professionals do not want to be posted in remote areas due to the lack of basic civil facilities and the absence of opportunities for private practices.

### **A. Hospitals**

There are five civil hospitals in Khyber Agency. As of April 1993, they were staffed and located as follows:

#### **1. Agency Headquarters Hospital at Landikotal**

The Landikotal hospital is a 102 bed hospital and according to tribal area standards is considered very large. There are 82 male and 20 female beds. The staffing position and case load statistics are shown in Table XII.I.

# KHIBER AGENCY

## HEALTH

### LEGEND

- INTERNATIONAL BOUNDARY.....
- AGENCY BOUNDARY.....
- SUB-DIVISIONAL BOUNDARY.....
- PAVED ROAD.....
- SHINGLED ROAD.....
- HOSPITALS.....
- DISPENSARY.....
- BASIC HEALTH UNIT.....

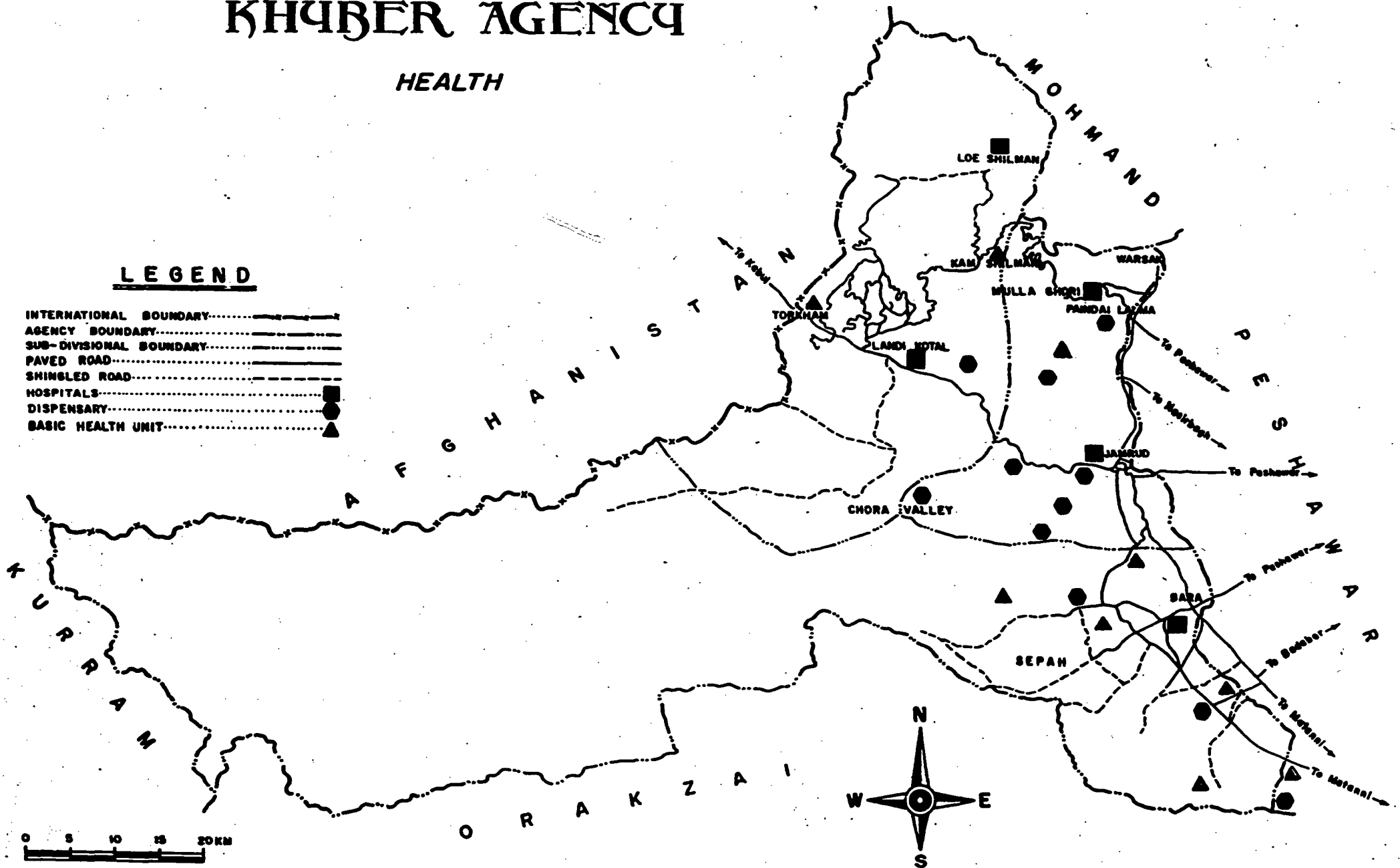


Table XII.1 (a)

## STATUS OF STAFFING AT LANDIKOTAL HOSPITAL IN 1993

S.No	Name of Post	Sanctioned Positions	Occupied Positions	Vacant Positions
1.	Medical Superintendent	1	1	-
2.	Medical Specialist	1	1	-
3.	Surgical Specialist	1	1	-
4.	Orthopaedic Surgeon	1	1	-
5.	Ear Nose Throat (ENT), Specialist	1	1	-
6.	Eye Specialist	1	1	-
7.	Gynecologist	1	1	-
8.	Radiologist	1	-	1
9.	Pathologist	1	-	1
10.	Anaesthetic	1	-	1
11.	Dental Surgeon	1	1	-
12.	Senior Medical Officers	8	8	-
13.	Medical Officers	11	11	-
14.	Women Medical Officers	5	5	-
15.	Head Male Nurse	1	1	-
16.	Nurses	27	23	4
17.	Office Assistant	1	1	-
18.	Lady Health Visitor	1	1	-
19.	House Keeper	1	1	-
20.	Blood Bank Technician	1	1	-
21.	Operation Theater Technician	1	1	-
22.	X-Ray Technician	1	1	-
23.	Anesthesia Technician	1	1	-
24.	Anesthesia Assistant	1	1	-
25.	Operation Theater Assistant	1	1	-
26.	Compounders	11	11	-
27.	Radio Graphers	4	4	-
28.	Dental Technician	1	1	-
29.	Laboratory Assistant	4	4	-
30.	T.B-Assistant	1	1	-
31.	Masseur	1	1	-
32.	Nurse Dai	1	1	-
33.	Dais	3	3	-
34.	Ward Orderlies	11	11	-
35.	X-Ray Attendant	3	3	-
36.	Laboratory Attendant	4	4	-
37.	Outpatient Attendant	1	1	-

Source: Medical Superintendent, Landikotal Hospital

Table XII.1 (b)

## CASE LOAD: 1988-92 at Landikotal Hospital

Year	In door Patients	Out door Patients	Operations Carried out	Lab Tests Conducted	X-Ray Tests Conducted
1988	1,432	38,340	348	2,808	2,413
1989	1,534	36,692	157	2,115	2,531
1990	1,850	43,250	670	2,760	3,250
1991	2,383	62,127	670	2,830	4,100
1992	2,431	64,227	840	5,231	4,785

Source: Medical Superintendent, Agency headquarters, Landikotal hospital.

The hospital has one laboratory and one blood bank. The hospital has a casualty ward where emergency patients are treated on a 24 hours basis. There is also one operation theater and one ambulance available for emergencies.

There are 11 residential quarters for officers and 19 for other staff members. Moreover, there is a nursing hostel and doctors hostel under construction.

## 2. Civil Hospital at Jamrud.

The civil hospital at Jamrud is a commonly utilized health facility. Its staffing positions and case load statistics are as follows:

Table XII.2(a)

## STATUS OF STAFFING AT JAMRUD HOSPITAL IN 1993

Name of Post	Sanctioned Positions	Occupied Positions	Vacant Positions
Medical Officer	1	1	-
Women Medical Officer	1	1	-
Compounder	4	4	-
Laboratory Assistant	1	1	-
Radiographer	1	1	-
Operation Theater Assistant	1	1	-
Anesthesia Assistant	1	1	-
Lady Health Visitor	1	1	-

Source: Incharge, Civil hospital, Jamrud

The Jamrud Hospital is a 50 bed hospital; 30 are out of order, and 20 beds are operational.

**Table XII.2 (b)**

**OUT PATIENTS AT JAMRUD HOSPITAL: 1988-92**

Year	Male	Female	Male Child	Female Child	Total
1988	6,455	8,723	4,996	4,029	24,203
1989	4,522	6,262	3,389	2,902	17,065
1990	6,859	9,545	4,541	2,353	23,298
1991	4,804	9,101	3,038	1,782	18,725
1992	4,973	8,475	3,553	2,866	19,867

Source: Incharge, Civil hospital, Jamrud

In the year 1992, there were 941 patients treated in emergency situations and 91 were admitted to the hospital.

The hospital is equipped with one X-ray Unit and an oral rehydration facility. Potable water is available from a tubewell. There are 2 residential bungalows for medical officers and some residential quarters for other staff members.

**3. Civil Hospital Dogra Picket at Bara.**

Bara hospital is also utilized by the general public. Its staffing position and case load statistics are as follows:

**Table XII.3(a)**

**STATUS OF STAFFING AT DOGRA PICKET HOSPITAL IN 1993**

Name of Post	Sanctioned Positions	Occupied Positions	Vacant Positions
Medical Officer	1	1	-
Women Medical Officer	1	1	-
Dental Surgeon	1	1	-
Dental technician	1	1	-
Radiographer	1	1	-
Operation Theater Asst	1	1	-
Anesthesia Assistant	1	1	-
Laboratory Assistant	1	1	-
Lady Health visitor	1	1	-
Compounder	4	4	-

Source: Agency Surgeon



The Dogra Picket Hospital has 20 beds in the male ward and 10 in the female ward.

Table XII.3 (b)

OUT PATIENTS AT DOGRA PICKET HOSPITAL 1988-92					
Year	Male	Female	Male Child	Female Child	Total
1988	13,659	4,317	1,322	1,074	20,372
1989	14,555	4,644	1,562	1,088	21,849
1990	18,884	4,699	1,874	1,394	26,851
1991	23,418	5,005	2,298	1,458	32,179
1992	25,111	5,321	2,404	1,743	34,579

Source: Agency Surgeon

There is an oral Rehydration facility attached with the hospital. There is one laboratory unit and one dental unit as well. A potable water connection is also available.

#### 4. Civil Hospital at Lowara Maina

This hospital is situated in Jamrud subdivision. This facility is highly underutilized. Detailed information are as follows:

Table XII.4 (a)

#### STATUS OF STAFFING AT CIVIL HOSPITAL LOWARA MAINA IN 1993

S.No	Name of Position	Sanctioned	Occupied	Vacant
1	Medical Officer	1	1	-
2	Compounder	2	1	1
3	Laboratory Assistant	1	0	1
4	Dai	1	-	1

Source: Civil hospital, Lowara Maina

The Civil Hospital has 12 beds, but there haven't been any admissions.

Table XII.4 (b)

#### OUT PATIENTS AT CIVIL HOSPITAL LOWARA MAINA: 1988-92

Year	Male	Female	Male Child	Female Child	Total
1988	1,997	722	862	460	4,041
1989	1,121	890	681	333	3,025
1990	792	691	493	277	2,253
1991	623	631	405	212	1,817
1992	805	1,017	722	355	2,899

Source: Civil hospital, Lowara Maina

A rehydration facility is attached with this hospital and a potable water connection and electricity are also available. There are seven residential quarters, but only one is occupied. The remaining six are vacant as most of the staff are local.

#### 5. Civil Hospital Loe Shalman

This hospital is located in Landikotal subdivision. This facility is more like a basic health unit and is underutilized. Detailed information is as follows:

Table XII.5 (a)

#### STATUS OF STAFFING AT CIVIL HOSPITAL LOE SHALMAN: 1993

S.No	Name of Position	Sanctioned Positions	Occupied Position	Vacant Positions
1	Medical officer	1	1	-
2	Compounder	2	2	-
3	Dai	1	1	-

Source: Agency Surgeon

There are no beds in this hospital.

Table XII.5 (b)

#### OUT PATIENTS AT CIVIL HOSPITAL LOE SHALMAN: 1988-92

Year	Male	Female
1988	4,445	25
1989	4,591	35
1990	5,441	35
1991	5,867	55
1992	6,009	75

Source: Agency Surgeon

There is a potable water connection available at the hospital.

#### B. Basic Health Units (BHUs)

There are 9 operational basic health units in Khyber Agency. Description of each BHU is given below:

Table XII.6 (a)

## NAME AND LOCATION OF ALL BHUS

S.No	Name	Subdivision	Approximate Population Covered
1	BHU Kambella	Jamrud	6,000
2	BHU Sara Chena	Bara	16,000
3	BHU Touda Chena	Bara	21,000
4	BHU Torkham	Landikotal	5,000
5	BHU Kala Khel	Bara	8,000
6	BHU Kam Shalman	Landikotal	8,000
7	BHU Ajab Talab	Bara	18,000
8	BHU Abdullah Jan Killi	Bara	18,000
9	BHU Bagkala	Jamrud	20,000

Source: Agency Surgeon

Total staffing position of all BHUs is as follows:

Table XII.6 (b)

## STAFFING POSITION OF ALL BHUS IN 1993

S.No	Name of Position	Sanctioned Positions	Occupied Positions	Vacant Positions
1	Medical Officer	7	7	-
2	Lady Health Visitor	8	8	-
3	Medical Technician	16	16	-

Source: Agency Surgeon

### C. Dispensaries

There are 11 operational dispensaries in Khyber Agency.  
Detailed information is as follows:

Table XII.7 (a)

#### NAME AND LOCATION OF DISPENSARIES

Name of Dispensaries	Subdivision	Approximate Population covered
Sultan Khel	Landikotal	37,000
Lala Chena	Jamrud	25,000
Qaddam	Jamrud	10,000
Jabba	Jamrud	15,000
Choorra	Jamrud	25,000
Choppari	Jamrud	9,000
Pandi Lalma	Jamrud	11,000
Tangi	Jamrud	9,000
Ucholgadh	Bara	10,000
Fort Slop	Bara	9,000
Fort Milward	Bara	11,000

Source: Agency Surgeon

Total staffing position at all the dispensaries is as follows:

Table XII.7 (b)

#### STAFFING POSITION OF ALL DISPENSARIES IN 1993

Name of Positions	Number of Positions	Occupied Positions	Vacant Positions
Compounder	13	13	-
Dais	11	11	-

Source: Agency Surgeon

The distribution of health facilities on a subdivision basis is as follows:

Table XII.8

**DISTRIBUTION OF HEALTH FACILITIES  
BY SUBDIVISION**

<u>Subdivision</u>	<u>Number of Facilities</u>	
Jamrud	Hospital	= 2
	BHUs	= 2
	Dispensaries	= 7
Bara	Hospitals	= 1
	BHUs	= 5
	Dispensaries	= 3
Landikotal	Hospitals	= 2
	BHUs	= 2
	Dispensaries	= 1

The percentage share of health facilities on subdivision basis is given in table XII.9

Table XII.9

**PERCENTAGE DISTRIBUTION OF HEALTH FACILITIES  
BY SUBDIVISION**

<u>Subdivision</u>	<u>%age share of Agency Population</u>	<u>%age share of Agency's hospitals</u>	<u>%age share of Agency's BHUs and Dispensaries</u>
	%	%	%
Jamrud	21	40	45
Bara	51	20	40
Landikotal	28	40	15

#### D. Private Medical Practitioners

There are 8 qualified private medical practitioners in Landikotal, 10 in Jamrud and 20 in Bara subdivision. There is also a small private childrens hospital in Bara. There are private laboratories, X-Ray Units and ultra sound clinics in the Agency.

#### EXPAND PROGRAM FOR IMMUNIZATION (EPI)

The following EPI supervisory staff are available in Khyber Agency. The staff strength is listed as of 1992-93

Table XII.10

#### EPI STAFFING POSITION

<u>Positions</u>	<u>Sanctioned</u>	<u>Occupied</u>	<u>Vacant</u>
Field Senior Medical Officer (FSMO)	1	1	0
Field Superintendent Vaccination (FSV)	2	2	0
Assistant Superintendent Vaccination (ASV)	1	1	0
Senior EPI Technician	12	12	0
Junior EPI Technician	22	22	0

Source: Deputy Director, EPI

Eleven EPI Centers are attached with the following health facilities in Khyber Agency.

Table XII.11

LOCATION OF EPI CENTERS IN KHYBER AGENCY

<u>Health Facility</u>	<u>Sub-division</u>
AHQ Hospital	Landikotal
Sultan khel	Landikotal Tehsil
Jamrud	Jamrud Tehsil
Jan Baz Killi	Bara
Abdullah Jan Killi	Bara
Kam Shalman	Landikotal Tehsil
Uchalgoth	Bara Tehsil
Loe Shalman	Landikotal Tehsil
Dogra Pkt	Bara Tehsil
Pandilalma	Mullagori
Ajab Talab	Bara Tehsil

Source: Deputy Director, EPI

Every Agency EPI office is given an annual as well as monthly targets. Statistics on targets and achievement are as follows for all 11 EPI centers:

1992 Annual Target was 14,165 inoculations.  
1992 Monthly Targets was 1,180 " "

The following table shows the monthly percentage achievement for inoculations during 1992.

Table XII.12

EPI MONTHLY TARGETS AND ACTUAL ACHIEVEMENTS IN 1992

<u>Month</u>	<u>Monthly Achievement</u> %
January	82.5
February	85.4
March	83.7
April	84.2
May	86.9
June	84.5
July	95.0
August	92.5
September	91.9
October	90.3
November	83.8
December	87.45

Source: Deputy Director, EPI

### XIII. ELECTRIFICATION

Electricity in the Khyber Agency is managed by an Executive Engineer (XEN) WAPDA who is based at Peshawar. Two subdivisions manage the electricity operations in their respective areas. Jamrud subdivision deals with the Jamrud & Landikotal area while Alamgudar subdivision is responsible for the Bara area.

#### A) Jamrud subdivision

This office is located at the Industrial estate, Jamrud road, and is headed by a Sub-divisional Officer (SDO). Electricity is supplied to Jamrud and Landikotal areas through two grid stations of 132 kilo volt capacity each. One is located at the industrial estate Jamrud road and the other at Landikotal.

Jamrud grid has two transformers each of 20/26 mega volt amperes (MVA). There are four feeders of 11 Kilo volt (KV) each. The first goes to Sari Kamar, the second to Jamrud, the third to Pump house area and the fourth to Mullagori. The second grid station at Landikotal also has two transformers of 10/13 MVA each with six feeders of 11 KV each going to different areas. The first goes to Koga Khel area, the second to Khyber area, the third to Ali Masjid area, the fourth to Sadi Khel, the fifth to Shalman and the sixth goes to Army units.

The number and breakdown of connections as of February 1993 are as follows:

Legal domestic connections	=	7379
Legal commercial connections	=	1044
Industrial Connections	=	166
Tubewell connections	=	12

In addition, there are as many illegal domestic connections as there are legal domestic connections.

Some information concerning the average electricity consumption in the year 1992 is as follows:

Average monthly household consumption	=	1500 Kilowatt hours (KWh)
Average monthly consumption of electricity in tubewells	=	3000 KWh
Average monthly consumption of commercial users	=	30 KWh
Average monthly consumption of industrial users	=	2000 KWh

(Industrial users are mainly stone crushing machines).

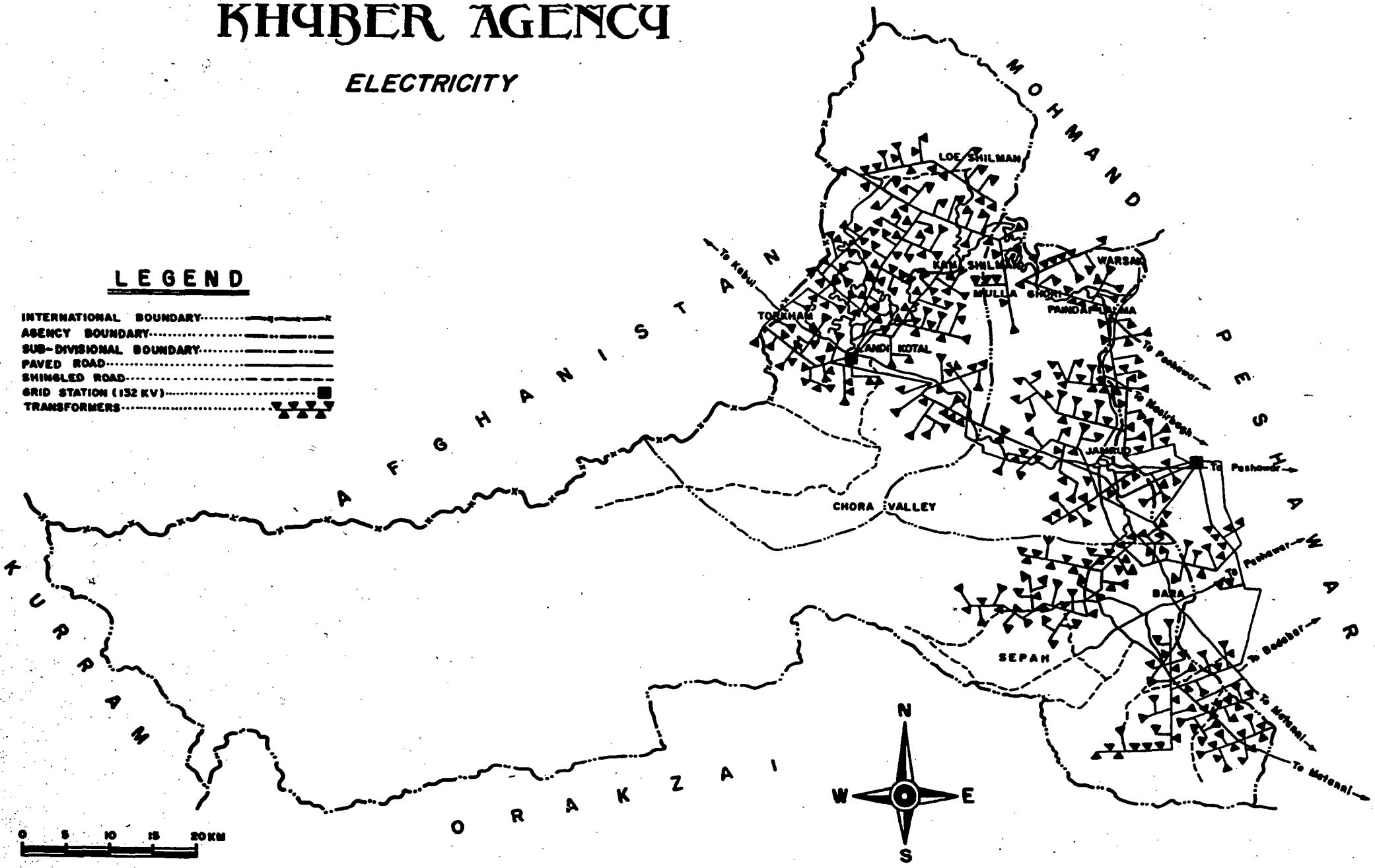


# KHIBER AGENCY

## ELECTRICITY

### LEGEND

- INTERNATIONAL BOUNDARY.....
- AGENCY BOUNDARY.....
- SUB-DIVISIONAL BOUNDARY.....
- PAVED ROAD.....
- SHINGLED ROAD.....
- GRID STATION (132 KV).....
- TRANSFORMERS.....



Jamrud subdivision has 3 Line Superintendents. The five complaint centers attached to this office are located at Jamrud Bazaar, Ali Masjid Pumping station, Zintara, Landikotal and Torkham.

**B) Alamgudar subdivision**

This office is located at Gulberg Peshawar Cantt and is headed by an SDO. Electricity to the Bara area is supplied through six feeders from four grid stations as follows:

S.No ----	Grid stations -----	Feeders -----
1)	132 KV Industrial estate Jamrud	1) 11 KV Lamgudar 2) 11 KV Fort salop 3) 11 KV Bara Express
2)	132 KV Kohat Road	4) 11 KV Bara
3)	132 KV Matani	5) 11 KV Aka khel
4)	66 KV Badabar bazaar	6) Ghee Mill

The number and breakdown of connections as of February 1993 are as follows:

Legal domestic connections	=	5483
Tubewell connections	=	75
Legal commercial connections	=	516
Illegal Domestic connections	=	6000
Industrial connections	=	318

Industrial connections are mainly for loom industries, a ghee mill, ice factory, cigarette factory and crushing machines.

Some information about the approximate average electricity consumption for the year 1992 is as follows:

Average monthly household consumption	=	2000 KWh
Average monthly consumption if electricity used in tubewells	=	3000 KWh
Average monthly consumption of commercial users	=	30 KWh
Average monthly consumption of industrial users	=	6000 KWh

Alamgudar subdivision has 3 Line Superintendents. The 6 complaint centers located at Bara Market, Kari Gari, Nasir Gari, Fort Salop, Nala and Gulberg main office.

**Problems:**

There is a 90 rupee flat rate charged per month for a residential electrical connection regardless of how much is used. For tubewells, commercial and industrial users the charges are the same as in settled areas and theoretically depends on consumption. A consumer in the settled area must pay 2,000 plus rupees for 1500 Kwh of electricity while a Khyber Agency resident pays only 90 rupees. Even this flat rate of 90 rupees goes unpaid. There are unpaid bills of 35 million rupees in the Alamgudar subdivision alone. WAPDA has made serious efforts to recover outstanding bills and to legalize illegal connections. One method involves the issuing of official documents such as a Passport or Identity card only after payment of WAPDA bills. The second method has been through the Jirga system in which the elders of the area convince the locals to pay their electricity bills.

## **XIV. INVESTMENT IN DEVELOPMENT**

### **A. Allocation Process in FATA:**

The Federal Government allocates funds to Federal Government Institutions such as FATA D.C and to the Provincial Government of NWFP through GONWFP line departments for the execution of project schemes. In addition, each Senator and Member of the National Assembly is allocated five million rupees for development schemes in their respective areas.

#### **1) FATA D.C Allocation Process.**

The steps in the allocation process for FATA D.C are as follows:

- Field officers of each line agency within each Tribal Agency prepare development schemes for the next year.
- The proposed schemes are approved by their respective Political Agent.
- The proposed schemes are sent to the respective sections of FATA D.C where they are consolidated for all Tribal Agencies
- The consolidated schemes are then sent to the planning & development section of FATA D.C where a proposed Annual Development Plan (ADP) for FATA D.C is prepared and sent to the Ministry of Frontier Regions in Islamabad. This Ministry receives its allocation through the Federal Ministry of Finance and Planning.
- The actual allocations by the Federal Government are sent to FATA D.C where the proposed ADP is revised into a final ADP.
- The new ADP is approved by the Chairman FATA D.C and by the Board of FATA D.C.
- The Annual Development Program for FATA is printed.

#### **2) Provincial Government Allocation Process.**

The steps in the allocation process for the Provincial Government of NWFP are as follows:

- Field offices of each concerned provincial Department prepare schemes for the next year. These are approved and priorities are given by Political Agents.

- The consolidated proposed ADP of all Tribal Agencies are sent to the FATA section of Planning, Environment and Development (PE&D) Department, GONWFP. The proposed ADP schemes are discussed at the PE&D Department and FATA section before being sent to the Governor of NWFP.
- The Governor discusses the ADP in a meeting with the heads of all concerned Departments and approves the final ADP.

### 3) MNA/Senator Allocations:

Each Senator and MNA prepares schemes worth 5 million rupees in his area. These schemes are given to the Federal Local Government & Rural Development Department. After approval, these schemes are executed by the LG&RD Department.

#### B. Analysis of Investment Allocations from 1972-73 to 1992-93:

The total investment for Khyber Agency from 1972-73 to 1992-93 was 898 million rupees. Khyber Agency ranks sixth among the seven Tribal Agencies in terms of total allocations. Table XIV.1 shows FATA D.C, PE&D Department, and MNA/Senators, allocations from 1971 to 1993. Table XIV.2 shows sectorwise allocation for all Tribal Agencies from 1971 to 1993. In 1972-73, schemes were started in the irrigation and industrial sectors. The 1974-75 and 1975-76, schemes were started in agriculture, power, health, education, communications and potable water sectors. The initial investment allocations in 1972-73 were 8.437 million rupees which rose to Rs. 80.144 million in 1992-93.

Figure XIV.1 shows allocation trends over time. Figure XIV.2 shows sector-wise allocations from 1972-1993. Analysis of all these sectors show that in industrial and rural development schemes, the allocations remained the same or changed insignificantly during 22 years, despite inflation. In all remaining sectors, allocations increased from a low base in 1972-73 to higher amounts in 1992-93.

In the irrigation sector, Khyber Agency is fifth in terms of allocations among all seven Tribal Agencies. The irrigation sector was initiated in 1972-73 at a cost of 6.567 million rupees. Allocations increased to 18.808 million rupees in 1974-75 but started decreasing to 1.188 million rupees in 1984-85. From 1985-86, allocations rose variably to 11.531 million rupees in 1992-93. From 1972-73 to 1992-93, the share of the irrigation sector ranged from 3% to 78% of the total Agency allocations. The trend suggests that during the past few years, heavy capital investment was the mode for drilling more tubewells or developing new water channels while for the remaining years, allocations will be used to maintain them.

In comparison with all Tribal Agencies, the investment in agriculture in the Khyber Agency places it fourth out of all seven Tribal Agencies. In 1975-76, the agriculture sector was initiated with 120 thousand rupees. This allocation increased variably to 4.357 million rupees in 1987-88 but was reduced to 1.187 million rupees in 1992-93. From 1975-76 to 1992-93, the agriculture sector allocations ranged from 1% to 15% of the total Agency allocations. The agriculture allocations contain agriculture extension, animal husbandry, agriculture research and agriculture engineering components.

In Khyber Agency, the allocations for the agriculture extension component in 1990-91 were 300 thousand rupees which dropped to 30 thousand rupees in 1991-92 and rose again to 230 thousand rupees in 1992-93. The animal husbandry component of the agriculture sector had an allocation of Rs. 780 thousand rupees in 1989-90 which rose to 957 thousand rupees in 1992-93. Within agriculture components, agriculture extension activities receive comparatively less funds.

Forestry allocations were included in agriculture allocations in the Annual Development Program (ADP) until 1988-90. In 1988-89, 2.768 million rupees were allocated to forestry sector which rose to 7.749 million rupees in 1992-93. Forestry is becoming a priority of the Government with the passage of time.

In the power sector, Khyber Agency allocations stand fifth in comparison with other Tribal Agencies. The power sector was started in 1974-75 with an initial allocation of 1.5 million rupees. This amount variably rose to 15.626 million rupees in 1990-91 and then dropped to 7.227 million rupees in 1992-93. In terms of percentage share out of total Agency allocations, the range remained from 4 percent to 22 percent. Higher allocations in certain years might have been used for the capital expenditure for the establishment of grid stations and transmission lines. This high capital investment and greater percentage share of power sector signifies its importance to the Government of Pakistan in Khyber Agency.

In communications, Khyber Agency ranks last among all seven Tribal Agencies. Investment in this sector was initiated in 1974-75 with an amount of 7.55 million rupees. This allocation rose variably to 18.014 million rupees in 1992-93. The percentage share of the communication sector out of all Agency allocations ranged from 6 to 36 percent. There is a plan to extend the road network to inaccessible areas of Tirah. However, it is opposed by some of the tribes within Tirah.

Total health allocations in Khyber Agency ranked it fourth among all Tribal Agencies. In 1974-75, allocations for the health sector were only 0.005 million rupees. This amount rose to 7 million rupees in 1982-83. The allocations dropped the following year but in 1992-93, it reached 6.488 million rupees. The percentage of health allocations out of total Agency allocations ranged from 2 to 24 percent.

Education sector investment in Khyber Agency was fourth in comparison to other Tribal Agencies. The initial allocations of 4.257 million rupees in 1974-75 rose variably to 14.497 million rupees in 1987-88 but dropped to 7.067 million rupees in 1992-93. The percentage share allocated to education out of total Agency allocations has ranged from 9 to 26 percent. Within the education sector, the general education component received an allocation of 11.861 million rupees in 1989-90 while the technical education component received only 2.231 million rupees. In the following three years, all allocations were made to general education, it appears that technical education is not given as much emphasis as general education.

The potable water and housing sector was initiated in 1974-75 with one thousand rupees. This amount rose to 18.897 million rupees in 1992-93. The percentage share in terms of total Agency allocations ranged from 6 to 24 percent.

In rural development schemes, Khyber Agency ranks third among all Tribal Agencies. The percentage share of investment in small rural development schemes of the total Agency allocations has ranged from 1 to 5 percent.

Mineral exploration development was initiated in 1985-86 at a cost of one hundred thousand rupees. In the following four years, no funds were allocated to this sector. In 1991-92, 1.99 million rupees were allocated while in 1992-93, 0.5 million rupees were allocated.

In the industrial sector, one cigarette factory at Bara and one marble factory at Paindilalma were established by FATA D.C, at a total cost of 26.59 million rupees in 1976 and 1980 respectively. These were closed down in 1984 and 1986 respectively due to financial losses. The reasons for the losses were reported to be the high cost of the transportation of finished goods, the unavailability of industrial skilled labor, and the poor quality of finished products.

Table XIV.1

**FATA-DC, PE&D DEPARTMENT AND  
MNA/SENATOR YEAR/SECTORWISE  
ADP ALLOCATION  
AGENCY: KHYBER  
(IN MILLION RUPEES)**

YEAR/ SEC	AGRI	POWER	COMMU	HEALT	EDUCAT	POT-WATE & HOUSING	INDUS	RURDEV	P&D	IRRIGATI	FORES	MINERA	TOTAL
72-73							1.870			6.567			8.437
73-74							1.100			0.950			2.050
74-75		1.500	7.550	0.005	4.257	0.001	10.500			18.808			42.621
75-76	0.120	1.000	9.118	0.500	2.610	1.800	2.385			9.265			26.798
76-77	0.050	1.500	6.753	2.785	3.093	3.742	6.000			6.000			29.923
77-78	0.655	3.320	5.647	2.500	6.398	2.127	12.155			4.389			37.191
78-79	1.185	2.500	1.770	7.071	5.665	6.295	1.308	0.656		3.270			29.720
79-80	3.000	3.645	1.837	5.646	4.103	5.631	2.272			0.870			27.004
80-81	2.375	2.200	1.160	2.260	3.220	3.766				0.650			15.631
81-82	2.419	3.000	4.856	2.323	7.680	4.625		1.323		2.889			29.115
82-83	1.738	5.565	3.200	7.008	7.738	3.750		1.430		3.825			34.254
83-84	2.244	4.954	11.874	1.500	6.283	3.003		1.755		3.959			35.572
84-85	2.901	5.766	9.984	2.980	6.092	5.349		1.890		1.188			36.150
85-86	2.827	4.400	5.665	4.453	7.465	7.111		1.514	0.196	2.091		0.100	35.822
86-87	3.000	10.140	7.301	3.315	11.443	14.138		1.514	0.197	2.150			53.198
87-88	4.357	11.016	32.389	3.315	14.497	18.658		1.596	0.196	3.964			89.988
88-89	0.860	9.161	17.191	4.143	13.752	10.309		0.893		4.041	2.768		63.118
89-90	0.780	15.243	11.259	6.955	14.092	8.707		0.982		10.860	2.938		71.816
90-91	1.004	15.626	11.719	5.630	12.550	13.917		1.226		7.198	2.361		71.221
91-92	0.997	12.000	11.530	8.914	10.360	13.347		1.349		14.967	3.390	1.990	78.844
92-93	1.187	7.227	18.014	6.488	7.067	18.897		1.484		11.531	7.749	0.500	80.144
<b>TOTAL</b>	<b>31.699</b>	<b>119.763</b>	<b>178.817</b>	<b>77.791</b>	<b>148.365</b>	<b>145.173</b>	<b>37.590</b>	<b>17.612</b>	<b>0.589</b>	<b>119.432</b>	<b>19.206</b>	<b>2.590</b>	<b>898.617</b>

Source:

PE&D Department(FATA Section)  
FATA-DC (Irrigation, mineral-industries)



Table XIV.2

**SECTOR WISE ALLOCATION  
FOR ALL TRIBAL AGENCIES  
FROM 1971-1993  
(IN MILLION RUPEES)**

AGENCY	AGRI	POWER	COMM	HEALTH	EDUC	POT-WATER & HOUSING	INDUST	RUR-DEV	PE&D	IRRIGAT	FOREST	MINERAL	TOTAL
Bajaur	52.994	126.194	242.481	67.852	139.533	155.908	27.131	17.449	10.000	133.850	20.716	3.605	997.713
Khyber	31.699	119.763	178.817	77.781	148.365	145.173	37.590	17.612	0.589	119.452	19.206	2.590	898.617
Mohmand	25.154	99.960	199.745	50.240	127.338	109.672	9.846	15.036	9.329	59.430	16.690	1.438	723.878
Orakzai	27.164	146.011	276.118	79.563	151.436	142.787	0.090	17.662	9.968	73.912	23.912	5.777	954.400
Kurram	56.421	122.471	326.403	83.672	186.038	139.267	14.592	29.526	9.996	237.971	20.069	9.154	1235.580
N.Waz	32.202	108.431	280.597	70.807	125.065	146.033	29.818	14.229	10.000	198.720	13.017	26.673	1055.592
S.Waz	23.340	137.465	332.984	89.606	154.437	129.220	24.983	16.873	5.849	229.080	17.613	0.000	1161.450

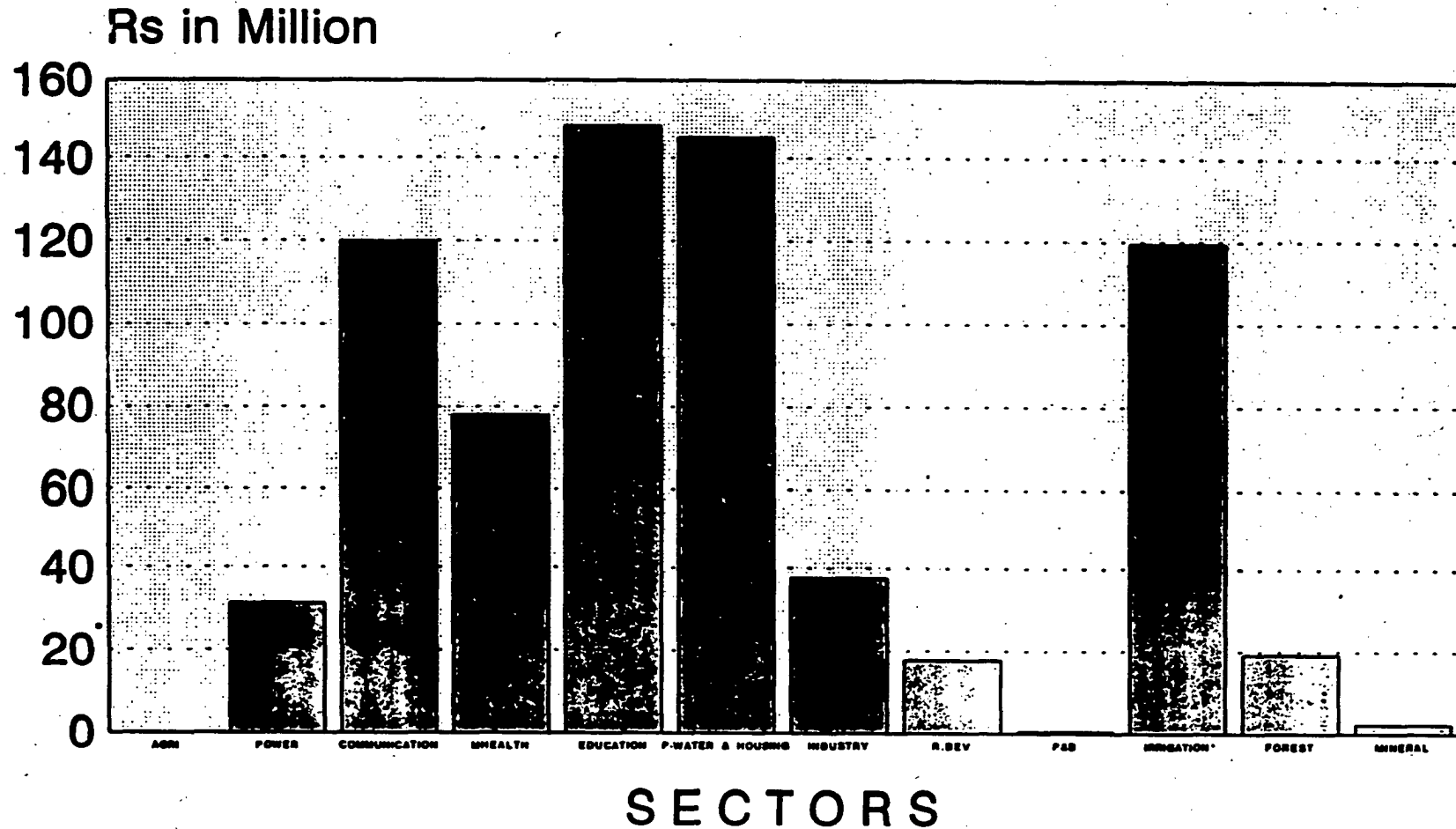
Source:

PE&amp;D Department (FATA Section)

FATA-DC (Irrigation, mineral-industries)

# FATA-DC, PE&D DEPARTMENT & MNA/SENATOR PROGRAM

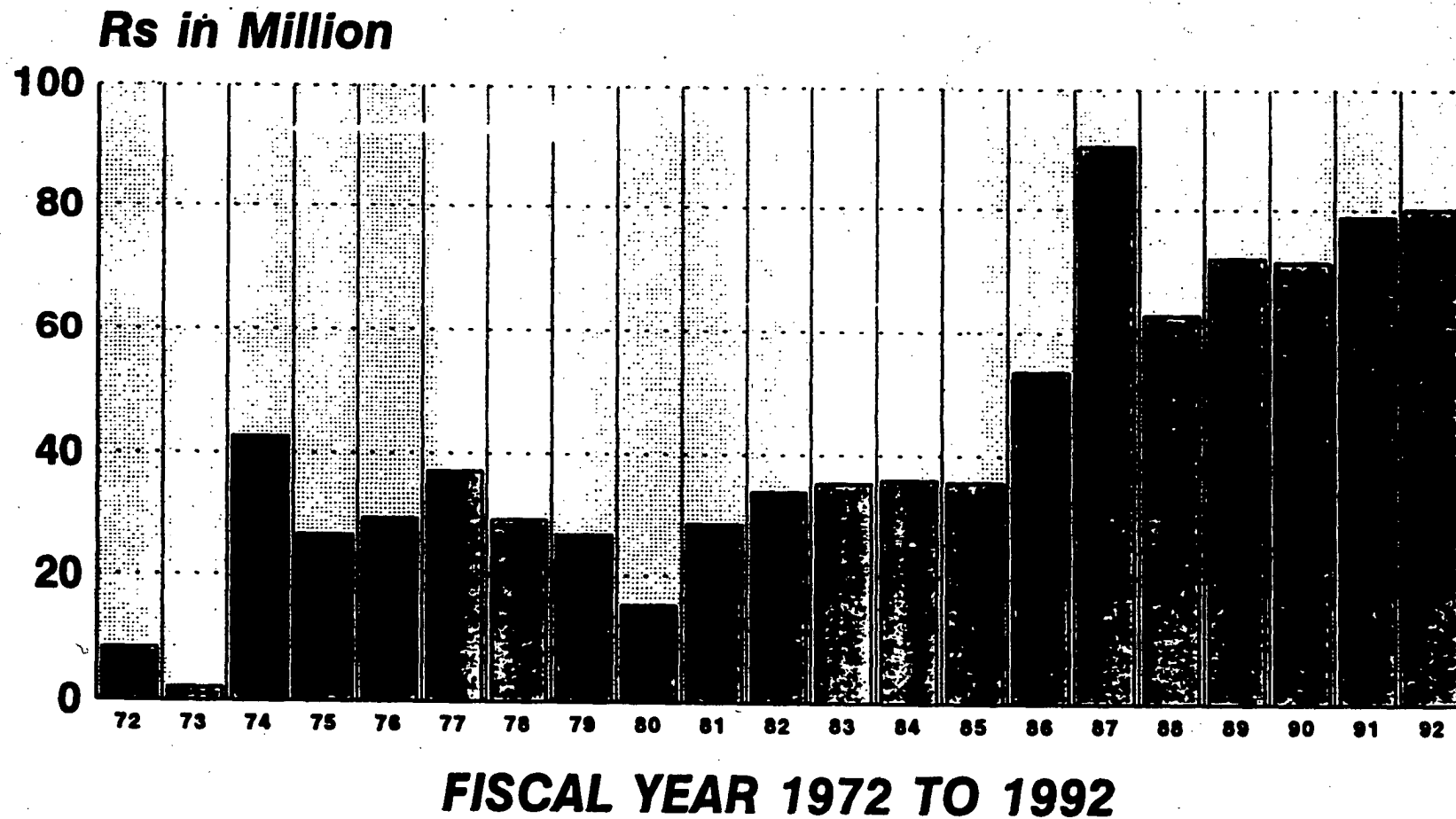
## ADP ALLOCATION IN KHYBER 1971-1993



SOURCE: PE&D Department (FATA Section)  
FATA-DC (Irrigation, mineral-industries)

# FATA-DC, PE&D DEPTT & MNA/SENATOR PROGRAM

ADP ALLOCATION IN KHYBER 1972-1992



SOURCE: PE&D DEPARTMENT (FATA SECTION)  
FATA-DC (IRRIGATION MINERAL-INDUSTRIES)

APPENDIX - 1ANNOTATED BIBLIOGRAPHY FOR THE SOCIO-ECONOMIC PROFILE\*

<u>SECTIONS</u>	<u>SOURCES OF INFORMATION</u>	<u>COMMENTS ON ACCURACY</u>
Geography	<ol style="list-style-type: none"> <li>1. Directorate of FATA Agriculture</li> <li>2. Metrological Dept. Govt. of Pakistan</li> <li>3. Geology Section, FATA-DC</li> </ol>	This information is generally accurate because climate, rainfall data and geographical features are based on scientific observations.
Administration Economy	<ol style="list-style-type: none"> <li>1. Office of Political Agent</li> <li>2. General public</li> </ol>	Accurate information about administration. General observations of local area experts are roughly accurate.
Population	1981 Population Census	Population Census figures are mostly controversial because of political, methodological and inaccessibility issues.
Refugees	Commissionerate of Afghan Refugees	These figures are generally accurate and are based on actual registration of refugees.
Land use and Agriculture	<ol style="list-style-type: none"> <li>1. Agriculture Statistics of NWFP</li> <li>2. Pakistan Census of Agriculture, 1972</li> <li>3. Directorate of FATA Agriculture</li> </ol>	Estimates given in each source are different from others and are not accurate.
Irrigation, Flood Protection and Potable water	<ol style="list-style-type: none"> <li>1. FATA-DC</li> <li>2. Local Government and Rural Development</li> </ol>	These statistics relating to schemes are accurate because these are based on factual positions in the field, but beneficiary and acreage covered estimates are doubtful.
Animal Husbandry	<ol style="list-style-type: none"> <li>1. Pakistan Census of Livestock, 1986</li> <li>2. Livestock Dept. Govt. of NWFP</li> </ol>	Animal count statistics are not accurate because of inaccessible areas. This information is more reliable than Census data.

<u>SECTIONS</u>	<u>SOURCES OF INFORMATION</u>	<u>COMMENTS ON ACCURACY</u>
Forestry	Forestry Department, Govt. of NWFP	These statistics are based on facts and are generally accurate.
Communications	Communication and Works Department, Govt. of NWFP	These statistics are accurate.
Education	Education Department, Govt. of NWFP	Enrollment figures are not very accurate because various sources give different figures.
Health	Health Department, Govt. of NWFP	The number of patients treated is generally not accurate.
Electrification	Water and Power Development Authority	These are generally accurate as they are based on recorded facts.
Investment and Development	1. Investment Report, FATA-DC 2. PE&D Department, (FATA Section)	These figures show actual allocations and are correct.

\* The annotations are based on the sources listed, or interviews and unpublished documents provided by source officials.

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