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**THE AFGHAN AGRICULTURAL EXTENSION SYSTEM:
IMPACT OF THE SOVIET OCCUPATION AND
PROSPECTS FOR THE FUTURE**

by

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to the required standard**

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Abstract

The Soviet Union occupied her southern neighbor Afghanistan on Thursday, December 27, 1979. Soon after the occupation, significant impacts were felt on agriculture and other sectors of the economy. Agriculture was affected in many ways from the integrity of irrigation systems to the cultivation of opium poppies. Agricultural extension, as the main department within the Ministry of Agriculture, was severely affected in terms of programs, organization, personnel, budget, methods, relations with farmers, and transfer of improved technologies.

This study was designed to assess the impacts of the occupation and identify recommendations for the future development of the system. A survey design was used. Sixty-two Afghans with detailed knowledge about the Soviet occupation and agriculture participated in the study. The survey included 34 mostly open-ended questions, covering three areas: demographic characteristics of respondents, impacts of the occupation, and prospects for the future of the Agricultural Extension System of Afghanistan.

The majority of participants were highly educated and lived in North America after departing Afghanistan. The results also showed that during the occupation many participants were assigned to passive positions or lost their jobs. The occupation affected the attitudes of the farmers, reduced the cultivation of agricultural land, destroyed the infrastructure for delivering agricultural services, altered the types of crops grown and reduced the number of people working in agriculture. Millions of landmines remain a serious threat to those who return to farming.

Recommendations are made for the Government, Ministry of Agriculture, Ministry of Higher and Vocational Education, Agricultural Extension System, Non-governmental Organizations (NGOs), and International Aid Agencies.

Agricultural extension rehabilitation should be given high priority to meet the emerging challenges of increasing agricultural production by adopting modern technology, generating suitable marketing channels for surplus agricultural products, providing equal development and working opportunities for Afghan women, protecting natural resources, utilizing professional returnees, and replacing poppy cultivation with regular food crops. Perceptual and structural obstacles may militate against providing proper support for agricultural development in Afghanistan. The overall reconstruction and development of the Afghan Agricultural Extension System is a prerequisite for the future development of the Afghan agriculture sector. Establishing a stable Afghan government and support from the international coalition are essential to rebuilding this important sector of the economy.

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Preface

The Soviet Union occupied Afghanistan from December, 1979 to February, 1989. The occupation left numerous impacts on the social and economic infrastructures of the nation. Several million Afghans left the country for other destinations. Hundreds of thousands were jailed, executed, or lost their properties and professions.

Because Afghanistan is an agrarian country. Agricultural development is a prerequisite for its reconstruction, and agricultural extension can play a vital role in this process.

When this research was carried out, the country was ruled by informal governments (Northern Alliance and Taliban), the economy was in a shambles and there seemed little prospect that this war-torn land would be able to rejoin the world community. Then came the events of September 11, 2001 which both plunged Afghanistan into yet another war and raised hopes that eventually the country might regain some political and economic stability and that peace might even prevail.

It remains to be seen if and when these hopes might come to pass, but this study seems well-timed to contribute to the reconstruction of the country. Many of us who left the country because of the occupation and internal conflict are hopeful that recent events will provide opportunities to help with this process.

To personalize this study, I want to provide some background information about myself. I (Tooryalai Wesa), have been involved in agricultural extension my entire adult life. In 1973, I received my B.Sc. Degree from the Agricultural Extension and Economic Department of the Agricultural College, Kabul University. In 1977, I

completed my M.Sc. Degree in the Department of Agricultural Education, Agricultural College, the University of Nebraska-Lincoln. From 1973 to 1989, I was a member of the Agricultural Extension and Economics Department of Kabul University.

From 1989 to 1990, I worked as the principal secretary to the Minister of Higher and Vocational Education. Furthermore, from 1990 to 1991, I worked as National Consultant for the Food and Agricultural Organization of the United Nations Development Programs (FAO/UNDP), Kabul, Afghanistan. From March 1991 to Mid-December 1991, I worked for the Agricultural College of Kandahar University, Afghanistan. In 1992, I joined the Agricultural Extension Department at Godollo University-Hungary. There I compared the Afghan Agricultural Extension System with the Hungarian Extension System. Then, from 1994-1995, I worked for the Swiss Agricultural Extension Centre in Lindau-Zurich, Switzerland. I completed a research project "*Afghan Agricultural Extension System Prior to the Conflict*" which was published in the Beratung (2/94) of the Centre. Since September 1995, I have been a doctoral student in the Department of Educational Studies at the University of British Columbia, Canada.

To complete this study, I contacted 62 Afghan individuals with substantial knowledge and experience about Afghan agricultural extension and the Soviet occupation. They lived in North America, Europe and Pakistan during the study.

Again, I must point out that the data were collected long before the events of September 11, 2001. Although it is impossible to know if participant responses would be substantially different if the survey and interviews were conducted today, it seems

reasonable to assume that respondents would today be more optimistic about the country's future prospects. It is with greatly renewed hope that I now present my study.

Acknowledgements

I found it extremely hard to successfully conduct an international study of this nature among professionals residing in exile. I further found that a study of this character would not be complete without the continuous support of several experienced and knowledgeable personalities.

The researcher is sincerely indebted to his academic supervisor and mentor through this study, Dr. Thomas J. Sork, Professor in the Department of Educational Studies, for his valuable guidance and suggestions throughout this research project. Professor Sork spent his time and energy beyond the call of the study in offering counsel in the development of this thesis.

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Additional thanks go to those who gave me their time and materials that made this thesis possible. Deep appreciation is extended to all the Afghan professionals who participated in the survey and thoroughly responded to the questions despite their vigorous living conditions in exile. Their time and efforts are heartily acknowledged.

Lastly, but certainly not least, a special gratitude is shared with my wife (Rangina, MD.), my daughters, Mina, Hila, and Wazhma, and other members of my family and my wife's family. Without their help, patience and moral support through banishment, I would not have been where I am now. Once again, heartfelt thanks to all and everyone who helped and encouraged me to pursue this degree. Any errors in fact or interpretation that remain are my own responsibility.

Dedication

To the courageous people of Afghanistan, who sacrificed their lives, family, profession and property for defending their motherland against the Red Army of the former Soviet Union.

CHAPTER ONE INTRODUCTION

Background to the Study

Modern Afghanistan occupies an ancient land, which has seen countless invasions and cruel invaders. A military coup took place in Afghanistan in April 27, 1978. Its failure to gain support of the people of Afghanistan was followed by Soviet military occupation with approximately 80,000 troops. The following year the troops increased to over 100,000. The resistance of Mujahideen (freedom fighters) intensified and became widespread throughout the country. The "civil war" became a struggle for national liberation. The free world thought that Muslim Afghanistan had fallen into the Soviet orbit and would be under Soviet control forever. The world community did not take any urgent effective measures to stop the Soviet Union.

During 1978 and 1979 the people of Afghanistan were forced into a struggle to defend themselves against the Soviet troops. For those who knew Afghanistan before it fell under the control of the Peoples Democratic Party of Afghanistan (PDPA) in April 1978, it is a sad account. But it is an important one for all those seriously interested in this remote Asian land, important and tragic for everyone who respects the right of the proud, diverse, and formerly free Afghan people to determine their own fate.

The fate willed by the leaders of the Soviet Union was the conversion of Afghanistan into a quietly obedient member of the socialist community of nations.

According to Bradsher (1983),

aside from the forms of national identity that will always make it a distinctive country, Afghanistan had to follow both internal and external policies whose basic outlines conformed to Soviet patterns and desires (p.3).

Afghanistan's relations with Moscow became more cordial after the Bolshevik Revolution in 1917. The Soviet Union was the first country to establish diplomatic relations with Afghanistan after the Third Anglo-Afghan war and signed an Afghan-Soviet non-aggression pact in 1921, which also provided for Afghan transit rights through the Soviet Union. Early Soviet assistance included financial aid, aircraft and attendant technical personnel, and telegraph operators. Ghaus (1988), in his book The Fall of Afghanistan, says that,

President Daoud, (1973-1978) seemed to share the Afghans' innate suspicion of the Russians, and adhered closely to the simple and unsophisticated belief that expansion toward the Indian Ocean was the ultimate regional goal of the Soviet Union. I was astonished when Daoud, speaking of Soviet intentions suddenly recalled the reflection of a Russian regarding the purpose of their economic and technical assistance to Afghanistan, which he had read many years ago in an article in *Life*. The Russian (probably an expert working in Afghanistan in the 1950s) confided to an American in Kabul that the growing supply and communications facilities financed by the Soviets would be useful for our armies when they will march. I gathered from that conversation that the consequences of a Russian southward move for Afghanistan, whenever conditions allowed its realization were not lost to Daoud. If he had ever been lax in his assessment of Soviet ambitions, he was certainly alert now to the Russian danger (p. 160).

Ghaus is an experienced Afghan diplomat; in fact, he was the most senior official of the Afghan Foreign Affairs Ministry to survive the Communist coup of April 1978. Ghaus was a member of a delegation with President Daoud and witnessed his meeting with Brezhnev of the Soviet Union.

In another part of his book, Ghaus (1988), explained that:

Brezhnev complained to Daoud, the number of experts from North Atlantic Treaty Organization (NATO) countries working in Afghanistan in bilateral ventures, had increased. In the past, he said, the Afghan government at least did not allow experts from NATO countries to be stationed in the northern parts of the country, but this

practice was no longer strictly followed. The Soviet Union, he continued, took a grim view of these developments and wanted the government to get rid of those experts, who were nothing more than spies bent on promoting the cause of imperialism.

A chill fell in the room. Some of the Russians seemed visibly embarrassed, and the Afghans appeared greatly displeased. I (Ghaus) looked at President Daoud, whose face had grown hard and dark. Brezhnev had stopped talking, as if he were waiting for an answer from the Afghan President. In a cold, unemotional voice Daoud gave Brezhnev his reply, which apparently was as unexpected to the Russians as Brezhnev's words had been to Afghans. He told Brezhnev that what was just said by the Russian leader could never be accepted by the Afghans, who viewed his statement as a flagrant interference in the internal affairs of Afghanistan. He went on to say that Afghanistan greatly appreciated its ties with the Soviet Union, but this partnership must remain the partnership of equals. Daoud added, and I (Ghaus) remember clearly his exact words: We will never allow you to dictate to us how to run our country and whom to employ in Afghanistan. How and where we employ the foreign experts will remain the exclusive prerogative of the Afghan state. Afghanistan shall remain poor, if necessary, but free in its acts and decisions (p. 179).

Until the Soviet invasion in 1979, the country had never been under foreign rule in modern times except for brief interludes during the Indo-Afghan wars of the 19th century. There is some evidence, however, that the Russians had been planning the occupation of Afghanistan for some time. According to Dupree (1973), "...Editorials in Russia encouraged the Tsarist armies to seize Herat (Afghan territory on the west border to Iran) as the first step to reaching the Indian Ocean" (1973, p. 423). Ghaus (1988), agrees with Dupree (1973), that the Soviet Union wanted to occupy Afghanistan for several reasons:

1. to destroy the Islamic movement, to safeguard its Asiatic Muslim republics, 2. to use it as a launching site for subversive activities against Pakistan and Iran, and 3. to get closer and control the Indian Ocean and the warm water of Persian Gulf (1988, p.160).

Every aspect of Afghan society was affected by the Soviet occupation, including agriculture.

Pre-Occupation Agriculture

In the twenty-year period before the occupation (1958-1978), which marked the gradual transformation of Afghanistan from comparative isolation to a more open society, the economy remained largely agricultural. There was some industrial development but this was mostly linked to the processing of agricultural products or the production of farm inputs. According to a report of UNDP, "in 1978, an estimated 85% of the 15.2 million people lived in villages, and almost all of the other 15% were connected in some ways with rural enterprises" (1993, p. 10). Afghanistan was one of the least developed countries in the world, although data was only just beginning to be collected in a systematic way, and many of the criteria did not take into account the specialized nature of production systems in Afghanistan. The country was not, however, unproductive, or unnecessarily conservative, so it could not be regarded as backward.

According to Gul and Morrison, "By 1974 the country was self-sufficient in grain for the first time since the early extension of some improved seeds and technologies" (1988, p. 49). Shortly after, Afghanistan was able to export agricultural products and generate more than \$200 million, which was more than double of the export value of non-agricultural products for the same year (\$92 million) (Swedish Committee for Afghanistan, First Report, 1988). It is worth mentioning that the \$200 million export value was generated by only 30% of the farmers, who had just adopted improved methods and modern equipment. The other 70% of the farmers were still practicing

traditional and subsistence farming. Samin and Anwarzay (1991), in a separate survey, found that, "within the four years, 1974-1978 agricultural exports increased in value from US\$ 171 million to about US\$ 222 million" (1991, p. 15).

Agriculture was almost entirely dependent on irrigation, although this view tended to ignore the large areas of rainfed wheat grown on the steep rolling hills and steppes of the northern regions. According to UNDP (1993),

there is uncertainty about the total areas under irrigation by 1978. Some pre-occupation publications suggest that 5.2 million hectares of land was irrigated, but only 2.8 million hectares (FAO satellite data) were cultivated due to unreliable water supplies. (p. 10)

Low rainfall, cold winters and hot summers, high mountains, winter-stored water in the form of snow and ice, rugged terrain, and the limited land with irrigation systems determined the extent and nature of agricultural activities. According to a survey completed by UNDP, "total cultivated land was thought to be about 0.26 hectare per person" (1993, p. 10). In a separate report of the Afghan Survey of Agriculture completed by Gul and Morrison (1988), "cereals were grown on about 87% of cultivated land with wheat (57%) being the principal crop" (1988, p. 47). UNDP (1993), in another part of its survey mentioned that:

Irrigated land produced 77% of all wheat, and 85% of all food and agricultural crops. Industrial or cash crops included cotton, sugar-beets, oilseeds, fruits and vegetables. (pp. 10-11)

Since mechanization was not widely adopted by the farmers, livestock were used as the major source of power on small and average size farms. Tractors were of growing importance in the larger formally operated irrigation schemes such as the Helmand Valley but animal power was still predominant.

Before the occupation, Afghanistan had well-organized plans for agricultural development. Graduates of Agriculture and Veterinary Colleges, Agricultural Institute, fourteen Agricultural high schools plus numerous short and long term courses in the field of agricultural extension, plant protection, forestry and horticulture were actively involved in developing the agriculture sector.

Agricultural extension programs were available to almost all districts in the country. An efficient network was in operation for distribution of improved seeds, tested in the areas in question, chemical fertilizers, insecticides, fungicides and herbicides. Rural people were accommodated with agricultural and veterinary training and research facilities in various fields. Because of the professional linkage between agricultural extension and related departments, farmers' soil samples from different parts of the country could be tested and the farmers could be advised about the amount and type of fertilizer to apply. Tractors and other farm equipment could be obtained on credit provided by the only Agricultural Development Bank in the country. Cotton ginning plants and sugar-beet factories paid in advance to growers part of the products they sold to the processing factories under contract. Afghan Chemical Fertilizer Company (ACFC) in the north (Mazar-I-Sharif) was able to fulfill the needs of farmers by producing sufficient quantities of urea.

Such measures gradually increased agricultural production which helped the agriculture sector attract more investors. According to a survey conducted by Samin (1989), "prior to the occupation there were more than 200 private poultry farms in Kabul province" (p. 26). Orchards and vineyards were established in most parts of the country, irrigation dams were built and deep wells for irrigation purposes were dug; irrigated

canals and karezes (a local type of irrigation system) were cleaned annually and vast virgin lands came under cultivation and traditional agriculture moved from a static phase to a more viable stage.

Although pre-occupation Afghanistan had fertile soils, ample irrigation water, and a hard working labor force, due to poor management, inadequate policy, and insufficient staff, little attention was paid to the improvement of agricultural, social, and economic standards of living in the country. Nevertheless, in spite of inadequate farm machinery, insufficient agricultural credit, limited agricultural extension, agricultural education and crop protection, poor transportation, and low farm income, Afghan agriculture was developing impressively before the occupation. Had the Soviets not invaded, Afghanistan would most probably have been on the list of developing nations, if not the top developing nation, in the region.

Agriculture During the Occupation

Earlier successful Soviet military interventions in the Ukraine (1945-1951), former Democratic Republic of Germany (DDR) (1953), Hungary (1956), former Czechoslovakia (1968) and intermittent Soviet military pressure on Poland demonstrated that the stark military power of the Soviet state was an irresistible tool of Soviet political power. Therefore, in December 1979 Soviet tanks rolled into Afghanistan to enforce the Brezhnev doctrine in Stalinist fashion. The Red Army (RA) was sent to crush the anti-Communist movement and to secure the life of the installed Sovietist Afghan government.

Afghanistan's agriculture sector, agricultural institutions, farms and farmers became the victims of the Soviet occupation. Some programs were implemented by the PDPA, the Soviet sponsored Afghan government, including a major land reform. A report by the Swedish Committee for Afghanistan explains that plans implemented in 1978 involved redistributing about 25% of agricultural land from landlords (who owned large acreages) to former tenants to strengthen both equity in land ownership and incentives for farm production (Swedish Committee First Report, 1988).

The people of Afghanistan as the residents of a Muslim country, under the power of the PDPA united to oppose these changes. Majrouh and Elmi (1986) emphasized the value of land and property within the frame of Islam. They believe that:

The right of ownership is recognized as a right of the individual by Islam. Any violation of the right is considered illegal and sinful. Land and houses are recognized as the honor of the tribe and family among Afghans. (p. 31)

According to these authors, the people of Afghanistan clearly saw that, "their national sovereignty was threatened by a foreign power, their religion in danger, and their work and properties lost" (1986, p. 31). The Soviets and the PDPA government also thought that they would be able to rule the country. Gradually the people's resistance gained momentum and the Afghans, without any modern weapons or training, stood firmly against the PDPA and their inter-nationalist friends.

As the result of the conflict, most agricultural services and institutions failed. Communication between various and connected agencies was disrupted. Transportation of agricultural products and inputs was disturbed. Due to the destruction of power and irrigation systems, the season to season storage of agricultural produce did not take place. Famine, poverty and starvation in the villages resulted from destroying harvests and

burning grains and other foodstuffs. The former Silo department head of Kandahar province explained to me during a telephone interview from Germany that by the mid decade of 1980s, the Afghan government with the support of Soviets tried to purchase wheat from villages at higher prices and offer it to the market to balance the demand and price of wheat supplies. This action ended with food shortages in rural areas. The motive behind this, from the general public's perspective, was to force the rural people to accept the occupation (personal communication with the former Head of Kandahar Silo).

During the occupation, based on the type of farming and the number of people involved, Afghanistan could be classified as one of the world's least developed countries with a subsistence farming system. More precisely, of the 141 countries surveyed for human suffering by the Population Crisis Committee in 1992, Afghanistan ranked third in the world under the title of "Extreme Human Suffering."

Soviet troops stayed in Afghanistan until 1989 and the PDPA government in Kabul survived until April 1992. During that period Afghanistan's economy increasingly integrated with the Soviet bloc and became more dependent upon it with each passing year. According to Zakhilwal (a senior Afghan economist), "by the late 1980's Moscow and the Soviet Central Asian Republics, despite their own problems, were supplying some US \$300 million worth of goods every month to Kabul" (2000, p. 4).

There were no major development activities during the government of the PDPA. The government's economics policy was limited to day to day survival. Afghanistan relied on foreign sources for virtually all its food. Afghan traders succeeded in providing Kabul with food and fuel paid for in US dollars. Hard currency came largely from the narcotics trade and the sale of weapons. By the late 1980s, Afghanistan's vast poppy

cultivation made it one of the world largest opium producers. Similarly, large amounts of hard currency also stemmed from re-export of goods coming to Kabul then smuggled into neighboring countries. For example, some Afghan businessmen imported various goods (televisions, air-conditioners, refrigerators, and other items which people were unable to use either because of lack of electric power or low economic status) from foreign countries. Such goods were re-exported to neighboring countries.

The Mujahideen (freedom fighters) toppled the PDPA regime in April 1992. However, that only brought more war and devastation as internal power struggles intensified. The meager infrastructure that once existed in Kabul was demolished or looted and this once civilized and highly cosmopolitan Asian capital became a cultural wasteland. With little electricity, those factories that were not destroyed during the occupation could not operate because of insufficient power and other inputs anywhere in the country. Opium replaced regular agricultural crops, agricultural extension and other farming services were ineffective due to the lack of qualified personnel and facilities. Schools and universities were closed and education at all levels came to a standstill; water, power, the telephone system, roads and airports were heavily damaged or thoroughly destroyed in the fighting. There was no functioning government apparatus to repair the damage.

Large groups of the country's professionals-- doctors, mechanics, engineers, university professors, writers, economists, officers--fled the country and there was virtually no one left in the cities qualified to undertake repair of the damaged infrastructure. According to Whitaker (1994), Kabul's destruction led to it being compared to post-Hitler Berlin.

Agriculture After the Occupation

On February 15, 1989, I remember the scene of the last Soviet soldier departing Afghanistan through the so-called Afghan-Soviet friendship bridge in the north of the country. It was an historical victory for the people of Afghanistan and a major defeat for the former Soviet Union. Due to the continuous devastation, it was difficult to measure the exact amount of damage caused by the occupation.

Table 1 shows the number of houses, villages, mosques, and schools destroyed from the beginning of the occupation until 1988. Likewise, Table 2 indicates the loss of sheep and goats, cattle and horses from the occupation until 1988.

Table 1

Estimated Rural Property Losses, 1979-88

Rural houses destroyed	1,045,212
Villages totally or partially destroyed	11,418
Rural mosques destroyed	10,814
Rural primary schools destroyed or abandoned	3,261

Source: Noorzy, 1988a, p. 58 table 9

Table 2

Estimated Losses of Livestock in 1979-88

Kind of Livestock	Number in 1000	Percentage of total
Sheep and goats	11,140	67.0
Karakul sheep	4,181	65.0
Cattle	1,739	52.0
Horses	178	31.0

Source: Noorzy, 1988a, p.54

Swedish committee, 1988, p. 19, 37

A survey by Farr and Gul found many changes in the agriculture sector, particularly wheat as a main crop and the use of chemical fertilizers. The area planted to wheat in 1978 was 37.3 Jeribs (4.5 Jeribs = 1 Hectare) per farmer sampled. By 1982, acreage in wheat had dropped to 13.9 Jeribs, or about 37 percent of the 1978 acreage. All provinces were down although some of the areas suffered larger declines than others. Provinces with large farm sizes, such as Farah, Kandahar and Nimroz, showed a higher provincial decrease in wheat acreage, while provinces with smaller farms decreased less. In addition to wheat, by 1982 the acreage in corn was down to 38 percent of the 1978 level, barley to 43 percent, rice to 20 percent and cotton to 16 percent (Farr & Gul, 1982).

A survey performed by Samin (1989), found that the price of pre-occupation era chemical fertilizer used for wheat production dropped to 50% (during the occupation) of its level in 1981. An example cited by Samin in this regard is that "the price for a bag of 50 kg of urea was officially only 400 Afs. but its price in the rural areas was raised to 2500 Afs." (p. 23).

Yusufi found similar results for chemical fertilizer as:

for wheat 20.8% in 1982, of corn to 34.6% in 1981 and to 11.5% in 1982, of rice to 45.7% in 1981 and to 19.6% in 1982, of barley to 11.2% in 1981 and to 5% in 1982, of cotton to 18.7% in 1981 and to 6% in 1982. (Majroh and Elmi, 1986, p. 173)

Fertilizer was not available in most of the provinces, especially those that were geographically distant from the capital, Kabul and the fertilizer plant in Mazar-I-Sharif. Though the Soviets left Afghanistan in 1989, the agriculture sector still faces several crucial problems that have significantly influenced agricultural production. The first problem deals with the existence of several million land mines. The Soviet Union withdrew, but their mines are still there. Afghanistan remains one of the countries most

severely afflicted by this vicious form of late twentieth century pollution. Remarkable steps have been taken to address the problem, but for too many Afghans, not least among them those Afghan refugees who remain stranded in neighboring countries, the threat of injury or death from landmines continues to thwart their hopes of reintegration in their homeland.

The presence of millions of mines will remain a major obstacle to refugees and displaced Afghans wishing to return to their villages. The position and location of the mines have been uncertain by the almost continuous war for the last 20 years. Based on a report completed by UNDP, "irrigation canals and ditches were mined to prevent their use by Mujahideen" (1993, p. 46). Since the occupation, a substantial number of the country's farms have been abandoned which has led to recurring food shortages, with the result that the Government has been obliged to import large quantities of foodstuffs (personal observation).

Another problem is the vast cultivation of opium poppies by farmers, which affected the country's food production capacity and increased instability and corruption in the region. During the occupation, opium cultivation increased dramatically mainly because the central government was unable to curb the practice. In some parts of the country, small farmers who wanted to feed their families and provide basic needs preferred cultivating poppy for ready cash that was offered them in advance by moneylenders. The existence of mines in some areas also persuaded farmers to cultivate poppy on their reduced holdings. Runaway inflation as well as high unemployment compelled farmers to cultivate the opium poppy in still larger quantities in place of food crops. At the same time that the drug smugglers made persuasive demands for poppy

cultivation, the unprecedented ease in crossing porous borders facilitated a trade that became international in nature.

Afghanistan was one of the world's largest producers of poppy and hashish, although precise figures are unavailable. However, a report by the BINLEA (Bureau for International Narcotics and Law Enforcement Affairs) of the United States estimates:

1,350 MT (metric tonnes) of opium gum compared to 1,265 MT (39,150 ha in 1997) was produced from approximately 41,720 hectares (ha) of poppy. Poppy cultivation and opium gum production increased by 7 percent in 1998, despite poor weather. (1999, p.3)

During an interview with the Earth Times News Service, Arlacchi, Executive Director of the UN Office for Drug Control and Crime Prevention (ODCCP), in response to a question explained that: "opium production is a consequence of the overall catastrophic situation of the country" (01, 30, 2001).

With the installation of the current interim government, illicit crops no longer occupy prime agricultural land. Table 3 presents related figures on the matter in Afghanistan during the occupation in comparison to the world .

Table 3

Opium Production in Afghanistan in Comparison (metric tons)

Year	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Afghanistan	400	600	750	585	415	570	640	685	950	1250	1230	1265
Burma	770	835	1280	2430	2255	2350	2280	2575	2030	2340	2400	2500
World	1595	2350	2590	3698	3257	3492	3389	3745	3409	4086	4100	4000

Source: www.afghan.politics.org The Online Center for Afghan Studies. 1999

Before the installation of the Afghan interim government in December 2001, a formal government was not functioning. In most cases, the United Nations along with some NGOs provided direction in the reconstruction and development of the country. The lack of a central government has created serious constraints to rehabilitating the country's capacities. However, opportunities have been seized wherever possible. Most notably, development organizations and others have worked directly with communities and Afghan NGOs to plan and implement activities.

At present, Afghanistan has no conventional economy. The cities have been virtually destroyed and the country's infrastructure will have to be rebuilt from scratch. In most cases, conditions are almost medieval with not a single-operational attribute of a modern state such as irrigation systems, roads, electricity, communication, schools or transport being fully functional. Most Afghans inside the country are left to subsist on a diet of bread and tea for which they pay astronomically high prices. Afghanistan, with the recently established government has been assured that it will receive international aid on a meaningful scale. From Zakhilwal's perspective, "Peace and stability alone can bring economic recovery" (Zakhilwal, 2000, p. 5). The current government, as a useful start in returning peace to the country, will be meeting challenging tasks in the reconstruction process.

Gul and Morrison (1988) have estimated that "between 55 and 77% of the country's pre-war agricultural output capacity has been destroyed" (1988, p. 48). They further added that between 1978 and 1982, selected farms had reduced their acreage of wheat by 63%. During the same period, average yield per hectare dropped by 46% for wheat, 65% for rice and 40% for barley (p. 48).

The total number of victims of the years of occupation cannot be accurately counted. Apart from an estimated one million dead, and another 200,000 to 300,000 disabled Afghans, there are tens of thousands of orphans and widows left behind, whose survival in the devastated Afghan economy will be a major responsibility of any future government (Zakhilwal, 2000, p. 5).

In 1992, when Mujahideen assumed power, the war reached a climax, leaving about one third of the population (about 6 million) either internally displaced or in refugee camps outside the country. Significant reductions in agricultural production left the country in dire need of food and other assistance. Agricultural systems had been devastated; infrastructure had deteriorated, and government extension services were drastically reduced.

My Interest in the Subject

I was born into a farm family in Kohak village, Arghandab district, Kandahar province, Afghanistan. My interest in studying agriculture extension began in my youth. I was witnessing the contacts and demonstrations performed by extension agents on various agricultural inputs, mostly improved seeds (wheat), chemical fertilizers and some machinery. This was the main motive and I favored agricultural extension as my future career. Furthermore, my uncle, Abdul Qayoum Bazgar, as a progressive farmer and resource person in our village (Kohak), had numerous contacts with the agriculture extension district and provincial offices. Some of the demonstrations on improved seeds and chemicals were performed on our farm. Farmers from the neighboring districts and provinces, local and provincial governors were also invited to certain agricultural days

(farmer, wheat and cotton days). He was acting as a resource person for the rest of the farmers in the village. I was spending my summer holidays (June-August) with him on the farm. I enjoyed observing his contacts with the agricultural extension agent.

The interest in extension strengthened in 1989-1990, while I was working as a local consultant for the Food and Agricultural Organization of the United Nations Development Program (FAO/UNDP) Kabul, Afghanistan. FAO was in the process of rehabilitating the agriculture extension units in Afghanistan. I was asked to prepare a report on the status of agriculture extension units in the country. I used the available documents in the Ministry of Agriculture and traveled to visit some units in the provinces of Kabul, Heart, Mazar-I-Sharif, and Shaberghan that were under government control. In the same provinces, I visited some of the units under opposition control. These visits were arranged by the United Nations headquarters. While observing numerous extension units in various provinces, drastic differences were observed between what was described in documents and the existing situation.

Likewise, I translated two textbooks from English to Pashtu (language of the majority in Afghanistan). The first one is by Maunder, (1972), Agricultural Extension-A Reference Manual (Food and Agricultural Organization (FAO), United Nations. Rome, Italy). It was published and used as a textbook for the Introduction to Agriculture Extension course taught at the sophomore level. The book was also used as a reference in related subjects within agriculture and veterinary colleges of Kabul and Nangarhar Universities. The second, Introductory Rural Sociology (1972), published in India, was also published and used as a textbook for the Introductory Rural Sociology course at senior level of the agriculture and veterinary colleges of Kabul and Nangarhar Universities.

During this period, circumstances were severe, schools were open infrequently, and daily life was risky because of stray bullets, bombs and rockets. Several rockets hit the campus of Kabul University and the Agriculture College, where one professor and three students were killed and various parts of the building were damaged. University and school sessions were irregular.

My wife Rangina's daily commute to work (as a hospital gynecologist) was unsafe and my three daughters (Mina born 1982, Hila born 1983, Wazhma born 1986) had problems getting a proper education. They were under a lot of stress and their morale was low. We, as educated parents, so as not to be blamed by our children in the future, decided to leave the country until the situation returned to "normal." At that time, the only chance to leave the country was walking through mountains to either Pakistan or Iran with the assistance of human smugglers. It was very risky and unsafe. Furthermore, our children were too young to afford such risks. We did not dare even try that option though some of our family members went through that channel. We looked for a safe and quasi-legal avenue. I tried through my work place and got a passport, but my wife did not. She tried from her work place and got a passport, but I did not. The secret service of the regime was supposed to certify every single citizen before travelling outside the country. It did not agree to allow us to travel together. They assumed we would not return. We tried other alternatives. My wife organized a medical certificate from her work place that said: "Dr. Rangina's sickness is untreatable within Afghanistan. She has to go overseas for further treatment." This letter was forwarded to the Medical Committee within the Ministry of Public Health for further evaluation of her sickness. The committee supported the decision of the hospital and forwarded its decision to the

Ministry of National Security. The Ministry of National Security agreed to allow her trip but only to one of the friendly countries (Soviet Union and its alliance).

I submitted a request to the Ministry of Public Health that said: "My wife is ill, she is going overseas for treatment, she needs help during her treatment. Someone should accompany her". The Ministry agreed. I submitted a separate request saying, "since we do not have anybody around, I mentioned myself as the only alternate to accompany her." Lastly, I applied for our three children to join us. I got their permission.

We rented our apartment "#33, Block 5, First Macrorayoun" for one year, locked our household goods in one room for security purposes, and pretended we would return in the near future. Moscow was our best choice. My older brother (Zalmai Wesa) was a student in Moscow. We left Afghanistan on December 21, 1991. First to Tashkent, and then to Moscow. Three and a half months later, the Mujahideen entered Kabul. A war between various groups of Mujahideen erupted. We were considering going home, but were concerned about our safety. We were optimistic that a new government would be established under rules proposed by the United Nations. We resided for nearly four months in Moscow monitoring the situation. Other members of our family and friends, residing overseas, advised us against returning home. We were unable to get enough information on the situation to make an informed decision. None of us could communicate in Russian and the Soviet media was not as open as in the West.

We approached various Western embassies while in Moscow seeking visas. None of the embassies issued us visas. I contacted a former co-worker, Dr. Villmos Janata, (Hungarian), (CEO, training project, FAO/UNDP, 1989-1991, Kabul, Afghanistan), who ended his contract with FAO due to the civil war and returned to Budapest, Hungary in 1991. At that time, he was the member of the Farm Management Department of Godollo University, Hungary. He invited me with my family to Hungary via the agriculture extension department of Godollo University. I shared my extension experience in Afghanistan by delivering some lectures to different agriculture students and agriculture extension employees.

At that time, the Hungarian government was not in the position to take refugees. Therefore, we looked for somewhere else to settle. Once again, I approached different Western embassies. Luckily, Switzerland issued us a visa and on June 11, 1992, we arrived in Zurich. I was given an opportunity to work with the International Department of the Swiss Agriculture Extension Center which was conducting preliminary studies on agriculture extension in Kazakhstan (Asian Republic of the former Soviet Union). I wrote a report on the Afghan Agriculture Extension System, which was published in the bi-monthly journal (Beratung) of the Center.

We lived there for three and half years. According to Swiss laws, refugees could not benefit from certain services. For example, refugee children were unable to attend university level education. Professionals with refugee status could not work in their fields. Moreover, there are three different official languages (German, French, and Italian). In our situation, it was difficult to learn all of them. Since the future of our children had priority, we searched for a suitable alternative. I applied to the Department

of Adult Education, (now Educational Studies) at the University of British Columbia. In the meantime, one of my brother-in-laws, (a Canadian citizen) arranged a sponsorship for us to immigrate to Canada. Both chances synchronized and we departed.

Research Purpose

It should be clear from the foregoing that Afghanistan's agricultural sector was damaged severely during the Soviet occupation. Production of traditional food crops dropped dramatically, the agricultural infrastructure was torn apart, opium production skyrocketed, and potentially productive land was rendered useless by landmines. Agricultural extension had been a vital tool for agricultural development prior to the occupation. Although quite a bit is known about what happened to agricultural production during the occupation, little is known about what happened to extension during this period and what might be done to rebuild the agricultural sector in what is now a dramatically changed set of circumstances.

The purpose of this study, then, was to determine--from the perspectives of people who were directly involved in various aspects of agricultural extension in Afghanistan-- what impact the occupation had on the Agricultural Extension System and what might be done to reconstruct extension in a way that will contribute to rebuilding the agricultural sector.

Research Questions

In an effort to understand the role of agriculture extension in the agricultural development in Afghanistan, my study was guided by the following broad research questions:

1. How was the Afghan Agricultural Extension System affected by the Soviet occupation?
2. What should be done to reconstruct the Afghan Agricultural Extension System?

Organization of the Thesis

In Chapter 2, I introduce Afghanistan by explaining her geography, history, ethnography, economy, educational system, religious traditions, and social and political structures. This chapter provides readers with basic information so they can understand the challenges of rebuilding the country.

In Chapter 3, I present a review of the meaning and practice of agriculture extension, beginning with literature on the philosophy and theoretical orientation of agriculture extension. Definitions and historical development of agriculture extension in the United States of America, Europe, third world and Afghanistan are also covered.

In Chapter 4, I review the methodology used in the study. I detail data sources, data gathering methods and procedures, interpretation and data analysis procedures, and discuss threats to validity. I also cover the demographic characteristics of the participants and pilot testing procedures. I conclude by identifying limitations of the study.

In Chapter 5, I report the findings concerning the impact of the occupation on various aspects of the Agricultural Extension System and the agricultural sector as a whole. Included are impacts on programs, budgets, teaching methods, relations with affiliated organizations, scope and responsibilities, and the role of the government, and NGOs.

In Chapter 6, I report on the suggestions and recommendations made by the participants for the reconstruction and future development of the system including extension and the agricultural sector as a whole. The discussion section of Chapter 6 covers the desirability and feasibility of the key suggestions and recommendations made by the respondents.

Chapter 7 summarizes the study, presents conclusions and offers a series of recommendations to various stakeholders in the future of Afghanistan.

The next chapter provides a more in-depth introduction to Afghanistan.

CHAPTER TWO INTRODUCTION TO AFGHANISTAN

The purpose of this chapter is to present general information about Afghanistan. This information will help the reader understand this complex country that is the context of this study. Afghanistan as we know it today emerged as an independent political entity in the middle of the eighteen-century. According to Gregorian (1969) "the Afghans finally imposed their rule upon territories extending from the Punjab to Baluchistan" (p. 10).

Geography

The geography of Afghanistan is described by the Encyclopedia Americana (1986) as follows:

With an area of approximately 254,00 square miles (658,000 sq. km), Afghanistan is about the size of Texas, but it is vastly different from Texas in terrain, climate, and vegetation. It is a rugged land, characterized by steep, snowy mountains, deep valleys, barren plateaus and windy desert. The average elevation exceeds 4,000 feet (1,219 meters). Afghanistan extends a maximum of 770 miles (1,239 km) from east to west and 350 miles (563 km) from north to south. Afghanistan is situated in Central Asia at the junction of the Himalaya, Hindu Kush and Pamir mountain ranges. The northern border is shared with the Turkmen, Uzbek and the Tadzhik republics of the former Soviet Union (USSR). Iran lies to the west, Pakistan to the south and east, and Kashmir and China to the northeast (V1, p. 246). [See figure 1].

Afghanistan's dry, continental climate produces four distinct seasons. Winters bring snow followed by early spring rains. Summers are hot and dry. Autumns are moderate and dry. According to Statesman's YearBook (1995-96), "annual rainfall is 13 inches (388 mm) (132 Ed, p. 61).

Afghanistan is a mountainous country by nature. The country has varied terrain including mountains, steppes and plains. The Encyclopedia Americana (1986) characterizes the geography as follows:

Mountain ranges, running from the Wakhan corridor in the northeast to the southwest, bisect the country. The principal range, the Hindu Kush, has its origin in the Pamir and is an extension of the Himalaya. It forms the chief barrier to communication between northern and southern Afghanistan: of the several passes across the range only one, Shibar (9,800 feet, 2,987 meters), is less than 10,000 feet high. Toward the west the Hindu Kush broadens and descends into the Paropamisus Range, which ends near the Iranian frontier. In the heart of the country, it throws off to the south of Koh-I-Baba (Kuh-I-Baba) range, which in turn thrusts out spurs in all directions (V1, p. 246).

Other major ranges are located in the east. From the lower reaches of the Kabul River the Safed Koh (Safid Kuh) range runs westward to the Logar Valley south of Kabul. South of the river it is pierced by the legendary Khyber Pass. Farther south is the northern end of Suliman Range, which extends into Pakistan. The Khowja Amran range runs southwestward between the Kandahar region and the Pakistan frontier (Encyclopedia Americana, 1986).

North of the Hindu Kush are the steppes of the Amu Darya, which are well watered by the tributaries of that river. South of the main line of the range, the foothills recede into vast plains of mixed sand, loam, clay, and gravel. These barren areas, which cover 40,000 square miles (103,600 sq.km), are called the Dasht-I-Margo (in the southwest) and Registan (south of Kandahar); they are between 1,500 and 2,000 feet (457- 610 meters) above sea level (Encyclopedia Americana, 1986).

Similarly, Afghanistan has major rivers running from north to south and east to west. Gregorian (1969) mentioned the four river system as, "the Helmand, Amu Darya (Oxus), Hari Rud (Arius), and Kabul" (p. 12).

History

The history of Afghanistan is full of stories of wars and invasions. Most of the conflicts took place because of either foreign invasions or Afghan leaders' political ambitions. The nature of this ambition is complicated because of the multi-ethnic structure of the Afghan population. A glance at the history of Afghanistan explains easily how these wars were sparked and why they devastated the country. During each war, many cities including historical heritage sites (Buddha Statue) and architectural monuments, were repeatedly destroyed and then rebuilt. According to Gregorian (1969), most of the important urban centres of Afghanistan "Kandahar, Herat, Ghazni, Mazar-I-Sharif" were located in fertile valleys and at the junctions of trade routes, where they were difficult to defend against attack" (p. 11). These cities were once the center of civilization and culture in Central Asia.

Afghanistan's crossroads position in Central Asia has exposed it to constant invasion and conquest throughout its long recorded history. The parade of conquerors in historic times include Darius I of Persia in the 6th century BC; Alexander the Great in 328 BC; the Sakas (Scythians), Parthians, and Buddhist Kushans in the second and first centuries BC; and the Hephthalites, or White Huns, in the fifth and six centuries AD (Dupree, 1973). The Arabs introduced Islam in the seventh century, and the Turks under Mahmud of Ghazni briefly made Afghanistan the center of Islamic power and civilization at the beginning of the 11th century. The Mongols invaded Afghanistan early in the 13th century, and Timur added it to his empire at the end of the 14th century. In the early 16th century, Timur's descendant Babur, first of the Mughals, founded an empire in India from his base at Kabul. During the 16th and 17th centuries some parts of the country

owed allegiance to the Moghols, and others to the Safavids of Persia (Gregorian, 1969).

In 1747 the Afghans (Pathan), having thrown off the Persia yoke, established a dynasty of their own under Ahmad Shah Sadozai (Ahmad Shah Baba) in Kandahar, the leader of a tribal confederation. This is the date of the foundation of modern Afghanistan. The boundaries of the Afghan state expanded to the east to New Dehli (India) and to Mervq (Today's Tajikistan) in the North and to Meshhad (Iran) and further to the West. Only Ahmad Khan (Durani) invaded India seven times in order to expand Afghan Empire to the Indian Ocean (Ghoubar, 1967; Gregorian, 1969).

Pathan strength was consolidated by Dost Mohammad Khan (r.1826-63) who founded a second dynasty early in the 19th century. Effective physical control over all of the country, however, was first achieved by Dost Mohammad's grandson, Abdur Rahman Khan (r.1880-1901); Abdur Rahman's diplomacy also prevented either the British or the Russian empires from gaining internal control over Afghanistan. Frustrated by their failure to subdue the country in the Anglo-Afghan wars of 1839-42 and 1878-80, the British agreed to subsidize an Afghan ruler strong enough to serve as a buffer between the empires (British and Russians) (www.afghan-web.com/history/articles/reshtya/html, 2002. February 25. p. 1).

Abdur Rahman's grandson, King Amanullah, (r. 1919-1929) proclaiming unilaterally the independence of his country in 1919 without waiting for the reaction of the English, sent out a roving delegation to establish diplomatic relations with the different countries of Asia, Europe, and America. The first stage of that delegation's mission was in Moscow, where it was received in October, 1919, with open arms by the leaders of the new regime. It was the first diplomatic delegation to visit Moscow since the Bolshevik

revolution of 1917. According to Reshtia, (1984), "Afghanistan was the first country to recognize the new state of workers and peasants of all the Russia" (pp. 31-42).

This was the beginning of a "special relationship" between the two neighboring countries, which lasted, with difficulties, for sixty years until the invasion of Afghanistan by the units of the Red Army in December 1979. In order to illustrate the evolution of Russian policy towards Afghanistan over these sixty years, Reshtia (1984) divides the period into three distinct phases.

First Phase

During the first phase (1919-1929) relations were very amicable, but too hasty. The two countries needed each other. Afghanistan, having broken her traditional bonds with Great Britain, turned towards the Soviet Union for all kinds of support and assistance. In this way, for the first time in the history of relations between these two countries, many Russian technicians and instructors arrived in Afghanistan to set up telephone and telegraph communications, and to train young Afghan technicians, so that the first pilots of the Afghan air force were trained in the Soviet Union. At the same time, Soviet goods came onto the Afghan market, which had, up to that time, been monopolized by the English.

This "flirtation" did not appeal to the English, particularly as Bolshevik propaganda made its way slowly across Afghanistan into India. The reaction of Great Britain was brutal. Nevertheless, the ground had been prepared by King Amanullah himself. In his patriotic zeal, he had started a series of reforms which were too bold and hurried, modeled along Turkish lines, without taking into consideration conditions peculiar to his own country, or the negative attitude of the religious factions towards these innovations, or their influence on the tribes. The result of this was the fall of the reformer monarch and the establishment of a regime, which was both conservative and favorable to British policy (pp. 31-42).

Second Phase

The accession of King Nader Shah, in 1929, marked the beginning of a new phase in relations between Afghanistan and the Soviet Union. We shall call that phase the "closed borders era". In fact, under the reigns of Nader Shah and the early part of Zahir Shah (who was King until the 1973 coup d'etat organized by his cousin Daoud), the relations with the

USSR were limited to diplomatic representation and commercial exchanges of no significance.

This was the situation until the end of the Second World War, during which time Afghanistan was able to maintain its neutrality because, at least during the last three years of war, its two powerful neighbors were fighting on the same side (Reshtia, 1984. pp. 31-42).

In 1947, the political status quo in this area was fundamentally changed by the withdrawal of the English from the Indian sub-continent, an event that left a political vacuum for Afghanistan (Reshtia, 1984).

The impact was so strong that the conservative government of Prince Hashem, elder uncle of the young King Zaher Shah and a strong-minded man, who as Prime Minister had ruled the country since the assassination of his older brother, King Nader Shah in 1933 fell, and his brother, Marshal Shah Mahmud, came into power as Prime Minister. In order to fill the political gap, the new government asked the United States to take the place vacated by the English, at least in economic and technical fields, by initiating research to explore the natural resources of the country, and by building irrigation and communications systems. The Afghan government offered substantial incentives to American commercial firms, in the form of very favorable contracts, in order to develop large areas of so far unproductive land in the Hilmand Valley, in the south of the country (Reshtia, 1984).

Since 1947, Pakistan and Afghanistan have had a political dispute over the right of self-determination of the Pashtun and Baluch tribes who live along the frontier between the two countries. The Indian government was on the Afghan's side and these two factors led the American government to consider the request for arms as a prelude to a new Kashmir situation in the area. Faced with the negative attitude of President Truman, Shah Mahmud made a very significant remark, which was widely commented upon by the

press. To a journalist, who had inquired whether the Afghan government would turn to the USSR for arms, he replied: "Muslims are forbidden to eat pork, except when a Muslim is dying of hunger!" (Reshtia, 1984, pp. 31-42). Although it was at that stage only a bluff, later Afghanistan had no alternative but to turn to Moscow.

Third Phase

Prince Daoud, a cousin of King Zahir, who meanwhile had come to power, tried once more to convince the American government of the Afghan government's good will and of its desire to settle the dispute with Pakistan through diplomatic channels. He met Vice-President Nixon during his short visit to Kabul in 1953. But another prerequisite was demanded, namely that Afghanistan should abandon its long tradition of neutrality to join Pakistan, Iran, Iraq, and Turkey as a party to the Baghdad Pact (Reshtia, 1984. pp. 31-42).

This was enough to push Prince Daoud, who was already tired of American lack of comprehension, into the open arms of Moscow. Thus, the third phase had started and the Great Assembly (Loya Jirga), at a special meeting convened to decide on the Pashtunistan situation and the purchase of arms, unanimously, decided that arms "should be bought wherever this was possible" (Reshtia, 1984. pp. 31-42).

In Moscow, the new post-Stalin leaders were following these events with great interest. They had already started their Peace Policy towards the Third World and were eager to draw Afghanistan into their sphere of influence (Reshtia, 1984). In December 1955, Bulganin and Khrushchev stopped in Kabul, on their way back from a trip to India, to assure their new client of the full support of the USSR, not only in terms of arms, but also on the Pashtunistan issue, and a long-term loan of 100 million dollars was granted to Afghanistan (Reshtia, 1984).

On the other hand, numerous Soviet experts started exploring various social, cultural, educational, and political aspects in all over the country; thousands of young Afghans were sent to the USSR to complete their studies in various fields, but mostly to get army training. Large projects were undertaken by the Soviets, mostly in the communication sector and the research of natural resources. Several main roads and airports were built; gas, oil, iron and copper resources were carefully studied. A large polytechnic institute in Kabul and several smaller ones in the provinces were built. During the years 1958 to 1973, 50% of the young officers and army technicians were trained in the USSR, or under the supervision of Russian instructors in Afghanistan (Reshtia, 1984).

A long-term plan had been drawn up by the Soviets and each step had been carefully studied by qualified experts. During the whole preparatory and transitional period, the western countries, which in spite of the growing Soviet influence had maintained a presence in Afghanistan, did not suspect the intentions of the USSR. On the contrary, they were quite happy at this unprecedented peaceful competition with Soviets. For example, the Soviets built Kabul airport and the Americans supplied the technical equipment. A few Afghans, who were familiar with the Soviets' methods, and in particular with their way of dealing with the Muslims in Central Asia, voiced some doubts about their impartiality (Reshtia, 1984).

They were able to convince King Zaher that his cousin was going too far in his relations with the USSR, especially after relations with Pakistan were severed in 1961, making the country totally dependent on the Soviets. Already some signs of Marxist ideas were becoming apparent and were reflected in the press. The King, who was quite slow in

making up his mind (this was due to the many years during which all decisions were taken by his uncles and then his cousin), came to a drastic decision (Ghaus, 1988).

He "accepted the resignation" of Daoud and, for the first time, appointed a Prime Minister who belonged neither to the Royal family, nor to the aristocracy. Dr. Muhammad Yusuf, who was Minister of Mines and Industry in Daoud's government, presented his cabinet, composed of technocrats and intellectuals, in March 1963. He suggested that a new Constitution be prepared with a view to changing the country to a constitutional monarchy. The King agreed to that proposal, and the new constitution was drafted by Afghan experts, in collaboration with foreign legal advisers (a Frenchman, an Indian and an Egyptian). It was based on the principles of classical democracy, but maintained the traditional values, so deeply rooted in Afghan society, of Islam and monarchy. It also excluded all members of the Royal family from the political scene (Reshtia, 1984).

The Constitution was adopted in October 1964, with only one vote against it, and ratified by the King. General elections were due to take place in October 1965, and, therefore, the interim government had sufficient time to prepare and promulgate by Royal decree the laws for the first democratic general elections. For the first time in the history of Afghanistan, political parties were allowed, on the condition, however, that their aims and activities should conform to the fundamental principles of the Constitution: Islam, constitutional monarchy and individual freedom. Therefore, the formation of Marxist parties of any tendency was indirectly excluded. As the elections were to take place prior to the formation of the political parties, it was left to the elected Parliament to pass the law on the creation of political parties, trade unions, and other political activities. But the

leftist groups were eager to start and did not wait until the legal formalities were completed. On the contrary, they took advantage of the general authorization and started to organize themselves. Several groups, formed mainly of youngsters, began their future political activities; the other groups, being much more law conscious, waited until the promulgation of the law to form the center parties, which were to be the main-stream of the new Parliament.

The law on freedom of the press, prepared by the interim government and promulgated by Royal decree, made things easy for the leftist groups which launched an intensive campaign aimed at gaining the support of young people--most of them inexperienced. That is how the Marxist groups, with the help of their Soviet advisors, managed to gain a strong position and overtake all the other political groups, whose aim was to play a positive and constructive role in a democracy. To a large extent, the Marxists were helped by some pressure groups, who were ready to go to any lengths to retain their power. Instead of stopping the illegal activities of the Marxist groups, they tried to oust the group which had drawn up and defended the new Constitution before the Constituent Assembly. After the first student riots, organized by Marxist elements after the opening of the first democratic Parliament, they suggested that the government should be changed, in spite of the fact that the government had just won a vote of confidence by large majority (Reshtia, 1984).

They accused the Prime Minister, Dr. Muhammad Yusuf of incompetence in this matter, when they knew very well that the Prime Minister and the members of his government were at the meeting of the parliament. Muhammad Hashem Maiwandwal, a former Minister of Information and former Ambassador to Washington, was asked to form

a new government. This event was the beginning of the failure of the experiment in democracy in Afghanistan. The liberal group, which had been a promoter of the constitutional monarchy, was excluded from the government and replaced by persons who did not believe in the Constitution. As a result, the constitution was only partly applied, and some important laws, which had been approved, never came into effect. It was the case for the law on political parties and the results thereof were that groups loyal to the Constitution could not organize themselves, whereas the Marxist groups could expand (Reshtia, 1984).

So encouraged, the Marxist groups openly started their activities and had representatives in the Parliament (Three during the first legislation and two during the second). Simultaneously, the Marxist parties were taking advantage of the successive governments' policies of "lassie-faire", and were publishing articles in which their ideology and programs were explained; their newspapers were "khalk" (Masses) and "Parcham" (Flag) and "Shola" (Flame), the latter belonging to the Maoist ideology (Reshtia, 1984).

The governments were too weak to stop the publication of these articles, which were contrary to the letter and the spirit of the Constitution. It was only through the pressure applied by the parliamentary majority on the government, from time to time, the publication of these illegal newspapers was stopped. The constitutional monarchy was already condemned, and the last blow was soon to come (Reshtia, 1984).

The Fall of the Monarchy

Moscow had not easily accepted the replacement of Daoud and the steps taken towards democracy. One positive result for the Soviets was that it provided an opportunity officially to create the Communist Party. The workers started to get organized and became very active in the industrial areas of the country; the demonstrations, which had begun on the campus of the University and in the secondary schools of Kabul, soon spread to the provinces: riots became more and more frequent; the King was openly criticized.

Moscow had a plan ready and in Kabul the army was being infiltrated by the "Parcham" group. A period of transition was necessary before a Marxist government could be established. Someone had to be found who could, at the same time, be trusted by Moscow and accepted by the Afghan people, in order to replace the King who was gradually losing his popularity. Only one person met all the requirements, and that was Daoud. After ten years away from the political scene, he was still ambitious and eager to regain power. To achieve this goal, he was to take the King's place, even if that meant as President of the Republic only. The Soviets were in a hurry to put an end to the monarchy, which they considered a major obstacle to their objectives (Reshtia, 1984).

An agreement was reached in 1971 between two officers belonging to the "Parcham" group (Moscow's favorite) and Dr. Hassan Sharq who was acting on Daoud's behalf. Prince Daoud was to lead an army coup, which had been prepared by the Parchami officers in Kabul and under the direct supervision of the Soviet military advisers. The opportunity came when the King traveled to Europe (Italy) for a medical check-up. The Heir Apparent, Ahmad Shah (King's older son), was to replace the King; the government was led by Muhammad Musa Shafiq (former Prime Minister), an

intelligent young intellectual but without experience, and General Abdul Wali, a cousin and son-in-law of the King, who was the commanding officer of the armed forces in Kabul (Reshtia, 1984).

On 18 July 1973, Daoud made a radio announcement, informing the Afghan people that the monarchy had come to an end and that a Republic was established. The 1964 democratic Constitution was annulled; a temporary government and a revolutionary council-both headed by Daoud-came into power. Six members of the "Parcham" group were in the government, and half of the members of the revolutionary council were Parchami officers. The program of the new government promised a fast and revolutionary development of the country, based on democracy and socialism. This program was practically identical to the one published in the first issue of the Parcham newspaper, four years earlier, especially with regard to land reform, nationalization of banks, large industries and social justice, etc (Reshtia, 1984).

Daoud was not a communist, nor was he a man to accept orders from anyone, especially foreigners. It may be that he believed he could get rid of his demanding allies. At any rate, he tried to keep them to one side as he strengthened his own position. Two years later, all the Marxist ministers were replaced. Some were sent abroad as ambassadors, some simply asked to resign.

Moscow did not react immediately. Daoud had a new Constitution drawn up, providing for one party only, on the model of Algeria and Egypt (during Naser's time). Once more the Soviets tried to reason with Daoud; he was invited to Moscow, but would not yield on this point which, for him, would have meant total surrender. After this eventful meeting, the Soviet leaders decided that Daoud should be removed from power,

and the first condition to achieve this was the reconciliation of the two Marxist groups Parcham and Khalk (Reshtia, 1984).

After eight years of antagonism, the two groups united to become the "People's Democratic Party of Afghanistan (PDPA)", under the leadership of Noor Muhammad Taraki, the Khalk leader, who was to become President of Afghanistan. Babrak Karmal, the Parcham leader, would only be Vice-President, and later, for a few months, Ambassador in Prague. This shows the ir-reconcilability of the Afghans: once an enemy, always an enemy until death... as we were to see (Reshtia, 1984).

After his visit to Moscow, Daoud became worried about his own safety, and was ready, but too late, to follow the advice of other political leaders. The machine of the KGB (Soviets Intelligence Service) was already moving in his direction. The new Constitution was accepted by the Constituent Assembly and he was elected, in March 1977, as President of the Republic for a term of six years. Daoud knew, however, that he could no longer count on either Moscow's support, or the loyalty of the officers who had brought him into power four years earlier. He had become unpopular after his open "flirtation" with Moscow and his incredible tolerance towards the leftist groups which had monopolized the political scene of the country (Reshtia, 1984).

His only chance was to turn to the Muslim countries, at least to obtain financial and moral support in case of total break-up with Moscow. His trips to Kuwait, Egypt, and Saudi Arabia, in March and April 1978, and the reconciliation with the Shah of Iran, were desperate efforts which only precipitated his fall (Reshtia, 1984).

The Soviets plan was so well conceived and prepared that Daoud did not have time to leave the presidential palace, where he, his whole family, and his aids were killed, without even being able to call on the half-a-dozen army camps which he had set up around the capital for such an event. According to the survivors of this bloody massacre, he was personally directing the defense of the Palace and refused to surrender even when the Marxist officers entered the building (personal observation and informal contacts).

The plan had also foreseen the elimination of Mir Akbar Khaiber, the theoretician of the PDPA party, who had opposed the total take-over by the Soviets. He was murdered on 18 April 1978, and his funeral provided the opportunity for the members and sympathizers of the Marxist parties to launch the protests and riots which were to last for several days. All the communist leaders were arrested, and the open confrontation started. The winner was the Popular United Khalk party, and the first Marxist government was thus established under the power of Noor Mohammad Taraki. Its brutal methods and impractically-radical reforms in education, land and family law fomented a popular backlash, especially in the rural areas. Despite growing Soviet support, the regime was increasingly threatened by general revolt late in 1979. Its link with Moscow was weakened in September when Taraki was removed (later killed) by his lieutenant, Hafizullah Amin (personal observation and informal contact).

The Soviets intervened militarily in December 27, 1979. Amin was executed and replaced by Babrak Karmal, who had been a long time Marxist rival of Taraki and Amin. The Karmal government attempted to establish control over the country with the help of Soviet air and land forces and several thousand Soviet civilian advisors (personal observation).

After the Soviet invasion, popular opposition became a national resistance movement active throughout the country. After several years of fighting, the poorly-equipped Mujahideen, aided by the United States, Pakistan and Arabic countries, controlled most of the countryside. The movement remained, however, politically divided between rival claimants to leadership based in Pakistan. In 1986, with no end to the war in sight, Karmal was replaced by Najibullah (MD), former head of the Afghan Security/intelligence Service (Khad) (personal observation).

In January 1987, an international Islamic conference called on the Soviet Union to remove its troops from Afghanistan. Najibullah announced plans for a cease-fire on January 1, 1987, and called on the Mujahideen Moslem resistance forces to adhere to the armistice. But the seven associated Mujahideen rebel groups rejected the cease-fire, saying they would negotiate only with the Soviet government--not with the Soviet "puppet government" in Kabul- - for a complete withdrawal of Soviet forces from Afghanistan. Rebel forces had increasing success in battle, partly because of substantial arms aid, such as ground-to-air Stinger missiles from the United States-- and prospects for a military solution by the Soviets grew dimmer (personal observation and informal contacts).

In November 1987, Najibullah convened a nationwide gathering of tribal leaders that approved a new constitution and elected Najibullah president. Elections were held in April 1988 for two -chamber National Assembly to replace PDPA (People Democratic Party of Afghanistan) Revolutionary Committee that had governed the country since 1978. On February 19, 1989, however, Najibullah declared a nationwide state of emergency and named a military council to rule until it was lifted (personal observation).

Accords signed in Geneva, Switzerland, in April 1988, set a timetable for the withdrawal of Soviet forces. Pakistan and Afghanistan agreed not to interfere in each other's affairs and to allow the return of millions of refugees. The Soviet Union and the United States were to serve as guarantors of the accords, and a United Nations negotiator was given a mandate to help the Afghans form a broad-based government. Half of the Soviet forces were withdrawn by August 15, 1988 and the remainder left the country by February 15, 1989.

The politically divided Mujahideen, who had not signed the accords, were controlling the countryside. Najibullah ruled under a state of emergency from February, 1989, to May, 1990, when the constitution was amended to provide for multiple political parties. The Mujahideen continued to fight. In April, 1992, they occupied Kabul the capital. Najibullah was forced into hiding and later resigned from office when crucial military leaders abandoned him. Afghanistan then became an Islamic state ruled briefly by a 51 member Islamic Jihad Council and then by an interim regime pending elections. After the Mujahideen victory, various ethnic, military, and religious factions continued to struggle for power (personal observation and informal contact).

Seeking to resolve these differences, the leaders of the Peshawar-based Mujahidin groups established an interim Islamic Jihad Council in mid-April to assume power in Kabul. Moderate leader Prof. Sibghatullah Mojaddedi was to chair the council for 2 months, after which a 10-member leadership council composed of Mujahideen leaders and presided over by the head of the Jamiat-i-Islami, Prof. Burhanuddin Rabbani, was to be set up for 4 months. During this period, a Loya Jirga, or grand council of Afghan elders and

notables, would convene and designate an interim administration which would hold power up to a year, pending elections (personal observation and informal contacts).

But in May 1992, Rabbani prematurely formed the leadership council, undermining Mojaddedi's fragile authority. In June, Mojaddedi surrendered power to the Leadership Council, which then elected Rabbani as President. Nonetheless, heavy fighting broke out in August 1992 in Kabul between forces loyal to President Rabbani and rival factions, particularly those who supported Gulbuddin Hekmatyar's Hezb-i-Islami. After Rabbani extended his tenure in December 1992, fighting in the capital flared up in January and February 1993. The Islamabad Accord, signed in March 1993, which appointed Hekmatyar as Prime Minister, failed to have a lasting effect. A follow-up agreement, the Jalalabad Accord, called for the militias to be disarmed but was never fully implemented. Through 1993, Hekmatyar's Hezb-i-Islami forces, allied with the Shi'a Hezb-i-Wahdat militia, clashed intermittently with Rabbani's Jamiat forces. Cooperating with Jamiat were militants of Sayyaf's Ittehad-i-Islami (Islamic Unity) and, periodically, troops loyal to ethnic Uzbek Abdul Rashid Dostam. On January 1, 1994, Dostam switched sides, precipitating large scale fighting in Kabul and in northern provinces, which caused thousands of civilian casualties in Kabul and elsewhere and created a new wave of displaced persons and refugees. The country sank even further into anarchy, forces loyal to Rabbani, ethnic Tajiks, controlled Kabul and much of the northeast, while local warlords exerted power over the rest of the country (personal communication).

Rise of the Taliban

In reaction to the anarchy and warlordism prevalent in the country, and the lack of Pashtun representation in the Kabul government, a movement of former Mujahideen arose. Many Taliban had been educated in Madrassas (religious schools) in Pakistan and were largely from rural Pashtun backgrounds. The name "Talib" itself means pupil. This group dedicated itself to removing the warlords, providing order, and imposing Islam on the country. It received considerable support from Pakistan and the Arab world. In November 1994, it developed enough strength to capture the city of Kandahar from a local warlord and proceeded to expand its control throughout Afghanistan, occupying Kabul in September 1996 (Marsden, 1998).

By the end of 1998, the Taliban occupied about 90% of the country, limiting the opposition largely to a small largely Tajik corner in the northeast and the Panjshir valley. Efforts by the UN, prominent Afghans living outside the country and other interested countries to bring about a peaceful solution to the continuing conflict came to naught, largely because of intransigence on the part of the Taliban.

The Taliban sought to impose an extreme interpretation of Islam--based in part upon rural Pashtun tradition--upon the entire country and committed massive human rights violations, particularly directed against women and girls, in the process. Women were restricted from working outside the home and from pursuing an education, were not to leave their homes without an accompanying male relative, and were forced to wear a traditional body-covering garment called the burka. In 2001, as part of a drive against relics of Afghanistan's pre-Islamic past, the Taliban destroyed the world's two largest statues of the Buddha outside of the city of Bamiyan and announced destruction of all pre-

Islamic statues in Afghanistan, including the remaining holdings of the Kabul Museum (www.afghan-web.com).

Since the mid-1990s, the Taliban provided sanctuary to Usama bin Laden, a Saudi national who had fought with them against the Soviets, and provided a base for his and other terrorist organizations. The UN Security Council repeatedly sanctioned the Taliban for these activities. Bin Laden was believed to provide both financial and political support to the Taliban. Bin Laden and his al Qaeda group were charged with the bombing of the U.S. embassies in Nairobi and Dar Es Salaam in 1998, and in August 1998 the United States under the Bill Clinton Administration launched a cruise missile attack against Bin Laden's training camps in Afghanistan. Bin Laden and al Qaeda are believed to be responsible for the September 11, 2001 attacks on the World Trade Center and Pentagon in the United States (News accounts).

Following the Taliban's repeated refusal to expel Bin Laden and his group from Afghanistan, the U.S. and its partners in the anti-terrorist coalition began a campaign on October 7, 2001, targeting terrorist facilities and various Taliban military and political assets within Afghanistan (news accounts & personal communication).

In Bonn, Germany, on Wednesday, December 5, 2001, Afghan factions reached a landmark deal in United Nations brokered talks on a post-Taliban government headed by Pashtun chief Hamed Karzai to start rebuilding their devastated country, Afghanistan. The interim 30 member government representing the war-riven country's many ethnic factions (11 Pashtuns, 8 Tajiks, 5 Hazara, 3 Uzbek, and 3 other minorities) resumed offices on December 22, 2001. The 30 members do not represent the exact percentage of the Afghan ethnic groups. But this should be no problem for the time being (The

Vancouver Sun, Dec. 6, 2001. A4). The interim government is in the process of gathering and organizing support and donations from the international coalition.

The interim government will be working for six months, the next phase will be the performance of the traditional Loya Jirga, a meeting of Afghan tribal leaders, which will select a yet more representative government, to rule for two years. After that a constitution will be drawn up and national elections held (The Globe and Mail, Dec. 6, 2001. A 22).

Society

Afghan society is one of the most complex societies among existing tribal systems in the world. Not only is it divided into different ethnic groups, but each ethnic group is again divided into sub-tribes. The Pashtuns are a prime example of this social complexity. Sir Henry Rawlinson, writing from British India in 1875, described Afghan society as follows:

The nation consists of a mere collection of tribes, of unequal power and with divergent habits, which are held together, more or less closely, according to the personal character of the chief who rules them. The feeling of patriotism, as known in Europe, can not exist in Afghans, for there is no common country. In its place is found a strong, turbulent love of individual liberty, which naturally rebels against authority, and would be equally impatient of control, whether exercised by English or Russians or Persian, or even Duranis. (Jawad, 1992, p.8)

The social structure of Afghanistan can be defined as an agrarian society. The majority of land was owned by *Khans* (lords). Farmer tenants were respecting their land lords. The indebtedness of farmers, who remained grateful for the lease system, allowed the rich to represent their villages at all levels, which included state and other institutions. For their part, the landowners bore and honored a responsibility towards villagers, which

extended to their economic well-being in times of need. Thus a system of reciprocal obligation was maintained (Jawad, 1992).

Population

Before 1880 the total number of inhabitants of Afghanistan was not known. Approximations were, however, many and conflicting (Kakar, 1979). In addition, Kakar (1979), in his book Government and Society in Afghanistan, wrote that, "in 1892 a census of the population was officially attempted. Mainly because of the recurrent epidemics and high rate of mortality among children the growth of population was extremely low" (p. 181).

Since there are no accurate population numbers available, a number of foreign organizations, i.e the United Nations have attempted in the past to count the population. The lack of infrastructure and the continuation of warfare has further complicated the issue. However, according to Jawad (1992), "a current population estimate is that it stands between 15 and 18 million. In the 1970s, the population growth rate was 2.3%" (p. 6). According to the Encyclopedia of the Third World (1992):

Afghanistan has a population estimated at 15,862,293 in 1990. As of 1987, the urban population was 18.1% of the total. Included in the total population are 2.6 million nomads. Afghan refugees in Pakistan and Iran numbered over 5.6 million in 1988. (p. 2)

Moreover, Collin (1986) mentioned the major populated cities as "Kabul (population 800, 000 in 1978), Kandahar (230, 000), Herat (150, 000), and Mazar-I-Sharif (100, 000)" (p. 2). Most farmers lived in settled villages in the best-watered valleys where the major rivers intersect the plains. Various forms of nomadic herding are practiced by as much as 20% of the population. The warfare that disrupted the country during the

Soviet occupation forced some 5 million Afghans to become international refugees, mostly in neighboring Pakistan and Iran. Large tracts of the best agricultural land were systemically depopulated, and perhaps one million Afghans were killed. The major cities were also swollen with internal refugees fleeing from the fighting in the countryside (personal communication and news accounts).

Ethnic Groups

Few Afghan ethnic groups are indigenous. Some Pashtuns, for example, are not Afghan citizens. Almost an equal number live in the Tribal Agencies and the North-West Frontier Province (Baluchistan) in Pakistan. Tajik, Uzbek, Turkoman, and Kirghiz have their own ethnic republics in the former Soviet Union. Most inhabitants of the extreme western part of Afghanistan, geographically and culturally an extension of the Iranian Plateau, are simply Persian speaking farmers. Baluch live in the south-western corner of Afghanistan, north-western Pakistan, and south-eastern Iran; several large groups also live in the Turkoman of the Soviet Union (Dupree, 1973, p. 57).

Within the Afghan nation, the dominant ethnic group is the Pashtun, who are described as true Afghans. The Pashtuns are divided into two major sub-tribes: the Durranis and the Ghilzais, who together comprise more than half the population. Most Pashtuns are Sunni Muslims. The Tajiks comprise 30% of the population and live in northern Afghanistan. The mountain Tajiks are Shias (a Muslim branch), and the Plain Tajiks are Sunni (a Muslim branch). The Hazara Mongols, who constitutes the third largest distinct ethnic group, live in the Bamyan region. They are believed to be descendants of the hordes of Genghis Khan and number nearly one million. The smaller ethnic groups include Aimaks, Taimanis, Jamshedis, Taimuris tribes, Baluchis, Brahuis,

Turomans, Uzbeks, Nuristanis and Qisilbashes or Redheads. Ethnic aliens include over 20,000 Hindus and Sikhs, most of who are merchants or traders (Encyclopedia of the Third World, 1992, p. 2).

Language

According to the Third World Encyclopedia, (1992),

The two official languages of Afghanistan are Indo-European: Pashtu and Persian (Farsi). The 1964 Constitution names both Pashtu and Dari (Afghan Farsi) as official languages. Pashtu is spoken by over half of the population. Kandahar is the center of Pashtu culture. Dari (Farsi) is a second national language, spoken by the Tajiks and the Hazaras. It is the principal language of the administrative elite. In addition to Pashtu and Dari, over 18 languages and dialects are spoken in Afghanistan. (p. 2)

In Afghanistan, different ethnic and tribal groups communicate in different languages. Similarly, they practice various religions and different versions of Islam.

Religion

After the Arab occupation of Afghanistan at the end of ninth century A.D., Islam was introduced into the country. Islam is still the official religion of Afghanistan, while there are certain small groups who have been given the opportunity to practice their religious beliefs freely. Non-Muslims are subject to legal and unwritten restrictions. To the Muslim, only Allah (the God) is divine (Dupree, 1973, p.95). "Qoraan is the holly book for Muslims. To Muslims, Qoraan is the word of God, not the prophet Mohammed" (Dupree, 1973).

The Constitutions of 1964 and 1987 stated the religion of Afghanistan, Islam. Large percentages (80%) of the Pashtuns, Tajiks, Uzbeks and Turkmans belong to the Hanafite rite of the Sunni sect of Islam, close to 20% belong to the Shia sect. According to Gregorian (1969), "the Hindus and the Jews are the two numerically insignificant non-Muslim religious communities in Afghanistan" (p. 38).

Economy

Historically, there has been a dearth of information and reliable statistics about Afghanistan's economy. This was exacerbated by the Soviet occupation and ensuing civil war, which destroyed much of the country's infrastructure and disrupted normal patterns of economic activity.

Economically, Afghanistan is classified as one of the low income countries of the world. In 1994, Afghanistan had an estimated annual per capita income of \$220. This figure makes Afghanistan one of the world's poorest countries (<http://www.afghanweb.com/economy/basics.html>).

It also is on the United Nations' official list of the least developed countries of the world. Afghanistan has a centrally planned economy in which the dominant sector is public. Land locked Afghanistan never had a modern integrated economy. Although the mountainous nature of the country has been an obstacle to national economic integration, the predominant factors for Afghanistan are political instabilities, cultural rigidities, civil wars, foreign interventions and the like. Moreover, development has been retarded by physical factors, such as arid conditions, rugged terrain and relative remoteness from trade centers. Institutional and administrative inadequacies and lack of technical expertise also help to keep economic performance low.

Afghan's modern economic change began early in the 20th century. Economic changes included efforts to expand trade with foreign countries, increased manufacturing, improved transportation, and the generation of large government income sources. The occupation severely disrupted the Afghan economy. Official data on the economy is inaccurate, but Encyclopedia of the Third World, Vol. 1, (1992) mentions that: "a United Nations report released in the late 1980s cites a 20% loss in livestock and a 70% reduction in the wheat-growing area from prewar size" (p. 7). The infrastructure was severely damaged, and roads in poor condition.

Majrooh and Elmi (1986) believe the country's economy was affected in several ways by the occupation:

First the countryside was emptied of its labor force. Men between the ages of 18-50 were in the underground resistance, the children, women and old men left behind, worked at the fields at night and did not make up a large enough labor force to maintain agricultural production at its normal level. Second, some military operations concentrated solely on armed resistance groups, causing constant harm to civilians. Third, from an economic point of view, the most serious operations were those which were aimed principally at destroying systematically the infrastructure of the rural economy. (p. 153)

Afghanistan's mineral resources offer considerable potential for development.

There are major deposits of iron, chrome, copper, and natural gas and possibly of uranium.

Mining

Afghanistan is a land that is rich in natural resources. There are numerous mineral and precious stone deposits, as well as natural gas and yet untapped petroleum stores. All mineral resources are government property. Some of these resources have been exploited prior to the occupation, while others have remained relatively untouched. There are large

deposits of iron, copper, soft coal, and recent surveys suggest that the country may have exploitable oil reserves, and with some roamers, possibly uranium. Lapis lazuli continues to be taken from ancient mines in the northeast. According to the first volume of Encyclopedia of the Third World, (1992), the most promising recent discovery is that:

of 1.7 billion metric tons of high-grade iron ore at Hajigak, although the high altitude was expected to cause problems in exploiting the deposit. Other mineral deposits, such as petroleum and copper are to be exploited with the help of foreign aid. A copper mining and smelting project has been initiated near the capital, Kabul; when completed, this could give Afghanistan a 2% share of world copper production. Natural gas, coal, various rubies and other ores are also existed. (p. 9)

Industrially, Afghanistan was not and is still not an industrial country. It had some light industries. The industries include cement, coalmining, cotton textiles, small vehicle assembly plants, fruit canning, carpet making, leather tanning, footwear manufacture, sugar manufacture, and preparation of hides and skins. Most of these are relatively small and with the exception of hides and skins, and carpets and fruits, do not meet domestic requirements. Most of these industries were completely or partly damaged during the occupation (personal observation).

Agriculture

Afghanistan is an agrarian country. This fact is of vital importance for its social, political, and economic structures. Farming is the primary occupation for an estimated 80 percent of the work force. The size of the farms averages approximately five hectares. Most farms are passed from one generation to the next, from the father to the son. Similarly, farm technology is transferred from one generation to the next; but the general hope of fathers of rural youth is that their sons will find a more respectable occupation

(Qaderi, 1977). In this predominantly agrarian society life runs according to traditional patterns.

Up to 1978, the Afghan people, land and economy were mainly agricultural, and the small amount of industrial development was largely linked to the processing of agricultural commodities or manufacture of farm inputs. In the conventional sense, Afghanistan is one of the least developed countries in the world, and one aspect of this is absence of verifiable statistics. Yet it seems that before the war, according to the statistics which are available, about 85% of the population was rural (CSO 1978).

According to Fox (1967),

Eighty percent of the population and roughly 67% of the labor force is engaged in agriculture. About 10% of those in agriculture are nomads who migrate seasonally with their livestock in search of pasture. They are the main suppliers of livestock products. The remaining 90% are primarily involved in producing wheat (staple crop in the country and occupying about 60% of the cultivated land before the occupation) and also corn, barley, rice, cotton, sugar beet, sugarcane, oilseeds, fruits, and vegetables. The country was self sufficient in foodstuffs, excepting sugar and tea. During the first and second economic development plans (1957/58-1961/62 and 1962/63-1966/67), annual imports of wheat averaged 50,000 tons and 97,000 tons, respectively. (p. 1)

Afghanistan was primarily an exporter of agricultural products and an importer of industrial goods, although several items of farm origin are of significance in imports.

Methods of cultivation were primitive and the crude implements used were hand tools or animal drawn. The irrigated plots are generally too small to accommodate mechanized equipment. The average farm size on irrigated land is about five hectares and the farm labor productivity is relatively low because of the small amounts of capital inputs used in the agricultural sector. Use of chemical fertilizer was almost common.

From Taussig's (1966), perspective,

Of particular importance is animal breeding, especially of the nearly 6 million karakul sheep the skins of whose lambs provide Afghanistan's largest export item, nearly 3 million skins, while the 13 million ordinary sheep produce 7,000 tons of wool for export, apart from 500 tons of cashmere wool. This country also sells about 7 million hides and skins to foreign markets. It is the task of the agriculturists to see to it that the country is not only self-sufficient in agricultural product, but that is building a substantial surplus enabling it to obtain foreign exchange for the purchase of capital goods needed for development. (p. 13)

Livestock and their products contribute the largest single source of gross national product (GNP). It plays vital role in the economy of the country, especially in the economy of the nomads. Livestock contribute to both the welfare of the people and to the exports of the country. Cattle are used as sources of milk and meat, most oxen, cows, donkeys, mules, camels and horses are beasts of burden and are used for ploughing, threshing and transportation. Efforts were also made concerning increasing poultry, egg and fish production to provide animal proteins which the country is not self-sufficient, and that in this, as in other sectors of her development, Afghanistan was making gratifying progress.

Fox (1967), highlighted the lack of trained personnel as a main obstacle towards agricultural development. Fox said that,

the major constraint to agricultural development for the future development of agricultural sector and also the most difficult to overcome, is the extreme shortage of trained personnel (extension) to bring changes in farmers' attitude. (pp. 5-6)

The principal factors currently limiting increases in Afghanistan's agricultural production are land mines, limited irrigation water resources, limited work force and trained personnel, and limited acreage of land for cultivation. A large capital investment would be required to minimize these limitations. The application of improved cultural

techniques could result in a far greater return on capital inputs. According to Zakhilwal (2000), from occupation up to the installation of the Afghan interim government, "the lack of legitimate sources of income forced many families to grow poppy or join criminal gangs or local militia to survive" (www.afghan-politics.org September, 14, p. 4).

The usefulness of the agriculture extension service can be increased without further diluting the quality through rapid expansion by concentration on areas with greatest potential for development.

Education

Afghanistan has one of the lowest literacy rates in the world, with about 20% of its population being literate. Schooling is free and compulsory for eight years, from ages 7-15. Post-secondary education is also free but optional. Elementary education consists of eight years and secondary school for four years (Majroh & Elmi 1986 and personal observation). From 1981 to 1986, the enrollment in primary and secondary school dropped significantly of school age population to less than half. By 1986, only a limited percentage of children in the secondary school age group attended. In both primary and secondary schools, attendance by female students is significantly below that of males.

The academic year runs from March to November in the cold areas and from September to June in warmer regions. The languages of instruction are Pashtu and Dari. Vocational training is provided in a few of the secondary schools and senior high schools. The shortage of teachers is always chronic and serious. All teachers must have civil service status. The State controls almost the entire educational system (secular and Islamic) which expanded rapidly since the 1950s. The exceptions were the private, rural

madrasas (Islamic religious institutions) that steadily lost influence and prestige. The Islamic Movement of Taliban later emerged from these madrasas after nearly a generation of destruction of the state schools and the competing elite (nationalists, communists, Islamists) they had spawned (Roy, 1986; Rubin, 1995). Only the government has the right to establish and administer institutions of higher education.

The war has had a drastic impact on education. The resistance destroyed most rural schools when the regime attempted to turn them into political indoctrination centers. Many others were closed because of the fear towards those teachers working for the ruling regime. Formal education even in major cities, such as Kandahar, had been brought to a virtual standstill because of daily firefights. In most rural areas, education seems to be in the hands of traditional Islamic teachers. During the occupation, the regime's inability to maintain the strength of its armed forces led to the drafting of boys as young as 15 (16 was the official age limit), and attendance at the University of Kabul was limited to women, party members and men who have completed military service. In secure urban areas, schools for girls and boys were functioning, with curricula reoriented to conform to the Soviet model. The regime initiated a literacy program in the military forces, using ideological tracts as texts.

During the occupation, each year several thousand young Afghans were sent to the Soviet Union for training that was heavily geared to political indoctrination. In 1984, at least 3,000 children between seven and ten years old were sent to the Union of Soviet Socialist Republics for 10 years total education. Furthermore, Galster (1988) says: "between April 1978 and March 1979, seventy-five various assistance agreements signed by Moscow and Kabul, accompanied by the arrival of nearly 4,500 Soviets advisers" (p.

1515).

The University of Kabul (Kabul Puhantun), founded in 1946, provides university education in Afghanistan. It has nine faculties. Several of its faculties were established earlier (medicine, 1932; law, 1938; science, 1942; and literature, 1944). All Afghan institutions of higher education received foreign assistance from the beginning. For example, the College of Medicine was affiliated with the University of Lyons of France. They signed an agreement for student and faculty exchanges as well as providing material assistance for the library and laboratories (Amin, 1977).

Amin, (1977) writes, a student and faculty exchange agreement was signed between the:

College of Law and Political Science of Kabul University and the University of Paris. The College of Natural Sciences was associated with the University of Bonn of West-Germany. The College of Theology received some assistance from the Universities in Egypt. (p. 125)

The instructional materials of most faculties at Kabul University were in foreign languages: English, German, French, Arabic, or Russian. The language of instruction in a given faculty or department was often that of its donor.

The Ministry of Education of Afghanistan also became cognizant of the need to improve the education of those teachers who had not had the opportunity to complete their education. After contacting the American Government for possible assistance through the Agency for International Development (AID), AID facilitated an educational exchange contract between Teachers College, Columbia University, and the Royal Ministry of Education of Afghanistan. The Teachers College, Columbia University, agreed to send a group of educators to study possible ways of assisting the Ministry of Education in this

regard. As a result, the Institute of Education which became an associate institute of Kabul University in 1955 was opened (Spencer, 1962.)

Amin, (1977), further mentioned that:

AID also facilitated a contract agreement between the College of Natural Sciences-Kabul University and the University of Wyoming. Under this agreement, the University of Wyoming agreed to help the development of a newly opened Department of Engineering and Agriculture. Soon, this department was transformed into a new college of Agriculture and Engineering in 1963 under the umbrella of Kabul University. The College of Agriculture continued its affiliation with the University of Wyoming until 1973 and changed to the University of Nebraska-Lincoln, while the College of Engineering became associated with a group of nine American universities--commonly referred to as the Educational Services Incorporated. (p. 126)

Subsequently, colleges of economics (1957), pharmacy (1959), veterinary medicine (1961), home economics (1962), and education (1962), were opened. About 2,500 students were enrolled at Kabul University. A branch of the faculty of medicine was founded in Jalalabad in 1963 and later expanded into a university (University of Nangarhar, founded at Jalalabad in 1963 (Amin 1977, p. 127). The University of Balkh was founded in Mazar-I-Sharif in (1985). The University of Herat was founded at Herat in 1988. The University of Kandahar was founded at Kandahar in 1991. The University of Islamic Sciences was founded at Kabul in 1989 (personal observation).

"According to Article #3 of Kabul University Constitutions, the first President of the Kabul University was proposed by the Minister of Education and approved by His Majesty Mohamad Zahir Shah in 1957 for a three-years term" (Amin, 1977, p.118). Similarly, the Vice-Presidents, Deans, and faculty members for the respective Colleges were proposed by the President of the university and approved by the Minister of Education.

A doctoral (Ph.D.), unpublished thesis, by Amin (1977), found that:

In March 1977, President Mohammed Daoud, announced his new cabinet members. Together with the new appointments to his cabinet, President Mohammed Daoud also announced an important structural change in regard to the Afghan educational system, the separation of the former Ministry of Education into two independent ministries-- the Ministry of General Education and the Ministry of Higher Education. With the establishment of this new Ministry, the President of Kabul University Dr. Ghulam Siddiq Mohibi, was appointed as its first Minister. (p. 129)

Amin (1977) also stated that in the new university Constitution was that: "Kabul University be called a state institution and the Government of Afghanistan was to provide free room and board for all those students that needed such help" (p. 131). It still does and was providing free room and board for all those who needed it during the occupation.

As a neutral government having close and friendly relations with the Soviet Union before the occupation, the Government of Afghanistan also started to seek some educational assistance from the Soviet Government. According to Amin (1977), "the Soviet Union agreed to build and help develop a Polytechnic Institute within the frame of Kabul University. It was opened in 1967 with 240 freshmen students" (p. 127).

There were also the Afghan Institute of Technology, Institute of Accounting, the Schools of Agriculture, several teachers colleges, theological institutes, vocational schools and technicals. Under the cultural agreements, which were signed with various governments in the past, several hundred Afghans used to go each year for higher studies (graduate and undergraduate) to Europe, the United States of America, India, Japan and the Middle East (personal observation).

In 1960, co-education was introduced at Kabul University and women were no longer forced to be veiled; a growing number of them, after promotion from various colleges of Kabul University, started working in the government administration. For the first time in the history of Afghanistan, women were elected as members of parliament, became ministers and diplomats.

After the occupation, all cultural relations with foreign countries were suspended. According to Majrooh and Elmi, (1986), "only selected party members were entitled to benefit from foreign scholarships" (p. 90).

Due to continuous bombardment and heavy rocket fire, schools were demolished in the countryside on an enormous scale. In 1983, Shah Mohamad Dost, foreign minister of the Kabul regime, stated in the United Nations that: "50% of the schools in Afghanistan were destroyed" (informal contact). According to Majrooh, and Elmi, (1986, p. 90), before the occupation, the following schools existed in Afghanistan: Refer to Table 4.

Table 4

Pre-post Occupation Number of Schools in Afghanistan

Type of Schools	Number of Schools before Occupation (1978)	Numbers of Schools after Occupation (1984)	Declined by Percentage
Village Schools	1451	00	100
Primary Schools	1154	210	82
Middle Schools	350	78	78
High Schools (Lycees)	163	44	73
Teacher Training Schools	26	6	65
Technical Schools	17	8	69

Source: Majrooh, and Elmi, 1986. p.91.

Majrooh and Elmi, (1986) also found that: "in 1978, there were some 750 teaching staff in Kabul University. After the occupation, there was a sharp decline in university staff" (pp. 79-80).

The Soviet occupation set the modernization movement of Afghan education back about a century and the Afghan culture was threatened from inside Afghanistan and outside in the refugee camps.

Political Structure

The Soviet-sponsored Taraki, Amin, Karmal, and Najib governments were not the true representatives of the people of Afghanistan. Likewise, the Mujaddadi, Masoud - Rabani, and Taliban eras were not considered as legitimate Afghan governments. The current interim government, initiated after the events of September 11, 2001, is relatively acceptable to the Afghans without guns as well to the international community.

The Globe and Mail (2001), reported in its issue of Thursday, December 6, that:

Afghanistan took a major step toward a permanent peace yesterday as delegates representing the war-riven country's many ethnic factions agreed to a broad-based , interim governing council and the 43 years old Hamid Karzai, as the Council's Prime Minister. (p. A7)

The interim government includes representatives of the major ethnic and religious groups in the country. The government is composed of 30 members, almost similar to the former cabinet with the exception of the Ministry of Women Affairs, which did not exist in former governments. This government is for six months and has been ruling since December 22, 2001. The former King (Mohammed Zahir Shah, 87 years old, now living in Italy), will open a Loya Jirga of tribal leaders before the six months period of the interim government comes to end.

In 1977, President Daoud replaced the 1964 Constitution with a new constitution that was abolished after the 1978 Communist coup. On April 21, 1980, the Revolutionary Council ratified the Basic Principles of the Democratic Republic of Afghanistan (DRA).

These Basic Principles were superseded by the Constitution ratified in April 1985. The newest Constitution was ratified in November 1987. As with past Constitutions, the principle of non-alignment was emphasized. The Constitution establishes Afghanistan as an Islamic state with a limited multi-party system and a bicameral legislature called the *Meli Shura* (National Assembly) composed of the *Sena* (Senate) and the *Wolasi Jirgah* (House of Representatives). The Peoples Democratic Party of Afghanistan (PDPA) was granted constitutional status as the guardian of "national reconciliation" within a National Front within which other parties could function. The president, who holds office for seven years has unlimited power. The president appointed the Prime Minister who, in turn, appointed the cabinet. Figure 1 (p. 330) represents the political map of Afghanistan.

Chapter Summary

Afghanistan lies at the heart of Asia. Its geographical location makes it a country of immense strategic importance in the region. Throughout its history, Afghanistan has thus been subject to continual invasion and rule by outside powers-- Greek, Mongols, Turks, Uzbeks, and other empires.

A country slightly larger than such European countries as France and Spain, Afghanistan occupies 650,000 sq/km of mountainous territory in Central Asia. Entirely land locked, Afghanistan borders on Iran in the west, Pakistan to the south and east, China to the far northeast, and the republics of former Soviet Union (USSR) to the north.

There are no accurate population figures available. Numerous international agencies have attempted in the past to count the population. The lack of infrastructure made access to vast parts of the country impossible and the attempt was aborted.

The population of Afghanistan is ethnically and linguistically diverse. Various ethnic groups with Pashtun as the majority exist in the country. Pashtu and Dari are the two official languages spoken. There are also some other main languages and numerous other dialects spoken in various parts of the country. Islam is the single binding force and the only non-Muslims belong to a tiny Sikh and Hindu minority, plus a few Jewish families. The majority of the population profess Sunni Islam.

Economically, Afghanistan remains a pre-industrial society. Before the Soviet occupation, the majority of the population lived in rural areas, and derived their livelihood from agriculture. A large percentage of farmers was deeply indebted to their landlords, wealthy merchants and rich nomads. A high percentage of farmers had to till the soil for landowners on a share-crop basis for only a small portion of the harvest. Major agricultural programs are land reform, public irrigation projects, improvement of input supplies and agricultural extension services. Wheat is the main crop and sheep the main livestock. Other crops and livestock are also common.

Observable expansion in education was accomplished between the occupation (1950-1978). Primary schools became accessible to more than half of the school-age children, secondary schools were functioning in nearly all-provincial towns, and the University of Kabul offered increasingly sophisticated graduate-level programs. Despite this progress, made possible largely by assistance from many countries and organizations, large percentage (about 90%) of the population remained illiterate. Following the Soviet occupation in 1979, schools and teachers became principal targets.

With this brief introduction to Afghanistan, the following chapter will take the reader to the related concepts and experience connected to agricultural extension. Perspectives, interpretations, and examples of the term will be discussed within the context of various developed and under-developed countries in the world.

CHAPTER THREE

CONCEPT AND PRACTICE OF AGRICULTURAL EXTENSION

This chapter begins by defining agricultural extension, providing a brief history, and describing several models of extension. The next section explains the role and development of extension in Afghanistan. The last section covers the political structure of extension and some problems created during the last two decades in the country. The major problems include: damages to human resources, infrastructure, crops and livestock, agricultural land, landmines, and the vast cultivation of opium poppy. Although this chapter summarizes earlier work, it provides important background useful for understanding the rest of the study.

Definitions

Agricultural extension is not an easy term to define, partly because it refers to diverse practices that accomplish a wide variety of goals. Yet, despite a broad spectrum of practices and interpretations, there appear to be several common elements in most definitions.

From Swanson's (1984) perspective,

Extension is an on-going process of getting useful information to people (the communication dimension) and then in assisting those people to acquire the necessary knowledge, skills and attitudes to utilize effectively this information or technology (the educational dimension). (p. 1)

According to Farquhar (1963),

Agricultural extension is a service or system that assists farm people, through educational procedures, in improving farming methods and techniques, increasing production efficiency and income, bettering their level of living, and lifting the social and educational standards of rural life. (p. 116)

OECD (1965) defines agricultural extension as,

The provision of informal education, including advice and information to farmers to help them solve their problems. Improving the efficiency of the farm business, increasing farm incomes and raising levels of living have been its aim. (p. 9)

According to Savil,

The aim of all extension work is to teach people living in rural areas how to raise their standard of living, by their own efforts, using their own resources of manpower and materials, with the minimum of assistance from the governments. By encouraging local leadership and a spirit of self-help, extension develops civic pride and the progressive growth of the community. (Maunder 1972, p. 3)

Maunder (1973) believes in that:

All forms of extension take education to rural people and equates extension with (extension education). Agricultural extension takes to the rural people that form of educational assistance best suited to their needs. (p. 3)

Agricultural extension was provided to farmers who were taught improved farm practices and improved ways of living. Extension teaching methods included meetings, group discussions, demonstrations, exhibitions, workshops, and farm and home visits. The purpose of agricultural extension was and still is to remove and/or to help solve problems of farmers. The extension agent was responsible for giving comprehensive, accurate and scientific information to farmers (Mathur, 1965). According to Blackburn (1989), "Extension may refer to more than agricultural extension". (p.140). Indeed, as Mosher (1978) notes, the term originally derives from "university extension." Today, it is a broad-based concept, which is also used in industry, health, energy development and education. Thus, extension aims to promote agricultural development.

Many now accept the broader function of extension work to help people solve their own problems through the application of scientific knowledge. If this is true, then extension must be regarded as largely educational. However, it is different from education provided in schools and colleges, particularly because extension education involves no coercion of any sort. Adult farmers cannot be forced to learn new and improved practices. No extension service has the necessary staff to direct every action and see that it is carried out effectively. Extension education is dependent upon the ability of a limited staff of advisers to inspire rural people and to create a desire for more efficient production and better living in rural communities (Maunder, 1972).

Significance of Agricultural Extension to Agricultural Development

The world demand for food is increasing quickly, especially in Third World countries where population growth has been rapid. The United Nations predicted in mid-1980s that the population would increase three folds in many African countries in the next forty years. Similarly, the Latin American population should double, and that of many Asian countries will increase by between 50 and 100%. No large population increase is expected in industrialized (developed) countries, although one can expect the demand for food to increase as the living standard rises. Most of the countries with a rapid population increase will be unable to import much of their food because they have few exports to generate funds for purchases. The world thus faces the major challenge of increasing food production in such countries rapidly enough to avoid serious shortages (Van Den Ban & Hawkins, 1985).

In most Third World countries, including Afghanistan, there are wide gaps between the yields which could be obtained through use of available production technologies and the yields obtained by the majority of farmers. Research results generated in the research stations of these countries have still not been used widely by local farmers. Other reasons for low yields must be sought in the economic, social, educational and political situation in rural areas.

Such investments are needed more than ever, however, and can result in high returns, especially when important contributions that farmers make in knowledge-gathering, sharing and application, are recognized and promoted. The FAO Investment Centre considers such factors vital to improving the welfare of people in developing and transition countries (World Bank web sites <www.worldbank.org>).

Joint programs with partner multilateral financing institutions and FAO technical units, the Investment Centre provides assistance in the formulation of investment projects that aim at developing effective agricultural services and philosophies that are farmer-driven and emphasize sustainable agriculture (FAO Investment Centre, Rome, Italy).

Increased recognition of such human factors by development organizations has led to the emergence of participatory tools that encourage rural people (farmers) to differentiate and prioritize their problems, collect data and information, select proper methods and procedures for better solutions. The role of education and training in this regard is no longer seen as a process of knowledge or information transfer. According to the FAO Investment Centre, "education and training are the means of preparing people to solve problems for themselves by reflecting critically on their own

experiences." (FAO website, <www.fao.org>)

Some agricultural extension systems lack appropriate technology, effective linkages between agricultural extension organizations and agricultural research institutions, adequate transport facilities, essential teaching and communication equipment, and essential teaching aids, bulletins and demonstration materials. Field workers often lack practical training in agriculture and the whole system can have organizational problems. Consequently, the effectiveness of agricultural extension systems in some countries is low. Van Den Ban and Hawkins (1985) found:

In a study of less industrialized countries, fifty extension directors were asked to rank the importance of various problems in their countries. The extension directors from the poorest countries ranked the lack of extension training as their most important problem, whereas those from the wealthiest countries ranked organizational problems and technical training highest. (p. 292)

Van Den Ban and Hawkins (1985), further found that:

The role of an agricultural extension agent is to help farmers form sound opinions and to make good decisions by providing them with the information they need. Farmers' opinions and decisions are based on their image of the reality in which they live and on their expectations of the consequences of their actions in this reality. The agricultural extension agent therefore has a major task in helping farmers reconcile their perceptions with scientific insights. (pp. 292-293)

According to Van Den Ban and Hawkins, (1985),

Farmers have expectations about the way extension agents will help them, but the agents superiors also have expectations about the agents role. The agent can be in trouble if the role expectations of these two groups conflict. There is a high probability this will occur if:

1. The superiors expect the agents to implement an agricultural development program, which is not in the farmers' best interests, although it may be in the national interest by increasing export

earnings, for example.

2. Farmers expect their extension agents to provide services rather than to help them with their education, especially if the agents' role has not been explained to them.

3. Extension agents are expected not only to perform an extension role, but also some other role, such as policing regulations or supervising credit, which conflicts with the extension role. (p. 294)

Agricultural development implies the shift from traditional methods of production to modern science-based methods of production. It includes modernistic technological components such as improved crop varieties, new cultural practices, commercial fertilizers and/or pesticides, new crops and/or new farming systems such as double cropping. For farmers to adopt these technologies successfully, they must learn about them and how to use them correctly in their farming systems.

Simple changes such as the adoption of a new crop variety may require minimal extension involvement. However, if a change involves a new time for planting, a larger plant population, more fertilizer or the use of pesticides, farmers may have much more to learn. Furthermore, the shift to new science-based technology is the first step towards more intensive and productive cropping and/or farming systems. This process is the essence of agricultural development and each step in this process may require an educational and/or communications input. Therefore, agricultural extension, regardless of how it is provided, must be viewed as an essential component in the agricultural development process.

Agricultural extension is only one form of education. Mass literacy education and expanded technical education also contribute to agricultural and economic development. Adult education is of vital importance since development cannot wait for

a new generation of educated people. Rapidly advancing agricultural technology requires continuing education for rural adults regardless of their level of formal education. Governments are increasingly recognizing that this need must be filled through some form of voluntary adult education, usually in the form of agricultural extension (Swanson, Bentz & Sofranko, 1997).

Agricultural extension is one among several elements of agricultural development. Mosher, in Maunder (1972), distinguishes between "essentials for agricultural development" and "accelerators of agricultural development" (p. 7) contending that changes in environment may result in autonomous changes. Agricultural development requires certain essentials and some means of accelerating change in the desired direction. Among the essentials of agricultural production, Mosher lists:

- a. Market for farm product
- b. Constantly changing technology
- c. Local availability of supplies and equipment
- d. Production incentives for farmers
- e. Transportation

The accelerators include:

- a. Education for development
- b. Production credit
- c. Group action by farmers
- d. Improving and expanding agricultural land, and
- e. National planning for agricultural development. (p.7)

Extension has not made the expected impact on agricultural production in many countries where extension services are young. This is not because the concept or provision of extension education have been fully invalid, but rather because agricultural extension requires political and administrative support.

Agricultural extension education can and should be considered in the formation and implementation of agricultural policy. The Afghan Government agricultural policy should include the interests of all segments of the population in Afghanistan. Some of the Afghans who worked in the Afghan agricultural extension system even recommended changes in skills and behavior of the farmers before adopting any agricultural policy. Without farmers' support, agricultural policy may not be effective. They must return to their villages and farms and participate in all rehabilitation type of work (irrigation systems, de-mining, eradication of narcotics).

The Food and Agricultural Organization of the United Nations (FAO-UNDP) initiative, Applied Participatory Approach, emphasizes the importance of peoples' participation. This approach, enhances extension planning process, builds extension planners/trainers, improves extension relation with research and education, needed by small, resource poor farmers, reduces extension work load, and increases its coverage, encourages participation of community based organizations, and helps revitalize extension workers' professionalism (www.fao.org/participation/sec-lessons).

Generally a farmer gets information not only from the Agricultural Extension System, but also from other sources such as progressive farmers, agribusiness firms, farm publications, farmers' organizations, chemical fertilizer agents, and veterinarians. Agricultural extension offices should study the farmers' information sources and environment carefully to recognize the gaps in the information required.

Agricultural extension agents also get their information from many different sources. In developed countries they usually learn as much from farmers as from research employees. According to Van Den Ban and Hawkins (1985):

Farmers who try new agricultural methods or change their farming system are important sources of information about the effects of such changes under local conditions. (pp. 30-31)

Much less research attention has been paid to the ways in which agricultural extension agents learn from farmers, community leaders, representatives of other agricultural and non-agricultural organizations, than to the ways they learn from agricultural research personnel. This does not mean that these ways are nonsignificant, but it explains why numerous chapters and articles have been written on agricultural extension-research relations.

Farmers' participation often takes place in the form of labor, materials, institutions, and to accept responsibility for the maintenance of the equipment or a facility. In some instances, farmers share their knowledge, skills and information on certain local subjects with the extension workers, who are in some cases not thoroughly familiar with the subject. Therefore, the Agricultural Extension System should facilitate two-way communication between policy-makers and farmers.

Historical Development of Agricultural Extension

Agricultural extension can be tracked back to the European Renaissance when there was a movement to relate education to the needs of human life and to apply science to practical affairs. According to True (1929),

Some of the earliest agricultural schools in Europe were established in Hungary, including one at Zarvas (1779), another at Nagy-Michlos (1786) and the Georgicon Academy at Kezthey, (1797) that was for 50 year, "the model agricultural college of Europe". (p. 3)

According to Swanson and Clarr, (1984),

European philosophers of education also emphasized a "scientific" approach to learning about agriculture. The Swiss educational reformer, Heinrich Pestalozzi (1746-1826), followed Rousseau and began an agricultural life. For several years after 1775, he conducted a school for poor children in which part of their time was spent raising farm produce, spinning and weaving of cotton, etc. Philip Emanuel Von Fellenberg (1771-1844) also ran two successfully manual-training schools in Switzerland that had considerable influence in the United States. The schools were located on an estate of 600 acres where the boys were expected to do farm work and study science related to agriculture. Subsequently there was a school for girls and a normal school. (p. 3)

According to Mathur (1976):

The origins of the contemporary idea of "extension" is not so clear. The term extension developed in the United States (US), where this program operated in the universities under the two different forms of university extension and agricultural extension. University extension was primarily meant for those adults who could not attend regular classes in such universities. They could learn at home by correspondence or join night classes or summer schools when they were off from their professional or vocational tasks. (p. 16)

On the contrary, according to Farquhar (1962), the term extension education was:

first introduced in 1873 by Cambridge University to describe a particular educational innovation. This was to take the educational advantages of the universities to the ordinary people, where they lived and worked. The term "extension" was coined first in England, not in America as is often thought. (pp. 114-117)

Regardless of who coined the term, by the late 19th century the movement had spread to other institutions in Britain, the United States and elsewhere. The first public grants to extension came from English country councils for extension lectures in agricultural science (Maunder, 1972). As the movement grew, its programs were adapted to meet agricultural education needs of the people, the place, and the time.

As in England, the American extension movement originated in the universities and large public libraries. The first Director of Extension in the United States (University of Chicago, 1892) was an Englishman named Moulton. He had been one of Cambridge University's original extension workers and in 1885 had documented the first ten years of the extension movement--the world's first treatise on extension. However, as with several other American adult education movements of the 19th century, popular enthusiasm waned almost as quickly as it had grown. Extension had a modest revival early in the next century, but agricultural and rural home programs provided extension with its major impact in the United States (Maunder, 1972). Although agricultural extension developed much later than the other extension programs, it had a great lasting influence.

The Scottish Advisory Service is one of the oldest agricultural extension services in the world. It was established around the turn of 19th century virtually in its present form as an agricultural college providing county and national programs. Concurrent agricultural education and advisory movements developed in England, continental Europe, Australia and elsewhere. As early as 1889 Queensland started a successful dairy extension program based on the use of two mobile dairy extension units. From this innovation and its use of the title "extension" it seems that local thinking was aware of professional development (Williams, 1968).

The Morrill Act of 1862 has been credited not only as the most significant legislation regarding agricultural extension, but also as the most important single piece of social legislation in the history of the United States (Boyle, 1981). The Morrill Act encouraged education for anyone, not just the privileged few. More important for

extension, the Act established at least one land grant college in every state. Twenty-five years later, the Hatch Act created the state agricultural experimental stations, which provided a research dimension and broadened the relationship between the United States Department of Agriculture (USDA) and the colleges. When the Smith Lever Act (1914) created the cooperative extension service (CES), these land grant colleges provided an ideal institutional base for an organized, structured, educational system that helped the CES attain its main objective: to diffuse useful and practical information on subjects relating to agriculture and home economics among the American people and to encourage application of that information (Boyle, 1981).

Agricultural education, advice, and demonstration are as old as agriculture itself, and information and ideas have come from many countries. The American and Canadian approach resulted from a complex mix of local ideas, mutual influences and trans-Atlantic exchanges. The English example led to the agricultural extension work of the American land grant colleges. The Farmers' Institute movement originated in the northeastern United States. The United States and the United Kingdom adopted the Women's Institute from Canada. Dr. Seaman Knapp's Farm and Home Demonstration Program began in the southern United States in 1902 sponsored and originally financed by the U.S. Department of Agriculture (USDA) as a national effort to rehabilitate cotton-growing areas. Later, state and local government finances and participation were added and it became a cooperative project (Swanson, 1984).

According to Prawl et al (1984), every extension system had a sponsoring agency, usually a governmental department or bureau. Extension systems varied tremendously in organizational form, but individuals trained in the technical aspects of

agricultural production staffed most extension organizations. Prawl et al (1984) reported that the world's first nationwide and government sponsored agricultural extension system began in Japan. Similar systems followed in other countries as shown below:

<u>Country</u>	<u>Year of Origin</u>
Japan	1893
Canada	1907
United States	1914
United Kingdom	1946
Israel	1948
India	1952
Pakistan	1952
United Arab Republic	1953
The Netherlands	1953
Nigeria	1954
Taiwan	1955
Brazil	1956
Belgium	1957

Although both Canada and the United States have exchanged information on extension practices, the American experience has strongly influenced the Canadian practice of extension in various ways (Blackburn, 1994). According to Blackburn (1994), "The University of Saskatchewan began agricultural extension work in 1910 and the University of Alberta created an Extension Department in 1912" (p. 5).

It should be noted that most of these early European and North American programs did not use the term "extension." The title was adopted after the American Smith-Lever Act of 1914 formalized a nation-wide cooperative federal-state-county program and gave operational responsibility to the land-grant colleges and universities. The present pattern of American agricultural extension resulted from this merger of local farmers and adult education movements with a major national agricultural rehabilitation program and university extension. However, it soon became such a large and vital program that the use of the term "Extension" tended to be restricted to agricultural and home demonstration (Sanders, 1966).

Agriculture Extension in the Third World

According to Swanson (1984), "the development of agricultural extension organizations in Third World countries was, to a very great extent, a post-independence phenomenon, occurring mainly after the Second World War" (p. 5). Famines and food shortages during the war emphasized the need for extra agricultural production, especially where the post-war population of many nations expanded faster than food supplies. People demanded government assistance in obtaining economic and social equality for various social groups within the nations. Newly formed countries, formerly maintained by subsistence agriculture with limited industry, found it essential to establish a better-balanced economy. Increased and more efficient domestic food production was required to supply the rapidly growing cities and to save or gain foreign exchange necessary for economic development.

In Latin America and the Caribbean, the majority of national agricultural extension organizations were started in the mid-1950s, with a few established in the late 1940s and others in the early 1960s. The experience of Asia was similar to Latin America and the Caribbean, except that the mid-point was around 1960. Some of the extension organizations in African nations began a little later, particularly in the 1960s and 1970s (Swanson & Rassi, 1981).

In most Third World countries, western countries and organizations, particularly the United States, played a major role in the introduction of agricultural extension. The donor organization's role in the development of agricultural extension has significance not only for the extension organization but also for the country as a whole (Baxter, Slade & Howell, 1987). Swanson (1984), also believed that in most Third World countries, "the introduction of general agricultural extension organizations was brought about by assistance, particularly from the United States" (p. 6).

The United States Agency for International Development's (US-AID) involvement in agricultural extension began with the end of World War II. US-AID has been recognized for its pioneer work in Farming Systems Research (FSR) as well as its emphasis on extension's role in technology transfer. According to Blackburn, (1989)

Between 1975 and 1984, US-AID initiated 1,065 projects involving agricultural extension, although only in 266 of these projects was agricultural extension a primary component. The International Fund for Agricultural Development (IFAD), the Inter-American Development Bank (IDB), and the Food and Agriculture Organization (FAO) of the United Nations continue to various extension projects in different parts of the world. (pp. 144-45)

The lack of local or popular demand for extension-type services has characterized most Third World countries, unlike North American and European. Because few Third World countries had well-established colleges of agriculture or an agricultural university when they became independent, most agricultural extension programs were run by Ministries of Agriculture rather than agricultural colleges, as was the case in the United States. In a large number of Third World countries, there has been a severe shortage of trained agricultural personnel. When agricultural extension organizations were established, ministry personnel were often assigned to operate at the local level, and often became involved in administrative and regulatory activities in addition to their extension activities (Swanson, Bentz & Sofranko, 1997).

Third World countries are in most cases dependent on developed countries in agriculture as well as in other technologies. Developing countries often import agricultural technology without proper long-term consideration. The developing nations that import technological hardware should pay considerable attention to the selection of type, size and source of technology and judge both its technical and social appropriateness. A bad selection may end-up in a total failure. Proper selection of technology requires that groups of technical analysts, experts, economists and knowledgeable people study each technology for its appropriateness to the task and its location.

It is also important that local experts have the opportunity to evaluate technologies. Developed nations consider "intermediate" technologies rather than "simple" or "complex" technologies suitable for developing nations. Such a judgement fails to consider various cultural, educational, economic, social and technical factors.

What is considered intermediate technology in a developed country may be considered very advanced and complex technology in a Third World country. The availability of raw materials, manpower, and economic resources, not to mention environmental restrictions, are important in determining the suitability of a particular technology. Imported technologies must be suitable to the local cultural, economic, technical, social, material, and human climate. In rural areas, it would be more appropriate if the technology is labor intensive, simple, small-scale, and low cost (Dawlaty, 1978).

Although agricultural extension makes use of various materials and tools, it remains an educational process to communicate useful information to rural people. As an educational process, it can be organized in different ways and according to different models (Swanson, 1984).

Agricultural Extension Models

Certain extension models are better than others for implementing a specific development objective. Extension models can be characterized according to their goals, the role of the extension agent, the educational approach used, their clientele, and their relation to related departments. Over the past five decades, various models have been used with success in various areas, but have strengths and weaknesses.

Familiarity with these models is important in order to understand extension as well as to recognize the advantages and disadvantages of each approach. Every nation or state has at least one employing large numbers of professional personnel. Swanson and Rassi (1981) count over 290,000 men and women working throughout the world in agricultural extension. Extension includes indigenous learning systems that carry the main burden of agricultural education for many rural people (farmers). Extension also

includes exogenous learning systems, sometimes with massive bureaucracies, which have been introduced relatively recently and are struggling with problems of size, management, personnel, program development, and implementation.

The literature contains various attempts to delineate categories of agricultural extension systems. Lele (1975) categorized extension systems broadly under two major headings: the "take it or leave it" type (where farmers were free to accept or reject innovations) and the contact farming type (where farmers volunteer to receive innovations and were in effect granted on contact to produce certain commodities).

According to Maung Mya (1989, p. 34), Baker classified three types of extension:

1. Public Sector Extension that incorporates "all direct or indirect technology transfer/extension operations paid for by public funds, such as the government or universities";
2. Private Sector Extension that was paid for by private funds such as fertilizer companies, financial agencies or other profit oriented firms;
3. Voluntary Sector Extension that was paid for by such volunteer organizations as farm societies or commodity groups.

Axinn (1987) categorized extension approaches by point of control: the "delivery" approach (top-down, supervisory, supply-driven) and the "acquisition" approach (bottom-up, farmer-determined, participatory, demand-driven). In the industrial and high-income countries with more highly educated farmers, extension has become demand-driven. In the Third World countries, extension had become supply-driven, and involves hierarchical, top-down, technology-packaged delivery systems (Axinn, 1987).

In any case, the aim of this section is to review the basic practical agricultural extension systems in the world and to see what lessons they might hold as "models" for the rehabilitation and future development of Afghan extension. Baxter et al (1987), Pickering, (1987), and Weidmann (1987) proposed the following as the main agricultural extension models.

Conventional, Ministry, State Agricultural Extension Model

This broad categorization covers many general agricultural extension systems in the Third World. It is somewhat difficult to generalize accurately about these systems, as this category includes a wide range of national extension systems. The main objective of this system is to increase national agricultural production of food crops, export crops and animal production. Additional objectives frequently stated or implied are an increase in farm incomes and quality of life of the rural population. Most of these systems were established long before productive agricultural research systems and consequently used research institutions very little. These extension organizations were generally established under a Ministry of Agriculture and became increasingly involved in carrying out all types of governmental activities at the local level (Swanson, 1984).

This model is administered by the Ministry of Agriculture or any other related department. It is more effective when a nation is in the early stages of agricultural development. The Ministry of Agriculture provides funds, training and technical information. Furthermore, this model is much more useful when a country goes through war, famine or other national crisis. The government controls most of the resources and it is easy to negotiate with foreign countries for international cooperation (Tajima,

1994).

Training and Visit (T&V) Agricultural Extension Model

The Training and Visit (T & V) model of extension was developed by Israel's Director of Extension from 1950-65 who attempted to reform and improve upon the effectiveness of conventional agricultural extension systems (Rivera, 1987). It is now widely used in many Third World countries, largely through the encouragement and support of the World Bank (Swanson, 1984). The extension objectives of the T&V model are similar to the conventional model, although the primary objective is to increase individual farm production and income. The implicit assumption is that if farmers increase their production and income, then national agricultural production will increase.

Blanckenburg (1984) mentioned some additional important aspects of the T&V system. The contact farmer groups know precisely when they can expect their extension agent. The system emphasizes good supervision, a strong research-extension linkage, field agent dedication to extension work, and wherever feasible, a unified extension service. The entire system is to be continuously monitored and evaluated. This system discourages sudden radical changes, favoring well-tested improvements that can be systematically introduced. However, the system is intended to accommodate reorganization based on evaluation and perceived improvements (Blanckenburg, 1984).

Roling (1988) looks at the T&V model as a form of extension management, which emphasizes regular extension visits to designated "contact farmers", who in turn have designated "follower farmers" (Roling 1988). Though this is not the theory of T&V, in some countries the T&V model is little more than a slightly changed progressive farmer's approach. Van Den Ban and Hawkins (1985) explain the main task

of management in the T&V model is to support the Village Extension Workers (VEWs) to help them work effectively. Unsatisfactory VEW performance might well be attributed to insufficient support from higher levels in the organization. This view implies a major change of management orientation in those countries where subordinates were expected to please their superiors (Van Den Ban & Hawkins, 1985).

The basic goal of the T&V model is to build a professional extension service that is capable of assisting farmers in raising agricultural production and/or income and of providing appropriate support to agricultural development. To be successful, the T&V model must be adapted to fit local agro-ecological, socio-economic and administrative conditions.

Training and Visit model, or a version of it was widely adopted in both Asia and Africa by the World Bank in the late 1970's. Rivera (1987) reported that 65 countries were using the T&V system, and nine of them have adopted it as the organizational form for their national extension service. The clientele in the T&V model are farmers in each extension worker's area of responsibility. Initially, the T&V model selected the more progressive farmers in each community as contact farmers, because these farmers had greater access to resources (World Bank, 1991).

College/University Agricultural Extension Model

The United States pioneered extension service led by land grant colleges. Under this model, the university employs extension staff and the service is normally funded by federal, state and local agencies. One important aspect of this model is the close link between research, extension and training functions; another is a general educational function that includes community development and youth work. The model is a product of United States agricultural history dating from the establishment of the land grant

universities in 1862 which effectively removed extension services from direct government control (True, 1929). The clientele of extension normally includes all people who are interested in the subject matter. Audiences are targeted for each type of program. For example, significant programs are carried out in large cities, in home economics, youth work and home horticulture. Extension also works with a great many organizations and firms that provide services to agriculture.

The cooperative extension service provides informal, noncredit education. All agricultural extension education programs are based on local needs. The CES works under conditions of rapid change in technological services available for farm people, and it had a strong link with research. The US land grant colleges, with their three-way tradition of research, extension and resident instruction, were largely independent institutions of external governance that avoided supply and marketing functions (Rivera, 1987).

The extension system is organized at the state level by the state land grant universities. Therefore, all extension personnel are staff members of the university, including extension workers and extension assistants at the local level, subject matter specialists at the state level, and administrative and supervisory personnel at the state and regional levels (Williams, 1968). However, until recently, Scotland and the United States have been the only countries where this system prevails (Tajima, 1994).

Farming Systems Research and Extension (FSR/E)

The farming systems research and extension model is used in some Third World countries. According to Zandstra (1986), FSR/E originated in the late 1960s with the notion that inefficient resource use restricts productivity and that there are limits to

technology transfer from Western to Third world systems. The term farming systems was applied in the 1970s to several different practices around the world and in the 1980s, the generic term Farming Systems Research came into more common use (Rivera, 1987). Russell (1981) observes that FSR/E is the application of systematic analysis to agricultural research, development, implementation and evaluation and of the various component systems (social, technological and political), that interact with the farm.

Byerlee et al (1982) characterized the Farming Systems Approach as having two basic components, research and development. This concept was similar to that used by Shaner et al (1982) who termed it Farming Systems Research and Development (FSRD). Regardless of terminology, consensus developed on the basic assumptions, methodologies and objectives of FSR/E to address the need for linkages among researchers, extension workers and farming systems.

The FSR/E extension system designates the professional agrologist (extensionist) as the core runner of the system. Communication originates from the top and sometimes there is lack of coordination with research and affiliated institutions run by universities and governmental agencies. This is because of the multiple roles performed by the extension agents.

Commodity Development and Production Model

The commodity-based extension model arises from the technical, administrative and commercial requirements of a specific crop or livestock. In most cases, extension is directed by a commodity authority that manages all production activities from research and extension through to input (including credit) supply. In Third World countries, such authorities generally oversee export crops, although they may also be found in

domestically oriented activities such as dairy production. Well-known commodity-based extension models are part of the rubber schemes in Malaysia, the cotton companies in West Africa, the Kenya Tea Development Authority and the dairy cooperative of India. Commodity-based extension models also operate in the private sector, such as those run by the British American Tobacco Company in Kenya. Whether private or public, crop authorities operate commercially and the cost of providing extension and other services is recovered by a management charge at the point of sale. This cost-recovery mechanism is largely assured by the powers of the authority or the company (Boxer, et. al, 1989).

Integrated Agricultural Development Model

According to Swanson and Clarr (1984), in the early 1970s, it was recognized that for "agricultural development to occur, all of the institutional components that affect this process must be coordinated and applied to achieve increased agricultural output" (p. 13). The objectives of such activities are focused on to increase agricultural output in the area. All farmers covered by the project are the clientele. However, where resources are limited, the more progressive farmers tend to take advantage of the improved practices.

Integrated Rural Development Model

The integrated or participatory rural development model is, in some respects, a blend of the community development projects of the 1950s and early 1960s and the "animation rural" approach in French Africa. These approaches embody a broad concept of rural development that includes social and economic factors. The rural poor are encouraged to participate in planning, implementing, and evaluating programs.

Since these programs address both economic and social objectives, the introduction of appropriate new technology, particularly to increase agricultural output, is expected to produce the income that will support and enhance social objectives. Increased participation is the central concern of this model, particularly to increase self-reliance and local initiative. This model also pursues objectives such as improved health, nutrition, and basic education (Swanson, 1984).

The above agricultural extension models have been used in various countries. Yet, it is difficult to identify a single extension model appropriate for the future development of the Afghan agricultural sector. The T&V model might be practical in Afghanistan if certain pre-requisites are met. It is expensive. At present, Afghanistan has neither the economic nor the human resources to pursue such programs.

The United States cooperative extension system might be considered a model of what can work in a context of national commitment to agriculture, political stability, and abundant natural resources. Its transfer to and adoption in the Third World is difficult because well-developed agricultural colleges or universities, an essential element, do not exist in most Third World countries including Afghanistan. The university /college model of extension has had obvious positive results. It requires, however, well-developed higher education institutions (agricultural universities and colleges) that Afghanistan cannot currently afford. Such a model may be highly desirable in the future. Due to the occupation, most higher education institutions were destroyed and professional personnel were either jailed or fled the country for other parts of the world. Today, only India, the Philippines and Thailand are trying to adopt this model.

The commodity development model, seems less than ideal for Afghanistan. The geographic and climatic conditions within the country are not suitable for a specific plant and animal. Because of the low number of qualified personnel, limited budget and the existence of simple technology, FSR/E model is also not currently practical in Afghanistan. Whenever peace restores, the country gets on the road to economic development, and agriculture recovers this model could be tried.

Among the models mentioned the conventional extension model (in some countries called State or Ministry extension model) has a long history in Afghanistan. Agricultural development plans and programs were top to bottom, decisions were centralized because of the limited financial, human, educational and technical resources, and farmers were not in the position to decide for themselves. The Agricultural Extension System in the past bridged the gap between people (farmers) and government. Afghanistan should continue with the Ministry extension model. When peace restored and the country returned to normal the possibilities of adopting other agricultural extension models could be considered.

Agriculture Extension in Afghanistan

There were two independent extension services in Afghanistan prior to the occupation. One was the extension service of the Helmand and Arghandab Valley Authority (HAVA). This was the largest agricultural development project in the southwestern part of the country. The scope of activities of the HAVA extension service was limited mainly to the area under the project. The second was the

Agricultural Extension Service (AES) of the Ministry of Agriculture. This service had a nationwide responsibility with the exception of the area administered by HAVA.

Although the two extension services were separately organized and administered, they had similar goals. Often US-AID extension advisors were responsible for advising both extension services at the same time. This had a definite effect on bringing the two services closer together in function as well as in their objectives.

Agricultural extension activities were initiated in Afghanistan about five decades ago in support of the growth and development of the agricultural sector. To fulfill the need of the people and to accelerate the development of the economy, the government of Afghanistan set up numerous departments within the Ministry of Agriculture to provide services to farmers. The departments that undertook academic and technical studies for generating knowledge (agricultural technology) were placed in one category. Those departments that provided different services (communication/diffusion of technology) were placed in a second category. Agricultural extension was located at the top of the second category (Wesa, 1994). In 1958, the agricultural extension system was first formally organized under a Director within the Ministry of Agriculture. In 1959, this position was elevated to the level of General Director, in 1963 the name was changed into Production and Extension Department (PED), and in 1966 to Research and Extension Department (RED). In 1970, the RED was divided into the Department of Agricultural Extension and Production and the Department of Soil Sciences.

In 1971, a severe drought called for urgent action by the Department of Agricultural Extension. The department was therefore temporarily withdrawn from the Ministry of Agriculture and brought under the Rural Development Department, under

the direct control of the Prime Minister. In 1971-72, agricultural extension returned to the Ministry of Agriculture as the Agricultural Extension and Development Department. In 1979, during the Soviet occupation, agricultural extension was dismantled because it was assumed to be a western concept (Wesa, 1990).

Problems of the Last Two Decades

Damage to Human Resources

The Soviet occupation of Afghanistan caused the loss of more than one million Afghan lives, displaced about two million inside Afghanistan, and forced more than five million Afghans to leave their homeland for other countries. The destruction was not only physical. Afghan society was ripped apart, too. A whole generation grew up without any education beyond the primary level. Many youngsters did not receive any teaching at all. The literacy rate, especially among females, is probably the lowest in the world. Administrators and technocrats who ran the government departments and businesses either fled or were killed. A once friendly and cheerful population became ruled by intolerance and fanaticism (Domato, 2000).

The Christian Science Monitor has estimated the total number of Afghan emigrants at five million (9/26/84). The Pakistan Times reported from Mashad, Iran, that "1.8 million refugees will receive identification cards from the government of Iran". (6/2/84)

Most technocratically experienced and Western educated Afghans left the country or were murdered. Nearly one third of the population emigrated to refugee camps in Pakistan and Iran while another two million who migrated from villages to the cities created an overburdened urban structure (Kamrani, 1988). Some who did not get

the chance to leave the country were jailed. As many as 23,000 people were crammed into the Pulicharkhi prison that was designed to hold only 2,000 (Eiva, 1981).

Landes (1988) noted that Soviet administrators after the occupation of Afghanistan in December 1979 had an enormous impact on domestic policies. Conflict among pro-Soviet Afghans and opposing factions severely damaged the economy and resulted in the emigration of 5-6 million refugees (Landes, 1988). The impact of the occupation was not limited to a loss of human resources; it impacted the entire infrastructure of the country.

Women Limited Access to Agricultural Extension

Women are the main stakeholders in agricultural production in many countries of the world including Afghanistan. More than 20 years of Afghan conflict blocked active participation of women in the Afghan agricultural improvement process.

Women's substantial contributions continue to be systematically marginalized and under valued in conventional agricultural and economic analyses and policies, while men's contributions remain the central, often the sole, focus of attention (Swanson, Bentz & Sofranko, 1997).

There is a wide spread recognition of the need to improve both agricultural education and extension work with Afghan women (rural). This is necessary as both a fundamental right and as a matter of good sense. In a cost-benefit analysis, the World Bank showed that investing in the education of females has the highest rate of return of any investment in developing countries (Crowder, 1997).

Numerous factors such as culture, tradition, and social norms prevent women from active participation in formal agricultural education and non-formal extension

education. Consequently, they are on unequal terms with males in recruitment and self-employment. Inadequate educational and training opportunities for women led to unequal participation of women.

Damage to Infrastructure

Following the Soviet occupation, the Afghan economy was in shambles. The infrastructure, which represented the only major accomplishment of the preceding few decades, was decimated. Underground water canals which took decades to build were damaged. The cost of the Soviet war in Afghanistan was enormous in lives and property and many still feel that the Soviet Union should pay war reparations to Afghanistan (Kamrani, 1988). Not only has the income producing capacity of the country suffered, the damage to its capital stock--land, irrigation systems, cottage industries, factories, power lines, roads, bridges, livestock, and trees--posed enormous problems of reconstruction.

The Soviet occupation laid waste to large areas of land that would otherwise be used for agriculture, commercial development, or social infrastructure, such as homes, hospitals, and schools. The destruction of the agricultural infrastructure drastically reduced farm power, mainly oxen and human labor. A rapidly increasing population growth rate (3-5%) is a significant threat to the country. During the occupation, transportation systems were crippled. Some 25% of the country's paved roads and 33% of those partly paved were damaged (Jawad, 1991). Similarly, fledgling communication systems such as telephone and telegraph networks were almost destroyed, and even mail delivery required military support.

Damage to Staple Crops/Livestock

Production in all sectors declined. Keshtmand, Sultan Ali, the Afghan Prime Minister during the Soviet occupation, noted that Afghanistan purchased a record 170 thousand tons of wheat in 1988 to make up the deficit, while in 1978, Afghanistan achieved self-sufficiency in wheat (March 6, 1988). Gul and Morrison (1988) similarly found that by 1974, agricultural production was self-sufficient. During the occupation orchards and trees were burned, agricultural land hardened for lack of tilling, and an unknown but large quantity of livestock and capital goods vanished. Although the damage was widespread, certain provinces such as Kandahar were hit particularly hard.

Farr and Gul (1982) found many changes in the agriculture sector after the occupation, particularly in wheat production. According to Farr and Gul each farmer sampled in 1978 planted 37.3 Jeribs (8.3 ha) on average. By 1982 acreage in wheat had dropped to 13.9 Jeribs, or about 37% of the acreage. Wheat cultivation in all provinces was down although some areas suffered larger declines than others. Provinces with large farms, such as Farah, Kandahar, and Nimroz, showed a greater provincial decrease in wheat acreage, while provinces with smaller farms had less of a decrease. Other food crops decreased in area between 1978 and 1982. Corn was down by 38%, barley dropped 43%, rice dropped 20%, and cotton dropped 16% (Farr & Gul, 1982). In addition, Saba (2002), in his article, The Condition of Afghanistan's Environment, mentioned that: "compared to 1979, agricultural farm products have decreased 50%". (www.afghan-web.com/geography/environment.html May 10, p. 1).

Another study completed by Samin (1989) illustrates how badly the Afghan agriculture was damaged by the Soviet occupation. Table 5 summarizes the effect of the occupation on the production of main crops.

Table 5

Yield Reduction in Agricultural Products(thousand tones)

Crop	1975-76	1986-87	Percent Decrease
Wheat	2,850	1,428	49.89
Corn	780	240	72.00
Rice	435	170	60.92
Barley	384	111	70.09
Cotton	160	35	78.13
Sugar Beets	100	15	85.00
Oil Seed	40	35	12.50

Source: Writers Union of Free Afghanistan (WUFA), Volume 4, Number 2. April-June 1989. p.23

Sugar beet production decreased drastically and was followed by cotton, corn and barley, while the percent decrease in wheat production was close to 50%. Gul and Morrison (1988), estimated that "between 55 and 77% of the country's pre-occupation agricultural output capacity has been destroyed" (pp. 46-47). Further, they added that between 1978 and 1982, selected farms had reduced their acreage of wheat by 63%. During the same period, the average yield per hectare dropped by 46% for wheat, 65% for rice and 40% for barely (p. 24).

Moreover, Samin, (1989) found that as the level of crop production fell, prices rose contributing to massive inflation. Prices of some agricultural products before and after the occupation are listed in Table 6.

Table 6

Comparative prices of some agricultural products in Kabul

Item	Cost in 1978	Cost in 1989	Percent Increase
Edible oil per 7 kg.	500 Afg.	3500 Afg.	600
Rice per 7 kg	150	1800	1100
Mutton per kg.	80	800	900
Beef per kg.	50	600	1100
Sugar per kg.	25	450	1700
Onions per 7 kg.	20	350	1650
Potatoes per 7 kg.	25	320	1180
Bread per loaf	2	15	600

Source: Writers Union of Free Afghanistan (WUFA). Volume 4, Number 2. April - June 1989, pp.24-25.

The prices are in Afghani currency, Afghani. In that time one US dollar was approximately 1000 Afghani.

A decrease in chemical fertilizer use accompanied the drop in productivity. Two main types of fertilizer were in regular use before the occupation. Compound fertilizer, or "gray fertilizer" is used at or before seeding and is mainly Di-Ammonium Phosphate (DAP). Nitrogen fertilizer or urea, or "white fertilizer" is used at seeding and on the growing crop in the spring. Gul and Morrison (1988) analyzed the use of fertilizer for wheat, the most important crop. They found that the percentage of farmers using compound fertilizer had declined from 57% to 33% and the percentage of those using urea had declined from 76% to 53%.

Gul and Morrison (1988) also found a serious decline in the numbers of all livestock. For example, the number of karakul sheep and ordinary sheep and goats declined by 60% and 56% respectively. The decline in the number of cattle was estimated at 47%. The number of horses declined by 45%, while the figures for donkeys and mules are 6% and 24%. Gul and Morrison (1988) found two reasons for the decline in livestock. The most important was the need to sell livestock in order to buy food, and to raise money for the trip to a refugee camp outside the country, as well as the living expenses after arrival in a neighbor country.

Damage to Agricultural Land

Agricultural land was abused terribly during the Soviet occupation. A survey conducted after the occupation showed that rural areas had been bombed indiscriminately and that civilians had been targets of military activities. According to Dr. Azam Gul, former Professor, Agricultural College, Kabul University, in Majrouh and Elmi (1986) mentioned that: "the average farm size was 140 jeribs in 1978, 131 jeribs in 1981, and 134 jeribs in 1982" (p. 168).

Daud Saba (2002) in his article, The Condition of Afghanistan's Environment, mentioned that: "Two thirds of the landscape of Afghan is occupied by mountainous terrain with little or no vegetation, typical of an arid country". (www.afghan-web.com/geography/environment.html May 10, p. 1). At present, only six percent of the 15% of agricultural land in Afghanistan is under cultivation. In the past 20 years, the agricultural areas have been drastically decreased. According to Daud (2002), "It is estimated that Afghanistan lost 30% of the farm land and pastures, either by abandonment or degradation". (www.afghan-web.com/geography/environment.html May 10, p. 1).

Yusufi in Majrouh and Elmi (1986), mentioned the following as the main cause of such acreage reduction:

Military drafting of all male between ages of 15-45 years, escape of some people to mountains, flight of about five million Afghans, and killing of farmers. (p. 168)

Forests and orchards were burned, irrigation and drainage systems destroyed, farming was eliminated, and agricultural land became desolate and unproductive. Fertilizers, agricultural chemicals, and improved seeds became scarce, unavailable, or prohibitively expensive. The supply of animal manure and local fertilizer to replenish the farmland decreased significantly due to the killing of domestic livestock. A lack of irrigation water became a limiting factor for crop production. Millions of mines were planted in the agricultural land and the population was forced to leave the country (Samin, 1989, p. 23).

Landmine Damage

The proliferation of long-lived landmines in Afghanistan is a continuing obstacle to agricultural and economic growth and political stability. These mines do not become less deadly when the guns fall silent. They inflict injuries, claim lives, and sow bitterness. They imprison a nation and its people and they limit every option.

Landmines prevent farmers from tilling arable land. Mines impede the repair and maintenance of irrigation systems and watercourses, which are critical to agricultural productivity and food production. Landmines isolate power lines, bridges, transportation systems, roads, rail networks, and water ways.

The Soviets left behind a legacy of over thirty million land mines, making Afghanistan one of the countries most severely afflicted by this vicious form of late twentieth century pollution (UNDP, 1993). Remarkable steps have been taken to address the problem, but for too many Afghans, including refugees who remain stranded in neighboring Pakistan and Iran, the threat of hideous injury from landmines continues to thwart their hopes of reintegration. The extent and location of many minefields is uncertain, but include areas around cities and war-time encampments, irrigation canals and ditches that were mined to prevent their use by Mujahideen raiders. The UNDP further states that efforts to clear the mines have been coordinated from Pakistan due to political instability in Kabul (UNDP, 1993). Lohr (1991) believes that land mines may yet take the lives of one-fourth of the Afghan population.

Increase in Poppy Production

Another major problem caused by the Soviet occupation was illicit drug production, a practice that decreased the country's food production capacity and increased social instability and corruption. Opium poppy cultivation rose during the Soviet occupation mainly because the central government was unable to curb its cultivation. Reduced arable land, high inflation, and high unemployment compelled the farmers to cultivate large quantities of opium poppy in place of staple crops. Drug smugglers, enjoying poorly guarded national borders, also encouraged opium cultivation. An estimated 200 heroin laboratories lay along the Afghanistan/Pakistan border (Cone, 2000; Frank 1988).

An estimated 1,350 metric tons (Mts.) of opium gum was produced from approximately 41,720 hectares of poppy. Poppy cultivation and opium gum production increased by 7 percent in 1998, despite poor weather. According to informal discussions with some Afghans outside the country, during the Taliban regime, the percentage of opium poppy increased. According to them, famine, poverty, destruction of agricultural and economic infrastructure encouraged the high percentage of poppy production. Illicit crops still occupy prime agricultural land, significantly reducing food crop production (BINLEA, 1999).

Poppy cultivation violates Islamic law and ethics. Although Afghanistan has a history of illicit drugs, problems have rarely been serious (Macdonald, 1992). Only recently have farmers turned to large-scale cultivation for economic reasons (Bahram, 1996). As farmers of Nangarhar (eastern Afghanistan) are reported as saying "a good man sins as much as is necessary to keep his family alive, while a bad man sins

unnecessary" (UNDP, 1993, p. 34). The UNDP calls for a "strong leadership commitment as a fundamental requirement of a poppy control program" and emphasizes written agreements between provincial governments, local leaders and communities who are benefiting from development activities not to grow poppies.

The Taliban, more or less minimized poppy cultivation before they were toppled by the international coalition forces. The interim government may not be in the position to implement these controls because, its authority is rarely extended beyond the capital and the provinces are controlled by warlords. Warlords are the main forces behind poppy cultivation.

Non-governmental Organizations (NGOs)

The role of NGOs in Afghanistan during the occupation was crucial. NGOs had significant economic and social influence on the country. During the occupation, central government had less or no control over rural and suburban areas. NGOs were in charged of most of the projects and programs. At the beginning of the occupation, NGOs were responsible for humanitarian and relief operations.

According to Baitenmann (1990), "many of the nearly 300 NGOs involved in the Afghan conundrum have provided badly needed humanitarian aid". (pp-67-68). At that time, NGOs headquarters were inside neighboring (Pakistan) countries. ACBAR (1993), "identified 200 NGOs with offices in Pakistan". (p. Introduction). Following are some of the significant NGOs and agencies involved in Afghanistan during and post Soviet withdrawal:

Austrian Relief Committee, the British Agencies Afghanistan Group, the Danish Committee for Aid to Afghanistan, the German Agro Action, the Global Partner-UK, OXFAM, the Swedish Committee for Afghanistan, and more. These NGOs are involved in agriculture, education, women affairs, training, irrigation, construction, and landmines. For example, the Swedish Committee for Afghanistan (SCA) provided assistance to the educational and agricultural sectors. According to ACBAR (1993), "SCA conducted a series of agricultural surveys and carried out agricultural extension services to Afghan farmers"(p. 387).

The role of NGOs had changed during post Soviet withdrawal from relief efforts to production and rehabilitation. Because, some NGOs moved their headquarters in side Afghanistan. ACBAR (1990), noted the change in the position of some:

NGOs from their emergency relief efforts to rehabilitation programs that emphasized agriculture and infrastructure rehabilitation work, including irrigation repair and fertilizer and seed input projects. (p. 4)

The Structure of Agricultural Extension

The reconstruction process of Afghanistan brings numerous challenges for the government. Agricultural extension before the occupation was one of the major organizations closely involved with farmers. The government used agricultural extension to implement most of its community and rural development programs within the country. Farmers were, and still may be, familiar with the pre-occupation agricultural extension network. Today, agricultural extension could play an important role in reducing poppy cultivation, increasing agricultural production, and changing farmers attitudes towards modern technology.

The place of agricultural extension in the organizational structure of the Ministry of Agriculture of Afghanistan is a critical factor in determining its relationship with other governmental services and institutions. The role of agricultural extension as the educational arm of the Ministry of Agriculture is particularly appropriate as the extension service, through its field organization has close contacts with farmers. Agricultural extension field personnel who were properly established themselves in the rural communities enjoyed the confidence of the farmers they served. They were in the peerless position to explain national agricultural policies and updated farmers in regards to the availability of possible innovations within the agricultural sector. Due to the more than two decades conflicts of Afghanistan, most of the relationships between the organizations including agricultural extension have been changed. Agricultural extension lost its reputation with the farmers and was not trustworthy as before the conflict. The current Agricultural Extension System with the full support of the Ministry of Agriculture is trying to refresh its relations with farmers (personal communication).

The capability of the Agricultural Extension System to provide the required support to agriculture development has to be seen in the context of the evolution and growth of the agricultural development administration in the last five decades. Agricultural development activities were conducted through a hierarchy devolved from national policy to the village and farmers using various administrative levels that followed the general pattern of political/administrative divisions.

The Ministry of Agriculture in Afghanistan was organized into a number of departments, each presided over by a president in order to carry out the activities of different sub-sectors (Appendix E). The development sub-sectors were brought under two vice-ministers (Agriculture and Animal Husbandry) while those departments which served more than one sub-sector (such as land reforms, planning, administration) were supervised directly by the minister of agriculture. The provincial presidencies were also under the direct control of the minister of agriculture (Wesa, 1994).

At the provincial level, the Ministry of Agriculture was represented by the president of the department of agriculture who was assisted by a team of specialists at the level of director generals/directors (depending up on the extent of activities and the load of work). Directors organized and monitored activities in agricultural extension, plant protection, agricultural research, veterinary medicine, animal husbandry, forestry, cooperatives, land reforms and other subject areas. Often activities like seed and fertilizer distribution, and farm mechanization were represented at the provincial level by a respective organization (Wesa, 1994).

Agricultural development activities at the Woluswali (District) level were organized and administered by the Unit Chief (UC) popularly called Amiri Tarwaj (AT) who was supported by a team of specialists rendering support and services in such subject areas as plant protection, animal husbandry, veterinary medicine and cooperatives, forestry, seeds and fertilizers. Depending upon the extent of cultivated areas and hence the intensity of crop development, the Woluswali was territorially subdivided into two or more Extension Units (EU). Each was headed by an Amiri Tarwaj (AT) and a team of specialists found at the Woluswali level as described earlier.

At the grass-roots level agricultural development activities were carried out by the Extension Agent (EA) popularly known as Mamouri Tarwij (MT) who supported farmers cultivating between 400-800 hectares (2,000-4, 000 Jeribs) of crop land. Each EU used to have 8-10 EAs depending up on the extent of croplands in the area. Even though the MT was responsible primarily for all the activities connected with crop development, he or she organized and guided farmers in securing support and services in other specialties and sub-sectors such as plant protection or veterinary services. These services reached only up to the level of Woluswalis or at best EUs. The MT was effectively the representative of the Ministry of Agriculture for all agricultural development activities at the grass roots and personally supported groups of villages if not all villages and communities (Wesa, 1994).

Before the occupation, extension services were being rapidly expanded with help from external sources; an increase from 1,200 to 5,000 extension officers was planned. There were 4,500 extension agents (almost all males) assigned to about 300 extension units scattered throughout the country (persnal observation). Fewer than 30% of the extension workers had over twelve years of education. Grade twelve graduates comprised from 55-60% of the staff, many of whom were not graduates of agricultural schools and had no agricultural training. Most of the remaining staff had not gone beyond the ninth grade. Such workers were generally young and lacked experience. There was also an obvious requirement for extension agents to be housed in the rural areas and equipped with transport facilities and audio-visual aids.

The extension agent (local extension worker) is the most important single element in achieving the aims and objectives of the extension organization. Having said that, extension agents should be accommodated with proper facilities at both village and farm levels. The effectiveness of an extension service depends to a noticeable degree on the morale and motivation of its staff. To be efficient, the staff need acceptable working conditions, and incentives (achievement-oriented pay, promotion opportunities and good staff management) (Blanckenburg, 1984).

Extension agencies are normally not autonomous in their program planning. Their objectives can be formulated only on the basis of general development objectives, and the resources for program implementation were as a rule allocated by the Ministry of Agriculture or other superior authorities. According to Balnckenburg (1984), "Extension programming takes place at three levels "national, regional [province, district, project] and local [division, village]" (p. 53).

Agricultural extension programs have been planned and executed in Afghanistan probably as early as in many other countries of the world. The exact history, however, cannot be traced due to lack of pertinent literature. According to the FAO (1966), some of Afghanistan's neighbors such as Iran, Jordan, Syria and Lebanon were planning agricultural extension soon after World War II as economic development was linked to sound planning. Given the long tradition of agricultural extension information the idea of extension planning might have been introduced to Afghanistan from neighboring countries. According to a report from United States Operation Mission (USOM 1953) the "National five year plan of Afghanistan provides guidelines and policies for program development for the various sectors of the country" (p. 3). Literature on

Afghanistan indicates that some planning activities have been carried out, or planned and suggested to be carried out in agricultural extension or other fields (USOM, 1953).

During the 1960s, the Ministry of Agriculture considered the involvement of the farmers or their representatives in the process of program development as a significant factor in expediting agricultural development. According to Renolds (1962), the Ministry of Agriculture of Afghanistan started in 1962 that:

Under the second five-year plan, the government will develop policies, plans and programs through discussion with the farmers, had we done this in the first plan, we would have avoided some of the mistakes and failures. (p. 9)

Before the internal conflict, the AES network consisted of 250 Extension Units (EU) with over 4,000 professional/technical staff and over 1000 supporting staff. All activities connected with agricultural development were implemented via the extension agent who was the link between the farmers and the government. An effective system involving villagers and national policy makers had been built, including adequate support in logistics, manpower development, extension education materials and facilities. The agricultural extension system had attained near autonomy within the Ministry of Agriculture with an independent budget, its own outfit for planning, programming, monitoring and evaluation (Wesa, 1994). During the Soviet occupation only 80-90 extension units were functional. Most of them did not have a full complement of staff. Furthermore, for a variety of reasons the trained staff stands depleted in both quantity and quality. For instance, the professional staff strength estimated was around 500. During the mid-seventies, the department of agricultural extension had over 40 postgraduates, but during the occupation the numbers dropped to 20. Several of them were reported to have left the department for various reasons.

Beside agricultural extension, other educational institutions were also affected by the occupation. The number of trained and professional women in agriculture in Afghanistan and similar countries is too limited. Broad and special efforts to be made in order to employ and train female students who could function as extension agents, agricultural researchers, trainers, educators and policy makers.

After the Soviet occupation, the government began a mass literacy campaign, which raised the ire of the local Mullahs (priests). The government, acting clumsily, had tribal women sit in classrooms with male teachers. The men in the community became furious with what they saw as a direct threat to their culture, authority and their property over their women. Many schools were destroyed (Ellis, 2000, p. 127).

In 1989, as part of the rehabilitation process of agriculture in Afghanistan, the UNDP in Kabul, started to study the status of agricultural extension units (AEUs) throughout the entire country. Based on a special contract, the author prepared a report on AEUs at that time. Because of the political situation, only four provinces were visited under the auspices of the United Nations. Other provinces were evaluated based on the reports gathered by the Ministry of Agriculture. Refer to [Appendixes I, J, K, and L] for details on the provinces (Wesa, 1990).

The Austrian Relief Committee conducted a survey in 1988 (ARC, 1988), showing that among the refugees in Pakistan were some-well educated Afghans. Five Ph.Ds., 18 Masters, 255 B.Sc. (Agriculture), 49 graduates of agricultural institutes, 517 graduates of agricultural high schools and 181 graduates of agricultural short and long term courses. Poor logistic support in order to undertake farm visits for the extension agents and the supervisory staff to provide effective supervision the logistic support at

all levels was grossly inadequate. In addition, shortage of extension education materials including audio visual aids resulted in the poor quality of extension system. Livestock extension was assigned to the Department of Livestock and Veterinary Services in the Ministry of Agriculture, but the unit had no field staff. A certain demonstration impact was achieved by the veterinary clinics, but for all practical purposes, there was no livestock extension program.

Before the occupation, the scope of educational activities, which was considered the main function of AES, had been limited. Demonstration (method and result) had been the most popular educational technique used throughout the country. Exhibits were displayed in the beginning of every New Year ("Nowrouz, Hamal First", March 21), Independence Day (August 19 "Assad 28") celebrations and other traditional occasions. Teaching through radio programs and field days was popular. The use of literature, meetings and individual contacts was becoming popular in scope. There was no administrative or program relationship between the Faculty of Agriculture, Kabul University and the Agricultural Extension System, Ministry of Agriculture.

Nakata (1965) emphasized and recommended such relationships particularly for Afghanistan:

I would recommend that the Faculty of Agriculture, Kabul University, initiate some extension works in the future. I sincerely hope that the future foundation of agriculture in Afghanistan be established by the Faculty of Agriculture. (p. 6)

It is often pointed out that the unsatisfactory performance of extension services is due partly to the low qualifications and motivation of extension staff and partly to the fact that the number of staff is insufficient in view of the large number of farmers to be cared for. Most services try to overcome the first problem by better training

(Blanckenburg, 1982, p. 41).

Apparently, the opinion prevails that generally the lower level staff is insufficiently prepared for its difficult task. Therefore, attention concentrates on an improvement of the qualification of the grassroots level by training that is more intensive and by better supervision of the staff. Many countries, especially in Asia, have recently started to invest in extension activities and to adopt the World Bank concept of a systematic training and visit system which brings about major changes in the total extension approach (Benor & Harrison, 1977).

By now some countries made investment in various agricultural extension programs. According to Evenson (1997), "we now have a substantial body of economic studies of extension services in a number of countries; 75 studies of economic impacts of extension systems have been published to date" (p. 27). Evenson (1997) find out that, "many extension programs have been highly effective in aiding farmers to achieve higher productivity" (p. 33).

Due to the Soviet occupation and more than twenty years war in Afghanistan, the rehabilitation and reconstruction of agriculture sector, and agricultural extension in particular is beyond the capacity of the Afghan economy. International financial and technical assistance is extremely important. The main purpose of such endeavors is to assist the country in the rehabilitation and development processes, i.e., to help them attain more quickly a higher and more prosperous standard of economy (living standard).

This chapter has briefly explained some definitions, brief history, extension models, role, development, and political structure of extension in Afghanistan. The next chapter describes the research design used to address the research questions.

CHAPTER FOUR METHODOLOGY

The purpose of this chapter is to describe the design of the study and selected characteristics of respondents. Examination of the methods employed reveals the thought processes embodied in the research. Choices of questions, how questions are asked, of whom they are asked, and about what, are all manifestations of stances and ideologies that underlie a particular research framework. In this chapter, I describe the data sources used, how participants were recruited, how data were collected and analyzed, who the respondents were, and limitations of the study.

Data Sources

While most aspects of Afghanistan's agriculture sector were affected one way or another by the Soviet occupation, the Agriculture Extension System was one of the worst affected. The infrastructure for extension was nearly shattered and the system derailed to the point of being ineffective. The challenge in this study was to identify sources of information about the agricultural sector and about extension in particular when most of the knowledgeable people had fled to other parts of the world. In the end, this study relied on two primary sources of information: literature and people with direct knowledge of and experience working in agricultural extension in Afghanistan.

My investigation involved an examination of documents about the Afghan agricultural sector (Agricultural Extension System) before and during the Soviet occupation and a survey of agricultural professionals who formerly worked for either the Ministry of Agriculture or the Agriculture College of Kabul University. Each of these is

discussed in detail below.

Documents

Several categories of documents were useful in understanding the condition of the agricultural sector just prior to the occupation and what happened during the occupation. These documents were located using largely conventional strategies including searches of the library catalogue, the Educational Resources Information Center (ERIC), Agricola, World Cat and Afghan on line. Internet searches also yielded useful documents as did searches of newspaper indexes. In addition to these sources, I was aware that several development organizations produced documents relevant to my research purpose. Specifically, various branches of the United Nations, the World Bank, the Asian Development Bank and Agricultural Development and Industrial Bank produced documents related to the situation in Afghanistan. Reports and studies produced or commissioned by The Agency Coordinating Body for Afghan Relief (ACBAR) and South-West Afghanistan and Baluchistan Association for Coordination (SWABAC) describe activities of local and indigenous NGOs. In addition, the Writers Union of Free Afghanistan (WUFA) published reports on social, economic, educational and general characteristics of Afghanistan. Publications and web sites of some Afghan societies established in exile were also consulted. In addition, the Afghan Study Centre at the University of Nebraska-Omaha (UNO), United States Agency for International Development (US-AID) and United States Department of Agriculture (USDA) National Library yielded abundant literature on Afghanistan.

Survey Respondents

Ninety Afghans living in the US, Canada, Europe and Pakistan were identified as potential survey respondents. All of these people formerly worked in either the Ministry of Agriculture or Kabul University and all were working in Afghanistan at the time of the occupation. They were identified largely through word of mouth in a snowball fashion beginning with people I knew and expanding to include others identified as meeting the criteria for inclusion in the study. The goal in identifying potential respondents was to involve a diverse group with a broad range of experience in the agricultural sector who could offer informed views about the impacts of the occupation and what the prospects are for reconstruction. As indicated earlier, because of the Soviet invasion and occupation, more than two million Afghans left the country and fled to different parts of the globe. It was therefore not easy to locate potential participants.

I contacted Afghans I knew in the United States and Europe and both governmental and non-governmental organizations that had some involvement in the agricultural sector in Afghanistan. I wrote to different departments (FAO, WFP, UNHCR, UNV, UNDP) of the United Nations working for Afghanistan located in Islamabad, Pakistan and asked for, and received, their assistance in locating people who met the criteria of my study.

Ultimately, all those on the final list of potential participants resided in the United States, Canada, Europe and Pakistan at the time of the survey. In general, they were:

1. Former agriculture extension workers (Extension Agents (EAs), Subject Matter Specialists (SMS), Supervisors and Administrators) within the former Ministry of Agriculture. Former members of other agricultural departments (Agricultural Cooperative, Plant Protection, Research Institute,

Mechanization, Agricultural Development Bank, Forestry, Animal Husbandry, Seeds and Fertilizer Companies, Land Reform) within the Ministry of Agriculture, Community Development and Family Planning Units. Past members of related ministries (Planning; Higher and Vocational Education; Irrigation; Commerce, Mines & Industry; Public Health; and Community Development).

2. Educators, including university professors (in agriculture and veterinary colleges), and teachers at agricultural institutes and agriculture vocational schools.
3. Former students (at agriculture colleges, institutes, and vocational schools) who either graduated or not, left the country for political reasons, and were living/working in Pakistan, Europe, and North America.
4. Former and current progressive Afghan farmers either living in Pakistan or moving back and forth from Afghanistan to the United Nations branches, NGOs' and other offices located in Pakistan.
5. Non-governmental organization employees involved in agriculture.

Informal Discussion

Although the documents and survey provided the primary data for this study, I also had numerous conversations with respondents that helped clarify survey responses and provided a deeper understanding of their backgrounds, experiences and perspectives on the occupation and reconstruction. Notes from these conversations became helpful in understanding survey responses. In the chapters that follow in which results are reported, I occasionally refer to these conversations when discussing specific responses to the survey.

Developing the Survey

The intent of the survey was to gather information about the perceived impacts of the Soviet occupation and respondents' ideas about the reconstruction of the agricultural sector. The survey was therefore organized into three sections. The first section sought demographic and other information about the background and experience of respondents. The second section included open-ended questions about the impact of the occupation on the agriculture sector including specific questions about its impact on the Agricultural Extension System. The third section focused on the prospects for reconstruction and future development of the system.

After the initial draft of the survey was prepared, it was shared with my research supervisor and committee members for their comments and suggestions. Several changes were made to clarify the questions and several complex questions were simplified. Following these refinements, the survey was ready to be pilot tested.

Pilot Testing the Survey

On September 27, 1999, the draft survey was mailed to a randomly-selected 10% sub-sample of the potential respondents. The purpose of pilot testing was to ensure the questions were as unambiguous as possible and that the instructions were clear. The questionnaire was accompanied by a brief introduction to the study and a form on which respondents could consent to participate in a follow-up telephone interview if needed. Participants were asked to complete the survey, to indicate any confusing questions or instructions, and return it within three weeks.

Eight of the 10 surveys distributed in the pilot test were returned. Respondents did not suggest adding any additional questions and indicated in their comments a high level of support for the project and willingness to be interviewed by phone. In following up on the two non-respondents it was determined that one was in hospital and the other out of the country at the time the survey arrived. Based on the pilot test, it was concluded that the general form of the survey was satisfactory. Minor changes were made to the wording of a few questions to further clarify their intent, and the survey was ready for general distribution to the remaining sample. The final survey consisted of 34 questions: Nine questions were demographic and background questions, 10 were solicited views of the impact of the Soviet occupation, and 15 were sought suggestions for the reconstruction of the agricultural sector. The survey required 60-90 minutes to complete.

Data Collection

On July 27, 1999, an introductory letter (see Appendix C) was sent to all those in the sample to explain the purpose of the study and the importance of their participation. This advance letter served the purpose of alerting them to the study and the impending arrival of the survey. Based on the comments received from those who participated in the pilot study, it was expected that there would be a high level of interest and willingness to participate.

On October 27, 1999, the survey package [see Appendix D], consisting of a standard information letter, the survey instrument and consent form for telephone follow-up, was sent to the sample. The deadline date for returning questionnaires was November 20, 1999. By this date, 41 completed surveys were returned. Follow up contact was

made with those who had not responded by the deadline and several non-respondents then submitted completed questionnaires. Ten of the survey packages had been sent to Afghans living in Pakistan, but because of problems with postal services and lack of certain mailing addresses, they were not received. Because of this difficulty, these participants agreed to complete the survey over the telephone. Four surveys were completed by phone. In addition, several follow up phone calls inside Canada, the United States and Europe were also made to clarify some of the incompleted and vague responses. The telephone calls were mainly made to former agricultural students and respondents from outside the Ministry of Agriculture. By December 20, 1999, 62 completed, usable surveys had been received—including the four completed by telephone—for an overall response rate of 68.9%.

Data Analysis

Responses to all questions were summarized. In the case of close-ended questions, simple summaries were prepared of response frequencies and percentages. The responses to the open-ended questions were more complicated. The responses to each question were summarized and a set of categories developed into which all responses could be placed. The categories were refined and revised until they represented the full range of responses provided to each question. After all responses were categorized, the number of responses in each category was determined and tables constructed with both the number of responses and percentage of total responses for each category. Only descriptive statistics are used in reporting the results because these best capture the extent to which perceptions and recommendations were shared by respondents.

Characteristics of Respondents

This section presents data on the background and personal characteristics of the participants. The personal characteristics presented in this study include country of residence, age, level of education, date left Afghanistan, position prior to the occupation, position(s) after the occupation, current employment status, present occupation and retirement status. Such information will provide the reader with a basis for judging the responses of participants to more substantive questions about the impacts of the occupation and their views on the reconstruction of the agricultural sector.

Residence

The educated groups were interested in countries where they had trained or worked. As Table 7 shows, 90% of respondents were residing in North America at the time of the survey. They either had a degree from or had work experience with North American institutions before the Soviet occupation. Furthermore, at the initial stages of the refugee programs, Western countries (USA), gave priority to those who had any previous connection with American institutions. In some cases, the refugee program was so generous that it accepted certificates showing any kind of work, training and so forth as proof of a connection with North American agencies.

Table 7

Residence of Respondents

Residence	Numbers of Respondents	Respondents in Percent
* U.S.A.	36	58.0
Canada	20	32.2
Pakistan	4	6.4
Europe	2	3.2
Total	62	**99.8

* United States of America ** Does not equal 100 % due to rounding

Age

Table 8 presents the age distribution of respondents. At the time of the survey, 72% of respondents were between 40-59 years of age. Only 8% of respondents were younger than 40.

Table 8

Age of Respondents

Age	Number of Respondents	Responses in percent
20 - 29	1	1.6
30 - 39	4	6.4
40 - 49	22	35.4
50 - 59	23	37.0
60 - over	12	19.3
Total	62	*99.7

*Does not equal 100% due to rounding.

Some respondents were students outside Afghanistan at the time of the occupation and decided to stay where they were rather than return to the uncertainties of Afghanistan. Moreover, some came from inside Afghanistan, wanted to pursue higher education and receive internationally recognized degrees. They were either financially self-sufficient or had some support within North America.

Level of Education

Table 9 summarizes the educational level achieved by respondents. Ninety-five percent have at least one university degree. Of these, 56% have at least one graduate degree. Clearly, a highly educated group left Afghanistan.

Table 9

Highest Level of Education

Level of Education	Number of Respondents	Responses in percent
University (B.Sc.)	24	38.7
Masters (M.Sc.)	22	35.4
Doctors (Ph.D.)	13	20.9
Vocational	2	3.2
Secondary	1	1.6
Elementary	0	0.0
Total	62	*99.8

*Does not equal 100% due to rounding.

Afghanistan with a remarkable history of more than 6,000 years is still a developing nation faced with problems similar to other such nations. In contrast to its eastern neighboring countries, Pakistan and India, Afghanistan has a much less developed system of higher education. Since the 1920s, teaching in most post-secondary institutions was dependent on international sources. As the need for more technically trained personnel increased in the country, King Amanullah (1919-1929) established educational exchange programs with Australia, Egypt, France, Germany, India, Pakistan, Turkey, Switzerland, England and the United States. Not only were students sent to these countries for further studies, but educators from those countries were also invited to teach in the newly established schools in Afghanistan.

Such programs continued until the Soviet occupation. Immediately after the occupation, Western countries halted their assistance to Afghanistan. For example, just before the occupation the University of Nebraska extended its contract with Kabul University for supporting the Faculty of Agriculture and Kabul University administration for the next four years. According to Amin (1977, p. 151), until 1976, the team trained 11 Ph.D. and 25 Masters students who were successfully teaching in the departments of Agriculture Extension and Economics, Plant Sciences and Animal Husbandry. Likewise, the team sponsored several research projects at the level of Faculty of Agriculture as well as Kabul University. The team also provided four senior professors (Ph.D.) from various departments of the Faculty of Agriculture under a special program (professorship), for one year to teach in their areas of specialization within the University of Nebraska-Lincoln. These were all cancelled immediately after the occupation. Moreover, West Germany, which sponsored similar programs within the Faculties of Economics and Natural Sciences, cut off the programs.

Departure Date

Table 10 indicates the period of time when respondents left Afghanistan. More than 60% of respondents departed during the decade of the occupation. The Soviet occupation in Afghanistan began on December 27, 1979 and lasted to February 15, 1989.

Table 10

Departure Date From Afghanistan

Departed Afghanistan	Numbers of Respondents	Responses in Percent
1970 - 1974	2	3.2
1975 - 1979	6	9.6
1980 - 1984	22	35.4
1985 - 1989	17	27.4
1990 - 1994	10	16.1
1995 - over	5	8.0
Total	62	*99.7

*Does not equal 100% due to rounding.

About one quarter of the respondents left Afghanistan after the Soviet withdrawal, while close to 12% of respondents left the country before the occupation. The former group includes people who had sent part of their families out of the country before the occupation and wanted to join them.

Position before the Occupation

Table 11 summarizes the position of respondents before the Soviet occupation. About 26% of respondents were professors at Kabul University. Close to half were agriculture students, extension employees and personnel of other departments within and outside the Ministry of Agriculture.

Table 11

Position Prior to the Occupation

Position Before the Occupation	Numbers of Respondents	Responses in Percent
Professors, Kabul University	16	25.8
General Directors, *MoA	11	17.7
Field Inspectors, **AES	10	16.1
Students (Agriculture)	10	16.1
Presidents, MoA	5	8.0
Technicians, MoA	4	6.4
Technical Program Officers	2	3.2
Computer Engineer	1	1.6
Chairman of Research Council	1	1.6
Deputy, State Secretary	1	1.6
Vice President, Planning Ministry	1	1.6
Total	62	***99.7

* Ministry of Agriculture ** Agricultural Extension System *** Does not equal 100 % due to rounding

The next major group of the participants is General Directors (GD). These were senior positions within the Ministry of Agriculture. They were all graduates of the Faculty of Agriculture. In most cases, they started as extension agents and were promoted to the position of General Director.

Positions after the Occupation

Table 12 indicates the positions held by the respondents immediately after the occupation. It is noteworthy that the percentage of Professors at Kabul University increased from about 26% prior to the occupation to 30% immediately after the occupation. This is due to the fact that some senior professors working in administration before the occupation returned to their former teaching positions. They were neither party members nor trusted by the system. Because the occupiers were suspicious of Western-trained academics, they kept some professors and staff only long enough to work out a system for replacing them with others who shared their ideology.

Table 12

Positions immediately After the Occupation

Position Immediately after the Soviet Occupation	Number of Respondents	Responses in Percent
Kabul University Professors	19	30.6
Self-employed	12	19.3
Subject Matter Specialists	7	11.2
Refugee in Pakistan	6	9.6
Field Inspectors in MoA	4	6.4
Joined Jihad (Holly War)	3	4.8
Presidents in the MoA	3	4.8
Research Institute Members	2	3.2
Agriculture Bank Credit Manager	1	1.6
Computer Engineer	1	1.6
Political Prisoner	1	1.6
Student	1	1.6
Unemployed	1	1.6
War Reporter (*VOA)	1	1.6
Total	62	**99.5

* Voice of America

** Does not equal 100 % due to rounding

About 19% of respondents lost their jobs and shifted to self-employment. This group includes people who worked in senior positions within the Ministry of Agriculture before the occupation. They were re-assigned to low-level positions in remote areas. Many were unwilling to take these positions, because of the hardship that would have created for their families or because they resented the prospect of working under the authority of a former subordinate. Instead, they either resigned or applied for medical leave and moved to self-employment.

Close to 11% of the respondents held jobs as subject matter specialists (SMS). Most of them were either former general directors or program officers. Subject matter specialists' positions were "passive" meaning they were not trusted by the regime and had no role in decision making. They had not much to do in the office. Most of their jobs involved work in the provinces. Their role involved travel to the provinces to help solve problems faced by extension provincial supervisors as well as extension unit officers.

However, the situation in the provinces was not secure and they were distrusted by the new regime. Therefore, they were confined within the Ministry of Agriculture and controlled by the political secretary's office.

A small number of respondents mentioned that after the occupation they joined the Jihad (holy war), served as Presidents in the Ministry of Agriculture, were Research Institute members, and so on. (See Table 12 for details).

Current Employment Status

Table 13 shows the employment status of the respondents at the time of the survey. Just over 60% of the respondents were employed. Respondents who were employed generally knew English, were more or less familiar with the area, and knew where and how to hunt for a job.

Table 13

Currently Employed

Currently Employed	Numbers of Respondents	Responses in Percent
Yes	38	61.2
No	24	38.7
Total	62	*99.9

*Does not equal 100 % due to rounding.

Furthermore, a little over 38% of respondents were unemployed at the time of the survey. This group includes people with age, language and economic obstacles to employment. They were unable to get a job because of limited English proficiency and lack of economic resources prevented them from pursuing self-employed. Moreover, some of them moved to physical and non-professional work like washing cars and driving taxis.

In commenting on his employment prospects, one respondent said: "Back home we had problems e.g. rockets, bombardments, no power and drinking water, lack of proper education, transportation, and medical facilities. Job was never a problem. I have never been unemployed. I had a happy family life and children. We knew the schedule for all of our national, cultural, religion and traditional ceremonies. Here we have excellent medical facilities, transportation, 24 hours power and drinking water. Children are enjoying schools. Nice streets, high-rises, recreational parks and no jobs. With no job, means no economy, family life is getting difficult. There are examples of unhappy family lives, which are against the Afghan family norms. For example, husband and wife pretended divorce on paper, and prepared paper for adopting their own children to save some money from taxes or social assistance. Now our children or young they may not understand the situation. We are worried when they grow up and find out about their statuses and the statuses of their parents. We (our children) are losing our culture, religion, language, tradition and after some time perhaps our nationality" (from the interview of one respondent).

If we look through bigger lenses at Afghan refugees who have settled in Western countries, they are using the educational facilities of the host countries. The children speak English, German, or French even with their parents; they do not have the means to learn to read and write their mother tongue, be it Pashtu, Dari, or Uzbek. They are in the process of being assimilated into Western society.

Current Occupation

Table 14 shows the occupation of respondents at the time of the survey. Close to 22% of the respondents were self-employed and about 15% were unemployed. The reason that many were self-employed is that their Afghan qualifications were largely unrecognized. Respondents were a highly educated group but their credentials and experience were not always valued in their new countries of residence. This limited their professional employment options. As some of the respondents explained:

We have been offered both job and residency to continue living in North America, we rejected, because we wanted to go back to our country and implement what we learned in the world's most developed countries. We did not know any thing about the Soviet invasion. Had we known we should have not gone at the first place. We are the same people. We have the same degrees from the same universities. No body accepts it now. Wherever we apply, we are facing negative responses. For some jobs we are over qualified and for some we don't have local experience. (Compiled from several respondents)

Table 14

Current Occupation

Current Occupation	Number of Respondents	Responses in Percent
Self-employed	14	22.5
Unemployed	9	14.5
Agricultural Scientists	8	12.9
Teaching	6	9.6
Salesman	5	8.0
NGOs Members	4	6.4
Assistant Controller	3	4.8
Member of Community Economy	1	1.6
Senior Coordinator Officer	1	1.6
Afghan Association Director	1	1.6
Senior Program Analyst	1	1.6
Plant Protection ***USDA	1	1.6
United Taxi Cab Vice President	1	1.6
Computer Operator	1	1.6
VOA Reporter	1	1.6
Bank Teller	1	1.6
President of Khurasan Ltd.	1	1.6
Post auditor	1	1.6
Social Worker	1	1.6
Property Manager	1	1.6
Car Wash	1	1.6
Lab Technician	1	1.6
Realtor	1	1.6
Nursing	1	1.6
Disabled	1	1.6
Total	**67	***99.5

*United States Department of Agriculture. ** Respondents had more than one chance. *** Does not equal 100% due to rounding.

One of the respondents has two degrees, an M.Sc. and a Ph. D. from two different North American universities. He left Afghanistan with his family in the early 1990s and arrived in one of the neighboring countries. He contacted some of his former professors and colleagues in addition to explaining his situation to the immigration department of the North American Embassies in that country. He was told, "It is too late, we are not taking any more refugees from Afghanistan. Why didn't you come earlier? Maybe you were happy working for the Soviet-backed Afghan government" (from respondents interview).

He left his family, gave several thousand US dollars to a human smuggler, and made it into the United States. He waited for a little over a year and got a Green Card. He started looking for a job to support himself within the States and his family outside the States. He was proudly mailing his resumes with the copies of his degrees. He received nothing but negative answers. Finally, he changed the resume, hid his higher education degrees, and got a job as a cashier in a department store. Some respondents with relatively stable economic status moved to self-employment (from respondent interview).

Almost 13% of respondents' current occupations involve agricultural sciences. Close to 10% of respondents are involved in teaching. Just 8% of respondents mentioned sales as their current occupation. A little over 6% of respondents were working in NGOs.

Small numbers of respondents held a wide variety of other positions including: assistant controller, member of community economy, senior coordinator officer, Afghan Association Director, senior program analyst, plant protection USDA, United Taxi Cab Vice President, computer operator, VOA reporter, bank teller, President of Khurasan Ltd., post auditor, social worker, property manager, car washer, lab technician, realtor, and nurse.

Retirement Status

Table 15 presents the retirement status of respondents. Almost 85% of respondents were not retired at the time of the survey, while about 14% of respondents were retired.

Table 15

Retirement Status

Are You Retired?	Number of the Respondents	Responses in Percent
No	53	85.4
Yes	9	14.5
Total	62	*99.9

*Does not equal 100% due to rounding.

As mentioned earlier in Table 8, the majority of respondents were in their forties at the time of the survey, so for most, retirement is still many years away.

Limitations of the Study

Scholarly work on the Agricultural Extension System in Afghanistan is scarce. Afghan scholars, few in number, have written little about the agriculture sector in general and Agricultural Extension in particular. Foreign visitors, advisors and scholars have treated the subject briefly in their writings. Because of the Soviet occupation and the subsequent unstable political context, there is little reliable data on the effects of the occupation and what has happened since the occupation ended. This provides a rationale for conducting this study, but also limits what can be said about the impact of the occupation. There are few empirical facts that can be used to check or validate the perceptions of respondents. Other limitations of the study include the following:

1. Although attempts were made to identify a representative sample of potential respondents from among Afghans with agricultural knowledge and experience, it would be difficult to argue that the sample obtained is representative of the larger population of those involved in agriculture. Most respondents experienced some degree of "trauma" by being displaced, migrating to another culture, being removed from their positions,

responsibilities, losing social and economic status, and so on. Their responses were certainly influenced by their personal circumstances and the impact the occupation had on their professional and personal lives.

2. Responses to the survey were, in most cases, the opinions and perceptions of the respondents. It is possible that some respondents used the survey to vent their frustrations about being displaced by the occupation.
3. The survey was in English and although all respondents spoke English, it was most often not their first language. So it is possible that differences in English proficiency affected interpretations of questions and limited responses.
4. All participants in the study are male. This is largely a consequence of the social, cultural, and religious traditions of Afghanistan that have limited the educational and career options of women. Although a few women have been enrolled in agricultural colleges in Afghanistan, they have not had the opportunity to pursue careers in government or education to the same extent as men. Consequently, very few women held the kinds of positions that were the focus of this study. I did attempt to recruit the few women who I learned had held relevant positions, but was unsuccessful. So the views expressed by respondents are exclusively male.
5. The study is limited because the sample does not include farmers and extension workers who were inside Afghanistan during the survey.
6. All responses and opinions of the respondents received equal weight even though some may have been more expert or insightful than others. There was no way to determine whose perception should have been given more weight

weight even though it might have been desirable to do so.

7. Information and responses given were all from the position of agricultural extension providers not extension service users. The perceptions of users may have been substantially different from providers.

Chapter Summary

This chapter presented the procedures and sources of data collection, the research design and selected characteristics of the respondents. Due to the Soviet occupation, large portions of the Afghan population fled the country for various destinations around the world. The majority of the population settled in neighboring Pakistan and Iran, and some of highly educated and often had lived in North America settled in the United States and Canada.

More than 70% of respondents are 40-59 years old and composed the highest educational group. More than 90% have at least one university degree. Of these over 50% have at least one graduate degree. More than 60% left Afghanistan during the decade (1980-1989) of the occupation. More than 20% of the respondents were University professors and close to half of the respondents were agriculture students, extension personnel and employees of other departments within and outside the Ministry of Agriculture.

About 30% of the respondents kept their former positions after the occupation, while about 19% lost their positions and shifted to self-employment. The later includes those who were either not trusted by the system or worked in senior positions before the occupation. In addition, a little over 10% of the respondents were assigned to passive positions. They had no roles in the major decision making processes.

As far as the current occupation of the respondents is concerned, just over 60% of the respondents were employed, while fewer than 40% were not employed. Among the employed group of the respondents, a small group is employed in their profession, while a large number is working outside their profession. This is because of the updating of their credential and certain rules and regulations in their dwelling areas.

The next chapter will familiarize the reader with the impact of the Soviet occupation on the agriculture sector and on the various aspects of the Agricultural Extension System as the consequences of the occupation.

CHAPTER FIVE IMPACT OF THE OCCUPATION

The purpose of this chapter is to present and analyze findings on the impact of the Soviet occupation on the agricultural sector and various aspects of the Agricultural Extension System in Afghanistan. The occupation affected self-sufficiency of agriculture and agricultural institutions. The impact of the occupation on various parts of agricultural extension is also discussed including programs, organizational structures, budget, teaching methods, responsibilities, and relationships with related organizations inside and outside the Ministry of Agriculture. This chapter also presents findings on the impact on the attitudes of the farmers toward improved technologies in agriculture.

The findings in this chapter are the result of the responses of a group of 62 Afghans residing outside the country (America, Canada, Europe, and Pakistan). They are all professionals and well experienced in various aspects of the Afghan agricultural sector. Some lived in Afghanistan during the entire decade and some for part of the Soviet occupation. Some remained in Afghanistan after the withdrawal of the Soviet soldiers and some witnessed the reign of the opposition (Mujahideen).

Self-sufficiency of the Afghan Agriculture Sector

Up to 1978 Afghanistan's national economy was largely based on agriculture and associated industries. Before the occupation, the pace of agricultural development was impressive. According to Samin and Anwarzay (1991),

In 1974, Afghanistan became self-sufficient in wheat production largely due to introduction of the Green Revolution already in progress in neighboring countries. (p. 16)

Table 16 summarizes the views of the respondents concerning the self-sufficiency of the Afghan agricultural sector before the Soviet occupation. Nearly 55% of the respondents indicated that the agricultural sector was not self-sufficient before the Soviet occupation, while 45% of the respondents thought it was self-sufficient. They related the self-sufficiency of agricultural sector to the substantial amount of international aid, preliminary stages of scientific research, the quality and quantity of the tasks performed by the agricultural extension workers in the country, and land ownership. They believe the owners were not performing enough on their lands. They just owned the land but involved in some thing different like running a business in the city, working for the government and so on.

Moreover, Kishmand, the Afghan Prime Minister during the occupation stated that the agricultural sector was self-sufficient in wheat before the occupation but not in 1988 when he addressed the Council of Ministers:

Afghanistan purchased 170 thousand tons of wheat (largest amount ever purchased) this year to make up for the deficit while, in 1978, Afghanistan had achieved self-sufficiency in wheat. (March 6, 1988)

Table 16

Self-sufficiency of the Agriculture Sector before the Occupation

Self-sufficiency	Numbers	Responses in Percent
No	34	54.8
Yes	28	45.1
Total	62	*99.9

*Does not equal 100% due to rounding.

Gul and Morrison (1988) confirmed the pre-occupation self-sufficiency by saying: "for the decade up to 1973, annual imports averaged over 115,000 tons. By 1974, it was self-sufficient. This was in parallel with exports of other commodities" (p. 49).

One of the former Professors of Agricultural College in Kabul University, who currently resides in the United States and didn't want to reveal his name, expressed his opinion regarding the changes and development that took place within the agricultural sector before the occupation:

With the establishment of agricultural colleges, institutes the increased number of agricultural high schools within the country, and contracts with foreign agricultural institutions the number of trained agriculturists increased. This increase took place within the last three decades before the occupation. The farming situation elevated from its primitive and traditional methods to the more modern practices of cultivation. The vast extension of improved varieties, chemical fertilizers, pesticides, mechanical power, and proper agricultural practices were introduced to the farmers.

The Ministry of Agriculture strengthened and initiated intensive research and extension programs in most parts of the country. Testing soil samples for available nutrients, its need for appropriate fertilizers, and its suitability for various crops were included in the research and extension programs. Programs were also designed to study common local insects, diseases, and proper preventive remedies. Intensive plant breeding studies were carried out in the country and new disease resistant and high yielding varieties of wheat, rice, cotton, sugarcane, onion, and fruit (apple) were distinguished and forwarded to the extension department for diffusion. More irrigation sources were made available to the farmers by constructing new projects and repairing existing systems. Numerous personnel of the Ministry of Agriculture and related ministries got the opportunity to travel overseas under various training programs for achieving higher educational degrees and updating professions. Agricultural extension programs were the main cores of agriculture development. Both method and result- demonstration plots were established in different districts of the country. Various technologies, improved seeds, chemicals, and related skills were explained and adopted by farmers.

The amount of chemical fertilizer distributed to the farmers increased from 9,000 tons in 1966-1967 to 100,027 tons in 1977-1978. The average annual distribution of farm machinery in 1975-1977 included 253 tractors, 83 water pumps, and 33 flour mills. The distribution of agricultural machinery and tools in 1977-1978 included 283 diesel water pumps, 392 hand water pumps, 2384 Ariana ploughs, 61 wheat cleaning machines, 12 threshing machines, 5 sprayers, 963 three blade spades, 707 long point axes, 3,129 pitch forks, and 5,900 gate turnouts. [summary prepared from interview notes]

He also said that within a period of four years, 1975-1978, the value of agricultural exports increased from 170.71 million to 221.61 million US dollars. Meanwhile, within the same period, the percent share of agricultural imports to total imports decreased from 20.96 million to 15.30 million US dollars.

Wheat production increased from 1,947 million tons in 1963-1964 to 2,936 million tons in 1976-1977. The wheat yield increased from 832 kg per hectare in 1963-1964 to 1,249 kg per hectare in 1976-1977. Distribution of improved varieties of wheat to farmers by the Afghan Fertilizer Company (AFC) increased from 1,470.75 tons of seed in 1976-1977 to 3,000 tons of seed in 1977-1978. Imports of wheat decreased from 238,523 tons in 1971-1972 to 2500 tons in 1976-1977. Wheat imports for the years 1973 to 1977 were mainly for seeding purposes. In that time, Afghanistan became almost self-sufficient in wheat production, added the anonymous professor.

In 1977, the Agricultural Development Bank (ADB) offered 1,400 million Afs., in agricultural credit, while in 1981 the total had dropped to 600 million Afs.; and by September 1982 only 100 million Afs. had been provided. According to Sayed Abdul Rahman Hashimi, a former senior official of the ADB, who defected to Pakistan in October 1982 and currently resides in the United States, "the ADB had announced loans of 10 million US dollars earlier in 1982, but there were no farmers to receive it. Only 30,000 US dollars (3 million Afs.) had been distributed. The farmers were ordered by the government to take weapons for so called self-defense against Mujahideen. However, the farmers refused the order. Government authority in the area was minimum. People (farmers) were surrounded by Mujahideen. Those who took weapons departed villages;

farms and moved into government controlled cities. The government connected to Mujahideen those who not armed.

Several factors could be considered in explaining the low level of agricultural production and dependency on foreign markets for most agricultural commodities. For instance, before the occupation, Afghans worked in senior governmental positions lost their seniority, support the pre-occupation self-sufficiency of the agricultural sector at least for some commodities (wheat). Where as, Afghans who worked in relatively higher government positions during the occupation did not believe in the self-sufficiency of the agricultural sector before the occupation. The latters were organizing strikes and demonstrations against the pre-Soviet sponsored regimes. Their slogans were low level and unequal distribution of production, exploitation of the farmers and industrial workers and asked for the so called democratic land reform. After the occupation, despite the low quality and quantity of the agricultural production they did not want to credit the earlier regimes.

During the occupation contact between the capital, Kabul, and the provinces was weak. The entire communication process between government institutions was taking place on paper. Some of the respondents supported the discrepancies in communication during the follow up telephone interviews. Physical follow-ups of the issues by sending delegations to provinces were not easy and in some cases impossible.

I as a member of the delegation observed the following connected to government problems contacting the provinces:

In late 1980s, the Ministry of Higher and Vocational Education (MHVE) of Afghanistan assigned a mission composed of three members of Kabul University staff (Afzali, (Veterinary), Tokhi, and Wesa, (Agriculture) Colleges) to supervise the university entrance

exam in Kandahar province. Kandahar located 480km south-west of the capital. At that time, there was no ground transportation between provinces for the government. Airplane was the only means of transportation for the government missions. Ariana Afghan Airlines and Bakhtar Airlines the only domestic airlines in the country were unable to commute within the country. Most of the contacts took place by Soviet military planes. The Ministry of Higher and Vocational Education requested the Ministry of Defense to transfer the mission to Kandahar. We went for two consecutive weeks back and forth between the MHVE and the airport. Finally, we got a plane with an unknown number of rockets on board.

On the way back to Kabul, Kandahar's airport was under severe attack by the opposition. The airplane was not stopping after landing and unloaded while running on the runway. In order to get on, one had to run after the airplane while it was taking off. While we were in a Russian Jeep driving after the plane, we had to climb on board. When we got on board, we found out the plane was not going to our destination, Kabul. It was going to Mazar-I-Sharif, about 500 km north of the capital. (My personal observation)

Furthermore, the location and place of work of each individual did affect his/her opinion on the issue of self-sufficiency and insufficiency of the agricultural sector. Some of the respondents were on farms, which were close to the reality and some were in offices and distant from reality, meaning some of the respondents were in direct contact with the field and knew what was going on. Some were not in direct contact and were involved in administrative work.

Afghanistan's agricultural sector as the literature showed and respondents indicated was moving toward self-sufficiency and had achieved it in some commodities.

The Most Affected Aspects

With the direct occupation of Afghanistan by the Soviet Army, all aspects of life in both rural and urban areas changed. Table 17 summarizes the aspects of the Afghan agricultural sector most affected by the occupation. A little over 20% of the respondents

intimated that every aspect of agriculture was directly/indirectly affected by the occupation. About 14% of the respondents mentioned irrigation systems, pollution of rivers and under-ground water as the most affected aspects. Nearly 10% of respondents identified animal husbandry as the most affected aspect of the Afghan agricultural sector. Livestock and their products compose a major part of the national economy. Sheep are the most common animals and the major source of meat for domestic consumption. Some cattle are used as a source of meat and milk, most oxen, cows, donkeys, mules and horses are beasts of burden and are used for ploughing, threshing and transportation. Some of respondents during the follow up telephone interviews noted that, due to the occupation, production of livestock declined dramatically, because most of the pasture and grazing areas were destroyed or rendered unusable because of land mines. In addition, Iran was the closest and highest paying market place. People close to the border of Iran substituted domestic Afghan markets to Iran by transferring their livestock (sheep, goats and cattle) that survived the bombardment. There were weak or almost no restrictions at the border due to the chaos in government infrastructure.

We can draw no other conclusion other than that the areas under the control of the opposition (Mujahideen) were the target of a carefully planned and systematic destruction of agriculture. (p. 65)

Soviet attacks rapidly increased during the early 1980s. Their heavy attacks caused thousands of families to flee and seek refugee status in foreign countries.

In a separate survey, Gul and Morrison (1988) found, "the percentage of farmers using compound fertilizer had declined from 57% to 33% and the percentage of those using urea had declined from 76% to 53%". In addition, Samin (1989) found that "irrigation water became a limiting factor for crop production. Millions of mines were planted in the agricultural land and the population was forced to leave the country" (1989, p.23).

Seven percent of respondents reported that the fleeing of educated and trained workers (not trusted for being educated in the West) from agriculture was a major impact of the occupation. This is supported by Majrouh and Elmi (1986):

On the basis of an accurate and updated research, in 1978, some 750 teaching staff were in Kabul University, but after the bloody coup in 1978, followed by Russian military intervention in 1979, there was a sharp decline in university staff as 17% emigrated to the US, 7% to West Germany, 3.7% to Pakistan. On the whole, 36.5% of Kabul University staff are emigrants. (p. 81)

Close to 6% of respondents indicated that ownership of agricultural land was the most affected by the occupation. The pro-Soviet Afghan government issued Decree No. 8 to perform Democratic land reform within the country. According to the decree, any Afghan resident who owned more than 30 Jeribs (5-6 acres) of agricultural land should grant the extra to the government. The land was distributed to the landless and farmers. Afghanistan is a religious and tribal country. Religiously, Moslems (Afghans) are forbidden to own others' property without his/her permission. They will be punished by

their Allah (God). The distribution of confiscated land by the pro- Soviet government was considered as an illegitimate procedure. Afghans who accepted agricultural land from the government were despised and considered as sinners. The new occupants faced strong hostility of the local legitimate owners, they were unable to use the land and were forced to leave the area. Consequently, the land stayed bare and uncultivated. Less than 5% of respondents identified nine other impacts of the occupation: distribution of agricultural inputs, forests and lumbers, agricultural infrastructure, research process in various branches of agriculture, training system, crops and livestock disease, labor shortage, reduction in agricultural production, soil erosion and horticulture.

Khalilzad and Byman (2000) believe:

Afghanistan's infrastructure has been destroyed. The educated classes for the most part either have been killed or have left the country. Because of the lack of modern schools, the Afghan population receives little education, undermining the prospects for future economic development. (p. 68)

A shortage of farm labor and the correlation between high weed infestation and low crop yields were both designated as prime constraints in various surveys. The two are connected and related to the shortage of farm power and consequent poor land preparation and missed planting times. Data produced by the Agricultural Survey of Afghanistan (ASA, 1988/89) suggests a 19% drop in available farm labor and skewed population ratios with low numbers in the 10 to 20 year old age group. According to UNDP, "Young Afghans previously engaged in a war of liberation have little inclination towards a life of agricultural or farm labor" (1993, p. 43).

Almost all aspects of daily life (production, institutions, human power, inputs, relations between people has been one way or another affected by the occupation.

Impact of the Occupation on Agricultural Institutions

Agricultural institutions in general and the Agricultural Extension System in particular are the worst affected as a consequence of the occupation. Apart from the direct effects of the occupation, from which no development organizations escaped, the Agricultural Extension System was by political ideology also seen as identified with Western methods of agricultural development and was largely dismantled.

Table 18 summarizes the impact of the Soviet occupation on Afghan agricultural institutions and services. Over 60% of respondents mentioned a complete halt to agricultural institutions and fewer than 40% agreed on most of the rural areas not under the government control. In this period, the conflict was at its peak.

Table 18

Impact of the Occupation on Agricultural Institutions and Services

Agricultural Institutions	Number of Respondents	Responses in Percent
Complete halt to agricultural institutions.	38	61.2
Rural areas not under government control	24	38.7
Total	62	*99.9

Does not equal 100% due to rounding.

According to Wesa (1994), during the occupation:

Only 80-90 agricultural extension units out of 250 units were functional and active. Most of them did not have the full complement of staff, equipment, and material. Most of the buildings belonging to the agricultural extension, were either destroyed or taken by the military and security departments. The system suffered from shortage of trained personnel, poor logistic support, destruction of infrastructure and lack of audio visual aids and equipment. (p. 30)

The government lost most of the land to the opposition and was unable to contact rural areas. In some provinces, agricultural institution buildings were diverted to either military or intelligence forces to defend the occupation. The government was only able

to contact centers of the cities by air. Highways to the provinces were under opposition control.

Impact of the Occupation on Extension Programs

The programming process within the Ministry of Agriculture in Afghanistan was centralized. Most planning took place in Kabul (the capital), and the least planning took place at the local government level (ignoring planning at the district level) where most extension activities should take place. Agricultural Extension System with the assistance of its board of subject matter specialists designed its short and long-term programs and forwarded to the Planning Department of the Ministry of Agriculture for further paper work then to provincial offices.

Table 19 summarizes responses on the impact of the occupation on agricultural extension programs. A little over 23% of respondents believed that extension programs were affected because most of its employees were pursuing non-extension programs.

Table 19

Impact of the Occupation on Extension Programs

Agricultural Extension Programs	Number of Respondents	Responses in Percent
Extension employees pursued non-extension programs	19	23.7
Farmers perceived programs anti-Afghani & Anti-Islamic	16	20.0
No security, AES workers unable to implement programs	14	17.5
Programs failed because international support discontinued	12	15.0
Lack of trust on centralized program planning	8	10
Programs stopped, war had priority for government	8	10
Wide gap between people & government slowed programs	3	3.7
Total	62	*99.9

Does not equal 100% due to rounding.

The content of extension programs shifted from pure agriculture to politics. The rural population was not interested in the government's political agenda. Farmers were forced to participate in meetings and gatherings to support the occupation. Extension

agents were asked to change the attitudes of the farmers toward the Soviet occupation. The pre-occupation extension system had close contact and was trusted by the rural people. The pro Russian Afghan government took advantage of the situation and assigned extension employees to implement the so-called Democratic Land Reform program. Consequently, extension programs were delayed because Land Reform was not supported by farmers and extension workers had no experience in implementing land reform. Gul and Morrison (1988) believe land reform was one of the main causes of the Afghan conflict, saying:

Land tenure reform which the communist President Taraki sought to introduce in 1978. As a result of general dissatisfaction with the reforms, the Government became increasingly unpopular and this resulted in the Soviet occupation to provide support to the regime. It is, therefore, to be expected that the larger farmers should have been the most ready to leave. First the larger farmers and the government were ideologically opposed to each other. In any particular village or province, the government regarded the larger farmers as their main enemy. (p. 52)

Furthermore, extension personnel were not working in their field. Some of them gave up their jobs and joined the opposition.

In addition, 20% of respondents believed most of the farmers assumed programs after the occupation were anti-Afghani and anti-Islamic. A little over 17% of respondents claimed no security for AES workers in the villages and they were therefore unable to implement programs. In addition, 15% of respondents observed that programs failed because international support was discontinued. Ten percent of respondents reported lack of trust in centralized program planning. Similarly, 10% of respondents reported that the AES programs stopped because the war had priority. Less than 5% of respondents

mentioned the generation of a wide gap between people and the government as major effect of the occupation on extension programs.

Impact of the Occupation on Organizational Structure

During the occupation organizations and positions were based neither on the needs of the society nor on the needs of the people. They were based on the interests of party and party members. Long-time party members were expecting to be rewarded after the occupation because they assumed that they sacrificed their lives for the well-being of Afghan society (workers) struggling against the former regimes. On the one hand, party leaders had to prevent factions within the party by keeping members satisfied through installing them in desirable positions. On the other hand, insufficient senior positions (ministers, deputies, governors, etc) forced the government to create new organizations and positions by radically restructuring government services.

For example, the Ministry of Culture and Information was divided into three ministry level organizations (Culture Committee, Press Committee, and Committee of Radio, Television and Cinematography). Each one of them was at the Ministry level. Another example is the Ministry of Mines and Industries, which was divided into ministries of Mines; Foodstuff, and Light Industries. Another example is the Ministry of Frontier Affairs which was divided into two ministries of Nation Affairs and Tribes. Each one was served by about 10-15 deputy ministers. Representatives of each tribe (Pashtun, Tajik, Usbick, Turkuman, Balouch, Hazara, etc.) were assigned as deputies to the ministry. The number of representatives was based on the percentages of each tribe within the population of the country.

Some organizations were established just for propaganda against neighboring countries. For instance, Pakistan and Iran bordering Afghanistan have strong higher education institutions. During the occupation, the government wanted to compete with its neighbors by establishing higher education institutions in the provinces bordering Pakistan and Iran. Yet, those provinces were not ready to run universities or other higher education institutions. There were not enough students, academic and administrative staff, and equipment to support a university. For example the universities of Kandahar, bordering Pakistan and Herat, bordering Iran. Before the occupation, these were the most populated provinces with a large number of high schools and vocational schools. Because of the occupation, these provinces suffered the most. Schools, government organizations, and agricultural infrastructure were negatively affected. A large portion of the population immigrated to neighboring countries where their children started attending school. The pro-Soviet government tried to attract them back by establishing universities. These universities lacked academic status. The number of students and instructors were limited. Libraries and laboratories were either non-existent or in limited numbers. For example, the University of Kandahar (Southwest) opened in a former middle school while there were big buildings suitable for a university in other parts of the city not under government control. Due to security problems, students were unsafe to stay in the dormitory. They were residing in a military base. The University of Herat (West) was sharing the building of the Herat Teachers College and the University of Mazar-I-Sharif (North) occupied a Soviet style (technical school) building, experienced similar problems.

Only the physical structure of the buildings was not an issue. There were not enough students. Almost all high schools (male/female) in those provinces as potential sources of students, were either destroyed, or occupied by defensive units and were not under government control. Schools in government control areas had limited numbers of students. For example, in Kandahar, prior to the Afghan conflict, Ahmad Shah Baba and Myr Wais Neeka as very ancient boys' high schools and Zerghona Anna, girls' high school in Kandahar graduated 30-100 students per school annually. By the time, Kandahar University opened in 1991, graduate rates of the same schools were in single figures. There were other de-functioned boys and girls high schools (personal observation).

Qualified staff to teach at the university level were unavailable. Five academic members of Kabul University (Akbar zaad, Nasratullah, M.Sc., Agricultural Extension and Economic, Amanulah, Soil Sciences, M.Sc., Azhkezai, Abdul Barry, Horticulture, M.Sc., Jahani, Mohammad Hassan, Animal Sciences, B.Sc. and Wesa, Tooryalai, M.Sc. Agricultural Extension & Economic Departments, Agricultural College. volunteered for one semester. In addition, some senior and qualified high school teachers and officers from the army taught some courses. Although five volunteers were originally from Kandahar province, they had not resided in Kandahar for some time. It was a difficult time. The team was using one of the classrooms as a bedroom. Beds were provided by the Police Department and food was provided by a military base close to Kandahar University. There was no laboratory, no library, and poor teaching equipment and facilities.

Table 20 summarizes the impact of the occupation on the Afghan Agricultural Extension System organizational structure. Nearly 30% of respondents reported that the installation of members of the ruling regime within the organizational structure of AES as a major impact of the occupation. The political representatives of the ruling party had key roles in decision making and recruiting staff. These representatives were non-professional and in some cases had little understanding of the AES. Their basic responsibility was to pursue a political agenda and force employees to participate in the campaign against the opposition.

Table 20

Impact of the Occupation on the Extension Organizational Structure

Organizational Structure	Number of Respondents	Responses in Percent
Political office of the ruling regime installed within AES	24	29.6
Efforts were made to convert it to Kavkhouse & Savkhouse	19	23.4
AES organization was destroyed by manpower replacement	13	16.0
Afghans were excluded, Soviets advisers made the decisions	12	14.8
AES organizational structure reduced to limited positions	9	11.1
More attention and focus on young extension agents	4	4.9
Total	*81	**99.8

* Respondents had more than one chance to respond. ** Does not equal 100% due to rounding

About 23% of respondents believed that the main impact was to replace the entire extension organization with a Soviet style collective (Kavkhouse and Savkhouse) farming system. The Soviets and their Eastern allies faced numerous problems. For example, the form of land reform proposed was incompatible with the beliefs and norms of the Afghan people because it changed the ownership of the land by issuing a piece of paper. Moreover, the government jailed respected religious, tribal and ethnic leaders. Social norms were either dishonored or were violated by the government (personal observation).

Sixteen percent of respondents reported that manpower replacement had a negative impact on AES organizational structure. Young and poorly educated personnel replaced qualified and experienced extension workers. Those not trusted by the system were transferred to non-professional positions, some became self-employed, and some left the country.

About 15% of respondents reported that Soviet advisors replaced Afghans as decision makers in AES. Hussain and Rizvi (1987) observed that:

The USSR controlled the media and all public and cultural institutions including cinemas, theatre, radio, television and press. Soviet advisers function is to control decision making process of the government and implement the indoctrination plans of the USSR. Karmal (Afghan president during the occupation) operated under the strict guidance of six Soviet advisers. His principal bodyguards, his driver, chef and doctor were also Soviets. Other than the presidency, four key ministries clearly controlled by the Soviets are Prime Minister's Office, the Ministry of Defense, the Ministry of Information and Culture, and the Ministry of Foreign Affairs. A senior official of the Prime Minister's office who defected in 1982 reported that an agenda prepared for discussion for the cabinet (ministries council) has to be approved by the Soviet advisers before it could be presented before the cabinet meeting. (pp. 33-34)

The situation in the Ministry of Defense was even more obvious. According to Colonel Mohammad Ayub, an official of the Defense Ministry who fled to Peshawar, Pakistan in 1983, "the Soviets completely control the ministry to the point of countersigning all written orders. Ayub put the number of Soviet advisers in that ministry to 2,500" (personal communication). In addition, a foreign ministry official who defected in 1981 reported that three Soviet advisers maintained their permanent position in the ministry. One was responsible for overall foreign policy, the second controlled the country's trade and economic relations, and the third dealt with legal matters.

About 11% of respondents reported the reduction of positions within the AES organizational structure while, about 5% of the respondents believed that Soviet advisers paid more attention to and focused on young extension agents. As a witness of the situation, I observed Agricultural Extension Service as the top ranked position within the Ministry of Agriculture. It was under the direct control of the Minister of Agriculture. After the occupation, with the arrival of the Soviet adviser to the Ministry of Agriculture, AES was reduced to rank two and came under the direct control of the Deputy Minister. Young extension workers were enrolled in a special Russian language program and were granted short and long-term scholarships to the Soviet Union and other Socialist countries.

According to Majrouh and Elmi (1986), Russia's relations with the third world clearly manifest that the Red Czars under the pretext of economic aid, dispatch hundreds of their spies and members of the KGB, in the garb of engineers, teachers, and advisers to the host country. In the host countries, these people were involved in politics. This phenomenon is quite obvious in the case of Kabul Polytechnic Institute. According to Amin (1977), the Polytechnic Institute was built at Kabul University as a sample of the educational assistance of the Soviet Union in 1967. In addition, Majrouh and Elmi (1986)

When the polytechnic started teaching there were 180 Russian teachers and advisers. But in the real sense few of them were teachers, most of them were engaged in subversive activities. The Russians had a separate organization in the Polytechnic, i.e. all their staff were controlled by an adviser. He was helped by his Russian assistants. All Russian advisers were communists. Only Sepanov Rubin Dmitreewich was a noncommunist adviser in the Polytechnic in 1972. He was on good terms with Khalq and Parcham (Afghan Communist parties) members. Soon afterwards he was summoned to Moscow. (p. 89)

Majrouh and Elmi (1986), further mentioned that, Russian teachers always humiliated Afghan students,

Afghans won their freedom only by the direct support of the Russian government, Afghanistan was a backward country, and that it was only with economic aid of the Soviets, that they have achieved all those developments. (p. 89)

The Afghan Agricultural Extension System, as a change organization, was faced with complex problems in its pursuit of introducing behavioral, social, economic, and technological changes to the rural people. Shortages of trained personnel, resources and facilities, resistance of the people to change and others are problems that arose from the organizational structure that existed during the occupation.

The effective conduct of extension work usually requires a rather complex organization. The relatively large size of the typical extension service, the many relationships that must be maintained, the wide scope of subject-matter to be taught, and the large number of scattered client's to be reached, all affect the type of organization that is needed.

Impact of the Occupation on Financing and Budgeting

Before the occupation, the Afghan Agricultural Extension System was under the direct control of the Minister of Agriculture. It was receiving both local and international financial assistance for implementation of its programs.

Table 21 summarizes the impact of the occupation on financing and budgeting of the Agricultural Extension System. Nearly 34% of respondents suggested that sufficient international support (US-AID, European Community, OPEC, etc.) was prior to the occupation replaced by limited support from the Soviet and other alliance countries.

Twenty percent of respondents believed that AES funds were transferred to other units to support the war. Government lost almost all rural areas to the opposition. Most of the extension units located in rural areas were dismantled. The budget was transferred to military and security units. About 17% of respondents agreed that agricultural extension workers pursued non-extension programs in other departments while they were paid from the agricultural extension budget. Close to 14% of respondents suggested that some agricultural extension teaching methods were dropped for financial reasons. Respondents have been asked to cite some examples during the follow up telephone interviews. Some examples have been mentioned: most of the rural area was not under government control. Demonstration plots, as the most effective teaching method was not taking place by AES. The budget was deducted and was devoted to security units. United Nations (FAO) and some NGOs were performing demonstrations in the area. Publications in the form of leaflets and pamphlets distributed to progressive farmers and through them to other farmers were cut off. That portion of the budget was given to other units. Nearly 11% of respondents believed the government was unable to collect taxes because of the war.

Less than 5% of respondents reported that the Soviet occupation had no affect on the AES budget. This group includes people who were working in relatively higher positions during the occupation. They were promoted from lower positions to higher positions due to personal and ideological reasons. They did not want to disclose otherwise. They did not want to mention any deduction in budget caused by the occupation. From their perspectives, the results of the occupation were positive.

Table 21

Impact of the Occupation on Financing and Budgeting in the Agricultural Extension System

Budget and Financial Affairs	Number of Respondents	Responses in Percent
International support replaced by limited Soviet assistance	22	33.8
AES budget transferred to other units because of the war	13	20.0
AES workers pursued non-extension programs, while paid from AES	11	16.9
Some of AES teaching methods dropped for financial reasons	9	13.8
Due to war, government was unable to collect taxes	7	10.7
Soviet occupation had no affect on AES budget	3	4.6
Total	65	*99.8

* Does not equal 100% due to rounding.

Mr. Abdullah Naik, former President of the Agricultural Extension Service, explained during a telephone interview an example of international assistance in agricultural extension prior to the occupation:

With the assistance of the World Food Program (WFP) of the United Nations over 200 buildings were constructed for extension units in the country before the occupation, while 160 require intensive repairs or reconstruction. (Naik) (translation)

In 1977 US-AID sponsored a project to research non-formal education in Afghanistan. The project was designed in three phases and included non-formal education in five development sectors: agriculture, education, industry, public health, and social affairs. Thirty thousand US dollars were devoted to each phase. Each sector was assigned to a team of three Kabul University Staff. I was member of the agricultural sector team.

The first phase of the project was completed in the fall of 1978. Then, each group began to design the second part of the project and was supposed to select a sub-sector within each sector for a case study. Agricultural cooperatives were chosen for the case study in the agricultural sector. At that time, the government paid more attention to agricultural cooperatives because of the land reform strategy. Questionnaires were

prepared and were about to be distributed. The Soviet adviser to the Research Center of Kabul University then declared:

With the remaining US \$60,000 we decided to purchase calculators for the Center. We do not need research in Afghanistan anymore. We can adopt and copy the guidelines of the Great October Revolution. (Personal observation)

Impact of the Occupation on Teaching Methods

The primary responsibility of extension and extension workers is education. A substantial number of proven educational methods or techniques exist from which the extension workers may choose to set up learning situations and to maximize the transfer of information and skills to young and adult learners. Once the needs of an area or community have been identified, it is the task of extension workers to choose the teaching methods that will be most effective in achieving their educational objectives.

Demonstrations (method and result) have been the most popular extension educational method used throughout the country. Exhibits are displayed in the beginning of every New Year (Hamal 1st/March 21st), Independence Day (Assad 28/August 18) celebrations and other traditional occasions. Teaching through radio and television programs and field days were popular before the occupation. Due to the shortage of qualified extension employees, equipment, transportation, geographical conditions and limited funds, AES was not in a position to implement other more efficient and improved extension (individual, group, mass) methods.

Table 22 summarizes views on the impact of the Soviet occupation on teaching methods and the training processes. It is obvious from the responses to this question that respondents interpreted the question quite broadly or misunderstood its intent. Several of the categories included in the table seem unrelated to teaching methods and the training

process. Nevertheless, responses are included because they do reflect perceptions of impacts that are relevant to the context of extension.

Nearly 15% of respondents reported that inexperienced party members replaced educated professionals within the organizations of AES, so traditional extension methods were no longer used.

A little over 14% of respondents believed that professional courses were replaced by non-professional courses within the secondary and post secondary education institutions as an impact of the occupation. According to Elmi (1986), former professor of Islamic Studies in Kabul University:

In the new Russian Style curriculum, new subjects were introduced, namely: Historical Materialism, the Revolutionary History of Workers, History of Russia, Russian Language, Spanish Language, New History of Afghanistan, Dialectical Materialism, Scientific Sociology, and History of World Literature. (Majrooh & Elmi, 1986, p.75)

Due to the strong recommendation of the Soviet advisors within the educational institutions, military education was introduced and became part of the curriculum. It was mandatory for a student to graduate.

Table 22

Impact of the Soviet Occupation on Teaching Methods and the Training Process

Teaching Methods and Training	Number of Respondents	Responses in Percent
Inexperienced party members replaced educated professionals	17	15.3
Professional courses substituted by non-professional courses	16	14.4
Educational degree was treated lower than party membership	14	12.6
AES employees educated in the West were not trusted	13	11.7
AES teaching equipment were given to military	11	9.9
Low numbers of participants in AES & vocational programs	9	8.1
Soviet Union & allies were only choice for overseas education	8	7.2
Brain drain because of no security	7	6.3
On farming training disrupted because war had priority	5	4.5
The whole system of education was disturbed	5	4.5
Participation in training was an excuse for not going to military	3	2.7
Recruitment process diverted from free selection to dictation	3	2.7
Total	*111	**99.9

*Respondents had more than one chance to respond.

**Does not equal 100% due to rounding.

A little over 12% of respondents agreed that the value of an educational degree was ranked lower than party membership as an impact of the occupation. One of the respondents with a higher degree (M.Sc.) told me: "in the ministry where I was working, the promotion to higher positions was neither based on the level of education nor on the level and kind of degree. It was based on the membership and seniority within the party" (respondent interview). Almost all benefits connected to jobs were evaluated based on party membership not on the kind of education method, training, educational degree or years of education. Students and employee, even farmers being party members, did not wish to go through the training process. They knew that with party membership, no one was allowed to ask or doubt their knowledge on the position he/she occupied. Such attitudes decreased the interest in learning for both trainer and learner. This impact does not relate directly to teaching methods. I followed up on this question during the telephone interviews with some respondents. They were just trying to make the point of loss of interest in education and training processes in general. They further believed that

such low interest and attitudes limited the possibilities of adopting improved and modern teaching methods.

Close to 12% of respondents reported that AES employees educated in the West were not trusted by the system. Almost 10% of respondents reported that AES's teaching equipment and buildings were given to or taken by military units. About 8% of respondents reported that low numbers of farmers and students attended extension programs. Furthermore, a little over 7% of respondents mentioned the Soviet Union and its allies were the only alternate for overseas education during the occupation. Long and short-term training and educational opportunities provided by various Western countries and international organizations were cancelled. International journals and articles from American, European and other Western universities and academic institutions were stopped. Only the Soviet Union and the rest of the eastern bloc remained as providers of educational opportunities. Journals, magazines and books (mostly Russian) were available in the libraries. A little over 6% of respondents mentioned the brain drain because of lack of security as an important impact of the occupation. People with higher educational degrees with no party membership felt at risk and therefore left the country. This is supported by the results of a survey conducted by the Australian Relief Committee (ARC) and reported by Samin (1989) that:

Five Ph.Ds., 18 Masters, 255 B.Sc.s.(agriculture), 49 graduates of agricultural institute, 517 graduates of agricultural high schools and 181 graduates of agricultural short and long term courses in the field of extension, plant protection, forestry and horticulture are in Pakistan. (p. 25)

Samin (1989) further shows that: "1400 agriculture experts have also left Afghanistan for Pakistan and other countries" (p.25).

Less than 5% of respondents reported four important areas as the impact of occupation on extension teaching methods: farming training disrupted because war had priority, the whole system of education was disrupted, participation in training process was an excuse for not attending military service and the recruitment process in educational institutions diverted from free selection to dictation.

One example that I witnessed is Kabul University. All university students were required to enroll in military courses on top of their required professional curriculum. The Engineering College supported by a group of American universities before the occupation shut down and the building was assigned to the Army for military training. Various kinds of light and heavy weapons and tanks were put on display for the first time at Kabul University. By applying military curriculum, the total credits went higher than the international standards. Consequently, certain professional courses dropped off from the curriculum. Most of the classes were disrupted.

In addition, I as a former member of the Agricultural Extension Department at the Faculty of Agricultural of Kabul University, witnessed changes in the curriculum. A specific instance is the replacement of Introductory Rural Sociology by Scientific Sociology within the curriculum of that department. Furthermore, the Faculty of Agriculture as well as other faculties within Kabul University did not have sufficient textbooks and teaching materials. Members of each faculty tried to prepare handouts, outlines, lecture notes, and textbooks in one of the national languages (Pashtu/Dari) from foreign sources upon their arrival to Afghanistan. The Department assigned me (researcher) to prepare some literature for the course on Rural Sociology. I had a book

titled "Introductory Rural Sociology" which was used as textbook in the American University in Beirut (AUB).

I submitted the original book with its Pashtu translation to the department. The department supported the book and forwarded it to the faculty staff meeting and then to the University President's office. It stopped there and various questions (can you find books from one of the friendly countries?..) were sent to the department. The department answered all the questions with proper justification. The President of the University, Assistant Professor Assadullah Habib (Ph.D.) (Soviet Union), as a strong pro-Russian and contra Pashtu linguist along with his comrade Minister of Higher and Vocational Education, Burhan Ghiasi put a hold on the book and did not discuss it at the academic council.

After six months, the President was invited to Baghdad, Iraq. Professor Aliphshah Zadran (Ph.D.), Vice Chancellor, let the book be discussed in the council. The council not only approved the book but also accepted it as a useful step towards enrichment of Afghan culture.

This story illustrates how everything was tightly controlled. People were unable to freely communicate and make open comments on academic and other issues. Some students (party members) taped lectures and comments made by non-member instructors. So academic freedom was unknown.

Impact of the Occupation on Scope

Before the occupation, the major scope and responsibilities of Afghan AES was service of a regulatory nature, such as: supplying chemical fertilizer and other chemicals to the farmers; seeds and seedlings multiplication and distribution, supplying improved

farm implements; controlling compulsory acreage allotment; crop reporting, etc. The scope of educational activities which was considered the main function of an extension service was limited. AES was in the preliminary phases of how to increase agricultural production by adoption of modern technologies. Agricultural Extension System was focused on how to substitute the traditional means of production by improved inputs. AES generated various educational programs. For example, extension programs for improved wheat (Maxi-Pak), extension of chemical fertilizer (Urea & Di-Amonium Phosphate), cottons, sugarbeets and some more. AES performed various demonstration plots (method & result) in the villages and enrolled numerous farmers in educational programs to explain how to apply improved seeds and chemicals.

According to Maunder (1973), the scope of extension may vary in detail from service to service and country to country but all extension services have areas of common interest. These areas of responsibility can be identified as:

Agricultural Production, Marketing (distribution and utilization of farm products), Conservation (wise use, and development of natural resources), Management on the farm and in home, Family living, Youth development, Leadership development, Community development, and Public affairs. (p. 24)

An Extension service should be concerned with all aspects of the welfare of rural people. It should also be kept in mind that its role is educational and its program should compliment administrative programs of other agencies, and cooperate to the extent deemed feasible and mutually agreeable in other educational programs. It is therefore highly desirable that the scope of responsibility and other programs of extension service and its relationship with other agencies be defined either through legislation or an official statement of policy.

Table 23 summarizes responses related to the scope and responsibilities of the Agricultural Extension System. Close to 19% of respondents brought up the point that the political mandate was to attack traditional system of land ownership and leasing.

Majrooh and Elmi (1986) support this by saying:

In order to attract the poor people of the country, the communists introduced their land reforms (Decree No. 8, 1978) and nationalization of properties through various decrees (1986, p.29). According to decree No. 8, of the Peoples Democratic Party of Afghanistan, each farmer had the obligation to be present on his plot of 50 acres and did not have the right to run any other business. (p. 29)

About 16% of respondents reported that the Agricultural Extension System's scope and responsibilities were changed from agricultural issues to a political agenda because of the occupation. According to this group, AES was not performing extension activities (i.e. demonstration plots) for various technologies and chemicals. AES was expected to extend political issues and change the attitude of the farmers toward Soviet occupation. Literacy courses were established. Its content was not agricultural, but dealing with the history of the Afghan communist party, and land reform. Furthermore, it was dealing with so called "friendly" and without any political purpose assistance of the Soviet Unions.

Table 23

Impact of the Occupation on Scope and Responsibilities

Scope and Responsibilities	Number of Respondents	Responses in Percent
Political mandate was to attack traditional land ownership	13	18.8
Entirely changed from professionally agriculture to politics	11	15.9
AES needed to serve farmers within the Soviets ideology	10	14.4
The scope was limited, due to government had no full control	10	14.4
Not much left as scope, because AES was severely damaged	8	11.5
AES was seriously involved in non-extension work	6	8.6
A young inexperienced group was running the system	6	8.6
AES scope and responsibilities were of low priority, war	5	7.2
Total	*69	**99.4

* Respondents had more than one chance to respond.

** Does not equal 100% due to rounding.

Close to 14% of respondents suggested the AES needed to serve farmers consistent with the content of Soviet ideology. Farmers close to the pro-Soviet Afghan government were receiving enough goods and services. The question was asked during telephone follow up for further explanation. Respondents mentioned some aid items in the form of improved seeds, chemicals, house holds (furniture, fabrics, edible), water pumps and some other commodities. All thirty Afghan provinces had a sponsor in the Soviet Republics. Some farmers traveled to some Republics of the Soviet Union and eastern European countries under the so-called (Afghan-Soviet) cultural programs. After their return, most of them were unable to continue living in rural areas. They were forced to reside in the cities. In rural areas, the government was getting fragile. Rural areas were not safe enough for people with strong linkage to the pro Moscow Afghan government.

Another group of respondents of the same percentage concluded that the scope and responsibilities of the Agricultural Extension System were limited because the government had no full control over the country. Participants of this group further explained that the government was in war and losing ground to Mujahideen. A little over

11% of respondents agreed that not much left as AES scope, because AES was severely damaged. Close to 9% of respondents reported that AES was seriously involved in non-extension work. Likely, another close to 9% of respondents reported that a young inexperienced group was running the system. Almost 7% of respondents reported that AES's scope and responsibilities were of low priority because of the occupation.

An Extension service should be concerned with all aspects of the welfare of rural people. It should also be kept in mind that its role is educational and its program should compliment administrative programs of other agencies, and cooperate to the extent deemed feasible and mutually agreeable in other educational programs. It is therefore highly desirable that the scope of responsibility and other programs of extension service and its relationship with other agencies be defined either through legislation or an official statement of policy.

The priority given to areas of responsibility also varies between services. Logically, programs must reflect needs and priorities of the people whom AES workers serve. This does not, however, negate the fact that extension personnel must be aware of the total scope and responsibility of their service. In addition, it is as important that the National Administrative Unit, to which the extension service is attached i.e. (Ministry of Agriculture), and the rural people be adequately informed as to the scope and responsibility of agricultural extension. Only in this way can a cooperative and understanding relationship evolve and support an effective extension program.

Impact of the Occupation on Extension Relations

Maunder believes that "teaching of agriculture in schools and colleges along with agricultural research and experimentation are probably the two fields of activity with closest relation to extension education" (1973, p. 36). Obviously, extension is dependent upon research for technical information to be interpreted and applied in the solution of agricultural problems. Extension personnel require technical training in agricultural science available only from agricultural schools and colleges. But the relationship goes deeper than that. A mutuality of interest does or should exist among practitioners of all three functions (teaching, research, extension).

In Afghanistan, there is no administrative or program relationship between the College of Agriculture and the Agricultural Extension System. In general, there is no coordination between the Agricultural Extension System and the Department of Community Development, which performs similar functions. Agricultural extension has no cooperative relationships with other organizations and institutions performing similar activities.

Agricultural College is within the organizational structure of Kabul University within the Ministry of Higher and Vocational Education, while Agricultural Extension and Research Institution are within the organizational frame of the Ministry of Agriculture. During the occupation, the Soviet advisors started to attach each college to the related Ministry. It started with Medical College. During the occupation, the Medical College detached from Kabul University and attached to the Ministry of Public Health. This motion (to detach Medical College from Kabul University and attach to the Ministry of Public Health) was discussed in the Senate of Kabul University. It was

rejected and was not assumed as an academic step. It took place anyway and ended with substantial administrative problems.

Colleges of Agriculture and Veterinary were supposed to attach to the Ministry of Agriculture. College of Geology was supposed to join the Ministry of Mines and Industry. The process did not complete.

Table 24 covers the impact of occupation on the extension system relationship with the connected departments in the Ministry of Agriculture as well as outside. About 26% of respondents reported a vast gap between farming communities and government. Lack of trust between farmers and agricultural personnel alienated farmer communities from the government. The common example mentioned by most respondents was the position of the Agricultural Extension Service before the occupation. AES was the closest link between rural people and the government. AES (extension agent) was trusted by rural people to the degree of discussing their personal and family problems. Former governments utilized its position for implementing most of the development projects in various sectors. International assistance was carried to rural areas through extension units. With the occupation serious changes (programs, employees, services,...) took place within the system. Most of the experienced extension employees were either replaced by inexperienced workers or transferred to nonprofessional positions and departments. Others emigrated to neighboring countries. In addition, close to 19% of respondents recognized demographic variables counted for suitable relationship. A little over 16% of respondents based AES relationships with related departments on personal and ideological interest. The same percentage of respondents reported that technical relations between all entities were almost demolished. About 15% of respondents agreed

on negative impact, corruption, no trust and no mutual respect as the negative affect of the occupation on AES relation. Only a little over 5% of respondents reported that relation between AES and other departments was worthy since department heads belonged to the same political party.

Table 24

Impact of the Occupation on the Relationships between Extension and Related Departments

AES Relationship with Connected Departments	Number of Respondents	Responses in Percent
Caused vast gap between farming communities and the government	19	26.3
Personal, linguistic, tribal, regional & religious variables counted	14	19.4
Based on ideological and personal interests	12	16.6
Technical relations between all entities were almost demolished	12	16.6
Negative impact, corruption, no trust and no mutual respect	11	15.2
Relations were worthy, because department heads were of the same party	4	5.5
Total	*72	**99.6

*Respondents had more than one chance to respond.

**Does not equal 100% due to rounding.

Close and strong relationships and communication between AES and related departments have play a vital role in controlling, preventing and decreasing duplication and misunderstandings. They also increase efficient use of various resources (human, equipment, budget, etc). The Afghan agricultural sector needs strong and close relationships between affiliated departments. Such relationships should not be based on political ideas, region, language, religion, and ethnic group. They should rather be based on the needs and necessities of the Afghan people and society.

Impact of the Occupation on Attitude Towards Technology

Prior to the occupation, Afghan AES initiated more or less positive changes in farmers' attitude. AES worked closely with farmers and explained the value of high productivity of improved agricultural technologies. Farmers adopted some of the improved seeds, fertilizer, pesticides, insecticides, tractors, thrashers, water pumps and improved breeds. The gap between government and farmers was narrowing.

Some of the farmers (progressive farmers) assisted extension personnel in the villages by distributing improved seeds and renting tractors and thrashers to other farmers. Agricultural Development Bank provided farmers with comfortable short/long term loans and credits. Because of the occupation farmers kept their distance, felt skeptical about the government and assumed government plans violated their social values and norms.

Table 25 summarizes the impacts of the Soviet occupation on attitudes of farmers towards improved technologies. The effects of war on the attitudes of the farmers have been at least as severe as the destruction of the physical infrastructure. With half the population dislocated, and a third driven into exile, the boundaries and composition of micro-societies have been dramatically altered. Power is no longer defined simply in terms of patronage, and loyalty is commanded in part by the ability to protect and provide sustenance. There has also been a general rejection of the notion of strong central authority, which is in part a reaction against the previous communist government and the use of violence as a prime method of self-protection and self-assertion has never been more pervasive in modern times as it is now (UNDP, 1993, p. 20).

government of Afghanistan announced women's freedom (not to veil in public) via issuing a decree". People assumed the decree anti Afghani and anti-Islamic. They expressed their anger and opposition by putting some schools, cinemas and theatres on fire. I as a grade five student of Shalamar Elementary School in Kandahar, witnessed the blazes of my own school, a girl elementary school on my way home and Kandahar cinema close to where I lived.

Ellis (2000) supports the idea by saying:

The government, acting clumsily, had tribal women sit in classrooms with male teachers. The men in the community became furious with what they saw as a direct threat to their culture, authority and their property over their women. Many schools were destroyed. (p. 127)

About 14% of respondents mentioned that the occupation banned useful Western technology and extended low quality technology. They also mentioned the technical problems connected to Soviet technology. Spare parts were the major problem.

According to respondents, in the late 1980s, it was difficult to find spare parts of a Soviet technology produced in early 1980s.

About 9% of respondents reported skepticism about modernisation because of the occupation. From their perspectives, other aspects of change and modernism may also cause similar consequences. Furthermore, a little above 6% of respondents mentioned antagonism as an impact of the occupation. In addition, the same percentage of respondents reported that modern technology was only available for pro-occupation farmers. Moreover, about 6% of respondents mentioned land reform as an obstacle against investment in improved technology.

Land reform reduced the size of farms to a maximum of 30 Jeribs (4.5 jeribs=1 Hectare). None of the farmers was willing to purchase heavy technology for that size of farm, respondents added. Five percent of respondents reported that the Soviets and pro-Soviet Afghan regime proposal was to keep the farmers hungry in order to accept occupation. Respondents also reported that some farms and livestock were burned by the Soviet and pro-Soviet Afghan soldiers. Less than five percent of respondents mentioned one important fact: due to land mines, application of technology is a wishful thinking as an impact of the occupation. Agricultural land is full of mines and no body will be willing to adopt technology under such circumstances. According to Samin, "millions of mines were planted in the agricultural land" (1989, p. 23). The regime did not support agricultural cooperatives and agricultural banks to assist farmers in extending improved technologies. The farmers had to accommodate themselves with required financial sources in order to purchase agricultural equipment, chemicals, and improved seeds. It caused sharp decline in farmers' attitude towards adopting new technologies. Most farmers did not have enough resources to purchase improved technologies.

Agricultural Extension System with the cooperation of related departments and international agencies can generate various educational programs for changing farmers' attitude towards improved technologies. The decade of occupation, migration and foreign connections of the Afghans may facilitate the job of future AES in this regard

Chapter Summary

The intention of the Soviet occupation of Afghanistan is clear. The goal was to destroy the collective memory and to make Afghans forget their social history and cultural identity. Thus uprooted, free from the socio-cultural ties with the past, a new man, able to be re-educated, will be created. Men of the older generations, having too strong of a memory to be easily erased, were in the process of physical elimination. The attention was focused on the younger generations, especially the children.

With the direct occupation of Afghanistan, all aspects of life in both rural and urban areas swapped. The Afghan population went through numerous social, political, cultural, economic, educational, agricultural, industrial, and other problems. All sectors have been affected one way or another. The agricultural sector, as the main economic sector, was affected the most. Within this sector, the Agricultural Extension System as the main linkage of the government to rural communities was severely damaged. Various aspects of agricultural extension programs, organization, budget, relationships, responsibilities and training process were severely affected.

Agricultural production, organizations, human resources (trained personnel), improved seeds and breeds, fertilizer, irrigation systems, technology, and proper farming management and maintenance of agricultural land were severely disrupted. Moreover, the government was not paying sufficient attention to the agricultural sector. Most of the rural areas were not under the government control. Numerous qualified experts, particularly in agriculture, were jailed or fled the country. For instance, the Faculty of Agriculture in Kabul University alone lost about 70% of its qualified instructors.

Due to the occupation wild plants replaced normal crops. Wild animals, birds and insects left the mountains and deserts and migrated to near-by villages. Wildlife and natural resources such as forests and soils have deteriorated.

Decisions and programs forwarded to farmers were viewed as full of Soviet content and made by foreign advisors. Messages coming from Soviet and pro-Soviet Afghan were anti-Afghani, anti-Islamic, and untrustworthy. The Soviets prohibited high quality Western technology and facilitated the dissemination of their low quality technology. The Soviets and their allies were not there to help but rather to destroy Afghans' culture and religion. They jailed and killed conspicuous, religious, tribal, and ethnic leaders in the country.

After obtaining a general scenario on the impact of the Soviet occupation on the various aspects of the Afghan agricultural sector, the following chapter will familiarize the reader with the suggestions and recommendations made by respondents for the rehabilitation and future development of the Afghan agricultural sector and Agricultural Extension System.

CHAPTER SIX

FUTURE PROSPECTS FOR THE SYSTEM

The purpose of this chapter is to present suggestions made by the respondents for the rehabilitation and future development of the agricultural sector and various parts of the Agricultural Extension System in Afghanistan. On one hand, I am aware and should confess that some of these suggestions are extremely general. On the other hand, I feel it is important to present all of the ideas mentioned by the respondents. Respondents' recommendations fall into six categories: the reconstruction and future prospects of agricultural extension programs; organizational structures; budgets; teaching processes; scope and responsibilities; and relationships between related departments and organizations within and outside the Ministry of Agriculture. Furthermore, suggestions are also made in respect to the role of the government and rural people of Afghanistan, local and international non-governmental organizations (NGOs), and the importance of relationships between the Afghan Agricultural Extension System and NGOs during the reconstruction process. At the end, strategies and policies are suggested by the respondents for reducing and eliminating narcotics cultivation and increasing the acreage of regular food crops. Lastly, suggestions are also made for where and how to use international assistance.

Suggestions and recommendations were made by a group of 62 Afghans who completed the questionnaire. The questions asked were of three major types: demographic characteristics of the respondents; impacts of the Soviet occupation; suggestions and recommendations for the reconstruction and future development of the Afghan agricultural sector (Agricultural Extension System). Respondents were residing outside Afghanistan (America, Canada, Europe, Pakistan) and were thoroughly

acquainted with the agricultural sector of Afghanistan. Moreover, some respondents witnessed the entire decade of occupation and some survived the regime of the opposition (Mujahidden) after the Soviet withdrawal.

Agricultural Extension Programs

Since extension is essentially an educational activity, extension programs are educational in nature and employ educational methods. Therefore, extension programs in agriculture are concerned with educational aspects of agricultural development.

Table 26 summarizes the suggestions of respondents for the rehabilitation and future development of agricultural extension programs. About 15% of respondents suggested regaining peoples' trust was an important element in reconstruction. In some countries, central government is in close touch with its citizens and is a relatively effective mechanism for transmitting new ideas and initiating social change. In other countries, the people view government as nothing but a tax-collecting agency, which takes, but gives little in return. The people of such countries are suspicious of governmental programs. According to Maunder (1972),

This is a hurdle that a promoted extension program must jump because it must enter all underdeveloped areas through government's.
(p. 13)

Table 26

Suggestions for the Reconstruction of the Extension Programs

AES Programs	Number of Respondents	Responses in Percent
Regain the trust of the people	15	15.4
Farmers' participation in AES programming process	13	13.4
Revision of AES programs' content	12	12.3
Encourage financial sources for AES programs' execution	9	9.2
Material and non-material incentives (motivation)	9	9.2
Strengthening of infrastructure to facilitate AES programs	8	8.2
Programs bring positive changes in rural lives	8	8.2
Adoption of useful programs from other countries	6	6.1
Technical expertise to promote AES programs execution	5	5.1
Decentralization of decision making to the local level	4	4.1
AES programs should serve the majority	3	3.0
Existence of Master Plan	3	3.0
Programs must be based on the content of National Plan	2	2.0
Total	*97	**99.2

*Respondents had more than one chance to respond.

** Does not equal 100% due to rounding.

About 13% of respondents believed in farmers' active participation in extension programs. Jawad supports this when he suggests that "the day-to-day running of almost all NGOs is by Afghans" (1991, p. 61). The participation of rural clients (farmers) in the development, implementation and evaluation of extension programs has been a long-standing, fundamental, guiding principle Compton (1984). Without the proper kind and amount of popular participation by youth and adult men and women in the program planning process the cognitive, social and geographic gaps can not be closed (Compton, 1984, p. 117).

Farmers are products of their respective social, geographic, political environments. They have learned to survive by following the farming practices taught them by their forebears. Farmers' experiences reflect differences in land, sizes and types of enterprises and successes and failures in the past. Consequently, their reactions to improved technologies will vary. Because of the differences among farmers, programs for agricultural development must be tailored to general conditions in the area, then to the specific farm and farmer. Technologies that are successful in one area or even on a single

farm must often be adjusted for application to another farm by another farmer. This could be done with the active participation of farmers in the process of educational program development.

About 12% of respondents felt that revision of extension program content would be advantageous for the reconstruction process. Respondents believe the content of the extension programs depends very much on the goal and the target group (farmers) and the extension strategies. The contents of the extension programs should relate closely to the knowledge and attitudes of the target group. Extension agents with specific technical expertise often over estimate their target group's knowledge and the extension message is not understood. Extension agents must also consider that many farmers have limited resources. Extension advice is often rejected by the farmers because they have insufficient land, or capital or other resources to act on the advice.

Close to 9% of respondents recommended increased funding for AES programs' execution. Respondents believe without sufficient financial resources AES programs implementation would be a difficult task. Nearly 9% of respondents also suggested proper motivations and incentives for the reconstruction of agricultural extension programs.

According to Maunder (1972):

We in extension education must persuade or motivate people to want technical knowledge, to use it and to adopt a progressive attitude toward change. (p. 113)

Motivation of people (farmers) is an important function of extension workers. The initiative and desire for learning and change must come from the farmer. When people see the need for change, they make an effort to learn and usually succeed.

About 8% of respondents recommended strengthening the infrastructure (social, economic, educational, etc.) important for facilitating future AES programs. Kamrani (1988) considers that because of the Soviet occupation, "the Afghan economy is in a shamble. The infrastructure, which represented the only major accomplishment of the past few decades, is decimated" (pp. 31-32). Another 8% of respondents suggested that well designed programs bring positive changes in rural lives. About 6% of respondents recommended the adoption of useful programs from other countries important for AES programs' development. Programs from other countries should meet the Afghan conditions, the respondents added. Close to 5% of respondents recommended technical expertise as important for promoting AES program execution. Due to the occupation, large numbers of Afghan intellectual and scholars left the country, respondents claimed.

Less than 5% of respondents in four different categories suggested decentralizing the decision making process; ensuring that AES programs should serve the majority; creating a master plan; and basing programs on the content of the National Plan important for the reconstruction of agricultural extension programs. According to respondents, planning at the national level provides general direction for development and allocates national resources to the various sectors of the country. It also considers the trends and terms of international trade. Planning at the local level, on the other hand, assists in making the national plans applicable to local conditions and acceptable to the local people. Moreover, local planning provides educational experiences for the citizens. According to USOM (1953), "the National five year plan of Afghanistan provides guidelines and policies for program development for the various sectors of the country" (p. 3).

Respondents emphasized the value of changing the decision making process from top-bottom to bottom-top and asked for close coordination and communication between the top authoritative (Ministry) and the lower (Provincial and District) levels. Respondents commented that the (bottom) levels are dealing directly with all the farm issues and know the main problems and the possible solutions. Top positions should make their decisions based on the facts received from the bottom, they added.

According to Blanckenbur (1984), "A decentralized system will work best if the central control is operational and if the communication systems function well". (p. 37).

Agricultural Extension Services in Afghanistan, as in many other developing countries, are not autonomous in their program planning. Its objectives can be formulated only based on general development objectives, and the resources for program implementation are as a rule allocated by the Ministry of Agriculture. Blanckenburg (1984) recommends that extension programming should be based on national programming. Furthermore, regional level planning is especially important for extension programming because of the changing ecological conditions of farming. Programming at the provincial level often receives more attention than national planning. It is mainly at this level that practical policy decisions have to be made about the clientele, the organization of extension work with respect to staff densities, availability of subject-matter specialists and eventual establishment of special projects, coordination with research and the main messages to be conveyed to farmers.

According to respondents in Afghanistan, the local level is the weakest link in extension programming. The extension field staff often lacks the competence and time to design work plans or to develop a local program to meet production targets. Moreover,

the field staff are more affected than the higher levels by a role conflict in which the extension agent acts as a government officer on the one hand, and as someone who has a trusting relationship with the farmers and their needs and wishes, on the other. According to Blanckenburg (1984), several new approaches like the "training and visit" system have devoted more attention to the task of local extension planning and the possibilities of greater participation by farmers" (p.53).

Before and during the occupation, the local level was not involved in the decision making process. All decisions were dictated from the national level to local levels, resulting in difficulties during the implementation of the programs. Respondents believe that extension programs should cover the majority of the population without any regional, linguistic, ethnic, ideologic and personal interest towards a specific individual, group, tribe, sect and region.

To conclude, planning should take place at various levels, although planning at the national level is essential for balanced development throughout a nation, local or community planning mobilizes local resources for growth. Local planning may also provide educational experience for the people. Proper agricultural extension programs require sufficient resources, qualified expertise and suitable organizational structure with identified positions, roles and responsibilities.

Organizational Structure

Throughout history, man has been forced to associate himself with one group or another for protection and to achieve essential social, economic, political, and educational objectives. Man has been able to accomplish much more through organized group effort than by working alone. Consequently, organizations as democratic social entities have

developed. Inherent in these organizations are all the conflicts and opportunities of cooperation that individuals themselves experience when striving to fulfill their interests through pooling resources and coordinating efforts.

Schwartz and Kampen (1992) consider extension organization(s) as "both the internal structure and the linkages with related organizations and client groups" (p. 40). The organizational structure of agricultural extension services differs between countries. Structures are influenced by the nature of the agricultural sector, social, cultural and demographic make-up of the country, and the prevailing political structures. Various agricultural organizations serve the farmers in each country. Some countries have different organizations to deal with a particular sector; in some others, each sector extension needs separate organization with certain positions and ranks, e.g. crop extension is separated from fisheries, livestock or family improvement extension. Each needs certain positions and plays certain roles. Efforts have been made in many countries to improve the situation and get the maximum from the limited resources. According to Jalil (1994),

In Bangladesh, 6 extension-oriented agencies were emerged together in 1982, to form the Department of Agricultural Extension. In Philippines, the line functions of the various bureaus in extension were re-consolidated under the decentralization program at the regional and provincial levels. (p. 20)

Table 27 includes the suggestions of respondents about the rehabilitation of organizational structure in Afghanistan AES. About 13% of respondents recommended that extension units should include representatives of related departments to prevent duplication of goals and facilitate the maximum use of available resources within related departments. Respondents believe that various development agencies and services operating in rural areas seek similar goals and objectives. Multiplicity can easily lead to

an overlapping of activities and consequently to a waste of resources. Therefore, the number of such agencies within Afghanistan should be appropriate for efficient coordination. Respondents further believe that suggestion will lead to the establishment of a single unified extension service with a representative from each related department (plant protection, soil sciences, agricultural cooperatives, agronomy, etc.).

Table 27

Recommendations for the Reconstruction of Extension Organizational Structure

Organizational Structure	Number of Respondents	Responses in Percent
Extension unit should include representatives of related departments	11	12.6
Review of various extension organization models in the World	10	11.4
Extension stays as the backbone of the Ministry of Agriculture	8	9.1
Creation of decentralized policies within extension organization	7	8.0
Job description within extension organization	6	6.8
Extension has to be part of entire agricultural colleges	6	6.8
At village level, farmers have to be part of decision making process	6	6.8
Reactivation of former three level extension organization	5	5.7
Extension organization should match the features of the areas	5	5.7
Distribution of proper positions to proper persons	4	4.5
Zone office for better coordination	4	4.5
Expertise should work without any apprehension	4	4.5
Prevention of unnecessary and inclusion of required positions	3	3.4
Subject Matter Specialists board is essential for extension organization	3	3.4
Promotion of agricultural extension to the Ministry level	3	3.4
Creation of both male and female positions	2	2.2
Total	**87	*98.8

* Does not equal 100% due to rounding.

* *Respondents had more than one chance to respond.

A little over 11% of respondents recommended the review of various extension organization models used elsewhere to aid the future development of Afghan agricultural extension organization. Attention should be paid to those models that are most similar to the agricultural, economic, social, educational, technical and cultural situations of Afghanistan, responded added. In addition, almost 9% of respondents suggested that extension remains the backbone of the Ministry of Agriculture and cultivate a close connection between farmers and the ministry.

Moreover, 8% of respondents suggested that the creation of decentralized policies within extension organization is important to reconstruction and future development of the Afghan AES. Decentralized policies will encourage farmer's participation in achieving AES goals in the area. Randinelli (1987) defines the term "decentralized" as:

The transfer of planning, decision-making or management functions from the central government and its agencies to field organizations, subordinate units of government, semi-autonomous public corporations, area-wide or regional development organizations, specialized functional authorities or non-governmental organizations. (p. 31)

Close to 7% of respondents suggested job description within extension organization helpful for the reconstruction and future development of agricultural extension. Each position should be assigned without any ideological, linguistic, race, gender, cultural, tribal, and religion discrimination. It should be based on experience, knowledge and background of each individual connected to the position.

A similar percentage (close to 7%) of respondents recommended that extension has to be part of the organizational structures of agricultural colleges. This will marry the theoretical part of the colleges to the practical part of the ministry, the respondents emphasized. According to Nakata (1965), this suggestion was on the floor since mid 1960s. Nakata, said:

I would recommend that the Faculty of Agriculture, Kabul University, initiate some extension works in the future. I sincerely hope that the future foundation of agriculture in Afghanistan be established by the Faculty of Agriculture. (p. 6)

There were some signs of relations between the two institutions in terms of conferences, workshops, seminars, etc. I as a member of the agricultural extension department of the Agricultural College witnessed the workshops and seminars sponsored

by the Ministry of Agriculture that took place within the building of Agricultural College. Moreover, Agricultural College professors were invited to join short and long term courses within the Ministry of Agriculture. There were not significant numbers of joint research projects between the two. Some research papers of the faculties of the Agricultural Colleges were published in the Monthly Journal (Karana) of the Ministry of Agriculture. After the occupation, the relationships got extremely loose and political. Non-party faculties were not welcomed for any seminars, workshops, etc.

The Agriculture College was founded in 1956 as the first higher agricultural educational organization in the country within the framework of the Kabul University (Amin, 1977, p.140). According to Nakata, "its graduates in 1959, 1960, 1961, 1962, and 1963 were, 12, 8, 23, 27, and 25" (1965, p. 7). While in 1976, Amin mentioned this number 85 (84 male and 1 female) (1977, p. 150). Myself as a former employee of the agricultural extension department, Agriculture College, Kabul University, in the late seventies, the number of the graduates grew to more than 100.

The National Master Plan promoted agricultural development through research and adoption of various agricultural technologies. The Ministry of Agriculture sent a formal request to the Faculty of Agriculture through Kabul University to train 1500 agricultural extension agents by the end of 1970s. Based on that request the Faculty of Agriculture revised the curriculum, added new agricultural extension courses and increased the number of students in the department (personal observation).

Close to 7% of respondents suggested that farmers should be part of the decision-making process at the village level. Through their participation in the decision-making process, farmers will introduce their ideas and needs, respondents added. Close to 6% of

respondents suggested the reactivation of the former three level (national, provincial, district) of agricultural extension organizations useful to the reconstruction and future development of the system. Another group of respondents of the same percentage suggested that extension organization should match the features of the areas. The organization should suit the educational, technical, economic, social norms and tradition of the residents of the geographical areas.

Less than 5% of respondents in seven different groups suggested: distributing proper positions to proper persons; zone office for better coordination; protecting expertise so they can work without any apprehension; preventing unnecessary positions; the necessity of the board of Subject Matter Specialists (SMS) for extension organization; promotion of agricultural extension to the Ministry level and creation of both male and female positions important for the reconstruction and future development of the system.

Extension workers are expected to assist farmers in solving their problems. Their technical knowledge has to be continuously upgraded. The role of SMS is crucial in the transfer of new technological know-how to farmers. They not only support the field extension workers, but also serve as links between the extension services and research organizations. According to Jalil, "the ratio of field staff to SMS ranges from 1:10 in Bangladesh and Malaysia to about 1:20 in India and Indonesia" (1994, p. 22). This ratio is much different (higher) in Afghanistan due to the imprisonment and professional Afghans on their emigration to foreign countries. This will be one of the major challenges for the future agricultural extension services (the researcher's view).

In order to obtain the maximum service of the limited number of Subject Matter specialists in Afghanistan, the country was divided into seven agricultural zones. Three to four provinces belonged to one zone. Each zone used to have a group of SMSs with some number of improved technologies. Both technologies and SMSs were jointly used between the provinces that belonged to each particular zone. The number of extension agents surpassed over the usual ratio of SMS/extension agent (personal observation).

The younger Afghan generation, born during the Soviet occupation, is over twenty years old today. They did not attend regular educational institutions. Most of them were involved in war in favor of one side or another. If peace is restored at present, it will be practically impossible to use the skills and expertise of this generation. They have no professional skills and must enroll in various educational (vocational) programs. Respondents stressed the importance of former professional Afghans returning to train the current young generation and to plan the future development of the agricultural sector.

From some of respondent's perspectives, over the past several years and even now, it is difficult for women to work outside the home, and for others to work with women. According to Hill and Halimi (1997), this can have serious implications for livestock production efforts.

If women are not present, their knowledge and experience cannot contribute to solving livestock problems. The restricted movement of women in Afghanistan has added constraints to UN-based, NGOs and other planners trying to respond to development needs in areas already pressured by years of conflict. (p. 7)

The work to be done is the basic consideration in determining the structure of any organization. The broader the scope of responsibilities and program of an extension service the more involved become relationships with other institutions, services, and agencies.

Scope of Agricultural Extension

The scope of agricultural extension specifically refers to the goals of agricultural extension and how it operates. According to Sanders (1966), the scope of extension service include three aspects: "people to be served, the subject matter to be included in the work and the methods to be used" (p. 29).

Although the scope and responsibilities of different extension services may vary in detail from each other, they all share areas of common interest. Maunder (1972), identified these areas of responsibility as,

Agricultural production, marketing, conservation of natural resources, farm and home management, family living, youth development, leadership development, community development, and public affairs. (p. 24)

Table 28 summarizes recommendations of respondents concerning the scope and responsibilities for the reconstruction and future development of the Afghan Agricultural Extension System. A little over 10% of respondents suggested the extension of useful research results to farmers as an important scope and responsibility of AES for its reconstruction and future development. Agricultural research findings are of little use and value if not adopted or diffused to farmers. Research results from research stations and laboratories should get transferred to the field and put in practice.

Table 28

Recommendations Related to the Scope and Responsibilities of Extension System

Scope and Responsibilities	Number of Respondents	Responses in Percent
Extension of useful research results to farmers	16	10.3
Considers various features of villages as scope & responsibilities	15	9.6
Invites experts for determination of scope and responsibilities	15	9.6
Accommodates farmers with modern equipment	13	8.3
Adjusts new scope and responsibilities with the needs of the rural	12	7.7
Finds and transfers solutions to farmers' problems	11	7.0
Provides assistance related to land mines eradication	11	7.0
Facilitates close relationship between farm and family	9	5.8
AES has to be part of the Afghan reconstruction committee	8	5.1
Provides farmers with proper management techniques	8	5.1
Considers knowledge level of the farmers while extension process	7	4.5
Needs to search new community development techniques	6	3.8
Facilitates marketing of agricultural products	5	3.2
Creates scope to cover the vast majority of women	5	3.2
Guides farmers how to maximize their production	4	2.5
Facilitates the involvement of rural youths	3	1.9
Has to protect and conserve natural resources	3	1.9
Rediscovery of traditional rural economic bases and community values	2	1.2
Strengthening the former scope and responsibilities of AES	2	1.2
Total	*155	**98.9

* Respondents had more than one chance to respond. **Does not equal 100% due to rounding.

Agricultural production has increased substantially in many countries since the Second World War. For example, rice production in Indonesia almost doubled between 1970 and 1982. This is the result not only of increased use of irrigation, fertilizers, and other but also the increased productivity of the inputs used. According to Van Den Ban and Hawkins (1985),

Research findings have stimulated the World Bank to give large loans to many governments in less industrialized countries for the expansion and improvement of their agricultural extension services. Similar loans have been made for agricultural research and vocational agricultural education, because it has been recognized that these three systems reinforce each other. (p. 33)

About 10% of respondents recommended that the AES consider various social, economic, educational, religious, and geographical characteristics of villages to determine its major scope during the future development of the system. Close to 10% of

respondents suggested the invitation of experts for determination of scope and responsibilities important for the future development of the system. Almost 8% of respondents recommended that farmers be accommodated with modern equipment as an important scope and responsibility for the future development of the system. Close to 8% of respondents suggested the adjustments of new scope and responsibilities important with the rural needs as a major scope and responsibility for the reconstruction of the system. Seven percent of the respondents recommended to find and transfer solutions to farmers' problems as important scope for the future development of AES. Another 7% of respondents suggested assistance related to land mines eradication as important responsibility for the reconstruction of the system. Almost 6% of respondents mentioned to facilitate close relationship between farm and family as a major scope and responsibility of AES for the future development of the system. Nearly 5% of respondents suggested AES has to be part of the Afghan reconstruction committee. Another group of respondents of the same percentage (5%) recommended the provision of farmers with proper farm management (crops, livestock, income) techniques as an important scope and responsibility for the reconstruction of the system.

Less than 5% of respondents in nine different groups recommended: consider knowledge level of the farmer in extension process; search new community development techniques; facilitates marketing of agricultural products; creates scope to cover the vast majority of women; guide farmers how to maximize their production; facilitate the involvement of youths; protect and conserve natural resources; rediscovery of traditional rural economic bases and community values; and strengthening the former scope and

responsibilities of AES as the major scope and responsibilities for the future development of the system.

For religious and cultural reasons, many Afghan women were historically denied access to education and employment outside the home. Various political regimes have restricted the mobility of women in Afghanistan and their access to services. Likely, youngsters (10-15 years old) were involved in heavy physical tasks. According to some of the respondents who resided in Pakistan before emigration to the United States:

Some of the Afghan families in refugee camps in Pakistan and even inside Afghanistan put their youngsters to heavy physical work. They were the only income resources for their families. Most of them did not have access to schools. They either have no schools in their area or can not afford it economically. Training them will be one of the most serious tasks for future extension system; the respondents concluded (summary of some respondents views).

Afghanistan's infrastructure has been seriously compromised by the occupation. Such physical resources as irrigation systems, hospitals, highways, schools, residential and other buildings will be either replaced or constructed by the humanitarian assistance of the world. Human resources, however, are not so easily rebuilt. The young population born and raised during the conflict will stay as a major issue and burden on the future development organizations. It will be difficult if not impossible to replace them or to reconstruct them as can be done with other types of resources. The rebuilding was, still is and will be the major concern of related systems in the rehabilitation process of the nation.

Because agricultural extension in Afghanistan is a governmental service, budgeting, disbursing and control of the use of funds has to be done by the administration in conformity with state policies and procedures. Extension administration is responsible to prepare and submit its budget for the fiscal year including all proposed expenditure, to the minister of agriculture or other competent body.

Agricultural Extension Budget

The role of an extension system is complex, the services it provides are widespread and the agencies involved in agricultural extension activities are many. At the same time, each country is unique in the number of farming households to be served, the state of development of the clientele (farmers), and the national policy of the government. There is therefore no single indication of how much a country actually invests in agricultural extension. According to Jalil (1994),

While the overall figure is not available, there appears to be a direct relationship between the percentage of agricultural population and the financial allocation to extension by government through its various extension agencies. Roughly, it was estimated to range from about 3 percent of the total government expenditure in industrialized countries to about 9 percent in countries where the agriculture population is still very predominant. (p. 25)

Table 29 summarizes respondents' recommendations concerning the reconstruction of budgetary and financial systems of extension. About 30% of respondents suggested that various financial sources be used to fund extension programs. Afghanistan will not be able to afford a thorough reconstruction of extension services after a so-long period of destruction, respondents commented. They suggested international funds from developed countries, aid organizations, and charitable foundations as important external sources. The exact budget for agricultural extension is

unknown, due to the lack of relevant statistics on the agricultural extension situation in Afghanistan. Some of respondents believed the budget devoted to the Afghan extension system were always insufficient. Agricultural extension activities were of low priority during the occupation. Even before the occupation, extension programs in most cases were dependent on international support.

Table 29

Recommendations for the Reconstruction of Extension Financing and Budgeting System

Budget and Finance	Number of Respondents	Responses in Percent
Various external budgetary sources for extension	15	30.6
Budgetary and recruitment autonomy for extension	7	14.2
Major part of national budget should devote to agriculture	6	12.2
Budgetary system for achieving planned objectives	6	12.2
Farmers' update on financial status of AES projects	5	10.2
Decentralization of the budgeting process	4	8.1
Establishment of strong agricultural bank	4	6.1
Paying fees for extension services and training	2	4
Encouraging farmers to initiate their own coops & banks	1	2
Total	*49	**99.6

*Respondents did not respond thoroughly.

** Does not equal 100% due to rounding.

A major problem facing government extension services in poor countries is their limited budget. Even when the services offered are expanded, the budget often does not expand proportionately. Insufficient staff and inadequate training facilities are some of the drawbacks caused by the lack of funds. Low salaries encouraged the staff to look for positions with relatively high salary.

In addition to the restriction of numbers of personnel and their abilities, low budget allocations severely limit the materials (equipment) available to all extension agencies. The main problem, which became even more acute during the occupation, is transportation. Farms are rarely close enough to each other that the extension agent can

reach them on foot. Walking in rural areas has lately become unsafe because of the land mines.

Close to 14% of respondents suggested financial and employment autonomy for the reconstruction of future extension system. The Agricultural Extension System was not in the position to receive a proper budget. There were always questions about the AES budget from the financial department. People working in the financial departments were unfamiliar with and did not have backgrounds in the field, and they raised various questions for instance, what is the demonstration plot, or what does 4-H program do. By the time the budget was set, it was often too late for that particular plan or program. Similarly, the hiring process was not completely under the control of the President of the AES. He was able to recruit junior staff (rank six and under), but the Minister of Agriculture could hire senior staff (rank five-three). The two senior positions (rank two-one) were under the authority of the Ministers' Council (Prime Minister). The most senior positions (Fouqi Routhba and Khariji Routhba) were the authority of the King/President of the country. The late two positions are not and were not existed in the extension organization. The highest position in the history of the Afghan extension service was the Presidency of the extension service (rank one). During the occupation, the position was reduced to rank two. The President of the extension service was nominated by the Minister of Agriculture, forwarded to the Ministers' Council, and approved by the Prime Minister. Hiring at higher levels were often based on personal, family, and political interests rather than the need of agricultural extension. Respondents strongly suggested financial and employment autonomy for the reconstruction and future development of Agricultural Extension System.

Almost 12% of respondents suggested that a major part of the national budget should be devoted to the agricultural sector important to AES reconstruction. About 10% of respondents recommended farmers' update on financial status of AES projects important for the reconstruction of the system. Farmers may get financial interest in supporting the projects by sharing their resources, the respondents added. Nearly 8% of respondents suggested that the decentralization of the budgeting process is important for the future development of the system. From the respondents' perspectives, such action will accelerate the reconstruction of AES by delegating budget authority to various levels (national, provincial, district) of extension service. During a follow up question, I asked respondents of this group over the telephone how would the decentralization of budget accelerate the reconstruction process? Each level knows its needs and necessities. Employees in each level can estimate the value and amount of budget for its programs. This would save time for each level, respondents answered.

Close to 6% of respondents suggested that the establishment of a strong agricultural bank is important for the reconstruction of the system. The Agriculture Development Bank (ADB) served as the only official credit source to farmers. Most of the farmers were not in the position to use the services of the bank because of the small size of the farms and high interest rates on loans. The establishment of a strong agricultural bank with low interest could enable farmers to elevate their level of production and living standards. One of the respondents, Syed Abdulrahman Hashimi (extension specialist), is a former senior official of the Afghan Agricultural Development Bank currently residing in the United States disclosed the following during a telephone interview:

In 1977 the Agricultural Development Bank gave out 1,400 million Afs. in agricultural loans. In 1981, the total had come down to 600 million Afs. and in 1982 by September, only 100 million Afs. had been provided. In October 1982, the ADB had announced loans of only 10 million US dollars earlier in 1982, but there was insufficient number of farmers and only 30,000 US dollars (about 3 million Afs. at that time) had been distributed. (Hashimi, personal communication, 1999)

Most of respondents supported the importance of a strong ADB for the future development of the agricultural sector and agricultural extension. Land reforms had caused significant farm size reductions and prevented farmers from adopting and practicing improved techniques. Furthermore, farmers could not afford to purchase modern equipment. Religious and social constraints prevented people in villages from lending money to others. On one hand, long-term loans were not common among farmers due to the length of work contracts; on the other hand, farmers had problems repaying short-term loans. Farmers' incomes were seasonal. Most farm products matured and were marketed in autumn (October-December). Besides, the farmers were supposed to pay interest to the lender, which (was/is restricted in Islam) and Moslems are forbidden (from to charge money via) interest on loans to others. The Agricultural Development Bank, as a governmental organization was able to manage loans officially with proper interest for certain period of time. There were/are no religious/cultural restrictions on paying interest to the government.

Less than 5% of respondents in two categories suggested paying fees for extension services and training; and encouraging farmers to initiate their own cooperatives and banks important for the reconstruction of agricultural extension.

The Agricultural Extension System of Afghanistan should keep close contacts and connections between the rural population and the government. The government must be strong and provide proper financial support for teaching materials and methods by using internal and external resources.

Agricultural Extension Teaching Methods

The central function of the extension worker is to create situations in which others develop educationally. Many proven educational methods or techniques exist from which extension workers may use to create learning situations for optimum transfer of new knowledge, information and skills to young and adult learners (farmers). Once the needs of an area or community have been identified, it is the task of extension workers to choose the teaching methods that will be most effective in achieving the educational objectives.

People do not learn in the same ways. Some learn best by seeing, listening, doing or discussing. Some respond well to visual or auditory methods, and others prefer practical exercises. The varieties of extension methods used, the more people change their practice. The more an individual (teacher/learner) has access to variety of teaching methods the more likely the person (farmer) will find his/her preferred method of learning.

Table 30 summarizes the suggestions of respondents for the reconstruction and future development of the Afghan Agricultural Extension System teaching methods and training process. A little over 15% of respondents suggested short-term courses, seminars, workshops and conferences important to the future development of the training

process of the extension workers. Close to 14% of respondents recommended adequate agricultural community colleges and vocational schools meaningful for the reconstruction of teaching/training process. Blanckenburg (1982) agrees by saying: "extension personnel require technical training in agricultural science available only from agricultural schools and colleges" (pp. 36-37). Furthermore, 12% of respondents suggested training of AES employees by scholarships and fellowships important for the reconstruction of extension training process.

Table 30

Suggestions of Respondents for the Reconstruction of Extension Teaching Methods

Teaching Methods and Training Process	Number of Respondents	Responses in Percent
Short term courses, seminars, workshops, and conferences.....	18	15.5
Adequate Ag. Community Colleges & vocational schools	16	13.7
Training (scholarships & fellowships) for AES employees	14	12.0
Establishment of AES training centers in each district	12	10.3
Training of local farmers to train others	10	8.6
International support for short and long term training	9	7.7
Future AES's training should rely on visual aids	8	6.8
Attraction of trained and experienced Afghans to return	7	6.0
Reapplication of the Afghan Monarch era AES training methods	4	3.4
Attract people from the community and educate them	4	3.4
Revision of the former teaching methods (demonstrations)	3	2.5
Teaching & learning shouldn't be confined to classrooms	3	2.5
Utilization of high - tech (internet, satellite, TV...) of education	3	2.5
Rehabilitation of former training institutions	2	1.7
Paid enrolment of farmers in AES training programs	2	1.7
Adoption of a teaching model from a similar country	1	0.8
Total	*116	**99.1

* Respondents had more than one chance to respond.

**Does not equal 100% due to rounding.

Almost 10% of respondents suggested the establishment of training centers in each district is significant for the reconstruction of extension workers training process. About 9% of respondents suggested the training of local farmers to train others important for the development of the training process. Close to 8% of respondents recommended

international support for short and long-term training of the extension training process.

Almost 7% of respondents suggested that future AES training should rely on visual aids.

Similarly, 6% of respondents recommended attraction and return of trained and experienced Afghans important for the future development of extension.

Less than 5% of respondents in eight different categories suggested reapplication of the Afghan Monarch era AES training methods; attract people from the community; revision of the former teaching methods; teaching and learning shouldn't be confined to classrooms; utilization of high-tech in education process; rehabilitation of former training institutions; paid enrolment of farmers in AES training programs; and adoption of a teaching model from a similar country important for the reconstruction and future development of the Afghan extension.

Respondents mentioned demonstration (result and method) as the most common extension teaching method before the occupation. They recommended the reapplication of the method as important for the future development of the system. Blanckenburg (1984) noted the value of demonstration by asking the extension officers from the eight East African countries to rank the principal extension methods used in their countries according to importance for the eight countries. They recorded "farm and home visits clearly as the most important method and demonstration as the second important" (p. 58).

Among the mass media extension teaching methods in Afghanistan, radio ranked at the top. However, under closer scrutiny it appears less effective because of inadequate infrastructure in the rural areas. There is no electrical power in most villages, and farmers have no access to electrical facilities. Consequently, extension agents can not properly use mass media extension teaching methods in the village. Moreover, extension agents

often do not have the proper training to use complicated mass media teaching methods adequately, respondents commented. Blanckenburg (1982), agrees that "unsatisfactory performance of extension services is due partly to the low qualifications and motivation of extension staff". (p.41).

One group of respondents suggests encouraging the return of expatriate Afghans who have various expertise. Such a view is supported by an article *Overseas Afghans role in economic uplift sought* published in the Frontier Post:

The Afghan government has invited Afghan expatriates to take part in the development of the war-ravaged country. A meeting of the ruling council in several decisions to extend the Afghan government invitation to the overseas Afghans to a seminar on Afghanistan's economy. Vice Chairman of the Council presided over the meeting. The meeting decided to invite economists and experts from inside and outside the country to take part in a seminar in country's economy and to explore ways for economic development of the country. (July 19, 2001)

Because of the Soviet occupation, a marked number of the Afghans with various educational backgrounds fled the country for various parts of the world. Respondents have told me that most of them will return home under proper conditions. Yusufzai supports the idea by quoting the story of a former Afghan business man in the news paper Jang issue of Feb. 15, 2001.

Alhag Mohammad Omar Mumtaz, before the Soviets occupation, was one of the top Afghan businessmen. He owned a fleet of oil tankers, about 200 of them, which supplied almost the whole country. Vehicles of his Mumtaz Transport Company were a familiar sight on Afghanistan's roads. But the impatient communists considered every wealthy Afghan their enemy and Mumtaz was categorized as a bourgeoisie who could never be a friend of these revolutionaries. Thus a super patriot was jailed, deprived of his business and forced to flee his homeland. For ten years, he and his family lived in Islamabad and left for the land of opportunity-- the United States. It seems his travels and business acumen enabled him to earn a lot more and now he is back where his heart has always been. (Yusufzai, 2001, p. 1)

He is investing in war-ravaged Afghanistan despite being forewarned of the risks involved in doing business in an unstable and much-sanctioned country. Even more surprising is his decision to set up a private bank, Da Afghan Omar Mumtaz Bank, which would have to operate under Shariah regulations and do interest free banking Yusufzai explained.

In addition, the UNDP (1993) is challenging the call for qualified and experienced personnel

A challenge now facing the country is how to ensure that this institutional experience resource and resource of trained people can become a stimulus and driving force in reorienting educational and research institutions to link them with development in Afghanistan. (p. 47)

Extension agents have a greater responsibility in the training process because they must live with their student (farmers). Extension educators need to study and become skilled in the art of teaching and the art of preparing their clients by establishing close and smooth relations with related organizations within the Ministry of Agriculture and in the villages.

Agricultural Extension Relations

Close and constant liaison between the Agricultural Extension System and related departments inside and out side the Ministry of Agriculture are of basic importance to agricultural development in general and to the Agricultural extension in particular. Failure to create such relevance is a major factor in the failure of pilot projects to expand their results beyond their borders. Relations between the Afghan AES and complementary organization relations were weak during the occupation.

Table 31 contains recommendations of respondents regarding relationships between AES and related departments within and outside the Ministry of Agriculture. Close to 30% of respondents recommended that the relationships should be guided by a common goal of increasing yields. The relation between AES and affiliated departments should be free of any personal, ideological, religious, linguistic and ethnic interests, respondents added. Maunder (1972) agrees with the opinion of the respondents saying "the extension service should not be expected or allowed to disseminate partisan political agenda" (p. 35). Almost 21% of respondents suggested that AES must have strong relation with the Ministry of Planning, provincial and district governors, farmers, NGOs and other related agencies important for the reconstruction of the system.

Respondents believe the nature of extension education requires the organization to maintain in intimate contact with all segments and organizations (rural development, public health, education, literacy development and agricultural cooperative) working for the rural population. Depending upon the scope of its assigned responsibility and program, AES may also work closely with organizations dealing with urban people.

Table 31

Recommendations Regarding Relationship between Extension and Related Departments

Relationships with Related Departments	Number of Respondents	Responses in Percent
Based on how to reach the pre-established goal of increasing yields	24	29.6
Must has strong relation with the Ministry of Planning, provincial & district governors, farmers, NGOs and others	17	20.9
AES should be cooperative to share facilities and equipment	14	17.2
Any assistance or guidance to farmers should go via AES	8	9.8
Close relation between AES, research and educational institutions	5	6.1
Develop an open policy to stimulate and attract others	4	4.9
AES must avoid and prevent duplications	4	4.9
AES should be the leading implementing administrative unit	3	3.7
Should be one AES	2	2.4
Total	*81	**99.5

* Respondents had more than one chance to respond.

**Does not equal 100% due to rounding.

About 17% of respondents recommended that AES should share facilities and equipment with other departments important for the future development of extension. Close to 10% of respondents suggested that any assistance or guidance (local/international) to farmers should go through the AES as an important aspect of reconstructing the system. From respondents' perspectives, AES was the most trusted service by rural people. Maunder (1972) agrees "Extension field personnel who have properly established themselves in the communities enjoy the confidence of the people they serve " (p. 35).

About 6% of respondents recommended close relation between the AES, research and educational institutions important for the future development of the system. Maunder (1972) supports the idea saying:

Liaison between research and extension must first be achieved at a national level before very useful liaison can be expected at an inter country level. Emphasis will be given to measures for strengthening the links between each national extension service and the experimental station. (p. 37)

Four other categories (develop an open policy to stimulate and attract others; AES must avoid and prevent duplications; AES should be the leading implementing administrative unit; and should be one AES) attracted the support of less than 5% of the respondents.

Respondents believe in strong and close linkage between AES, research (Ministry of Agriculture) and academic institutions (Universities) within the country. This link was/is so loose and informal not specified in policy. The agricultural and veterinary colleges of Kabul University were mostly theoretical. Because international relations with advanced academic institutions were minimal and the amount of field research was remarkably low. Fortunately, in late 1960s and early 1970s, the Agricultural College performed some research with the support of the State University of Wyoming and the University of Nebraska. That research completed without any participation of the Ministry of Agriculture. Many of the Ministry officers lacked the sophisticated educational background that would allow them to participate meaningfully in research or policy based upon it. Many Faculty members of the Agricultural College had higher degrees (Ph.D. and M.Sc.), but few in the Ministry of Agriculture. Few personnel were trained in western institutions. Some of the employees educated in eastern European institutions (Soviet Union, Bulgaria, etc.) were not as efficient in research as those in the West.

The Ministry of Agriculture had adequate budget but insufficient personnel. The Agricultural College had qualified personnel but an insufficient budget. Cooperation between these two bodies will bring fruitful results, respondents concluded.

Extension-Research Relation

Extension workers can not answer all questions of the farmers at the farm level. Some of the problems are complicated and require professional laboratory examination. Research institutions assist extension service by providing reliable source of information. According to Maunder (1972), "research specialists usually have a higher level of technical training than extension specialists" (p. 35). On the other hand, extension specialists who work more with people are, or should be, better qualified in human relations.

- An extension service needs close and continuous link with the nation's research stations in order to keep its staff current with the latest improved technologies. Furthermore, such linkage can insure that all recommendations have been adequately considered from economic and social points of view.

Research-Extension Relation

Research institutions need to apply the results of their research broadly. A close connection with the extension service is necessary to insure that promising experimental results receive adequate field testing under normal farming conditions. Moreover, an extension service must have a channel through which the problems of the farmers, particularly those farmers distant from research stations, may be brought to the attention of the researchers.

Extension-Education Relation

From Maunder's (1972) perspectives, extension can give valuable assistance to faculties of agriculture in at least three areas, "curriculum planning, course content, and practical field training" (p. 36). Current curricula where tend to emphasize theoretical

training in basic sciences and technical agriculture. These are important for the potential extension worker as well as for agricultural technicians in other fields. But the extension workers need something more as his main concerns are rural people and their problems. This involves training in human relations, methods of informal teaching, decision making and the application of technical information in solving problems. The technical training of extension field personnel must be broad in order that he/she may deal not only with production but with all of the economic and social problems encountered by the villager.

In addition, the extension service assists educational institutions in organizing course content. When the Agricultural College of Kabul University began in 1957, research was limited. Course content dealt with foreigner countries. The textbooks that were brought from American universities addressed American agricultural conditions and problems. For example, plant pathology covered disease non-existent in Afghanistan, and entomology covered insects foreign to Afghanistan. With the help of the extension service content changed. With the help of expertise of the Universities of Wyoming and Nebraska, course curricula were revised. Crops, livestock, diseases, insects, fertilizers, and features of Afghan rural areas were introduced as topics in the Agricultural College (personal observation).

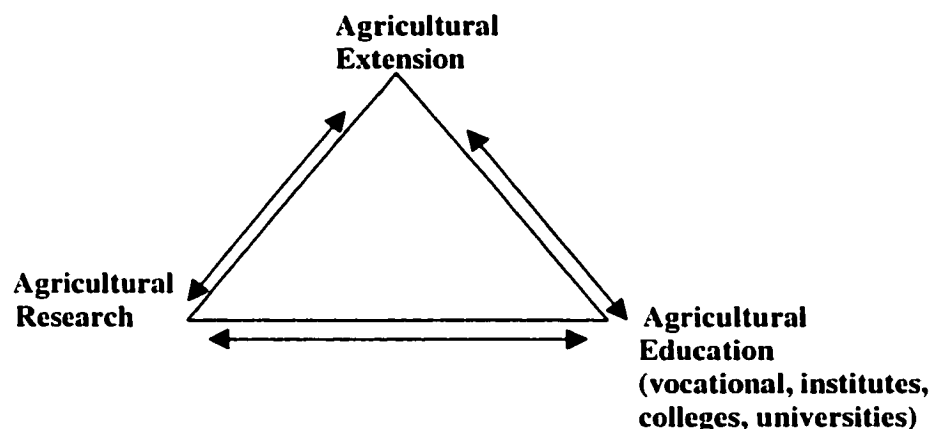
Education-Extension Relation

Extension depends on higher educational institutions to produce properly trained extension personnel, extension workers receiving education and graduate from an academic institutions within or outside the country.

Research-Education Relation

Research programs also depend on capable researchers educated at institutions of higher education. Research institutions help academic institutions by forwarding the results of their experiment to academic institutions as teaching material to teach in the class. Figure 2 gives an idea of such linkage.

Figure 2: Relations between Research, Extension, and Education



One might add that the farmer benefits most from close and continuous links between research and extension. Farmers suffer more than others do when this linkage is inadequate. Too frequently, the problem is seen only in term of its stiling effect on the experimental station or the extension service when in fact it is the farmer who is being made to bear, once again, the cost of others' mistakes.

Most developing countries have an agricultural based economy, with majority of the population living in rural areas. Land and people comprise most of the available resources. Capital is limited and must be generated through development of agriculture or procured from more advanced countries either through credits or foreign investment. Governments of most developing countries prefer to minimize foreign investment to a

minimum while generating capital through the development of their own resources. Thus, agricultural sector development becomes a prime factor in economic development.

Afghan Agricultural Sector

The Soviet occupation has had severe and destructive effects on all physical infrastructures; social management and maintenance organizations particularly of large formal schemes; farming systems served by irrigation networks; and the land base itself. The best information on the status of government machinery pools for both large informal and formal systems indicates that most equipment is in great disrepair. According to UNDP (1993), the processes of rehabilitation can be seen in very general terms as attempting to rebuild three inter-related elements:

1. production capacities and physical infrastructure
2. administrative infrastructure
3. social and economic structures. (p.74)

Table 32 summarizes the suggestions of respondents regarding strategies for the reconstruction and future development of the Afghan agricultural sector. Almost 10% of respondents suggested the revision and improvement of irrigation systems (dams, rivers, rules and regulations) important for the future development of the sector. Cone (2000) agrees with the respondents on the destruction of irrigation systems in Afghanistan "...all irrigation systems, infrastructure, and roads had been destroyed" (pp. 1-2).

Table 32

Promoting the Reconstruction of the Afghan Agricultural Sector

What else to be done?	Number of Respondents	Responses in Percent
Revision and improvement of irrigation system	17	9.8
Encouraging internal and external investment & donation	16	9.3
Strengthening of agricultural bank for low and interest free loans	14	8.1
De-mining of agricultural land	13	7.5
Effective training & educational facilities (schools, centers, colleges)	13	7.5
Stabilize the confidence of the farmers towards AES	11	6.3
Strengthening the department of agricultural mechanization	11	6.3
Involvement of local expertise within international organizations	10	5.8
Introduction of improved varieties and breeds of plants & livestock	9	5.2
Manufacturing of roads, highways, and bridges	7	4.0
Dignified return and settlement of the farmers to their homeland	6	3.4
Superior transportation, commerce and communication	6	3.4
Strong AES is the key to future agricultural development	5	2.9
Establishment of various research labs within the Ministry of Agriculture	5	2.9
Soil survey of Afghanistan to estimate the damage caused to soil structure	5	2.9
Expansion of AES and research departments	4	2.3
Provision of coops, marketing, financing and planning to increase produce	3	1.7
Enforcement of plant protection and quarantine laws	3	1.7
Prohibit internal migration from province to province	3	1.7
Transfer and extension of agricultural knowledge from developed nations	3	1.7
Practice of local traditional group work (Ausher)	3	1.7
Decontamination of rivers, streams, karez.....	2	1.1
Lessen military service for farmers to half and only in Winter season	2	1.1
Strong visual aid department	1	0.5
Total	*172	**98.8

* Respondents had more than one chance to respond.

** Does not equal 100% due to rounding.

Many government offices and irrigation management authorities and structures which were maintained throughout the occupation ceased to operate during the fighting between Mujahideen forces and the pro Soviet government after the departure of Soviet personnel. Many of the systems were badly damaged, and management structures exist only in name (UNDP, 1993). Close to 9% of the respondents recommended encouraging internal and external investment and donation for the reconstruction of the Afghan agricultural sector. About 8% of respondents suggested the strengthening of the agricultural bank to offer low and interest free loans for the future development of the agricultural sector. The agricultural bank used to be the only source for such purposes. It

was not in the position to accommodate and fulfill farmers credit needs. New and efficient sources of funds are necessary respondents commented. The UNDP (1993) supports respondents on the issue: "investment for this rehabilitation will require the involvement of international financial institutions" (p.24).

A little over 7% of respondents suggested de-mining of agricultural land important for the future development of agriculture. According to respondents of this category, several million land mines existed in the country and threaten the lives of a million innocent Afghans. The UNDP (1993) agrees to the complete clearance of explosive from agricultural land stating, "agricultural rehabilitation will be implemented in any area unless there is a reasonable chance that people so doing will not be blown up" (p. 46). A similar percentage of respondents recommended effective training and educational facilities for the reconstruction of the agricultural sector. Almost 6% of respondents suggested a need to stabilize the confidence of the farmers in the AES as important in the reconstruction of the Afghan agriculture. A group of similar percentage of respondents recommended strengthening the Department of Agricultural Mechanization as important for the reconstruction of the sector.

Nearly 6% of respondents suggested involving local expertise within international organizations useful to the future development of the agricultural sector. The UNDP (1993) concerns: "UNOCHA Mines Clearance Program employs almost two thousand personnel, of which 98% are Afghan nationals" (p. 11). According to some of respondents during the follow up interviews, foreign staff members of the assistant organizations are not familiar with the Afghan society. In some cases they do not understand the complexities of Afghan society and are actually intimidated apolitical

issues and will leave those cases to their Afghan employees. In effect, they neglect the very causes of program success or failure. Syed Naim Majrooh, director of the Afghan Information Center and widely regarded as the most objective Afghan source on the Soviet occupation, criticized assistance organizations for lacking knowledge about Afghanistan. Baietenmann (1990) agrees by saying,

Some individuals, with no qualifications, after a few trips to Afghanistan considered themselves experts on Afghan society and began advising governments and fundraisers. (p.72)

Some aid workers were in Afghanistan before the occupation and fail to realize that the country is now a different land. They are insisting that they know Afghanistan as no one else does. Respondents agreed that some expatriates come to work for Afghanistan as professionals and experts but are not experts on their home countries.

Afghans do not offer a socio-cultural environment that is comfortable to foreigners. Aid workers may be interested in participating in the lives of the Afghans with whom they work, but find themselves barred or rejected from the society. Top professionals in development work often find jobs in countries where the social life is more congenial to them. Such people do not choose to work with Afghans. Typically, a novice in the field of development will decide select to work with Afghans to gain international professional experience that is valuable to their future careers. Consequently, Afghan reconstruction programs become learning grounds for fledgling development personnel. Furthermore, some of them change from job to job and from organization to organization. Some hold conflicting interests. In principles, international advisors should stay only as long as takes to train Afghan substitutes.

Almost 5% of respondents recommended the introduction of improved varieties and breeds of plant and livestock important for the reconstruction of the agricultural sector. Less than 5% of the respondents in 15 various categories recommended: manufacturing of roads; highways and bridges; the dignified return and settlement of the farmers to their homeland; superior transportation-commerce-communication; a strong AES as the key to future development; the establishment of various research labs within the Ministry of Agriculture; a soil survey of Afghanistan; expansion of the AES and research departments; provision of coops, marketing, financing and planning of increase produce; enforcement of plant protection and quarantine laws; prohibition of internal migration from province to province; transfer and extension of agricultural knowledge from developed nations; practice of local traditional group work; decontamination of rivers, streams, karez; lessening military service of farmers by half and only in winter season; and a strong visual aid department important for the reconstruction of the Afghan agricultural sector.

Planning the rehabilitation of the Afghan agricultural sector after a catastrophic period is not an easy task. The government of Afghanistan can play an important role by considering all factors (land, irrigation water, human resource, economic, institutions, knowledge, inputs, etc.) involved one way or another in infrastructure development.

Role of the Government

One may review the purpose of government services in extension not to discourage participation, but rather to provide guidelines for change. These guidelines are needed because new opportunities or responsibilities continually arise which demand

decisions about the scope and form of government participation in agricultural extension.

William (1968) summarized the reasons for government participation:

Agricultural extension programs sponsored by the government contribute to economic growth by improving the efficiency of production, not only by improving farm performance, but also by aiding in land use adjustments. There is also some educational content in all government information programs which accompany new policies and proposals. (p. 197)

Table 33 summarizes the responses of the respondents regarding the role of the government in the reconstruction and future development of the agriculture sector.

Eighteen percent of respondents recommended exploring internal and external financial, technical, and educational sources as an important role of the government. The UNDP (1993) agrees that "external assistance would also help finance the government budget deficit, thus reducing recourse to domestic bank financing" (p. 19). About 15% of respondents suggested that the government be practical, not bureaucratic. Respondents further urged the government to delegate authority to employees in their positions. Some respondents believe authority and responsibility in each position should be parallel. There was a large gap between authority and responsibility before and during the occupation, they added.

Table 33

Role of the Government in the Reconstruction of the Afghan Agriculture Sector

Afghan Government's Role	Number of Respondents	Responses in Percent
Explore internal and external financial, technical, educational sources	19	18.0
Be practical not bureaucratic	16	15.2
Develop trust among people & create open atmosphere for people feedback	9	8.5
Conceive and perceive the importance of agriculture in national economy	8	7.6
Assure private investment in agriculture as well as other sectors	8	7.6
Proper program planning to cover the needs of the farmers	7	6.6
Increase and expand area of production (agricultural land)	7	6.6
Suitable irrigation system and new dams for irrigation	6	5.7
Give birth to policies conducive to more planning and less red tape	5	4.7
Support a powerful AES to reach small farmers up to very remote villages	5	4.7
Expansion of agricultural bank to offer easy & low interest loans & credits	4	3.8
Sufficient green houses and nurseries for farmers	3	2.8
Provide improved varieties of crops & livestock, fertilizer, chemicals, etc.	3	2.8
License the decision-making process to experts without any top pressure	2	1.9
Establishment of Ag. Development & experimental centers at district level	2	1.9
Backing of the people to organize themselves within various institutions	1	0.9
Total	*105	**99.3

* Respondents had more than one chance to respond.

** Does not equal 100% due to rounding.

A little over 8% of respondents recommended trust development among people and the creation of an open atmosphere for peoples' comments as important for the rehabilitation of the sector. During the occupation, people were unable to express their essential ideas and suggestions. People went to prison and some did not come back for simple critics.

Furthermore, during the occupation, fences surrounded governmental buildings and all employees were searched every day before entering the buildings to work. Some employees (not members of the party) were searched with extra caution and were mocked verbally during the searches.

Close to 8% of respondents recommended that the government should conceive and perceive the importance of agriculture in the national economy. About the same percentage of respondents suggested the assurance of private as well as other investments

as an important role of the government. According to the UNDP (1993), "the government will need to mobilize domestic revenues by removing existing anomalies in the tax system" (p. 19). Other important roles for the government, suggested by almost 7% of respondents, were proper program planning to cover the needs of farmers and the increase and expansion of agricultural land. About 6% of respondents suggested providing suitable irrigation systems and new dams as important responsibilities of the government in the reconstruction process. The UNDP (1993) agrees with the respondents: "the control and use of water sources, rivers, streams, springs and aquifers is the key to the development of agricultural systems in Afghanistan (p. 12).

Less than 5% of respondents in eight various categories suggested the following as imported roles of the government: new policies conducive to more planning and less red tape; powerful AES to reach small farmers; expansion of agricultural bank; sufficient green houses and nurseries; improved varieties of crops and livestock; licensing the decision-making process to experts without any pressure; establishing of agricultural development and experimental centers at the district levels; and supporting the people to organize themselves within various institutions.

Of utmost importance, however, is the private sector rehabilitation that will require a review of existing government rules and regulations to remove impediments to free functioning markets. The incentive structure needs to be rationalized and private sector access to credit must be streamlined. Available support services and a functioning infrastructure would contribute significantly to the restoration of private sector activity. According to the UNDP (1993), "Government decrees of September 1993 illustrate the

progress of policy reform already underway. Advisory assistance is sought from the United Nations to facilitate this process" (p. 14).

One of the respondents who worked for FAO in Pakistan until mid-2000 supported the establishment of a powerful AES by sharing his observations with the researcher:

There is no provision of other services such as agricultural extension or rural development in Hazarajat (Central Afghanistan). In terms of the aid community, FAO was the most significant provider/supporter of services, with work in crops and livestock. He added, a number of veterinary clinics have been established through the FAO and partner implementing agencies, but still not all districts are so served. Dai Kundi for example, has no clinic. FAO used to give medicines, vaccines and some salary and other operational support, but funding constraints have meant that the levels of support have reduced over recent years. (One of the Respondents observation)

Government's role is very crucial in the rehabilitation of the Afghan agricultural sector by strengthening physical and social infrastructure. The rehabilitation of Afghanistan seems beyond the economic and human resource of the government of Afghanistan. It needs external support in various aspects. Non-governmental organizations (NGOs) already assisting the country can play an important role during the reconstruction process, in implementing effective programs during the reconstruction of the country.

Role of NGOs

NGOs are playing an increasingly important role throughout the Third World in assisting war-related refugees. NGOs of various sizes, backgrounds and expertise have been giving both solicited and unsolicited help in regional hot spots to alleviate the pain that accompanies war and displacement. As local conflicts of varying intensities continue

around the globe, local governments, the UN, and other organizations and agencies look to NGOs for help. The consequences and future implications of NGO humanitarian work in Third World conflicts can already be seen in Afghanistan, where the Soviet occupation of December 1979 created the largest single refugee population in the region and possibly in the world.

Afghanistan is one of the poorest and least developed countries in the world. During the 1980s, a third of the population-over six million-people became refugees. Until the late 1980s, there were virtually no local Afghan NGOs. By 1994, there were hundreds.

Table 34 condenses responses related to the role of NGOs in the process of reconstruction of the agricultural sector. NGOs are new to Afghanistan and entered the literature of the country right after the occupation. Interestingly, 12% of respondents suggested forestalling the direct contact of international NGOs with the farmers as important role of NGOs. Afghan farmers are conservative, devout, semi-literate and not in close contact with foreigners.

Table 34

Role of the Non-governmental Organizations (NGOs) in the Reconstruction of the Afghan Agricultural Sector

The Role of NGOs	Number of Respondents	Response in Percent
Forestall the direct contact of international NGOs with the farmers	21	12.0
Assistance in campaign against narcotics cultivation	16	9.1
Training of extension employees via various academic opportunities	14	8.0
Avoid their religious and political interests, focus on reconstruction	13	7.4
Provide extension units with proper equipment, transport, knowledge	13	7.4
Provide sufficient funds for various agricultural projects	10	5.7
Provide various services, technologies, equipment, inputs for farmers	8	4.5
Provide unconditional aid to Afghanistan (people, government)	8	4.5
Respect Afghan culture and social norms for better outcomes	8	4.5
Training of local population for technical & managerial tasks	8	4.5
Facilitate the safe return of educated Afghans residing out of Afghanistan	7	4.0
Rehabilitate agricultural extension units through entire Afghanistan	6	3.4
Utilize the services of Afghan specialists	6	3.4
Prepare spare parts for various available technologies	6	3.4
Assist farmers to get self sufficient	6	3.4
Direct funds and expertise should be focused on agricultural development	5	2.8
Local NGOs follow AES leadership	4	2.2
Focus on minimizing foreign interference	4	2.2
Prevent goal duplication via normal communication process	4	2.2
NGOs headquarters should be inside Afghanistan	3	1.7
Reintroduce Afghans to a land free of explosive	3	1.7
Prevent and protect NGOs aid abuse by Afghans as well as non-Afghans	2	1.1
Total	*175	**99.1

* Respondents had more than one chance to respond.

** Does not equal 100% due to rounding.

Maulana Fazul Rehman (Ameer, Jamiat Aulema-e-Islam) agrees with suggestion while addressing a gathering on Sunday September 10, 2000 in Pakistan. He alleged that the "US and Europe were funding the so-called NGOs for converting the simple and poor Muslims to Christianity" (Frontier Post, 9/11/2000).

About 9% of respondents recommended assistance in the campaign against narcotics cultivation as an important role of NGOs. They asked NGOs to focus on the training process of extension workers and farmers and pay more attention to minimizing, substituting and eradicating narcotics cultivation. The Mercy Corps International (MCI), an American NGO agrees and provides "the only poppy reduction project being

implemented by an NGO in Afghanistan (BINLEA, 1999, p. 2). 8% of respondents suggested that NGOs should train extension employees by providing various academic opportunities.

A little over 7% of the respondents recommended that NGOs should not pursue specific religious and political interests but focus on reconstructing the country in general and agriculture in particular. Another group of respondents, of the same percentage recommended that NGOs should provide extension units with proper equipment, transport and knowledge as important role of NGOs for the future development of the sector. Almost 6% of the respondents suggested NGOs could play an important role for the reconstruction of agriculture by providing sufficient fund for various agricultural projects.

Less than 5% of respondents in sixteen different categories suggested the following as important roles of NGOs in the rehabilitation process: providing various services and inputs for farmers; supplying unconditional aid to Afghanistan; respecting Afghan cultural and social norms; training of local population; ensuring the safe return of educated Afghans; rehabilitating extension units; utilizing the Afghan specialists' services; providing spare parts for machinery; encouraging farmers' self-sufficiency; focusing on agricultural development; following AES leadership; minimizing foreign interference; preventing goals duplication; locating NGOs head-quarters inside Afghanistan; explosive free land; and preventing any types of NGOs' aid abuse.

Numerous assistant organizations that apparently claim to be non-partisan, unconditional and impartial are actually cultivating their religious, political, cultural and social aims within Afghan society. Such aims may have grave effects for future

generations. Majrooh and Elmi (1986) favor the unconditional assistance of various international donors as desirable for Afghanistan's future:

Unconditional assistance should be sought from friendly and international circles to build the new Afghanistan. Such assistance should be selfless, generous, and sufficient in order to enable the government to motivate the people to rebuild the country. (p. 185)

Ikram (1990) also sides with respondents on the issue of unconditional aid:

The UN, US, Western NGOs and Arab Islamic Relief Agencies are acting in open competition under disparate ideological mandates in Afghanistan. This has the effect of exacerbating Afghan disunity and thus reduces the potential for Afghan national reconstruction. (p. 105)

International interference has affected the country socially and politically. For example, some countries have encouraged further fragmentation through religious and political interference in a country already fragmented ethnically. Some of the respondents mentioned the interference of neighboring countries in the internal issues (religion, linguistic, region, ethnic) of war-torn Afghanistan. Jawad (1991) agrees saying:

Western anti-Communist organizations, UN, multicultural and bilateral agencies, particularly Western and Islamic governments following the American call to *make the Soviets bleed in Afghanistan*. (p. 61)

According to a British Broadcasting Corporation news report of August 5th, 2001, entitled the *Afghan government crackdown on Christian relief*, Afghanistan's ruling government closed down Shelter Now International, a Western aid agency, and arrested 24 of its staff, alleging that the group was spreading Christianity.

The official Bakhtar news agency said: *Shelter Now International was teaching Christianity to Afghans and we found Bible books in a house of its Afghan staff*. Among eight foreigners arrested, six were women and were two men. *The eight employees confessed to the crime and asked for pardon*. (August 5, 2001)

Baitenmann (1990), agrees with respondents by quoting an NGO representative who openly stated that: "NGOs working inside Afghanistan know that it is highly political work we did all over the years, although we knew the aim was to give humanitarian assistance" (p. 73).

After a separate study, Baitenmann (1990) concluded:

By tracing the direct connections between the NGOs and the political interests of their funders I have found that most NGOs working cross-border, and most advocacy NGOs were conscious agents of political interests. (p. 82)

Ikram (1990) looks at the suggestion from another perspective:

Religious organizations have a philosophy to gain ideological and political influence by affecting the religion of our people...either to convert them to another religion or change their Islamic sect. (p. 102)

NGOs' assistance was and still is abused by some people in the neighboring countries.

The respondents were concerned about the situation during filling out the questionnaire.

Details provided during the follow up telephone calls revealed their frustrations:

Most of the assistance provided by the donor countries, agencies, foundations, and organizations to the Afghans do not reach the needy people. First, the needy Afghans can not present their needs to coordinated agencies like [ACBAR and SWABAC]. Some of the war lords, commanders, and ethnic leaders establish the contacts and get the donations. In most cases, the donations do not reach the needy people and were spent on something different. Second, in the neighboring countries, some non-Afghans pretend to be Afghans by presenting fake identification cards to the donors. They get the donations and use it unwisely. (One of the respondents from Pakistan expressed through a telephone interview)

Baitenmann (1990) reinforces the observation in her article *The Politicisation of Humanitarian Aid*. She wrote:

Pakistan and the aid agencies began relying on maliks (village leaders) in some camps for the distribution of supplies due to lack of staff. This resulted in some diversion for personal use, discrimination against

single women and widows the sale of refugee goods to local bazaars and cross-border shipments to the resistance. (pp. 67-68)

NGOs could achieve further success by establishing and strengthening relations with related organizations within the organizational structure of the Afghan government. Future Afghan governments would be wise to capitalize on the ever-growing experience of local NGOs if they wish to see the evolution of infrastructure that truly serves all Afghanistan's diverse and, in many cases, severely traumatized communities.

Relationships Between AES and NGOs

In Afghanistan as well as in other similar countries, extension service is one of the important community and agricultural services required for rural development. Since each of such organizations and services plays a significant role, it is important for extension to accomplish and cultivate complementary rather than competitive relations.

Table 35 summarizes the responses of respondents regarding the relationship between the AES and NGOs for the reconstruction of the agricultural sector. The Soviet occupation ruined the AES removing personnel, equipment, budget and other necessary supplies. The AES also lost qualified and professional workers many of whom went to work for various NGOs. According to the UNDP (1993) "more than 22,000 former Afghan staff are employed by NGOs in Afghanistan and Pakistan" (p. 17). Almost 17% of respondents suggested sharing personnel, facilities, knowledge, information, experience and other resources to achieve positive relationships between the AES and NGOs. From respondents' perspectives, NGOs are and were in a better financial state than the AES. NGOs can employ local and international qualified personnel, purchase improved technologies, and access all material and nonmaterial means of production.

Unlike NGOs, the Afghan Agricultural Extension System has insufficient personnel, equipment, budget and resources. The Afghan AES, unlike NGO, has comprehensive knowledge about the social, economic, cultural, educational and climatic characteristics of the area. Respondents concluded that close relations between AES and NGOs would result in easy access to various resources.

Table 35

Relationships between NGOs and AES to Promote the Reconstruction of the Afghan Agriculture Sector

Relationships Between AES and NGOs	Number of Respondents	Responses in Percent
Sharing personnel, facilities, knowledge, information, experience, ...	19	16.9
Training of extension employees in various levels	15	13.3
Mutual trust, cooperation and setting common goals	14	12.5
Financial support and volunteers from other countries	11	9.8
Relations based on how to achieve goals, not on political interest	8	7.1
Working under single administration	8	7.1
Providing market for the surplus products	8	7.1
AES facilitates further participation for NGOs	8	7.1
AES leads local NGOs without touching their economic benefits	7	6.2
Close relation to prevent overlaps	5	4.4
AES publicizes NGOs activities in the regions	4	3.5
Prepare comprehensive and coherent plan	3	2.6
In the long run, AES take over NGOs activities	2	1.7
Total	*112	**99.3

* Respondents had more than one chance to respond.

**Does not equal 100% due to rounding.

About 13% of respondents recommended training of extension employees at various levels as a sign of a fruitful relationship between the AES and NGOs. A little over 12% of respondents suggested mutual trust, cooperation and setting common goals as important for the relationships between AES and NGOs and the reconstruction of agriculture. Almost 10% of respondents recommended financial support and volunteers from other countries may cause close relationships between AES and NGOs. Respondents believe the sincerity of some countries' humanitarian aid as demonstrated by

volunteer efforts following earthquakes, fires, floods and diseases occurred in various parts of the globe.

Afghan NGOs do not have the opportunity to hire qualified personnel but they may be in the position to organize volunteers for physical work. For instance, if international volunteer designs a bridge canal or dam for irrigation the local NGO can help by managing volunteers as physical force, respondents ended.

Close to 7% of respondents suggested that the relationship between the AES and NGOs should be based on achieving shared goals, not political interest. Such relations will strengthen the reconstruction of the agriculture, respondents added. Over 7% of respondents recommended that having the AES and NGOs work under a single administration would contribute to the future development of the agricultural sector. Nearly 7% of respondents suggested that the AES and NGOs' relationship should be based on searching for markets for the surplus production. Another 7% of respondents recommended that the relationships between AES and NGOs should be close enough to allow the AES to facilitate additional NGO participation. About 6% of respondents suggested that the relationships between the AES and NGOs should be such that the AES could lead local NGOs without influencing their economic benefits. Respondents accepted that such relationships would expedite the reconstruction and future development of the agricultural sector.

Less than 5% of respondents in four different categories recommended: close relations between AES and NGOs to prevent duplication of services; AES publicity of NGO activities in the regions; a comprehensive and coherent plan; and in the long run, AES take over NGOs activities for the reconstruction of agricultural sector.

Agricultural extension systems are established on the assumption of importing and motivating changes in the attitudes and practices of farmers. In achieving such an important goal, other institutions and services like schools, public health units, religious groups, NGOs, agricultural products merchants and numerous other organizations also take an active share in activities affecting farmers and other rural people.

Role of Rural People

It is important to continue focusing on interventions that rebuild mechanisms for people's participation in rehabilitation and future development and which provide incentives to disengage from conflict; for people to meet peacefully and discuss points of common interest rather than issues that divide; and to ensure that the concerns of the most disadvantaged are adequately taken care of.

Agriculture is basic to the economy of most developing countries. With the exception of a few countries with rich mineral resources, most must depend on agriculture for food or fiber for consumption by its own population and to generate foreign exchange or to accumulate capital. Individually and as a community, farmers must produce a surplus of food or fibers to exchange for products and services not produced locally. To achieve this, farmers should be exposed to various improved practice and skills. In Afghanistan, the Agricultural Extension System had the responsibility to expose farmers to various technologies. Farmers played their roles by expressing motivation and changing their attitudes towards improved means of production.

Table 36 summarizes the responses of respondents connected to the role of the people in promoting reconstruction of the agricultural sector. A little over 27% of respondents recommend the return of the farmers to their farms as their important role for

the reconstruction of the agricultural sector. Millions of Afghans residing as refugees in neighboring Pakistan, Iran and other countries are interested in returning to their home country. The tendency of villagers to take flight after the first aerial bomb has been reversed, some of respondents added.

Furthermore, refugee camps in Pakistan and Iran have lost their attraction. People want to stay in their villages as long as the conditions are not totally impossible. According to Majrooh and Elmi, refugees are now saying: "Better to die at home than to vegetate in the refugee camps" (1986, p. 154).

About 14% of respondents suggested sharing available resources by the rural people as important for the reconstruction of the sector. Almost 10% of respondents recommended people putting aside their differences as an important role for the future development of agriculture. Jawad (1991) agrees to the issue of the internal ethnic, linguistic, regional and other differences among the various Afghan groups:

Different ethnic and tribal groups have come together and have learned how to live beside each other on the basis of peaceful coexistence through the war. Jawad further supports, in order to safeguard their social values, i.e. honor, dignity and pride, both refugees and residents have helped each other more than they would have been before the war. (pp. 75-76)

Table 36

Role of the People (Rural) in Promoting the Reconstruction of the Afghan Agriculture Sector

Role of the Rural People	Number of Respondents	Responses in Percent
Return back to their farms	40	27.5
Share their resources	21	14.4
Put a side their differences	14	9.6
Contribute in controlling narcotics	13	8.9
Organize themselves in coops and councils	13	8.9
Utilizing farmers' knowledge of local conditions	11	7.5
Farmers are the main characters in the reconstruction process	11	7.5
Farmers must take part in de-mining	9	6.2
Farmers should be part of the decision making process	8	5.5
Farmers should contact government and related agencies	5	3.4
Total	*145	**99.4

* Respondents had more than one chance to respond.

**Does not equal 100% due to rounding.

Almost 9% of respondents suggested people contribute in controlling narcotics as their important role for the reconstruction of the sector. York (2001) supports the substitution of narcotics with alternative crops saying:

If the UN is unable to provide substitute crops, wheat seeds or whatever, people will start producing poppies again in one or two years. (The Globe and Mail, May 8, p. A 14)

Close to 9% of respondents suggested peoples' role in organizing themselves in various cooperatives and councils as important for the future development of agriculture. A little over 7% of respondents recommended the importance of using farmers' knowledge as an important role for the reconstruction of the sector. About 7% of respondents identified farmers as the main character in the reconstruction process of the agricultural sector.

Almost 6% of respondents suggested farmers' participation in the de-mining process as an important role during reconstruction of the agricultural sector. Nearly 6% of respondents suggested farmers being part of the AES decision-making process

important for the reconstruction of the sector. Contrary to the specialists expectations, some farmers do not want to participate in extension decision-making and program planning processes, some of respondents commented during telephone follow up. From the farmers' point of view there may be good reasons for not participating. As Sofranko (1984) supports:

Participation can be costly, take time away from other activities or involve travel and other expenses; it may also expose farmers to criticism or ridicule by other members of the village, especially if the activity is new or controversial. (p. 67)

Some people do not become involved because they feel their participation is not wanted. Women, for example, despite their dominant role in agricultural activities, have not been encouraged to participate in many Afghan AES projects until recently.

Religious, cultural and social norms currently and even before occupation did not encourage women to participate in extension plans and decisions, respondents added.

Less than 5% of respondents suggested the importance of farmers' role in maintaining regular contacts with government and related agencies for the future development of the sector. Respondents have asked rural people to stay in regular contact with appropriate agencies and share their knowledge on local issues with the change agents (extension agent, community development agent, family planning agent). An extension worker's task of getting farmer participation in planning change will likely be difficult.

Majrooh and Elmi (1986) comment that "People will be quite willing to work on their land, build their dwellings, as well as carry on their business. They will lay down their arms and take up shovels and sickles" (p. 185).

The Agricultural Extension System and other development organizations dealing with the rural population need farmers' cooperation during the development programs. The rural population plays positive roles by offering material, human, institutional and in some cases monetary resources. Development organizations should consider even small opportunities in these regards. Farmers' attitudes toward importing changes in the area is fundamental. Agricultural extension or any other agency with a similar agenda must value and consider the attitudes of the residents.

Farmers' Attitudes

The effects of the occupation on social attitudes have been at least as severe as the destruction of the physical infrastructure. For agricultural development to occur, the knowledge and skills of farmers must keep increasing and changing. As farmers adopt more and more new methods, their ideas change. They develop a new and different attitude toward agriculture, toward the natural world that surrounds them, and towards themselves. Their early successes in increasing production increase their self-confidence. Their increasing contacts and transactions with merchants and government agencies draw them into closer acquaintance with the world beyond their villages. They increasingly become citizens, full members of the nation. It is a basic purpose of agricultural extension in its truest sense (Mosher, 1966, p. 10).

Table 37 summarizes respondents' views related to the impact of the occupation on the attitudes of the farmers. A little over 25% of respondents believed enmity was the major impact of the occupation. Afghanistan is a tribal society, respondents emphasized, with a long history of inter tribal and inter ethnic conflicts and issues.

Those differences were to some extent suppressed prior to the occupation. For example, before the occupation, according to a decree from the President's office, Afghans were forbidden to use the name of a geographical area and the name of a tribe (province, district, village, popal, barakzai, alokozai, hotak, babarr, kakar..) as a family name. The decree attempted to eliminate competition between tribes and foster an identity as an Afghan. This was working very well, said respondents. After the occupation, numerous organizations (ministries, unions and associations) representing various tribes and minority groups appeared. Campaigns and propaganda proliferated to establish who belongs to the majority or to the minority, and who had the power or who belonged to the oppressed.

Table 37

Impact of the Occupation on the Attitudes of Afghan Farmers

Occupation and Farmers' Attitude	Number of Respondents	Responses in Percent
Enmity	28	25.4
Loss of trust on government	17	15.4
Destruction	16	14.5
Most of the young farmers became war addict	8	7.2
Last their interest in farming	6	5.4
Farmers being away from the farms as refugee or jihadi forces	6	5.4
Converted the farmers to worriers	5	4.5
Soviet people & government compensate Afghans for all losses	5	4.5
Invoked their nationalistic behavior	4	3.6
Developed strong relation with the resistance group	3	2.7
Rural population became more self-reliant	3	2.7
Gained more knowledge about weapons than Ag. Technology	3	2.7
Forced to accept narcotics as the main crop to survive	2	1.8
Farmers became more polarized	2	1.8
Victory	2	1.8
Total	*110	**99.4

* Respondents had more than one chance to respond.

**Does not equal 100% due to rounding.

Respondents believed that centuries old tribal and ethnic issues had resurfaced. Soviet supports and resisters organized groups according to ethnicity, minority status or other parochial criteria, groups, etc. Afghans province in the south were pitted against another province in the north. Alternatively, eastern Afghans opposed west. During the occupation, Afghans either belonged to the former pro-Soviet government or joined opposition. Afghans groups organized by tribal, ethnic or linguistic characteristics. They were and are still fighting each other in different geographical regions, speaking different Afghan languages, and belonging to different sects of Islam. According to the respondents, the issue is getting hotter and hotter. They believe it may require efforts and organizations more than agricultural extension.

About 15% of respondent's attribute the loss of trust in government to a destruction of confidence in intellectuals, which caused a huge, gap between people and government some of the respondents explained. Furthermore, some of the respondents who were in close contact with the farmers before fleeing the country commented:

This is all because of the educated population. They were encouraging young and innocent Afghans to participate in strikes and demonstrations against former monarchy. Is this what they wanted for Afghanistan and the people of Afghanistan? (summary of some respondents views)

That is why today the number of schools and the students are limited. Women as half of the population cannot attend school, respondents confirmed.

Close to 14% of respondents suggested that the occupation fostered a destructive attitude in the farmers. People expressed their opposition and worries to the system by destroying government property (bridges, buildings, power generating stations, etc.).

Furthermore, respondents believed that the Marxist trend was an urban phenomenon and the party (PDPA) recruited its members mainly among rural students and teachers. The Afghan population, however, blamed all the modernizing changes for the rise of Marxism. According to Majrooh (1988), "the favorable attitude of the people towards the modern schools reversed and changed overnight" (p. 85). People stopped sending their children to schools. In the countryside, the school buildings became the Communist Party headquarters and were targets for resistance attacks. Only in Soviet-controlled cities, especially Kabul, did schools continue to function but at less than half their capacity and with considerable but still resorted Soviet influence.

Majrooh (1988) agrees with respondents:

The majority of the urban population living under the direct control of the occupation forces have the same negative attitude towards the regime and its educational methods as the rural population. (p. 86)

Furthermore, nearly 7% of respondents suggested that most of the young farmers became "war addicts". About 5% of respondents said that young people lost their interest in farming. Another group of respondents of the same percentage suggested a shift of young farmers to become war devotees, join the Jihad (holy war) or left the country as result of the occupation. One of the basic tasks for the future AES will be to return war devotees back to their farmer livelihood, respondents added. These farmers thought their land would be confiscated and changed to the Soviet Union's model of collective farming. According to the UNDP (1993), "young Afghans previously engaged in a war of liberation have little inclination towards a life of agricultural or farm labor" (p. 43).

In addition, one of the respondents told me a story connected to the interest of the young generation when he was in Pakistan in the (late 1980s). This is a true story from a classroom in a refugee camp in Pakistan:

The classroom was full of young Afghan boys armed with colored pencils and empty sheets of paper. They were told to draw pictures about their future, so from their memories and dreams they began to depict the scenes they imagined. The expected images were revealing-airplane pilots, tanks helicopter gunship pilots, Mujahideen with big guns, etc. However, in the pile of the papers, one had an image that was distinctly different than the others. It was a picture of bright flowers, some trees and a green garden. When the teacher began to talk and look through the pictures with the children he discovered that amid this room full of future fighters and Mujahids and pilots there was only one who would like to be a gardener. The question was asked: *How will you eat then and where will you get your food?* The answer came back: *we have our rations.*

Moreover, data produced by the Afghan Survey of Agriculture (ASA 1988/89) suggests a 19% drop in available farm labor and skewed population ratios with low numbers in the 10 to 20 years old age group.

Less than 5% of respondents in nine different categories made the following suggestions or observations about the effects of the occupation: farmers have become great worriers; Soviet people and government compensate Afghans for all losses; the occupation evoked Afghan nationalistic behavior; the occupation developed strong support for the resistance group; the rural population has become more self-reliant; young farmers have gained more knowledge about weapons than agricultural technology; farmers have been forced to accept narcotics; farmers have become politically polarized; and victory by defeating the Soviets.

Respondents believe Afghanistan and its people will never be able to afford the losses caused by the occupation. Kamrani (1988) agrees: "the cost of the Soviet war in Afghanistan has been enormous in lives and property and the Soviet Union must pay war reparations cost" (pp. 31-32).

Frank (1988) agrees that poppy cultivation and production has increased. From his perspective, the major reason for the increase and growth of poppies in Afghanistan are the Pakistan refineries and drug dealers close to the border who are willing to buy any amount of raw opium and hashish produced in Afghanistan. He estimated there are more than 200 heroin producing labs along the Afghan border in Pakistan. In 1988, these labs produced 150 metric tonnes of heroin with 80% purity, he added (1988).

MacDonald (1992) has a somewhat different view of the drug problem. He believes that Afghanistan has history of illicit drugs, most of which were used for medical and culinary purposes inside the country. Afghanistan has never had problems as serious as those its neighbors have had. During the 1970s, however, Afghanistan was a favorite place for many western hippies. Based on an 1973 estimate, 5,000 to 6,000 hippies were living in Kabul city, he added (1992). Drug use was encouraged in the hippie sub-culture.

Farmers' attitude toward the extension of improved technology is crucial. It determines the extent of adoption as well as rejection of modern technology. Agricultural extension as well as other development organizations should be extra cautious as to how to direct such attitudes.

Changing Farmers' Attitudes

The main purpose of an extension activity is to introduce change practically in farming practices. An effective program of extension includes a synthesis of technical and practical knowledge, and provides means and channels of communication between farmers and administration. At one end of the channel is farmers' knowledge and on the other end is scientific information and administrative authority. Before and during this process of change, AES staff needs some knowledge and understanding of social sciences (sociology, cultural anthropology, or social psychology). From Maunder's (1973) point of view,

Social sciences can therefore make a contribution to an extension program after it is launched, while it is in operation and while it is in preparation. (p. 10)

Table 38 includes the responses connected to the role of AES in changing attitudes towards agricultural practices. About 18% of respondents suggested it was important for AES to regain the trust of the people to bring changes in farmers' attitudes. The Agricultural Extension System used to be a very strong link between government and rural people, respondents added. Maunder (1973) agrees saying that "extension field personnel who have properly established themselves in the communities enjoy the confidence of the people they serve" (p. 35).

Close to 11% of respondents suggested that the AES could change farmers' attitudes by regular campaigns and performance of various demonstrations. Sofranko (1984) agrees with the respondents when he says, "getting farmers' interest is through the use of convincing and realistic demonstrations and trials" (p. 67). The main goal of changing farmers, attitudes are to encourage agricultural change by using improved practices, respondents added. They further believe that extension workers are facing

some obstacles while changing farmers' attitudes. Some of the obstacles reside within farmers themselves and their immediate culture, like traditional values and beliefs, illiteracy, lack of motivation, low skill levels and limited aspirations. Traditional values, beliefs or cultural practices encouraged farmers to be unconcerned with improvement, unwilling to take risks or unable to take advantage of existing opportunities and use existing technologies. The extension service has to organize programs that match the value and beliefs of the targeted farmers and explain the content of the program clearly.

Table 38

Role of the Afghan AES in Changing Attitudes towards Agricultural Practices

Role of the AES	Number of Respondents	Responses in Percent
AES has to try to regain the trust of the people	30	18.1
Campaign and perform various demonstrations	18	10.9
AES must concentrate on farmers' education	13	7.8
Involve farmers as partners in program planning & evaluation	11	6.6
Use various intrinsic and extrinsic incentives	10	6.0
Target opportunities for women and youths	9	5.4
Encourage rural people to participate in reconstruction process	8	4.8
Promote, recognize and apprise value system of rural and urban	8	4.8
Should find and transfer solutions to farmers problems	7	4.2
Encourage traditional crops instead of narcotics	7	4.2
Facilitates the access of farmers to services, technologies, training	7	4.2
Support farmers involvement in decision making process	5	3.0
Farmers need a hand of help, AES should render this help	5	3.0
Extra efforts in returning former AES employees on job	5	3.0
AES employees must listen to rural population	5	3.0
Provide proper vehicles for transportation	4	2.4
Government support to AES is the key to change farmers attitude	4	2.4
AES has to deal with all farmers in all villages in the country	3	1.8
AES has to consider farmers' conservatism while dealing with them	2	1.2
Total	*165	**99.2

* Respondents had more than one chance to respond.

**Does not equal 100% due to rounding.

Another type of obstacle, such as the economic status of the farmers belongs to the farm environment. Are farmers economically motivated, and are they responsive to prices and various infrastructural alterations. The Government of Afghanistan through

agricultural extension must use possible financial sources: international donors, organizations, agencies and foundations provide farmers with proper credit and low interest loans.

About 8% of respondents recommended that the AES must concentrate on farmers' education while encouraging changes in farmers' attitudes. Almost 7% of respondents suggested that AES could play a better role in bringing changes in farmers' attitudes by involving farmers in the program planning and evaluation process. Their involvement could encourage their interest and confidence towards agricultural extension programs, respondents added. 6% of respondents suggested AES should use various intrinsic and extrinsic incentives to change farmers' attitudes towards improved practices.

A little over 5% of respondents suggested that the AES can bring changes in farmers' attitudes by providing proper opportunities for women and youths. Traditionally, women undertake an extensive range of agricultural activities in Afghanistan. What is socially acceptable as women's work is likely to fluctuate under the present circumstances of war, lack of male labor, large numbers of widows and differing interpretations of Islamic tenets. It is important that assumptions about roles of women are avoided, especially those which would limit women's active involvement in the rehabilitation process or negatively affect their power and influence within the household and community. According to UNDP (1993),

Women in rural communities are often proud of their agricultural skills, keen to learn more and confident of their ability to make a success of new ventures. This presupposes that the development activity has been selected with the private participation of the women themselves. (p. 7)

Women in agriculture are not treated as a separate issue in the strategy for the agriculture sector. This avoids the danger of marginalisation but contains the risk that women will be ignored. All staff involved in the reconstruction and future development process must be aware of the central role of women and ensure that their needs are considered. Agricultural extension must include women as one of its main scopes and responsibilities. AES must avoid consorting pattern of men talking to men about women as the only basis for action. There are many well-qualified Afghan women who can be employed as counterpart staff and this should be a priority. UNDP (1993) agrees that "numbers of women staff in implementing NGOs should be considered as a part of the selection process" (p. 8). UNDP (1993) further believes "it is recognized that working with women in Afghanistan is a sensitive issue but there is nothing to suggest it is an impossible task" (p. 8).

Rural young people are another major client group that former agricultural extension programs did not consider adequately. Million of young people residing in rural areas are a significant and untapped resource available to assist in the reconstruction process in Afghanistan.

In most developing countries, including Afghanistan, few young people from the farms and villages have the opportunity for secondary education qualifying them for matriculation in technical schools and universities. Consequently, most candidates for jobs in extension, agricultural teaching and the technical departments of the Ministry of Agriculture lack a rural background, agricultural skills and understanding of rural people. They only know such what they learned in school and when they become teachers and technicians. The gap widens between technical knowledge and its practical application on

the farm and in the villages. Maunder (1972) suggests two lines of remedy and both should be taken concurrently.

The first is to provide greater opportunity for rural youth to obtain higher education and the second is to relate higher agricultural education more closely to the job requirements of the graduate. Extension is more immediately concerned with the latter approach. (p. 36)

Special efforts are needed in agricultural extension education and training programs to include a much higher proportion of rural young women. Furthermore, traditional home economics programs need to be broadened to include agricultural and income earning skill training. Agricultural schools, colleges, and universities that prepare extension personnel need to make a greater effort to attract female students, especially to work with farmer women. Respondents further want AES to facilitate the participation of rural people in the reconstruction process.

Less than 5% of respondents in 14 various categories suggested: encouraging rural peoples' participation; apprise value system; solutions to farmers problems; replacing narcotics; providing access to different services; encouraging farmers' participation in decision-making process; restoring former AES employees; listening to the rural population; providing proper transportation; government support to AES; ensuring AES contact with all villages; and that AES should consider farmers' conservatism as important in changing attitudes of the farmers towards improved agricultural practices.

Respondents believe that agricultural extension can not solve all agricultural related problems of the farmers. Many problems are complicated and beyond the knowledge of agricultural extension workers. The extension service must have a channel through which other resources can be used to solve the problems of the farmers. One

requirement is to have close relations with such professional departments as research centres.

Agricultural extension might be expected to perform an almost unlimited number of roles, including advocate, teacher, organizer, enforcer of regulations, planner, catalyst, coordinator, fee collector and communication specialists. One of the major difficulties for extension from Sofranko's (1984) perspective is that "roles are often poorly defined. Roles may be vague or so broadly defined and with such high expectations that no one could hope to accomplish something" (p. 72).

During the Afghan conundrum, due to the lack of central government in the country, economic infrastructure did not repair for the last two decades. Despite religious and social norms, a majority of farmers adopted whatever variety or breed of plant including narcotics that would generate a quick income. Agricultural extension as well as other organization involved in the rehabilitation process of agriculture should give serious thought to minimizing and eradicate dangerous crops.

Reducing Narcotics Cultivation

The opium poppy has been cultivated in Afghanistan for decades. The crop has been grown as a traditional medicinal plant and chewed opium as one of the few ways to counter the pain of disease, or the misery and privation of a poor farm family in severe mountain winters. Poppies have also been grown as a cash crop for the international drug trade. Its use was apparently not widespread and production was relatively limited, in part due to a lower world demand and less effective marketing and distribution systems, as well as government restrictions.

As a resident of the Arghandab district of Kandahar province, I can remember from the early 1960s when I was in the last years of elementary school. Some of the farmers of the district grew poppies on part of their land. Since growing poppies were illegal, farmers chose a piece of land, that was not exposed to the public and in a secure place. They grew poppies on that land which was surrounded by other crops or trees. The district sheriff office knew about poppies cultivation in some villages of the district. Villages' leaders (Malik) were asked to the district office, where they were told to destroy the poppies. The Maliks went back to the farmers to destroy the crop. Farmers resisted the command by collecting some money from the poppy growers to bribe the district sheriff. The issue was very serious and bribing did not work. I remember the sheriff went village by village and used the oxen of each grower for poppy destruction. (personal observation)

The UNDP (1993) reports that before the occupation "the total area under poppy was estimated at 6,000 ha which yielded a total opium production of about 200 metric tonnes (mt) at an average yield of 35 kg/ha" (p. 34). The area under poppy has increased dramatically since the Soviet occupation in 1979. Estimates for 1992 range from a total area of 21,000 to 57,000 hectares with a production range from 600 to 2,000 metric tonnes of opium (UNDP, 1993, p. 34). One of the more evil legacies of the occupation is that although agricultural production has seriously declined the growing of opium poppies flourishes and opium and its derivatives are estimated to have become Afghanistan's major export commodity.

Table 39 indicates the suggestions of respondents connected to strategies for reducing narcotics cultivation. About 16% of respondents suggested enlightening narcotics growers about its outcomes as a suitable strategy. Bahram (1996) also suggests the "establishment of a particular program which explains regularly the damages of the opium to the people at the local, provincial and national levels" (p. 80). Producers have to learn about the outcomes and impact of the poppy on the society. Because many Afghans

seem not to understand the effects of drug use and hold misconceptions, a drug awareness program will also be of use.

Table 39

Strategies for Reducing Narcotic Cultivation and Increasing Production of Food Crops

How can AES Reduce Narcotics	Number of Respondents	Responses in Percent
Educating people on the consequences of narcotics	18	15.7
Joint efforts of AES, NGOs, UN and foreign governments	18	15.7
Use of key persons of the community	11	9.6
Government has to subsidize various crops and livestock	10	8.7
Creation and provision of alternate job opportunities	8	7.0
Abundant irrigation water will pursue farmers for other crops	7	6.1
Moral and financial incentives for farmers	6	5.2
Full authority and support of the Ministry of Interior to enforce law	6	5.2
AES can explain the negative socio-economic impact of narcotics	5	4.3
Thorough fulfillment of farmers needs and necessities	5	4.3
Over all control of narcotics smugglers	5	4.3
Narcotic is not only Afghanistan problem, it is globalizing	3	2.6
AES can reduce narcotics by performing demonstration of other crops	3	2.6
Introduction of dairy, poultry and fishery products	3	2.6
Provide support only to those farmers not dealing with narcotic	3	2.6
Search proper market for surplus	3	2.6
Total	* 114	**99.1

* Respondents had more than one chance to respond.

** Does not equal 100 % due to rounding.

There are already signs that the decline of poppy growing can be related to the reconstruction of rural production systems. Thus, although rural rehabilitation alone will not be sufficient to eliminate the problem, it will be a major contributor- a powerful and persuasive argument in assembling donor support.

Another group of respondents with the same percentage (16%) recommended joint efforts of different local and international organization as an effective strategy for narcotics reduction. They proposed that the AES together with other NGOs, the United Nations and developed countries have to contribute to and take an active part in poppy reduction strategies. On one hand, Afghanistan is financially unable to pursue such an

expensive program but on the other hand, narcotics cultivation is global and is problem in every single country. Other nations should participate in solutions.

In the Afghan Free Press (AFP) news of Thursday February 22, 2001, the Pakistan Foreign Secretary, Inam-Ul-Haq said:

If the international community does not come forward with its assistance for crop substitution, my apprehension is that in some areas at least the Afghan farmers will decide that since no one is helping, the only thing for them is to restart poppy cultivation. (Haq, 2001, p. 5)

To reduce narcotics, the international community should come forth with massive assistance for Afghan farmers not to revert to poppy cultivation, Haq emphasized.

According to York (2001),

In a report last month, UN Secretary-General, Kofi Annan warned that the Afghan farmers could resume their poppy cultivation because of the world community failure to fulfill promises to help move to alternative crops (without help for farmers, poppy fields will return. (The Globe and Mail, 8 May, May 8, p. A 14)

York (2001), quoted a senior UN official in Kabul in his article "without help for farmers, poppy fields will return" The Globe and Mail, 8 May, p. A14.

We can not just spend our time blaming them (Taliban). If the UN is unable to provide substitute crops, wheat seeds or whatever, people will start producing poppies again in one or two years. (The Globe and Mail, Tuesday, May 8, 2001, p. A 14)

Close to 10% of respondents suggested a strategy to using key persons of the community for reducing narcotics cultivation. According to the UNDP (1993), "strong leadership commitment is a fundamental requirement of a poppy control program" (p.34). Key persons could be progressive farmers, tribal chiefs, local commanders, religious leaders, current and retired government employees, ethnic group leaders, teachers, extension agents, and landlords (Khan and Arbab). Afghanistan is a tribal society by nature,

composed of various ethnic, linguistic and religious groups. Historically, some serious issues have been resolved through their (leaders) mediation. The UNDP (1993) reported popular saying amongst Nangarhar (eastern) farmers: "a good man sins as much as is necessary to keep his family alive, while a bad man sins unnecessarily" (p. 34).

Close to 9% of respondents suggested a strategy that government has to subsidize crops and livestock as alternatives to narcotics. The government subsidy program for certain crops and livestock should devote extra budget to AES and let it deal with the growers. Moreover, 7% of respondents suggested the creation and provision of an alternate jobs strategy for reducing narcotics. Respondents believe narcotics growing was forced on Afghans primarily for economic reasons. According to the UNDCP (2001), "since the war, opium poppy is a cash crop for the rural communities in Afghanistan that has played an increasingly important role in livelihood strategies" (Afghan Online Press, July 4, p.1). As soon as peace is restored and people return to their normal lives, they will replace narcotics, respondents assured. Before the occupation, farmers had the opportunity to grow narcotics, but they did not because of their religion, social values, cultural norms and responsibilities. Poppy cultivation violates Islamic law and ethics. Bahram (1996) agrees:

Poppy cultivation is anti Islamic and against Afghani tradition. Even the farmers producing narcotics believe narcotics cultivation is not humanitarian. (p. 76)

Furthermore, a farmer (Abdulrauf Ghazgai) from Eastern Afghanistan agrees "we accept the idea of banning poppies. We are Muslims and our scholars all say that poppies are not good" (*The Globe and Mail*, May 8, 2001, p. A14).

Almost 6% of respondents suggested providing abundant irrigation water as an effective strategy in reducing narcotics cultivation. Narcotics cultivation requires less water than food crops respondents added.

For a producer who is not a consumer, poppy cultivation has a number of advantages. Seed is locally available, resistant to crop diseases, has low bulk, is readily transported and highly marketable. The crop responds to fertilizer and irrigation and is mostly grown on land irrigated preferentially from springs, karezes (local irrigation system) or small river diversions. Planting is usually in autumn at the same time as winter wheat, and poppy is grown as part of double cropping system which includes vegetables, maize, cotton, and other plants which can be planted in spring. Poppy thus competes with winter wheat. Weeding requirements are similar to other crops if technically a little more demanding, and harvesting although labor intensive and time consuming is relatively simple. Residues such as seeds are of use to a farm family for medicinal purposes, pods may be boiled to extract residual opiates, and are then fed with stalks to animals.

Dil Jan Khan (2001), a member of the International Narcotics Control Board, said that the results of the latest survey about poppy cultivation in Afghanistan surprised several members of the board (p. 6). According to Frahi (2001), the poppy cultivation in the eastern province of Nangarhar, had fallen to 61 acres from 47,000 acres. Helmand, the most important province with 104,000 acres poppies last year, had no production this year, Frahi (2001) added.

We checked all the most important parts of Helmand province and found zero, Frahi said, spreading out pictures of fields of wheat that last year had been covered in poppies. (p. 1)

About 5% of respondents recommended moral and financial incentives for farmers as a useful strategy influential for reducing narcotics cultivation. Nearly 5% of respondents suggested using the full authority and support of the Ministry of Interior to enforce laws to reduce narcotics cultivation. Frahi, head of the southwest Asia office of the UNDCP (2001), supports the idea of law enforcement for controlling poppy cultivation. He said: " Afghan government rulers have practically eradicated poppy growing only one season after the area was the world's largest source of opium" (Thursday February 15, p.1). A survey conducted by the UNDCP (2001) on the current acreage of poppy cultivation in Afghanistan reported last month that in 2,200 villages under Taliban controlled there was no poppy cultivation found at all, although only last year Afghanistan was the world's biggest producer. The UNDCP representative for Pakistan and Afghanistan Bernard Frahi told AFP he would "buy a bottle of champagne" for anyone who found anything more than scattered opium plants in the inspection areas (p.1).

Furthermore, the survey found almost no poppy cultivation in the four provinces that last year accounted for 86% of all poppy production in Afghanistan. Although Washington would not let an American join the survey, it did assign a Pakistani expert from the United States embassy. To counter skepticism of the survey results, Frahi said drug administrators at the Canadian and Norwegian embassies in Islamabad and experts endorsed by U.S. embassy had conducted the survey.

Less than 5% of respondents in eight various categories suggested: AES should explain negative soci-economic impacts of poppy cultivation; fulfillment of farmers needs; control of narcotics smugglers; narcotics is global issue; demonstration of other

crops; introduction of dairy, poultry, fish; support only for farmers not dealing with narcotics; and search proper markets for surplus food crops as useful strategies for reducing narcotics cultivation.

Reducing narcotics cultivation is beyond the financial strength of Afghanistan. The government of Afghanistan with the support of international as well as local sources should design and implement suitable strategies to reduce narcotics cultivation.

International Assistance

The primary objective of international technical assistance in agricultural extension is to help a country or nation develop and strengthen its extension services. Extension can contribute to an improved quality of rural life, increased food and textile fiber production to meet world population demands, and enhanced agricultural economic and social development of the countries involved. It is also hoped that effective agricultural extension will strengthen democratic self-government in developing countries including Afghanistan, relieve the tensions caused by disparity of opportunity between classes and between people of different tribes initiated as the consequence of the Soviet occupation in Afghanistan as well as between the people of different countries, and contribute to world stability and restoration of peace.

According to Maunder (1972), technical assistance in extension, like extension education more generally, is built on the principle of self-help. He says, "...the role of extension is to help people to help themselves through educational means to improve their level of living" (p. 5). From his perspective, no foreign agency can establish an extension service and operate it effectively on a continuing

basis. Like other institutions, the extension service must develop to fit the culture and environmental conditions of each country.

Table 40 summarizes the suggestions of respondents related to necessary assistance from international aid agencies. 9% of respondents suggested international aid must concentrate in the expansion of power plants, communication and transportation systems. The road network in Afghanistan, some 2,500-km of highway and 16,000 km of other roads, is severely damaged through neglect of maintenance since the Soviet occupation.

Table 40

Necessary Assistance from International Aid Agencies

International Assistance	Number of Respondents	Responses in Percent
Expansion of power plants, communication & transportation sectors	19	9.0
De-mining of agricultural land	17	8.0
Construction of more schools, universities, vocational and the like	13	6.1
Adequate demonstration (method & result) plots in the villages	13	6.1
Eradication of narcotics by offering various incentives	13	6.1
Construction of new fertilizer plants & reconstruction of the old	12	5.6
Construction and reconstruction of various irrigation systems	11	5.2
Provision of substantial credits by international organizations	11	5.2
Supports extension agent's residency in villages	11	5.2
Provide easy access to technology and improved practices	9	4.2
Construction and reconstruction of training centers in the country	9	4.2
Women and youths development programs	9	4.2
Establishment of research farms throughout the country	8	3.7
Finance different farmers' literacy programs	8	3.7
Further investment in agriculture as well as other sectors	7	3.3
Any help should be compatible with cultural and ethnical customs	7	3.3
An integrated management structure to support Ag. Education	6	2.8
Proper support for developing infrastructure	6	2.8
Help Afghans to regain their farms and other properties	6	2.8
Construction of affordable housing and health care	5	2.3
Avoid recruiting expensive international experts by local experts	4	1.8
Afghanistan needs UN funds, not its personnel	4	1.8
Facilitate the cultivation of non-cultivated land	2	0.9
Pursue agricultural products processing industry	1	0.4
Total	*211	**98.7

* Respondents had more than one chance to respond. ** Does not equal 100% due to rounding.

Reconstruction of the network is of primary importance to facilitate the recovery of other sectors and allow economic activity to return to normal, respondents commented.

According to a report by the UNDP (1993),

About 60% of the highways require significant pavement reconstruction, while the balance requires varying degrees of patching. Twenty-seven major bridges on important road links require replacement; large numbers of smaller structures are damaged or destroyed. The regional road network is in generally poor condition. (p. 25)

Eight percent of respondents suggested de-mining of agricultural land as an important area for international aid. Respondents believe both Soviets and Mujahddin throughout Afghanistan have buried millions of land mines. The widespread use of mines in Afghanistan since 1978 is the major impediment to the return of refugees and travel in the country. It has also contributed in no small way towards creating one of the highest per capita numbers of amputees in the world. The extent and location of many minefields is uncertain, but includes areas around cities and government held encampments during the occupation, irrigation canals and ditches. These were mined to prevent use by Mujahideen raiders. The country was also liberally sprinkled with a variety of anti-personnel mines. De-mining activities must be major part of any reconstruction activity central to any agricultural rehabilitation strategy. This problem is immense and progress is dangerous and slow. Again, it is beyond the Afghan economy and de-mining could be recommended as an important area for international aid to save the lives of the Afghans.

According to Jawad (1991),

So far investigations and field missions in Afghanistan have identified 26 types of mines. One of the gravest threats to civilians in the rural areas is the plastic PMZ, otherwise known as *The Butterfly* designed to maim rather to kill which was scattered in large quantities from the air and cannot be detected through available equipment (used by the UN

Mine Clearance Program) which respond only to metallic objects. Although easily visible, the green brown or yellow colored *Butterfly* can be camouflaged by vegetation or covered in snow. It will be a long and expensive process to clear these and other mines and ordnance from Afghanistan before the widespread re-construction can be pursued. (p. 73)

About six percent of respondents suggested the construction and reconstruction of more schools, universities, and vocational and other educational institutions as suitable areas for international aid. A few institutions have survived some twenty eventful years since Afghanistan became a republic. Over the last more than twenty years these institutions and their employees have been increasingly isolated from the outside world, and have ever been denied access to many rural areas and communities by the occupation. This has been the case in government administration and in higher education, where research has had particularly serious consequences for the agricultural sector. Many countries are caught between administration, education and research and rural realities. In Afghanistan, the gap is unbridgeable. None the less, the institutions continued and people were received professional education. A reserve of knowledge, experience and institutional discipline was accumulated, although much has been lost by a steady outflow of skilled and experienced personnel. However, most of the elementary, secondary and post secondary schools in both rural and urban areas have been destroyed. Majrouh and Elmi (1986), estimated that: "...an average of 78 % of all training institutions in Afghanistan today has been destroyed" (p. 91). This percentage is valid up to 1986. It could be higher by now because of the continue civil war.

Close to 6% of respondents suggested conducting demonstrations of extension to diffuse knowledge about various plants and livestock. Since Afghanistan has a high illiteracy rate among the farmer population, demonstrations are suitable teaching

methods. Respondents agreed. Conservative farmers are likely to learn and trust new information by watching the process. Sofranko (1984) also supports the importance of demonstration and claims that: "one of the best ways of getting farmers' interest is through the use of convincing and realistic demonstrations and trials" (p. 67).

Almost 6% of respondents suggested that international assistance could go toward various incentives to farmers for eradicating narcotics. Nearly 6% of respondents suggested using international assistance to construct new fertilizer plants and build older plants. About 5% of respondents recommended the construction of irrigation systems as the major contribution of international assistance. The control and use of water is central to agricultural production. Before the occupation, irrigated land produced 77% of all wheat and 85% of all food and agricultural crops. An estimated 27-36% of all irrigation systems were directly affected by occupation, not including the indirect effects of neglect and abandonment (UNDP, 1993). Irrigation was identified as a priority for almost every region in the country

Close to 5% of respondents suggested that supporting an extension agent's residence in villages as an important use for international aid. The extension agent is the most important single element in achieving the goals and objectives of the extension organization. In keeping with extension principles, the functions of the extension worker are those of a teacher, trainer, and leader. To fulfill this mission, the extension agent must teach and train farmers to adopt new ideas, improved practices, new skills, a progressive frame of mind, and lead them to higher incomes and living standards. In performing this role, the extension agent needs to mobilize human resources through

self-help and cooperation, and coordinate farmers, development services, and aid agencies operating in the rural areas.

To get the job done, the extension agent must reside in villages. Maunder (1972) believes "...local extension workers must live in the area they are to serve, in order to be in contact with farm people and develop the proper working relations" (p. 208). Maunder (1972) also believes that "rural people are more likely to accept as valid information from an extension worker who lives and works among them than from a stranger" (p. 37). Keeping this in mind, the extension agent needs incentives and motivation. The type and extent of incentives vary depending on conditions within a country. This is suggested by a study conducted by the Asian Productivity Organization (1980):

Some countries reported providing some incentives to the field workers, e.g., India provides house rent allowances and soft loans to field workers, and plans to embark on a nationwide scale of constructing houses for the workers in the villages; Pakistan provides rent-to-own motor cycles to field workers involved in the T&V program; and Japan supplies cars for the field workers at the rate of one car for every three extension workers. (p. 6)

In Afghanistan, extension agents as well as workers from other development units serving in the rural areas are paid an extra 25% of their regular salary under the name (Mantaqaie) regional salary. This only includes government workers outside the capital of the country and the capital of their home provinces. Teachers who taught only in the agricultural schools were awarded with 800 Afghani (local currency. Before the occupation, 37 Afghani = \$US 1; today, 40,000-70,000 Afghani = \$US 1) and 25 jeribs of agricultural land. The land belonged to the teacher while he was teaching. Teachers in other vocational and professional schools (technical, commerce...) were only paid the percentage salary income (personal observations).

Less than 5% of respondents in fifteen categories suggested other important areas for international aid agencies: construction of training centres; women and youths development programs; establishment of research farms; farmers' literacy programs; agricultural sector; help compatible to cultural issues; management structure for agricultural education; development of infrastructure; regaining of farms and other properties; construction of affordable housing and health care; avoid recruiting expensive foreigner experts; only UN funds not its personnel; cultivation of non-cultivated land; and agricultural products processing factories for international assistance.

International aid agencies should try to minimize hiring expensive foreigner expertise by recruiting local personnel, respondents emphasized. Local personnel who are well acquainted with language, social norms, culture and other characteristics of the region will save both time and money for the program. The reconstruction of Afghanistan will also require the active participation of women, who now comprise more than 50% of the population. Rural and urban women have much to offer the reconstruction process as vital members of families and communities. They have particular needs which must be addressed and consider during the rehabilitation process.

Male casualties during the decade of occupation and after led to a dramatic increase in the number of female-headed households. An estimated 60,000 women or more have been widowed. Consequently, the workload of women has increased and diversified because of a reduced male labor force. A report of UNDP (1993) certifies this fact saying:

The major areas in which Afghan females active participation are crucial for themselves, their families and communities are health, water and sanitation (which fall within the realm of traditional female responsibilities), education (especially primary and basic) and income

generation. Income generating activities include: agriculture and horticulture (with a view towards production of goods for sale), animal husbandry, and a variety of home-based industries (tailoring, silk-weaving, and food preparation). These can and should be supported and enhanced through information and technology transfer, local market development and project-specific credit access or loans. (p. 15)

After more than twenty consecutive years of war, the economic infrastructure of Afghanistan is already exhausted. The country in most cases depends on international charity and assistance. Even if peace is restored, Afghanistan cannot afford the reconstruction of itself. It needs the support of international organizations, agencies, foundations, banks, countries, associations, groups and individuals.

Discussion

Suggestions and recommendations made by respondents are partly the result of their honesty and strong feelings towards the rehabilitation and future development of their beloved country. Some of these suggestions are clearly more feasible than others, especially at the beginning of the rebuilding process. In this section the desirability and feasibility of these key suggestions is discussed.

Government Structure

Some respondents suggested that a change of government structure was an important factor for the future development of Afghanistan. They are probably right, but the type and structure of the future government is beyond the scope of this study. Identifying a feasible governmental structure for Afghanistan is problematic because of its ethnic, tribal, religious and linguistic diversity and the absence of infrastructure to deliver government program and services. According to Gregorian (1969):

Nowhere is the difficult legacy of Afghanistan more sharply revealed than in her ethnic mosaic and socioeconomic structure. Linguistic, racial, cultural, and religious diversities coupled with the country's predominantly semi-feudal, tribal, and nomadic social organization, presented great obstacles to the development of a modern state. (p. 25)

The history of political instability and primitive communication systems impeded the development of a homogeneous culture and a unified economy, sustaining and prolonging the parochialism that discouraged national and social integration.

Afghans are in the process of transferring from a six month-interim government to a relatively longer 18-months government. The Loya Jirga (Grand Assembly) will be deciding on the type and structure of such government. This Loya Jirga, includes 1500 representatives of all ethnic, tribal, religious, and linguistic groups. They will be representing government officials, leaders, scholars, commanders, advisors, and female group from inside and outside Afghanistan. Major ethnic and religious groups could form a government coalition for significant development. According to the plan, Loya Jirga will be in session from June 10, 2002 to June 16, 2002.

Some respondents believed in that, any future government in Afghanistan should be acceptable to the Afghan people and their neighbors, Pakistan, Iran, Russian backed Central Asian republics and China. There is reason, however, to be suspicious of the ruling regimes or governments in neighboring countries. People of the neighboring countries did not vote for their current ruling governments. For example, in Pakistan, in October 1999, the democratic government of Nawaz Sharif was over thrown by a military coup led by General Parwaiz Mosharaf. Nobody arbitrated. In the Russian backed republics, nobody voted for the current regimes. They are all headed by former Soviet Union dictators and have not embraced democracy.

Being one of the crossroads of Asia for thousands of years, Afghan history is punctuated by invasions, each having its own particular after-effects. In bringing its own particular ethnic features, each invasion has quite profoundly contributed to the current political mosaic of bewildering complexity. There are upwards of thirty different languages and dialects spoken in the country, and to make matters even more complicated, the different ethno-cultural loyalties transcend Afghanistan's modern frontiers.

Afghanistan makes a good neighbor and a good friend, but not a good puppet. A very recent example is the government of 1979 installed by the former Soviet Union. The government was neither for the people nor by the people of Afghanistan. After ten consecutive years of conflict and resistance the Soviets were defeated and withdrew from Afghanistan. In order to generate a stable government, various avenues should be considered. It is not impossible. There are strong individuals within different tribes and ethnic groups inside the country who did not participate in the wars and have no ethnical, linguistic, tribal, religion, and region discrimination. They believe in peace. They have strong public support among intellectuals and the common public but have no military forces. Any international involvement in forming a new Afghan government should concentrate on these individuals by extending international peace keeping forces rather than supporting any former warlord or imported foreign controlled pawn.

During the Soviet occupation and the reign of Mujahidden, some Afghans worked in senior positions and encouraged the reconciliation process. They worked hard and resisted Sovitization of Afghanistan. They started the regeneration of some of the programs and institutions dropped during the occupation. They are outside the country

and have strong support of some Afghan ethnic and tribal groups. Getting use of such personalities could be another suitable alternate in the process of forming future government.

No single individual is capable of solving Afghanistan's conundrum. Afghans will have to unite. Among ex-patriate Afghans, members of the former monarchy might be the best alternatives. The latest ruler in the family was President Mohammad Daoud (1973-1978), who was assassinated during the Soviet sponsored People Democratic Party of Afghanistan (PDPA) military coup d'etat of April 27, 1978. The only survivor with popular support of the people of Afghanistan is ex-King, Mohammad Zahir Shah, resided in Italy from 1973 to 2002. President Daoud overthrew the ex-king in July 17, 1973. Zahir Shah showed his interest and willing to return to Afghanistan and play an active role in solving the Afghan problem. The ex-king was supposed to celebrate the Afghan New Year (Nourouz, Hamal First= March 21) this year with Afghans in Afghanistan. Due to the security issues, his departure postponed to mid-April 2002. The ex-king, arrived in Kabul in April 17, 2002. He is visiting various leaders of various ethnic and tribal groups in the country. In his first speech addressing the public, the ex-King said: "I am not here to restore former Monarch. I will do anything to bring peace and security in my country". (translated from ex-king's Dari speech, while addressing the Afghan public)

Any long-term solution to the Afghan conundrum has to be based on a comprehensive understanding of the history of Afghanistan and the unrivalled socio-political norms that have long shaped the very character of modern and traditional politics in the country. A great part of the dynamics of a possible solution to the future government structure in Afghanistan, nevertheless, has to be generated internally. Any

prospects of peace would greatly depend on shedding the prevailing belligerent mood in favor of majority and minority ethnic co-existence.

The traditional Afghan Loya Jirga or "Grand Assembly" should determine the pattern and structure of the future government. A Loya Jirga, or Grand Assembly, refers to a national gathering in which matters of national scale and importance are discussed and settled.

Loya Jirga, comprised of elders and tribal leaders from all corners of the country. Loya Jirga has historically been called upon to resolve matters of great national interest. It is the only political process honored and accepted by all the ethnic and religious groups of Afghanistan as the legitimate method to select a representative government that will be recognized and followed by all Afghans. The most promising way to establish peace and stability in Afghanistan is through new, honorable leadership that is selected by the will of the Afghan people through a Loya Jirga.

Similar Jirgas were held on several occasions throughout the history of Afghanistan, deciding on such matters as war on foreign invaders, the acceptance of new ruler, and the acceptance of a new national constitution. According to Dupree (1973), in "1924, 1930, 1941, 1949, 1955, and 1964" (pp. 421, 460, 461, 462, 463, 469, 482, 492, 539), such events took place in the history of Afghanistan.

Former Monarch

The Afghan monarchy has a long history. Different members of different ethnic and tribal groups ruled that monarchy. In this study, respondents refer to the very latest monarchy, ruled by King Mohammad Zahir Shah (1933-1973).

Now after enduring the decade of the Soviet occupation under the Soviet sponsored Peoples' Democratic Party of Afghanistan, followed by the Mujahidden and the Taliban eras, a great many Afghans dream of the former King Zahir Shah (1933-1973). Afghanistan remained one of the poorest countries in the world. Under the King agriculture was the main industry yet was still subsistence and traditional. About 90% of the total population remained illiterate, schools and universities were few in numbers. Most of the underground natural resources were untouched. The communication system was just beginning, paved roads were in short supply and the transportation system was primitive. There was peace, Afghans were not worried about their internal and external security. Tanks, artilleries, and other kinds of weapon were exhibited only once a year (National Independence Day).

Afghans enjoyed freedom, peace, and international relations. Ethnic and tribal conflicts were to some extent minimized. There were members of both majority and minority groups/tribes within the government. One wonders, however, whether the people today can go back to those times by putting the ex-King in power. From one perspective, the quick answer is "yes" because there was peace during his reign. But conditions have changed since then. Most of the Afghan population today is the generation that did not see any part of the monarch. They were born and lived during war. Their evaluations and judgments of current issues are based on ethnic, linguistic, and regional ethics. It is uncertain whether they will cooperate with someone who resided overseas to come and govern. Political parties and other social groups (tribal, ethnic) lost their lives (imprisoned, refugee, amputated, education) and properties (houses, farms, businesses) during the more than two decades conflict. Any foreign arrangement that

exports a regime (future government) to Afghanistan without the agreement of local groups may cause serious consequences. However, one of the important cultural features of Afghans is listening to their elders. No matter how serious the subject is, when their tribal, ethnic, or religious elders ask for compromise or pardon, Afghans will be cooperative. Afghans hope to stop and minimize any biased foreign interference during the nation building process, but the nature of the future government could be facilitated by cooperative elders via Loya Jirga.

Relatively speaking, among all the governments that ruled Afghanistan during the 23 years old Afghan conflict, the ex-King is an appropriate alternate to the Afghan conundrum. He will be further effective under whatever capacity decided by the Afghan National Loya Jirga.

Foreign Interference

Some respondents suggested preventing or minimizing foreign interference in Afghanistan as important for the country's reconstruction. Afghanistan was always the center of interest of world superpowers for geopolitical reasons. The keystone of its foreign policy, *bi-tarafī* (nonaligned), was in place until April 27, 1978 when the Soviet-sponsored coup took place. Afghanistan's relations with its neighbors until this time had never been better. President Mohammad Daoud in his address to the people of Afghanistan on July 17, 1973, announced the underlying principles of his foreign policy.

The foreign policy of Afghanistan is based on neutrality, non-participation in military pacts, and independent judgement of the issues by the people themselves. Emanating from our national aspirations, this policy is designed to fulfill the material and spiritual needs of the people. More than anything else the fulfillment of these

needs requires a world in peace. No country can attain its legitimate national aspirations except in conditions of tranquility. As we in Afghanistan endeavor to develop our country we aspire to the consolidation of world peace and security. The strongest pillars of Afghanistan's policy of non-alignment are its frankness and sincerity which stem from the national free will of the Afghan people. Thus, Afghanistan's friendly relations with other countries will remain their unshakable foundations, and through diplomacy, personal visits, and promotion of international cooperation, efforts will be exerted to consolidate these ties further. It is our hope that these efforts will bear positive and practical results...This regime observes and respects the United Nations Charter, the main goals of which are the welfare of mankind and global peace. (Ghaos, 1988, p. 109)

Preventing foreign interference requires a strong central government supported by all Afghans. Various international efforts are under way to support a broad-based government in Afghanistan. Whatever combination of Afghans compose the future broad-based government, it should be acceptable to the people of Afghanistan. The organizer of such efforts must make sure to minimize foreign interference particularly from the bordering states. Any assistance from their side should be for Afghanistan as a whole and not for a special tribal, ethnic, and religious group.

In addition, some of the respondents mentioned that future government should follow an international policy of neutrality and should not give priority to one nation over another. Neutrality as the foreign policy of the Afghan government must be included in the Constitution. Yet, Afghanistan will be soon in the process of nation building and any donations of money, education, construction, equipment, and so on from any countries or international organizations are welcomed.

Opportunities for Women

Women, as one of the most important human elements, have suffered enough during Afghanistan's conundrum. Any effort to make Afghanistan a comfortable place for them will be further appreciated. Therefore, the central point of this section is that there is a long history of involving women in various governmental programs (medicine, engineers, education, justice, military, journalism), but the decade of 1990s made it difficult for women to participate. Afghanistan is an Islamic country that has given women the right to work, to own property, to have wealth and to be educated. Women can seek employment and work in medicine, teaching, and law. These rights remain the same before and after marriage.

Under the government of Taliban, women's rights were misinterpreted. Women as more than 50% of the total population were denied their natural, political, social, educational, and economic rights. One should truly acknowledge the "temporary" setback women have experienced during the rule of the Taliban.

In early Islamic history, there were no restrictions on women's full participation in the economic, political, and social affairs of society. For example, BeBee Khadija, Prophet Mohammad's first wife was one of the most important merchants of the time. Be Be Aysha, his other wife, was one of Moammad's (Prophet) most important advisers and consultants. In the early Islamic era, women not only participated in various aspects of their society's public sphere, they also had the right to be elected. For example, Omar the second Khalif, appointed a woman to oversee the affairs of the market place. The women also participated and fought in battles.

Through the years, however, women's rights have been dramatically abridged. Islamic societies were male dominated, with no strong women's organizations. Various regimes interpreted the issue of women's rights differently. In the modern history of Afghanistan, women were acquiring more social rights and freedoms. According to Dupree (1973):

After the extended trip to Europe, King Amanullah (1919-1929) had intensified his efforts at modernization. He announced a new series of reforms in late August 1928, before a *Loya Jirga* of about a thousand of Afghanistan's most influential tribal, ethnic, and religious leaders. The reforms included the emancipation of women, enforced monogamy and compulsory education for all Afghans. Amanullah dramatically removed the veil from his wife to symbolize the voluntary abolition of purdah (veil) and announce himself a "revolutionary king". (p. 463)

The 1928 proposals were never implemented, however, for anti-Amanullah elements inside and outside Afghanistan combined to overthrow the king. During the reign of King Zahir Shah (1933-1973), the number of separate girls' schools increased, the university admitted women and women entered the government. Some women became members of cabinet and parliament. Women became doctors, engineers, university professors, teachers, police and army officers, and members of the civil service.

According to some respondents, the position of women during the period of the Peoples' Democratic Party of Afghanistan (PDPA) and the decade of the Soviet occupation was contrary to the norms and traditions of Afghan society. During the Mujaheddin era, (1992-1996) officials pressured women by declaring various decrees. There was no security for women as they faced abuse from Mujaheddin soldiers. People were generally insecure about the female members of their families. Most of those

officials, under the political title of Northern Alliance, are still struggling to recapture power and return to that period.

In November 1994, due to the corrupt government of the time, Taliban (religious student) appeared in Kandahar and captured provinces one after another. By September 1996, the Taliban captured Kabul, the capital, and controlled over 90% of Afghanistan. The Taliban restored security to the regions they captured, leaving Afghans feeling secure about family members and property. The Taliban disarmed all groups in their territory. Despite the fact that Taliban banned women from work and school, women's education and work was considered less important than their security.

Before long, Afghans started thinking about other aspects of their lives such as employment, schools, hospitals, roads, transportation, communication, and so forth. Administering these services was beyond the knowledge of the ruling Taliban and still is beyond the power of the current interim government. Most of the Taliban have never attended a modern school and had no international contacts or experience. Some of them might be visiting big cities for the first time. They can not recognize the value and importance of today's civil necessities. One of the respondents who was visiting Kandahar in 1999 told me what he heard the Taliban's education Minister said during an address to the education department:

We do not need to send students to Engineering College for 4-5 years to become engineer to design and build buildings. They can work under a regular mason for about six months to one year and learn how to build. (a respondent observation while visiting Kandahar)

The Interim government is also facing many difficulties. Because, the government is not selected by the people of Afghanistan and even the Chair of the Interim government did not choose any of his cabinet members. The government is a mixture of various

Afghan ethnic and tribal groups organized by the United Nations. The government is not selected on the bases of knowledge, experience, level of education and so on. Despite all of the above, it is a plus, and may facilitate the road towards future democratically elected governments.

Paid Enrollment and Fees for Extension Services

Respondents suggested that charging farmers to enroll in extension training programs is important for the reconstruction of the Afghan agricultural system. But respondents are looking at the issue from a settled (Western) perspective. Traditionally, education in Afghanistan at any level (primary, secondary, professional, post secondary) has been free. Charging farmers may decrease the number of participants in agricultural extension programs. Moreover, such action may widen the gap between farmers and the government. Since Afghanistan will soon enter the preliminary stages of rehabilitation, all efforts should focus on how to encourage people to return to their homes and farms and participate in the reconstruction process. Of course, this is an expensive undertaking. Afghanistan is not in the position to bear all the costs by itself. International assistance from various countries, organizations, agencies, foundations, associations, social groups and individuals is badly needed.

Return of Former Employees

As the result of the Soviet occupation and the discriminative approach of the Soviet sponsored Afghan government, several million civilians left the country and settled in various corners of the world. Most were average citizens with little wealth and education, although few were highly educated. Of the latter group, most tried to practice

their profession in their new homes. Some of them did, but some were thwarted by the rules and regulations of the host countries. Consequently, they changed professions or simply stayed self-employed, or remained unemployed often living on social assistance provided by host countries.

On the assumption that peace will be restored, some may return to Afghanistan. The process looks possible, but repatriation may not be so popular. To begin with, there is a problem of reintegration. Some Afghans left the country early, some later and some are still in the process of leaving. Those who left during the early years of the occupation (1980s) have spent some twenty years in a completely different social, cultural, educational, economic and political environment. The host country invariably substituted its own culture for Afghan language and culture. Some of the children born and raised outside Afghanistan learned English, German, French, Urdu, Arabic and other international languages. Similarly, some received non-Afghani names, celebrated Christmas instead of *Akhtar*, New Year (January first) instead of *Nourous* and observed Thanksgiving and Halloween. Religious studies in most host countries is not part of the school curriculum, although some families in larger Afghan communities organized religious programs once a week in their own schools and mosques.

When these people decide to return to Afghanistan, they will probably be troubled. If they travel alone and leave their families behind, they may be unable to concentrate on their work. There remains a financial question, "Would the returned professional be paid enough in foreign or local currency to support their families overseas and themselves in Afghanistan"? Some ex-patriates have mortgages, student and other loans.

Based on my conversations with some Afghans in the United States, Europe and eastern Canada, another problem with Afghan returnees is that they are expecting too much. Professionals would like to return if they became at least a minister, deputy minister, governor or the president of a professional department. Such people will help the country, but at a high cost. There are limited high level positions and there are several million Afghans to return. Returning professionals as well as other Afghans must be realistic about the distribution of privileges, concentrating on one common goal of building the nation with whatever skills one has.

For those families that decide to take their children with them, the children need to go to school. Few if any can write and communicate in a local (Pashtu or Dari) language. The researcher is not aware of any plans to establish international schools. Before the occupation there was one American high school and one UN elementary school only in the capital Kabul to accommodate the children of international workers and embassy employees. A few Afghan families also sent children to the American high school, but these families usually included a foreign spouse or children born outside Afghanistan to parents working in Afghan embassies. The fees were prohibitively high for many Afghans. Only those parents who both work for international organizations (the UN or the World Bank for example) can afford the fees. Using international assistance to pay such costs will impede the rehabilitation process.

The return of Afghan refugees will be dependent on the structure and the nature of the future government. Broad-based government represented by various ethnic, tribal and religious groups would encourage the process while a government composed of former or current warlords would slow down the process. Afghans do not want to

witness again the situation of 1992. In 1992, after the collapse of the last Soviet sponsored Afghan government of Dr. Najibullah, the northern alliance killed thousands of innocent Afghans, raped women, and looted individual, private and public properties. Furthermore, such a government will cause poor economy, insecurity and minimum or no international assistance. Even if there is international assistance, it will be going to the warlords, not to the public.

Selection of Extension Model From Another Country

Many countries have enjoyed fruitful results of implementing various agricultural extension models. Afghanistan, as one of the countries most affected by foreign occupation, needs to adopt and apply an appropriate model. For the time being, it does not look practical to choose a model that originates in a specific country. Adoption and application of any development model requires some elementary study and research to find out whether the model is workable. In this particular stage of Afghanistan history, the former agricultural extension model used by the Ministry of Agriculture should be put into practice while efforts continue to develop a model uniquely suited to current conditions and possibilities.

Certain extension models like "University Extension", "Training and Visit" (T&V), " Farm Research," and "Single Commodity" approaches may not be practical at this stage. Any of these approaches have pre-requisites. For instance, the University Extension model requires adequate agricultural colleges. Afghanistan lacks agricultural institutions so can not use this model, although this might be good in the long-term. Training and Visit also needs proper training centers for both farmers and extension

employees. According to respondents, most of the training centers were either destroyed or occupied by military and other security units.

Afghanistan's climate is not suitable for a single crop or livestock. Different regions of the country are suitable for certain crops and livestock. At this moment, however, it might be difficult to provide sufficient personnel and equipment to maintain numerous diverse crops and livestock within the country. Again, this would probably be considered in the later stages of agricultural development. Professionals will have to recommend certain crops and livestock regions.

Foreign Advisors

Due to the Soviet occupation, Afghanistan lost a great number of professional and qualified experts. Some of them were jailed, left the country and joined the opposition against the Soviets and the Soviet-sponsored regime. In either case, they became removed from their profession. Afghanistan needs professional personnel to help with the reconstruction process, but most professionals outside the country have been distant from their field for more than a decade.

Afghans, upon their return to the country, may not be in the position to start immediately. They may need refreshing their knowledge. International expert's service may be an appropriate factor for facilitating the subject. One of the problems likely to emerge, is the cost of bringing in international advisors. Traditionally, a major portion of international assistance is spent on wages, accommodation and transportation of international experts. I believe there will be some volunteer organizations and individuals to offer some kind of services to this war torn country. But if not, attention should be paid to recruiting international advisors for short periods of time to update local workers.

Destruction Costs paid by the Soviets

Some of respondents suggested that the costs of destruction in Afghanistan caused by the direct occupation by the former Soviet Union should be paid by Russia. This is a routine suggestion made by respondents after each war or occupation or conflict. In the case of Afghanistan and the former Soviet Union, there are some differences. First, the Soviet occupation was neither requested by nor endorsed by the Soviet public. Second, occupation was the decision made by a minority political party. Third, the Soviets' current political and governmental structure is entirely against the occupation decade. The current regime condemns the occupation and rejects any responsibility for the occupation in Afghanistan and anywhere else.

Quite probably, as soon as peace returns to Afghanistan, various types of assistance from all over the world will rush in to the country. The Russians (former Soviet Union) will likely also participate. Any assistance to Afghanistan should be processed through the United Nations. This will prevent the biases of certain countries from privileging certain Afghan groups.

The representatives of major Afghan ethnic and tribal groups from inside and outside the country agreed on a broad-based government on December 5, 2001 in Bonn, Germany. This government may not fulfill the political and ethnical needs of some social groups in Afghanistan. It may not be the key to all kinds of problems generated during the more than two decades of conflict. It is a good start. During the conflict, this is the first time Afghans compromise on some kind of governmental structure. The interim government will facilitate the strengthening of current and the transfer and adoption of other development models.

Furthermore, the interim and future governments will pave the way for considering the suggestions made by the respondents during this study. Optimism can go to the active involvement of women in the government. It will encourage women to take active part in the reconstruction and future development of the nation.

Chapter Summary

The general focus of the chapter has been to present the suggestions and recommendations of respondents for the reconstruction and future development of the agricultural sector and Agricultural Extension System in Afghanistan. More specifically, the chapter has presented appropriate and practical suggestions for extension program development, organizational restructuring, budgeting, training and defining responsibilities. It also suggests practical relationships between the Agricultural Extension System and related departments within and outside the Ministry of Agriculture. In addition to all of the above, the chapter covers responses of the respondents regarding the AES encouraging changes on it, role of the people, role of NGOs, relationships between agricultural extension and NGOs, role of the government and role of international assistance in the agriculture and extension development in Afghanistan.

Several themes can be identified from the findings in this chapter. Suggestions are made by a group of Afghan, thoroughly familiar with the agricultural and soci-economic conditions of the country to expand and strengthen agricultural extension programs by gaining the trust of rural people and involving them in agricultural extension program planning. Respondents recommended revising the content of the agricultural extension program to one based on the needs of Afghanistan farmers. A proper budget and

incentives for both farmers and extension workers will likely expedite the process.

Respondents believe that proper organizational structures with decentralized policies and clear job descriptions will help the reconstruction and future development of the Afghan AES. Respondents suggested a comprehensive scope and broad responsibilities to fulfill the needs of the farmers by transferring improved technologies under required skill and proper management. Respondents also support inviting outside experts to determine a suitable scope and responsibilities in the reconstruction process of the Afghan AES.

Furthermore, respondents suggested strong and smooth relations between agricultural extension, research centres, academic institutions and other related departments within and outside the Ministry of Agriculture. They also suggested that relations should be based on achieving shared goals rather than promoting personnel, linguistic, regional, or other issues. Smooth and open communication may control duplication of services and create the opportunity to share various resources.

Respondents believe the future government of Afghanistan must play an active role by exploring internal as well as external financial, educational and technical sources for the reconstruction of the agricultural sector. From respondents' perspectives, the future government has to be more practical and efficient, creating trust among people and reducing the vast gap between people and government through widespread opportunities to express needs, ideas and problems. Furthermore, the government must value the agricultural sector in the national economy by increasing agricultural land, building and reconstructing irrigation systems, designing policies to increase agricultural production and expanding financial organizations to offer free or low interest loans.

Respondents appreciated the humanitarian assistance of the NGOs to the Afghans during and after the occupation. Respondents want outside NGOs to avoid direct contact with the farmers and not to concentrate on religious and political issues, focusing on the reconstruction process instead. Respondents also want NGOs to campaign against narcotics and provide farmers with alternative crops, livestock and fisheries. Training of both extension workers and farmers by enrolling them in various educational programs is very useful for the future development of the agricultural sector as well as the AES. In addition, respondents want the safe return of displaced Afghans and proper use of returnees Knowledge and skills in various sectors. Respondents recommended strong and close relations between NGOs and the AES. Such relations may save time and money, by setting common goals, sharing resources while training and cooperating on other development activities. Due to the close connection between the AES and the rural population, the AES may encourage further participation of NGOs by publicizing NGOs' activities in the area.

People are the major element in the reconstruction of the Afghan agricultural sector. Respondents recommended return of the farmers; sharing resources; and minimizing personal, tribal, regional and religious conflicts. Rural Afghans must organize themselves into local councils and share their local knowledge through active participation in the decision making process. Respondents suggested that animosity, loss of trust in the government and destruction of infrastructure were the most common effects of the occupation on the attitudes of the farmers. Because of the occupation, most young farmers became war addicts, lost their interest in farming and gained more knowledge about weapons than agricultural technology. Due to the close connection

between agricultural extension and rural Afghans, agricultural extension can play a major role in changing farmers' attitudes towards modern agricultural technologies. Agricultural extension can use different incentives and involve more farmers in program planning and evaluation processes. Respondents recommended that agricultural extension try to change farmers' attitudes towards improved technologies by establishing demonstration plots to show the benefits of various new agricultural techniques and by enrolling large numbers of farmers in educational programs.

Respondents further recommended that the AES should change farmers' attitudes towards modern practices by encouraging women and youths to participate in agricultural programs. Women constitute more than 50% of the population and formerly accustomed to various farm activities. The AES must consider women's role in the reconstruction process. There was no central government during the occupation and in the few cases where regional governments opposed, they were not strong enough and were not in a position to control the country as a whole. From respondents' perspectives, the vast cultivation of narcotics is one of the major impacts of the occupation. Respondents believe that the government was unable to control it. They suggested useful strategies for reducing narcotics cultivation. For example, people must understand the side effects of narcotics and joint efforts of various organizations (NGOs, UN, AES) involved in the reconstruction of Afghanistan should be initiated, respondents recommended. The active participation of religious, tribal, and ethnic leaders was suggested as an effective strategy. The majority of Afghans is religious and respects the decisions of their tribal and ethnic elite. Respondents also recommended strong government laws against narcotics and providing farmers with alternate crops and livestock. Farmers have been severely

affected materially, culturally and socially and by the occupation, so respondents recommend government to subsidize certain crops and provide proper financial support. Respondents further called on a world effort to reduce narcotics cultivation, since they believe, narcotics are global problem.

The Afghanistan economy is based on agriculture and the agricultural sector is the most affected by the occupation. Afghanistan's destroyed infrastructure needs sufficient international aid. Various international organizations (UN, NGOs, major banks, associations, foundations, groups, and individuals) can take part.

The discussion section of this chapter includes the desirability and feasibility of some suggestions and recommendations (future government structure, role of the former monarch, foreign interference, opportunities for women, paid enrollment in AES programs, return of former employees, selection of extension model, and foreign advisors) made by respondents for future development of the sector. Furthermore, it discusses the feasibility and possible repercussions of the recommendations. In the following chapter, I present the summary, conclusions, and recommendations of the study.

CHAPTER SEVEN SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The purpose of this chapter is to summarize the study and present conclusions about the impact of the Soviet occupation on Afghanistan's agricultural sector in general and the Agricultural Extension System in particular. The chapter also presents recommendations for the reconstruction of the Agricultural Extension System as part of a more general national recovery program.

This study was designed to assess and understand the impact of the Soviet occupation on the Agricultural Extension System and agricultural sector of Afghanistan. Two broad questions guided the study: (1) How was the Afghan Agricultural Extension System affected by the Soviet occupation and (2) What possible prospects and suggestions could guide the reconstruction process of the Afghan Agricultural Extension System?

Summary

This study was conducted outside Afghanistan in the Department of Educational Studies at the University of British Columbia, Canada. I administered a survey to gather data on the impact of the Soviet occupation on the Afghan Agricultural Extension System and to solicit suggestions for the future development of the system. Ninety Afghans received a formal questionnaire of thirty-four questions (mostly open ended), organized in three parts: demographic characteristics of the respondents, impact of the occupation, and reconstruction of the system. Respondents were agricultural professionals with working experience in the Agricultural Extension System of the Ministry of Agriculture,

indigenous and international NGOs', or academic agricultural institutions and departments related to agricultural extension in Afghanistan. They were well acquainted with pre and post Soviet occupied Afghanistan. In addition to the questionnaire, eight telephone interviews were conducted to clarify and elaborate on survey responses. Most respondents resided in the United States during the period of data collection.

To complement the survey, I consulted documents and publications for facts about the impact of the Soviet occupation on Afghan agriculture and the Agricultural Extension System. These materials were found at the University of British Columbia and other academic institutions in Canada and the United States and on the Internet. Some of the materials were published by Afghan associations, NGOs, the United Nations, and other organizations.

The first part of the study dealt with the demographic characteristics of the respondents including country of residency, age, level of education, date of departure from Afghanistan, pre-post occupation positions, current occupation, and retirement status. Most of respondents were well educated and resided in the United States and Canada. Many Afghans with university degrees (B.Sc., M.Sc., and Ph. D.) left the country in the decade of occupation (1980-1989). The majority of respondents were between the ages of 50 and 59. The survey shows that most of the respondents had been university professors, general directors, field inspectors and agricultural students prior to the occupation. After the occupation, the highest percentage of respondents remained as university professors, while substantial percentages of respondents lost their jobs and became self-employed, were assigned to passive and non-professional positions or became refugees in Pakistan. At the time of the survey, most of the respondents were

self-employed and not retired. Furthermore, some of the respondents had been jailed in Afghanistan for not being members of the ruling party or for holding negative attitudes towards the Soviets and using Western literature and resources; and some left the country in fear of their and their family's.

The second part of the study assessed the impact of the occupation on Afghan agriculture. It sought to determine which aspects of the Agricultural Extension System had been most affected: agricultural institutions, extension programs, the organizational structure, budget, teaching methods, extension responsibilities, relations, and farmers' attitudes. The majority of the respondents agreed that the agricultural sector was not self-sufficient before the occupation, and this group include people who were working in relatively senior positions during the occupation. In truth, however, Afghanistan's agriculture was self-sufficient in some products before the occupation, notably wheat as the main crop in the country.

Most of respondents believed that every aspect of agriculture was affected by the occupation. Some respondents identified the irrigation system and animal husbandry as most affected by the occupation. Soil erosion and horticultural crops were thought to be the least affected. A large majority of respondents mentioned the complete halt of agricultural institutions as a result of the occupation. Agricultural extension training courses for farmers and extension agents organized by subject matter specialists among other institutions were decimated by a steady attrition of staff and equipment. In many cases, buildings were destroyed and remaining employees worked under conditions conducive to low morale.

Agricultural extension also suffered during the occupation. The technical content of agricultural extension programs was replaced by political content. Extension employees often presented non-extension and non-agricultural programs and farmers participated in programs that were anti-Afghani and anti-Islamic. The lack of security in villages left extension workers unable to implement any development programs. A large number of survey respondents agreed that the new regime (represented by the ruling political party) used the organizational structure of agricultural extension to introduce Soviet collective farming systems. Part of this political mandate was to attack traditional land ownership. Furthermore, agricultural institutions needed to serve farmers within the frame of Soviet ideology. Over-all, agricultural extension was a low priority during the occupation. Because of the occupation, financial support from outside the country was replaced by limited Soviet assistance and part of agricultural extension's regular budget was transferred to the military.

Respondents mentioned the reduction and demotion of extension personnel and the focus on young extension agents as the least affected aspects of the former Agricultural Extension System. However, the training process not only in agriculture but in general has been one of the most affected sectors. Inexperienced young party members replaced senior trainers, non-professional (political) courses replaced professional courses, and educational degrees were less valuable qualifications than party membership.

The Soviet occupation created a vast gap between farmers and government. Agricultural extension workers, researchers and educational institutions and other agencies were re-formed on ideological, personal, linguistic, and regional similarities.

Farmers lost their trust in government. They blamed the government for the Soviet occupation. They were expecting tractors, combines, threshers, water-pumps and other types of agricultural and non-agricultural technologies but instead received tanks, rockets and other weapons.

The third part of the study dealt with the future development of the Agricultural Extension System. Respondents identified regaining of the trust of the people and the complete participation of farmers in agricultural extension programs as priorities. They felt that Agricultural extension programs should serve the majority and be based on the priorities of the National plan.

Agricultural extension agents who deal with young and old farmers should be cautious in choosing teaching methods and materials, ensuring that they are compatible with farmers' educational and cultural background and economic circumstances. Most survey respondents believe that short-term courses, seminars, workshops, and conferences are effective methods of teaching. Some suggested the use of high technology (Internet, television, satellite) for effective teaching, but such an approach is dubious given Afghanistan's 90% illiteracy rate.

The task awaiting a revamped Agricultural Extension System is vitally important. The current farming system, for various reasons, does not have the production capacity to fulfill the food demands of the population. Repatriation of more than five million Afghans and natural population growth is likely to increase demand for basic food, shelter and employment. Unemployment and massive hunger are real possibilities. The question of what is to be done to enable the agricultural sector and

agricultural extension to ensure food availability and affordability as well as assist future economic development in the country needs an immediate answer.

Some of Afghanistan's needs are readily apparent. The country requires improved irrigation systems, agricultural mechanization, internal and external investment, a strong agricultural bank, donations and de-mining of agricultural land. Farmers need renewed confidence in agricultural extension and encouragement to return to and resettle their homes.

Any discussion of Afghanistan's reconstruction must consider the role of non-governmental aid organizations. During the occupation, the government of Afghanistan lost control over rural areas and some suburbs close to the centers of the provinces. Non-governmental organizations (NGOs) provided most of the services in these rural areas. NGOs provided some training for extension workers and employees in other sectors. For example, the Swedish Committee for Afghanistan (SCA) trained some agricultural extension agents. International NGOs supported and financed some Afghan NGOs, enabling professional Afghans to use their expertise in various development projects with the participation of locals.

During the occupation and immediately after the Soviet withdrawal NGOs replaced the agricultural extension system by providing farmers with training and services. NGOs engaged in various types of campaigns and worked to reduce narcotics cultivation. NGOs employed a large number of professionals who lived in exile. NGOs are new to the country, and are at times abused, but until the country's politics stabilize, they will be an important part of agricultural extension and agricultural rehabilitation.

Rural people will also play an important role in the reconstruction process by returning to their farms, abandoning their conflicts, and sharing resources during the rebuilding of the nation. They can play active roles in de-mining and decision-making processes. Above all, survey respondents noted that the occupation left farmers full of enmity. During the occupation, religious, linguistic, ethnic, tribal, and regional differences surfaced and encouraged the break-up of the country. Most of the young farmers became soldiers and lost interest in farming. Some of them were born and raised in war. Recruiting this generation into a cohesive and fraternal civil society will be a serious challenge for any future government as a whole, and agricultural extension in particular.

Poppy cultivation is another major concern of the respondents. The Soviet occupation led to failing irrigation systems, the placement of several million landmines, economic upheaval, and the migration of several million rural refugees to neighboring countries (Pakistan and Iran). These conditions encouraged the vast cultivation of poppy to supply the opium trade. Survey respondents want a thorough ban on poppy cultivation and the introduction of alternative crops and livestock. To encourage the latter, they want the future government and international donors to facilitate interest-free or low interest credits or loans to farmers during the initial phases of the reconstruction process. Respondents want the AES to facilitate changes in the attitudes of the farmers toward food crops by pursuing a vigorous campaign and providing demonstration plots. They also asked for active international participation, for the problem extends well beyond Afghanistan's borders.

After two decades of conflict and devastation, all natural and human resources in Afghanistan are exhausted. There is neither the dedication nor finances to pursue an internally resourced development project or program. International assistance in various forms - money, expertise, tools and equipment - is necessary for Afghanistan's reconstruction. Western industrial countries, United Nations, members of the Oil Producing and Exporting Countries (OPEC), World Bank, Asian Bank, and Industrial Bank, NGOs, foundations, groups and individuals can all contribute.

Conclusions

Based on the findings of this study, five general conclusions can be drawn.

1. **Professional Leadership**

There is a need for strong professional leadership in the development of a substantial agricultural base for Afghanistan. Educated people and institutions offer the greatest potential to the economic restructuring of Afghanistan. For the last over 60 years, the country has invested a substantial amount of local and international aid in its economic and agricultural development. Strong professional leadership is required to guide the war-torn nation in the direction of positive redevelopment. A strong well-developed infrastructure determines the economic potential of a nation. Afghanistan, with an agricultural infrastructure largely destroyed by the years of war, may need an extended period of redevelopment to fulfill the dreams of those who foresee its reemerging as a self-sufficient nation.

2. Infrastructure Destruction

Agricultural extension has a central role to play in rebuilding the infrastructure of Afghanistan. Agricultural extension can assist the country in different ways to achieve a wide range of goals. Proper integration of agricultural extension within the social, cultural, educational, and political context of Afghanistan can contribute to the reconstruction of the agricultural sector as well as the country. This is an important challenge for the future Ministry of Agriculture and the Department of Agricultural Extension of Afghanistan.

Proper and well-designed program planning is a prerequisite for economic development. Effective planning requires the active participation of scholars, professionals, and local people in all stages of the process. For example, a lack of participation by farmers in developing, implementing, and evaluating policies, programs, and procedures limits the knowledge available to farmers and reinforces their skepticism about the system. Politically contaminated programs may not achieve their objectives.

3. Agricultural Extension Centres' Occupation

The development of a variety of agricultural extension training centres designed to assist extension staff and farmers in the nation's capital and in different provinces through the country, are required to keep them up-to-date with knowledge and skills. The destruction and occupation of the extension training centres by the military during the conflict has led to inadequate extension staff training, shortages of experienced subject matter specialists, and weak in-service training. Teaching equipment has also been appropriated by the regime of political propaganda. In order for agricultural

specialists to assist in rebuilding the country's economic infrastructure, there is an immediate need to direct adequate resources to the rebuilding and staffing of agricultural extension training centres.

Reconstruction of the agricultural sector or the country as a whole requires considerable professional planning, involving the affiliated agencies and organizations. In the past, ideological reasoning prevented cooperation between agricultural extension, agricultural research (Ministry of Agriculture) and agricultural education (agricultural Colleges, Ministry of Higher and Vocational Education) in the capital as well as in the provinces. It is only through the development of strong professional relations between these agencies that the potential for agricultural redevelopment of Afghanistan can be realized.

4. Suspicious attitude

There is a lack of trust of many agencies within the country. During the occupation by successive regimes, farmers grew suspicious of improved farming technologies. They blamed the government for any destruction caused during the occupation. The occupation also brought to the surface a variety of tribal, ethnic, linguistic, religious, and regional conflicts that had long remained dormant.

The lack of trust of government meant that NGOs took on a new sense of importance. As the government had little access to the more remote areas of the country, NGOs provided Afghans with many basic necessities. NGOs assumed the responsibility for training technicians and professional agents in different sectors of agriculture, public health, education, and the removal of land mines. They also sponsored the construction of

bridges, irrigation systems, roads, campaigns against narcotics, and the development of safe drinking water supplies. The assistance provided by NGOs has, in the past, been abused by Afghans and non-Afghans alike. This is one area requiring immediate attention, since NGOs are one of the main sources of employment for expatriate Afghan academics.

5. Women's limited access to AES

Finally, in spite of past efforts agricultural extension programs have been unable to reach all farm families within the country. Therefore, women have had little or no access to extension services. Extension workers have traditionally been male, extension workers are male, and women's contributions to agricultural production have not been fully appreciated. In some cases, social custom and religion limit or prohibit the contact of non-family males with women. This has hampered attempts to involve women in agricultural extension programs. In order for the country to benefit from full participation in the planning and implementation of agricultural extension policy, methods must be found to involve women in agricultural extension programs.

Recommendations

The decade of the Soviet occupation and a little over a decade of civil war left Afghanistan with numerous economic, social, educational and cultural problems. There are some efforts under way for the reconstruction of war-torn Afghanistan. The reconstruction process may not be the task of one particular individual, social group, or government. Various groups can participate in the process. Based on the findings of this study, the following recommendations are made to various stakeholders in the reconstruction process:

Recommendations for the Government of Afghanistan

Historically, the governments of Afghanistan were the keys to the solutions to economic problems. The future government of Afghanistan in whatever form it takes, should emphasize utilizing local resources and attracting foreign aid and direct investment, thus generating sufficient revenue to reconstruct the country's infrastructure over time. A rebuilt Afghanistan would bring prosperity to its trading partners and stability to the region.

1. The future government of Afghanistan should place high priority on the agricultural sector in the national economy and national plan. The government should provide appropriate material and non-material incentives to encourage Afghans- both professionals and farmers residing in exile to return home and participate in reconstruction.
2. The promotion of women's rights in the country should be seen as a central priority. As the respondents stressed, Afghanistan will not reach its full potential until Afghan women are given this right to exercise and develop their full potential.
3. The government of Afghanistan should facilitate the involvement of NGOs in the reconstruction process. Considering the shortage of professional and skilled personnel, the coordinated and systematic involvement of NGOs would be of substantial value during reconstruction. Each NGO should be provided with a sectoral profile that includes a range of project activities they could support. The identification and selection of NGOs should be done in full consultation with the government and consistent with government policies.

Recommendations for the Ministry of Agriculture

In Afghanistan, the overall development of agriculture in the country is vested with the Ministry of Agriculture. The Ministry is organized into a number of departments, each presided over by a President.

1. The Ministry should clarify required budget for agricultural departments to the government and should identify further internal and external alternatives to government funding. Furthermore, the Ministry should provide autonomous budget to agricultural extension.
2. Reconstruction of the Agricultural Extension System should be given top priority in any action towards the reconstruction of agricultural sector. Positioning of the system centrally is very crucial for organizing and managing input distribution projects. At present, the Agricultural Extension System is in total disarray. The reconstruction of 250 agricultural extension (destroyed/damaged) units throughout the country should be given high priority.

Recommendations for the Agricultural Extension System

Agricultural extension restores the relation between the generation of knowledge by research institutions and the adoption of new technologies by farmers. Agricultural extension ensures the availability of means of production in order to translate knowledge into increased production, through monitoring and organizing the input delivery network. Agricultural extension should strengthen its capability to meet emerging challenges in Afghanistan.

1. The agricultural Extension System should adopt an integrated model of agricultural development that focuses on the multiple needs of the farm family and rural youth. The system should also mobilize the timely supply of technology and credit. The services should have grass roots and close access to them.
2. Agricultural extension programs should develop objectives, policies, and procedures suited to the current material conditions in the country. The Agricultural Extension System should prepare its programs in cooperation with farmers or their representatives. Such plans will not only address local concerns, but will be more acceptable to farmers. Agricultural extension should encourage community level participation in planning and decision making processes. Farmers' involvement in such processes could be a useful learning experience for both farmers and extension workers.
3. Women are key to successful reconstruction in Afghanistan. Women represent more than 50% of the Afghan population, have relatively poor access to productive resources (labor and land) or financial assets such as land title. The gender impact of extension messages often is not considered until negative consequences have occurred. Gender should be considered in the design and implementation of all extension projects. All field staff should be trained to consider the implications of technological change for women's activities within the farming system. Since women farmers have different needs and constraints, male extension staff require special training to understand to how to reach them with relevant information. The recruitment of female extension agents should be

encouraged. There are well qualified Afghan women who can be employed as counterpart staff and this should be a priority.

4. To ensure the continued relevance of agricultural and extension education research to the provision of extension services, it is essential to foster closer linkages between agricultural extension and agricultural colleges, universities, training and research programs, and other related institutions. Coordination between extension and other development services has proven to be a major problem in the past. The effectiveness of extension is hampered when its activities are not adequately supported by other development efforts. The most urgent task is to continue to improve cooperation between extension and research to make more technologically and economically attractive research results available to the extension agency for dissemination to farmers

Recommendations for the Ministry of Higher Education (Agricultural Colleges)

In Afghanistan, post secondary agricultural education institutions (agricultural and veterinary colleges) belong to universities of the Ministry of Higher and Vocational Education. Almost all universities in the country have at least one agricultural or veterinary college. Therefore, the Ministry of Higher and Vocational Education should cooperate with the Ministry of Agriculture in developing relevant research projects, curriculum, and programs.

1. Education should be seen as a priority, both in the reconstruction and in subsequent development stages. The most urgent need at this time is to attain "normalcy", including a restored formal education system accessible to all,

including women. A first step in this direction is the training of extension agents and other personnel. An information gathering system, to support an updated curriculum, is also a priority. Lack of adequate physical infrastructure constitutes another essential constraint and should be addressed at the same time. Education should be seen as an instrument contributing to the development and unity of the country.

2. Agricultural colleges and institutions within the organizational structure of the Ministry of Higher Education should facilitate close liaisons with agricultural extension and similar services within the Ministry of Agriculture. For many years universities tended to be too theoretical and lacked sufficient financial resources for field research. In contrast, agricultural extension and allied services formerly had sufficient funds but less qualified research personnel. By joining theoretical scientists with field researchers, both will gain.

Recommendations for Non-governmental Organizations (NGOs)

A broad range of international NGOs was involved from the very beginning of the Soviet occupation and played vital roles in supporting the people of Afghanistan. Over time, different NGOs found their niche, some as innovators and others as implementers. Ultimately, a greater degree of explicit specialization in the NGO community emerged: some as applied research centres, others as community development consultants, and some as employment, educational, training, medical, construction, and relief providers. Furthermore, international NGOs supported the creation and development of Afghan NGOs. Afghan NGOs are largely implementers, and do not have guaranteed funds,

normally working project-by-project. Afghan NGOs should receive sufficient budget for their potential district and regional project implementation.

1. When the Agricultural Extension System was unable to provide necessary help to villagers, NGOs assumed their role. Given the shortage of professional and technical manpower in Afghanistan, the coordinated and systematic involvement of the professional NGOs would be of considerable value in facilitating the rehabilitation process. The identification and selection of NGOs should be arranged in full consultation with the government to be consistent with its policies.
2. Afghanistan is widely regarded as the world's largest exporter of heroin, much of it entering Iran and Pakistan. Both countries need assurances that opium cultivation in Afghanistan will be drastically reduced. Reducing narcotics is a major challenge for the future government. The Agricultural Extension System and NGOs along with international assistance, should cooperate in meeting this challenge. Eradicating illicit crop cultivation while introducing acceptable new cropping patterns, packages of improved seed, fertilizer, technology, and other necessary inputs should be a high priority in the reconstruction of the agricultural sector. In addition, because of poor understanding and misconceptions about drugs, it is important to increase the awareness of local communities and leaders about the negative effects of narcotics.

Recommendations for International Aid Agencies

As the result of the Soviet occupation, most of Afghanistan's natural and human resources have been either destroyed or damaged. Its reconstruction is beyond its financial capacity. International assistance should be provided by various countries, organizations, agencies, foundations, groups, and individuals. International assistance should concentrate on the following:

1. After more than two decades of devastation in Afghanistan, cash up front will appeal to most Afghans, especially current warlords. For maximum benefit, financial aid should not be in the form of cash. It should rather be in the form of various technologies, equipment, expertise, and other non-cash investments. In addition, major financial assistance should not go to the salaries and accommodation of international scholars. Rather, it should be directed to building internal capacity.
2. The international community should think of long-term reconstruction projects for Afghanistan. In many cases around the world, there is slippage between the initial military action required to stabilize an area and the ensuring humanitarian action necessary in the immediate aftermath to save the population. The reconstruction effort goes beyond initial political stabilization, and development continues for years. Even though crucial factors to Afghanistan's stability remain to be determined like the ability of a post-war government to effectively rule the country, the international community should begin addressing long-term needs now.

Areas For Further Research

According to respondents in this study and to some literature, there is a great need to provide sound technical and social guidance on viable, high priority rehabilitation processes. Afghanistan is suffering a painful and dangerous social and economic collapse which calls for quick economic rehabilitation. The Soviet occupation, civil war, drought, poverty, governmental policies, and environmental degradation have been implicated. The future government needs to rescue its people quickly from the clutches of hunger, poor health, illiteracy, infrastructural destruction, and collapsed institutions. It also needs manpower to assist it in making policy-change transitions including its tentative plans to pull the various Afghan tribes, religions, and language groups into a unified nation, to allow females to work and receive education, to operate as a more democratic and secular nation, and to follow a more growth-oriented economic path. It is urgent that the international community, NGOs, foundations, and individuals provide quick and adequate assistance, with emphasis on the agricultural sector, to get this unfortunate nation and its people functioning adequately once again.

International community and donor countries and organizations should listen carefully to Afghans and make sure that Afghans are in the driver's seat for reconstruction and development of their country, and must all try to look at the future of Afghanistan through the eyes of Afghans.

The political discussions that took place in Bonn, Germany (December 2001), the establishment of an interim Afghan government, and the success of current transitional government are reasons for optimism. There is a need to ensure that there are sufficient resources for the humanitarian response so that it lays the foundation upon which a strong

nation can be built. In the fragile political and social environment of Afghanistan, there will be a need for a process of reconciliation and for the international community to listen to Afghans.

Once peace returns, reconstruction of the war-torn country would be by far the greatest task faced by the post-war governments. Some of the basic questions that need to be answered before the policy makers and planners embark on the formidable job of reconstruction include: where should reconstruction start (cities or rural areas), what kind of available financial resources are needed for reconstruction, what criteria should be used to prioritize projects, how can exiled professional and technical Afghans be engaged in the reconstruction of the country, and what should planners concentrate on in the revitalization of the economy.

Such a list of questions could still be extended considerably. If the actual physical reconstruction cannot begin due to the lack of peace and stability in the country, at least researching and answering some of these questions would be a remarkable start toward the reconstruction of the nation.

Due to the geographical and natural features of Afghanistan, agriculture is clearly going to be at the core of any survival and rehabilitation strategy. It has demonstrated resilience and can be improved radically. The agricultural sector provides the foundation for the socio-economic development of Afghanistan. The Soviet occupation has severely damaged every aspect of the sector including extension. There is a need for more research on each aspect of agricultural extension at all levels. Thus, future research should consider the following:

1. Another study like this is needed with a more inclusive representative (including farmers themselves) sample to identify additional ideas that could contribute to reconstruction.
2. NGOs played and still play vital role in agriculture and other sectors. Further research is needed to determine the most suitable roles for NGOs affiliated with governmental organizations.
3. A follow up study should be done to determine if the events since September 11, 2001 have changed the context so dramatically that other ideas and proposals are now possible.
4. Post Soviet withdrawal political developments have further eroded the overall situation of women in Afghanistan in terms of mobility and access to services. Since there are well-qualified Afghan women available, the methods of how to involve them in designing agricultural extension programs, implementation, evaluation, and decision making processes should be researched.
5. Study the potential of various participatory research projects in the reconstruction of the country.
6. Study ways of increasing democratization in decision making processes within the Afghan Agricultural Extension System.
7. Opium poppy cultivation reduced regular food crop production. Studies should be undertaken to identify an effective rehabilitation program which provides alternative economic opportunities, general infrastructure and social welfare improvements, a consensus of community agreement, and some elements of enforcement to reduce poppy growing.

8. Search for ways to utilize the capacity, optimism and energy that exist among the people of Afghanistan. There is a unified and enormous will among Afghans to build a nation that encompasses all people, women and men, both inside and outside the country, and from all ethnic backgrounds.

Afterward: Hopes For The Future

My belief in the importance of agricultural extension in rebuilding both the agricultural base and the economy of the country has prompted me to devote myself to its development and improvement. The occupation of Afghanistan, first by the Soviets, then by the Islamic fundamentalists, led to the nearly complete devastation of agricultural extension. I witnessed this first hand as I traveled under the auspices of the United Nations Development Program (UNDP) to some of the Northern and Western provinces in the country. I prepared a report for the UNDP outlining the need for rehabilitation of agricultural extension units throughout the country. Dramatic political unrest in the country brought about rise to power of the fundamentalists which forced me to leave the country.

Immediately upon my arrival in Switzerland, I joined one of the local agricultural institutions (Institute of Agricultural Economics). I began as a volunteer with the Institute of Agricultural Economics and progressed to the Swiss Agricultural Advisory Centre in Lindau, Zurich (Landwirtschaftliche Beratungszentrale-Lindau, known as the LBL). There, I was able to discuss the destruction of Afghanistan's Agricultural Extension System with some of the authorities. They soon became interested in the subject. However, because I had applied for political asylum, I was prohibited by Swiss law from working at my profession. Fortunately, through the dedicated efforts of members of LBL,

I was given conditional permission to work with them for eight months. During that time I promoted my ideas by publishing a brief article in the Centre's publication (Berater News 2/94).

When I came to Canada and began the doctoral program in Adult Education at the University of British Columbia, I was still interested in the issues raised by my article. In some of my courses, we presented and discussed our research topics for feedback from other students in the class and the professors. Most students responded with a very 'Canadian' perspective on the problems of my homeland. My views were very different from theirs. Friends and classmates, who became interested in what was happening in Afghanistan, asked questions about how I would apply my academic training when I returned to my country.

As a new resident of British Columbia and with a family (three children and wife) who spoke no English, I was at times nearly overwhelmed with problems that caused much confusion. Sometimes, I considered leaving the program. I found myself focusing on the past and watching my country and other Afghans who seemed to be going further and further off the track. Had I known in advance that I would endure so many hard days, I may never have started the program. But, I am glad I persevered.

Following the Soviet withdrawal, Afghanistan quickly came under the control those who supported Afghans against Soviet Union. The new government of Mujahiddin under the leadership of the Northern Alliance (Rabani, 1992-1996) began fighting amongst themselves and were soon toppled by religious students (Taliban, 1996-2001). These events left me with little hope for the future, and mounting depression over the current state of events. My answer to students' questions in class was always "hopefully,

by the time I am finished with my program, peace will be restored in Afghanistan and I will be able to return and contribute my research to the reconstruction and development of the country."

The December, 2001 installation of the interim government in Afghanistan by the international coalition increased my hope that my dream to apply my research to the reconstruction of Afghanistan may yet come true. The current interim government may not have all the solutions to more than two decades of problems, but it is a promising start. The government has many challenges ahead, but with international support it has a chance to find a way to begin rebuilding. Homeless and stateless Afghans ma

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Appendix A: Sample Contact Letter for Interview

Dear...Sir/Madam,

I am writing to ask for your assistance with research I am conducting, **The Afghan Agricultural Extension System: The Impact of the Soviet Occupation on the system and the prospects for the future.** My aim is to enhance understanding of the impact of the decade of the Russian occupation on the Agricultural Extension System (AES) and facilitate the reconstruction and development processes of the agricultural sector.

As part of this project, I am conducting interviews with Afghan individuals who left the country and are residing in North America and Europe. You have been chosen because of your knowledge, experience and involvement in the Agricultural Extension System or in other parts of agricultural sector. I would like to interview you about your knowledge and experience on this issue. Interviews will take approximately 60 to 90 minutes. You have my personal assurance the information you provide will be treated in the strictest confidence. Furthermore, it will not be possible to identify you in any published report or account of this research.

In a week or so, I will contact you by telephone to determine if you are willing to participate. Of course, you may refuse to participate, or withdraw your participation at

any time without consequence. If you have any questions about this project, please contact me or my research supervisor at the telephone numbers or e-mail addresses below.

Sincerely,

Tooryalai Wesa

Prof. Dr. Thomas Sork

(Researcher) (604) 222-9812
E-mail: toorwesa@direct.ca
or: twesa@unixg.ubc.ca

(Supervisor) (604) 822-5702
E-mail: tom.sork@ubc.ca

Appendix B: Sample Contact Letter for Questionnaire

Dear Sir/Madam...

I am writing to ask for your assistance with research I am conducting. **The Afghan Agricultural Extension System: The Impact of the Soviet Occupation on the System and prospects for the Future.** This study examines the reconstruction of the Afghan agricultural sector, particularly the Agricultural Extension System, and the steps that might be taken in the next 10 years to promote the recovery and strength of agriculture as a key component of the Afghan economy and culture. My aim is to enhance understanding of the impact of the decade of the Russian occupation on the Agricultural Extension System (AES) in Afghanistan and facilitate the reconstruction and development processes of future agricultural sector and Agricultural Extension System in Afghanistan.

As part of this project, I am distributing questionnaires to Afghan individuals who fled the country and are residing on the East and West Coasts of North America and Europe. You have been chosen because of your knowledge, experience and involvement in Agricultural Extension System or in other aspects of agriculture sector. I would like to mail you a copy of the questionnaire and question you about your knowledge, experience, and perspectives on this particular topic. Questionnaire will take approximately 60 to 90 minutes. You have my personnel assurance the information you provide will be treated in the strictest confidence. Furthermore, it will not be possible to identify you in any published report or account of this

research.

In a week or so, I will contact you by telephone to determine if you are willing to be questioned. Of course, you may refuse to participate, or withdraw your participation at any time without consequences. If you have any questions about this project, please contact me or my research supervisor at the telephone numbers and e-mail addresses below.

Sincerely,

Tooryalai Wesa

(Researcher) (604) 222-9812

E-mail: toorwesa@direct.ca

or twesa@unixg.ubc.ca

Prof. Dr. Thomas Sork

(Supervisor) (604) 822-5702

E-mail: tom.sork@ubc.ca

Appendix C: Sample Informed Consent

Investigators: Thomas Sork, Ph.D., Professor, Department of Educational Studies, UBC.

Telephone: (604) 822-5702 and Tooryalai Wesa, Doctoral Student, Department of Educational Studies, UBC. Telephone: (604) 222-9812

Purpose and Procedure: purpose of the study is to enhance understanding of the impact of the Soviet occupation on the Agricultural Extension System (AES) in Afghanistan. Further aims of this study are to enhance understanding of how the AES disseminates improved agricultural technologies to Afghan farmers as well as to increase the human resource capacity to absorb improved technologies under adverse conditions in Afghanistan.

A selected sample of individuals with extensive knowledge, experience and involvement in Agricultural Extension System and agricultural sector in Afghanistan will be interviewed. The interview will be scheduled at your convenience and last approximately 60 – 90 minutes.

Confidentiality: Any information provided by you for this research project will be kept strictly confidential. Responses will be coded so that your identity will not be known. The answers will remain in the investigator's database, and any records on computer hard disk will be kept in a secure folder requiring a password for access.

Contact: If you have any questions or desire further information regarding this study, you may contact Dr. Thomas Sork at (604) 822-5702 and Tooryalai Wesa at (604) 222 – 9812.

If you have any concerns about your treatment or rights as a research subject, you may contact the Director of Research Services at the University of British Columbia, Dr. Richard Spartley at (604) 822-8598.

I am willing to participate in the research project **“An Analysis of the Afghan Agricultural Extension System: The Impacts of the Soviet Occupation and Prospects for the Future ”** and agree to be interviewed.

I realize I am free to withdraw from the study at any time, without prejudice.

I have received a copy of this form for my own records.

Signature

Date

Appendix D: Survey Questionnaire

Dear Sir/Madam.

Street Address.....

Municipality, State.....

Country, Postal / Zip Code.....

My name is Tooryalai Wesa. I am currently a doctoral student at the University of British Columbia (UBC) and a former member of the Agricultural Extension Department, Kabul University, Kabul, Afghanistan. By virtue of my experience and interest in the Agricultural Extension System in Afghanistan, I am conducting a research project **“An Analysis of the Afghan Agricultural Extension System: The Impact of the Soviet Occupation and the Prospects for the Future”**, as a requirement for the Ph.D. Degree. My aim is to enhance understanding of the impact of the Russian occupation on the Agricultural Extension System and facilitate the reconstruction and development processes of the agricultural sector in Afghanistan.

This project is being conducted under the direct supervision of Dr. Thomas J. Sork of the Department of Educational Studies, University of British Columbia. The results of the study will help in the reconstruction and future development of the Afghan agricultural sector and Agricultural Extension System. The results of the study will also benefit individuals, groups, organizations and the Ministry of Agriculture involved in the reconstruction process.

Because of your experience and knowledge of the agricultural sector in Afghanistan, I am inviting you to participate in my study by completing the attached questionnaire. You can be assured of complete anonymity in providing the data. Your thorough responses to the questions will be appreciated. Any information provided by you is strictly confidential. Your name will not be mentioned or printed in any documents or presentations. You will also have the opportunity at the end of the questionnaire to indicate your willingness to participate in a follow-up telephone interview, which will take no more than 30 minutes. Likewise, you have the right to refuse to participate in this study or to withdraw at any time without consequence and if you complete and return this questionnaire, it will be assumed that you have granted consent to use your responses in this study.

Please complete and return the questionnaire in the stamped self addressed envelope provided by the end of April. We will be happy to answer any questions or concerns on that issue you might have. Please write or call us at (604) 822-5702 and (604) 222-9812.

Moreover, if you have any concerns about your treatment or rights as a research subject, you may contact the Director of Research Services at the University of British Columbia, Dr. Richard Spratley at (604) 822-8598.

Thank you in advance for your kind assistance.

Sincerely yours,

Tooryalai Wesa
2125 Main Mall
Vancouver, B.C.
V6T 1Z4 Canada

The Afghan Agricultural Extension System: Impact of the Soviet Occupation and Prospects for the Future

Please answer the following questions to the best of your ability as precisely as possible. You can respond using Dari, Pashtu or English. Please feel free to add additional pages if needed.

I. General Information

1. Name: First name _____ Family name _____
Address _____
City _____ State/Pro _____ Zip/Postal Code _____
2. Your age:
 - 2a. 20 – 29 Years
 - 2b. 30 – 39 Years
 - 2c. 40 – 49 Years
 - 2d. 50 – 59 Years
 - 2e. 60 + Years
3. Your highest level of education:
 - 3a. Elementary
 - 3b. Secondary
 - 3c. Vocational
 - 3d. University
 - 3e. Masters
 - 3f. Ph.D.
 - 3g. Other Please Specify _____
4. When did you leave Afghanistan? Month _____ Year _____
5. Your Position(s) immediately prior to the Soviet occupation:
 - 5a. _____
 - 5b. _____
6. Your position immediately after the Soviet occupation: _____
7. Are you currently employed? Yes No
8. What is your current occupation? _____
9. Are you retired? Yes No
10. Was the Afghan agricultural sector (production, labor, technology, personnel, administration, etc.) self-sufficient before the Soviet occupation? Yes No

Please explain:

14. **What was the impact of the Soviet occupation on the Afghan Agricultural Extension organizational structure?**

15. **What was the impact of the Soviet occupation on financing and budgeting of the Afghan Agricultural Extension System?**

16. **What was the impact of the Soviet occupation on the teaching methods and training process used within the Afghan Agricultural Extension System?**

29. What kind of relationships between NGOs and Agricultural Extension System must be established to promote the reconstruction and future development of the Afghan Agricultural Sector?

30. What role should the people (Rural) play in promoting the future development and reconstruction of the Afghan Agricultural Sector?

31. What impact do you believe the Russian occupation had on the attitudes of Afghan farmers?

32. What role if any, might the Afghan Agricultural Extension System have in changing farmers' attitudes towards agricultural practices?
33. In current Afghanistan, narcotics cultivation is displacing production of traditional agricultural crops. What do you recommend that the Afghan Agricultural Extension System can do to reduce narcotics cultivation and increase production of food crops?
34. What kind of assistance from international aid agencies and organizations, including the United Nations, is going to be necessary for the reconstruction and future development of the agricultural sector in general and Agricultural Extension System in particular?

IV. Telephone Interview

In order to clarify responses to the questionnaire and to deepen my understanding of your responses, I would like the opportunity to conduct a follow-up telephone interview with you. This interview will be scheduled at your convenience and will last no more than 30 minutes.

If you agree to participate in this interview, please indicate your consent below.

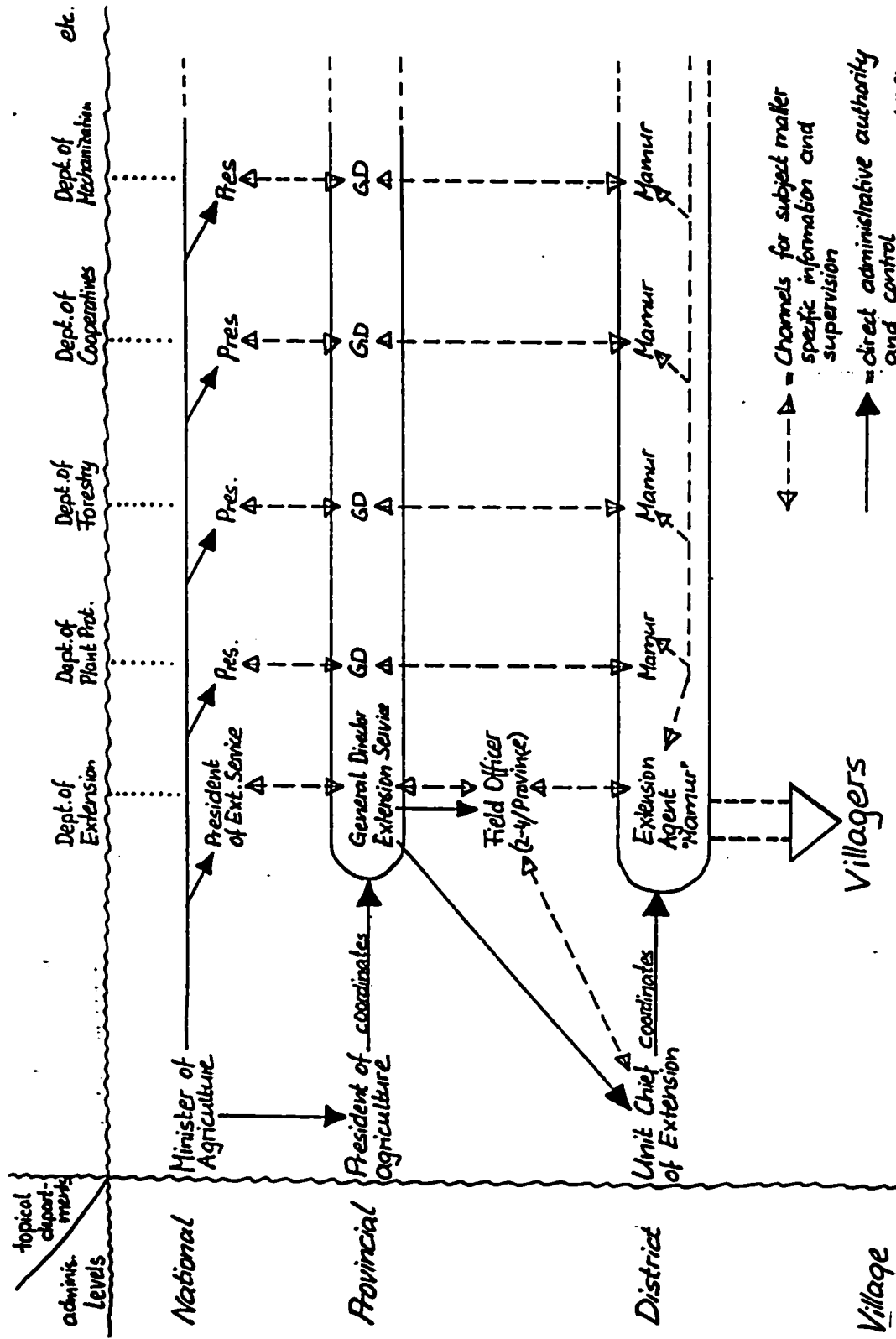
Yes, I agree to participate in a 30 minutes maximum telephone interview.

My telephone number is: (____)_____ Day time: _____ Evening time: _____

No, I prefer not to participate in a telephone interview.

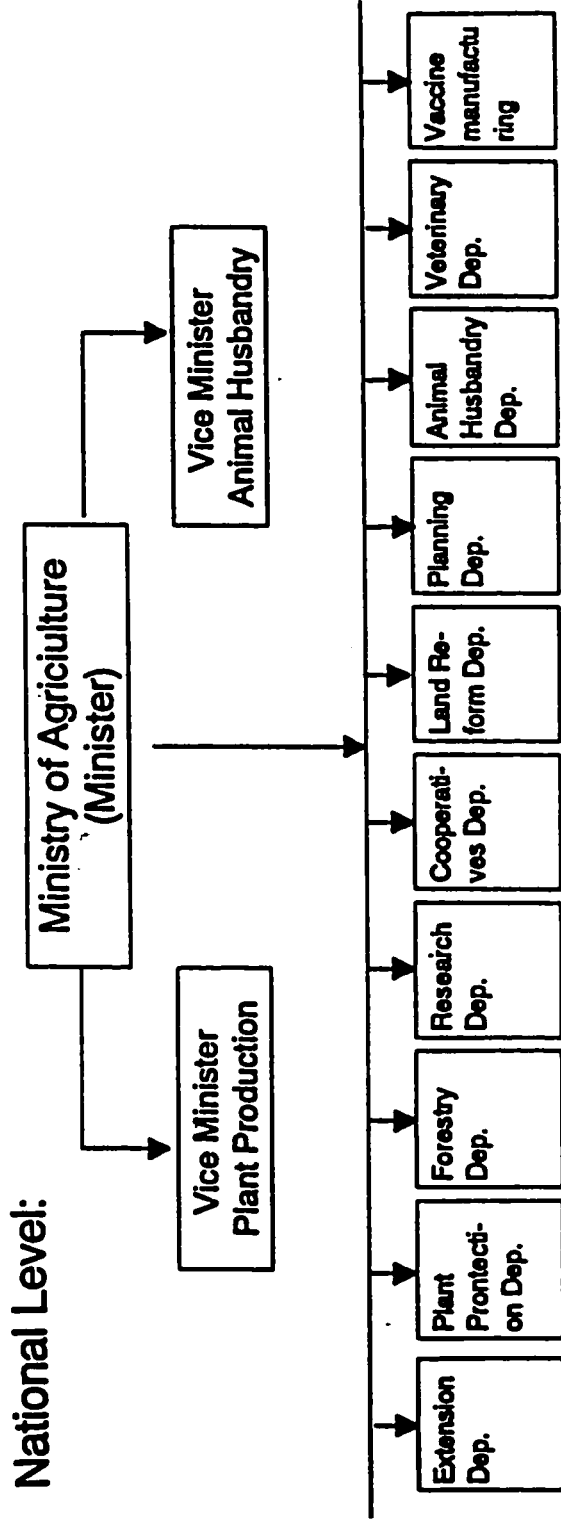
Signature: _____ Date: _____

Appendix E: Afghan Agriculture Department from District to National Level Around 1975



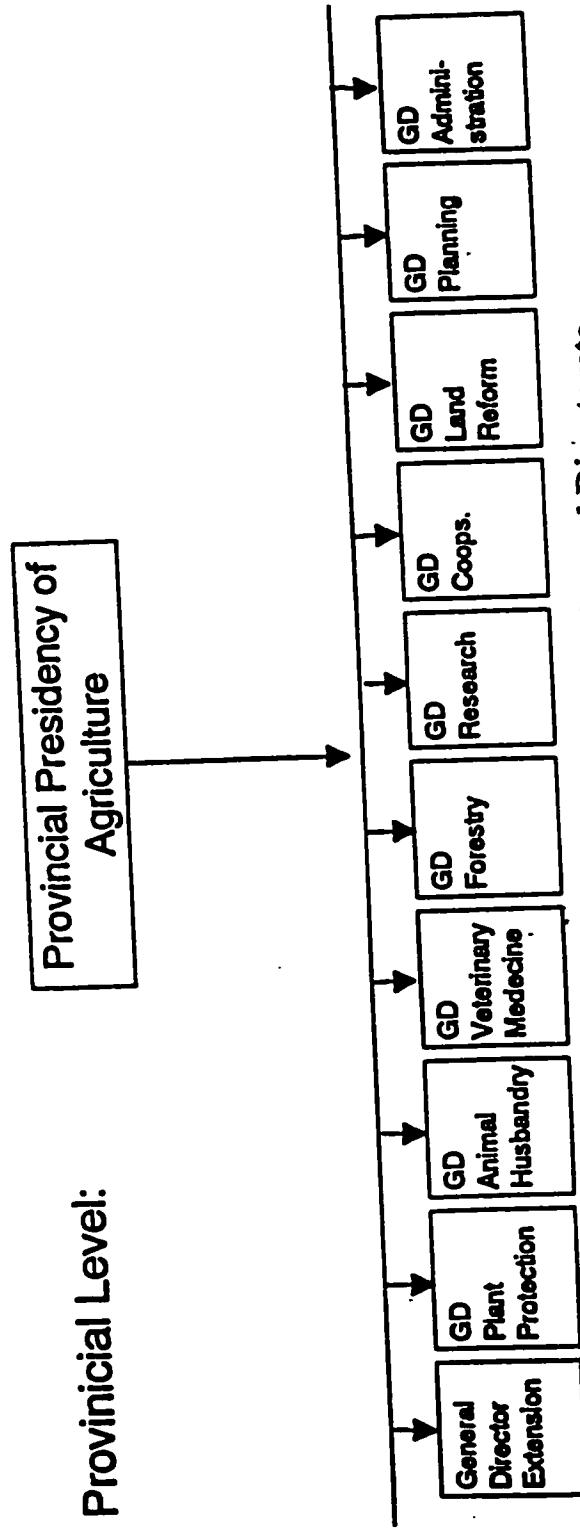
Source: Wesa, T. (1994). I.B.L. Beratung. Vol. 2. Switzerland.

Appendix F: Agricultural Department of Afghanistan at the National Level



Source: Wesa, T. (1994). LBL Beratung. Vol. 2. Switzerland.

Appendix G: Afghan Agriculture Department at the Provincial Level



Provincial Level:

In 15 Provinces at the level of Presidents and in others at General Directorate

Source: Wesa, T. (1994). LBL Beratung, vol. 2. Switzerland

Appendix H: Status of Agricultural Extension Units (AEUs) in Balkh Province

Province / District	Total (1978 - 79) # AEU # EA	Operational Status	Building	Equipment	Logistics	Personnel	Personnel 1989
Balkh Province	13 123	FNL NFNL	Owned/Hired STD -DMG- DST	ADQ - SUP - RPL	BCL - MCL - JEP - TRK	PG - G - B - Other	Total Present
Dawlat Abad EU		- -	- - - - -	- - -	- - - - -	- - - - -	52 15
Shore Tepa EU		1 -	1 - 1 1 -	- - 1	- - - - -	- - - - -	
Balkh EU		- 1	- - 1 - -	- - -	- - - - -	- - - - -	
Kaldar EU		1 -	1 - - - -	- 1 -	9 2 - -	- - - - -	
Char Bouliak EU		- 1	- - - - -	- - -	- - - - -	- - - - -	
Chemthala EU		1 -	- 1 - - -	- - 1	- - - - -	- - - - -	
Shoulgara EU		- 1	- - - - -	- - -	- - - - -	- - - - -	
Khoulm EU		- 1	1 - - - 1	- - -	- - - - -	- - - - -	
Total		4 4	3 2 2 2 1	- 1 3	9 2	- - - - -	

Source: (Wesa 1990)

Note: FNL= Functional NFNL = Nonfunctional STD= Standing DMG= Damage DST= Destroyed RPL= Replace ADQ= Adequate SUP=Supplement AEU= Agricultural Extension Unit EA= Extension Agent

Appendix I: Status of Agricultural Extension Units (AEUs) in Kabul Province

Province / District	Total (1978 - 79) # AEU # EA	Operational Status	Building	Equipment	Logistics	Personnel	Personnel 1989
Kabul Province	11 103	FNL NFNL	Owned/Hired STD -DMG- DST	ADQ - SUP - RPL	BCL - MCL - JEP - TRK	PG - G - B - Other	Total Present 88 80
Chardaii EU		1-	- 1 - - - -	- - 1	1 - - - -	- - - -	
Char Asiab EU		1-	1 - 1 - - -	- - 1	1 - - - -	- - - -	
Qara Bagh EU		1-	1 - 1 1 - -	- - 1	- - - -	- - - -	
Paghman EU		1-	- 1 - - 1	- - 1	1 - - - -	- - - -	
Mir Bachakout EU		1-	1 - - - 1	- - 1	- - - -	- - - -	
Istailif EU		- 1	- - - - 1	- - 1	- - - -	- - - -	
Shaker Dara EU		1-	1 - - - 1	- - 1	- - - -	- - - -	
Daih Sabz EU		1-	1 - - - 1	- - 1	1 - - - -	- - - -	
Saroubi EU		1-	1 - 1 - - -	- - 1	- - - -	- - - -	
Jik Dalick EU		- -	- - - - -	- - -	- - - -	- - - -	
Bagrami EU		1-	1 - - - -	- - -	- 1 - - -	- - - -	
Total		9 1	7 2 3 1 5	- - 9	4 1 - - -	- - - -	

Source: (wesa, 1990)

Note: FNL= Functional NFNL = Nonfunctional STD= Standing DMG= Damage DST= Destroyed RPL= Replace ADQ= Adequate SUP= Supplement
 AEU= Agricultural Extension Unit EA= Extension Agent EU = Extension Unit

Appendix K: Status of Agricultural Extension Units (AEUs) in Herat Province

Province / District	Total (1978 - 79) # AEU # EA	Operational Status	Building	Equipment	Logistics	Personnel	Personnel 1989
Herat Province	17 160	..	Owned/Hired DST	ADQ - SUP - RPL	BCL - MCL - JEP - TRK	PG - G - B - Other	Total Present
Gozara EU 1		1 -	- 1 - - -	- - 1	1 - - - -	- - - -	35 15
Gozara EU 2		1 -	- 2 - - -	- - 1	1 - - - -	- - - -	
Engeel EU 1		1 -	1 - 1 - -	- - 1	- - - -	- - - -	
Engeel EU 2		1 -	1 - - - -	- - 1	1 - - - -	- - - -	
Engeel EU 3		1 -	1 - - 1 -	- - 1	1 1 - - -	- - - -	
Koushke EU		1 -	1 - - 1 1	- - 1	1 - - - -	- - - -	
Adrusken EU		1 -	1 - - 1 -	- - 1	1 1 - - -	- - - -	
Sheendand EU		1 -	1 - 1 - -	- - -	- - - -	- - - -	
Total		8 -	6 2 2 3 1	- - 7	6 3 - -	- - - -	

Source: (Wesa, 1990)

Note: FNL= Functional NFNL = Nonfunctional STD= Standing DMG= Damage DST= Destroyed RPL= Replace ADQ= Adequate SUP=S supplement
 AEU= Agricultural Extension Unit EA= Extension Agent EU = Extension Unit

The Political Map of Afghanistan

