

PC-AAA-971

~~TSN 40760~~ 111912

~~2958~~

UNFDAC  
\*HOUSEHOLD SURVEY\*  
UPPER HELMAND VALLEY  
GHULAM FARUQ

Report on  
UNFDAC Household Survey - Upper Helmand

Prepared by

Chulam Farouq  
Director General,  
Planning & Statistics Division  
Helmand/Arghandab Valley Authority

Submitted to

UNFDAC of the United Nations

January 10, 1978

Helmand, Afghanistan

B

## TABLE OF CONTENTS

	<u>Page</u>
Introduction	
Methodology	1
Land	1
Farm Size	1
Cropland	1
Costs, Returns and Farm Income	2
Costs	2
Returns	2
Net Poppy Farm Income	2
The Most Profitable Crop and the Reasons Why Not Grown More	3
Farmers' Expectations for Help to Substitute Poppy Crop	3
Data Expansion	4
Land	4
Yield	4
Conclusion	4
Tables:	
Tables 1 - 4	7
Tables 5 - 6	8
Tables 7 - 8	9
Table 9	10

C

## INTRODUCTION

The Upper Helmand Valley, which is the subject of this study, includes Sanquin, Kajakai-Zamin Dawar, Musa Qala, Nowzad and Baghran areas. The first three areas have been surveyed by detail.

Sanquin is an area on the left bank of the Helmand River about 90 km northeast of Lashkar Gah, having highly fertile riverbottom land with the smallest farm size in the whole Valley. Potential irrigable land is estimated 5800 hectares. Cropland is 5070 hectares. The area with its traditional irrigation system has 36104 inhabitants, composed of 1984 farming families.\*

Kajakai is bordering Sanquin from southwest to Kajakai Dam in the northwest on the left bank of the Helmand River. Its irrigable land is estimated 1200 hectares of riverbottom land with small farms in size.

Zamin Dawar is an area lying northwest of Kajakai Dam. It is irrigated by Karezes. Many Karezes are dried now due to droughts and poor economic conditions of farmers to reactivate them. This is why many farming population of the area have abandoned their villages to find work somewhere else. The potential irrigable area is estimated 3250 hectares.

About 47202 people are living in Kajakai-Zamin Dawar, of which 2150 farm families. (Cropland is 4558 hectares).

Musa Qala. This area borders about the Musa Qala river, which empties into the Helmand River near Sanquin Village. Irrigation is from numerous Karezes and also from Musa Qala River. The potential irrigable land is estimated 8100 hectares. Cropland is 6230 hectares. About 55,685 people are living in this area, including 17500 members of farm families.

Main crops of the Upper Helmand Valley are wheat, cotton, corn, mungbeans and poppies. The purpose of this study was to determine the extent of poppy cultivation in Sanquin, West Kajakai (Zamin Dawar hereafter) and Musa Qala areas of the Upper Helmand Valley, and to find out annual net returns to poppy farmers. Farmer attitudes were also surveyed to find out why they are growing poppies and what would be the most realistic and practical way of eliminating this crop from the Upper Helmand Valley of Afghanistan.

\*Generally in the Upper Helmand the family size averages about 8-10 persons per family.

Methodology

Lists of all farmers in Sanquin, Zamin Dawar and Musa Qala area were prepared for each village. HAVA's Planning, Statistics and Extension offices were consulted in the preparation of these lists. The lists were checked in the field to see whether they were the most up-to-date. A 2% random sample was applied to these lists. A supplementary list was prepared to substitute for the farmers who were not available at the time of interview.

Area	Population Size	Sample Size	No. of Used Samples
Sanquin	1984	40	40
Zamin Dawar	2150	43	43
Musa Qala	1750	35	35
Total	5884	118	118

An interview schedule was designed in Pushto and was pre-tested in the field before being put in final form. Four qualified people, who had prior field interviewing experience, were appointed and trained to use the interview schedule. The actual interviewing started in the Sanquin area as Agricultural Extension agents accompanied the enumerators in the field to help them locate the sample farmers. The field work was supervised by the team leader on a continuous basis.

The collected data were brought to the HAVA office in Lashkar Gah and tabulated. During the period of data analysis the writer consulted a variety of HAVA departments and personnel in order to make the final report more realistic and comprehensive.

A short visit was also made to the Baghran, Nowzad and Upper Grish areas where some poppy production is known to exist. Local estimates were gathered on the amounts of land normally in poppies and on farmer's yields of opium.

LAND

Farm Size

It is reported that the average farm size in Sanquin area was 18.3 jeribs\*, in Zamin Dawar 19.8 jeribs and in Musa Qala 27.8 jeribs (Table 1).

Cropland

Cropland is estimated at 16.2, 10.6 and 17.8 jeribs in Sanquin, Zamin Dawar and Musa Qala areas respectively. Poppies, on the average, were planted one jerib of land in each farm in the Sanquin area, 1.1 jerib in Zamin Dawar and 1.8 jerib in the Musa Qala area (Table 1).

\*1 jerib = 0.2 hectare

About 88% of the farmers in Sanquin, 95% in Zamin Dawar and 80% in the Musa Qala area had less than 30 jeribs of cropland (Table 2). Thus, the majority of farmers in the areas of interest are not large landholders.

#### COSTS, RETURNS AND FARM INCOME

Only landowners were interviewed, and the owner's share of the total costs and returns were calculated to find the net poppy farm income to land owners.

##### Costs

Poppy production costs consisted of seeds, plow power and labor costs. Production costs per farm in Sanquin were Afs 2,734\*, in Zamin Dawar Afs 2,743 and in Musa Qala Afs 3,681 (Table 3).

##### Returns

Table 4 indicates that an average opium production of 1.10 Mons\* (4.858 kg) in Sanquin, 1.15 Mons (5.078 kg) in Zamin Dawar and 2.33 Mons (10.289 kg) in Musa Qala area was produced per farm.

There was an average return of Afs 11,286 to each farmer in the Sanquin area from the opium and poppies produced. In Zamin Dawar the return was Afs 22,044 and in Musa Qala the return was Afs 30,200 (Table 5). Ninety-six percent of the farmers in the Sanquin area, 56% in Zamin Dawar and 67% in the Musa Qala area had sold their poppy crop several months before harvest in a very low price.

Ninety percent of the Sanquin farmers, 100% of the Zamin Dawar farmers and 87% of the Musa Qala farmers had sold their opium in the villages; the rest of them had taken their yield to Grish and Kandahar for sale.

##### Net Poppy Farm Income

Net poppy farm income in Sanquin was Afs 8,552, in Zamin Dawar Afs 19,298 and in Musa Qala Afs 26,519 (Table 6).

\*Afs 1 = US\$0.022  
1 Mon = 4.416 kg

### THE MOST PROFITABLE CROP AND THE REASONS WHY MORE IS NOT GROWN

Almost all the farmers in the study areas reported that poppy production was the most profitable crop for them. When they were asked why they didn't grow more, since it was the most profitable crop, 87.2% of the Sanquin farmers, 57.4% of the Zamin Dawar farmers and 57.5% of the Musa Qala farmers indicated that they feared Government action.

The poppy is a labor-intensive crop. High labor cost was the second reason among 13% of the Sanquin farmers, 28% of the Zamin Dawar farmers and 28% of the Musa Qala farmers.

Water shortage was the third reason given for not growing more poppies (Table 8).

### FARMER'S EXPECTATIONS FOR HELP TO SUBSTITUTE POPPY CROP

The sample farmers were asked whether they could suggest ways to eliminate the cultivation of poppies in their areas. The majority of the farmers in the Zamin Dawar and Musa Qala areas complained of irrigation water shortage; they emphasized that if they could get enough water, they would not grow poppies. With adequate water, they said, they would grow wheat and cotton or other crops that the Government would suggest. These farmers argued why the farmers of the HAVA project areas, like Nad-i-Ali and Marja, did not grow poppies. They themselves answered that farmers of the HAVA project areas had enough water to grow other crops, and the Government had provided the other necessary agricultural facilities and inputs. Since the HAVA farmers can earn a reasonable income from their wheat and cotton crops, enough to live comfortably, then there is no need to grow poppies. Given the same advantages, the sample farmers argued they would not grow poppies.

The second way to eliminate the poppy crop in the area, as indicated by the farmers of these areas, was to give the farmers cheap chemical fertilizer and pay or find higher-priced market for their wheat and cotton productions.

The third way suggested by the majority of the farmers was that the Government must introduce a program to the area which would result in the following (Table 9):

1. Introduce a crop, crops or other kind of program that would result in an income equal or near the income from growing poppies;
2. Get employment for their unemployed family members; several farmers indicated in this case the introduction of small industries into the area based on agriculture.

## DATA EXPANSION

### Land

There was about 1984 jeribs poppy land in Sanquin, 2365 jeribs in Zamin Dawar and 3150 jeribs in Musa Qala under poppy production. Poppy cropland in Baghran is estimated at 1500 jeribs, in Nowzad 1700 heribs and about 1300 jeribs in Grish area. Thus, total poppy cropland in Upper Helmand is estimated at 11,999 jeribs (2400 hectares).

It was found from the survey and observations that the size of poppy cropland will likely increase by 15% next year (harvest May 1978).

### Yield

Total opium production in Musa Qala was 18,006 kg, in Zamin Dawar 10,921 kg, in the Sanquin area 9,636 kg, in Nowzad 8,258 kg and in the Grish area 6,315 kg. Thus, total opium production of last year's crop in Upper Helmand Valley was 60,422 kilograms.

Next year's crop yield is not expected to be less than 70 tons in Upper Helmand Valley.

## CONCLUSION

Upper Helmand, once known as a "Garden area" and the "Land of Saffaron", is now mostly arid, water-short and with a scattered population. In the areas where water is to some extent available, the farm plots are so small (due to higher population density and inheritance) that they can't function economically. In such an unbalanced situation one thing is commonly shared by all areas: the majority of the native people of these areas have migrated to the Helmand Valley Project areas, Kandahar and/or somewhere else, including neighboring countries. Certainly, it is very difficult for a traditional farmer to leave his village and tribe and move to an uncertain destiny, unless his living conditions in his homeland are so miserable that he is not able to continue living there. Those who are still on their farms, each having a small piece of land, are totally at the mercy of nature. Improved agricultural practices and technology have not been introduced in the area to the same extent as in the Central Helmand. Thus, small farm size with no constant water availabilities on the one hand, and a prevailing traditional way of agriculture on the other, brought such a situation to the area that very few of these farmers are able to maintain their subsistence levels with wheat and cotton production. Here, to make their living, they do the following:

a) Those members of the family whose services are not needed at home go out of the village for work to earn money and send to their families.

b) Those members of the family who cannot leave home handle the farm affairs. They divide their farms into two parts: a plot for poppy production to bring them the highest cash income possible, and the remaining piece of land they use for wheat and cotton to bring them food. If, in case the Government eliminates the poppy production, they still will have a small source of income on which to live. According to the field data and observations, poppies are grown in the area to insure that the farmers maintain their subsistence levels. It must be realized that a rational, realistic and practical way is necessary to be found to tackle the problem of poppy production and maintaining a viable economic condition. Otherwise, any miscalculated action will bring a serious disaster to the area farmers. This survey suggests the following steps to be taken to eliminate poppy growing in the area:

A. An efficient irrigation scheme is needed to be developed in the area to provide a constant irrigation water source for the farmers to grow what the Government authorities advise.

B. Following the completion of the first step, small and large industries based on agriculture must be developed in the area to insure local markets for farm products as well as to bring technological training to the farmers.

The above two steps will bring the following benefits to the area:

1. When there is an efficient irrigation project in the area, additional land can be developed. Those who migrated from the area will return and new settlers will be settled. Thus, the farm population will increase. In this case they will need to form agricultural co-operatives for their farm inputs and outputs, road networks and other transportation facilities will be developed, the agricultural extension service will come to the area, formal and informal education for farmers and their children will take place or develop, medical centers will become active, markets will be opened to provide farmers with their daily supplies, technicians to operate and repair their agricultural and industrial equipment and machines will come, ... etc. The more the project develops, the more the farmers will be dependent upon the Government. In this case they will not be willing to grow poppies because of their reasonable incomes from other sources. There will be too much to lose by growing poppies. Certainly, some farmers would want to continue to grow poppies at that time. They would not be able to hide their poppy crop from the Government and people. The Government would have strict control on every aspect of the project and people.

2. Seventy-three percent of the poppy growers sell their product several months before harvest at tremendously low prices to local merchants (instead of Afs 33,000 per Mon, they sell at Afs 12,000 per Mon). One can see how important the role of the merchants is in the area and how relatively little the farmers actually receive. In the case of the new project development, two results are likely: the role of the merchants will be eliminated; the farmers will receive a greater share of their product than they are now receiving.

3. Those family members who are presently leaving the Helmand for neighboring countries for work are going illegally. Most of them take some opium with them to make money and help to meet initial expenses. This is another reason why the price of opium is rapidly increasing. There is an active market demand.

If the two-step project outlined is developed, there will be jobs available for all such potential migrants and there will be no need to leave their homes and enter this risky gamble in which sometimes they lose their lives. In this way the opium price will come down considerably and its trade will become less active.

Table 1 Average Farm Size, Cropland and Land in Poppy Crop, by Jerib, by Area

Area	Farm Size	Cropland	Poppy Land
Sanquin	18.3	16.2	1.0 → 0.2 ha
Zamin Dawar	19.8	10.6	1.1 → 0.22 ha
Musa Qala	27.8 (5.56 ha)	17.8 (3.56 ha)	1.8 → 0.36 ha

Farm Size and Cropland Distribution in Percentage, by Area

Table 2

Area	Farm Size Distribution (Percent)		Cropland Distribution (Percent)	
	0-30 Jeribs	30.1-100 Jeribs	0-30 Jeribs	30.1-100 Jeribs
Sanquin	82.5	17.5	87.5	12.5
Zamin Dawar	81.4	18.6	95.3	4.7
Musa Qala	80.0	20	80	20

Table 3 Production Costs per Farm, by Afs., by Area

Area	Seeds	Plow Power	Labor Costs				Total Cost
			Men	Day	Wage /Day	Total	
Sanquin	20	392	3.8	13	47	2,322	2,734
Zamin Dawar	23	450	4.4	12	43	2,270	2,743
Musa Qala	34	840	4.8	13.6	43	2,807	3,681

Table 4 Average Opium and Poppy Yields per Farm and Their Owner's Share, by Area, by Mon

Area	Opium		Poppies	
	Total Yield	Owner's Share	Total Yield	Owner's Share
Sanquin	1.1	.88	10.8	8.6
Zamin Dawar	1.25	.93	17.2	14.8
Musa Qala	2.33	1.63	31	24

Table 5 Gross Poppy Crop Income (Owner's Share) by Afs., by Area

Area	Amount Sold		Afs./Mon		Income		Gross Income
	Opium Mon	Poppies Mon	Opium	Poppies	Opium	Poppies	
Sanquin	0.88	6.7	12,478	44	10,981	305	11,286
Zamin Dawar	0.97	13.9	22,077	45	21,415	626	22,041
Musa Qala	1.62	23.7	18,014	41	29,183	1,017	30,200

Table 6 Net Poppy Farm Income, by Afs., by Area

Area	Gross Income	Production Costs	Net Income
Sanquin	11,286	2,734	8,552
Zamin Dawar	22,041	2,743	19,298
Musa Qala	30,200	3,681	26,519

3,681

26,519

Breakdown for p. 7 line 3 88% of total

583 = 236

AF = \$ .022 (1977)

\$188 = 940

636 = 1500

Table 7 The Most Profitable Crop and The Reasons Why Not Grown More in Percentage by Area

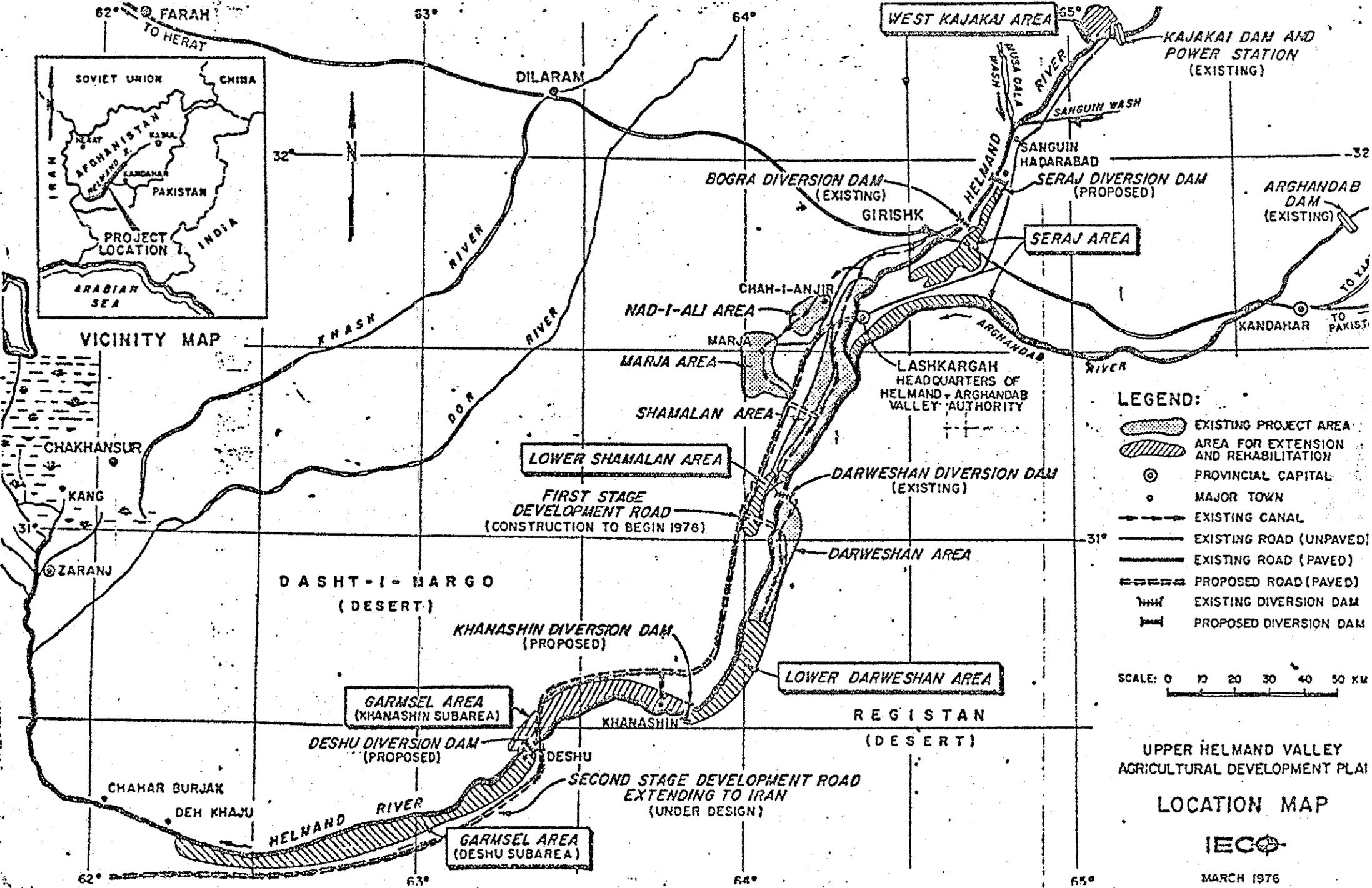
Area	The Most Profitable Crop by %		Reasons for not growing more (all land)			
	Wheat	Cotton	Gov't fear	Labor-intensive	Little water	Others
Sanquin	-	100	87.2	12.8	-	-
Zamin Dawar	-	100	57.4	27.7	12.8	2.2
Musa Qala	-	97.1	57.5	27.5	15	-

Table 8 Number of Irrigation and Water Availability and The Reasons for Not Available, by Area

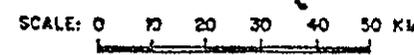
Area	Number of Irrigation		Enough Water		Reasons for non-Availability					
	Wheat	Cotton	Available	Not Available	End of Canal	Man Power	Karez Mgt	Intake Wrong	Flood bad	
Sanquin	7	8	11	5	77%	23%	89%	11%		
Zamin Dawar	6	7	9	1.8	18.6%	81.4%	5.4%	5.4%	73%	8.1%
Musa Qala	8	9	12	3	11.4%	88.6%	10.5%	5.3%	2.6%	28.9%

Farmers' Expectations for Help to Substitute Poppies' Growing in Percentage, by Area  
Table 9

Area	Sanquin	Zamin Dawar	Musa Qala
Cheap Chemical Fertilizer	26.1	16.5	15.9
Cheap Farming Equipment	13.0	7.1	11.6
Drainage Facilities	7.6	-	-
Flood Control	3.3	3.5	-
Dam			4.3
Higher Production Price	15.2	1.2	5.8
Employment for Unem- ployed Members	5.4	4.7	
Industries		2.4	
Improved Seeds	1.1	1.2	
Availability of more water	4.3	30.6	43.6
Honey			1.4
Extending farm-size	4.3	11.8	5.8
Land		1.2	1.4
Other crop to substitute poppies economically	19.6	18.8	10.1
Others		1.2	



- LEGEND:**
- EXISTING PROJECT AREA
  - AREA FOR EXTENSION AND REHABILITATION
  - PROVINCIAL CAPITAL
  - MAJOR TOWN
  - EXISTING CANAL
  - EXISTING ROAD (UNPAVED)
  - EXISTING ROAD (PAVED)
  - PROPOSED ROAD (PAVED)
  - EXISTING DIVERSION DAM
  - PROPOSED DIVERSION DAM



UPPER HELMAND VALLEY  
AGRICULTURAL DEVELOPMENT PLAN

LOCATION MAP



MARCH 1976