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## ACCELERATING SUSTAINABLE AGRICULTURE PROGRAM



### Panjshir Province Agricultural Profile 2008



Prepared by the National Agriculture Information System (NAIS)/AgNet  
for the Afghan Ministry of Agriculture, Irrigation and Livestock (MAIL)

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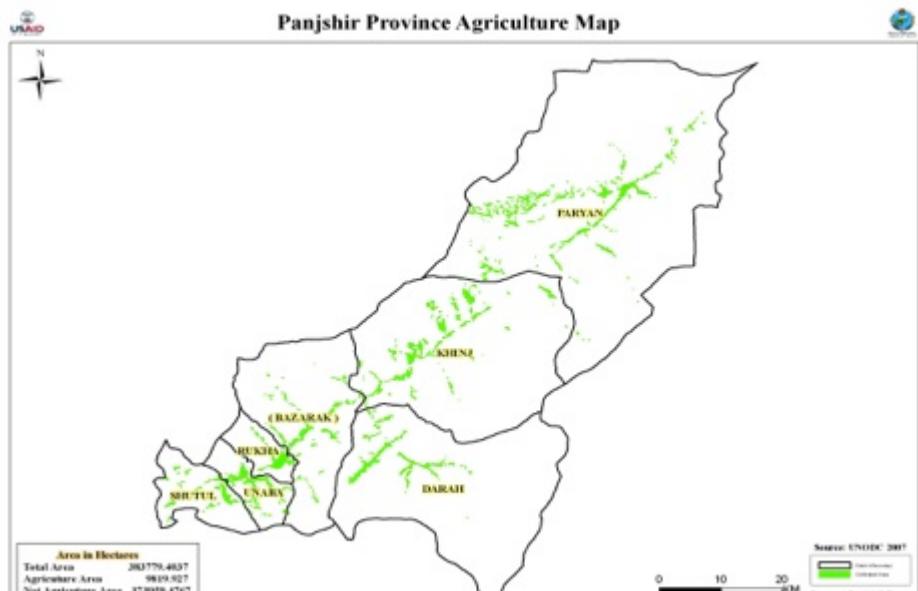
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# Agriculture

## Profile and Data

In Panjshir Province



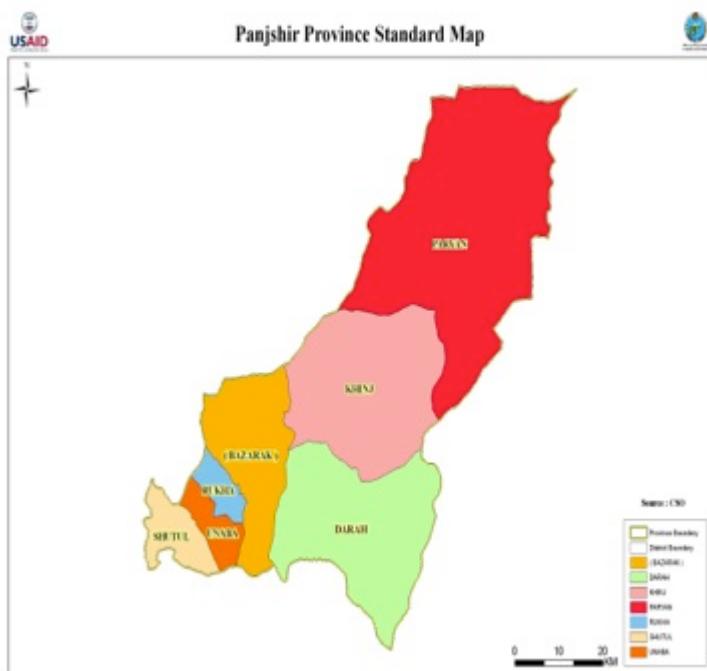
### Panjshir Brief Introduction:

Panjshir is located in northwestern Afghanistan within the southern expanse of the Hindu Kush mountain range. It is positioned between 35.08-35.90 degrees latitude and 69.24-70.30 degrees longitude. Panjshir is bordered by the provinces of Baghlan and Takhar to the north, Kapisa and Parwan to the south and Nooristan to the east. The province is divided into 7 districts (listed below), which includes 392 villages. In 2008, the estimated population was 156,246 people. The province's total area is 3,873,663 square kilometers of which 11,125 hectares are used for agriculture. Panjshir is famous for its nuts and mulberries, as well as its abundance of precious minerals. Local farmers raise sheep and goats in almost all of the province's districts.

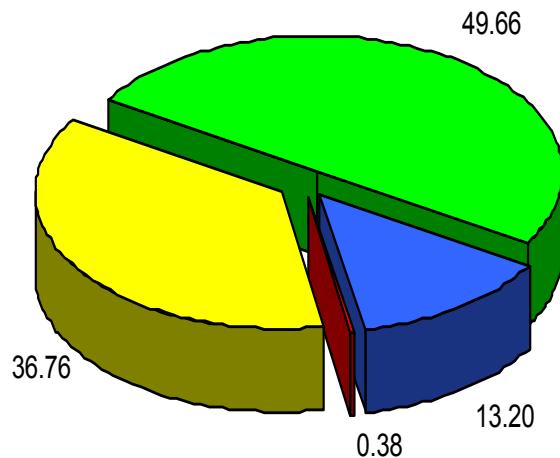
As of 2008, approximately 13,876 hectares of land (3.58 percent of the total area) were under cultivation. Panjshir farmers cultivated 22 different crops, mainly concentrated in the western and central districts of the province because of the low elevation and close proximity to the Panjshir River. Fifty percent of the cultivated land is found in only 2 of Panjshir's 7 districts. Meanwhile, livestock are mostly raised in the other 5 districts due to the hilly and mountainous topography.

### Districts of Panjshir:

- |           |        |
|-----------|--------|
| • Paryan  | Hunaba |
| • Rukha   | Shutul |
| • Bazarak | Khinj  |
| • Dara    |        |



In 2008, Panjshir's total crop production was 52,614 metric tons MT, mostly consisting of fruits (49.65 percent) and followed by grain (36.76 percent). Vegetables, industrial crops and animal fodder made up the remaining part (13.79 percent) of the province's annual production. The total market value of 2008 agricultural production was estimated at \$39 million, with no contributing value-added processing.



Grain 19,341 tons (36.76%)	Fruit 26,130 tons (49.66%)	Vegetable 6,944 tons (13.20%)	Fodder & Industrial corps 199 tons (0.38%)
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Rukha and Khinj districts produced 47 percent of all Panjshir agricultural products in 2008. Hunaba and Rukha produced 6,000 MT of wheat; high volumes of mulberries were produced in Rukha district; farmers in Khinj district grew large amounts of apples and Paryan contributed the most apricots during 2008. Dara led in potato production throughout 2008.

### Research Methodology

This report was prepared based on information provided by AgNet/NAIS system. In 2007 and 2008 AgNet Conducted two separate surveys (1) district profile survey and (2) agricultural statistic survey in 19 provinces of Afghanistan with the support of ASAP and MAIL at district level. During a period of 4 months each, more than 50 surveyors collected information related to the number of hectares land cultivated types of products produced number of livestock, crop calendar, sources of water and much more agricultural information. The information presented in this report is based exclusively in the area surveyed, not in the total farm land of the provinces. The AgNet/NAIS data base for Panjshir is the most accurate database available in the country in spite there is not estimation rewarding the level of exactitude of the information. All data related to harvest amounts was checked in July 2008 by ASAP personnel (Prof. A. Ghani Taj Agricultural Information Specialist and former professor of Kabul University and Ahmad Jawid Abid Survey and Data Assistant) by comparing the national average productivity level of each products. Crop value information was determined on wholesale price in Panjshir and collected by Panjshir AgNet officer Mr. Ahmad Jamshid and approved by director of Panjshir Provincial Agriculture department Mr. Hashmatullah Henayet in September 2008.

## Grains

Annual grain production surveyed was approximately 19,341 MT and had a market value of \$12.3 million in 2008. Nearly all (96 percent) of this total production consisted of major food staples such as wheat and corn (worth \$11 millions). The remaining 4 percent comprised other grain crops that valued \$1.3 million.

Grain	Tons	Value USD \$
<b>Wheat</b>	<b>12,690</b>	<b>8,882,650</b>
<b>Barely</b>	<b>539</b>	<b>301,840</b>
<b>Maize</b>	<b>5,874</b>	<b>2,776,320</b>
<b>Red Bean</b>	<b>272</b>	<b>299,200</b>
<b>Other Grain</b>	<b>56</b>	<b>41,440</b>
<b>Grand Total</b>	<b>19,341</b>	<b>\$ 12,301,450</b>

Production of wheat takes place primarily in Hunaba and Rukha districts. Wheat produced in these districts amounted to 6,000 MT in 2008 (32.5 percent of total grain produced in Panjshir). A complete breakdown of district level grain production is outlined in the following table (figures are in kg):

	Wheat	Barely	Maize	Red Bean	Other Grain
<b>Hunaba</b>	3,150,000	68,000	1,800,000	42,000	-
<b>Rukha</b>	3,132,500	-	1,736,000	21,000	-
<b>Dara</b>	1,985,000	-	1,050,000	40,000	-
<b>Shutul</b>	364,000	28,000	28,000	10,500	-
<b>Priyan</b>	1,080,000	325,000	-	52,500	56,000
<b>Khinj</b>	1,470,000	70,000	750,000	36,000	-
<b>Bazarak</b>	1,508,000	48,000	420,000	70,000	-
<b>Total:</b>	<b>12,689,500</b>	<b>539,000</b>	<b>5,784,000</b>	<b>272,000</b>	<b>56,000</b>

## Fruits

Annual fruit production surveyed in Panjshir during 2008 was estimated at 26,130 MT, which had a market value of \$24 million. Mulberries accounted for half (50 percent) of all fruits grown in the province, and generated \$15 million in revenue. The other 50 percent of fruit included apples, grapes and melons, amounting to \$9 million by the end of 2008.

Fruits	Tons	Value USD \$
Grape	962	\$ 673,330
Apple	7,083	\$ 4,958,100
Mulberries	13,100	\$ 15,196,000
Almond	312	\$ 218,050
Apricot	4515	\$ 3,160,500
Walnuts	47	\$ 27,966
Melon	50	\$ 20,160
Water melon	61	\$ 24,360
<b>Total</b>	<b>26,130</b>	<b>\$ 24,278,466</b>

As was the case with grain production, fruit production is also geographically concentrated in a few provincial districts. Mulberries represented the most grown crop in all districts of province, especially in Rukha district. Meanwhile, Khinj was the largest grape producing district, contributing 66.5 percent of the province's total grape output.. The following table illustrates the top 8 fruit producing districts (figures are in kg).

	Grape	Apple	Mulberries	Almond	Apricot	Walnuts	Melon	W.Melon
Hunaba	10,500	60,000	1,400,000	17,500	-	5,100	4,200	6,300
Rukha	-	2,800,000	3,360,000	294,000	2,240,000	-	4,200	2,100
Dara	70,000	360,000	700,000	-	420,000	-	-	-
Shutul	-	-	2,400,000	-	-	-	42,000	52,500
Priyan	-	210,000	200,000	-	315,000	21,000	-	-
Khinj	640,000	3,500,000	2,800,000	-	1,400,000	3,360	-	-
Bazarak	241,400	153,000	2,240,000	-	140,000	17,150	-	-
<b>Total</b>	<b>961,900</b>	<b>7,083,000</b>	<b>13,100,000</b>	<b>311,500</b>	<b>4,515,000</b>	<b>46,610</b>	<b>50,400</b>	<b>60,900</b>

## Vegetables

<b>Vegetables</b>	<b>Tons</b>	<b>Value USD \$</b>
Potato	5,170	\$ 1,861,200
Onion	1,107	\$ 265,680
Tomato	273	\$ 109,000
Garlic	7	\$ 7,000
Turnip	387	\$ 77,370
<b>Total</b>	<b>6,944</b>	<b>\$ 2,320,250</b>

Vegetable production surveyed in Panjsher province during 2008 was estimated at 6,944 MT (worth almost \$2.3 million). Panjsher farmers produced about 6 different types of vegetables in 2008. A combined 1,000 MT of potatoes and onions were harvested by year's end, representing 90 percent of all vegetables grown.

Approximately 63 percent of vegetables produced in Panjshir are concentrated in Dara district. Shutul district produced 100 percent of Panjshir's garlic; Khinj district took a one-third share in total tomato production, while Dara district produced 77 percent of all the potatoes in the province. The figures presented in the below talbe are in kg.

	<b>Potato</b>	<b>Onion</b>	<b>Tomato</b>	<b>Garlic</b>	<b>Turnip</b>
<b>Hunaba</b>	210,000	70,000	-	-	78,750
<b>Rukha</b>	105,000	98,000	72,000	-	-
<b>Dara</b>	4,000,000	362,500	11,000	-	-
<b>Shutul</b>	210,000	210,000	17,500	7,000	141,300
<b>Priyan</b>	120,000	-	-	-	52,500
<b>Khinj</b>	210,000	245,000	100,000	-	73,500
<b>Bazarak</b>	315,000	121,500	72,000	-	40,800
	<b>5,170,000</b>	<b>1,107,000</b>	<b>272,500</b>	<b>7,000</b>	<b>386,850</b>

## Fodder & Industrial Crops

Panjshir's is famous for its precious stones such as lazuli, barite and red pearls that are mined out of the province's high mountains.

The majority of Panjshir's farmers grow fruit trees and raise goats and sheep. They collect natural fodder from the mountains and store it in preparation for the winter season.

Fodder & Indus Crop	Tons	Value USD \$
Alfalfa	94	\$ 18,780
Clover	66	\$ 13,200
Cotton	11	\$ 19,320
Mustard Rain fed	28	\$ 33,840
<b>Grand Total</b>	<b>199</b>	<b>\$ 85,140</b>

Alfalfa is grown in all districts except Dara. Rukha district alone produced half (51 percent) of Panjshir's alfalfa in 2008. Clover is the second most abundant source of fodder grown in Panjshir, with 50 percent produced in Dara district. Cotton is grown in the Dara and is produced primarily for local household consumption. The figures presented in the below talbe are in kg.

	Alfalfa	Clover	Cotton	Mustard Rain fed
Hunaba	12,000	-	-	3,500
Rukha	24,000	12,000	-	2,450
Dara	26,000	36,000	10,500	-
Shutul	10,800	-	-	3,500
Priyan	-	-	-	-
Khinj	12,000	12,000	-	12,500
Bazarak	9,100	6,000	-	6,250
	<b>93,900</b>	<b>66,000</b>	<b>10,500</b>	<b>28,200</b>

Province	District	Total No	Poultry

## Livestock

Panjshir continues to be a major livestock raising province in Afghanistan. The statistical survey revealed that Panjshir farmers grow 22 different types of agricultural crops and raise 9 types of household livestock, including chickens (See annex –V).

<b>Panjshir</b>	<b>Parian</b>	70,350	56,000
	<b>Shutul</b>	17,690	38,000
	<b>Khinj</b>	44,700	43,000
	<b>Dara</b>	44,350	52,000
	<b>Bazarak</b>	17,090	40,240
	<b>Hunaba</b>	24,213	42,700
	<b>Rukha</b>	19,878	66,130
<b>Total</b>		<b>238,271</b>	<b>338,070</b>

Household livestock in Panjshir number 544,630, not including 336,970 head of chickens, duck and turkeys. Farmers in Dara and Khinj districts raise 16 percent of the province's livestock and the remaining are kept in the other 5 districts. Cows and sheep are the dominant household livestock in the province.

<b>Animals</b>	<b>Cow</b>	<b>Sheep</b>	<b>Goat</b>	<b>Donkey</b>	<b>Horse</b>	<b>Total</b>	<b>Chicken</b>	<b>Turkey</b>	<b>Ducks</b>	<b>Total</b>
<b>Heads</b>	67,379	84,640	75,503	7,561	3188	<b>238,271</b>	314,940	9,050	14,080	<b>338,070</b>
<b>Percentage</b>	28.28	35.52	31.69	3.17	1.34	<b>100%</b>	93.16	2.68	4.16	<b>100%</b>

Cattle are the largest single source of livestock in Panjshir, and this includes oxen and dairy cows. Sheep and goats make up 43.87 percent of all livestock, while chickens are also high in number, representing the second single livestock group in the province. The high number of donkeys could be a good indicator to measure the development of transportation in the province.

## Crops Surveyed by Hectares, Production and Value

No.	Crops	Hectares	Metric Tons	Value USD \$
1	Weath	6,240	12,690	\$ 8,882,650
2	Barely	400	539	\$ 301,840
3	Maiz	3,960	5,784	\$ 2,776,320
4	Red bean	260	272	\$ 299,200
5	Other Grain	50	56	\$ 41,440
6	Potato	512	5,170	\$ 1,861,200
7	Onion	59	1,107	\$ 265,680
8	Tomato	35	273	\$ 109,000
9	Garlic	20	7	\$ 7,000
10	Turnip	20	387	\$ 77,370
11	Grape	48	962	\$ 673,330
12	Apple	504	7,083	\$ 4,958,100
13	Mulberries	970	13,100	\$ 15,196,000
14	Almond	130	312	\$ 218,050
15	Apricot	420	4,515	\$ 3,160,500
16	Walnuts	37	47	\$ 27,966
17	Cotton	5	11	\$ 19,320
18	Mustard Rainfe	23	28	\$ 33,840
19	Melon	24	50	\$ 20,160
20	Water melon	29	61	\$ 24,360
21	Clover	55	66	\$ 13,200
22	Alfalfa	75	94	\$ 18,780
<b>Total</b>		<b>13,876</b>	<b>52,614</b>	<b>\$ 38,985,306</b>

## ANNEX 2

### Ranking of Panjshir Province districts by tons surveyed annually

No.	District	Tons	Hectares	Value USD \$	% total tons
1	Hunaba	6,938	2,849	4,960,890	13.19%
2	Rukha	13,903	3,392	10,783,310	26.42%
3	Dara	9,071	2,345	4,907,620	17.24%
4	Shuttul	3,525	648	3,291,890	6.70%
5	Pariyan	2,432	1,157	1,702,990	4.62%
6	Khinj	11,334	1,862	8,804,716	21.54%
7	Bazarak	5,408	1,623	4,533,890	10.28%
<b>Grand Total</b>		<b>52,611</b>	<b>13,876</b>	<b>38,985,306</b>	<b>100%</b>

# Annex 3 Harvest seasons for Panjshir Agricultural crops surveyed

Crops	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Tons
Weath													12,690
Barely													539
Maiz													5,784
Red bean													272
Other Grain													56
Potato													5,170
Onion													1,107
Tomato													273
Garlic													7
Turnip													387
Grape													962
Apple													7,083
Mulberries													13,100
Almond													312
Apricot													4,515
Walnuts													47
Cotton													11
Mustard Rainfed													28
Melon													50
Water melon													61
Clover													66
Alfalfa													94

## Annex 4

### District Profile Summary for Bazarak (Panjshir) 2008

DISTRICT PROFILE:		Bazarak	
1	DEMOGRAPHICS	7	Water
Region:	Northern	Rain fed	
Province:	Pansheer	Kariz	
District:	Bazarak	Canals	23%
Villages:	39	Springs	7%
Households:	3,801	Bored wells, #	
Estimated population:	19,005	Access/irrigated water	
2	Land	8	Infrastructure
Sharecroppers, %	5%	Access/drinking water	
Arable land, jeribs	7,100	Schools	7
Arable land, hectares (/5)	1,420	Electricity costs, Afs/KWH	
Grazing land, jeribs	20000	Cell phone access	yes
Geographic area, Km2	2000	Health clinic, #	1
Landowner, %	0	VFUs, #	1
Irrigated land area, hectares	1,400	9	Livelihood
Rainfed land in use,hectars	20	Agro-horticulture sector, %	35
3	Primary Crops	Livestock sub-sector, %	4
Spring Wheat, hectares	50	Business and Trade %	10
Fall wheat, hectares	730	Government and NGO %	17
Barley, hectares	40	Daily Labor %	34
Maize, hectares	300	10	Small Enterprises
Red bean, hectares	70	General shops, #	
potato,hectares	30	Food service,#	100
Mulberries , hectares	160	Flour mills,#	10
Apricot, hectares	100	Shoe repair,#	3
apple, hectares	90	Blacksmith,#	2
Grape	17	Oil extraction,#	5
4	Livestock	Butcher shops, #	
Livestock owners, %	10	Carpet weaving, #	
Dairy cows, #	3530	11	Agricultural Facilities
Beef cattle & Draught oxen, #	2,570	Artificial Insimilation	
Sheep & Goats, #	10,500	Rentable Ag Machinary	
Donkey, #	350	Improved wheat seed	
Horses, #	140	Fruit Nurseries, #	yes
Checkens & Turkey, #	40,240	Credit facility	yes
Camels, #		Poultry farm, #	yes
Kuchi, (families),#		Agrochemicals,	yes
Kuchi sheep, #		Cool storage, #	yes
Kuchi goats, #		Green houses, #	
Camels, #		12	Household (HH) Indices
Kuchi other, #		Arable land/HH, jeribs	1.867
5	Transportation	Grazing land/HH, jeribs	5.261
Distance to center, km		Irrigated land/HH, jeribs	1.841
Time to center, minutes		Rainfed land/HH, jeribs	0.26
Cost to center, Afs		Total livestock/HH, #	1.733
Truck cost to center, Afs		Sheep&goats/HH, #	2.762
District roads	Unproved	Poultry/HH, #	10.586
Provincial roads	Proved	13	Checks
Accessibility	12 Months	Household/village	97.461
6	Markets	Population/ HH	5
Provincial	yes	School/ village	0.179
District, General, day	allways	No. of Bored wells/ village	0
District, livestock, day		No. of Enterpize/village	3.076
Traders/assemblers			

## Annex 5

### Number of Household Animals and Poultry in Panjsher Province

2008

No.	Province	District	Livestock statistics							Poultry						
			Oxen	Cows	Sheep	Goats	Horse	Donkey	Camel	Total	Cock	Hen	Chiken	Duck	Turkey	Total
1	Panjshir	Priyan	6,480	4,020	41,500	14,600	2,200	1,550	-	70,350	5,600	16,800	28,000	3,920	1,680	56,000
2		Shutul	2,450	3,050	4,200	7,400	30	560	-	17,690	2,000	12,000	20,000	1,500	2,500	38,000
3		Khinj	7,260	4,840	13,400	16,900	600	1,700	-	44,700	4,300	12,900	21,500	3,010	1,290	43,000
4		Dara	6,800	10,000	9,400	16,800	.	1,350	-	44,350	5,600	18,000	25,000	1,400	2,000	52,000
5		Bazarak	2,570	3,530	8,400	2,100	140	350	-	17,090	5,290	10,700	20,900	2,050	1,300	40,240
6		Hunaba	6,879	3,100	4,590	8,003	20	1,621	-	24,213	1,600	25,000	15,000	1,000	100	42,700
7		Rukha	3,000	3,400	3,150	9,700	198	430	-	19,878	1,200	3,400	60,150	1,200	180	66,130
Total			35,439	31,940	84,640	75,503	3,188	7,561	-	238,271	25,590	98,800	190,550	14,080	9,050	338,070

# Annex 6

Province: Panjsher Arable land survey cultivated, forest and pasture land in Hectare

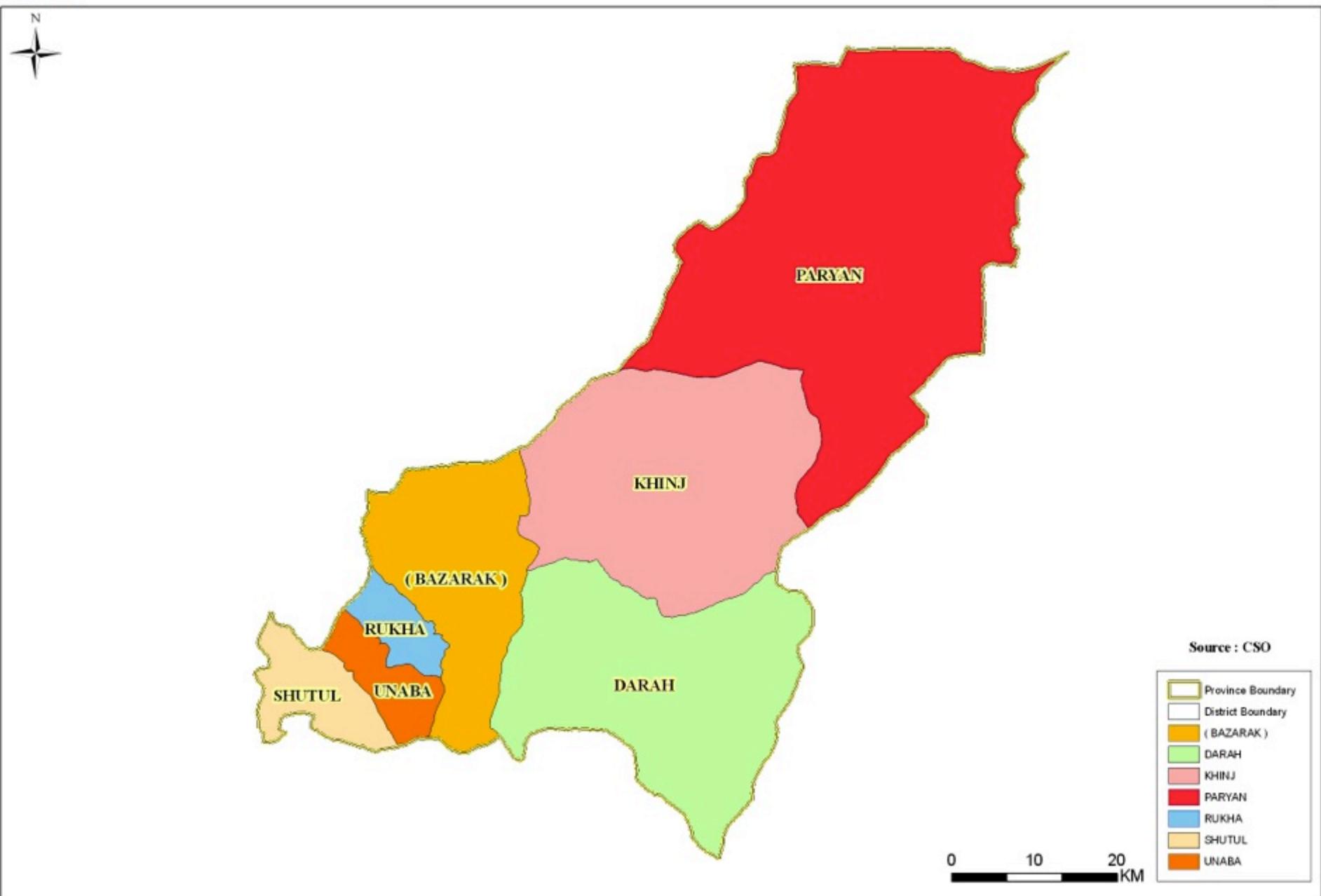
2008

No	Province	Districts	Villages	Areble land in Hact			Orchards & viens	Vegetable and Furrows crops	Cereal Crops	Forage crops	Forest land	Pasture land	Non-areble land	Mountains	Total Land area	
				rainfed	Irrigated	Total										
1	Panjshir	Priyan	26		2,400	2,400	720	10	1,600	70	61	93	22	-	2,576	
2		Shutul	67		1,790	1,790	200	40	1,500	50	460	102	91	-	2,443	
3		Khinj	26		170	170	120	.	120	20	370	967	420	-	1,927	
4		Dara	52		1,407	1,407	500	8	730	30	101	906	94	-	2,508	
5		Bazarak	39	20	1,400	1,420	40	.	800	100	17	4,000	329	-	5,766	
6		Hunaba	110		2,320	2,320	500	20	1,200	80	191	2,155	121	-	4,787	
7		Rukha	72		1,618	1,618	700	12	800	50	180	821	102	-	2,721	
Total				392	20	11,105	11,125	2,780	90	6,750	400	1,380	9,044	1,179	-	22,728

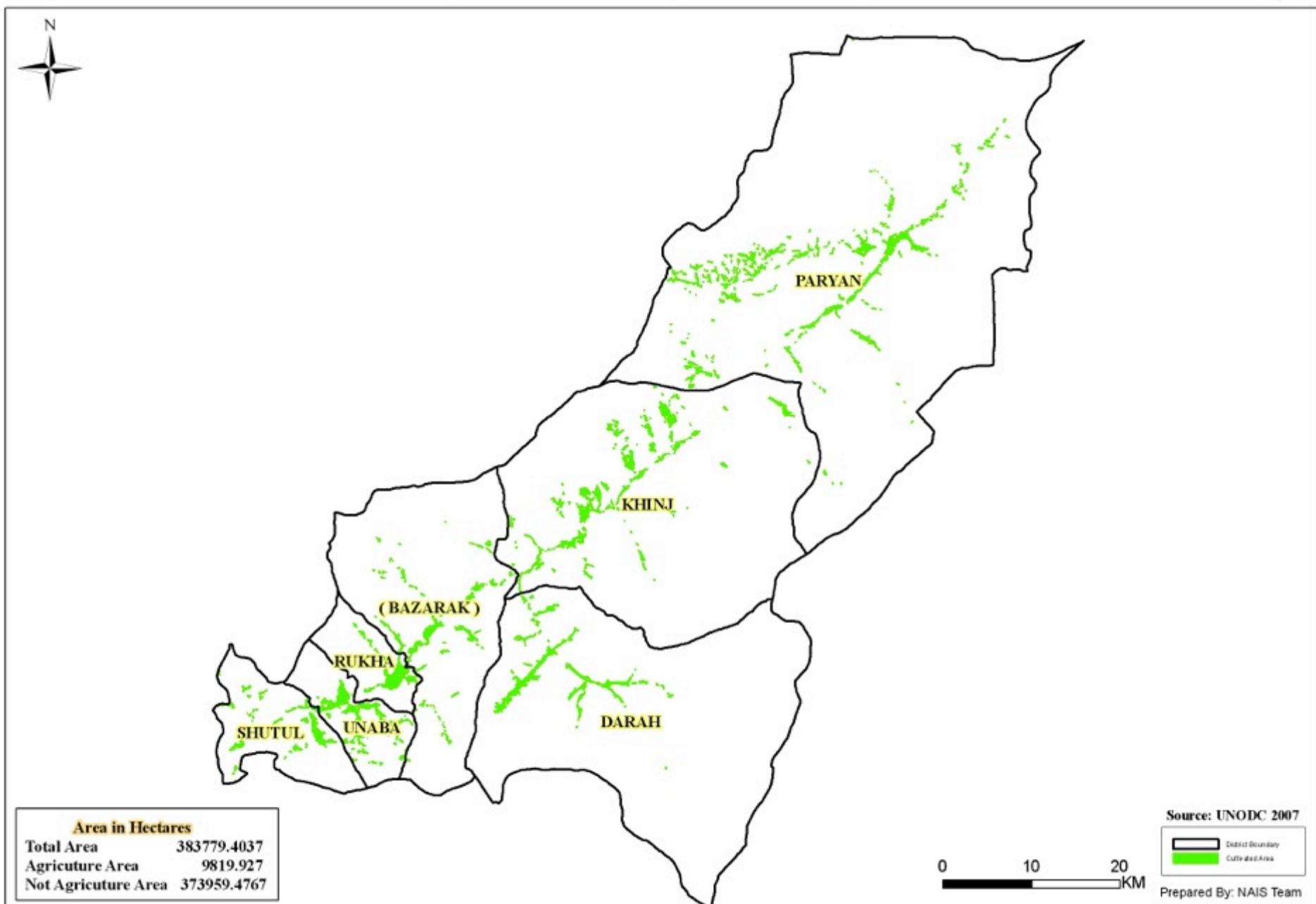
**Annex No. 7:**
**Crop Calendar**
**NAIS/ASAP**

Activities	District	Bazarak Province	Panjshir	Date	GPS HQ	Elev.HQ							
	seasons	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Planting=P;Harvest=H;Treat=T <b>Fruit and Nut Crops</b>													
Apple	Spring												
	Fall												
Grape	Spring												
Pomegranate	.												
apricot													
Peach	.												
Fig	.												
Plum	.												
Almond													
Walnut													
Pistachio	.												
Mulberry	.												
<b>Vegetables</b>													
Tomato	Spring												
Potato	Spring												
	Fall												
Water melon	.												
Melon	Spring												
	Summer												
	Fall												
Carrot													
Okra	.												
Eggplant	.												
Onion													
Cauliflower	.												
Spinach	.												
<b>Cash crop</b>	.												
Cotton													
Rice													
Beans	Spring												
	Summer												
Wheat	Spring												
	Fall												
Corn	Spring												
	Summer												
Mung bean	.												
Sesame	Spring												
	Fall												
Flax	Spring												
	Fall												
Cumin	.												
Sunflower	.												
Canola	.												
Zafaran	.												
Pea	.												
	<b>Planting:</b>												
		<b>Harvesting:</b>											

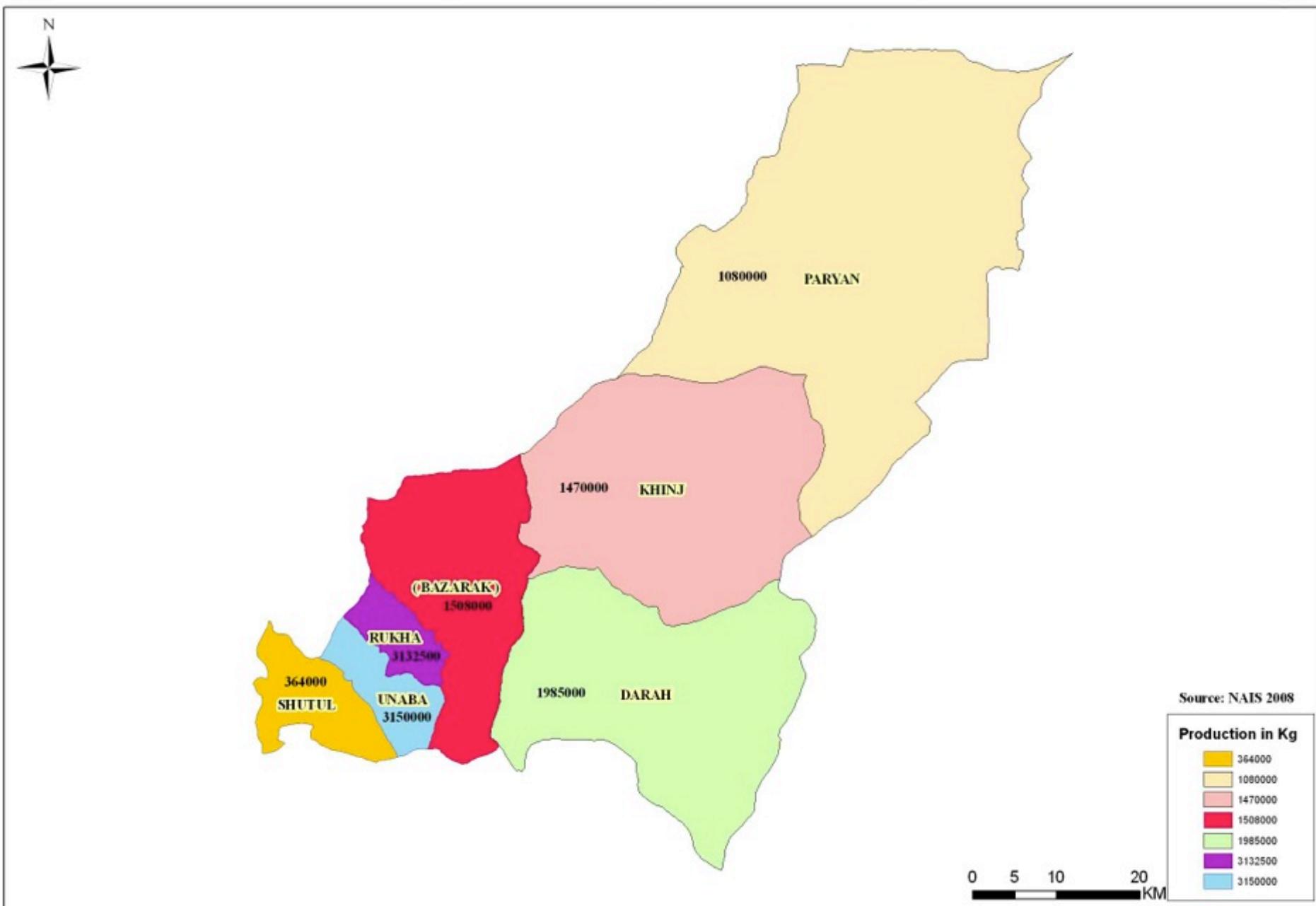
# Panjshir Province Standard Map



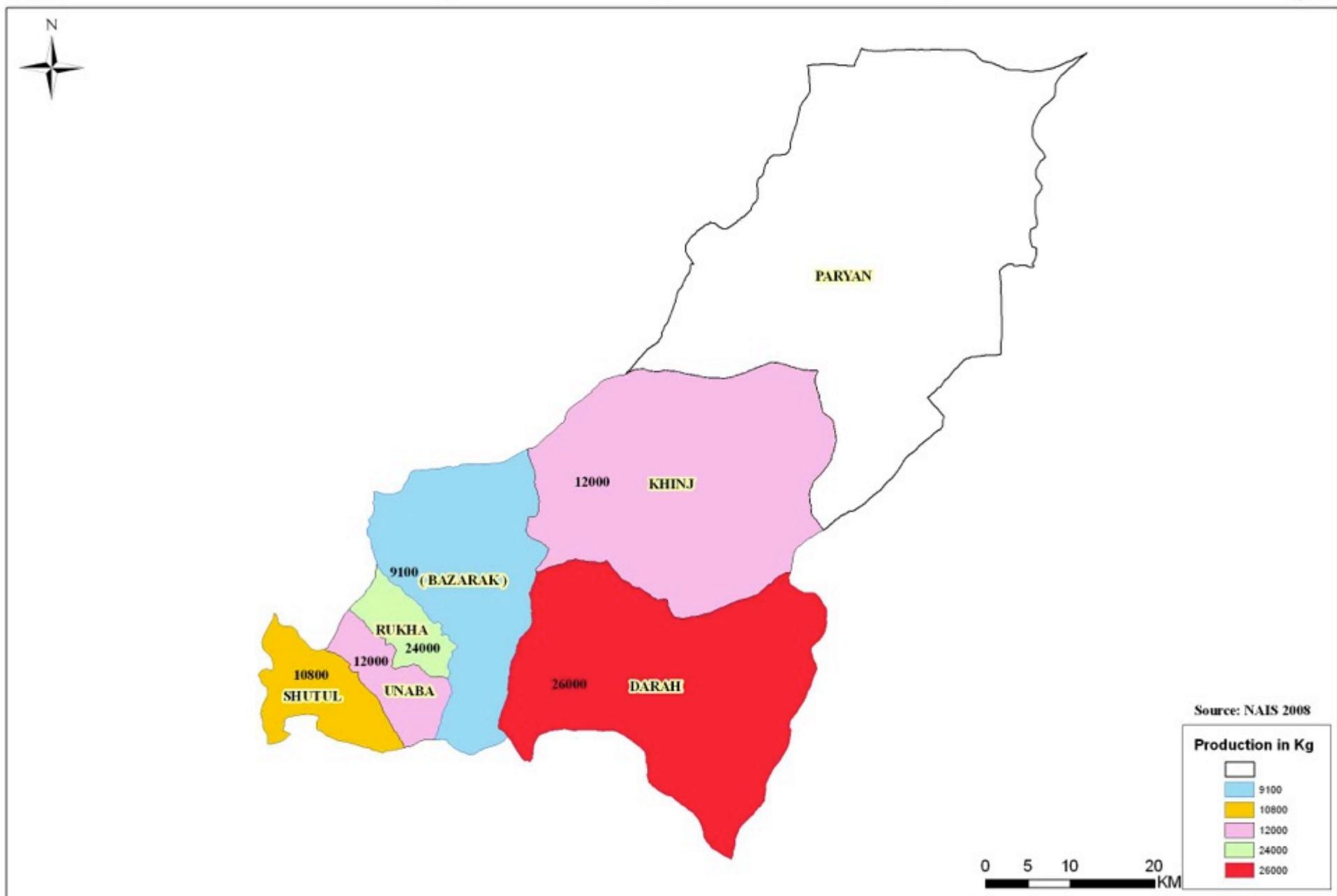
# Panjshir Province Agriculture Map



## Panjshir Province (wheat Production )



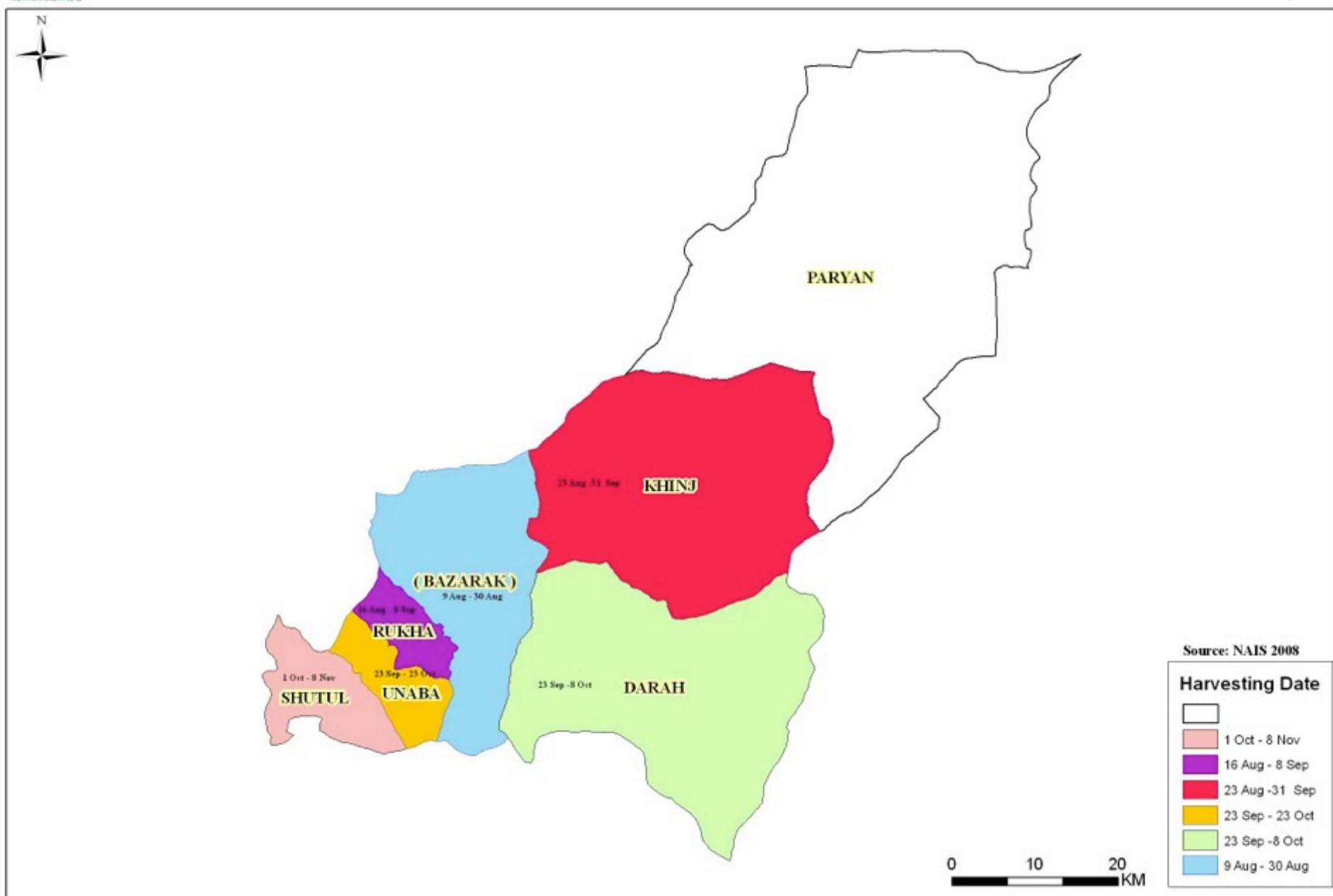
## Panjshir Province (Alfalfa Production )



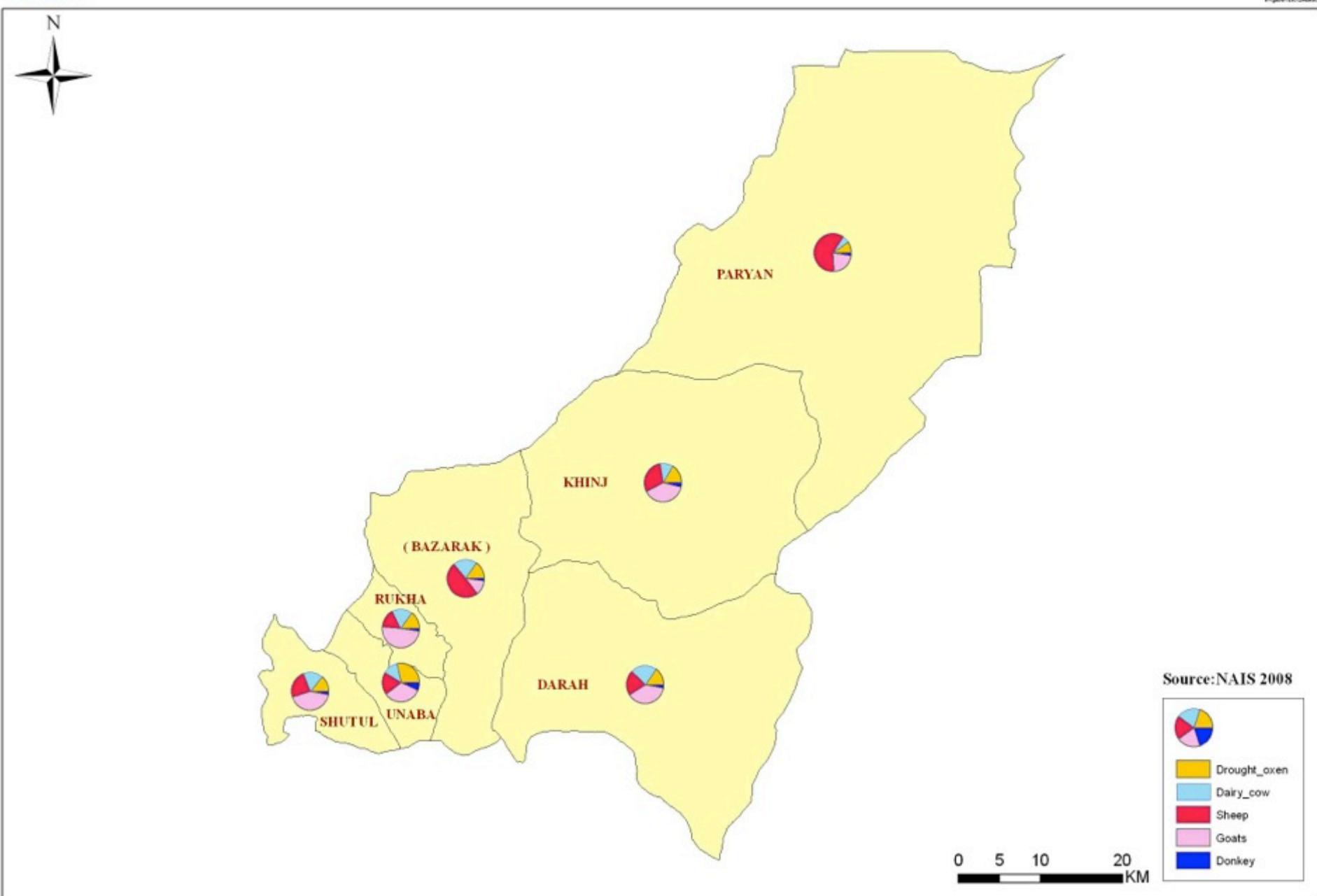
# Panjshir Province Onion Crop (Calendar) Map



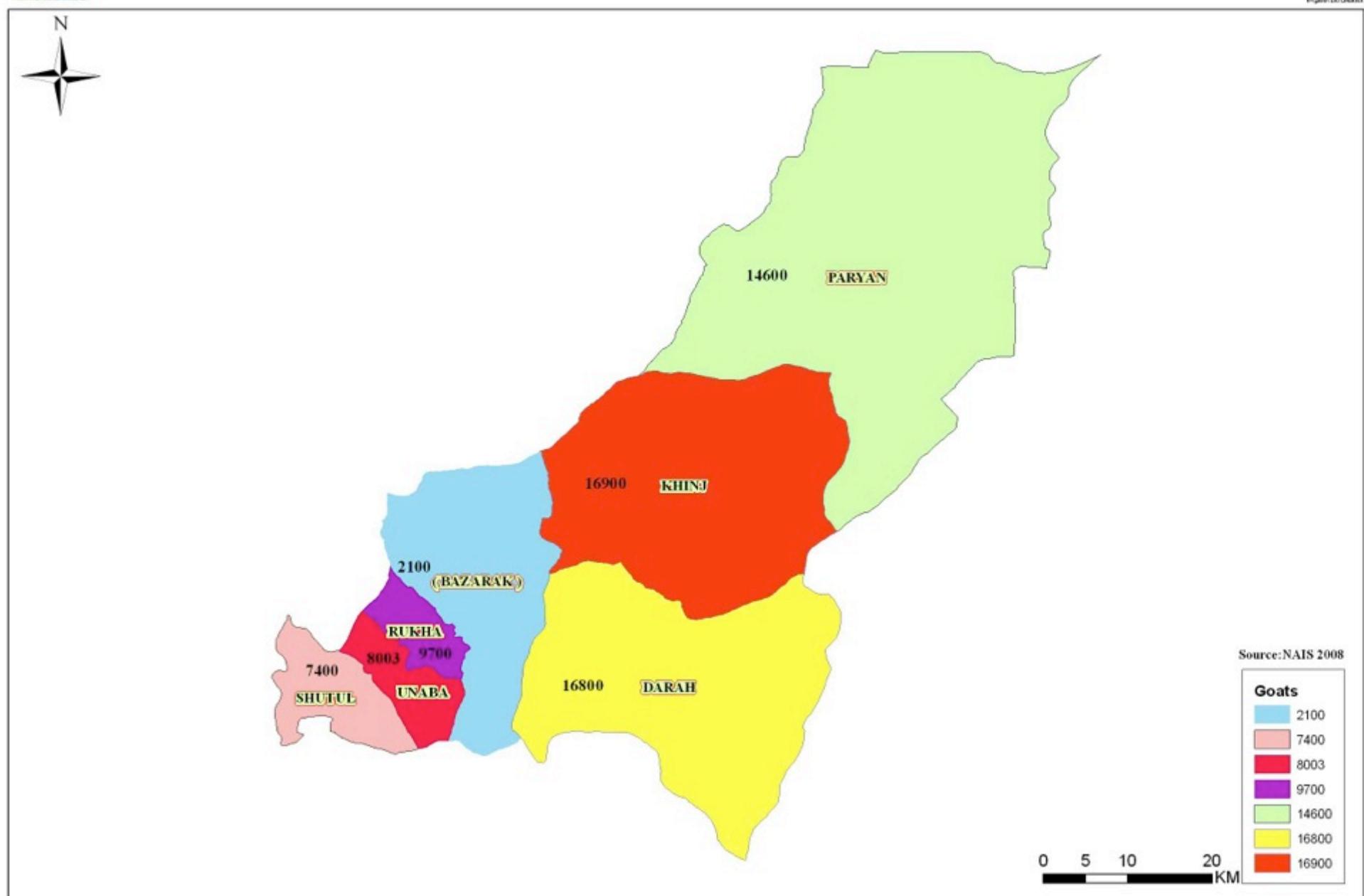
# Panjshir Province Onion Crop (Calendar) Map



## Panjshir province livestock



## Panjshir province livestock (Goats)



## Panjshir province livestock

