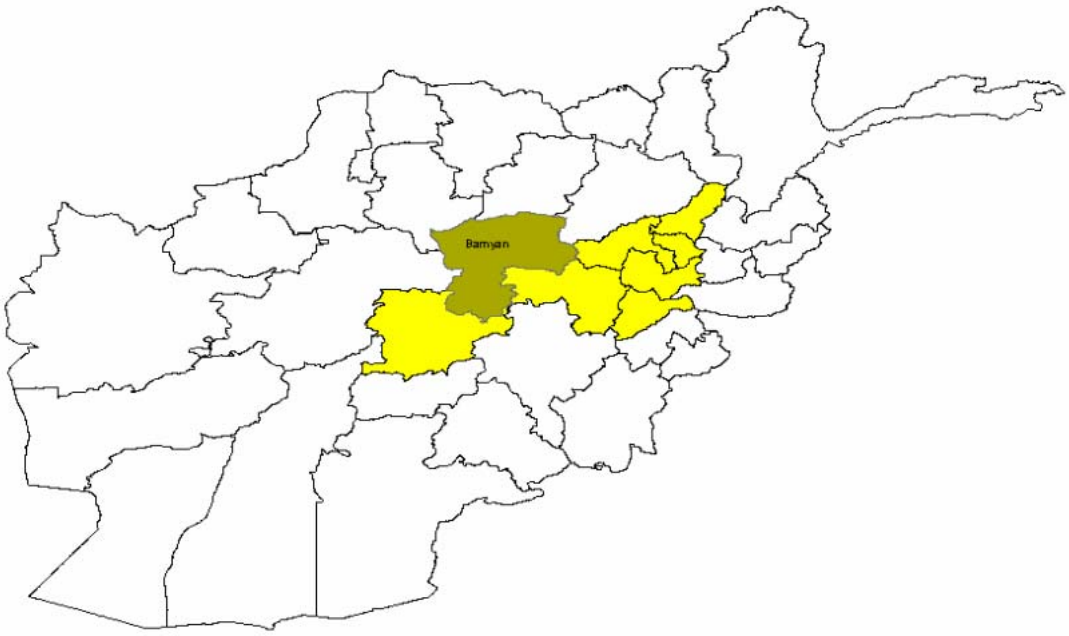
Bamyan



A Socio-Economic and Demographic Profile

With the financial and technical assistance of UNFPA

Note

Some of the information contained in this report, in particular that related to crops and economic activities, as well as the building stock may not be as accurate as one would wish. However, they are the best estimates available at the time of the Household listing exercise. The most logical explanation is that the sources of the information—local informants—may not have been as knowledgeable as they were assumed to be.

Province of

Bamyan

A Socio-Economic and Demographic Profile
Household Listing—2003

Acknowledgements

The Socio-Economic and Demographic Profiles were a collaborative effort of UNFPA, the Central Statistics Office, and numerous stakeholders, who made suggestions for the improvement of the final product while it was still being written.

UNFPA wishes to recognize the contributions of Mr. David Saunders, its former representative in Afghanistan, who shared the various drafts of the model Profile with a number of donors, embassies, and other stakeholders stationed in Kabul and collected their suggestions as to how to improve on it.

The profiles could not have been completed without the commitment, enthusiasm and energetic efforts of many CSO staff members. Mr. Mohammad Haroon Aman, Mr. Waheed Ibrahimi, and Mrs Fazila Miri of the Database section produced all the tables and graphics for all 34 provinces. Mr. Tamim Ahmad Shakeb, head of the GIS section, and his colleagues, Messrs Zabiullah Aseel and Abdul Ahmad Sherzai, together produced all the thematic maps included in the body of the text as well as in the annexes—a total of more than 1,300 maps. Messrs Nasratullah Ramzi, Saifrahman Azizi, Sayed Yousuf Hashimi, and Zabiullah Omari of Database were responsible for editing the profiles and putting the last touches before printing.

UNFPA also wishes to extend its appreciation to Mr. Abdul Rashid Fakhri, head of CSO, and his colleagues in the CSO review team—Messrs Esmatuallah Ramzi, Mohamed Sami Nabi, Azizullah Faqiri, and Ghulam Mustapha, who read the drafts and made valuable comments and suggestions, in particular with regards to the information on economic activities.

Introduction by the
Acting General President of the Central Statistics Office of Afghanistan

Designing programs aimed at increasing socio-economic development and economic growth to ensure better living conditions for population requires accurate, up-to-date, and comprehensive data. It has been 27 years since Afghanistan's first attempt to conduct a national population census. For reasons known to all, such an attempt had to be aborted. In those 27 years, a number of changes took place, that were related to natural population growth, population movement, and redrawing of the boundaries of the country's administrative units, among others. Such changes need to be apprised and documented, in order to respond to the need for accurate information that is vital for development and reconstruction programs.

Both the Bonn agreement and the emergency Loya Jirga called for the conduct of a second national population and housing census. Jointly with UNFPA, CSO mobilized the required funds from the international donor community, and took charge of the complex task of planning for the census and upgrading the technical skills of the CSO staff that will be responsible for its conduct.

In spite of difficulties of various sorts, and at an enormous cost in terms of staff mobilization, CSO, with the financial and technical assistance of UNFPA, undertook the first phase of the population and housing census. The operation, including door numbering, household listing, updating the enumeration area maps, data entry, cleaning, and processing took less than four years. For the first time, digital maps were produced for all provinces, districts, and village locations.

CSO has the great pleasure of producing this publication, which presents the results of the first phase of the census. It provides such valuable information as population size and spatial distribution, age and sex composition, as well availability of certain facilities to the village populations. We hope that such information will be useful for the widest audience, in particular planners, researchers, and any one with an interest in population data.

Abdul Rashid Fakhri,
Acting General President
Central Statistics Office,
Islamic Republic of Afghanistan.

Introduction by the
Representative of UNFPA

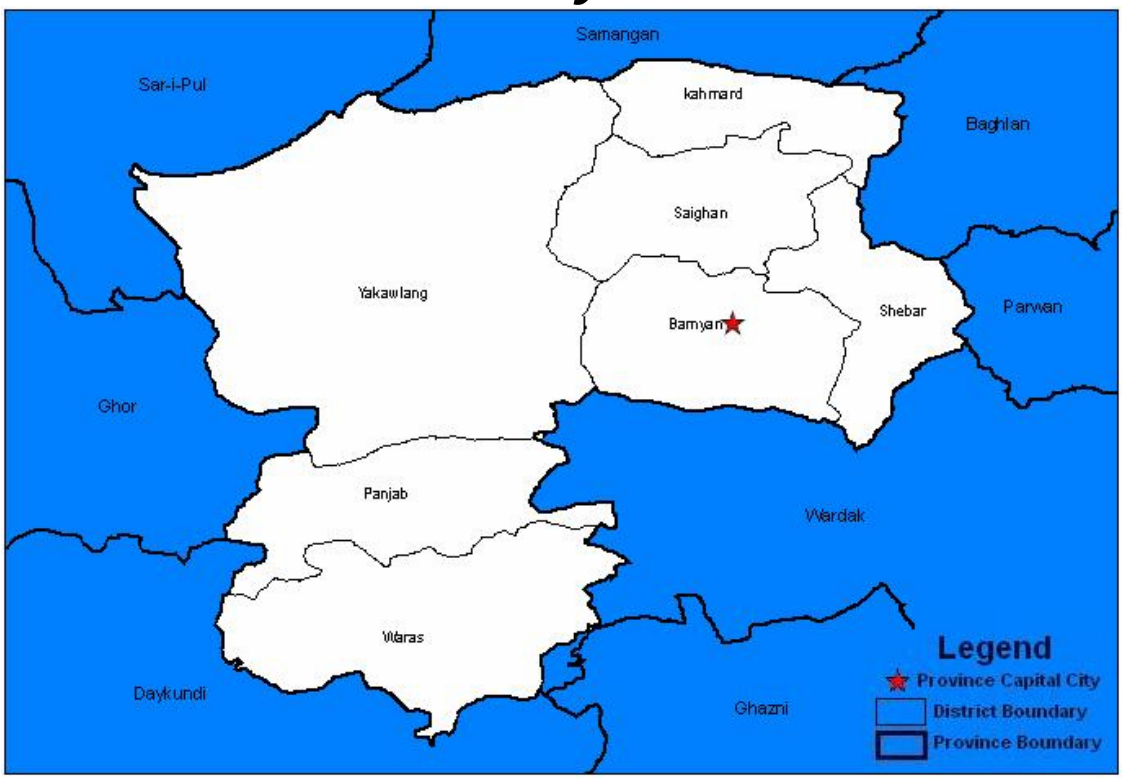
Under the Bonn Agreement, the United Nations agreed to assist the Government of Afghanistan in conducting a Population and Housing Census, the first Census in Afghanistan since 1979. As a leader in population and development issues, the United Nations Population Fund (UNFPA) has been entrusted with this task for its decades of experience and expertise in providing technical and financial assistance in conducting population and housing censuses.

For the past few years, Afghanistan has been making serious attempts at rebuilding and rehabilitating the nation and its institutions after more than two decades of war, conflict, and civil strife. Effective planning for comprehensive social and economic development requires evidence based and reliable data. Data for economic and social development can come from various sources: sample surveys, administrative records, and various other sources. However, no data source other than a Population and Housing Census will provide primary information about the number and characteristics of Afghanistan's population. Likewise, the Census 2008 will allow for comprehensive gender analysis of population based indicators and will provide the baseline for population and any related functional projections that are crucial for planning.

The present publication deals with Phase I of the Afghanistan census—the Household Listing, conducted and the results analyzed between 2002 and 2005. The data collected during this exercise provides a wealth of information on basic population variables in the country — size of the population, age structure and sex composition, and household size. The household listing has also produced much socio-economic data on economic activities, health and education facilities, housing facilities and so on. All such information will be essential in the process of socio-economic reconstruction in Afghanistan. However, it must be noted that the household listing phase unfortunately could not be conducted in a small number of districts due to the security situation that prevailed then. It is hoped that the census proper, scheduled for the summer 2008 and being a benchmark under the London Compact, will encounter more favorable circumstances and fill the gaps left by the Household Listing exercise. UNFPA will extend all possible assistance to the Government of Afghanistan in order to make the census operation in 2008 a successful one. There are a number of positive aspects, which are important to note in the context of conducting the household listing, particularly noteworthy is the cooperation, which the Central Statistical Office has received from the Provincial Administrations, and the assistance, which has been extended to the CSO staff in all of the provinces. The enthusiasm of all of the staff to undertake very difficult work in exceptionally difficult conditions is equally noteworthy and appreciated, as is the quality of the work. At this point, I would like to extend my gratitude and recognition to Dr. Hamadi Betbout, UNFPA's senior advisor who led the exercise of managing the household listing database and publication of the provincial profiles.

Alain Sibenaler
Representative a.i.
UNFPA Kabul

Bamyan


Samangan
Sar-i-Pul
kahmard
Baghlan
Saighan
Yakawlang
Bamyan
Shebar
Parwan
Ghor
Panjab
Wardak
Waras
Daykundi
Ghazni
Legend
Province Capital City
District Boundary
Province Boundary

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Settlement Patterns

Located in the Central region, Bamyan is bordered by the provinces of Baghlan and Parwan in the North East, Wardak and Ghazni in the South-East, Daikundi in the South-West, Ghor in the West, Sar-i-Pul in the North-West, and Samangan in the North. It covers a land area of 18,029 squared kilometers, representing 2.76 percent of the total Afghan territory. The province is divided into seven districts—Bamyan, the provincial capital, Shebar, Saighan, Kahmard, Yakawlang, Panjab, and Waras.

Bamyan is home to 1.5 percent of the total population of Afghanistan. With its 343,892 inhabitants, it is the 27th most populous province in the country (see Annex 1).

The population is distributed among the nine districts as shown in table 1 and figure 1[1]. The largest share of the population—close to a quarter—lives in Waras, while Bamyan, the provincial capital, houses a little over one-fifth. On the other hand, Yakawlang and Panjab, together represent another third of the total population in the province. The three remaining districts—Shebar, Saighan, and Kahmard—account for only a little more than a fifth of the total population.

[1] Figure 1 is comprised of two panels; in addition to panel A which shows the distribution of the population by district, panel B shows the population density of each district. The latter information was included for conventional purposes only, as in the absence of quantified information on proportion of inhabitable land, density figures can be very misleading. Panel B should therefore be interpreted with caution.

The large majority of the population—97.6%—lives in rural areas. Bamyan, the provincial capital and only urban[2] center, houses a mere 8,310 population, which represents 0.18 percent of the total urban population of Afghanistan.

Table 1—Population, sex, and sex ratio, by district, province of Bamyan, 2003[3]

District	Total		Males	Females	Sex ratio
	Number	Percent			
Provincial Center—Bamyan	***70,028***	***20.36***	***34,135***	***35,893***	***95.10***
Shebar	22,933	6.67	11,878	11,055	107.44
Saighan	23,215	6.75	11,779	11,436	103.00
Kahmard	31,042	9.03	15,839	15,203	104.18
Yakawlang	66,158	19.24	33,195	32,963	100.70
Panjab	48,397	14.07	24,118	24,279	99.34
Waras	82,119	23.88	41,182	40,937	100.60
Total	***343,892***	***100.00***	***172,126***	***171,766***	***100.21***

Bamyan's rural population of 315,726 inhabitants is distributed over 1,839 settlements of extremely varying sizes. The smallest settlement counts as few as six (6) people and the largest as many as 1,734[4].

Figure 2 shows the distribution of the village population by size-class in the total province (panel A) and in each individual district (panel B).

At province level, the distribution is heavily skewed towards villages of very small sizes. Out of the total 1,839 villages, more than two out of five have less than 100 inhabitants, and another 30 percent between 100 and 199 population. Villages with less than 300 population represent more than four out five. Only a little more than one percent—a total of 21 villages—have 1,000 or more population.

---

2 Urbanity in Afghanistan is not based on population size. According to the Ministry of the Interior, are considered urban those places whose administrative structures include a municipality, regardless of their population sizes. In the case of Afghanistan all provincial capitals are urban, with the exception of Panjsher and Nooristan, as well as the capitals of some districts.

3 Enumeration started on 20 June 2003 and ended on 9 August of the same year.

4 There was one village with zero population. Such villages appear to exist all over the country. According to CSO, this is due to a variety of reasons:

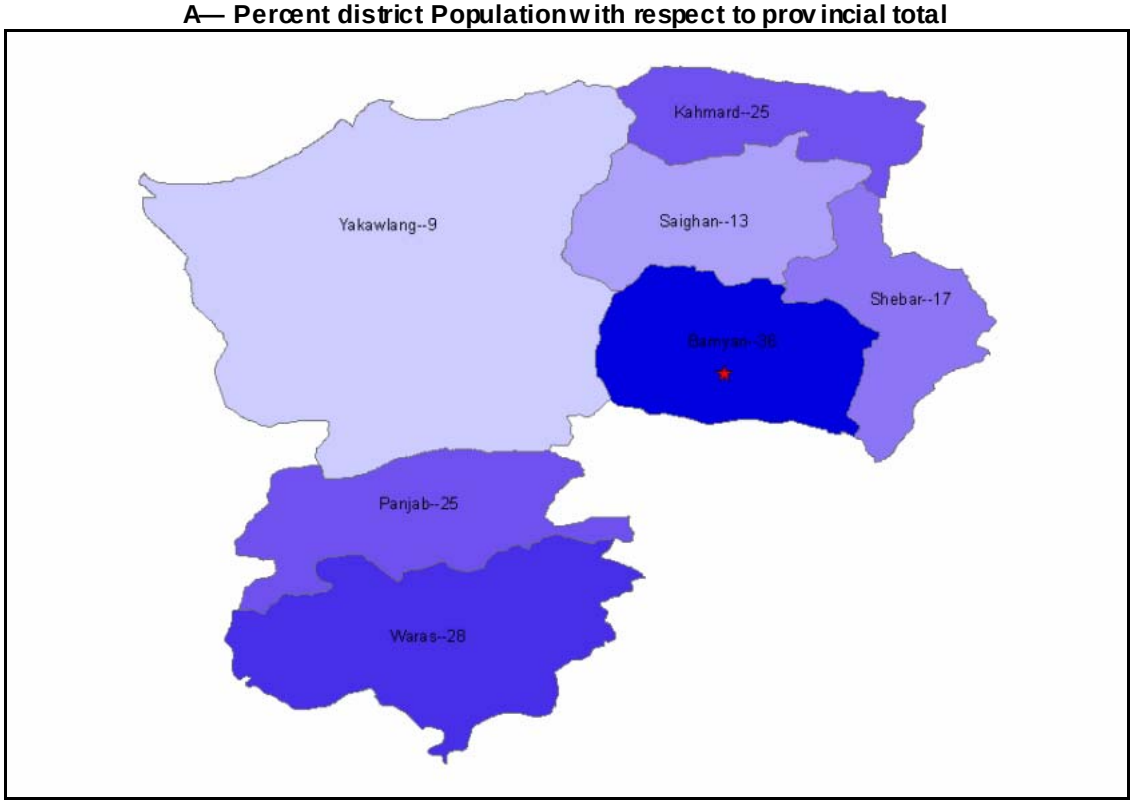
1. During the household operation, some villages were unoccupied because of the draught which caused the inhabitants to relocate in other places where more water was available;
2. Some of the villages were comprised solely of shops, serving the neighboring villages;
3. In some areas, remoteness as well as economic and other types of problems forced the villagers to relocate to other places;
4. In some cases, the villages are mere district centers with no other types of buildings than government offices and shops.
5. Some villages had been partially demolished, which drove the inhabitants away.

The distribution by district is shown in panel B of figure 2. Its most outstanding feature is the close resemblance between the settlement patterns of three districts—Shebar, Yakawlang, Panjab, and the distribution for the province as a whole. One feature that these districts do not share with Bamyan as whole is the total absence of large-sized villages. In Waras, for instance, the largest village does not have more than 600 population or so.

The remaining three districts exhibit patterns of their own, but they share one common feature: they all have large-sized village—one in Saighan, seven in Bamyan, and 13 in Kahmard. Overall, however, their settlement patterns are dominated by large majorities of small-sized villages. In Bamyan, the provincial capital, three villages out of five have 400 population or less, three out of four have less than 500, and four out five have less than 600.

Figure 1—Population Settlements, Bamyan, 2003

A— Percent district Population with respect to provincial total



B—Density: Population per km^2

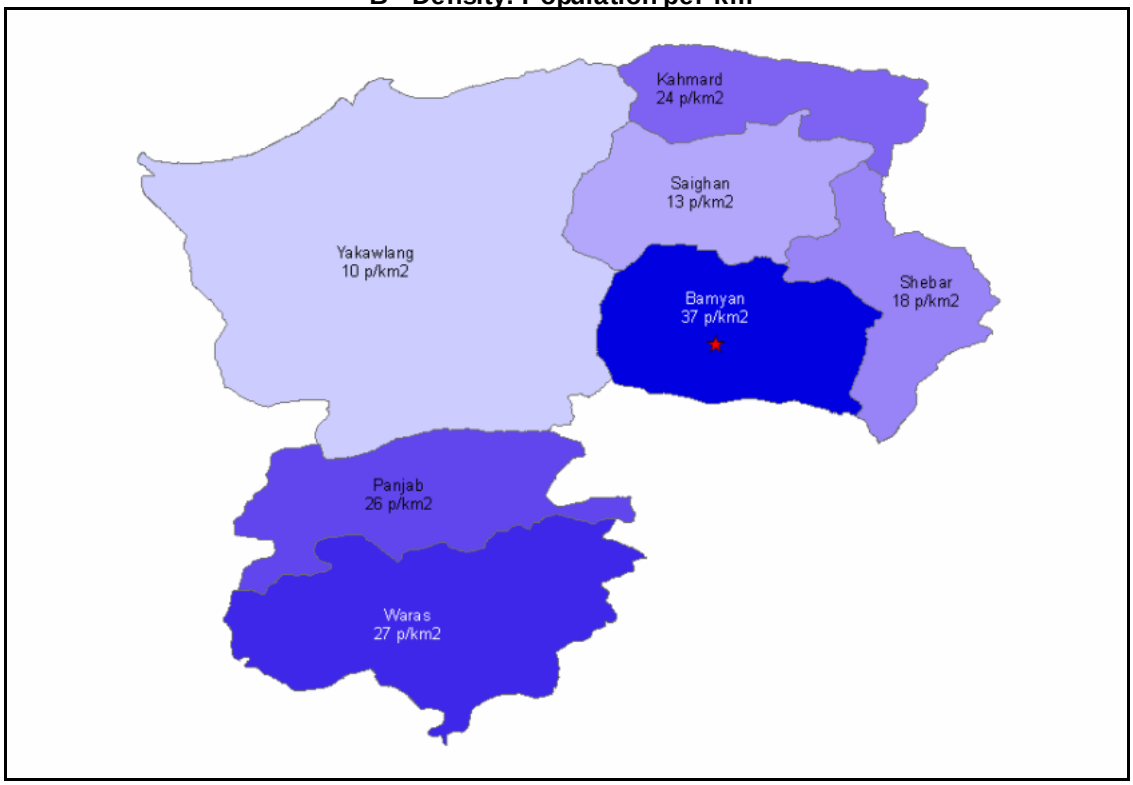
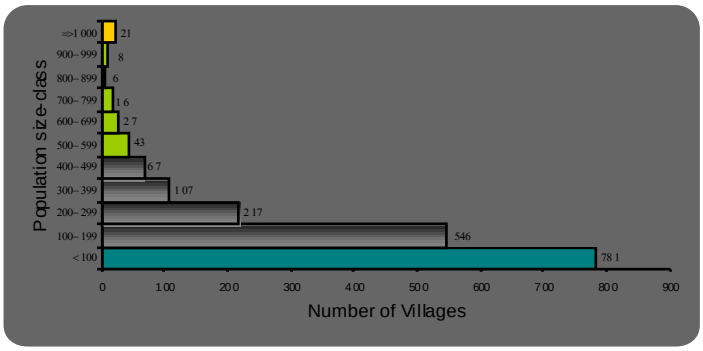


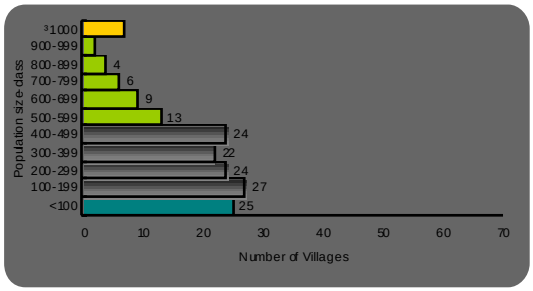
Figure 2—Distribution of the population settlements by size-class, Bamyan, 2003

A—Province

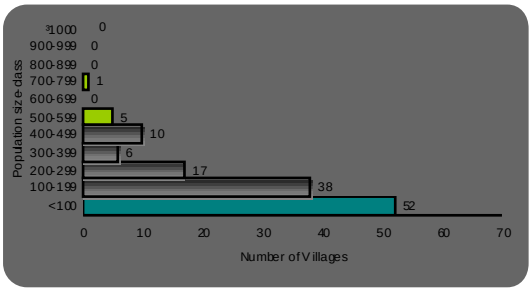


B—Districts

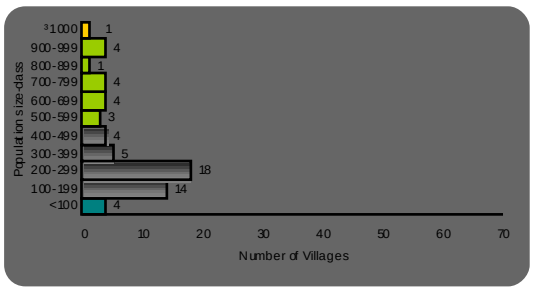
Provincial Center—Bamyan



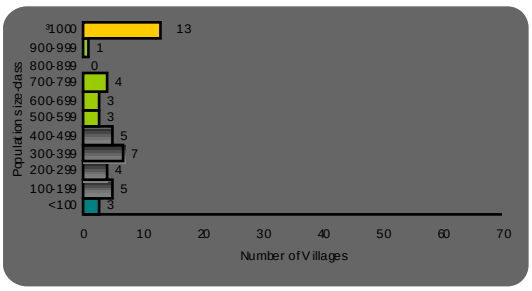
Shebar



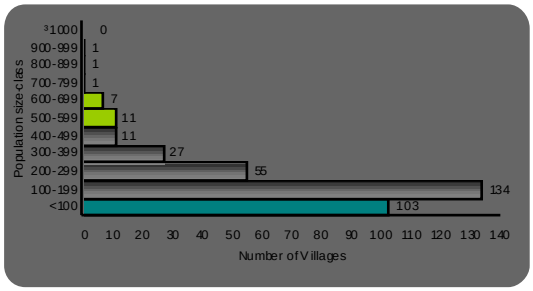
Saighan



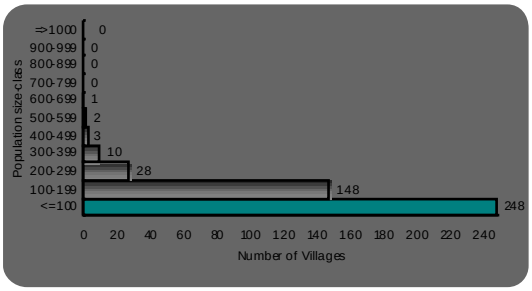
Kahmard



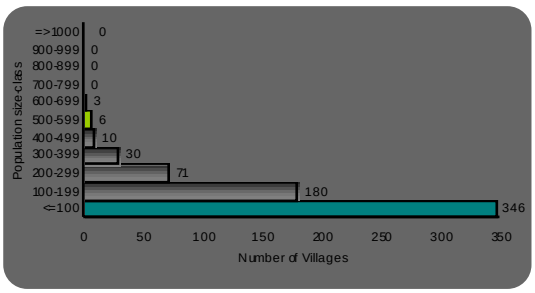
Yakawlang



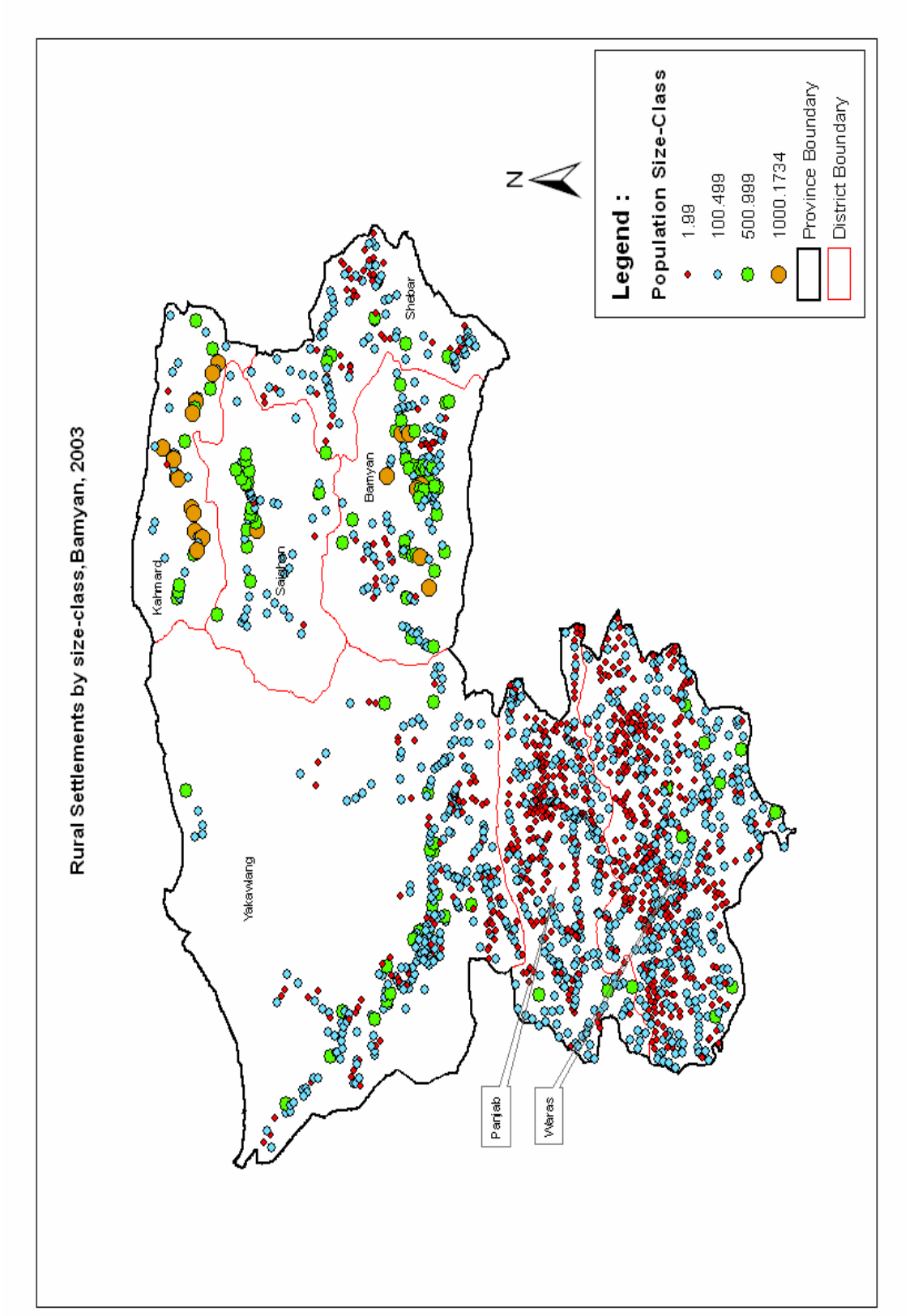
Panjab



Waras



Map1


Rural Settlements by size-class,Bamyan, 2003
Legend :
Population Size-Class
1.99
100.499
500.999
1000.1734
Province Boundary
District Boundary
N
Shebar
Bamyan
Kahmard
Saighan
Yakawlang
Panjab
Waras

Demographic Characteristics

Age distribution

The distribution by age and sex of the population of Bamyan is shown in table 2 and figure 3. As the latter clearly shows, the distribution is highly irregular. The overall shape of the age-pyramid is typical of a pre-transition society—characterized by stable high fertility, but certain age groups are noticeably below the expected size. For instance, it is not readily understandable why the proportion of males of the 0-4 age group should be that much lower than the proportion of males of the 5-9 age group. To the extent that unlike other predominantly rural districts, the proportion of females of the 0-4 age-group is lower than 0-5, it may be legitimately surmised that this is a direct result of war casualties—women married to soldiers having given birth to fewer children than in normal circumstances. This, however, remains to be verified. In the same way, why should the proportions of males in the 55-59 age groups be much lower than expected, while the 60-64 and 70-74 is substantially higher?

Clearly, the age data need to be adjusted before they can be used for planning purposes.

> *"Errors in the tabulated data on age may arise from three different sources:*
> - *inadequate coverage,*
> - *failure to record age, and*
> - *misreporting of age.*
>
> *Coverage errors are of two types. Individuals of a given age may have been missed by the census or erroneously included in it (e.g. counted twice). The first type of coverage error represents gross under-enumeration at this age and the second gross-over-enumeration. The balance of the two types of coverage errors represents net under-enumeration at this age[1]."*

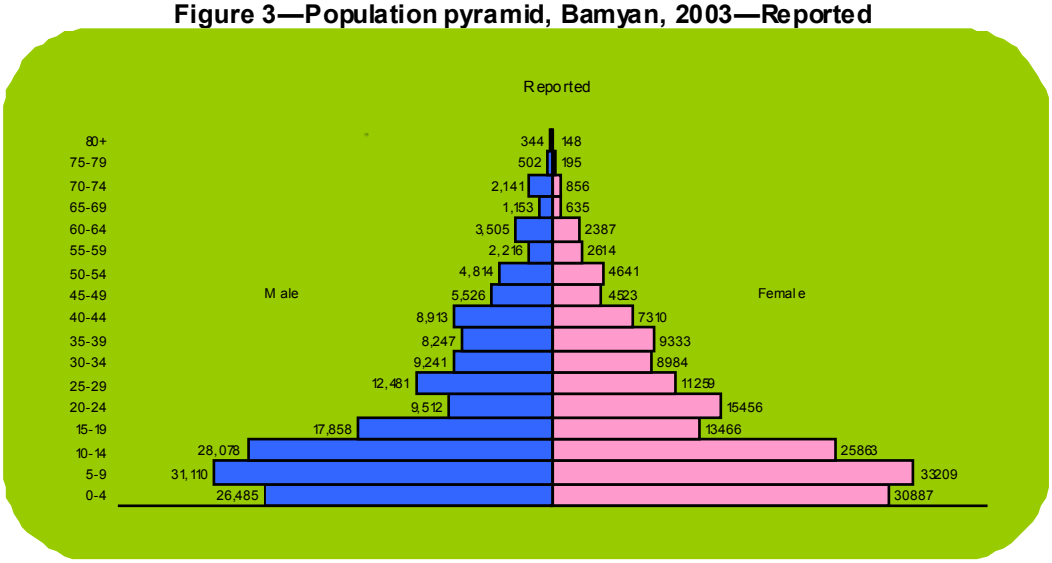
[1] Because under-enumeration commonly exceeds over-enumeration; the balance is typically designated as under-enumeration.

"In addition, the ages of some individuals included in the census may not have been reported, or may have been erroneously reported by the respondent, erroneously estimated by the enumerator, or erroneously allocated by the census office. Such errors are referred to as response bias".

Table 2—Population estimate, by age in 5-year groups and sex, Bamyan, 2003[2]—Reported

	Male		Female		Both sexes	
Age Group	Number	Percent	Number	Percent	Number	Percent
0-4	26,485	15.39	30,887	17.98	57,372	16.68
5-9	31,110	18.07	33,209	19.33	64,319	18.70
10-14	28,078	16.31	25,863	15.06	53,941	15.69
15-19	17,858	10.38	13,466	7.84	31,324	9.11
20-24	9,512	5.53	15,456	9.00	24,968	7.26
25-29	12,481	7.25	11,259	6.56	23,740	6.90
30-34	9,241	5.37	8,984	5.23	18,225	5.30
35-39	8,247	4.79	9,333	5.43	17,580	5.11
40-44	8,913	5.18	7,310	4.26	16,223	4.72
45-49	5,526	3.21	4,523	2.63	10,049	2.92
50-54	4,814	2.80	4,641	2.70	9,455	2.75
55-59	2,216	1.29	2,614	1.52	4,830	1.41
60-64	3,505	2.04	2,387	1.39	5,892	1.71
65-69	1,153	0.67	635	0.37	1,788	0.52
70-74	2,141	1.24	856	0.50	2,997	0.87
75-79	502	0.29	195	0.11	697	0.20
80+	344	0.20	148	0.09	492	0.14
Total	*172,126*	*100.00*	*171,766*	*100.00*	*343,892*	*100.00*

Figure 3—Population pyramid, Bamyan, 2003—Reported



Correction of the age distribution of the 2003 household listing poses certain challenges. In addition to the difficulties described above, one must take into account two additional factors:

1. excess mortality among certain age groups due to war, and
2. the waves of war refugees that left for neighboring countries.

[2] The age distribution is based on 1/200 sample of the total households.

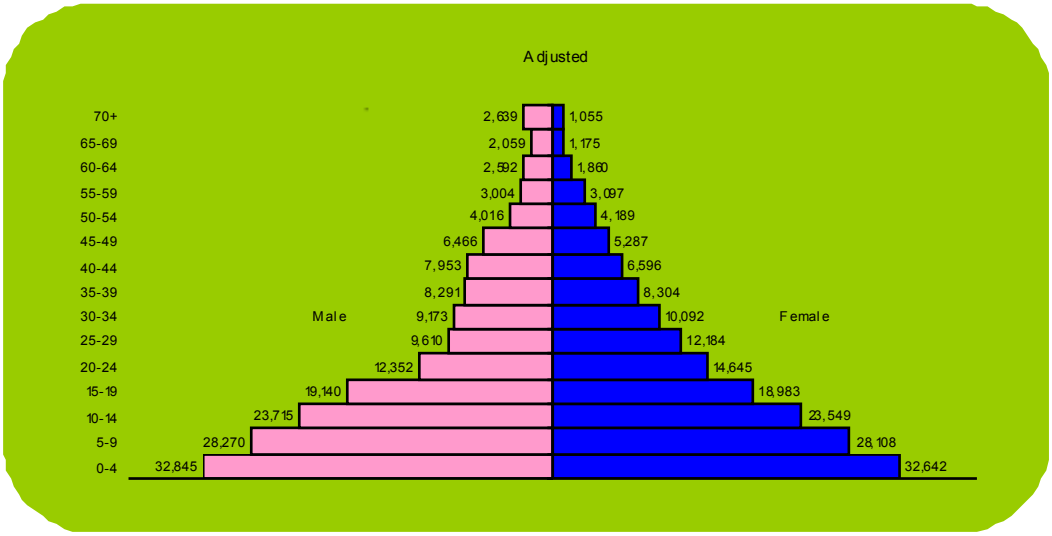
It follows that, in any attempt to correct for the anomalies, care must be taken not to remove the true fluctuations that resulted from such factors.

To correct for these irregularities, we applied a multi-stage procedure[3] that yielded the distribution shown in table 3 and figure 4[4].

Table 3—Adjusted population estimate, by age in 5-year groups and sex, Bamyan, 2003

	Male		Female		Both sexes	
Age Group	Number	Percent	Number	Percent	Number	Percent
0-4	32,845	19.08	32,642	19.00	65,487	19.04
9-May	28,270	16.42	28,108	16.36	56,378	16.39
10-14	23,715	13.78	23,549	13.71	47,264	13.74
15-19	19,140	11.12	18,983	11.05	38,123	11.09
20-24	12,352	7.18	14,645	8.53	26,998	7.85
25-29	9,610	5.58	12,184	7.09	21,794	6.34
30-34	9,173	5.33	10,092	5.88	19,265	5.60
35-39	8,291	4.82	8,304	4.83	16,594	4.83
40-44	7,953	4.62	6,596	3.84	14,549	4.23
45-49	6,466	3.76	5,287	3.08	11,753	3.42
50-54	4,016	2.33	4,189	2.44	8,205	2.39
55-59	3,004	1.75	3,097	1.80	6,102	1.77
60-64	2,592	1.51	1,860	1.08	4,452	1.29
65-69	2,059	1.20	1,175	0.68	3,235	0.94
70+	2,639	1.53	1,055	0.61	3,695	1.07
Total	***172,126***	***100.00***	***171,766***	***100.00***	***343,892***	***100.00***

Figure 4—Population pyramid, Bamyan, 2003—Adjusted.



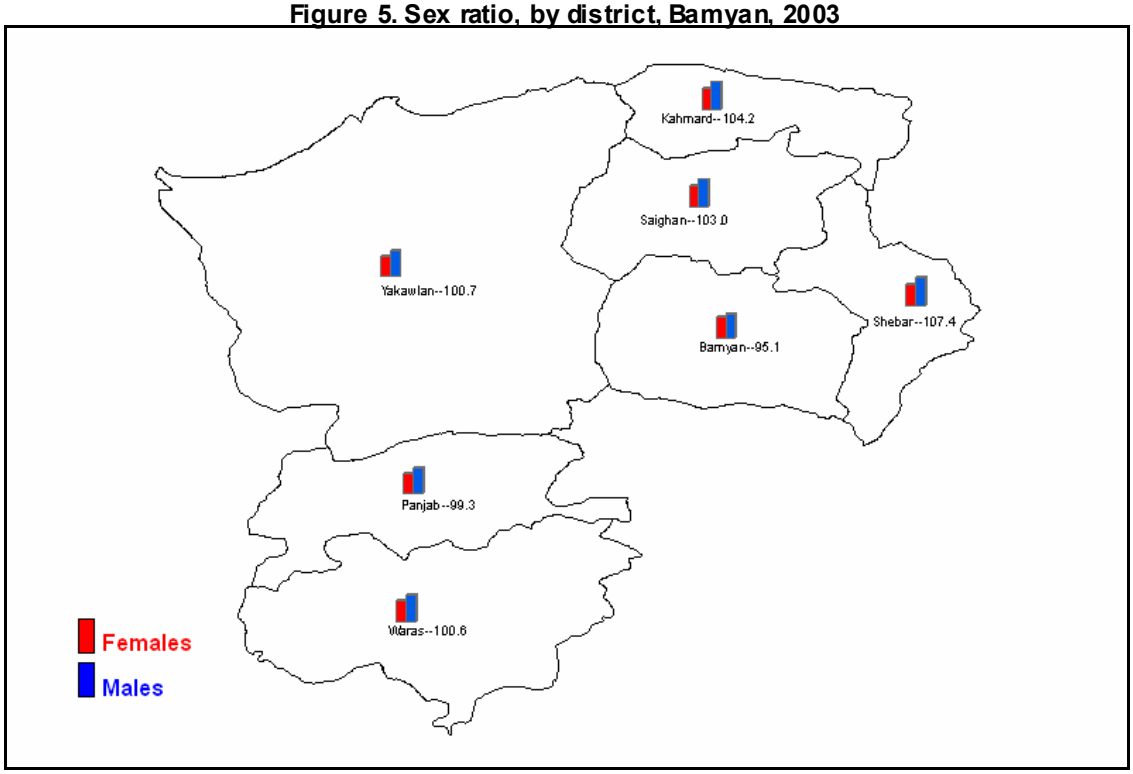
3 The complete account of the various stages is shown in Annex 2.

4 For a comparison of the reported and adjusted age-distribution, see annex 3.

Household size and sex ratio

The sex ratio (number of males per 100 females) varies between 95.1 in Bamyan to 107.4 in Shebar. In-between, however, two districts—Yakawlang and Waras have sex ratios that are close to parity, which is the average of the province (figure 5 below and the last column of table 1). No information is available that could explain why the sex ratio differs as much between Bamyan and Shebar.

Figure 5. Sex ratio, by district, Bamyan, 2003



A typical household in Bamyan has 6.1 persons, which is about the national average of 6.3. Such a size is an indicator of a high fertility regime.

Special age groups

Planners attach special interest to certain age groups. For fertility analysis for instance, the total number of women 15 to 49 years of age—the childbearing ages—is more significant than others. The population 6 to 12—primary school ages—is important in

educational research and planning. Table 4 presents data for the above age groups as well as for others, based on an interpolation of the adjusted five-year age distribution[5].

Table 4—Special age groups by sex, in absolute numbers and percents, Bamyan, 2003

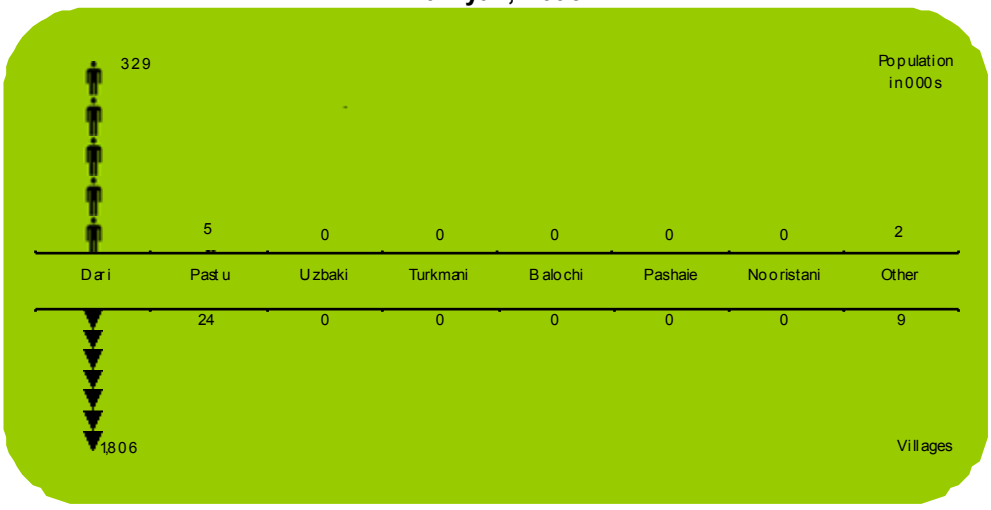
Age	Male		Female		Both sex	
	Number	Percent	Number	Percent	Number	Percent
School age Population						
Primary — 6-12	37,028	21.4	36,800	21.4	73,828	21.4
Secondary — 13-18	24,757	14.3	24,409	14.2	49,166	14.2
College — 20-24	12,352	7.1	14,645	8.5	26,998	7.8
Population in the labor force						
Children — 8-14	34,475	19.9	34,246	19.9	68,722	19.9
Earlier working ages — 15-44	66,519	38.5	70,804	41.1	137,322	39.8
Later working ages — 45-59	13,486	7.8	12,573	7.3	26,060	7.6
Retirement — 60+	8,133	4.7	4,507	2.6	12,640	3.7
Voters — 18+	75,946	43.9	75,963	44.1	151,908	44.0
Reproductive ages — 15-49	—	—	76,091	44.2	—	—

*= Women in the childbearing ages

Main languages spoken

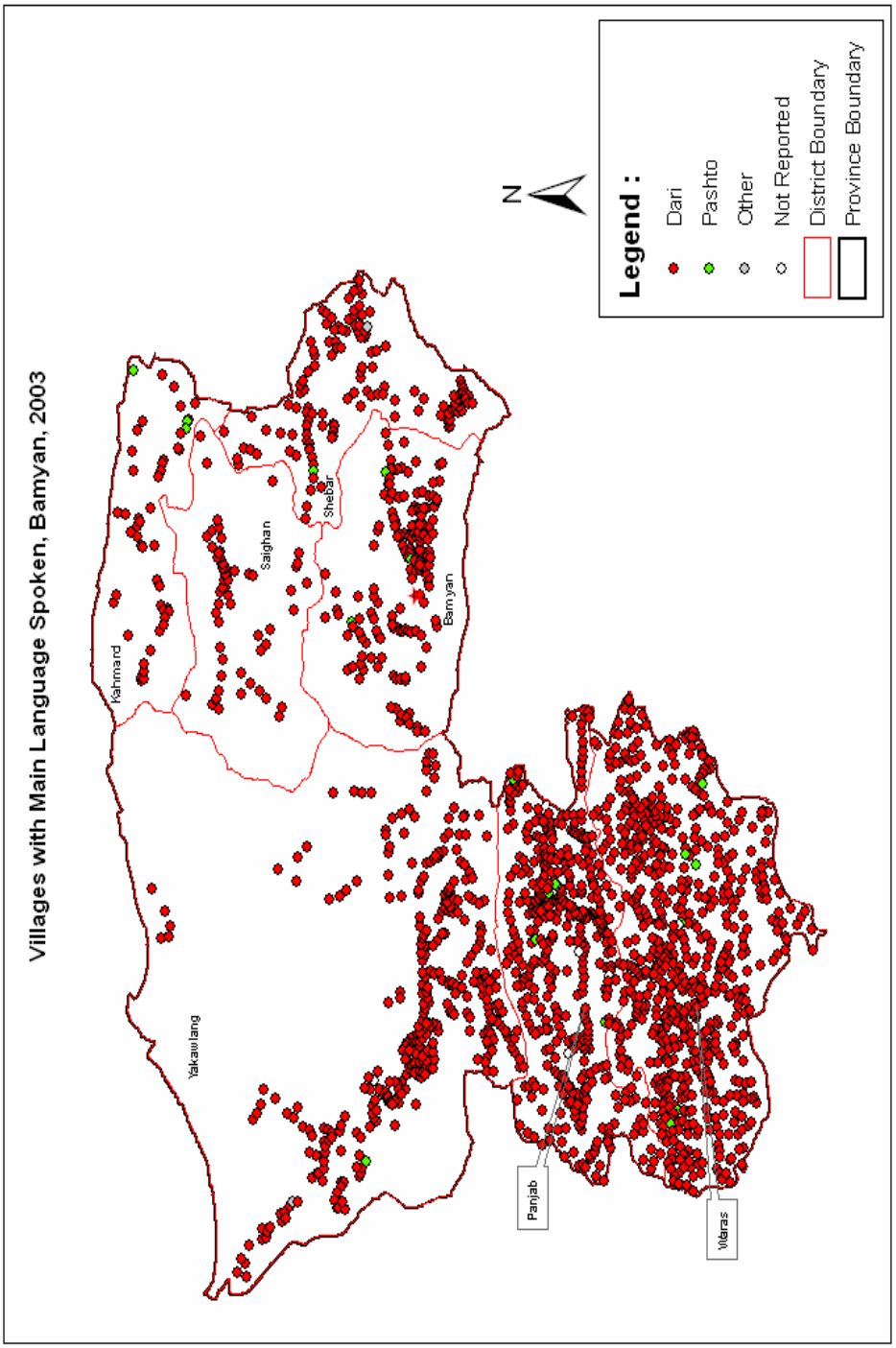
The household listing exercise did not collect any information on the ethnic background of the population. However, it included a question on the languages spoken by the majority of the population. Of the eight languages listed (figure 6), one—Dari—is spoken by 96 percent of the population and 98 percent of the villages. In another 24 villages, with a population of approximately 5,000, the main language spoken is Pashto. The remainder of the villages—a total of nine, representing about 2,000 population, the main language spoken is not specified.

Figure 6—Population and villages, by main language spoken, Bamyan, 2003



[5] The breakdown of the five-year age distribution into single years of age was obtained using the Karrup-King Third-Difference formula.

Map2


Villages with Main Language Spoken, Bamyan, 2003
N
Legend :
Dari
Pashto
Other
Not Reported
District Boundary
Province Boundary
Kahmard
Saighan
Shebar
Bamyan
Yakawlang
Panjab
Waras

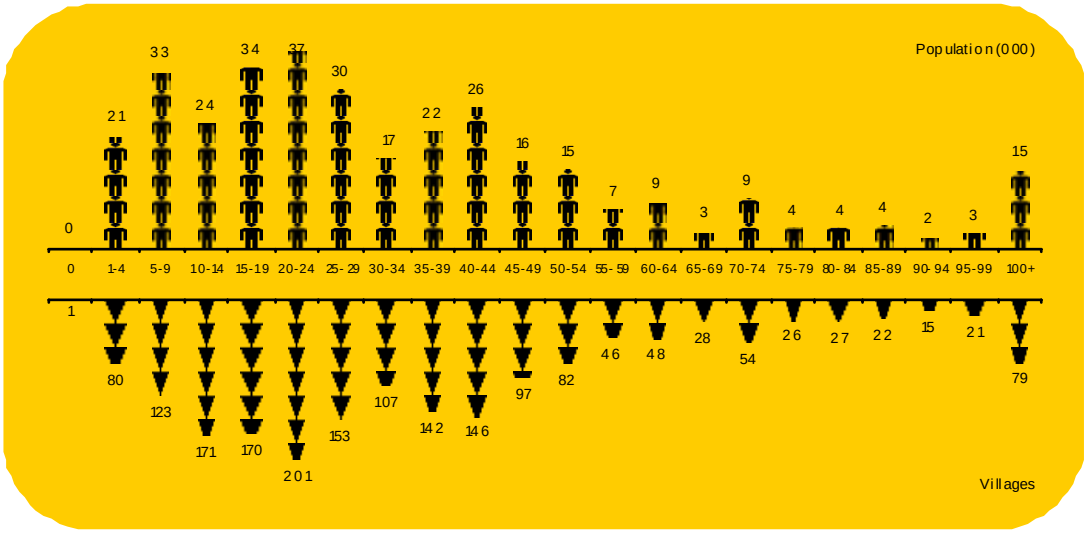
Living Conditions

Other useful information concerned the locations of the villages with respect to the provincial center, the types of roads, and the topography.

Even though no information was obtained on the social situation of the population, the data collected at village-level make it possible to draw inferences on the availability and/or accessibility of such essential social services as literacy courses; rural schools; primary, secondary, and high schools; health centers and/or dispensaries; drugstores; public phones, mills, as well as radio and television.

Figure 7 shows the numbers of villages by the distances separating them from their respective district centers. Figures 8 and 9 show respectively the types of predominant topography and the types of roads.

Figure 7—Population and villages, by distance from the district center, Bamyan, 2003



The distribution by distance from the provincial center clearly does not show a reasonable degree of accessibility with respect to those services that can only be provided by the district center. Close to one-fifth of the population live less 10-14 kilometers away from their respective district centers. Another 10 percent live between 15 and 19 kilometers. Altogether, the population living less than 25 kilometers away form the district centers represents about 45 percent. The right tail of the distribution, comprised of those among the population that live 50 kilometers or more of their respective district centers represent close to 18 percent the total, including more than 14,000 situated at more than 100 kilometers. In sum, most of the population of Bamyan does not have easy access to those services that can only be obtained from the district centers. It must be said, however, that this situation is compounded by the nature of the terrain and the availability of transportation. As figure 8 shows, of the 1,839 villages, 1,489, representing more than ¾ of the population are located in mountainous or semi-mountainous areas.

This is further confirmed by the availability of roads (figure 9). Of the 335,582 population, only 30 percent live in villages that are accessible by road at all season, another 38 percent live in places that are accessible only in certain seasons, and the remaining 32 percent, don't have roads at all.

Figure 10 presents information on the distances separating villages from certain social services: schools, health centers, drugstores, post offices, public phones, and mills.

Figure 8. Population and villages, by topography of the village, Bamyan, 2003

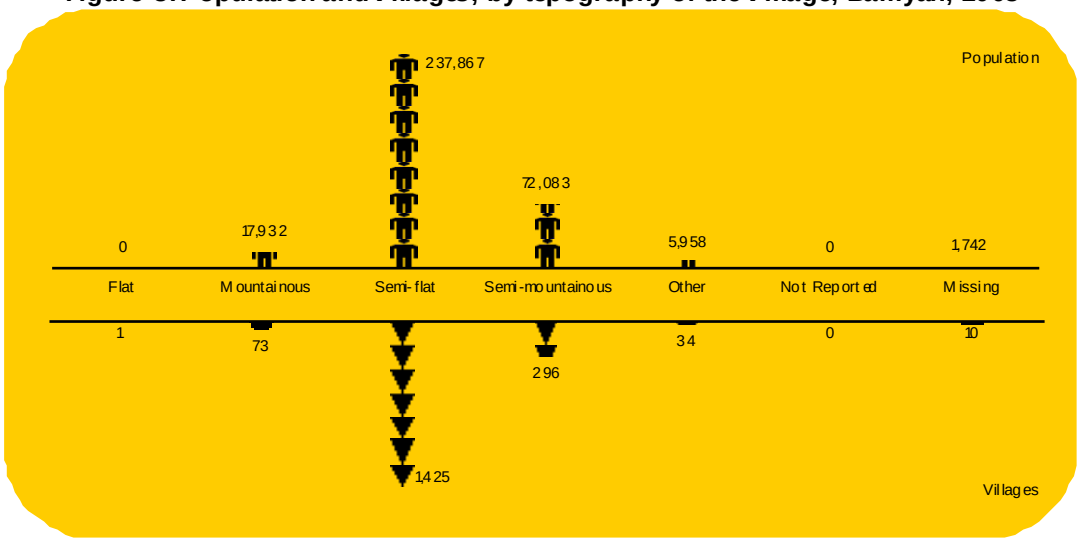
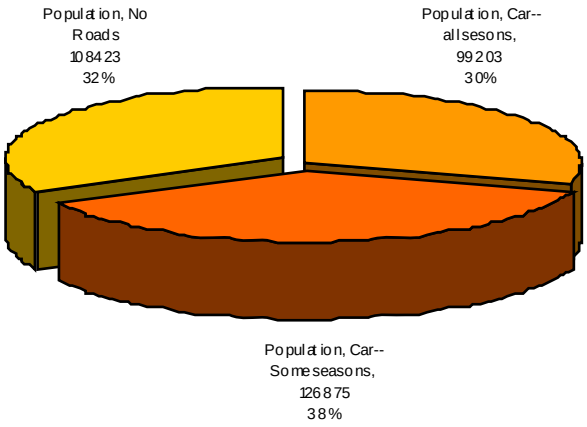


Figure 9 Population by types of roads, Bamyan, 2003



Educational services

With regard to educational services, accessibility appears to be relatively easier for rural schools primary schools than for any other type of school. Rural schools are available in-village for about two persons out of five. The corresponding proportion for primary schools, however, is only a little more than one out of five. And even though half the population of Bamyan does not have to travel more than five kilometers to reach the closest primary school or the closest rural school, it cannot be said that such schools are really easily accessible since the other half the population must travel sometimes 10 kilometers or more.

Literacy courses are by the far the most difficult to reach since they are located at 10 kilometers or more for four persons out of five. The situation is not much better for high schools either. For the latter, the distance to cover is 10 kilometers or more for three persons out of four. Secondary schools, on the other hand, are located at that distance for only half of the population.

Overall, the most accessible schools are rural schools, followed by primary schools, secondary schools, high schools, and literacy courses.

Health services

Health services in Bamyan appear to be as inaccessible as schools; and this is true of both dispensaries and health centers. The latter exist in-village for five percent of the population and two percent of the villages, and the for former in 3.8 percent of the population and 2.1 percent of the villages. More often than not, people seeking medical attention must travel more than ten kilometers to get it—70 percent for health centers and 72 percent for dispensaries. Again, given the nature of the terrain, it may take more time to reach the closest health center than distances would suggest.

Post office & public phones

Post offices exist in six villages out of the 1,839, and public phones in 15 (panels I & J). Both appear inaccessible to large majorities of the populations and villages. Those who must travel more than kilometers to reach the closet post office or public phone are respectively 94 percent and 89 percent of the populations.

Mills

Mills tend to be relatively more available to the population than any of the facilities mentioned above (panel K). They exist in 604 villages and cater to the needs of about 140,671 people, representing close to one-third of the total population. It remains nonetheless true that for about two persons out of five, the distance to cover to reach a mill is five kilometers or more.

Radio & television

Whereas 95.6 of the population have access to radio, those that have access to TV represent a mere 2 percent. It goes without saying that public information efforts and media campaigns are seriously hampered by this state of affairs.

Figure 10—Population and villages by distance from certain facilities, Bamyan, 2003

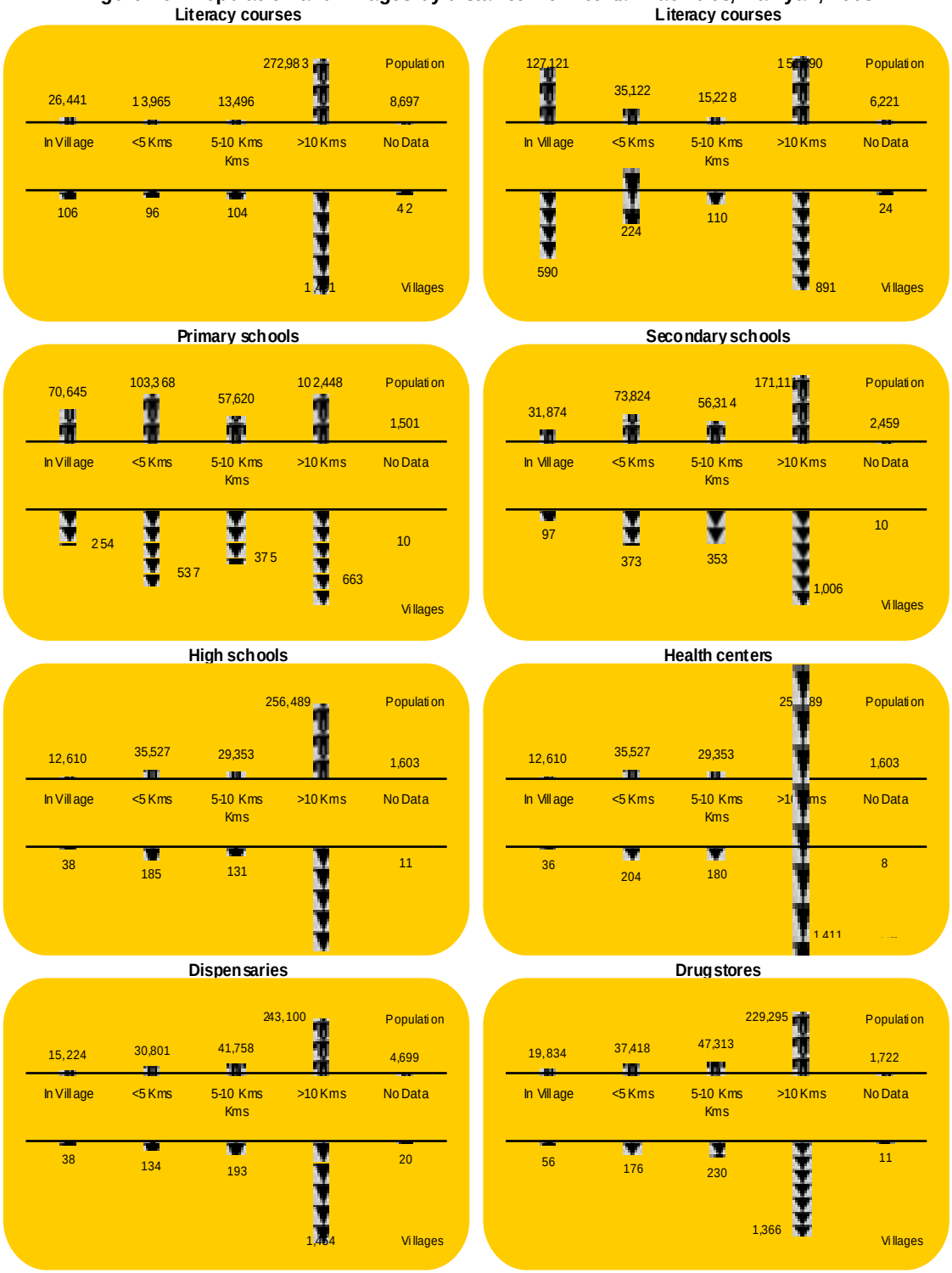


Figure 10 (Cont'd)—Population and villages by distance from certain facilities, Bamyan, 2003

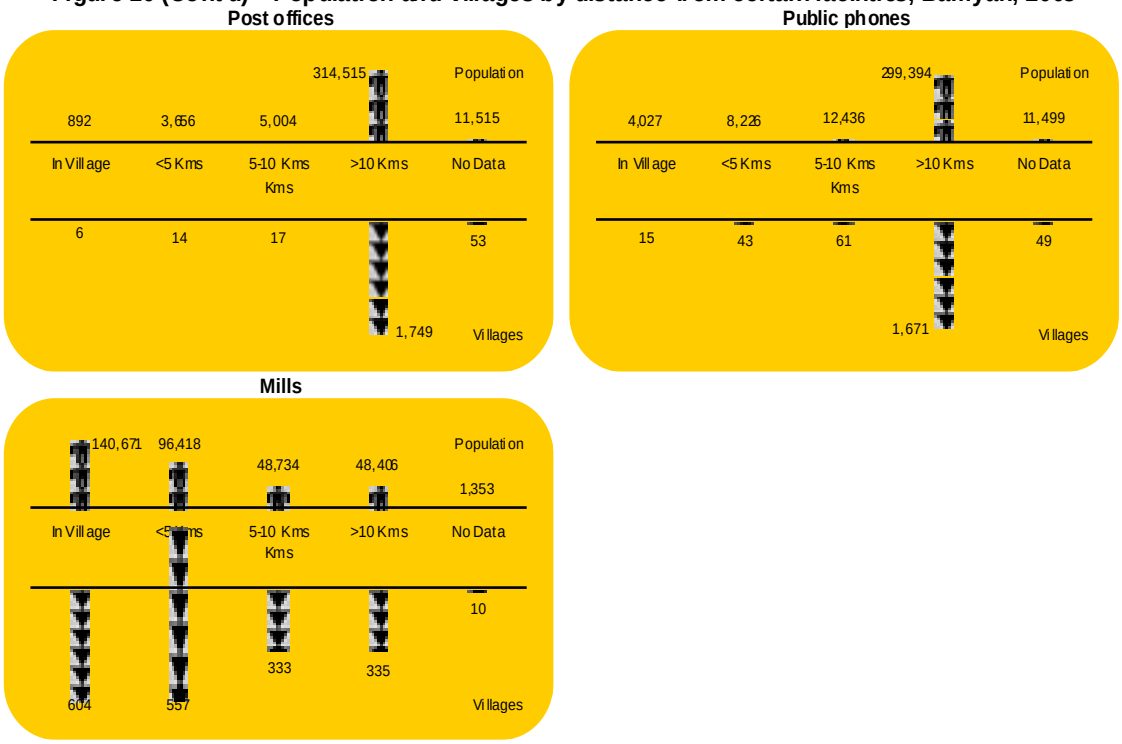
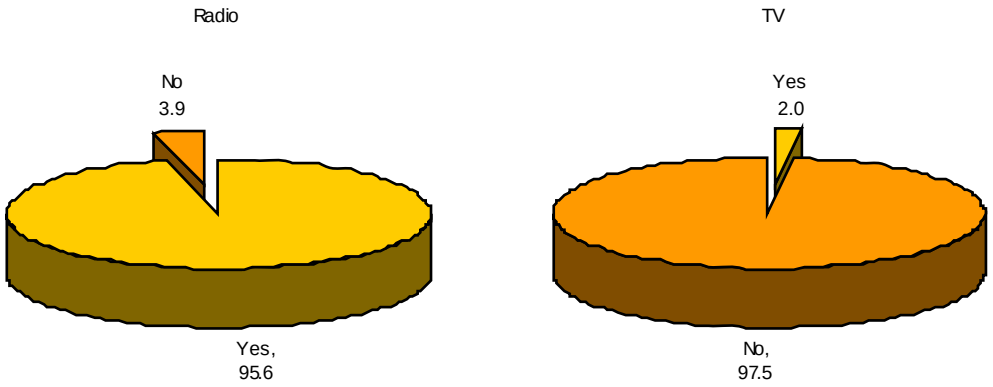
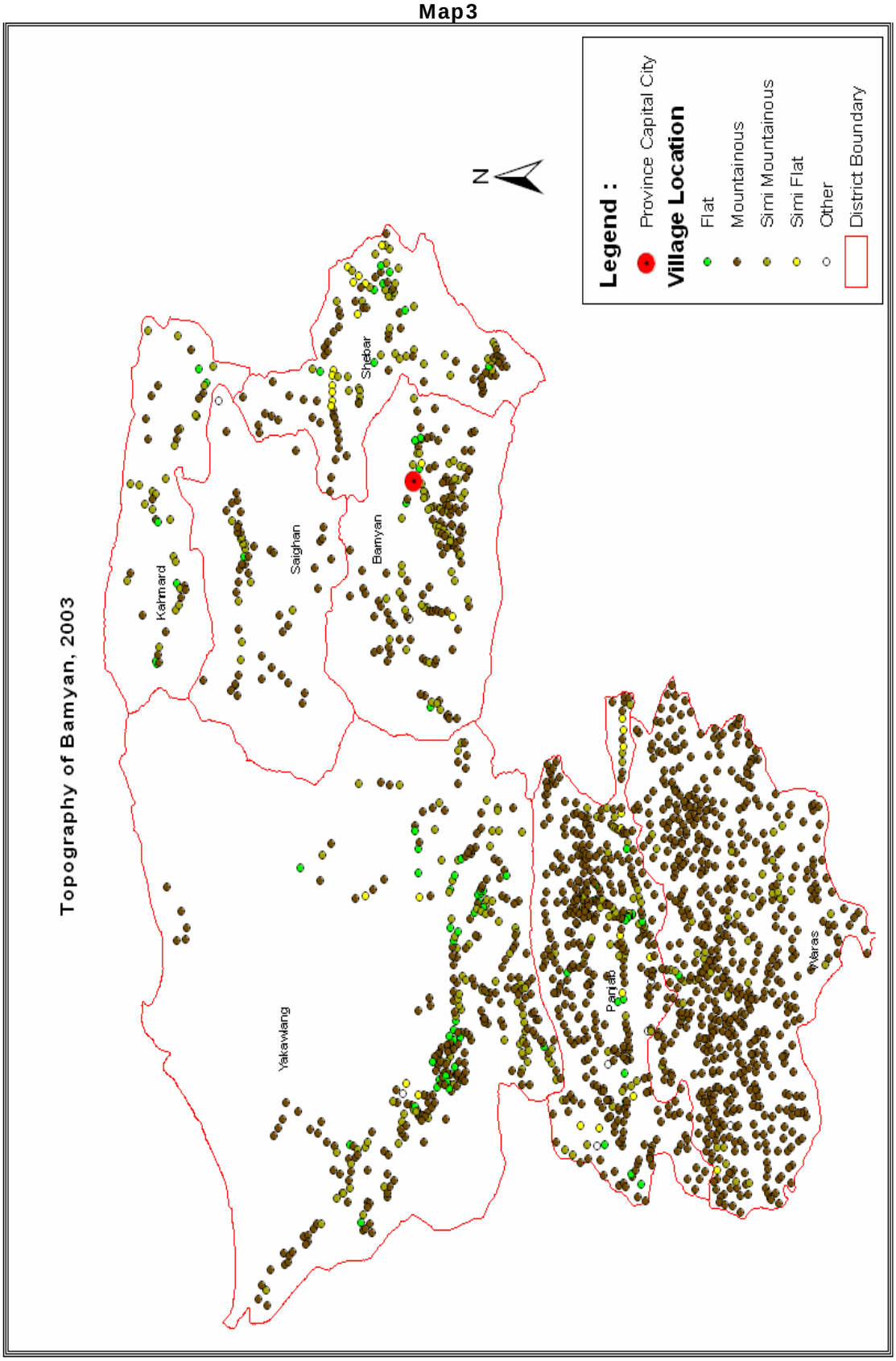


Figure 11—Proportion of the population living in villages where there are radios or TVs, Bamyan, 2003[1]

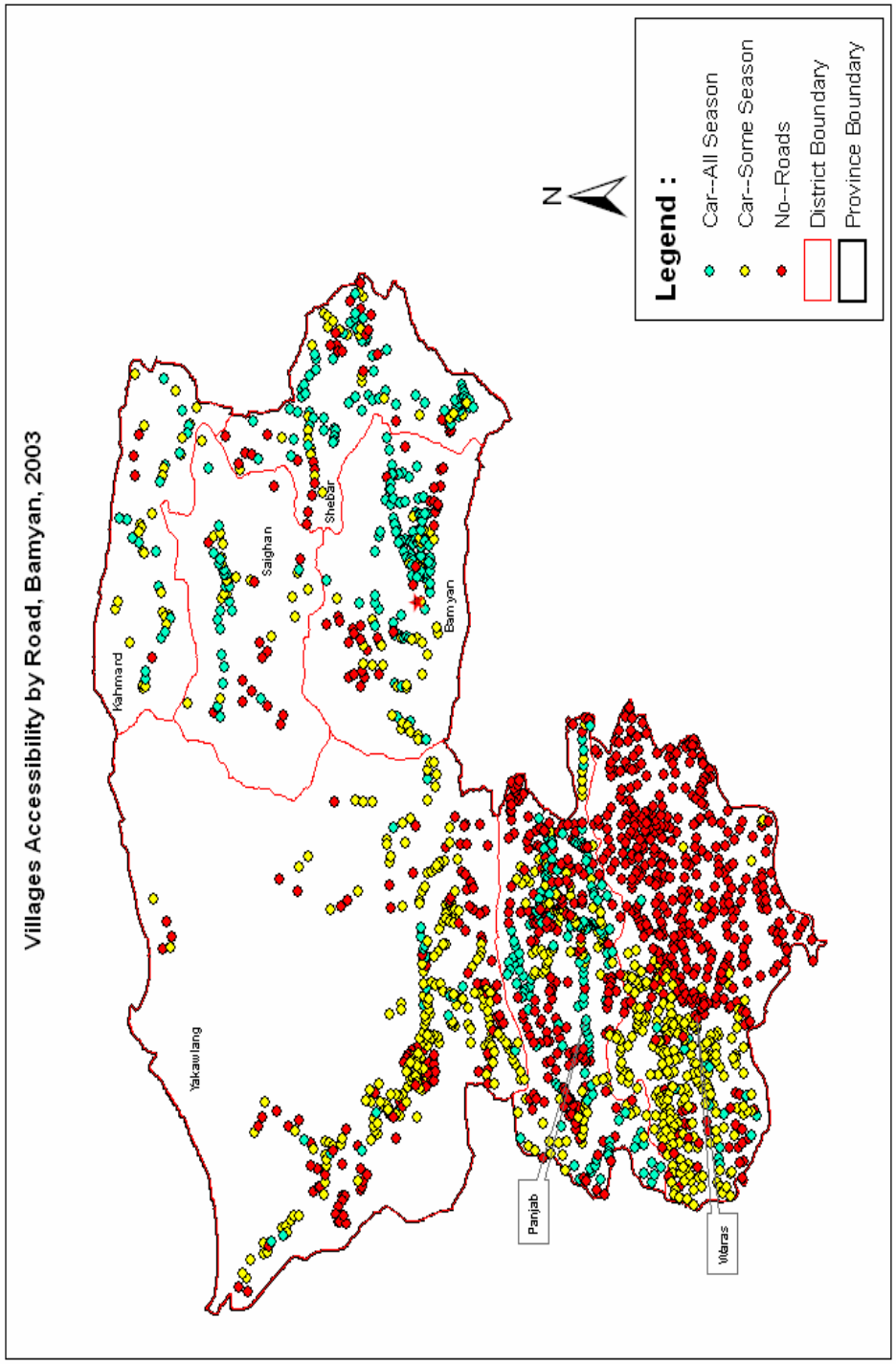


[1] Figures do not add up to 100% because of non-response.

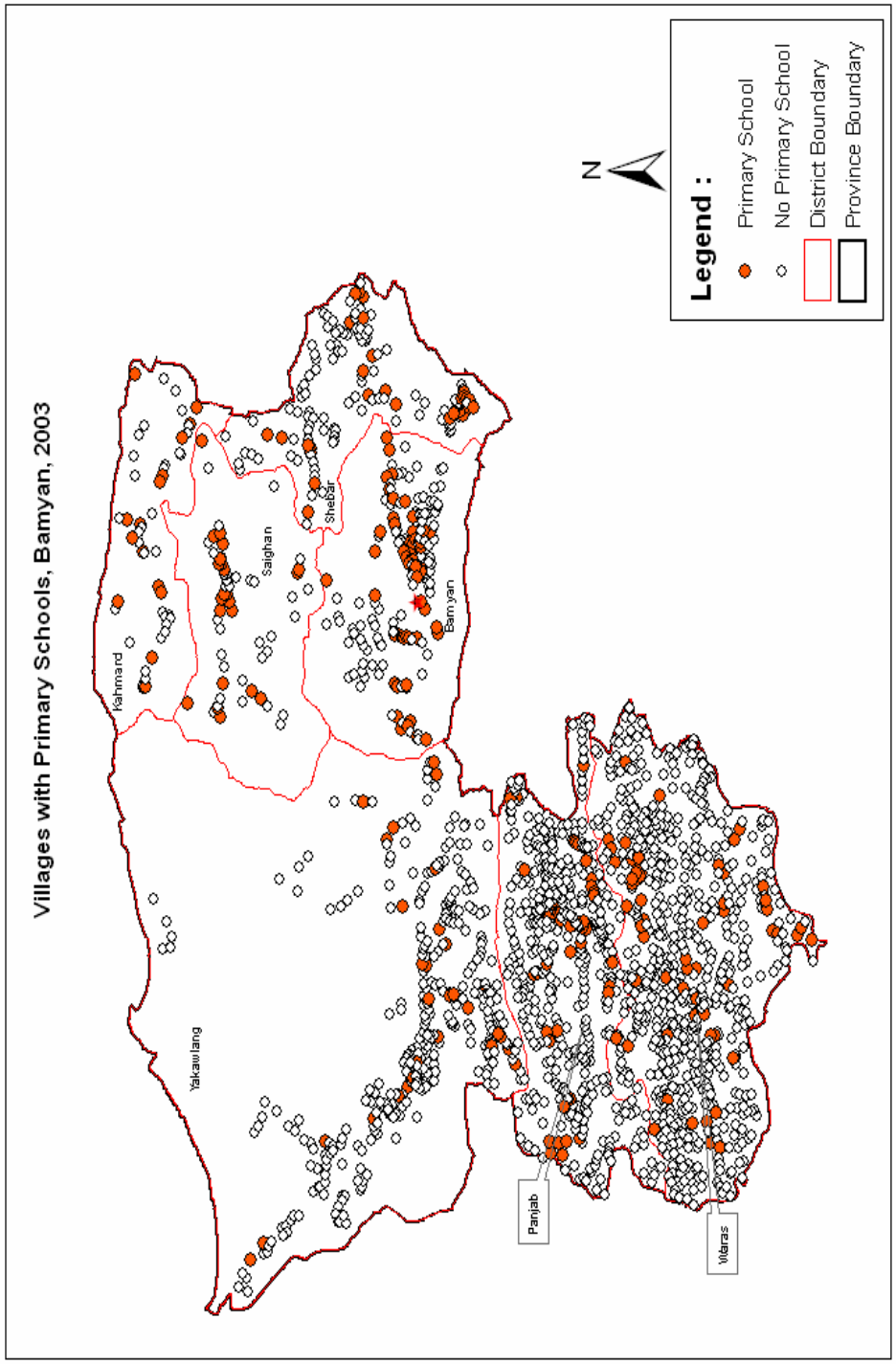
Map3


Topography of Bamyan, 2003
N
Legend :
Province Capital City
Village Location
Flat
Mountainous
Simi Mountainous
Simi Flat
Other
District Boundary
Shebar
Kahmard
Saighan
Bamyan
Yakawlang
Panjab
Yaras

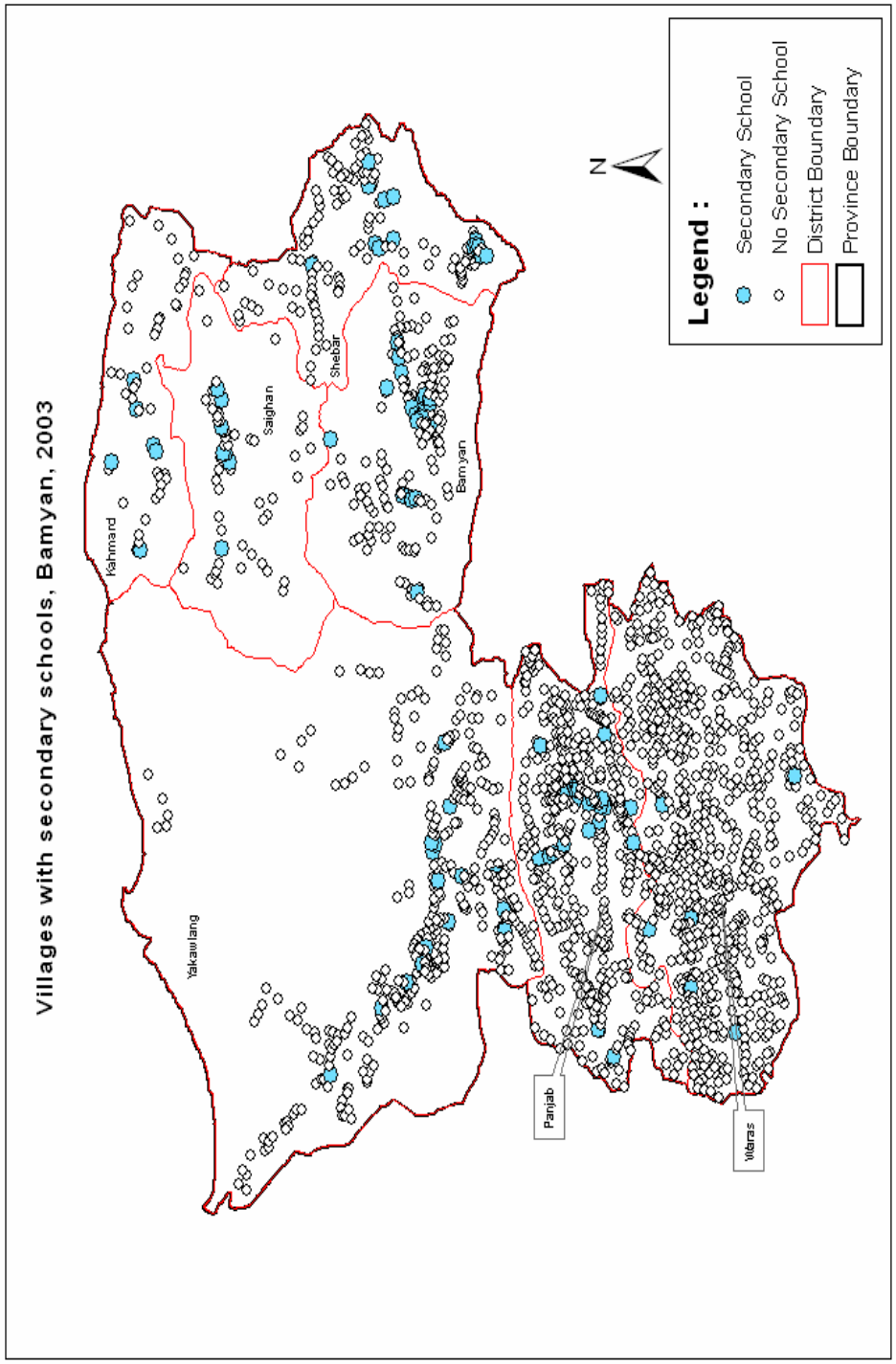
Map4


Villages Accessibility by Road, Bamyan, 2003
Legend :
Car--All Season
Car--Some Season
No--Roads
District Boundary
Province Boundary
N
Kahmard
Saighan
Shebar
Bamyan
Yakawlang
Panjab
Waras

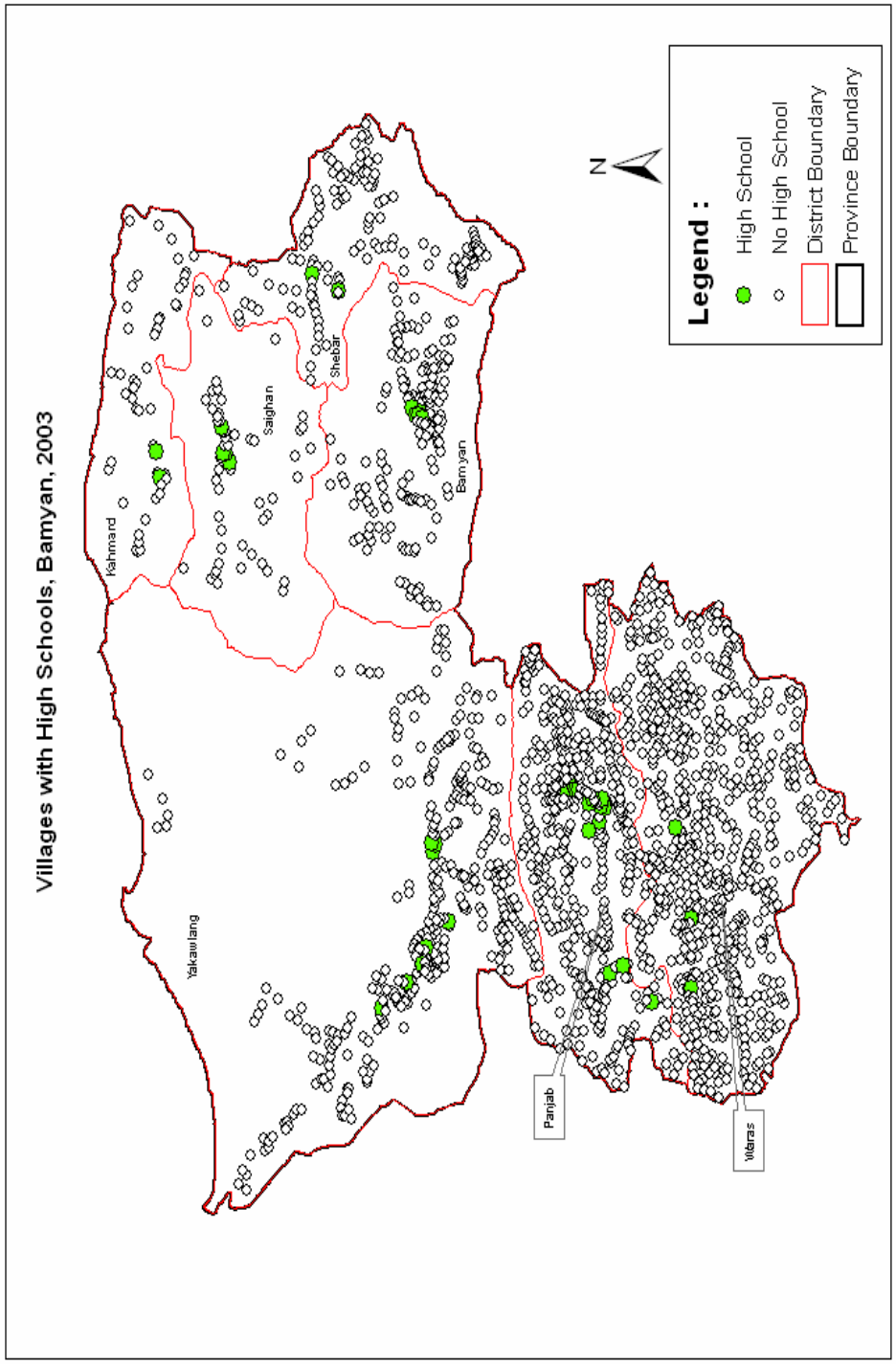
Map5


Villages with Primary Schools, Bamyan, 2003
Legend :
Primary School
No Primary School
District Boundary
Province Boundary
N
Kahmard
Saighan
Shebar
Bamyan
Yakawlang
Panjab
Waras

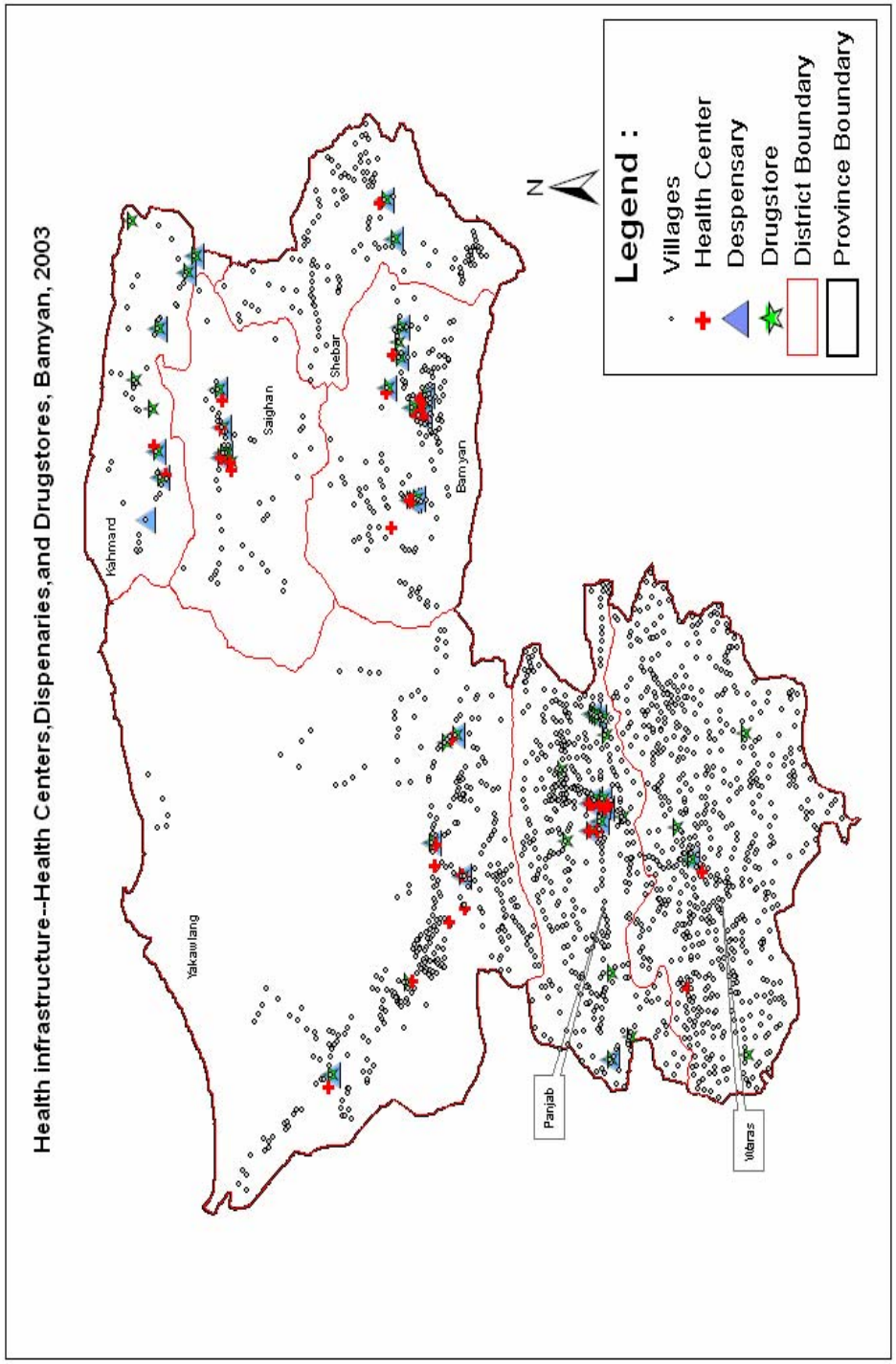
Map6


Villages with secondary schools, Bamyan, 2003
Legend :
Secondary School
No Secondary School
District Boundary
Province Boundary
N
Kahmard
Saighan
Shebar
Bamyan
Yakawlang
Panjab
Waras

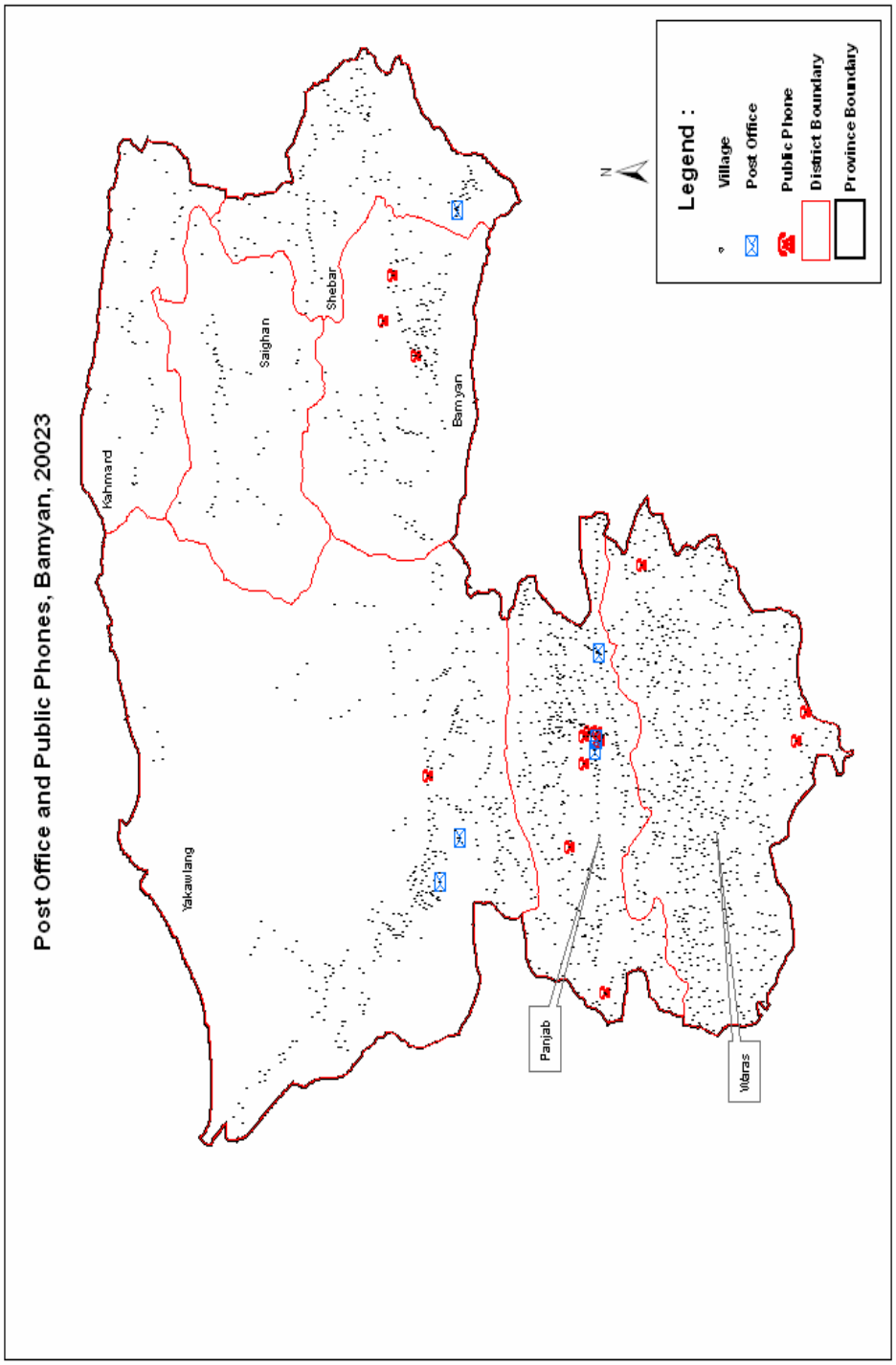
Map7


Villages with High Schools, Bamyan, 2003
Legend :
High School
No High School
District Boundary
Province Boundary
N
Kahmard
Saighan
Shebar
Bamyan
Yakawlang
Panjab
Waras

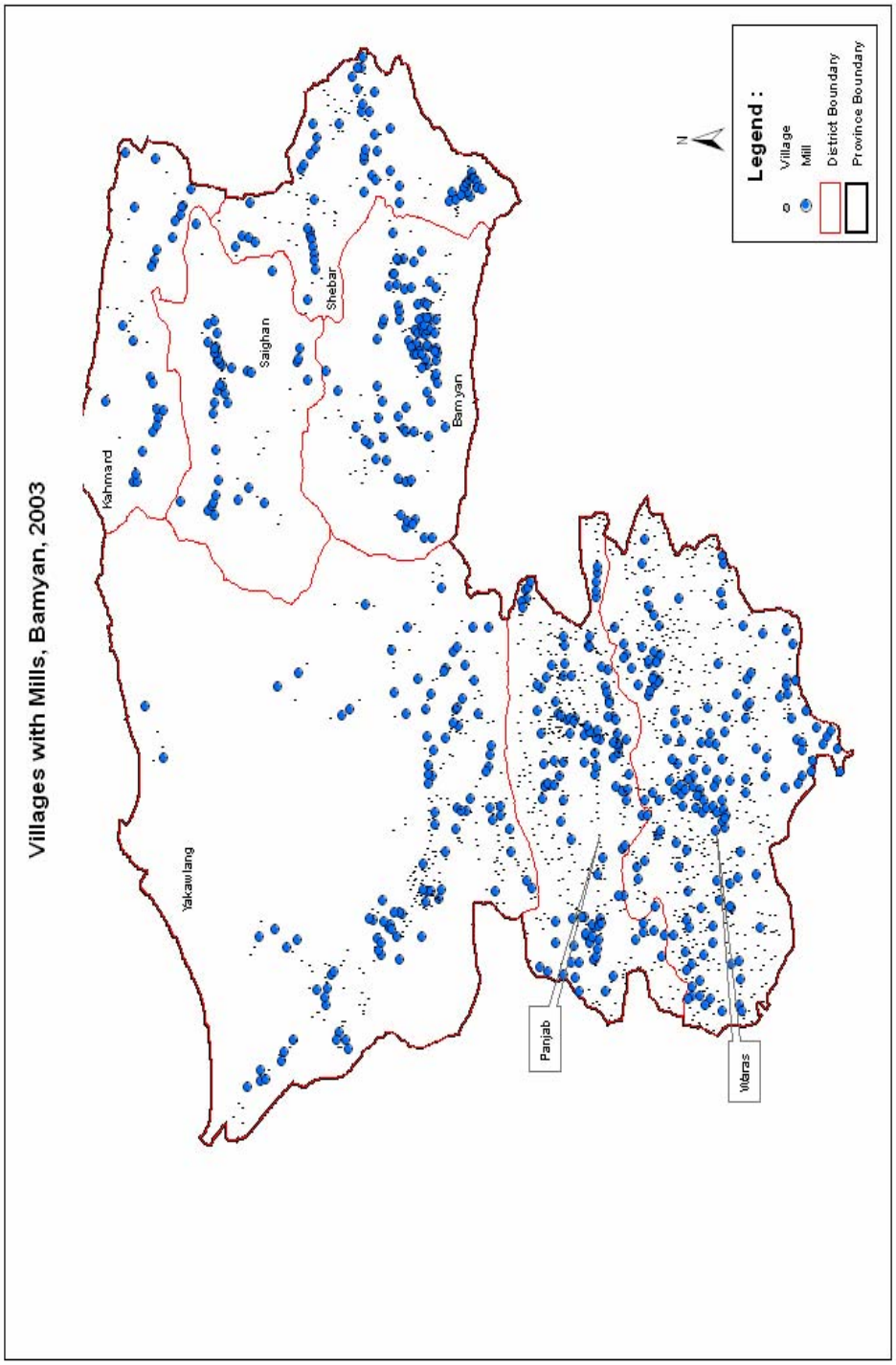
Map8


Health infrastructure--Health Centers,Dispenaries,and Drugstores, Bamyan, 2003
N
Legend :
Villages
Health Center
Despensary
Drugstore
District Boundary
Province Boundary
Kahmard
Saighan
Shebar
Bamyan
Yakawlang
Panjab
Waras

Map9


Post Office and Public Phones, Bamyan, 20023
Legend :
Village
Post Office
Public Phone
District Boundary
Province Boundary
N
Kahmard
Saighan
Shebar
Bamyan
Yakawlang
Panjab
Waras

Map10


Villages with Mills, Bamyan, 2003
Legend :
Village
Mill
District Boundary
Province Boundary
N
Kahmard
Saighan
Shebar
Bamyan
Yakawlang
Panjab
Waras

In addition to the major sources of irrigation water, the household listing included information on agricultural products, industrial products, handicrafts and small industries—a total of 64 items grouped into eight categories as shown in table 5 below.

Data on economic activities can be analyzed in various ways. The analysis presented here is based on a graphical depiction of the data. A more complex one is shown in annex four, based on a technique called compositional analysis.

Table 5—Agricultural, industrial, and animal products, handicrafts and small industries, Bamyan, 2003

Subsistence Crops	*Industrial Crops*	*Fruits*	*Vegetables*	*Herbal Products*	*Handicrafts*	*Small Industries*	*Animal Products*
Wheat	Cotton	Grapes	Potato	Licorice root	Carpets	Honey	Eggs
Corn	Sugar Extract	Pomegranates	Onion	Caray	Rugs	Silk	Milk
Rice	Sugar Cane	Mellon/Water m.	Tomatoes	Asfitida	Embroidery	Karakul skin	Yoghurt
Maize	Sesame	Orange	Carrots	Zerk	Pottery	Dried sugar	Whey
Beans	Tobacco	Almonds	Cauliflower	Aniseed	Pelisse	Con-fection	Dried yoghurt
Vetch	Olives	Walnuts	Spinach	Hyssop	Jewelry	Sugar candy	Butter
Peas	Sharsham	Mulberry	Leek	Chicory	Shawl making	Sugar sweet	Wool
Other	Other	Other	Other	Other	Other	Other	Other

Agriculture

Figure 12 and panels A through F of figure 13 provide information on the sources of irrigation water and agricultural products—crops; fruit; vegetables; herbal, and animal products.

Figure 12 shows that the predominant source of irrigation water is that of conduits, which supply two-thirds of the villages with their irrigation water, followed by rivers which

supply another 28 percent. Together, these two sources cater to the needs of 94 percent of the villages and 94 percent of the population.

A cursory look at figure 13 shows that Waras is the one district that specializes in most of the agricultural products, including subsistence crops, vegetables, herbs, and animal products. Out of the 1,777 villages producing wheat, 636 (35.8 percent) are located in it, in addition to 620 villages of the 1,677 producing maize. The same is true of vegetables (including potatoes), and herbal products, including licorice, hyssop, and chicory. Waras also comes first in all the animal products, with no exception.

Other districts that specialize in agricultural products more than others are Panjab in subsistence crops, vegetables, and animal products; and Kahmard in fruit.

Industrial crops, small industries, and handicrafts

Unlike animal products or crops, industrial commodities—cotton, sugar, sesame, tobacco, olives, and sharsham, etc.—do not appear to occupy the population in a substantial number of villages. They are present in 237 villages, which is a mere 13 percent of the total 1,839. They are concentrated in a few districts, mainly Waras, and Saighan. Together, these two districts account for about nine villages out of 10 that produce industrial commodities. The major commodity is tobacco; it is produced in 177 villages of Waras and 18 villages of Saighan.

Small industries are rather scarce in Bamyan; they exist in only 17 out of the 1,839 villages, eight of which are Bamyan, and another Panjab. Of the 17 villages, three are engaged in the production of honey, three in silk, three in confection, four in karakul skin, two in Sugar candy, one in dried sugar and another one in sugar sweets.

Handicrafts, on the other hand, are produced in all districts, in particular Waras (821 villages), Panjab (496), and Bamyan (146). Together, these two districts house more than three quarters of all the villages engaged in handicrafts. Rugs are the handicraft that is

present in a relatively larger number of villages—922 out of the 1,713, i.e., more than half.

Jewelry comes in second position with 295 villages, followed by shawl making (189), and carpets (178). Rugs are mostly produced in Waras and Panjab. Of all the villages producing rugs, three out of four are located in these two districts. Alone, Panjab produces more than half of the carpets produced in the whole province, and more than half of the jewelry, and about 40 percent of the shawls.

Figure 12—Population by source of irrigation water, Bamyan, 2003

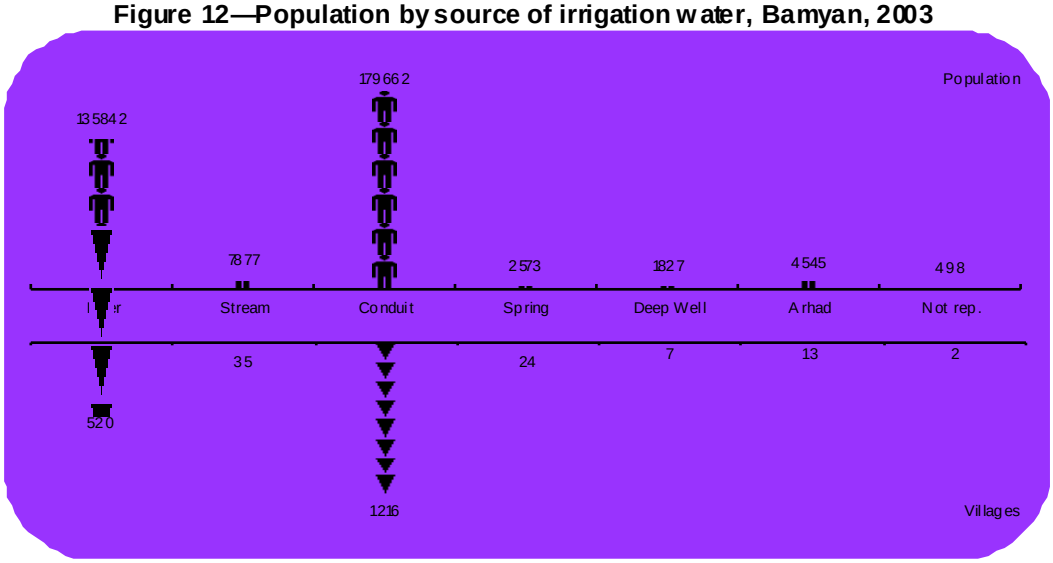
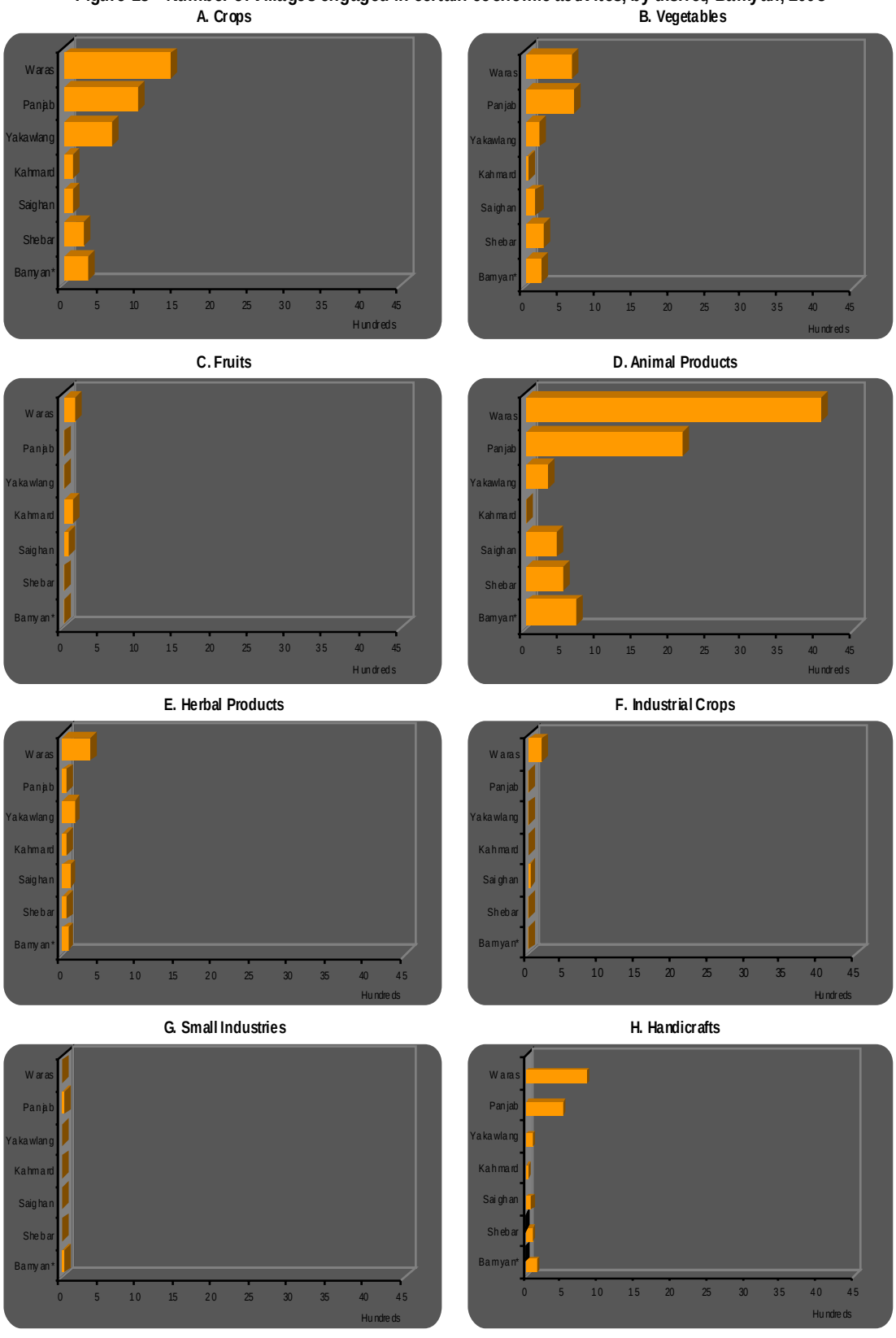


Figure 13—Number of villages engaged in certain economic activites, by disrict, Bamyan, 2003



* = Provincial Center

Physical Infrastructure

The household listing collected a large amount of data on the physical infrastructure in the provinces. A total of more than 300 different types of buildings were counted, that were later grouped into 17 categories—housing units, schools and educational institutions, mosques, mills, etc. (see figure 14).

The household listing operation counted a total 48,516 buildings in the whole province, 86 percent of which (41,848) are housing units. The remaining 14 percent represent the rest of the various types of buildings.

The number of buildings in a given locality is essentially a function of the size of the population living it. To control for this variable, we divided the total population by the number of buildings, thus obtaining a measure of the extent to which living space, amenities or services—social, economic or otherwise, are available to the population.

Housing units

The largest numbers of housing units are located in Waras, Yakawlang, and Bamyan. This is to be expected given that these three districts are the most populous among the nine. In terms of persons per housing unit, however, the remarkable feature of the distribution is its homogeneity, or lack of inter-district variation. The most crowded districts, Bamyan and Panjab, count only nine occupants to each housing unit, as compared to eight in Saighan, Kahmard, Yakawlang, and Waras, and seven in Shebar. The average for the province is eight.

Schools and educational institutions

With regard to schools and educational institutions, the distribution is not excessively skewed either, and closely resembles that of housing units, at least in terms of inter-district variation. However, to the extent that there is no information on the sizes of the schools, i.e., the numbers of classrooms in every school, it is difficult to draw any definitive conclusions as to class-density. From the information available, and assuming that schools would tend to be of approximately the same size, particularly in the less populated districts, one can group the districts into three distinct categories with respect to their degree of crowdedness. Azra is the district with the lowest school-crowdedness: one school for only 1,575 population. At the other extreme is Kahmard, with one school for 3,880 population. The middle of the distribution includes the rest of the districts with a density ranging from one school for 1,861 population in Panjab, and one school for every 2.415 population in Waras. At province level, the average is one school for 2,059 population.

Health infrastructure

The health infrastructure includes hospitals, clinics, doctors' practices, and pharmacies.

Hospitals exist in only two of the seven districts—Panjab and Yakawlang which house together one-third of the population. There are no hospitals in the provincial center, Bamyan. This is not particular to the province of Bamyan, however. The same situation exists in Logar for instance (see table 6 and figure 14). In sum, two persons out of three are deprived of those medical services that can only be provided by a hospital. This is all the more problematic that access to health centers is difficult for a good proportion of the population, not only because of distance, but also because of the nature of the terrain.

In terms of clinics, however, the situation is much better, but not ideal. There is a total of 24 units of them—more than ten times the number of hospitals, distributed over the seven districts. Some districts are much better off than others, in particular Yakawlang (6), and Bamyan (5). In the other districts, the number of clinics is three, except in Panjab where

there is only one. Clinic density varies from one clinic per more than 48,000 population in Panjab, to one per less than 8,000 in Shebar and Saighan. The average for the province is one clinic for more than 14,000 population. The question that begs to be asked, however, is: can clinics replace hospitals?

Doctors' practices tend to more scarce than clinics: a total of three—one in Panjab for more than 48,000 population, one in Yakawlang for more than 66,000 population, and one Saighan for more than 23,000 population.

With regard to pharmacies, they are relatively more numerous and their spatial distribution is notably more even than for clinics, hospitals, or doctors' practices. They vary from about 2,500 population per pharmacy in Shebar, to one per 16,500 Yakawlang. On average, there is one pharmacy for every 5,000 or so population.

Factories & workshops

The province Bamyan counts a total of 149 factories/workshops[1], one for about 2,300 population. They are rather evenly distributed over the seven provinces. There are three outliers, however—at one extreme Waras with one factory/workshop for every 6,300 population and at the other extreme, Bamyan and Saigal, with one factory/workshop for respectively 1,100 and 1,200.

Bakeries and Mills

Bakeries do not appear to be as present in Bamyan as one would expect. On average, there is one bakery for more than 14,000 population; but the variation between districts is sizeable enough. It goes from about one bakery for 7,800 in Kahmard to one for more tan 66,000 in Khushi. These two districts, however, are the extremes. In-between, the density hovers around one bakery per 10,000-11,000 population.

[1] This category of buildings refers to a variety of small-scale businesses: repair shops for bicycles, motorcycles, radio/TV, gas and light stoves, musical instruments, weapons, pressure cookers, typewriters, refrigerators; electric workshops, car workshops; juice-making shops, shoe-making shops, briefcase-making shops; electric products factories, plastic shoes and sandals factories, ice-making factories, fruit-processing factories, metal factories, and building companies.

Mills, on the other hand are omnipresent, even in Saighan where there are no bakeries. The average across the province is one mill for about 700 population. Inter-district variation exists without being excessive. The only outlier is Kahmard where there is only one mill for every 1,200 population or so.

In conclusion, it may be fair to hypothesize that because of geographic remoteness, households in a majority of villages in certain districts make their own bread at home.

Hotels & Restaurants

There is a total of 154 hotels and restaurants in the whole province of Bamyan, scattered throughout the districts. The largest number is in Panjab (41), followed by Yakawlang (35), Waras (28), and Shebar (26). Bamyan, the provincial capital has only 15 such places, and Saighan only one. The average for the province is one hotel/restaurant for every 2,200 population or so, but in Saighan it is as high as 23,000 or so. The lowest density is in Shebar with one hotel/restaurant for less than 900 population.

The information available does not give any indication as to the nature of such establishments. It would appear that in such predominantly rural settings as Bamyan, hotels and restaurants are mere stopping places for travelers in need of a meal and a place to spend the night. It follows that those districts with relatively more such places tend to have more visitors than the others.

Shopping places

Food & grocery stores are the most prevalent businesses in any of the districts of Bamyan. On average, there is one grocery store for every 206 population, and inter-district variation is minimal, with the exception of Wars where there is one grocery store for 373.

There are 82 constructions materials shops in Bamyan, including 63 in Bamyan and 10 in Yakawlang. On average there is one for approximately 4,000 population.

Mosques

The province of Bamyan counts a total of 1,217 mosques, i.e., an average of one mosque for every 283 population. Except for Shebar, where there is one mosque for every 150 population or so, inter-district is negligible.

Other places

There is a total of two poultry or livestock farm in the whole province of Bamyan, both of them located in Bamyan. The same is true of barbers and beauty salons—two of them, both in the provincial center. It would appear that barbers tend to do move from one place to the next, following weekly markets, or from home to home on demand. As for poultry, given the predominantly rural nature of the province, it is justifiable to hypothesize that household tend to raise their own chicken or other farm animals.

Table 6—Number of buildings, and population per building, by type, Bamyan, 2003

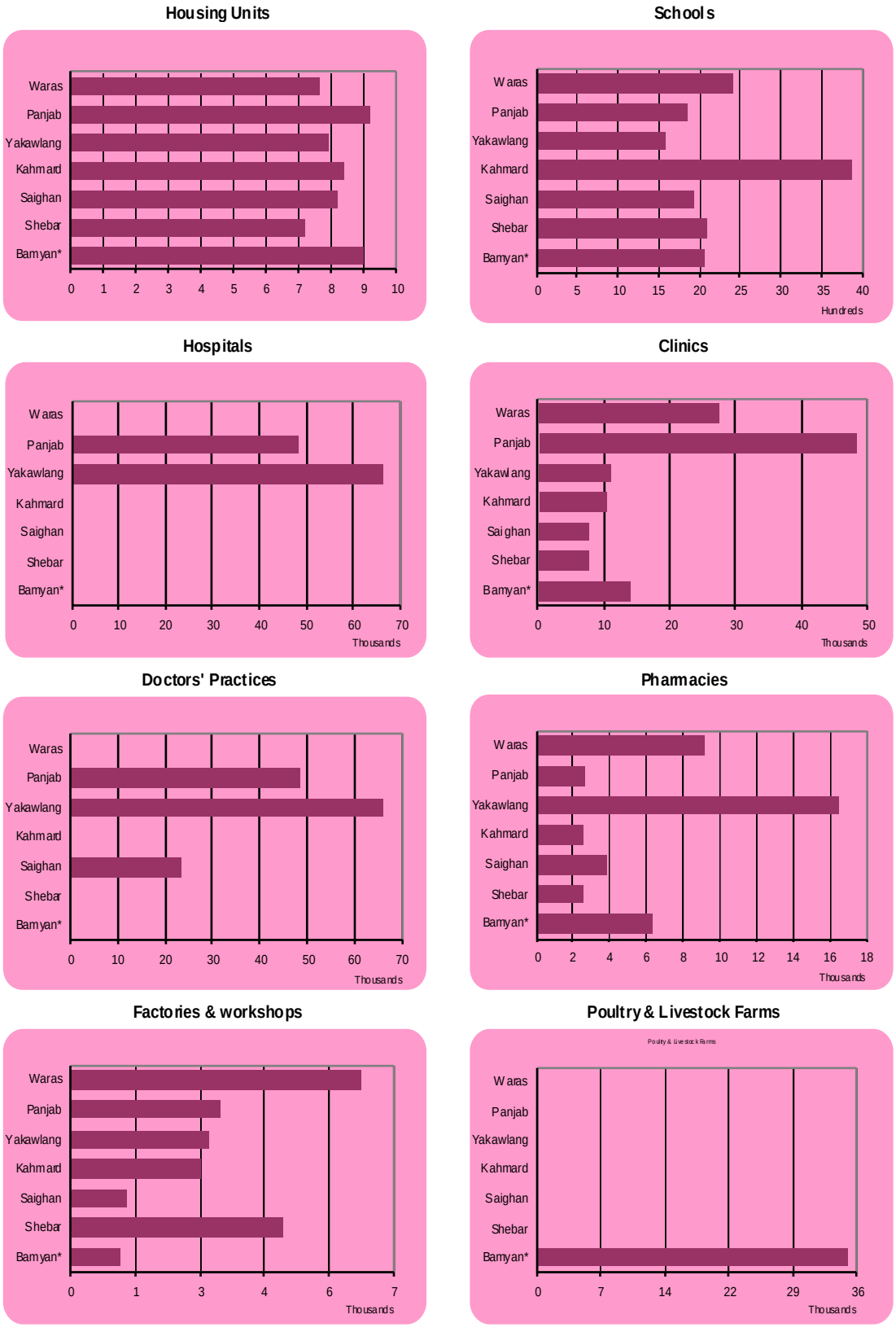
A—Absolute numbers

District	Resi-dential Places	Schools & Educational Institutions	Hos-pitals	Clinics	Doctors' Practices	Phar-macies	Factories/ Workshops	Food & Grocery Stores	Clothes & Textile Stores	Cons-truction Materials	Poultry/ Livestock Farms	Hotels & Res-taurants	Barbers & Beauty Salons	Bakeries	Mills	Mosques	Other	Total	Population
Provincial Center—Bamyan	7,811	34	0	5	0	11	64	309	56	63	2	15	2	7	75	169	685	9,328	70,028
Shebar	3,175	11	0	3	0	9	5	109	1	1	0	26	0	2	43	148	254	3,787	22,933
Saighan	2,846	12	0	3	1	6	19	121	9	0	0	1	0	0	43	76	38	3,175	23,215
Kahmard	3,706	8	0	3	0	12	11	205	20	2	0	8	0	4	26	82	363	4,450	31,042
Yakawlang	8,329	42	1	6	1	4	22	531	34	10	0	35	0	1	114	230	420	9,780	66,158
Panjab	5,284	26	1	1	1	18	15	178	18	4	0	41	0	3	72	204	298	6,164	48,397
Waras	10,697	34	0	3	0	9	13	220	21	2	0	28	0	7	125	288	385	11,832	82,119
Total Province	41,848	167	2	24	3	69	149	1,673	159	82	2	154	2	24	498	1,217	2,443	46,516	343,892

B—Ratio (Population per Building)

District	Resi-dential Places	Schools & Educa-tional Insti-tutions	Hos-pitals	Clinics	Doctor's Practice	Phar-macies	Factories/ Workshops	Food & Grocery Stores	Clothes & Textile Stores	Cons-truction Ma-terials	Poultry & Live-stock Farms	Hotels & Res-taurants	Barbers & Beauty Salons	Bakeries	Mills	Mosques	Other	Total	Population
Provincial Center—Bamyan	9	2,060	—	14,006	—	6,366	1,094	227	1,251	1,112	35,014	4,669	35,014	10,004	934	371	102	—	—
Shebar	7	2,085	—	7,644	—	2,548	4,587	210	22,933	22,933	—	882	—	11,467	533	155	90	—	—
Saighan	8	1,935	—	7,738	23,215	3,869	1,222	192	2,579	—	—	23,215	—	—	540	305	611	—	—
Kahmard	8	3,880	—	10,347	—	2,587	2,822	151	1,552	15,521	—	3,880	—	7,761	1,194	379	86	—	—
Yakawlang	8	1,575	66,158	11,026	66,158	16,540	3,007	125	1,946	6,616	—	1,890	—	66,158	580	288	158	—	—
Panjab	9	1,861	48,397	48,397	48,397	2,689	3,226	272	2,689	12,099	—	1,180	—	16,132	672	237	162	—	—
Waras	8	2,415	—	27,373	—	9,124	6,317	373	3,910	41,060	—	2,933	—	11,731	657	285	213	—	—
Total Province	8	2,059	171,946	14,329	114,631	4,984	2,308	206	2,163	4,194	171,946	2,233	171,946	14,329	691	283	141	—	—

Figure 14—Physical infrastructure, Bamyan, 2003



* = Provinial Center

Figure 14 (Cont'd)—Physical infrastructure, Bamyan, 2003

* = Provinial Center

Annexes

Annex 1

Population Estimates as of 1 July 2004, by province

	Rural			Urban			Total		
Province	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes
Kabul	254,048	246,567	500,615	989,851	956,578	1,946,430	1,243,899	1,203,145	2,447,044
Hirat	671,187	667,727	1,338,914	237,260	236,824	474,083	908,446	904,551	1,812,997
Hilmand	668,703	648,297	1,317,000	44,870	43,198	88,068	713,572	691,495	1,405,068
Nangarhar	583,572	559,507	1,143,079	108,538	104,877	213,415	692,110	664,384	1,356,494
Balkh	353,285	342,044	695,329	226,793	219,580	446,374	580,079	561,624	1,141,702
Ghazni	538,665	518,533	1,057,198	22,651	22,313	44,964	561,316	540,846	1,102,162
Kandahar	377,284	360,683	737,968	144,060	141,015	285,075	521,344	501,699	1,023,043
Takhar	368,110	356,810	724,921	64,104	63,549	127,653	432,215	420,359	852,574
Badakhshan	406,595	396,185	802,779	21,113	20,688	41,801	427,708	416,873	844,581
Faryab	376,406	364,010	740,416	52,238	51,734	103,972	428,644	415,744	844,388
Kunduz	297,724	296,776	594,500	97,677	97,892	195,569	395,401	394,668	790,069
Paktika	393,641	378,978	772,619	2,256	2,244	4,500	395,897	381,222	777,118
Baghlan	304,391	288,055	592,445	84,485	82,127	166,612	388,876	370,181	759,057
Ghor	328,739	316,703	645,442	3,176	3,164	6,339	331,915	319,867	651,782
Khost	321,315	306,771	628,086	7,900	7,476	15,376	329,215	314,247	643,462
Wardak	273,003	264,051	537,054	768	813	1,581	273,771	264,864	538,634
Paktya	252,815	242,673	495,487	11,888	11,403	23,291	264,702	254,076	518,779
Badghis	255,280	245,147	500,427	7,433	7,012	14,445	262,713	252,159	514,872
Parwan	220,954	223,407	444,361	26,843	27,398	54,241	247,797	250,805	498,602
Farah	238,743	227,190	465,933	14,271	13,588	27,858	253,014	240,778	493,791
Daikundy	235,515	228,805	464,320	1,799	1,690	3,489	237,314	230,495	467,810
Sar-i-Pul	211,286	202,615	413,901	15,324	14,745	30,069	226,610	217,360	443,970
Jawzjan	153,554	150,860	304,415	64,827	63,839	128,667	218,382	214,699	433,081
Kunarha	204,000	195,375	399,375	9,491	8,920	18,411	213,491	204,295	417,786
Laghman	197,220	187,721	384,941	831	745	1,576	198,050	188,466	386,517
Kapisa	181,021	184,056	365,077	216	195	412	181,237	184,251	365,488
Zabul	176,365	171,446	347,811	4,131	3,989	8,120	180,496	175,434	355,931
Bamyan	169,482	169,049	338,531	3,969	4,384	8,353	173,451	173,433	346,884
Logar	164,468	161,338	325,806	3,579	3,682	7,261	168,047	165,020	333,067
Samangan	144,756	137,454	282,209	19,122	19,163	38,285	163,878	156,617	320,495
Urozgan	160,761	150,438	311,200	4,073	3,887	7,960	164,834	154,325	319,160
Nooristan	68,252	66,306	134,558	—	—	—	68,252	66,306	134,558
Nimroz	44,565	42,910	87,475	15,699	15,025	30,723	60,264	57,934	118,199
Panjsher	56,221	54,028	110,250	—	—	—	56,221	54,028	110,250
Total	**9,653,727**	**9,354,205**	**19,007,932**	**2,309,436**	**2,252,046**	**4,561,482**	**11,963,163**	**11,606,251**	**23,569,414**

Annex 2

Total and urban populations (as of mid-July 2004) by province, ranked according to their shares of the total urban population of Afghanistan

Province	Total Population	Urban Population		Share of the urban population of Afghanistan		
		Number	Percent	Percent	Cumulative Percent	Rank
Kabul	2,447,044	1,946,430	79.5	42.7	43	1
Hirat	1,812,997	474,083	26.1	10.4	53	2
Balkh	1,141,702	446,374	39.1	9.8	63	3
Kandahar	1,023,043	285,075	27.9	6.2	69	4
Nangarhar	1,356,494	213,415	15.7	4.7	74	5
Kunduz	790,069	195,569	24.8	4.3	78	6
Baghlan	759,057	166,612	21.9	3.7	82	7
Jawzjan	433,081	128,667	29.7	2.8	85	8
Takhar	852,574	127,653	15.0	2.8	87	9
Faryab	844,388	103,972	12.3	2.3	90	10
Hilmand	1,405,068	88,068	6.3	1.9	92	11
Parwan	498,602	54,241	10.9	1.2	93	12
Ghazni	1,102,162	44,964	4.1	1.0	94	13
Badakhshan	844,581	41,801	4.9	0.9	95	14
Samangan	320,495	38,285	11.9	0.8	95	15
Nimroz	118,199	30,723	26.0	0.7	96	16
Sar-i-Pul	443,970	30,069	6.8	0.7	97	17
Farah	493,791	27,858	5.6	0.6	97	18
Paktya	518,779	23,291	4.5	0.5	98	19
Kunarha	417,786	18,411	4.4	0.4	98	20
Khost	643,462	15,376	2.4	0.3	99	21
Badghis	514,872	14,445	2.8	0.3	99	22
Bamyan	**346,884**	**8,353**	**2.4**	**0.2**	**99**	**23**
Zabul	355,931	8,120	2.3	0.2	99	24
Urozgan	319,160	7,960	2.5	0.2	100	25
Logar	333,067	7,261	2.2	0.2	100	26
Ghor	651,782	6,339	1.0	0.1	100	27
Paktika	777,118	4,500	0.6	0.1	100	28
Daikundy	467,810	3,489	0.7	0.1	100	29
Wardak	538,634	1,581	0.3	0.0	100	30
Laghman	386,517	1,576	0.4	0.0	100	31
Kapisa	365,488	412	0.1	0.0	100	32
Nooristan	134,558	0	0.0	0.0	100	33
Panjsher	110,250	0	0.0	0.0	100	34
Total	*23,569,414*	*4,561,482*	*19.4*	*100.0*	—	—

Annex 3

Total populations (as of mid-July 2004), land area, and density per km2, by province, ranked according to land area

Province	Population	Area	Density per Km²	Rank
Kabul	2,447,044	4,524	540.9	1
Kapisa	365,488	1,908	191.6	2
Nangarhar	1,356,494	7,641	177.5	3
Khost	643,462	4,235	151.9	4
Kunduz	790,069	8,081	97.8	5
Laghman	386,517	3,978	97.2	6
Paktya	518,779	5,583	92.9	7
Parwan	498,602	5,715	87.2	8
Kunarha	417,786	4,926	84.8	9
Logar	333,067	4,568	72.9	10
Balkh	1,141,702	16,186	70.5	11
Takhar	852,574	12,458	68.4	12
Wardak	538,634	10,348	52.1	13
Ghazni	1,102,162	22,461	49.1	14
Baghlan	759,057	18,255	41.6	15
Faryab	844,388	20,798	40.6	16
Paktika	777,118	19,516	39.8	17
Jawzjan	433,081	11,292	38.4	18
Hirat	1,812,997	55,869	32.5	19
Panisher	110,250	3,772	29.2	20
Urozgan	319,160	11,474	27.8	21
Sar-i-Pul	443,970	16,386	27.1	22
Daikundy	467,810	17,501	26.7	23
Badghis	514,872	20,794	24.8	24
Hilmand	1,405,068	58,305	24.1	25
Samangan	320,495	13,438	23.8	26
Zabul	355,931	17,472	20.4	27
Bamyan	**346,884**	**18,029**	**19.2**	**28**
Badakhshan	844,581	44,836	18.8	29
Kandahar	1,023,043	54,845	18.7	30
Ghor	651,782	36,657	17.8	31
Nooristan	134,558	9,267	14.5	32
Farah	493,791	49,339	10.0	33
Nimroz	118,199	42,410	2.8	34
Total	*23,569,414*	*652,864*	**36.1**	—

Annex 4

Procedure for adjusting the reported age distribution

To adjust for the irregularities of the age-sex distribution, we adopted the following three-step procedure.

Step 1. The reported age-distribution was submitted to the Arriaga technique of age-smoothing.

Step 2. Using a stable population model[1], the distribution obtained in step 1 was corrected for the pronounced sex-imbalances in the 0-4 to 10-14 age groups. While this procedure yielded the desired result in terms of sex ratios, it increased the size of the male population and decreased that of the female.

Step 3. In order to maintain the totals by sex as reported in the household listing tables, the distribution for males was multiplied by a negative factor and that for females by a positive one. The factors were obtained by dividing the adjusted population for each sex by the reported one.

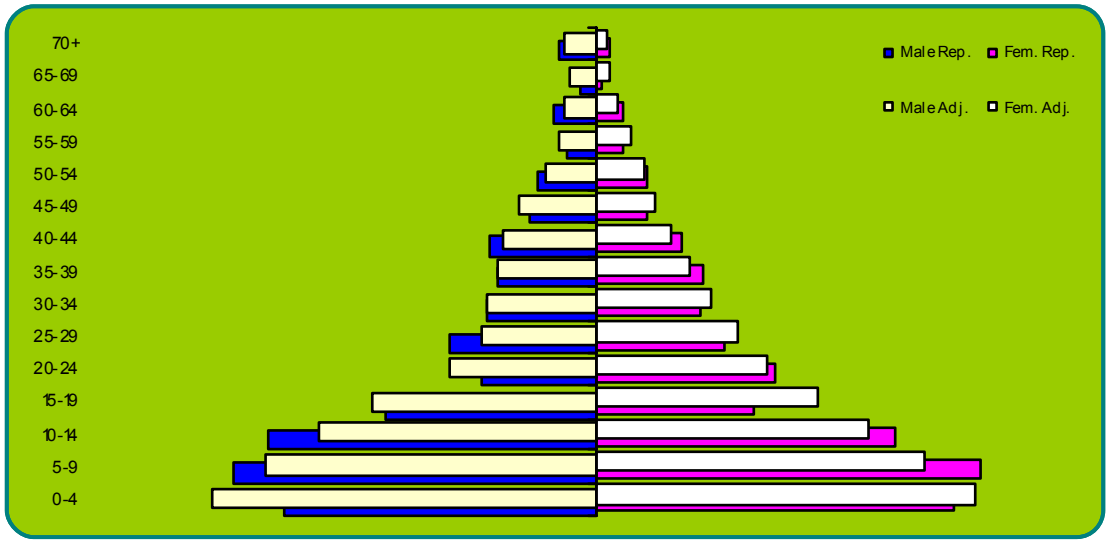
[1] The model used was from the Regional Model Life Tables and Stable Population; Ansley J. Coale and Paul Demeny; Princeton University Press; Princeton, New Jersey; 1966 ("West" model at level 13 for both males and females [e_0: 50 for females, and 47.114 for males] and a growth rate of 30).

Annex 5
Comparsion of the Reported and adjusted age distributions, Bamyan, 2003

A—Distribution

Age	Reported			Adjusted			Reported /Adjusted		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
0-4	26,485	30,887	57,372	32,845	32,642	65,487	-6,360	-1,755	-8,115
5-9	31,110	33,209	64,319	28,270	28,108	56,378	2,840	5,101	7,941
10-14	28,078	25,863	53,941	23,715	23,549	47,264	4,363	2,314	6,677
15-19	17,858	13,466	31,324	19,140	18,983	38,123	-1,282	-5,517	-6,799
20-24	9,512	15,456	24,968	12,352	14,645	26,998	-2,840	811	-2,030
25-29	12,481	11,259	23,740	9,610	12,184	21,794	2,871	-925	1,946
30-34	9,241	8,984	18,225	9,173	10,092	19,265	68	-1,108	-1,040
35-39	8,247	9,333	17,580	8,291	8,304	16,594	-44	1,029	986
40-44	8,913	7,310	16,223	7,953	6,596	14,549	960	714	1,674
45-49	5,526	4,523	10,049	6,466	5,287	11,753	-940	-764	-1,704
50-54	4,814	4,641	9,455	4,016	4,189	8,205	798	452	1,250
55-59	2,216	2,614	4,830	3,004	3,097	6,102	-788	-483	-1,272
60-64	3,505	2,387	5,892	2,592	1,860	4,452	913	527	1,440
65-69	1,153	635	1,788	2,059	1,175	3,235	-906	-540	-1,447
70-74	2,141	856	2,997	1,556	681	2,237	585	175	760
75-79	502	195	697	1,083	375	1,458	-581	-180	-761
80+	344	148	492	-	-	-	344	148	492
Total	172,126	171,766	343,892	172,126	171,766	343,892	0	0	0

B—Population Pyramid



Annex 6

Compositional Analysis

Compositional analysis (also called contingency tables) is a statistical procedure that summarizes the relationship between two variables. It consist in cross-classifying the two variables; each category of one variable is assigned to one of the rows, while each category of the other variable is assigned to one of the columns. The result is a table with a series of cells, each of which represents a unique combination of categories. The number of cases—persons, places, etc.—falling into each cell is called a "joint frequency" or "cell frequency". When the cell frequencies are summarized by rows, the row totals are often termed "row marginals". Similarly, the sum of cells by columns are called "column marginals" By definition, the sum of the row marginals is equal to the sum of the column marginals, which is the total number of cases that have been cross-classified. Based on the table thus generated, as series of other tables can be derived that portray the relationship between the two variables in terms of percentages or proportions.

This technique has been applied to the data on economic activities. The result is shown in the panels shown below. The contents of the panels are described as follows:

Panel A: Raw data—gives the distribution in absolute numbers; individual cells represent the number of villages in a given district (rows) that are engaged in the activity described—producing eggs, honey, carpets, etc. Row totals represent the number of villages in a given district engaged in a given category of activities or products. Column totals represent the number of villages in all the districts producing a given product or are engaged in one type of activity.

Panel B: Specialization—expresses the probability that a village chosen at random from the total number of villages in a given district is engaged, i.e., specializes in the economic activity described.

Panel C: Concentration—expresses the probability that a given product selected at random is produced in a given district.

Panel D: Actual Joint Distribution—is obtained by dividing the cell frequencies by the grand total of all rows or all columns[2].

Panel E: Expected Joint Distribution—indicates the proportion of all villages which would fall in each cell of table if products and districts were completely unrelated.

Panel F: Deviation of the Actual Joint Distribution from the Expected Distribution—is obtained by subtracting the expected values of Panel E from the actual values of Panel D. It shows a pattern of positive and negative values which sum to zero in all marginal totals.

Panel G: Deviation of Actual from Expected as a ratio to Expected—show the extent to which a district specializes in a given commodity or activity or a given commodity/activity is concentrated in a given district, controlling for the number of villages engaged in such activity/commodity[3].

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[2] For brevity purposes, panels D, E, and F, which serve as intermediate calculations for panel G, have been excluded from annex 6.

[3] It must be stressed that Panel B should be interpreted with caution to the extent that the indexes it shows are summary statistics that need to be related to the raw data in order for them to have their full

To summarize the wealth information contained in the various panels of annex 6, we decided to focus on the last one, Panel G, highlighting those among the seven districts that specialize in one or more of the various products/activities in a remarkable way.

With regards to subsistence crops, only five cells stand out, those associating Shebar with beans (an index of 3.52) and Vetch (an index of 2.53); Bamyan with vetch (3.59); Kahmard with rice (28.48); and Waras with corn (1.49). Stated differently, this means, for instance, that a village Kahmard is more than 28 times more likely to produce rice than any other village in any other district. In the same way, the probability that a village in Wars will grow corn is 1.49 times higher than for any other village in any other district.

In the area of industrial crops, six cells stand out, four of which exhibiting very high probabilities. Bamyan is shown to be very highly associated with cotton (16.56) and sesame (2.29); Shebar is associated with sugar extracts (18.75); Saighan is highly specialized in olives; and Yakawlang is highly associated with cotton (12.17) and seame 3.94). It is worth noting however (see Panel A of annex table 6), that the total number of villages producing cotton is only three.

Concerning fruit, three cells stand out: those associating Bamyan with grapes(31.75) and oranges (15.38), and Shebar with walnuts (1.84).

With regards to vegetables, only three products stand out as being concentrated in one or two villages—tomatoes in Khamard); cauliflower in Shebar (1.25) and Panjab (1.43); and leek in Bmayan (1.76) and Saighan (4.04).

Herbal products also appear to be as concentrated as fruit, even though the degree of concentration is not high, judging by the indices shown in annex table 6.x. The districts that stand out are Shebar for zerk (2.9) and aniseed (1.97), Saighan for aniseed (1.32), and Kahmard for Asfitida (4.24).

Handicrafts appear to be substantially spatially concentrated, in particular with regard to pelisse which is highly associated with Panjab (11.26), Khamard (8.55), Shebar (7.92), and Bamyan (7.13). But the other districts specialize in this handicraft as well—Saighan shows an index of 4.65, Yakawlang 2.85, and Waras 1.20. Stated differently, the various districts of Bamyan tend to produce more pelisse than any other handicraft.

The second handicraft that is produced by quite a few districts is jewelry, which is associated with three districts, albeit a low degrees: Shebar with 1.08, Kahmard with 1.17, and Panjab with 1.53.

Even though statistically speaking, pottery shows high indices of association, in reality the number of villages producing such commodity is only two. Carpets on the other hand

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usefulness in terms of describing the reality on the ground. Stated differently, this means that Panel G should be read jointly with Panel A.

are produced by a relatively large number of villages, but the indices of association linking it to specific places are low. Only Kahmard and Panjab appear to be producing more carpets than other districts, everything else held constant.

Small industries are very scarce in Bamyan. They feature in the product mix of only 17 villages. Only two districts have any small industries—Bamyan and Panjab. This is why both districts show high degrees of association with the various types of industries that exist in the province.

Surprisingly, out of the seven districts of the province, only two stand out—Yakawlang for dried sugar, and Kahmard for dried sugar and butter.

Agricultural and industrial products, and economic activities, Bamyan, 2003

Crops

Panel A—Raw Data

	District	Wheat	Corn	Rice	Maize	Beans	Vetch	Peas	Other	Total
1	Provincial Center—Bamyan	150	3	2	139	2	3	5	14	318
2	Shebar	128	0	1	125	8	2	4	8	276
3	Saighan	57	3	0	58	1	0	2	3	124
4	Kahmard	45	0	21	42	0	0	0	3	111
5	Yakawlang	329	1	0	263	4	2	0	52	651
6	Panjab	432	3	0	430	5	0	7	124	1,001
7	Waras	636	93	1	620	5	1	22	36	1,414
	Total	**1,777**	**103**	**25**	**1,677**	**25**	**8**	**40**	**240**	**3,895**

Panel B—Specialization

	District	Wheat	Corn	Rice	Maize	Beans	Vetch	Peas	Other	Total
1	Provincial Center—Bamyan	47.2	0.9	0.6	43.7	0.6	0.9	1.6	4.4	100.0
2	Shebar	46.4	0.0	0.4	45.3	2.9	0.7	1.4	2.9	100.0
3	Saighan	46.0	2.4	0.0	46.8	0.8	0.0	1.6	2.4	100.0
4	Kahmard	40.5	0.0	18.9	37.8	0.0	0.0	0.0	2.7	100.0
5	Yakawlang	50.5	0.2	0.0	40.4	0.6	0.3	0.0	8.0	100.0
6	Panjab	43.2	0.3	0.0	43.0	0.5	0.0	0.7	12.4	100.0
7	Waras	45.0	6.6	0.1	43.8	0.4	0.1	1.6	2.5	100.0
	Total	**45.6**	**2.6**	**0.6**	**43.1**	**0.6**	**0.2**	**1.0**	**6.2**	**100.0**

Panel C—Concentration

	District	Wheat	Corn	Rice	Maize	Beans	Vetch	Peas	Other	Total
1	Provincial Center—Bamyan	8.4	2.9	8.0	8.3	8.0	37.5	12.5	5.8	8.2
2	Shebar	7.2	0.0	4.0	7.5	32.0	25.0	10.0	3.3	7.1
3	Saighan	3.2	2.9	0.0	3.5	4.0	0.0	5.0	1.3	3.2
4	Kahmard	2.5	0.0	84.0	2.5	0.0	0.0	0.0	1.3	2.8
5	Yakawlang	18.5	1.0	0.0	15.7	16.0	25.0	0.0	21.7	16.7
6	Panjab	24.3	2.9	0.0	25.6	20.0	0.0	17.5	51.7	25.7
7	Waras	35.8	90.3	4.0	37.0	20.0	12.5	55.0	15.0	36.3
	Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Panel G—Deviation of actual from expected as a ratio to expected

	District	Wheat	Corn	Rice	Maize	Beans	Vetch	Peas	Other	Total
1	Provincial Center—Bamyan	0.03	-0.64	-0.02	0.02	-0.02	3.59	0.53	-0.29	0.00
2	Shebar	0.02	-1.00	-0.44	0.05	3.52	2.53	0.41	-0.53	0.00
3	Saighan	0.01	-0.09	-1.00	0.09	0.26	-1.00	0.57	-0.61	0.00
4	Kahmard	-0.11	-1.00	28.48	-0.12	-1.00	-1.00	-1.00	-0.56	0.00
5	Yakawlang	0.11	-0.94	-1.00	-0.06	-0.04	0.50	-1.00	0.30	0.00
6	Panjab	-0.05	-0.89	-1.00	0.00	-0.22	-1.00	-0.32	1.01	0.00
7	Waras	-0.01	1.49	-0.89	0.02	-0.45	-0.66	0.52	-0.59	0.00
	Total	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Annex 6 (Cont'd)
Agricultural and industrial products, and economic activities, Bamyan, 2003

Industrial Crops

Panel A—Raw Data

District	Cotton	Sugar Extract	Sugar Cane	Sesame	Tobacco	Olives	Shar-sham	Other	Total
1 Provincial Center—Bamyan	2	0	0	1	6	0	0	0	9
2 Shebar	0	1	0	0	2	0	0	0	3
3 Saighan	0	1	0	5	18	1	0	1	26
4 Kahmard	0	0	0	0	0	0	0	0	0
5 Yakawlang	1	0	0	1	0	0	0	4	6
6 Panjab	0	0	0	0	5	0	0	1	6
7 Waras	0	2	0	1	177	0	0	7	187
Total	**3**	**4**	**0**	**8**	**208**	**1**	**0**	**13**	**237**

Panel B—Specialization

District	Cotton	Sugar Extract	Sugar Cane	Sesame	Tobacco	Olives	Shar-sham	Other	Total
1 Provincial Center—Bamyan	22.2	0.0	0.0	11.1	66.7	0.0	0.0	0.0	100.0
2 Shebar	0.0	33.3	0.0	0.0	66.7	0.0	0.0	0.0	100.0
3 Saighan	0.0	3.8	0.0	19.2	69.2	3.8	0.0	3.8	100.0
4 Kahmard	—	—	—	—	—	—	—	—	—
5 Yakawlang	16.7	0.0	0.0	16.7	0.0	0.0	0.0	66.7	100.0
6 Panjab	0.0	0.0	0.0	0.0	83.3	0.0	0.0	16.7	100.0
7 Waras	0.0	1.1	0.0	0.5	94.7	0.0	0.0	3.7	100.0
Total	**1.3**	**1.7**	**0.0**	**3.4**	**87.8**	**0.4**	**0.0**	**5.5**	**100.0**

Panel C—Concentration

District	Cotton	Sugar Extract	Sugar Cane	Sesame	Tobacco	Olives	Shar-sham	Other	Total
1 Provincial Center—Bamyan	66.7	0.0	—	12.5	2.9	0.0	—	0.0	3.8
2 Shebar	0.0	25.0	—	0.0	1.0	0.0	—	0.0	1.3
3 Saighan	0.0	25.0	—	62.5	8.7	100.0	—	7.7	11.0
4 Kahmard	0.0	0.0	—	0.0	0.0	0.0	—	0.0	0.0
5 Yakawlang	33.3	0.0	—	12.5	0.0	0.0	—	30.8	2.5
6 Panjab	0.0	0.0	—	0.0	2.4	0.0	—	7.7	2.5
7 Waras	0.0	50.0	—	12.5	85.1	0.0	—	53.8	78.9
Total	**100.0**	**100.0**	**—**	**100.0**	**100.0**	**100.0**	**—**	**100.0**	**100.0**

Panel G—Deviation of actual from expected as a ratio to expected

District	Cotton	Sugar Extract	Sugar Cane	Sesame	Tobacco	Olives	Shar-sham	Other	Total
1 Provincial Center—Bamyan	16.56	-1.00	—	2.29	-0.24	-1.00	—	-1.00	0.00
2 Shebar	-1.00	18.75	—	-1.00	-0.24	-1.00	—	-1.00	0.00
3 Saighan	-1.00	1.28	—	4.70	-0.21	8.12	—	-0.30	0.00
4 Kahmard	—	—	—	—	—	—	—	—	—
5 Yakawlang	12.17	-1.00	—	3.94	-1.00	-1.00	—	11.15	0.00
6 Panjab	-1.00	-1.00	—	-1.00	-0.05	-1.00	—	2.04	0.00
7 Waras	-1.00	-0.37	—	-0.84	0.08	-1.00	—	-0.32	0.00
Total	**0.0**	**0.0**	**—**	**0.0**	**0.0**	**0.0**	**—**	**0.0**	**0.0**

Annex 6 (Cont'd)
Agricultural and industrial products, and economic activities, Bamyan, 2003

Fruit

Panel A—Raw Data

District	Grapes	Pome-grenades	Melon/ W. mel.	Oranges	Almonds	Walnuts	Mul-berry	Other	Total
1 Provincial Center—Bamyan	0	1	0	1	1	0	1	8	12
2 Shebar	0	0	0	0	3	7	6	3	19
3 Saighan	1	0	5	0	12	16	23	11	68
4 Kahmard	19	0	2	0	16	20	20	35	112
5 Yakawlang	0	0	0	0	1	1	1	10	13
6 Panjab	0	0	0	0	0	1	0	4	5
7 Waras	4	0	2	1	23	6	53	75	164
Total	**24**	**1**	**9**	**2**	**56**	**51**	**104**	**146**	**393**

Panel B—Specialization

District	Grapes	Pome-grenades	Melon/ W. mel.	Oranges	Almonds	Walnuts	Mul-berry	Other	Total
1 Provincial Center—Bamyan	0.0	8.3	0.0	8.3	8.3	0.0	8.3	66.7	100.0
2 Shebar	0.0	0.0	0.0	0.0	15.8	36.8	31.6	15.8	100.0
3 Saighan	1.5	0.0	7.4	0.0	17.6	23.5	33.8	16.2	100.0
4 Kahmard	17.0	0.0	1.8	0.0	14.3	17.9	17.9	31.3	100.0
5 Yakawlang	0.0	0.0	0.0	0.0	7.7	7.7	7.7	76.9	100.0
6 Panjab	0.0	0.0	0.0	0.0	0.0	20.0	0.0	80.0	100.0
7 Waras	2.4	0.0	1.2	0.6	14.0	3.7	32.3	45.7	100.0
Total	**6.1**	**0.3**	**2.3**	**0.5**	**14.2**	**13.0**	**26.5**	**37.2**	**100.0**

Panel C—Concentration

District	Grapes	Pome-grenades	Melon/ W. mel.	Oranges	Almonds	Walnuts	Mul-berry	Other	Total
1 Provincial Center—Bamyan	0.0	100.0	0.0	50.0	1.8	0.0	1.0	5.5	3.1
2 Shebar	0.0	0.0	0.0	0.0	5.4	13.7	5.8	2.1	4.8
3 Saighan	4.2	0.0	55.6	0.0	21.4	31.4	22.1	7.5	17.3
4 Kahmard	79.2	0.0	22.2	0.0	28.6	39.2	19.2	24.0	28.5
5 Yakawlang	0.0	0.0	0.0	0.0	1.8	2.0	1.0	6.8	3.3
6 Panjab	0.0	0.0	0.0	0.0	0.0	2.0	0.0	2.7	1.3
7 Waras	16.7	0.0	22.2	50.0	41.1	11.8	51.0	51.4	41.7
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Panel G—Deviation of actual from expected as a ratio to expected

District	Grapes	Pome-grenades	Melon/ W. mel.	Oranges	Almonds	Walnuts	Mul-berry	Other	Total
1 Provincial Center—Bamyan	-1.00	31.75	-1.00	15.38	-0.42	-1.00	-0.69	0.79	0.00
2 Shebar	-1.00	-1.00	-1.00	-1.00	0.11	1.84	0.19	-0.57	0.00
3 Saighan	-0.76	-1.00	2.21	-1.00	0.24	0.81	0.28	-0.56	0.00
4 Kahmard	1.78	-1.00	-0.22	-1.00	0.00	0.38	-0.33	-0.16	0.00
5 Yakawlang	-1.00	-1.00	-1.00	-1.00	-0.46	-0.41	-0.71	1.07	0.00
6 Panjab	-1.00	-1.00	-1.00	-1.00	-1.00	0.54	-1.00	1.15	0.00
7 Waras	-0.60	-1.00	-0.47	0.20	-0.02	-0.72	0.22	0.23	0.00
Total	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Annex 6 (Cont'd)
Agricultural and industrial products, and economic activities, Bamyan, 2003

Vegetables

Panel A—Raw Data

District	Potatoes	Onion	Tomatoes	Carrots	Cauli-flower	Spinach	Leek	Other	Total
1 Provincial Center—Bamyan	134	23	17	25	0	1	10	0	210
2 Shebar	119	32	23	53	1	1	3	0	232
3 Saighan	50	42	11	17	0	5	12	1	138
4 Kahmard	20	4	5	0	0	0	0	1	30
5 Yakawlang	187	1	0	0	0	0	0	2	190
6 Panjab	377	37	29	178	3	2	4	15	645
7 Waras	418	157	8	42	0	1	7	9	642
Total	**1,305**	**296**	**93**	**315**	**4**	**10**	**36**	**28**	**2,087**

Panel B—Specialization

District	Potatoes	Onion	Tomatoes	Carrots	Cauli-flower	Spinach	Leek	Other	Total
1 Provincial Center—Bamyan	63.8	11.0	8.1	11.9	0.0	0.5	4.8	0.0	100.0
2 Shebar	51.3	13.8	9.9	22.8	0.4	0.4	1.3	0.0	100.0
3 Saighan	36.2	30.4	8.0	12.3	0.0	3.6	8.7	0.7	100.0
4 Kahmard	66.7	13.3	16.7	0.0	0.0	0.0	0.0	3.3	100.0
5 Yakawlang	98.4	0.5	0.0	0.0	0.0	0.0	0.0	1.1	100.0
6 Panjab	58.4	5.7	4.5	27.6	0.5	0.3	0.6	2.3	100.0
7 Waras	65.1	24.5	1.2	6.5	0.0	0.2	1.1	1.4	100.0
Total	**62.5**	**14.2**	**4.5**	**15.1**	**0.2**	**0.5**	**1.7**	**1.3**	**100.0**

Panel C—Concentration

District	Potatoes	Onion	Tomatoes	Carrots	Cauli-flower	Spinach	Leek	Other	Total
1 Provincial Center—Bamyan	10.3	7.8	18.3	7.9	0.0	10.0	27.8	0.0	10.1
2 Shebar	9.1	10.8	24.7	16.8	25.0	10.0	8.3	0.0	11.1
3 Saighan	3.8	14.2	11.8	5.4	0.0	50.0	33.3	3.6	6.6
4 Kahmard	1.5	1.4	5.4	0.0	0.0	0.0	0.0	3.6	1.4
5 Yakawlang	14.3	0.3	0.0	0.0	0.0	0.0	0.0	7.1	9.1
6 Panjab	28.9	12.5	31.2	56.5	75.0	20.0	11.1	53.6	30.9
7 Waras	32.0	53.0	8.6	13.3	0.0	10.0	19.4	32.1	30.8
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**####**	**100.0**

Panel G—Deviation of actual from expected as a ratio to expected

District	Potatoes	Onion	Tomatoes	Carrots	Cauli-flower	Spinach	Leek	Other	Total
1 Provincial Center—Bamyan	0.02	-0.23	0.82	-0.21	-1.00	-0.01	1.76	-1.00	0.00
2 Shebar	-0.18	-0.03	1.22	0.51	1.25	-0.10	-0.25	-1.00	0.00
3 Saighan	-0.42	1.15	0.79	-0.18	-1.00	6.56	4.04	-0.46	0.00
4 Kahmard	0.07	-0.06	2.74	-1.00	-1.00	-1.00	-1.00	1.48	0.00
5 Yakawlang	0.57	-0.96	-1.00	-1.00	-1.00	-1.00	-1.00	-0.22	0.00
6 Panjab	-0.07	-0.60	0.01	0.83	1.43	-0.35	-0.64	0.73	0.00
7 Waras	0.04	0.72	-0.72	-0.57	-1.00	-0.67	-0.37	0.04	0.00
Total	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Annex 6 (Cont'd)
Agricultural and industrial products, and economic activities, Bamyan, 2003

Herbal Products

Panel A—Raw Data

District	Licorice	Caray	Asfitida	Zerk	Aniseed	Hyssop	Chicory	Other	Total
1 Provincial Center—Bamyan	9	29	1	5	2	2	12	0	60
2 Shebar	13	15	2	10	3	8	3	0	54
3 Saighan	10	21	10	13	4	4	30	0	92
4 Kahmard	4	8	34	0	0	0	0	4	50
5 Yakawlang	4	84	52	5	2	0	0	3	150
6 Panjab	11	16	4	1	0	0	5	1	38
7 Waras	61	65	1	4	4	96	124	2	357
Total	**112**	**238**	**104**	**38**	**15**	**110**	**174**	**10**	**801**

Panel B—Specialization

District	Licorice	Caray	Asfitida	Zerk	Aniseed	Hyssop	Chicory	Other	Total
1 Provincial Center—Bamyan	15.0	48.3	1.7	8.3	3.3	3.3	20.0	0.0	100.0
2 Shebar	24.1	27.8	3.7	18.5	5.6	14.8	5.6	0.0	100.0
3 Saighan	10.9	22.8	10.9	14.1	4.3	4.3	32.6	0.0	100.0
4 Kahmard	8.0	16.0	68.0	0.0	0.0	0.0	0.0	8.0	100.0
5 Yakawlang	2.7	56.0	34.7	3.3	1.3	0.0	0.0	2.0	100.0
6 Panjab	28.9	42.1	10.5	2.6	0.0	0.0	13.2	2.6	100.0
7 Waras	17.1	18.2	0.3	1.1	1.1	26.9	34.7	0.6	100.0
Total	**14.0**	**29.7**	**13.0**	**4.7**	**1.9**	**13.7**	**21.7**	**1.2**	**100.0**

Panel C—Concentration

District	Licorice	Caray	Asfitida	Zerk	Aniseed	Hyssop	Chicory	Other	Total
1 Provincial Center—Bamyan	8.0	12.2	1.0	13.2	13.3	1.8	6.9	0.0	7.5
2 Shebar	11.6	6.3	1.9	26.3	20.0	7.3	1.7	0.0	6.7
3 Saighan	8.9	8.8	9.6	34.2	26.7	3.6	17.2	0.0	11.5
4 Kahmard	3.6	3.4	32.7	0.0	0.0	0.0	0.0	40.0	6.2
5 Yakawlang	3.6	35.3	50.0	13.2	13.3	0.0	0.0	30.0	18.7
6 Panjab	9.8	6.7	3.8	2.6	0.0	0.0	2.9	10.0	4.7
7 Waras	54.5	27.3	1.0	10.5	26.7	87.3	71.3	20.0	44.6
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Panel G—Deviation of actual from expected as a ratio to expected

District	Licorice	Caray	Asfitida	Zerk	Aniseed	Hyssop	Chicory	Other	Total
1 Provincial Center—Bamyan	0.07	0.63	-0.87	0.76	0.78	-0.76	-0.08	-1.00	0.00
2 Shebar	0.72	-0.07	-0.71	2.90	1.97	0.08	-0.74	-1.00	0.00
3 Saighan	-0.22	-0.23	-0.16	1.98	1.32	-0.68	0.50	-1.00	0.00
4 Kahmard	-0.43	-0.46	4.24	-1.00	-1.00	-1.00	-1.00	5.41	0.00
5 Yakawlang	-0.81	0.88	1.67	-0.30	-0.29	-1.00	-1.00	0.60	0.00
6 Panjab	1.07	0.42	-0.19	-0.45	-1.00	-1.00	-0.39	1.11	0.00
7 Waras	0.22	-0.39	-0.98	-0.76	-0.40	0.96	0.60	-0.55	0.00
Total	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Annex 6 (Cont'd)

Agricultural and industrial products, and economic activities, Bamyan, 200

Herbal Products

Panel A—Raw Data

District	Licorice	Caray	Asfitida	Zerk	Aniseed	Hyssop	Chicory
1 Provincial Center—Bamyan	9	29	1	5	2	2	12
2 Shebar	13	15	2	10	3	8	3
3 Saighan	10	21	10	13	4	4	30
4 Kahmard	4	8	34	0	0	0	0
5 Yakawlang	4	84	52	5	2	0	0
6 Panjab	11	16	4	1	0	0	5
7 Waras	61	65	1	4	4	96	124
Total	**112**	**238**	**104**	**38**	**15**	**110**	**174**

Panel B—Specialization

District	Licorice	Caray	Asfitida	Zerk	Aniseed	Hyssop	Chicory
1 Provincial Center—Bamyan	15.0	48.3	1.7	8.3	3.3	3.3	20.0
2 Shebar	24.1	27.8	3.7	18.5	5.6	14.8	5.6
3 Saighan	10.9	22.8	10.9	14.1	4.3	4.3	32.6
4 Kahmard	8.0	16.0	68.0	0.0	0.0	0.0	0.0
5 Yakawlang	2.7	56.0	34.7	3.3	1.3	0.0	0.0
6 Panjab	28.9	42.1	10.5	2.6	0.0	0.0	13.2
7 Waras	17.1	18.2	0.3	1.1	1.1	26.9	34.7
Total	**14.0**	**29.7**	**13.0**	**4.7**	**1.9**	**13.7**	**21.7**

Panel C—Concentration

District	Licorice	Caray	Asfitida	Zerk	Aniseed	Hyssop	Chicory
1 Provincial Center—Bamyan	8.0	12.2	1.0	13.2	13.3	1.8	6.9
2 Shebar	11.6	6.3	1.9	26.3	20.0	7.3	1.7
3 Saighan	8.9	8.8	9.6	34.2	26.7	3.6	17.2
4 Kahmard	3.6	3.4	32.7	0.0	0.0	0.0	0.0
5 Yakawlang	3.6	35.3	50.0	13.2	13.3	0.0	0.0
6 Panjab	9.8	6.7	3.8	2.6	0.0	0.0	2.9
7 Waras	54.5	27.3	1.0	10.5	26.7	87.3	71.3
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Panel G—Deviation of actual from expected as a ratio to expected

District	Licorice	Caray	Asfitida	Zerk	Aniseed	Hyssop	Chicory
1 Provincial Center—Bamyan	0.07	0.63	-0.87	0.76	0.78	-0.76	-0.08
2 Shebar	0.72	-0.07	-0.71	2.90	1.97	0.08	-0.74
3 Saighan	-0.22	-0.23	-0.16	1.98	1.32	-0.68	0.50
4 Kahmard	-0.43	-0.46	4.24	-1.00	-1.00	-1.00	-1.00
5 Yakawlang	-0.81	0.88	1.67	-0.30	-0.29	-1.00	-1.00
6 Panjab	1.07	0.42	-0.19	-0.45	-1.00	-1.00	-0.39
7 Waras	0.22	-0.39	-0.98	-0.76	-0.40	0.96	0.60
Total	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Annex 6 (Cont'd)
Agricultural and industrial products, and economic activities, Bamyan, 2003

Small Industries

Panel A—Raw Data

District	Honey	Silk	Karakul skin	Dried sugar	Con-fection	Sugar candy	Sugar sweets	Other	Total
1 Provincial Center—Bamyan	2	2	2	0	1	1	0	0	8
2 Shebar	0	0	1	0	0	0	0	0	1
3 Saighan	0	0	0	0	0	0	0	0	0
4 Kahmard	0	0	0	0	0	0	0	0	0
5 Yakawlang	0	0	0	0	0	0	0	0	0
6 Panjab	1	1	1	1	2	1	1	0	8
7 Waras	0	0	0	0	0	0	0	0	0
Total	**3**	**3**	**4**	**1**	**3**	**2**	**1**	**0**	**17**

Panel B—Specialization

District	Honey	Silk	Karakul skin	Dried sugar	Con-fection	Sugar candy	Sugar sweets	Other	Total
1 Provincial Center—Bamyan	25.0	25.0	25.0	0.0	12.5	12.5	0.0	0.0	100.0
2 Shebar	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0
3 Saighan	—	—	—	—	—	—	—	—	—
4 Kahmard	—	—	—	—	—	—	—	—	—
5 Yakawlang	—	—	—	—	—	—	—	—	—
6 Panjab	12.5	12.5	12.5	12.5	25.0	12.5	12.5	0.0	100.0
7 Waras	—	—	—	—	—	—	—	—	—
Total	**17.6**	**17.6**	**23.5**	**5.9**	**17.6**	**11.8**	**5.9**	**0.0**	**100.0**

Panel C—Concentration

District	Honey	Silk	Karakul skin	Dried sugar	Con-fection	Sugar candy	Sugar sweets	Other	Total
1 Provincial Center—Bamyan	66.7	66.7	50.0	0.0	33.3	50.0	0.0	—	47.1
2 Shebar	0.0	0.0	25.0	0.0	0.0	0.0	0.0	—	5.9
3 Saighan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	—	0.0
4 Kahmard	0.0	0.0	0.0	0.0	0.0	0.0	0.0	—	0.0
5 Yakawlang	0.0	0.0	0.0	0.0	0.0	0.0	0.0	—	0.0
6 Panjab	33.3	33.3	25.0	100.0	66.7	50.0	100.0	—	47.1
7 Waras	0.0	0.0	0.0	0.0	0.0	0.0	0.0	—	0.0
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**—**	**100.0**

ed

District	Honey	Silk	Karakul skin	Dried sugar	Con-fection	Sugar candy	Sugar sweets	Other	Total
1 Provincial Center—Bamyan	0.42	0.42	0.06	-1.00	-0.29	0.06	-1.00	—	0.00
2 Shebar	-1.00	-1.00	3.25	-1.00	-1.00	-1.00	-1.00	—	0.00
3 Saighan	—	—	—	—	—	—	—	—	—
4 Kahmard	—	—	—	—	—	—	—	—	—
5 Yakawlang	—	—	—	—	—	—	—	—	—
6 Panjab	-0.29	-0.29	-0.47	1.13	0.42	0.06	1.13	—	0.00
7 Waras	—	—	—	—	—	—	—	—	—
Total	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**—**	**0.0**

Annex 6 (Cont'd)
Agricultural and industrial products, and economic activities, Bamyan, 2003

Animal Products

Panel A—Raw Data

	District	Eggs	Milk	Yogurt	Whey	Dried Yogurt	Butter	Wool	Other	Total
1	Provincial Center—Bamyan	98	111	109	98	102	96	81	0	695
2	Shebar	74	75	75	74	76	73	76	0	523
3	Saighan	50	62	62	62	62	62	61	1	422
4	Kahmard	1	1	0	0	4	3	0	0	9
5	Yakawlang	0	0	0	1	293	8	9	1	312
6	Panjab	288	311	305	309	348	305	291	2	2,159
7	Waras	451	620	619	616	634	603	516	3	4,062
	Total	**962**	**1,180**	**1,170**	**1,160**	**1,519**	**1,150**	**1,034**	**7**	**8,182**

Panel B—Specialization

	District	Eggs	Milk	Yogurt	Whey	Dried Yogurt	Butter	Wool	Other	Total
1	Provincial Center—Bamyan	14.1	16.0	15.7	14.1	14.7	13.8	11.7	0.0	100.0
2	Shebar	14.1	14.3	14.3	14.1	14.5	14.0	14.5	0.0	100.0
3	Saighan	11.8	14.7	14.7	14.7	14.7	14.7	14.5	0.2	100.0
4	Kahmard	11.1	11.1	0.0	0.0	44.4	33.3	0.0	0.0	100.0
5	Yakawlang	0.0	0.0	0.0	0.3	93.9	2.6	2.9	0.3	100.0
6	Panjab	13.3	14.4	14.1	14.3	16.1	14.1	13.5	0.1	100.0
7	Waras	11.1	15.3	15.2	15.2	15.6	14.8	12.7	0.1	100.0
	Total	**11.8**	**14.4**	**14.3**	**14.2**	**18.6**	**14.1**	**12.6**	**0.1**	**100.0**

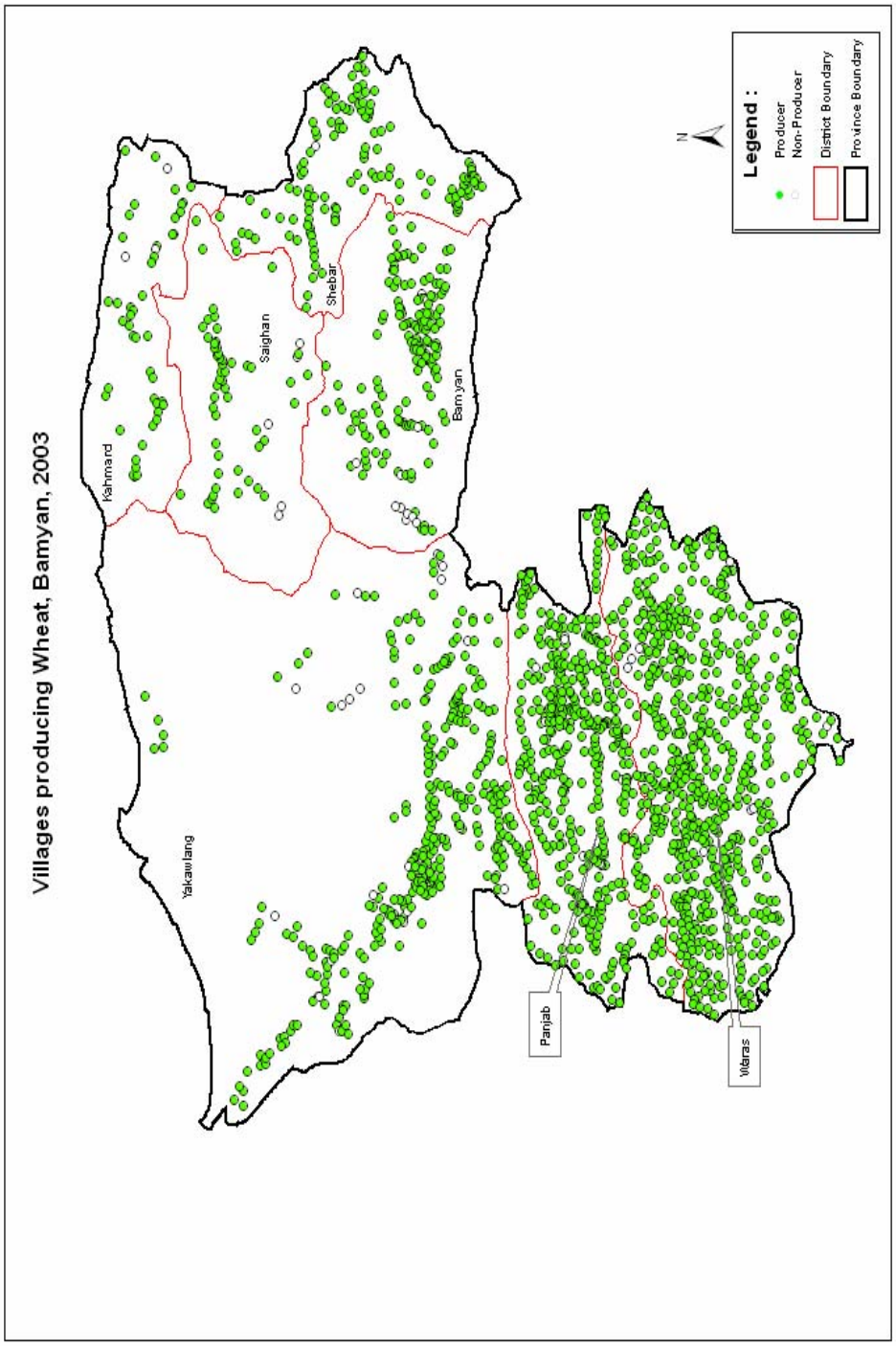
Panel C—Concentration

	District	Eggs	Milk	Yogurt	Whey	Dried Yogurt	Butter	Wool	Other	Total
1	Provincial Center—Bamyan	10.2	9.4	9.3	8.4	6.7	8.3	7.8	0.0	8.5
2	Shebar	7.7	6.4	6.4	6.4	5.0	6.3	7.4	0.0	6.4
3	Saighan	5.2	5.3	5.3	5.3	4.1	5.4	5.9	14.3	5.2
4	Kahmard	0.1	0.1	0.0	0.0	0.3	0.3	0.0	0.0	0.1
5	Yakawlang	0.0	0.0	0.0	0.1	19.3	0.7	0.9	14.3	3.8
6	Panjab	29.9	26.4	26.1	26.6	22.9	26.5	28.1	28.6	26.4
7	Waras	46.9	52.5	52.9	53.1	41.7	52.4	49.9	42.9	49.6
	Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

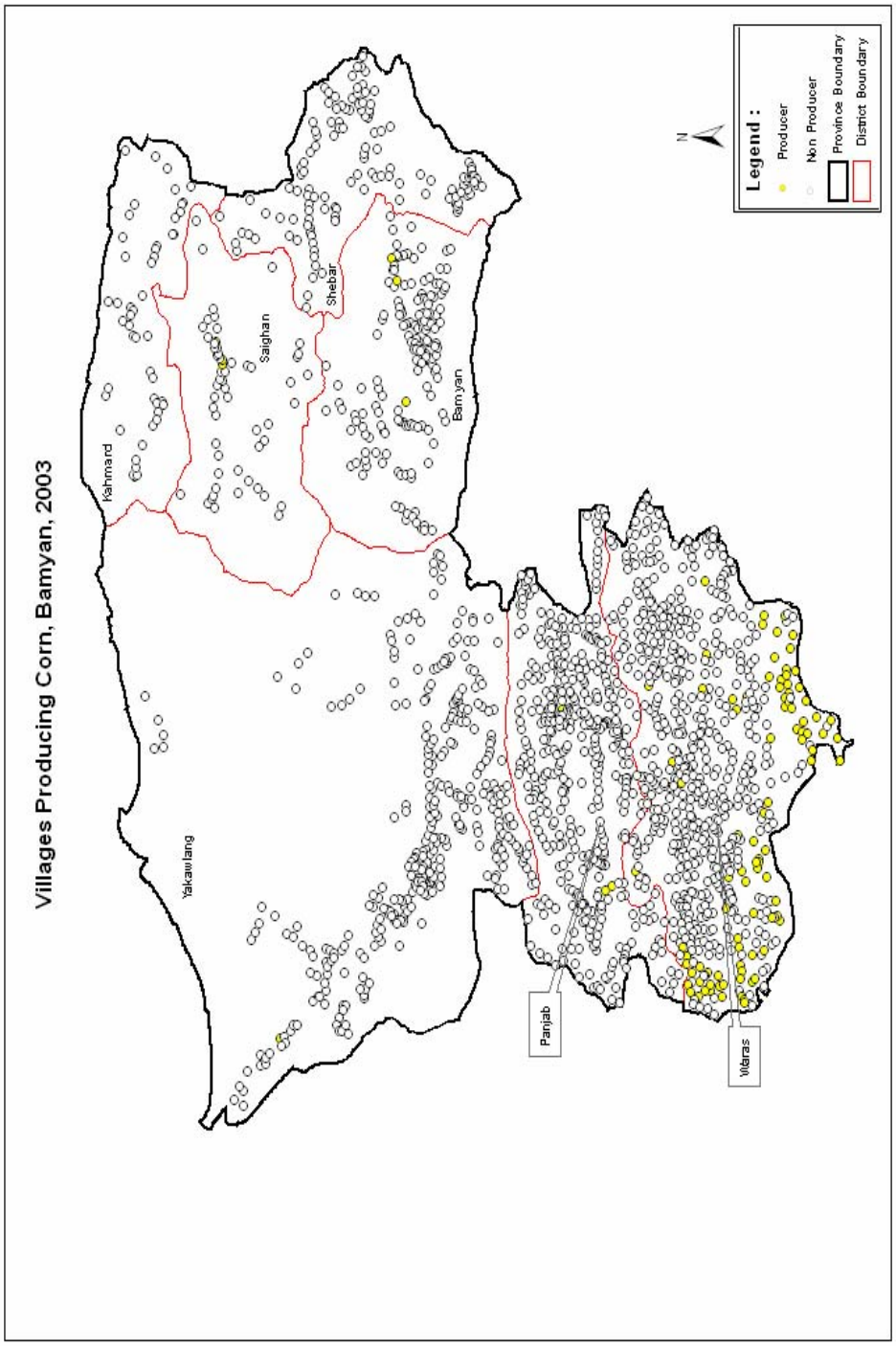
Panel G—Deviation of actual from expected as a ratio to expected

	District	Eggs	Milk	Yogurt	Whey	Dried Yogurt	Butter	Wool	Other	Total
1	Provincial Center—Bamyan	0.20	0.11	0.10	-0.01	-0.21	-0.02	-0.08	-1.00	0.00
2	Shebar	0.20	-0.01	0.00	0.00	-0.22	-0.01	0.15	-1.00	0.00
3	Saighan	0.01	0.02	0.03	0.04	-0.21	0.05	0.14	1.77	0.00
4	Kahmard	-0.05	-0.23	-1.00	-1.00	1.39	1.37	-1.00	-1.00	0.00
5	Yakawlang	-1.00	-1.00	-1.00	-0.98	4.06	-0.82	-0.77	2.75	0.00
6	Panjab	0.13	0.00	-0.01	0.01	-0.13	0.01	0.07	0.08	0.00
7	Waras	-0.06	0.06	0.07	0.07	-0.16	0.06	0.01	-0.14	0.00
	Total	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

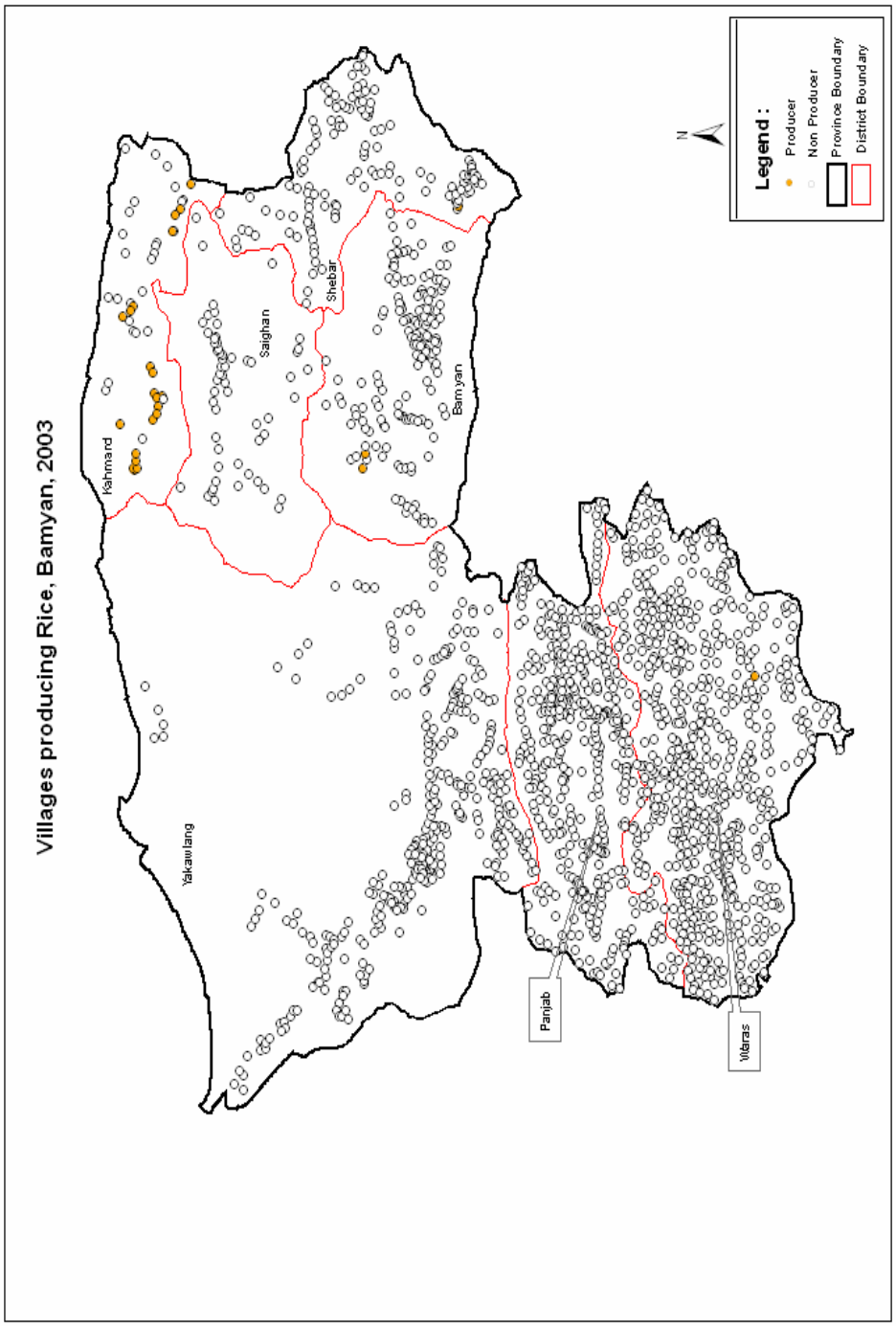
Annex 7


Villages producing Wheat, Bamyan, 2003
Legend :
Producer
Non-Producer
District Boundary
Province Boundary
N
Kahmard
Saighan
Shebar
Bamyan
Yakawlang
Panjab
Waras

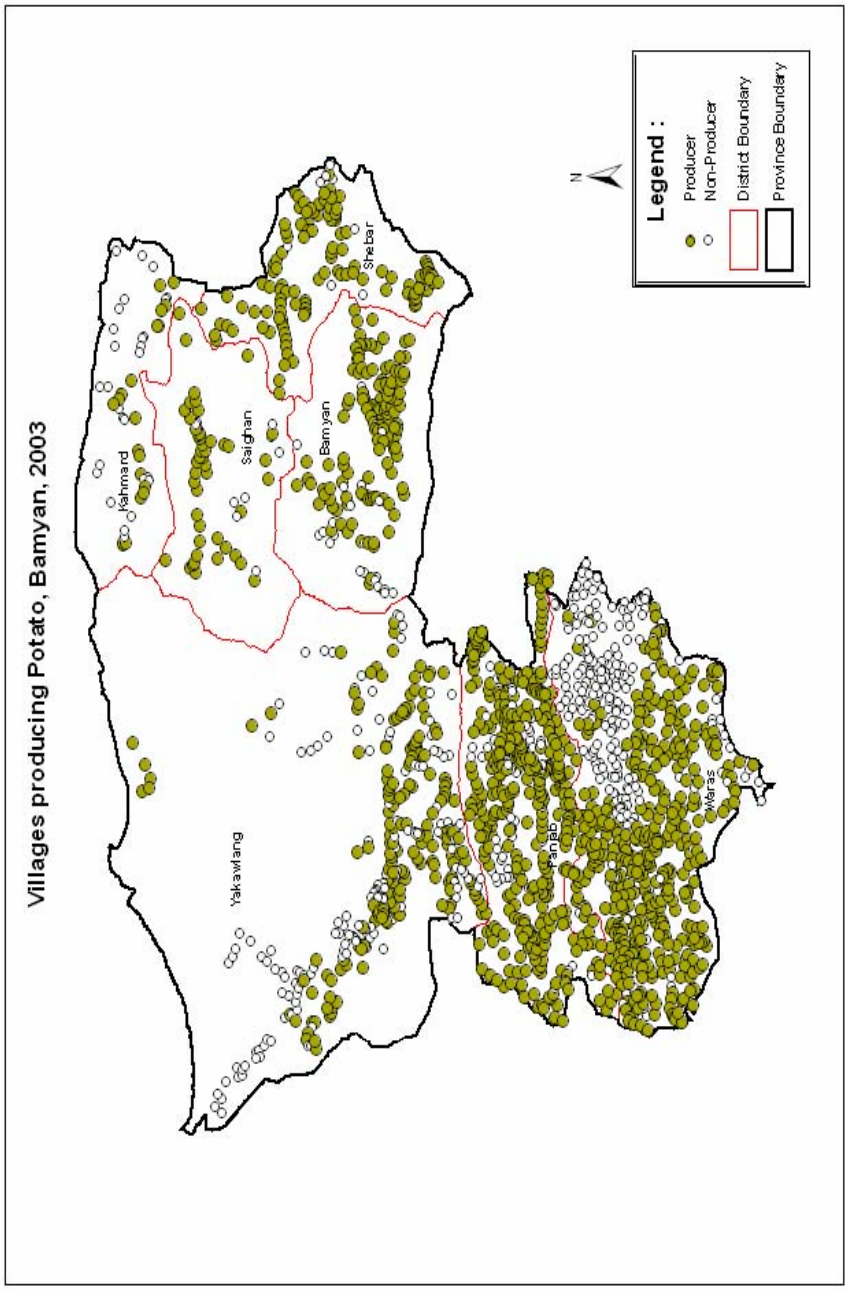
Annex 8


Villages Producing Corn, Bamyan, 2003
Legend :
Producer
Non Producer
Province Boundary
District Boundary
N
Kahmard
Saighan
Shebar
Bamyan
Yakawlang
Panjab
Waras

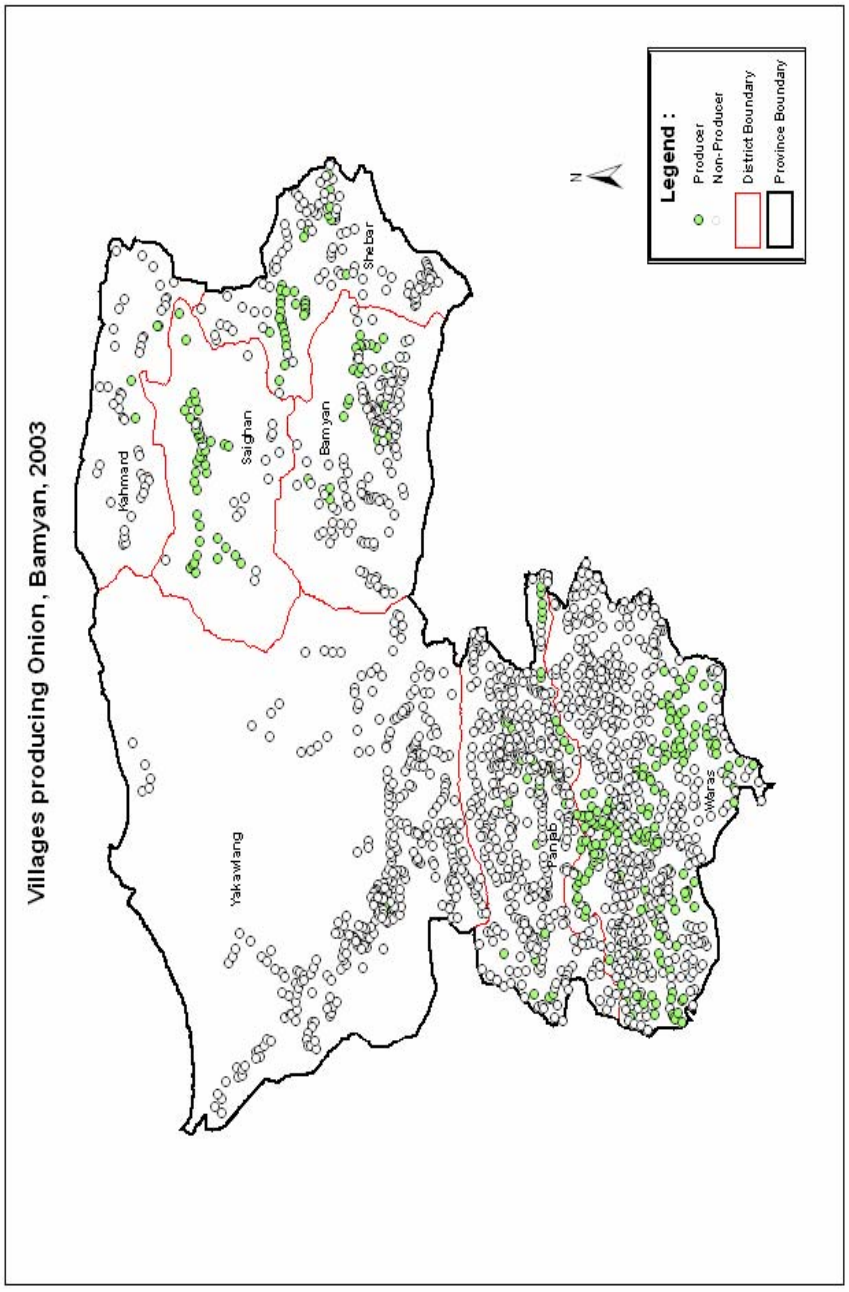
Annex 9


Villages producing Rice, Bamyan, 2003
Legend :
Producer
Non Producer
Province Boundary
District Boundary
N
Kahmard
Saighan
Shebar
Bamyan
Yakawlang
Panjab
Waras

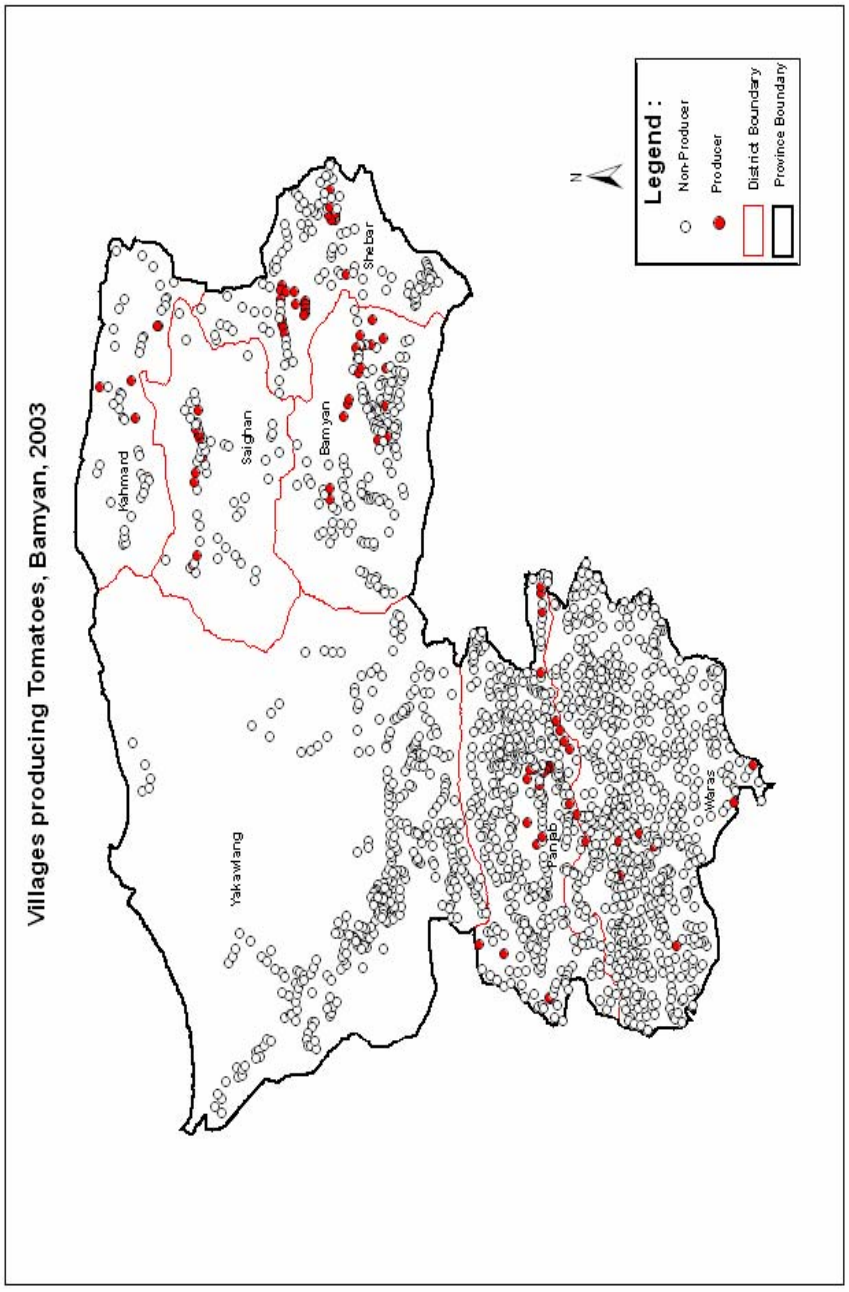
Annex 10


Villages producing Potato, Bamyan, 2003
Legend :
Producer
Non-Producer
District Boundary
Province Boundary
N
Kahmard
Saighan
Bamyan
Shebar
Yakawlang
Panjab
Waras

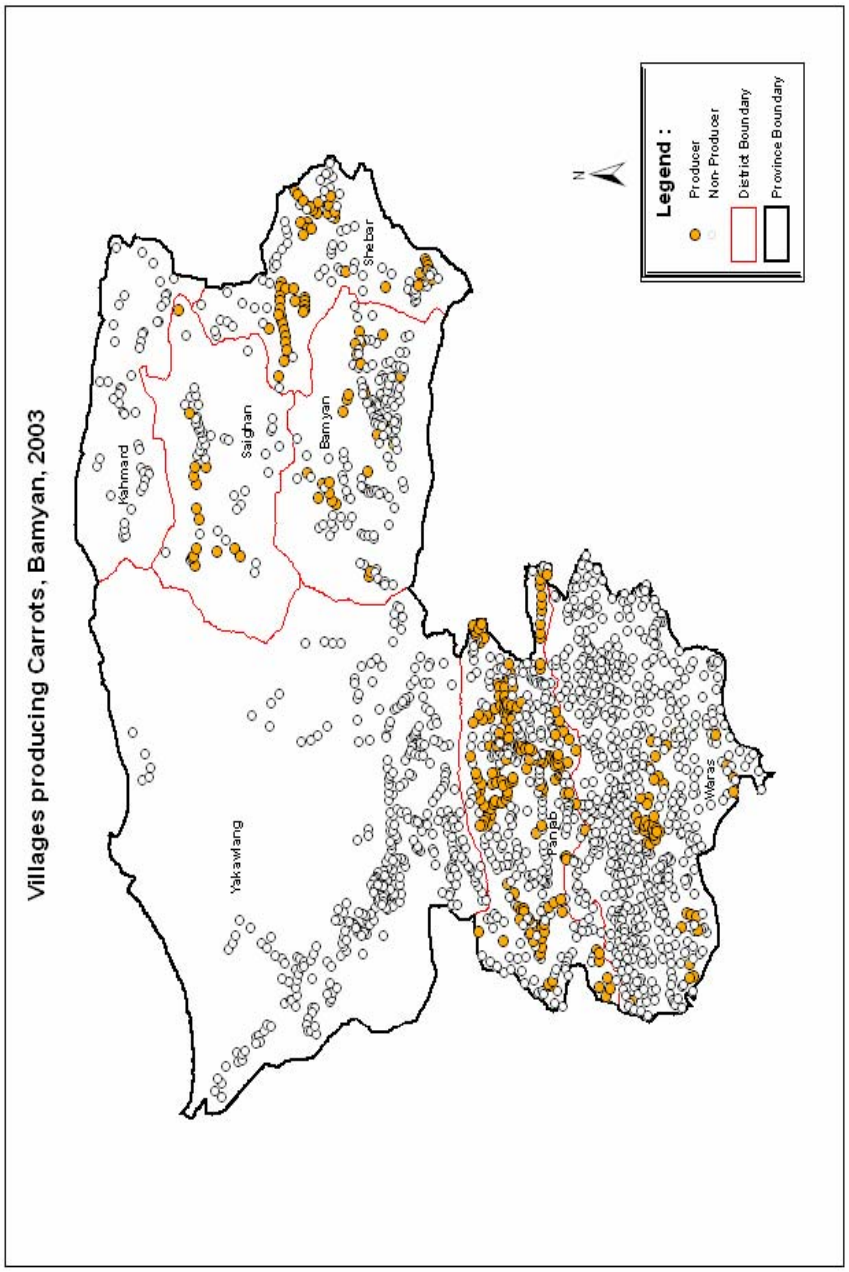
Annex 11


Villages producing Onion, Bamyan, 2003
Legend :
Producer
Non-Producer
District Boundary
Province Boundary
N
Shebar
Kahmard
Saighan
Bamyan
Yakawlang
Panjab
Waras

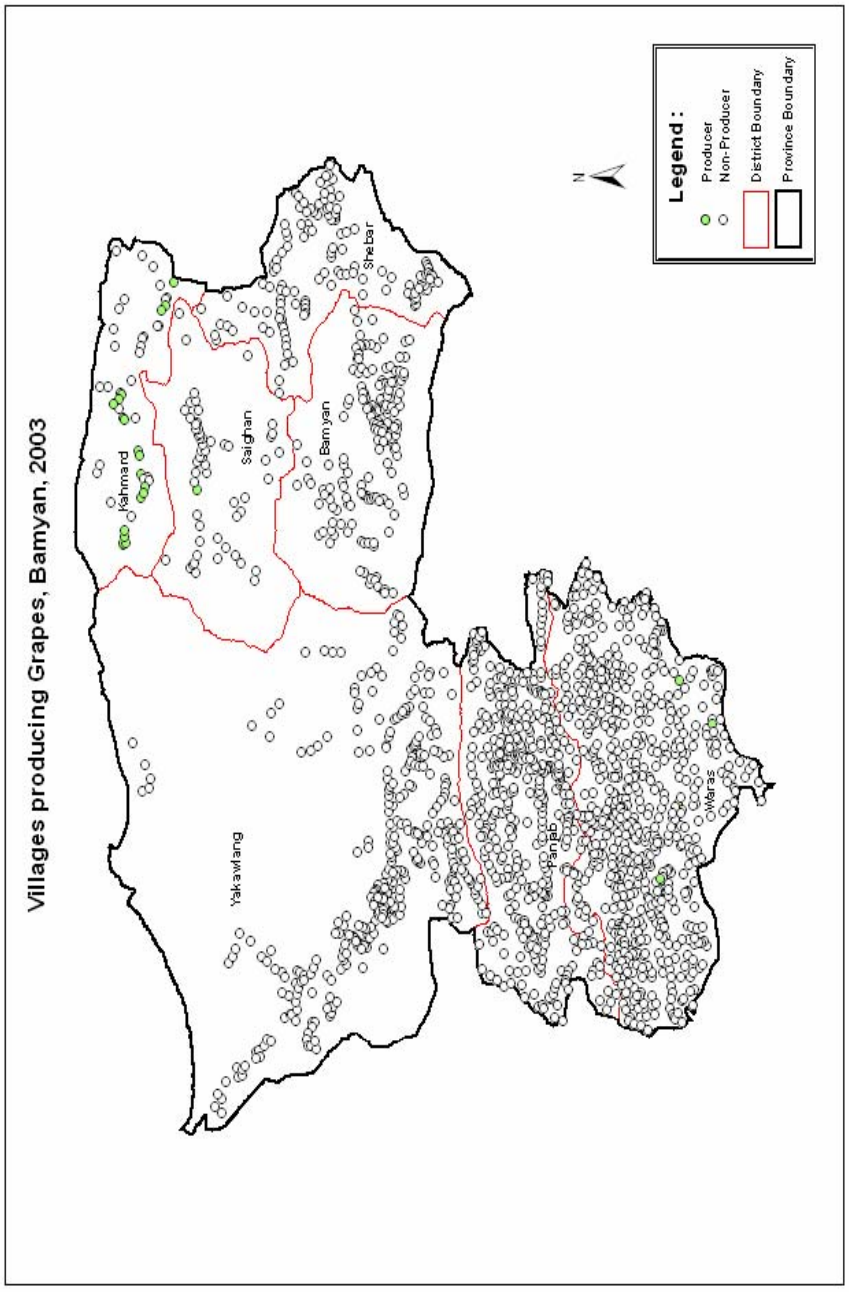
Annex 12


Villages producing Tomatoes, Bamyan, 2003
Legend :
Non-Producer
Producer
District Boundary
Province Boundary
N
Shebar
Kahmard
Saighan
Bamyan
Yakawlang
Panjab
Waras

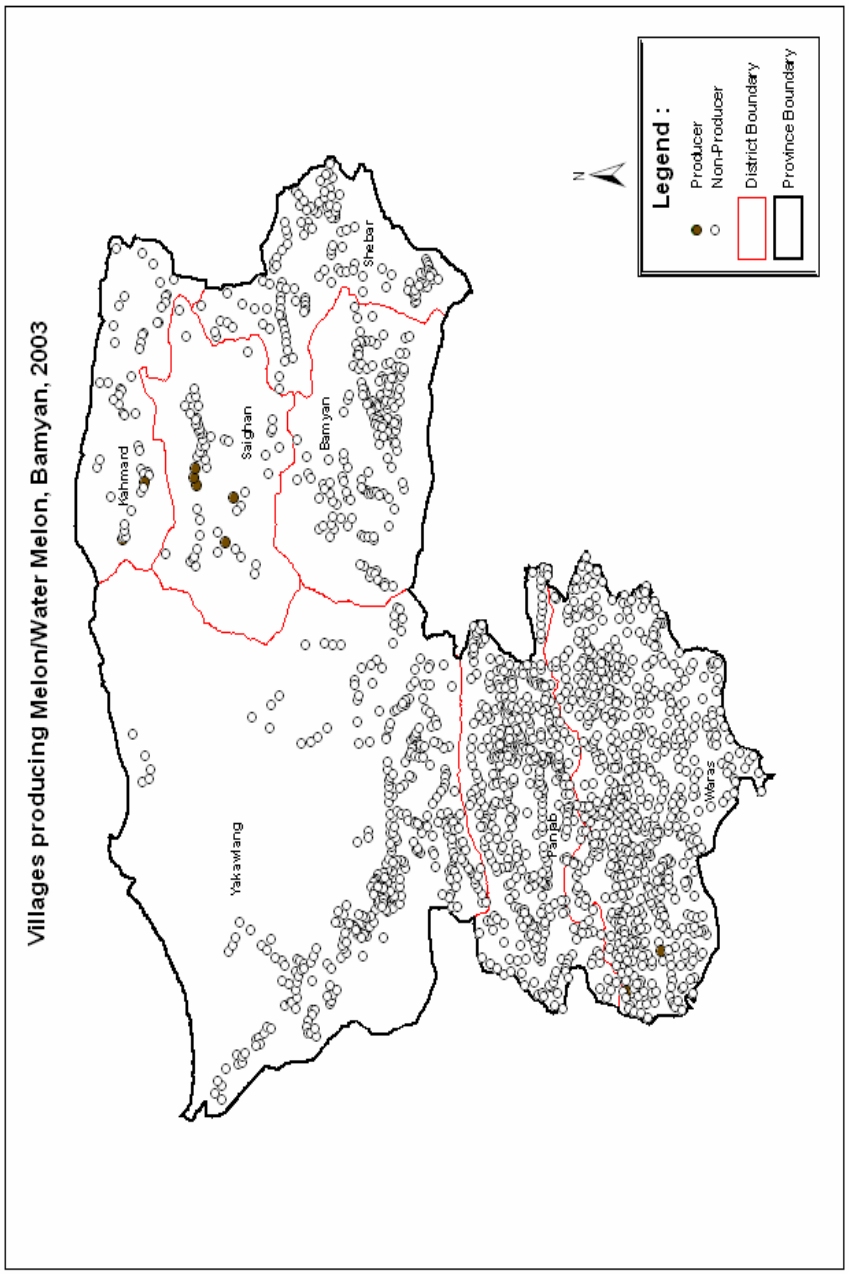
Annex 13


Villages producing Carrots, Bamyan, 2003
Legend :
Producer
Non-Producer
District Boundary
Province Boundary
N
Shaber
Kahmard
Saighan
Bamyan
Yakawlang
Panjab
Waras

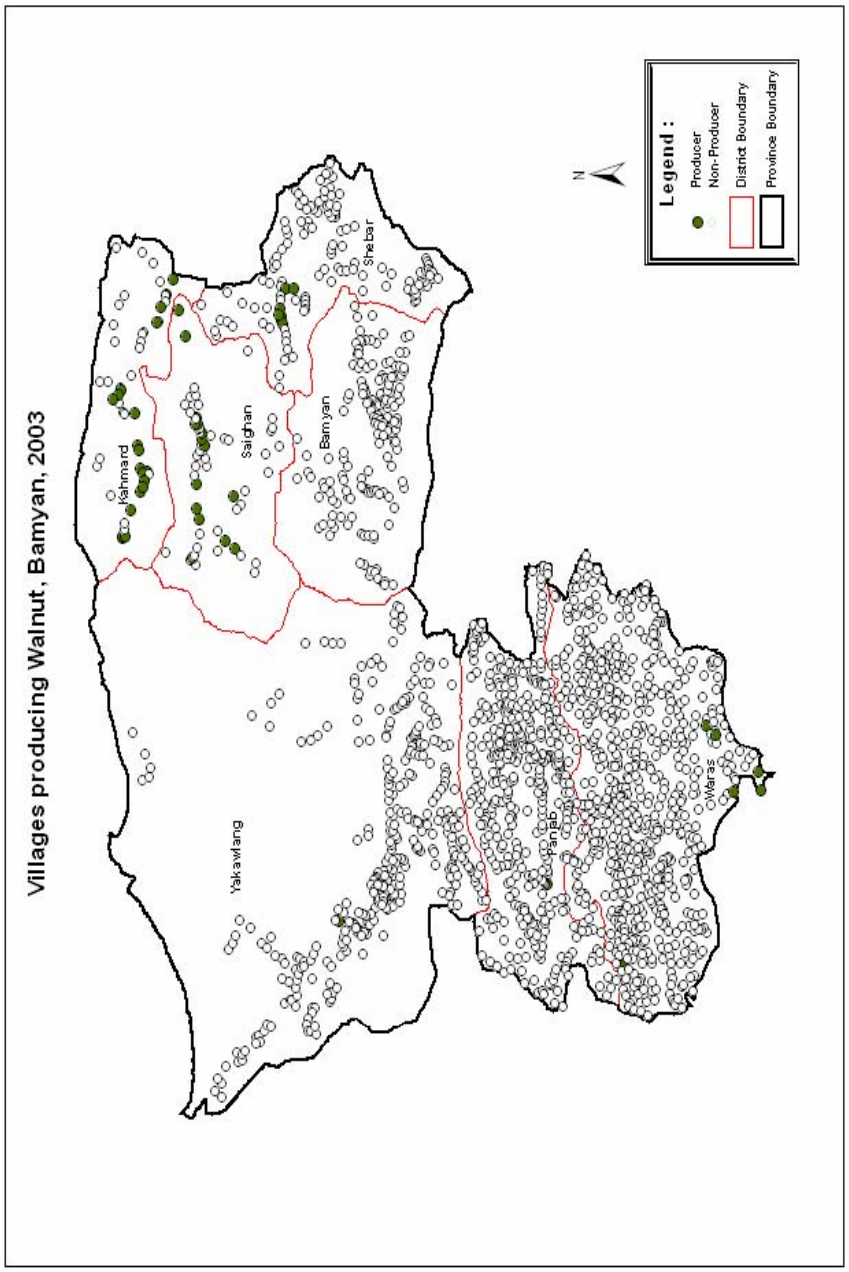
Annex 14


Villages producing Grapes, Bamyan, 2003
Legend :
Producer
Non-Producer
District Boundary
Province Boundary
N
Shebar
Kahmard
Saighan
Bamyan
Yakawlang
Panjab
Waras

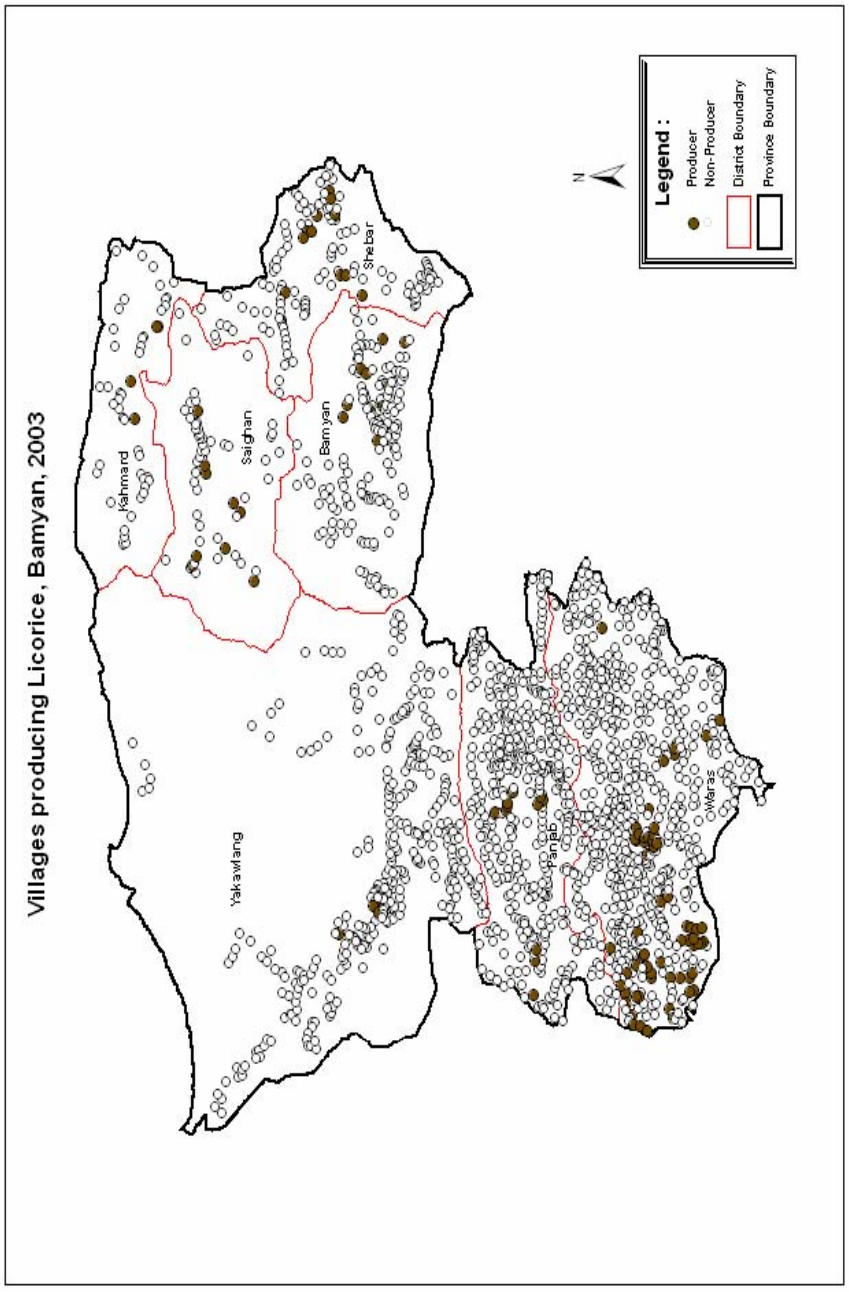
Annex 15


Villages producing Melon/Water Melon, Bamyan, 2003
Legend :
Producer
Non-Producer
District Boundary
Province Boundary
N
Shebar
Bamyan
Saighan
Kahmard
Yakawlang
Panjab
Waras

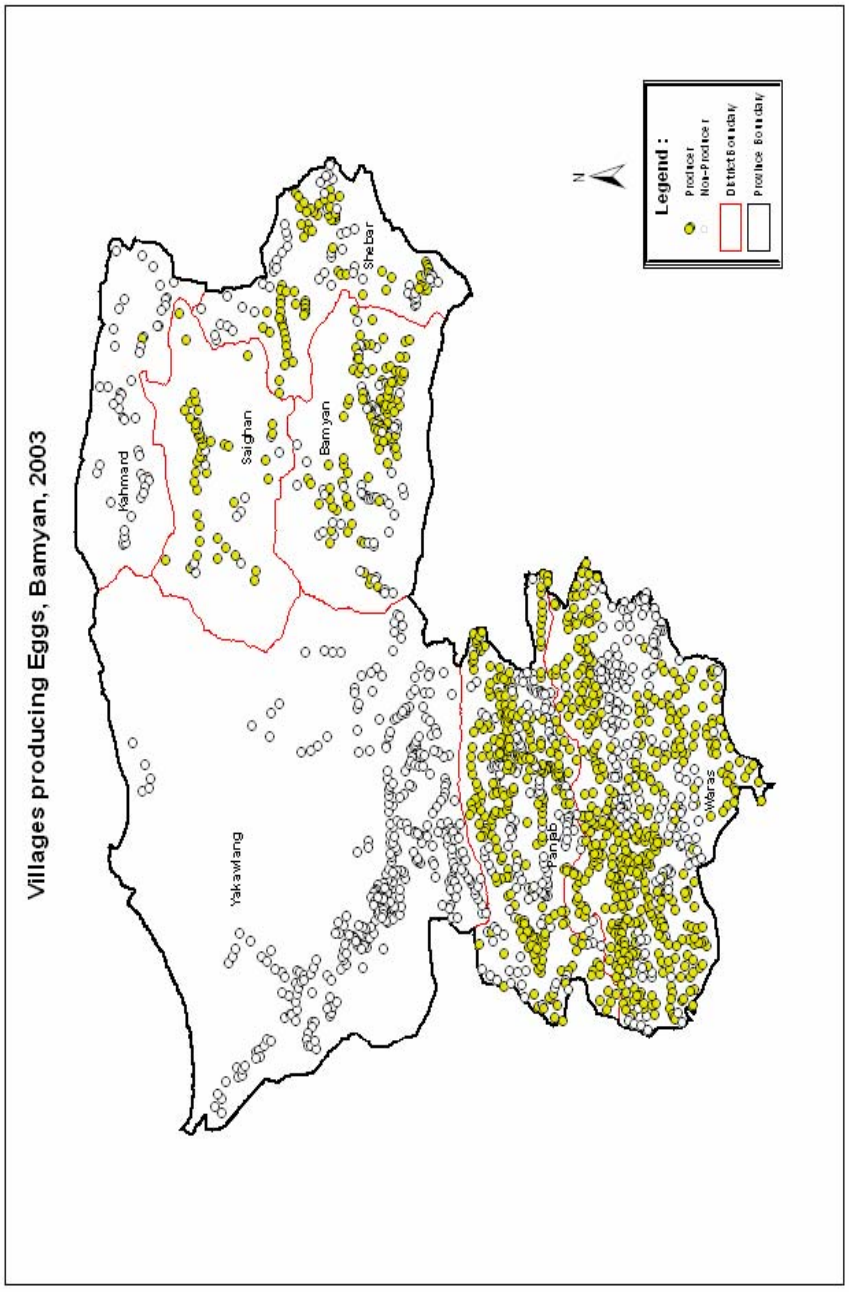
Annex 16


Villages producing Walnut, Bamyan, 2003
Legend :
Producer
Non-Producer
District Boundary
Province Boundary
N
Shaber
Kahmard
Saighan
Bamyan
Yakawlang
Panjab
Waras

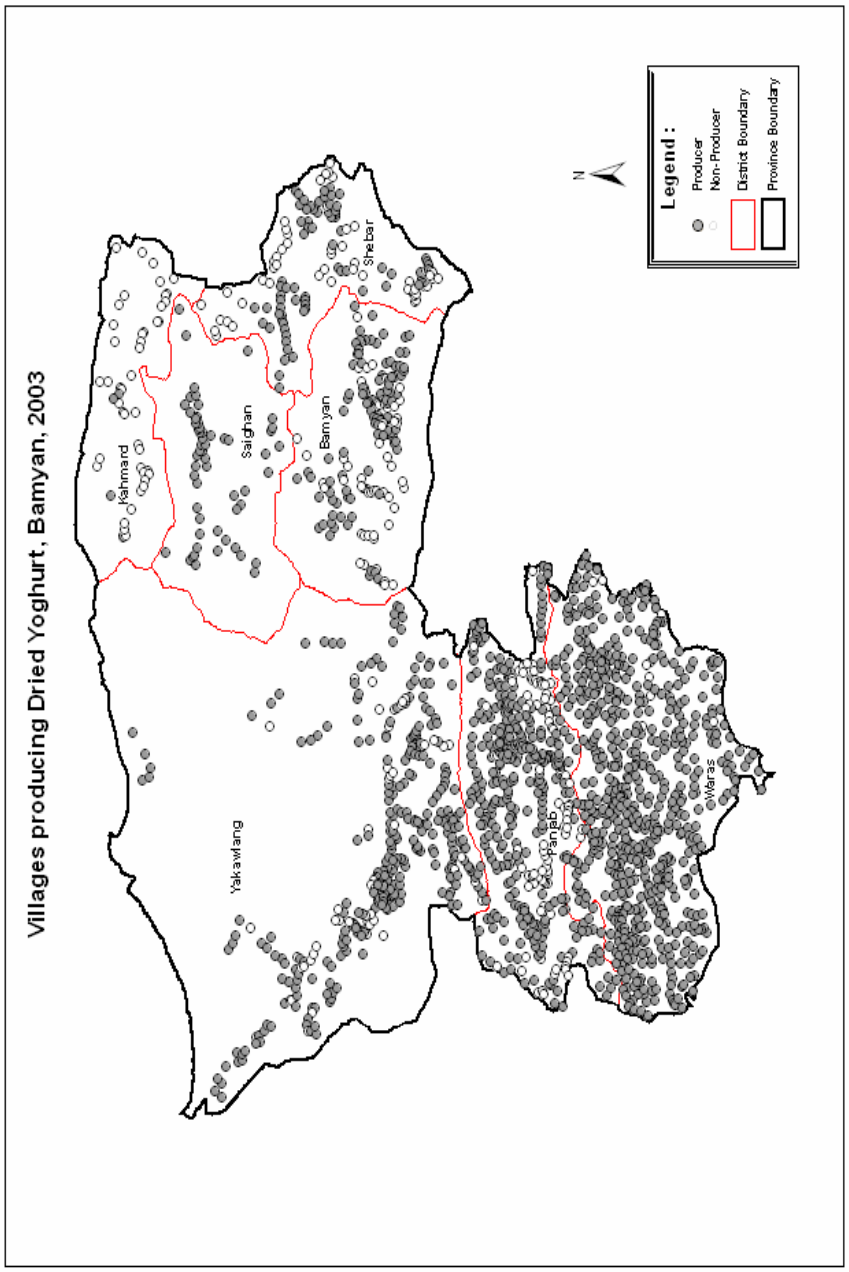
Annex 17


Villages producing Licorice, Bamyan, 2003
Legend :
Producer
Non-Producer
District Boundary
Province Boundary
N
Kahmard
Saighan
Bamyan
Shebar
Yakawlang
Panjab
Waras

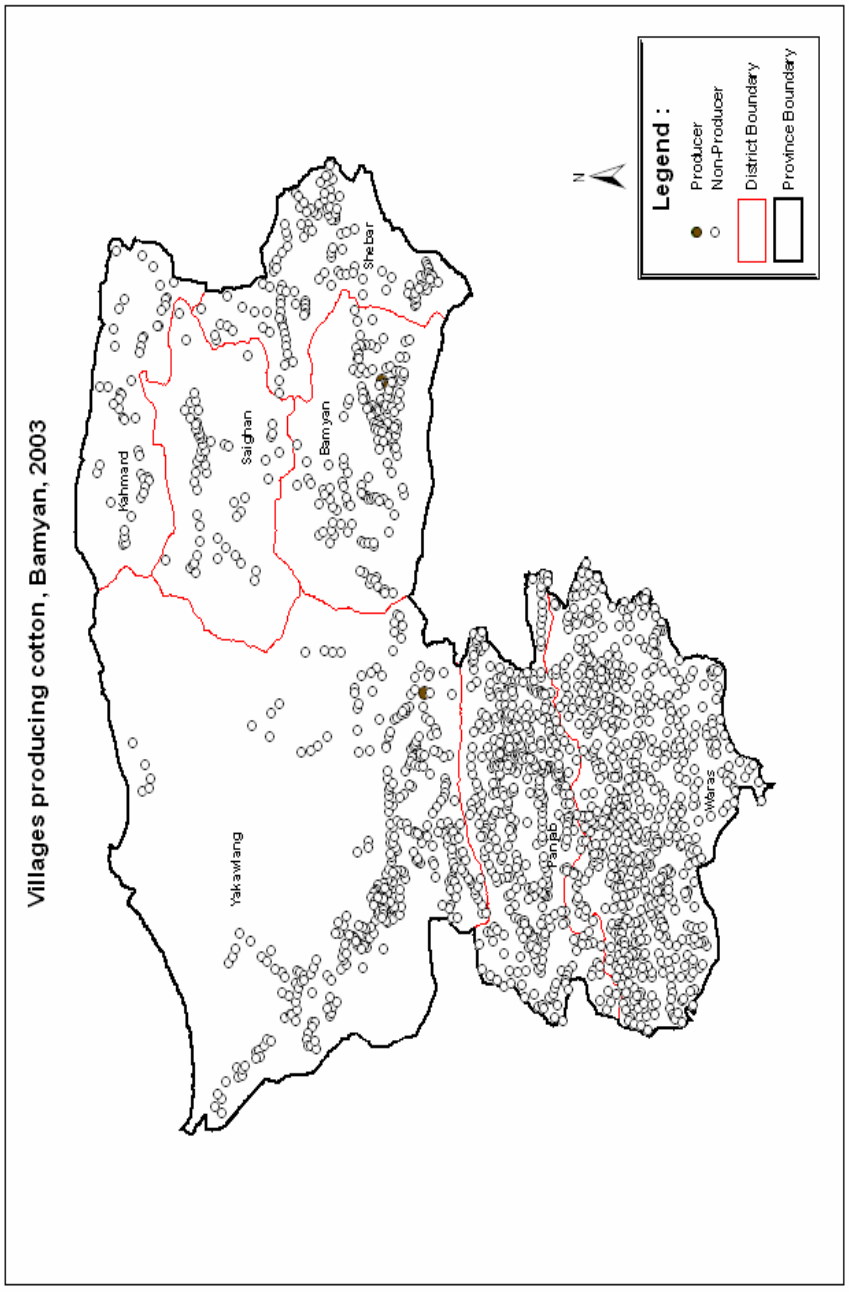
Annex 18


Villages producing Eggs, Bamyan, 2003
Legend :
Province
Non-Province
District Boundary
Province Boundary
N
Kahmard
Saighan
Bamyan
Shebar
Yakawlang
Panjab
Waras

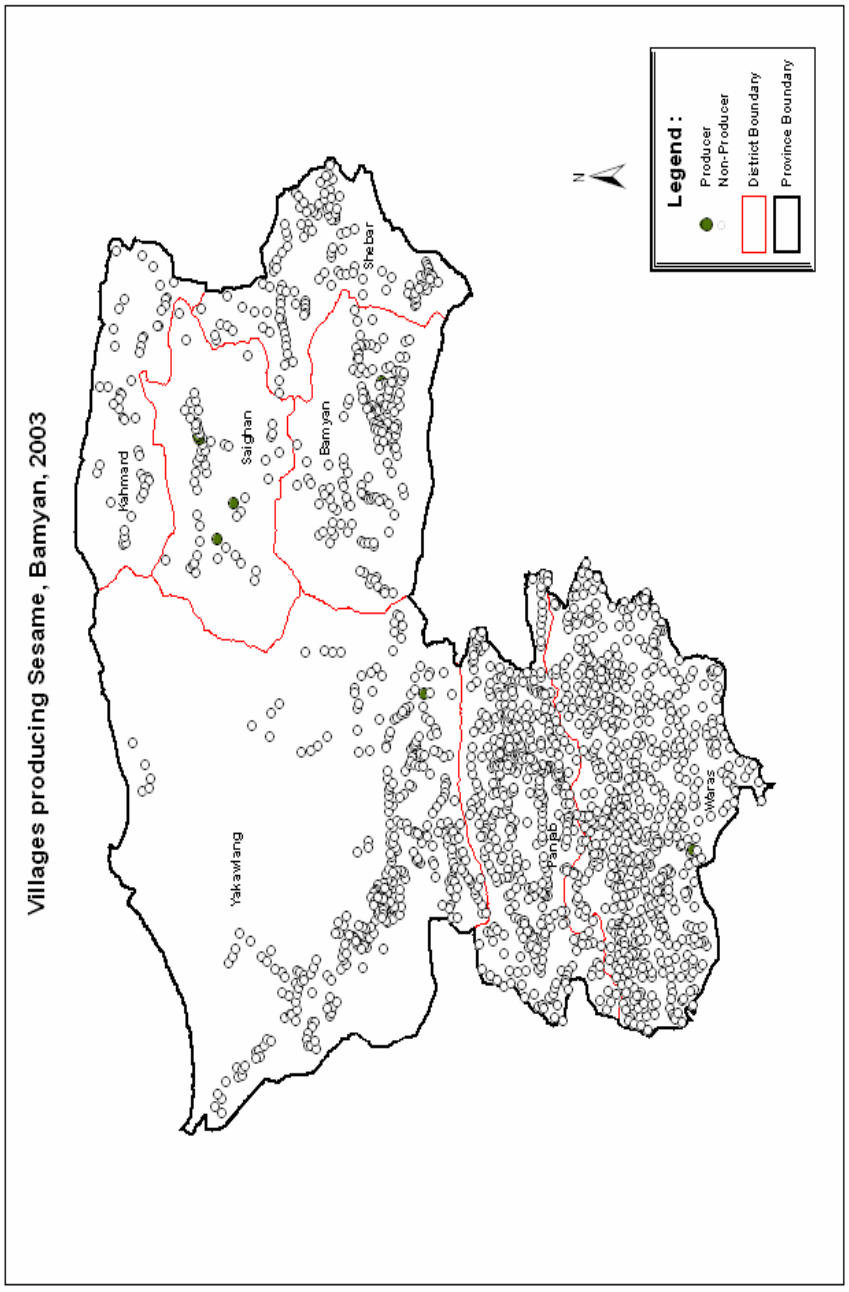
Annex 19


Villages producing Dried Yoghurt, Bamyan, 2003
Legend :
Producer
Non-Producer
District Boundary
Province Boundary
N
Shaber
Kahmard
Saighan
Bamyan
Yakawlang
Panjab
Waras

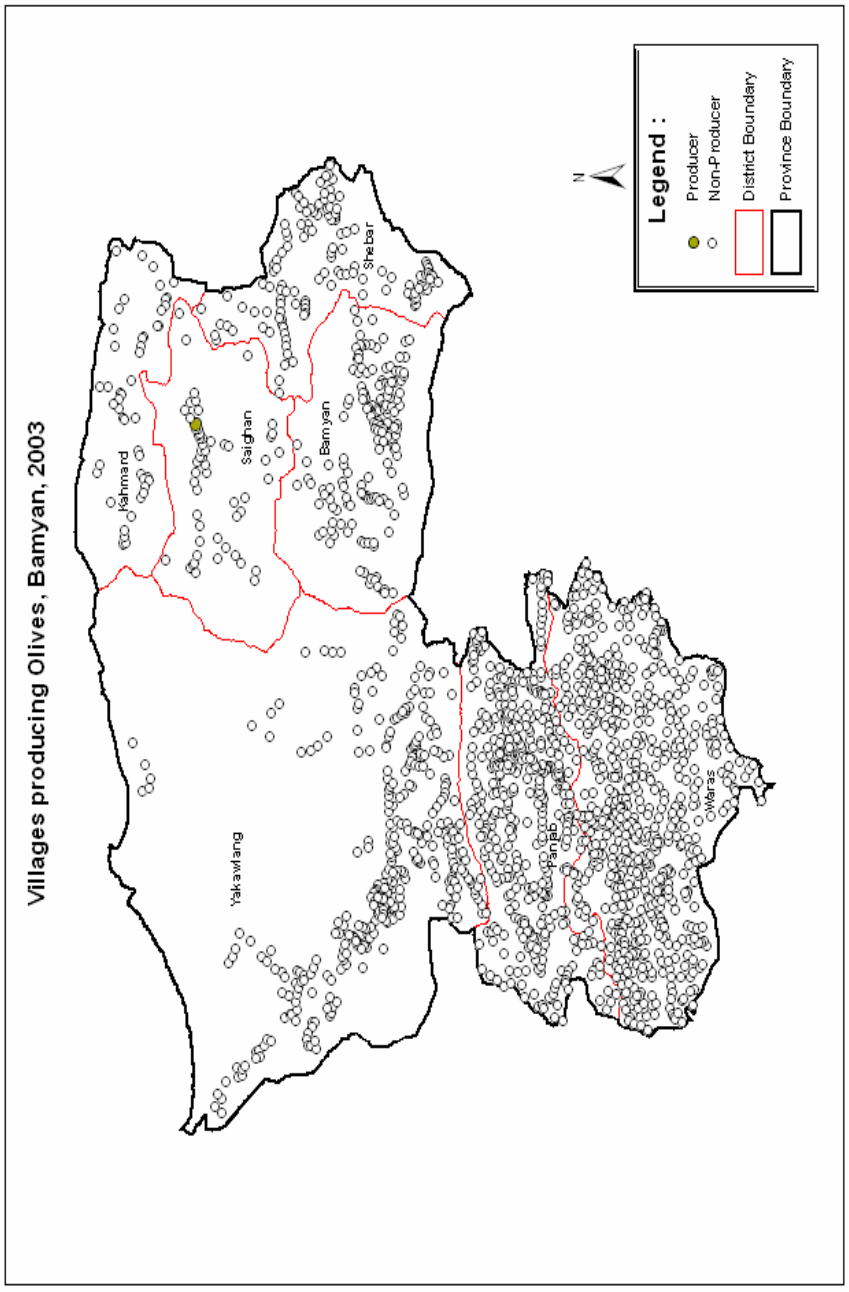
Annex 20


Villages producing cotton, Bamyan, 2003
Legend :
Producer
Non-Producer
District Boundary
Province Boundary
N
Shebar
Kahmard
Saighan
Bamyan
Yakawlang
Panjab
Waras

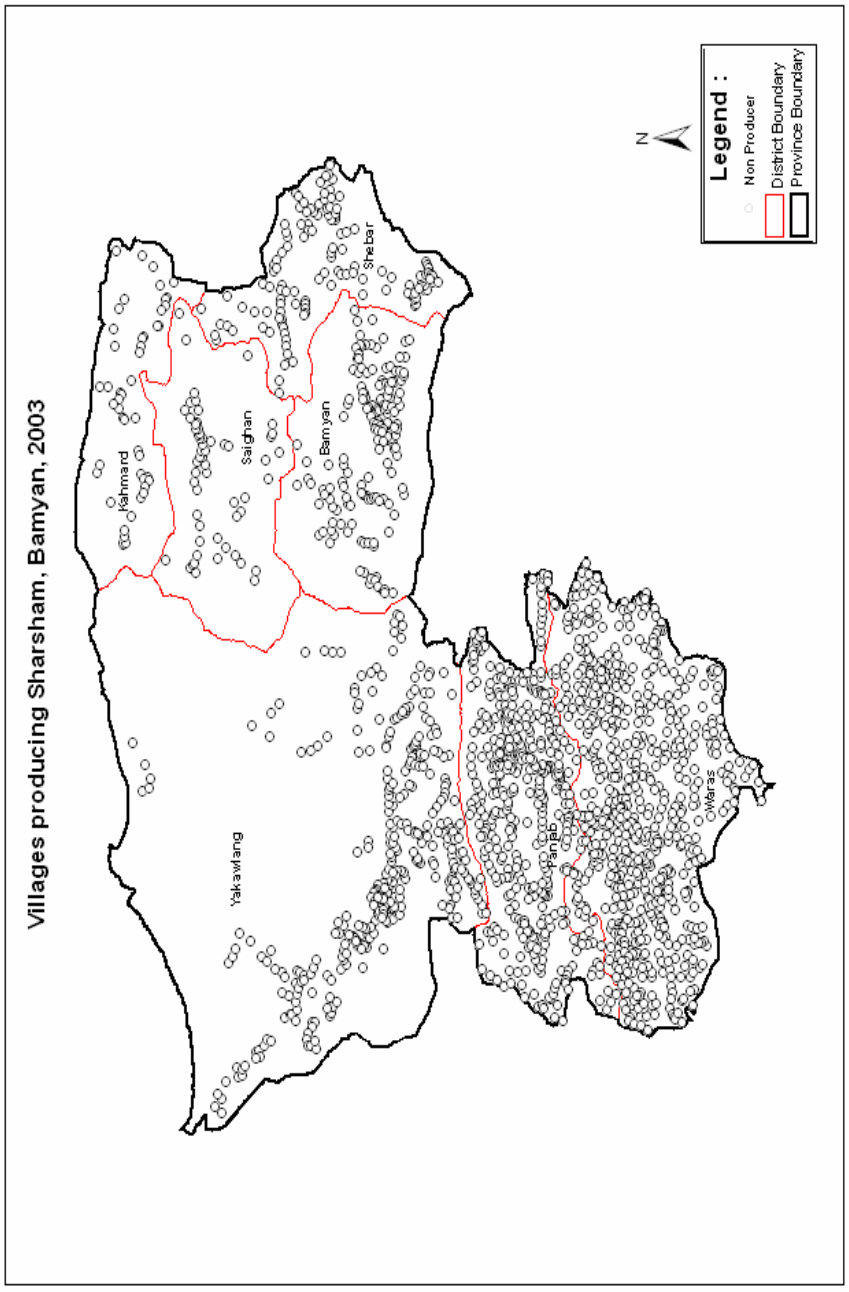
Annex 21


Villages producing Sesame, Bamyan, 2003
Legend :
Producer
Non-Producer
District Boundary
Province Boundary
N
Shebar
Kahmard
Saighan
Bamyan
Yakawlang
Panjab
Waras

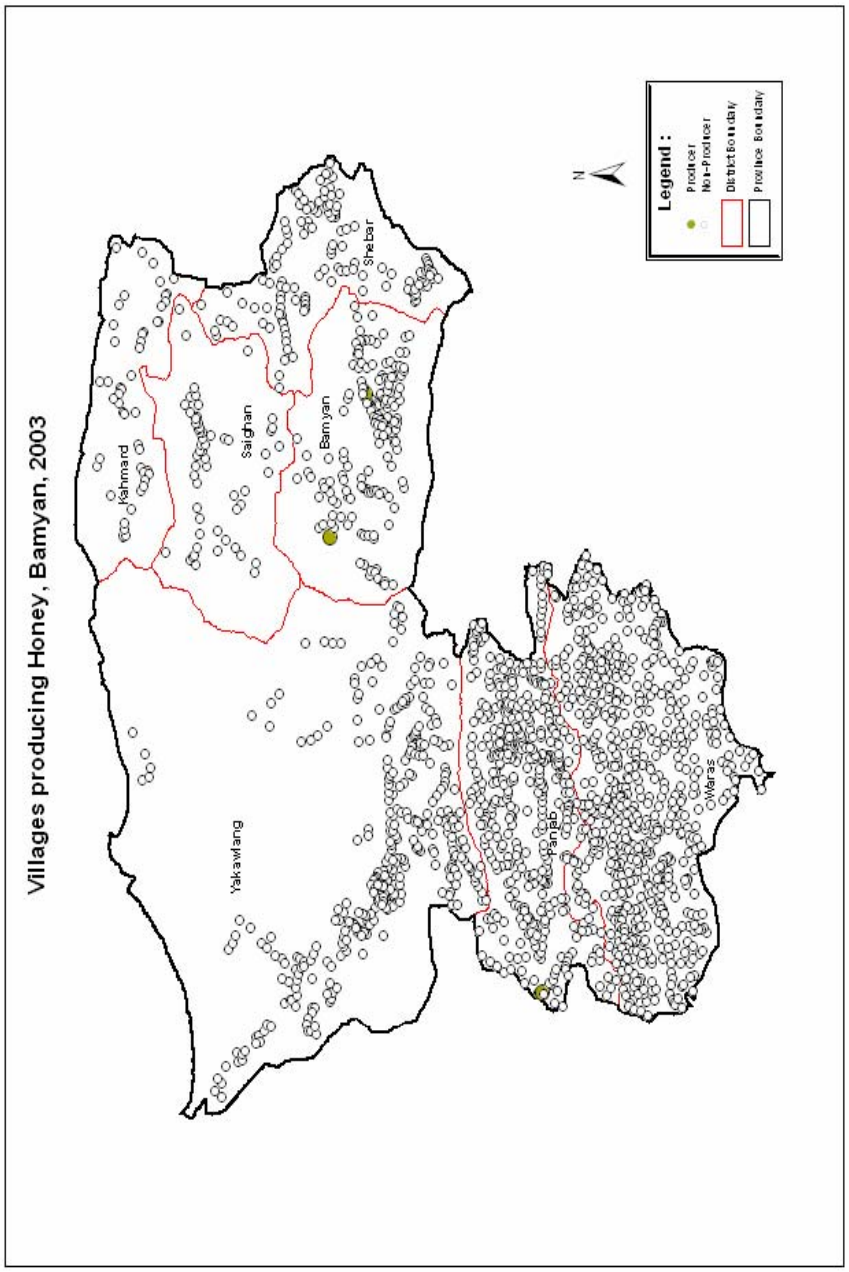
Annex 22


Villages producing Olives, Bamyan, 2003
Legend :
Producer
Non-Producer
District Boundary
Province Boundary
N
Kahmard
Saighan
Bamyan
Shebar
Yakawlang
Panjab
Waras

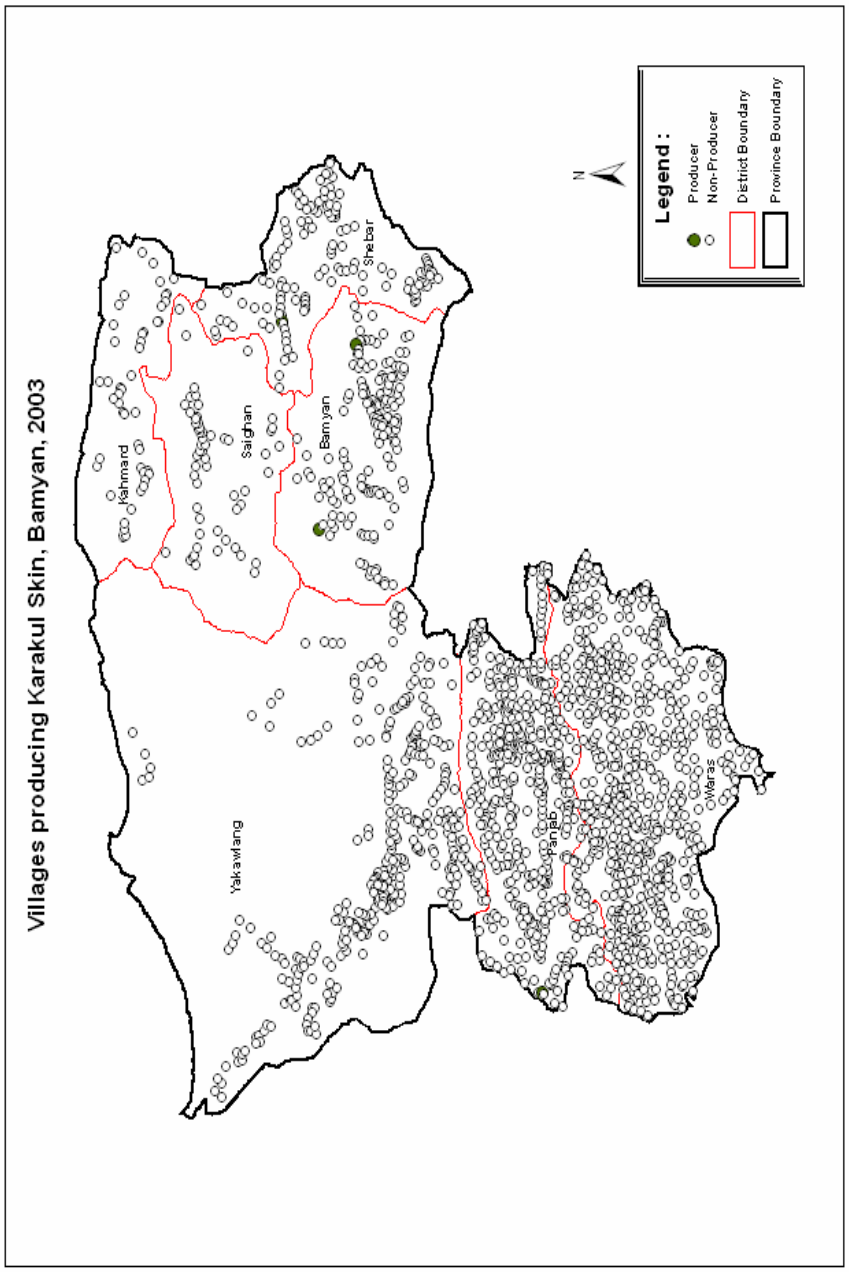
Annex 23


Villages producing Sharsham, Bamyan, 2003
Legend :
Non Producer
District Boundary
Province Boundary
N
Shebar
Kahmard
Saighan
Bamyan
Yakawlang
Panjab
Waras

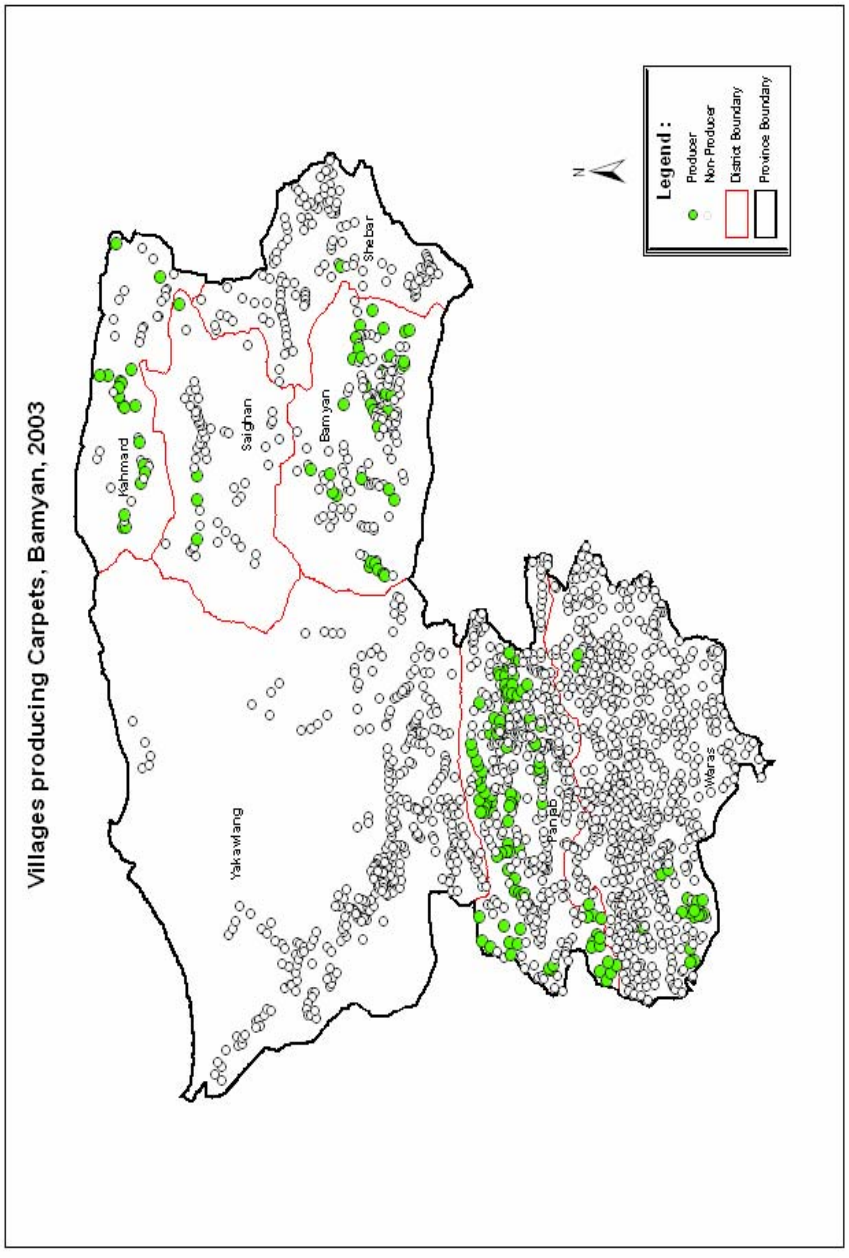
Annex 24


Villages producing Honey, Bamyan, 2003
Legend :
Producer
Non-Producer
District boundary
Province Boundary
N
Shaber
Kahmard
Saighan
Bamyan
Yakawlang
Panjab
Waras

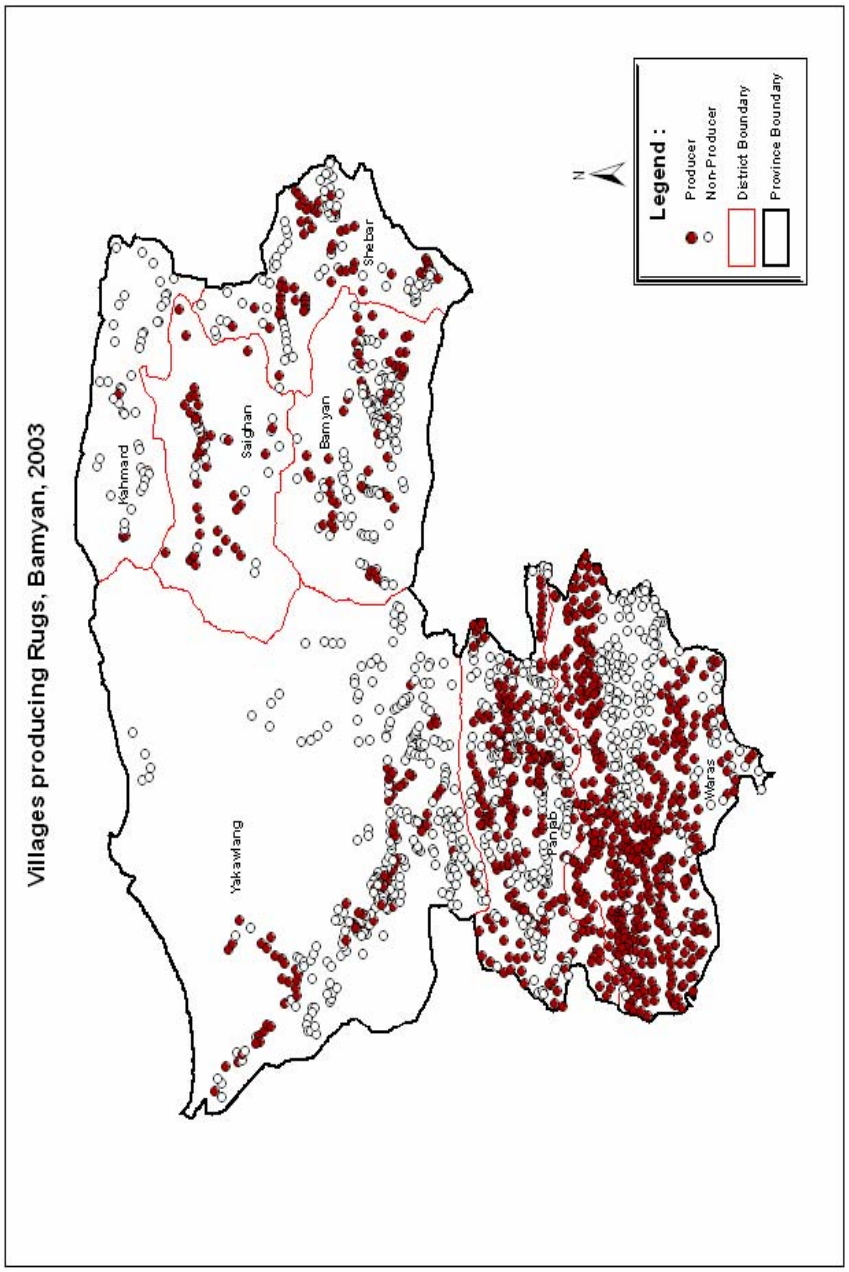
Annex 25


Villages producing Karakul Skin, Bamyan, 2003
Legend :
Producer
Non-Producer
District Boundary
Province Boundary
N
Shaber
Bamyan
Saighan
Kahmard
Yekawlang
Panjab
Waras

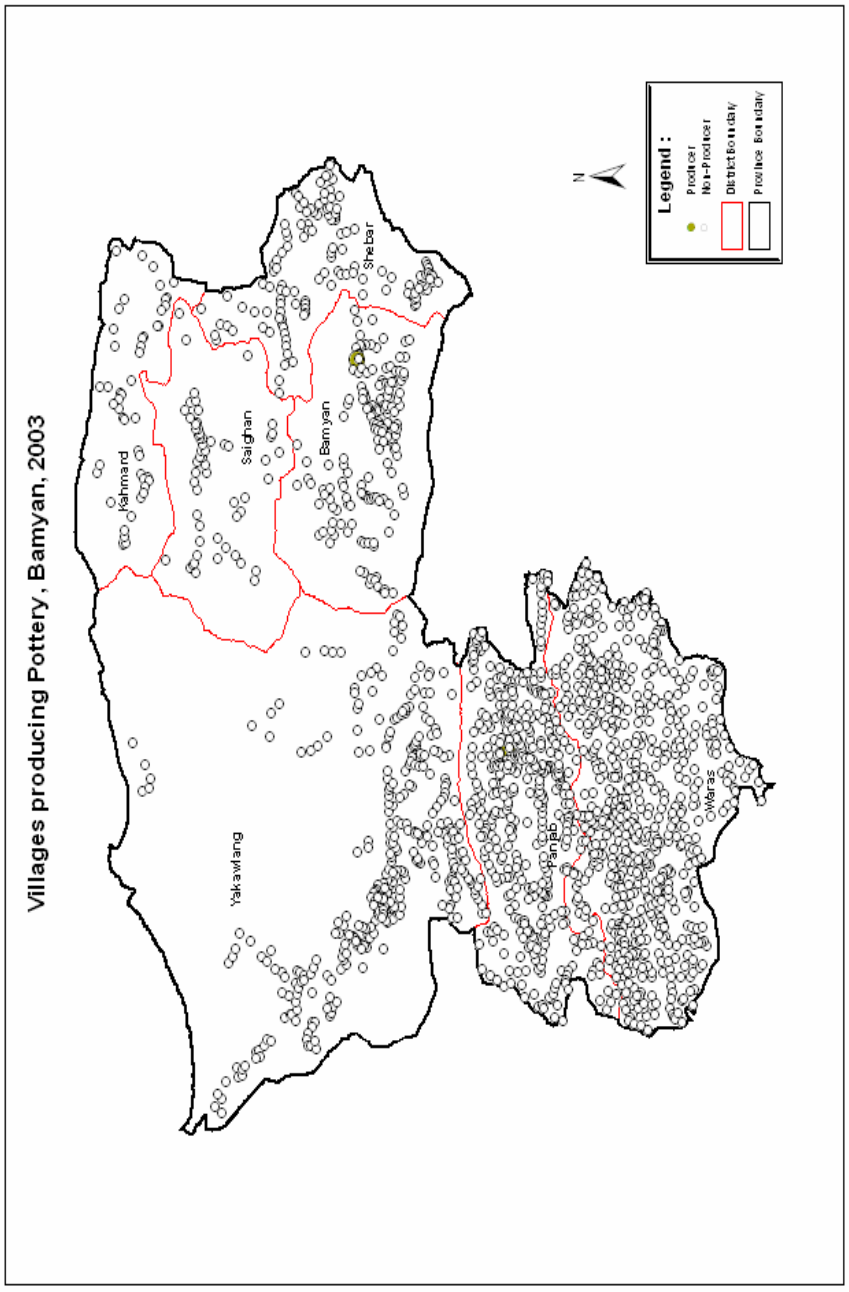
Annex 26


Villages producing Carpets, Bamyan, 2003
Legend :
Producer
Non-Producer
District Boundary
Province Boundary
N
Shebar
Kahmard
Saighan
Bamyan
Yakawlang
Panjab
Waras

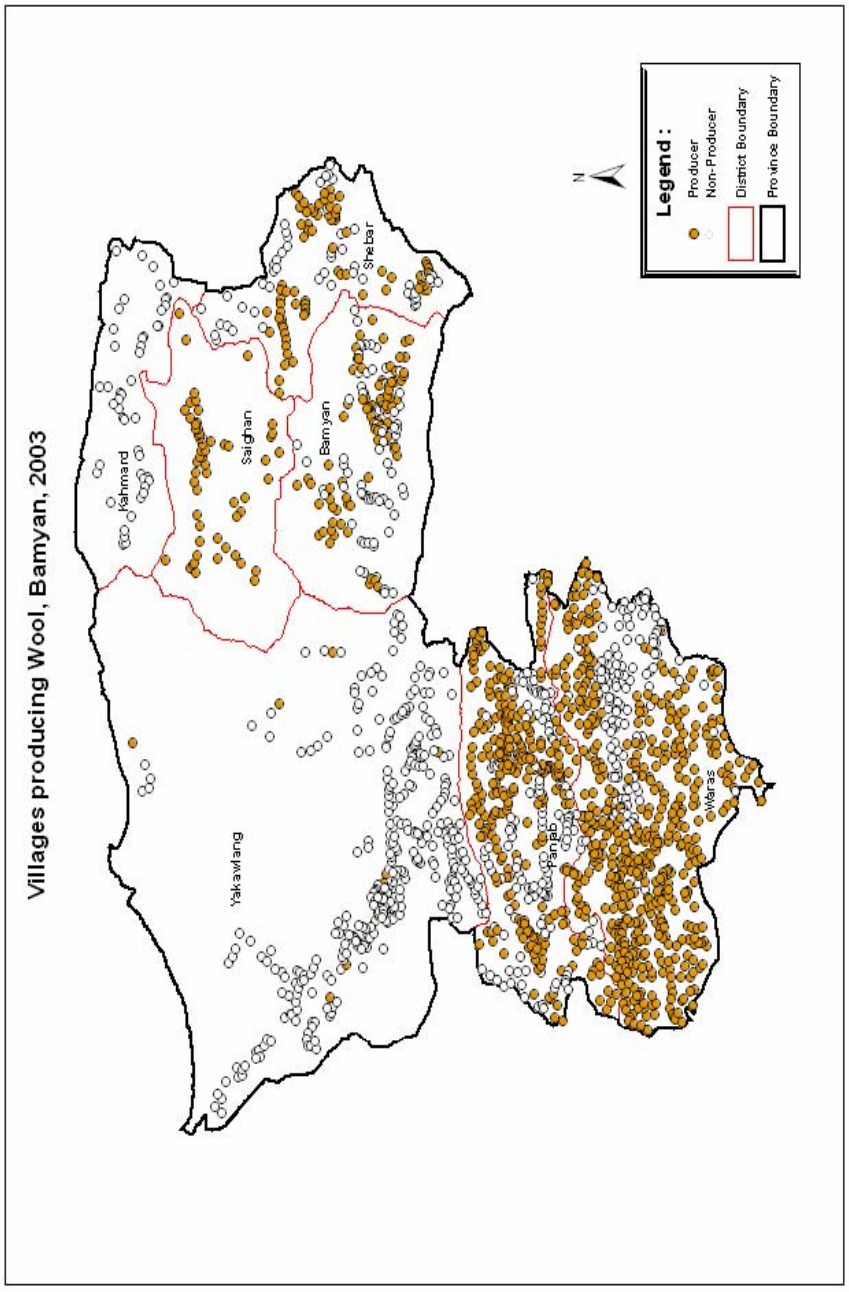
Annex 27


Villages producing Rugs, Bamyan, 2003
Legend :
Producer
Non-Producer
District Boundary
Province Boundary
N
Shebar
Kahmard
Saighan
Bamyan
Yakawlang
Panjab
Waras

Annex 28


Villages producing Pottery, Bamyan, 2003
Legend :
Province
Non-Province
District Boundary
Province Boundary
N
Kahmard
Saighan
Bamyan
Shebar
Yakawlang
Panjab
Waras

Annex 29


Villages producing Wool, Bamyan, 2003
Legend :
Producer
Non-Producer
District Boundary
Province Boundary
N
Kahmard
Saighan
Bamyan
Shebar
Yakawlang
Panjab
Waras