National Risk and Vulnerability Assessment 2007/8

A profile of Afghanistan
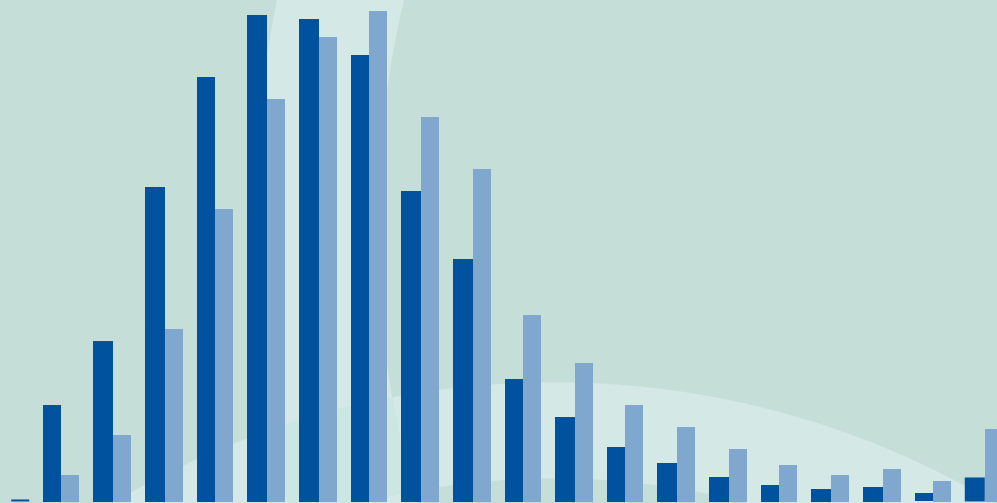
MAIN REPORT

European Union

Acknowledgement

Finally, a special word of thanks must be addressed to Mr. Christian Boese, former managing director of ASA-Institut, the company responsible for the TA component of the NRVA 2007/8 project who has been during most of the project the driving force behind it.

From this place, we as ASA wish to the Afghan nation all the best and hope that the results of this project will provide the government of Afghanistan the tools to adequately develop and evaluate policies that enhance the living conditions of the Afghan people in the coming years.

Kabul, October, 2009
Peter Pauli, Team leader NSS/NRVA 2007/8
on behalf of ICON INSTITUTE GmbH & Co. KG Consulting Group

Key indicators

A. MDG Indicators[1]

Goal 1: Eradicate extreme poverty and hunger

1.2	Poverty gap ratio		7.9
1.3	Share of poorest quintile in national consumption		9.1
1.5	Employment-to-population ratio; (male, female), both sexes	(79.8, 43.2)	61.9
1.7	Proportion of own-account and contributing family workers in total employment [2]; (male, female), both sexes	(67.3, 95.2)	76.9

Goal 2: Achieve universal primary education

2.1	Net enrolment ratio in primary education; (boys, girls), both sexes	(60.4, 42.1)	51.7
2.3	Literacy rate of 15-24 year-olds; (male, female), both sexes	(52.9, 23.9)	39.0

Goal 3: Promote gender equality and empower women

3.1	Ratios of girls to boys in primary, secondary and tertiary education		69.0, 48.8, 28.0
3.2	Share of women in wage employment in the non-agricultural sector		8.0
10	The ratio of literate women to men, 15–24 years old; (urban, rural, Kuchi), national	(70.9, 30.8, 39.1)	45.1

Goal 4: Reduce child mortality

4.1	Under-five mortality rate		161
4.2	Infant mortality rate		111
4.3	Proportion of 1 year-old children immunised against measles; (urban, rural, Kuchi), national	(73.1, 54.4, 23.9)	55.9

Goal 5: Improve maternal health

5.2	Proportion of births attended by skilled health personnel; (urban, rural, Kuchi), national	(69.3, 14.5, 8.0)	23.9
5.3	Contraceptive prevalence rate (modern and traditional methods)		22.8
5.4	Adolescent birth rate		122
5.5	Antenatal care coverage (at least one visit); (urban, rural, Kuchi), national	(71.0, 29.9, 17.5)	36.5
	Total Fertility Rate; (urban, rural, Kuchi), national	(5.25, 6.49, 7.28)	6.27

Goal 7: Ensure environmental sustainability

29	Proportion of population using solid fuels; (urban, rural, Kuchi), national	(32.0, 95.7, 98.5)	83.2
7.8	Proportion of population using an improved drinking water source;(urban, rural, Kuchi), national	(58.1, 19.8, 15.7)	27.2
7.9	Proportion of population using an improved sanitation facility; (urban, rural, Kuchi), national	(20.8, 1.3, 0.0)	5.1
7.10	Proportion of urban population living in slums		92.8
32	Proportion of households with secure tenure		56.2

Goal 8: Develop a global partnership for development

8.14	Telephone lines per 100 population; (urban, rural, Kuchi), national	(0.5, 0.0, 0.0)	0.1
8.15	Cellular subscribers per 100 population; (urban, rural, Kuchi), national	(16.5, 3.3, 2.4)	5.8
8.16	Internet users per 100 population; (urban, rural, Kuchi), national	(1.1, 0.1, 0.0)	0.3

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[1] The Millennium Development Goals and targets come from the Millennium Declaration, signed by 189 countries, including 147 heads of State and Government, in September 2000 and from further agreement by member states at the 2005 World Summit (Resolution adopted by the General Assembly - A/RES/60/1).

[2] The figure would be 99 percent if day labourers are included in addition to own-account and contributing family workers. These would qualify for the purpose of the indicator to identify vulnerable employment.

B. Other Indicators

Demography

Percentage of population under 15; (urban, rural, Kuchi), national	(43.7, 49.7, 51.1)	48.6
Sex ratio; (urban, rural, Kuchi), national	(102, 105, 109)	105
Total Fertility Rate; (urban, rural, Kuchi), national	(5.25 , 6.49, 7.28, 6.27)	6.27
Dependency ratio; (urban, rural, Kuchi), national	(96, 118, 126)	113
Mean age at first marriage, women		17.9

Labour force

Labour force participation rate (male, female), both sexes	(85.7, 46.7)	66.6
Unemployment rate (male, female), both sexes	(6.9, 7.4)	7.1
Percentage of children performing child labour (boys, girls), both sexes	(16.9, 9.1)	13.2

Agriculture

Proportion of households with access to land; (urban, rural, Kuchi), national	(10.0, 69.2, 19.2)	54.6
Proportion of households with access to irrigated land; (urban, rural, Kuchi), national	(4.4, 52.1, 12.2)	40.4
Proportion of households with access to rain-fed land; (urban, rural, Kuchi), national	(1.9, 21.9, 7.8)	17.2
Proportion of households with garden plot; (urban, rural, Kuchi), national	(2.8, 13.5, 3.5)	10.8
Proportion of households with livestock; (urban, rural, Kuchi), national	(17.8, 79.1, 94.2)	67.8
Proportion of households with major livestock; (urban, rural, Kuchi), national	(47.8, 93.8, 98.9)	91.8
Proportion of households with poultry; (urban, rural, Kuchi), national	(77.9, 77.2, 60.1)	75.9

Poverty and equality

Poverty headcount rate; (urban, rural, Kuchi), national	(29.1, 36.4, 54.3)	36.0
Gini Index		29
National average poverty line (in Afs. per person per month)		1,255

Education

Literacy rate, population aged 15 years and over; (male, female), both sexes	(39.3, 12.5)	26.2
Net secondary enrolment ratio; (boys, girls), both sexes	(21.5, 10.3)	16.2

Health

Proportion of population within one hour walking distance from a public health facility; (urban, rural, Kuchi), national	(78.5, 53.8, 37.1)	57.4
Proportion of children aged 12-23 months with full immunization; (urban, rural, Kuchi), national	(62.8, 33.3, 13.0)	37.2
Contraceptive prevalence rate (modern methods only); (urban, rural, Kuchi), national	(28.3, 13.0, 4.8)	15.2
Disability prevalence; (male, female), both sexes	(1.9, 1.4)	1.6

Infrastructure

Proportion of population with access to any source of electricity; (urban, rural, Kuchi), national	(89.9, 32.5, 5.7)	42.4
Proportion of households within 2 km. distance from drivable road; (urban, rural, Kuchi), national	(93.9, 65.7, 60.9)	70.7

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Abbreviations

ADB	-	Asian Development Bank
ANDS	-	Afghanistan National Development Strategy
AHS	-	Afghan Health Survey
ANC	-	Antenatal Care
BCG	-	Bacillus Calmette-Guérin (Tuberculosis)
BPHS	-	Basic Package of Health Services
CBN	-	Cost of Basic Needs
CDC	-	Community Development Council
CEB	-	Children Ever Born
CEDAW	-	UN Convention on the Elimination of Discrimination against Women
CHW	-	Community Health Workers
CPI	-	Consumer Price Index
CPR	-	Contraceptive Prevalence Rate
CSO	-	Central Statistics Organization
DAP	-	Di-Ammonium Phosphate (fertilizer)
DFID	-	UK Department for International Development
DHS	-	Demographic and Health Survey
DPS	-	District Price Survey
DTP	-	Diphtheria, Pertussis Tetanus
EC	-	European Commission
EPI	-	Expanded Program on Immunization
FEI	-	Food Energy Intake
FAO	-	Food and Agriculture Organization
FP	-	Family Planning
GDP	-	Gross Domestic Product
GoA	-	Government of Afghanistan
HCI	-	Head Count Index
ICF	-	International Classification of Functioning, Disability and Health
IEC	-	Information, Education and Communication
ILO	-	International Labour Organization
IMR	-	Infant Mortality Rate
ICSE	-	International Classification of Status in Employment
LFPR	-	Labour Force Participation Rate
LFS	-	Labour Force Survey
LAD	-	Least Absolute Deviations
MAIL	-	Ministry of Agriculture, Irrigation and Livestock
MDGs	-	Millennium Development Goals
MICS	-	Multiple Indicator Cluster Survey
MMR	-	Maternal Mortality Rate
MoWA	-	Ministry of Women's Affairs
MRRD	-	Ministry of Rural Rehabilitation and Development
NAPWA	-	National Action Plan for the Women of Afghanistan
NDSA	-	National Disability Survey in Afghanistan
NMAK	-	National Multi-sectoral Assessment on Kuchi
NRVA	-	National Risk and Vulnerability Assessment
NSP	-	National Solidarity Programme
NSS	-	National Surveillance System
OLS	-	Ordinary Least Squares
OPV	-	Oral Polio Vaccine
PCE	-	Per Capita Expenditure
PRSP	-	Poverty Reduction Strategy Paper
PSU	-	Primary Sampling Unit
SBA	-	Skilled Birth Attendance
SNA	-	System of National Accounts
TB	-	Tuberculosis

TBA	-	Traditional Birth Attendant
TFR	-	Total Fertility Rate
TT	-	Tetanus Toxoid
U5MR	-	Under-five Mortality Rate
UNAMA	-	United Nations Assistance Mission in Afghanistan
UNFPA	-	United Nations Fund for Population Activities
UNICEF	-	United Nations Children's Fund
UXO	-	Unexploded Ordonances
VAU	-	Vulnerability Analysis Unit, MRRD
WB	-	World Bank
WFP	-	World Food Programme
WHO	-	World Health Organization

Executive Summary

The National Risk and Vulnerability Assessment 2007/8 is a nationally representative multi-purpose survey. The main objectives of the survey are to provide up-to-date information for assessing the situation of the people of Afghanistan and to furnish data needed for monitoring progress toward development goals. Results pertain to the period August 2007 to August 2008.

Population structure
- Afghanistan has an exceptionally high share of children under 15 – 49 percent – and a very small proportion of elderly aged 65 and over – 3 percent. The overall dependency ratio is 133.
- The country's sex ratio is 105 males per 100 females.

Demographic indicators
- The Total Fertility Rate is estimated at 6.3 over the three years preceding the survey. Fertility is lowest in the urban population (5.3) and very high among Kuchis (7.3), with the rural population in between (6.5). The finding that the present TFR is nearly one live birth below the fertility level experienced by women aged 40-49 suggests a modest fertility decline.
- NRVA data indicate that the infant mortality rate was 111 per 1,000 live births and the under-five mortality rate was 161 per 1,000 live births around 2004. Comparison with earlier estimates of mortality suggests that infant mortality is declining.

Household structure
- The average household size is 7.3 persons per household, with on average 3.5 children residing in the household. Close to one-third of all Afghans live in households with 10 or more people and less than three percent do so in households with three or fewer people.
- Only 2 percent of households – around 70 thousand – are female-headed. Around 11 percent of households (380 thousand) are headed by either heads aged 65 and over or under-20.

Marriage patterns
- Marriage is almost universal in Afghanistan: less than one percent of the population of 35 and over remained unmarried.
- The mean age at first marriage of women is 17.9 years. Nine percent of women aged 20-49 were married before reaching age 15. This proportion has declined to three percent for those currently aged 15-19.
- Afghanistan has 526 thousand widows and 135 thousand widowers. The large age difference between spouses, especially in the older cohorts, is an important contributing factor to the overrepresentation of women among the widowed.

Migration
- Thirteen percent of households has members who were living elsewhere sometime during the five years preceding the survey. Fifty-four percent of these migrants migrated within Afghanistan. Of the remaining international migrants, the largest share had returned from Iran.
- The percentage of households who saw a household member leave during the past year is 7 percent. Here, the large majority consists of international migrants, with Iran as the main country of destination. Out-migration is under-estimated to the extent that complete households have moved away, which probably more affects internal out-migration than emigration.

Labour force
- The labour force participation rate of the population aged 16 and over is 67 percent, but reveals a large difference between men (86 percent) and women (47 percent). The share of the currently active population is highest among Kuchis – 78 percent for both sexes combined – and lowest for the urban population – 49 percent. Labour force participation among the rural population takes an intermediate position: 71 percent.
- The employment-to-population ratio also shows a large gender difference: 80 percent for males and 43 percent for females, with an overall ratio of 62 percent.

- The overwhelming majority of 93 percent of the labour force is employed for at least one hour a week. The corresponding unemployment rate is a modest 7 percent. These figures should be interpreted in the sense that in the dire economic conditions of Afghanistan, very few can afford not to work, even if it is in unproductive work and for few hours per week. In addition to the 7 percent who cannot even find one hour work, many who are employed find only few hours work and/or can insufficiently provide income.
- Pockets of high unemployment are found among youth under 25 (12 percent) and educated women (18 percent).
- Most employed people (77 percent) have insecure jobs as own-account workers or unpaid family workers. Almost all women and Kuchi (95 and 90 percent, respectively) are in vulnerable employment.
- In the situation of Afghanistan the concept of unemployment is inadequate to assess the degree to which the labour market is able to provide sufficient and adequate employment. Measures of underemployment will provide information that is much more relevant to assess the situation and to develop employment policies.
- Agriculture and livestock represent the dominant economic sector of employment in Afghanistan. Overall, 59 percent of the employed population is engaged here; for the rural and Kuchi populations, the respective shares are 67 and 87 percent.
- Of all children aged 6-17, 21 percent (1.9 million) are working. Of these, at least 1.2 million children (13 percent) can be classified as child labourers. The proportion of working children not attending school is twice as high as the corresponding proportion of children not working.
- Labour migration is a frequent livelihood strategy in Afghanistan. Seven percent of all households have a labour in-migrant, 6 have a labour out-migrant and 14 percent have seasonal labour migrants. Iran is by far the most important country for international labour migration.

Agriculture
- Agricultural activities are the main livelihood strategies for the Afghan population: 55 percent of households are engaged in farming and 68 percent have any type of livestock.
- Around 40 percent of households have access to irrigated land (on average 7 Jerib), 17 percent have access to rain-fed land (on average 14 Jerib) and 11 percent grow vegetables and fruits on garden plots.
- Wheat is by far the most important crop: 77 percent of households farming on irrigated land in summer and 94 percent farming on rain-fed land grow wheat.
- The main reason for leaving fallow land is shortage of water. Rehabilitation of irrigation systems is the first priority of rural communities.
- Some 10 percent of households engaged in agriculture grow opium. The production is concentrated in six provinces. In Urozgan and Helmand, respectively 82 and 67 percent of households produce opium.
- Nationally, the average number of major livestock – cattle, oxen, horses, donkeys, camels, goats or sheep – per household with any livestock is 13. With 63 major livestock Kuchi households have considerably larger herds.

Poverty and inequality
- Poverty is widespread in Afghanistan. The percentage of Afghans that is not able to meet their basic needs is 36 percent. Even higher poverty incidences are found among the Kuchi population (54 percent) and in South, West-Central and East regions of the country (more than 44 percent).
- The national average poverty line is 1,255 Afs. per person per month, representing the typical cost of attaining 2,100 calories per person per day and of meeting some basic non-food needs.
- The poverty gap ratio is a considerable 8 percent. Poverty among the Kuchi's is not only more widespread, poor Kuchi's are also significantly poorer that the rural and urban poor. The total consumption shortfall is about 28.4 billion Afs., approximately 570 million USD.
- Factors that significantly correlate with poverty are household size and number of children in the household, sex of the household head, the head's educational attainment, employment status and industry of work, child labour, seasonal migration, net primary and secondary enrolment, access to land, and access to basic services like safe drinking water, improved sanitation and electricity.
- Although the national Gini index of 29 is low in international perspective, substantial inequality exists in shares of consumption: the richest quintile of the population has a share of 39 percent of total consumption, the poorest quintile has only 9 percent.

Education
- Only 17 percent of the population aged 25 years and over has attended any type of formal education; the corresponding figure for women is 6 percent. This manifests the lack of human capital in the country, required for strong public administration and private economic sectors.

- The large majority – 74 percent – of the population aged 15 years and over is illiterate. Male illiteracy is at a level of 61 percent and female illiteracy at 88 percent. For the urban, rural and Kuchi populations, the corresponding illiteracy figures are 52, 79 and 94 percent, respectively.
- The sharp rise in literacy from 26 percent among the 20-29 years old to 46 percent for the 15-19 years old, suggest a considerable improvement of the education system in recent years.
- Around 52 percent of primary-school age children (42 percent for girls and 60 percent for boys) are attending primary school, leaving some 2.3 million children not in primary school. The figure implies a significant improvement compared to the net primary enrolment rate of 37 in 2005.

General health
- On most internationally comparable health indicators, Afghanistan is among the worst performing countries. Despite the still weak state of the health system, its reconstruction becomes visible in improving several health-related indicators.
- Further improvement of health facilities ranks among the top priorities for community development.
- Access to any public health facility within one hour walking is possible for 57 percent of the population. The corresponding figure for the rural population is 54 percent, for urban dwellers 79 percent and for Kuchis only 37 percent.
- There are 406 thousand disabled persons in Afghanistan, implying a disability prevalence of 1.6 percent. School attendance of disabled children and labour force participation of people of working age are only half of that of their non-disabled counterparts.

Child health
- Full immunization with the eight recommended vaccinations is received by 37 percent of children aged 12-23 months; 15 percent have never been vaccinated. Vaccination rates for BCG, OPV3, DTP3 and measles were, respectively, 74, 71, 43 and 56 percent.
- Sixty-nine percent of children aged 6-59 months received vitamin-A supplements against infections and 61 percent of households used iodized salt.
- Exclusive breastfeeding occurs for 35 percent of children aged 0-6 months.

Reproductive health
- Current use of modern contraception was reported by 23 percent of women married or in union, an increase from 10 percent reported in 2003. One in four currently married women are currently pregnant. For women under age 25 this figure is one in three.
- Twenty-four percent of women receive skilled birth attendance and 36 percent receive some type of antenatal care. In 2003 only 16 percent of women were assisted by skilled health personnel.
- Nearly one third of women had a birth interval of less than 18 months and more than half of the women had an interval of less than 24 months, the minimum recommended by the WHO.

Housing
- One-third (34 percent) of Afghan households can be considered overcrowded, in the sense that on average more than three people share one room.
- Some 23 percent of households cannot prove the ownership of their dwelling (44 percent in urban areas). Especially in view of returning refugees and IDPs this becomes a relevant issue.
- Around 4.4 million urban dwellers (93 percent) live in conditions of insecurity and physical and environmental deprivation.

Basic facilities
- Overall, 27 percent of the population use an improved source of drinking water, but the variation between the urban, rural and Kuchi populations is wide (58, 20 and 16 percent, respectively).
- Nearly the entire population lives in households lacking improved sanitation facilities. In urban areas 21 percent is lacking improved sanitation; among rural and Kuchi households it is virtually non-existent.
- Twenty percent of households is connected to the electric grid.
- For cooking and heating, the large majority of households use solid fuels (83 and 98 percent, respectively).
- Internet and telephone landlines are practically absent in Afghanistan. The use of mobile phones has penetrated into 6 percent of the population.

Gender aspects in decision making

- Women's decision-making power in the household is small. In most fields, the husband or father is the primary decision maker. Only in typical family affairs – marriage of children, care of the elderly and somewhat less, education of children – is the representation of women more felt, although even here decision making is usually together with the spouse.
- Marrying at very young age and marrying a spouse who is much older tends to imply high levels of dependency. Women's influence in household decision making increases with age.
- Representation of women at community level in Shuras and Community Development Councils is low – 20 and 36 percent, respectively, against 70 and 68 percent for men.

Gender inequality

- In every development field women are disadvantaged compared to men. This situation is generally less pronounced in urban areas.
- Women participate less in economic activities, for fewer hours and predominantly in vulnerable employment.
- Literacy of women is less than one-third of that of men, and large gaps exist in school enrolment rates.
- In recent years the literacy and school enrolment gaps are narrowing.

Household shocks

- More than two-thirds (71 percent) of Afghan households experienced in the year before the survey at least one household shock – a negative effect of events that is beyond their control.
- The most frequently mentioned household shock was the influx of refugees and IDPs (60 percent), followed by any natural disaster (39 percent), agriculture and livestock problems (22 percent) and drinking water problems (18 percent).

Aid programmes

- 450 thousand or one in seven households participated in cash-for-work, food-for-work or food aid programmes. For a large share of these households this participation improved their food situation.

Community preferences

- The male and female Shuras consistently rate the improved provision of drinking water as a top development priority, followed by better health facilities, and in rural areas rehabilitation of irrigation systems, and in urban areas road improvements.

1 Introduction

Afghanistan is facing fundamental economic and social change. To measure progress in social and economic development, as well as in poverty reduction, it is imperative that the Government of Afghanistan (GoA) has access to information on the social and economic situation of the population. This information will serve to assist the government to adapt policy to changing socio-economic conditions, and allow it to monitor the impact of such policies on the more vulnerable groups in the country.

The National Surveillance System (NSS) Project was designed to assist the Government of Afghanistan in addressing its acute and multiple data needs to inform and prioritise the reconstruction and development efforts, and to contribute to data collection in the areas of poverty alleviation, food security, livelihood and vulnerability. The NSS Project is implemented within the Vulnerability Analysis Unit (VAU) of the Ministry of Rural Rehabilitation and Development (MRRD) and the NSS Unit at the Central Statistics Organisation (CSO). The NSS Unit is responsible for the design and implementation of regular data collection, data processing, standard data analysis, as well as wider data dissemination. MRRD's Vulnerability Analysis Unit is responsible for addressing the needs for data, analysis and interpretation according to the specific priorities of the MRRD senior management, its advisors, as well as the MRRD programmes.

The key component of the NSS Project is the National Risk and Vulnerability Assessment (NRVA), the basis of this report. The NRVA as it stands today is the only comprehensive nation-wide multi-purpose household survey in Afghanistan enabling cross-section analyses. The present 2007/8 NRVA is the third of three successive rounds of surveys, following NRVA 2003 and 2005. The NRVA 2003 survey was carried out with co-operation of the World Food Programme (WFP) and supported by the Vulnerability Analysis Unit (VAU) of the Ministry of Rural Rehabilitation and Development. The second NRVA survey was launched in 2005, with CSO and MRRD as the implementing agencies. This NRVA 2005 was a significant improvement in terms of sample design and coverage.

As a follow-up to the first two surveys, the third NRVA survey was launched in 2007, jointly by MRRD and CSO, and with co-operation from the European Commission. The NRVA 2007/8 was based on a smaller sample of 20,576 households, but with further improvements in the questionnaire, sample design and coverage. It was designed to provide governments and other agencies with more robust and up-to-date socio-economic data. A comparison of coverage and methodology of the three surveys is given in Chapter 2.

The aim of this report is to provide key indicators of socio-economic development in Afghanistan, including 25 MDG indicators. These development indicators and additional information will support the Afghan PRSP (ANDS) and provide unique insights for policy makers, as well as for a broader audience. The present report does not only seek to fill in numerous data gaps, but also to put findings into a broader perspective by establishing trends with NRVA 2005 and other surveys, paying special attention to gender aspects, providing more detailed and cross-sectional analysis, and by translation into policy recommendations. The gained understanding of poverty and vulnerability in the context of social change in Afghanistan should justify the tremendous survey efforts of the past two years.

The subsequent Chapter 2 describes the main methodological characteristics of the NRVA 2007/8 survey, including brief descriptions of the sampling design, survey questionnaires, data collection and processing, data constraints, and comparison with the 2003 and 2005 NRVA surveys.

Population structure and change are addressed in the first subject-matter chapter (Chapter 3), as these factors permeate into every development aspect of the remaining report sections. Afghanistan's population composition by age and sex is analysed, as well as the underlying dynamics of fertility, child mortality and migration. In addition, household and marriage patterns are examined. Chapter 4 provides an analysis of the structure of Afghanistan's labour market and covers various labour force indicators, including employment, unemployment, working hours, vulnerable employment, and differentiation by age and sex. Special attention is also paid to working children and labour migration.

Agriculture, as the predominant economic activity in Afghanistan, is one of the two subsequent core chapters of this report. Chapter 5 analyses the agricultural sector with a view on access to land, land area size, agricultural production, and type and amount of livestock owned, as well as on the particular constraints this sector is facing. In the key Chapter 6, development and vulnerability are condensed into indicators of poverty and food security.

The twin Chapters 7 and 8 are dedicated to the social sectors of education and health, and to the changes occurring in these sectors. The former analyses literacy rates, school enrolment and educational attainment, whereas the latter covers access to health facilities, reproductive and child health, and disability.

The housing situation is described in Chapter 9, with a view on house ownership, building characteristics and housing facilities, like electricity, drinking water and sanitation. Chapter 10 has a cross-cutting focus on the position of women and contains two main sections: one on the role of women in decision making (in the household and in the community) and one that largely summarises the findings from all chapters, specifically from a women's development perspective. Household shocks and coping strategies, as well as community preferences for interventions are outlined and analysed in chapter 11.

Chapter 12 formulates recommendations for development policy, and information needs.

2 Methodological backgrounds of NRVA 2007/8

2.1 Lead-up to the NRVA 2007/8

In 2002, the World Food Programme (WFP) and other stakeholders conducted a countrywide assessment in Afghanistan, with the main focus on food aid needs for reasons of geographical targeting. In addition, the assessment provided baseline information on livelihoods. The Government of Afghanistan initiated a review of the methodology for the 2003 annual assessment, which proved useful in not only improving the methodology, but also, and more importantly, in involving a larger group of stakeholders in the national assessment process. Although at the time this review was not seen as a potential component of a larger information system, the timing was right. The government was just starting to implement its social protection programmes and the upcoming National Risk and Vulnerability Assessment (NRVA) presented an opportunity to incorporate its information needs into a new survey design.

The NRVA was an amalgamation of both emergency and development methodologies and various specific needs of stakeholders. While engaging with a wide audience in a collaborative process improved the usefulness of the information, it also presented challenges, for instance by trying to integrate the wide range of stakeholder needs into the questionnaire. As there was no national household sampling frame available – Afghanistan's first and only census to date took place in 1978 – the selection of communities (rural only) was stratified by both problems and agro-ecological zones. The list of villages and their population was incomplete at that time, inevitably producing a bias against those living in smaller undocumented villages. Within the villages, household selection was stratified by wealth groups, generated through a community focus-group wealth-ranking process. These methodological modifications marked a change from the previous community-based WFP methodology to surveys primarily based upon household responses. The first NRVA survey was carried out between July and September 2003 in co-operation with the WFP and supported by the Vulnerability Analysis Unit (VAU) of the Ministry of Rural Rehabilitation and Development (MRRD).

By the end of 2004, the second NRVA was under design, to be conducted in the summer of 2005. The survey was launched in 2005 jointly by the Central Statistics Organisation (CSO) and the Ministry of Rural Rehabilitation and Development. It received support from the European Commission (EC) through the National Surveillance System Project, based in both MRRD and CSO.

Building on the lessons learnt from 2003, a methodology was developed through a consultative stakeholder process, including the line ministries, World Bank, WFP and UNICEF. The assessment incorporated quantity of food consumed – allowing comparison to the NRVA 2003 – and dietary diversity. In the absence of other national data for the estimation of poverty and poverty analysis, the NRVA 2005 took on added importance by including questions that provided the empirical basis for consumption-based poverty estimates. This had special relevance to the development of the Afghan National Development Strategy (ANDS, Afghanistan's PRSP). The questionnaire scope was furthermore extended by including additional modules on remittances and reproductive and child health.

The NRVA 2005 was designed to produce representative estimates for the rural population and the nomadic Kuchi, and for the first time also for 10 large urban centres. By then a sample frame was available for most of the country through the pre-listing of households that CSO collected in preparation for the national census.[1] This sample frame to a large part removed any bias away from small rural settlements in remote areas. The survey in total enumerated 30,822 households from 34 provinces.

Another significant improvement of the NRVA 2005 in terms of coverage, related to the collection of data best answered by women with female interviewers. This was facilitated by mobilising male-female survey teams for almost all parts of the country, except where security dictated the team should be male only or, in rare cases, where areas were not enumerated at all. One of the main limitations of the 2005 survey was considered the limitation of data collection to the summer period June-August, during or immediately after harvest. As this is a time of the year where high consumption patterns were expected, the analysis inevitably produced seasonally biased results and poverty estimates that are low compared to the annual average and several other months.

The NRVA 2005 data has been used by many government and non-governmental organizations for their policies and programmes, but importantly, it has become the Afghan Government's tool for establishing baselines and monitoring progress against the MDG's and ANDS's goals and targets.

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[1] The census was originally planned to be conducted in 2008, but has been delayed because of poor security.

2.2 NRVA 2007/8 methodology

2.2.1 Stakeholder involvement and questionnaire design

The NRVA 2007/8 is in many ways similar to the NRVA 2005, and intentionally so. As in the preparation to the NRVA 2005, a process of stakeholder consultation provided input into the survey design and especially the development of the questionnaire. To facilitate the stakeholder consultation, two workshops were held in January and March 2007. The draft questionnaires were tested twice in the field and a pilot test of the questionnaires took place in five regions for further and final improvements. The questionnaires were translated into Dari and Pashto. The questionnaire format was designed in Teleform (software that extracts data from paper questionnaires) to allow data scanning instead of manual data entry. Around 1.6 million questionnaire pages were completed and scanned. The fieldwork started in mid-August 2007 and lasted up to the end of August 2008.

2.2.2 Sampling design

The sampling design of the NRVA 2007/8 built upon the experiences from the NRVA 2005 and the same sampling approach was maintained, with representative statistics generated for 34 provinces, 11 instead of 10 urban centres, and the nomadic pastoralists. Based on the CSO pre-census household listing data, a geographically ordered list of all of the primary sampling units (PSUs) (rural settlements and urban blocks) was created with their estimated number of households. The resulting sample is a total of 2,441 PSUs and 20,576 households (19,528 from the settled urban and rural population and 131 (1,048 households) from the Kuchi population

The use of a random start and a pre-determined sampling interval provided each household with an equal chance of being selected. Once individual households had been selected, seven other households were selected within the same PSU. Consequently, in every PSU, eight households were interviewed. To avoid the problem of household replacements in the field, the 2007/8 sample design was improved by randomly selecting four households that were kept as reserve in case the household had moved away.

A major difference with the 2005 assessment is the removal of the seasonality bias by conducting the survey year-round during all 12 months. The main considerations for moving from data collection in summer only to the year-round strategy were:
- to capture the seasonality of consumption and other dimensions of welfare;
- to improve the quality of the collected data;
- to field a smaller group of carefully selected, well trained and properly supervised interviewers;
- to permit higher quality field and data validation procedures, through avoiding a concentration of the sample into just two months;
- to be consistent with international standards for obtaining seasonally biased estimates.

2.2.3 Questionnaire contents and interviews

The core of NRVA 2007/8 survey is a household questionnaire consisting of 20 sections, 14 administered by male interviewers and answered by the male head of household, and six asked by female interviewers from female respondents *(Table 2.1)*. On average the time required to answer the household questionnaire was around two hours.

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[2] The full set of questionnaires can be accessed at *www.nrva.cso.gov.af.*

Table 2.1 Sections and section topics of the NRVA 2007/8 questionnaire

	Men's questionnaire sections		Women's questionnaire sections
1	Household roster	15	Food consumption in last 7 days
2	Housing and utilities	16	Iodized salt, avian flu, household expenditures
3	Livestock	17	Number of children-ever-born and marriage
4	Agriculture	18	Recent births
5	Assets and credit	19	Child immunization
6	Education	20	Women's sctivities
7	Disability		
8	Sources of household income		
9	Labour and migration of household members		
10	Cash/food for work		
11	Out-migration of household members and remittances		
12	Household expenditures		
13	Household shocks and coping strategies		
14	Final male section; demobilization, literacy		

Additional to the household data collection, information was gathered at community level through two community questionnaires – one male and one female Shura questionnaire – addressing the topics presented in *Table 2.2.*

Table 2.2 Male and Female Shura questionnaire topics

Male Shura questionnaire	Female Shura questionnaire
Community information and shura participants	Shura participants
Access to infrastructure and wages	Access to health facilities
Markets access	Community roles and governance
Access to health facilities	Community priorities
Access to education facilities	
Community roles and governance	
Programme activities in the community	
Community priorities	

2.2.4 Comparability of NRVA 2007/8 with previous rounds

It is tempting to compare the figures of NRVA 2007/8 with those of NRVA 2005 or even with NRVA 2003. However, the methodologies used are different, as described above, and thus only comparable to a limited extent. The main differences between NRVA 2003, NRVA 2005, and NRVA 2007/8 are summarized in *Table 2.3.* The radically different sampling design of the NRVA 2003 prohibits any meaningful comparison. Comparability between the 2007/8 and 2005 surveys was maintained for a number of key indicators, even though there was a significant questionnaire revision resulting in different measures. Where possible, the present report provides trend information for the period between the 2005 and 2007/8 survey rounds.

Table 2.3 Comparison of NRVA 2003, 2005 and 2007/8

NRVA 2003	NRVA 2005	NRVA 2007/ 08
Sampling		
Sample frame not available; relied on WFP village lists. Expected to be biased for larger rural settlements.	Sample frame available from CSO pre-census household listing. Sampling proportional to population, except in the smaller provinces and urban centres where over-sampling insured enumeration of sufficient number of households.	Sample frame from updated CSO pre-census household listing. Proportional to population, with over-sampling of smaller provinces and urban centres.
Sample selection was not fully random; stratified by different agro-ecological zones.	Sample selection based on random selection from geographically ordered PSUs, to give a random spread that represented the spatial distribution of the population.	Sample selection based on random start method to have a better geographic distribution of the sample.
Household selection was not random within the key issue, but randomly selected within wealth groups. 6-7 households have been assessed within each village.	Household selection based on the random start method within villages. 12 households were assessed in each selected village.	Household within selected villages was randomly selected from CSO household listing. 8 households in each village selected for assessment.
Data collection		
Four levels of data collection: • District level • Community Shura level • Wealth group level • Household level	Three levels of data collection: • District level • Community Shura level • Household level	Three levels of data collection: • District level • Community Shura level • Household level
Much data collection at the community or district level.	Data collection mainly at individual and household level.	Data collection mainly at individual and household level.
Female interviewers not involved in the south and most eastern areas.	Female interviewers participated in all provinces except Zabul.	Female interviewers participated in all provinces except Urozgan.
Only rural areas and Kuchi population	Rural and urban areas and Kuchi population	Rural and urban areas and Kuchi population
Representing one season, survey conducted within 3 months	Representing one season, survey conducted within 3 months	Representing all seasons, survey conducted within 12 months
Poor female coverage	Good female coverage	Good female coverage
• 32 provinces • 368 districts • 1,853 villages • 5,559 wealth groups • 11,757 rural households • 85,577 persons	• 34 provinces • 392 districts • 2,597 clusters • No wealth groups • 30,822 households • 221,586 persons	• 34 provinces • 395 districts • 2,572 clusters • No wealth groups • 20,576 households • 152,262 persons
Questionnaire contents and design; data processing		
Partial stakeholder participation in questionnaire design.	Full stakeholder participation in questionnaire design.	Full stakeholder participation in questionnaire design.
Information on basic demographics, health, housing, household assets, migration, risk exposure and response, livestock ownership, agricultural activities and household food consumption.	Added information on remittances, HIV/AIDS, maternal and child health, household non-food consumption.	Added information on disabilities, labour market participation, migration, infant- and under-five mortality, women's position. More details on household food and non-food consumption. Dropped information on HIV/AIDS.
Common questionnaire format	Teleform scannable questionnaires	Teleform scannable questionnaires
Some data manually entered; other data transcribed into Teleform format and scanned.	Teleform scanning software used for data capture with appropriate Visual Basic on SQL data quality routines built-in.	Teleform scanning software used for data capture with appropriate Visual Basic on SQL data quality routines built-in.

NRVA 2003	NRVA 2005	NRVA 2007/ 08
Staff and training		
Several trainers involved in training of interviewers, resulting in variation in interviewer performance.	Uniform training by 2 trainers involved for the whole country.	Uniform training in one training session for all field staff for the whole country. More detail and longer (17 days) training.
Large number of part-time interviewers.	More than 500 field staff were part-time employed.	156 field staff selected. More transparent method of staff selection (short listing, test and interview from 12 thousand applicants).
Management and funding		
Managed by WFP/VAM	Managed by Government (CSO-MRRD)	Managed by Government (CSO-MRRD)
Funded by: • Swiss Government • VAM Headquarters • WFP	Funded by: • EC/NSS (main donor) • WFP • UNICEF	Funded by: • EC/NSS (main donor) • WFP • DFID • ADB • UNICEF • WB

2.2.5 Data limitations

Even though the lessons learnt during design, implementation and analysis of NRVA 2003 and 2005 were integrated in the design of the NRVA 2007/8 survey, there are still some constraints and limitations in the data, especially with regard to information on women and children:

- Out of the 396 sampled districts, there were five that have not been accessible for security or other reasons in any time of the year. *Figure 2.1* provides the accessibility information by fieldwork quarter.

- Due to security problems there were no female interviewers in Urozgan province to administer female questionnaire sections. This especially had consequences for the information on reproductive health, child health and fertility and mortality information. Only the food consumption part of female questionnaire sections was collected by male enumerators interviewing male respondents.

- After the second month of fieldwork, the worsening security situation prohibited the female interviewers to continue data collection in Nooristan province. Considering the local culture of the province, male enumerators were able to ask the female questionnaire directly to the female respondents.

- Analysis of the population structure by sex and age shows under-enumeration of women and girls, and young children, especially infants. Although the coverage of these groups was far better than in 2005, significant numbers are still omitted, a phenomenon that is typical for surveys in many developing countries and especially among Afghan populations. Cultural backgrounds related to the status of women and high infant mortality are likely the reasons for these omissions.

Figure 2.1 Survey accessibility, by quarter (panels a-d), and by district

a. First quarter (September-November 2007)
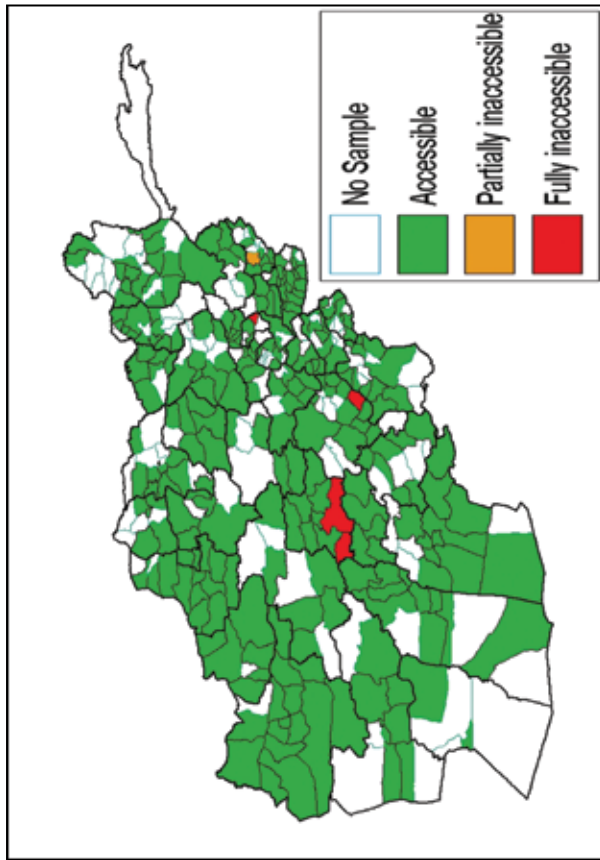
b. Second quarter (December 2007-February 2008)
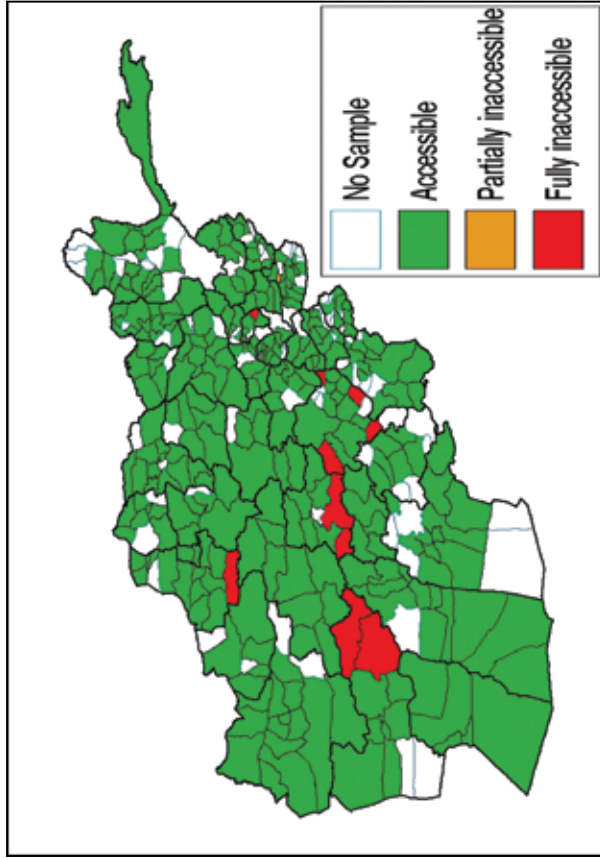
c. Third quarter (March-May 2008)
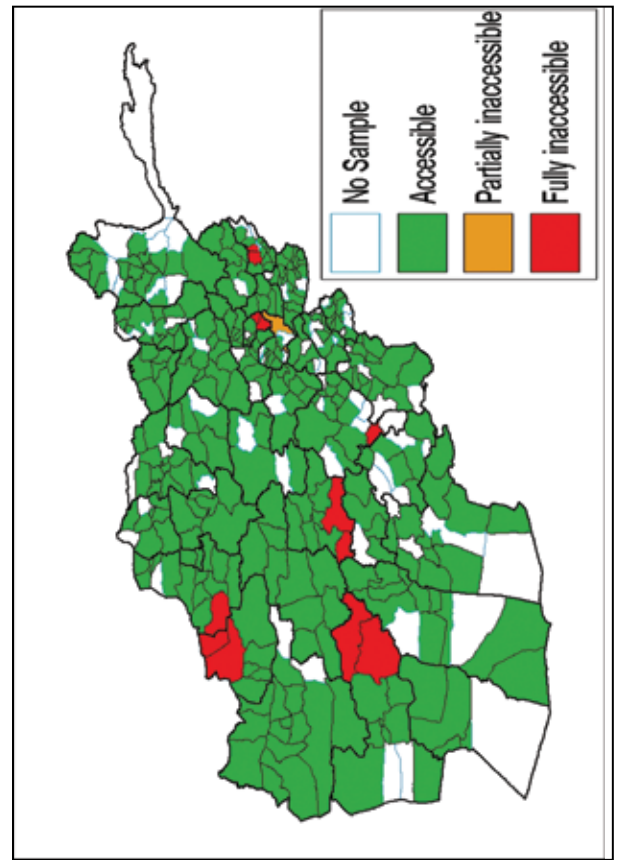
d. Fourth quarter (June - August 2008)
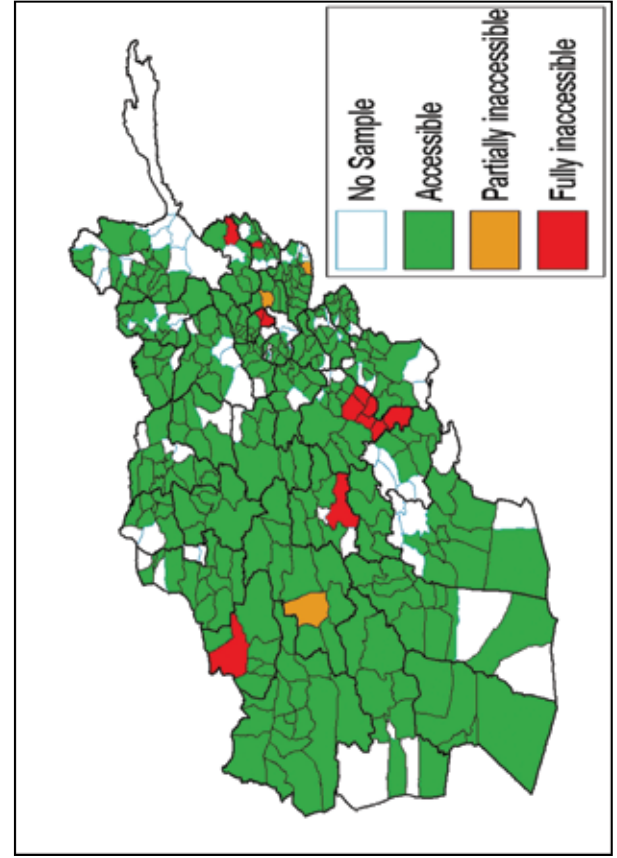
3 Population structure and change

SUMMARY. The structure and size of a population, as well as their development over time are principal components in development planning. Afghanistan is challenged by a rapid population growth, fuelled by very high fertility and significant in-migration in recent years. The Total Fertility Rate of 6.3 children per woman is reflected by an average household size of 7.3 persons and by an exceptionally high share of the population under age 15 (49 percent). The corresponding dependency ratio of 133 only partly indicates the burden on the country's economy and society. Additional costs at the individual and household levels are paid in terms of high maternal and infant mortality, and low female participation in education and income generating. The NRVA 2007/8 reveals an estimated infant mortality rate of 111 and an under-five mortality rate of 161 per thousand live births. Despite the very high levels of these demographic indicators, the NRVA also finds indications of decreasing child mortality and – more modestly – fertility. In addition to natural increase, Afghanistan's population has substantially grown due to returning refugees, predominantly from Pakistan and Iran. It is likely that additional net immigration is also a factor of population growth, with Iran being the leading country of origin and destination of migrants. By far the most important reason for international migration was employment. This indicates the relatively weak labour market situation in Afghanistan, as well as the economic importance of labour migration for the country's economy. In terms of numbers, internal migration is even larger than international migration.

Marriage is almost universal in Afghanistan and is characterized by early marriage for women, with a mean age at first marriage of 17.9. The combination of a relatively large age difference between spouses – on average husbands being nearly 7 years older than their wives – and the incidence of polygamy – 6 percent – contributes to the large number of more than half a million widows in the country. NRVA findings also include a recent noticeable decline of early marriages and a steady drop in the spousal age difference. More worrisome is the deficit in the statistics of very young children and females at adolescent and older ages. It is likely that this is caused by under-enumeration of these vulnerable groups.

3.1 Introduction

In the absence of a population census, a vital registration system or targeted nation-wide household surveys, it is difficult to assess the exact contribution of the principal factors of population development in Afghanistan. However, there can be no doubt that high fertility and mortality, and large-scale international migration – including consecutive massive waves of refugees and, more recently, returnees – made a significant impact on the overall size and structure of the population. In addition, geographic differentiation in fertility and mortality, as well as internal migration and movements of internally displaced persons (IDPs) have had major effects on the internal distribution of the population.

The NRVA is able to fill several gaps in the demographic picture of Afghanistan. Besides basic information on age and sex, the NRVA 2007/8 included modules that allow the assessment of fertility and infant and under-five mortality. In addition, structured information on migration was collected. A full picture, and the possibility to produce population growth rates and population projections, are not feasible as of yet, because of the absence of adult mortality indicators, life expectancy estimates and more adequate migration information.

This chapter first addresses the present population structure by age and sex, and its geographic distribution (Section 3.2). Subsequently, Section 3.3 describes household structures and marriage patterns. Next sections elaborate the underlying population processes of fertility and mortality (Section 3.4), and migration (3.5).

3.2 Population structure and distribution

3.2.1 General population characteristics

The population size of Afghanistan estimated on the basis of the NRVA sampling procedure is close to 25 million people. The most striking feature of the Afghan population is its very young age structure (see *Figure 3.1* and *Table 3.1*). Some 49 percent (12 million) is under 15 years of age, whereas elderly of 65 and over represent less than three percent of the total population. The proportion under 15 is among the very highest in the world and significantly higher than that of neighboring countries, ranging from 26 percent in Iran to around 39 percent in Pakistan and Tajikistan (UN Population Division 2008).

The young age composition contributes to a very high dependency ratio: for every 100 persons in the working age 15-59, there are 113 persons in the less productive ages of under-fifteen and 60 and over, who are dependent for income and subsistence. This figure implies a large burden for the prime working-age population and the economy at large. Large social investments in terms of education and health care are concentrated in the youngest age categories.

Quality of age reporting

In countries like Afghanistan, many people are ignorant about their exact age or date of birth. This leads to high incidences of age misreporting, for instance by age heaping and age shifting. Consequently, reported ages in surveys and censuses should be treated with caution. Different procedures to assess the quality of the NRVA data indicate that age reporting is highly inaccurate[a], but significantly better than in 2005.

Another common characteristic of many developing countries is the omission of very young children in the enumeration. The relatively small 0-4 age group in Figure 3.1 points in this direction. A breakdown by single years of age suggests an even more pronounced undercount of infants and one-year old children. It is not unlikely that around one million young children are omitted from the present statistics.

[a] Myers' blended index is 24.4, Whipple's index is 255, and the UN age-sex accuracy index is 52.

The overall sex distribution in the Afghan population is tilted toward males as indicated by the sex ratio – the number of males per 100 females in the population. The NRVA 2007/8 found a relatively high overall sex ratio of 105 males per 100 females, corresponding to 49 percent females and 51 percent males. The change in the sex distribution from the NRVA 2005 – respectively 54 percent males and 46 percent females, implying a sex ratio of 118 – is most probably due to much better coverage of the female population in the 2007/8 round.

Figure 3.1 Population, by age and sex (in percentages)
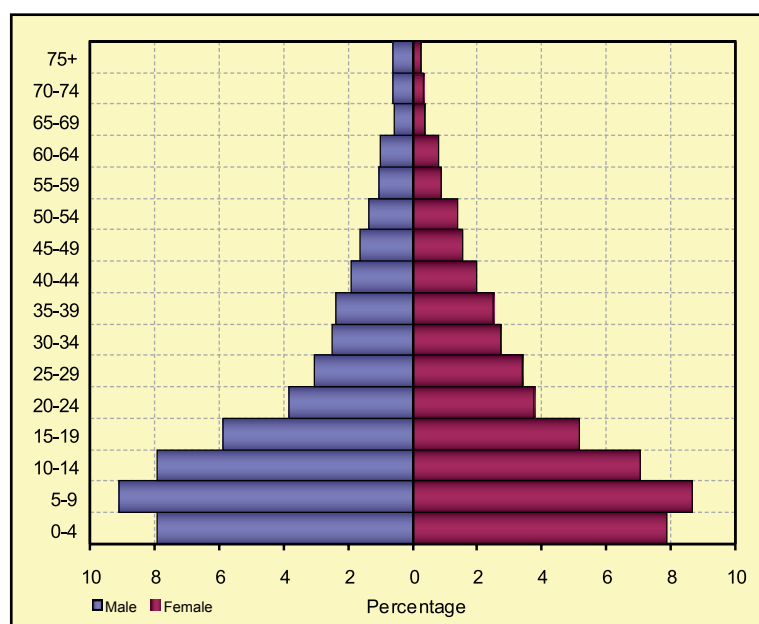
Generally, the sex ratio across age groups follows a pattern in which boys outnumber girls at birth (with around 105 to 100), by and large maintain this male pre-dominance in early childhood, to gradually converge with the number of women at later ages. Around age 50 the male surplus usually turns into a shortfall, which increases at older ages, resulting in an overall sex ratio generally close to 100. This pattern results from the usually small excess of boys at birth and the commonly higher mortality of males over females. Genuine deviations from this pattern can be caused by variations in the sex ratio at birth and by sex-specific mortality and migration. However, sex-specific age-misreporting and under-counting or over-counting can also lead to unexpected sex ratios.

Age	Thousands			Percentages			Sex
	Male	Female	Total	Male	Female	Total	Ratio
0-9	4,249	4,132	8,381	33	34	34	103
10-19	3,447	3,052	6,499	27	25	26	113
20-29	1,708	1,786	3,494	13	15	14	96
30-39	1,214	1,304	2,518	9	11	10	93
40-49	879	881	1,760	7	7	7	100
50-59	595	569	1,164	5	5	5	105
60-69	396	295	691	3	2	3	134
70-79	210	111	322	2	1	1	189
80+	89	43	132	1	0	1	209
Total	**12,787**	**12,173**	**24,960**	**100**	**100**	**100**	105

As is shown in *Table 3.1*, the age-specific sex ratios markedly deviate from the described common pattern. Especially noticeable are the high to extremely high sex ratios in the age ranges 10-19 and over-50, which suggest large male surpluses in these age brackets. Although in-depth investigation is warranted in this matter, it is likely that a combination of female under-enumeration – related to cultural norms of female seclusion – and excess female mortality – especially related to maternal mortality – are contributing factors. Another noticeable feature is that in the mid-age range of 20 to 39 women are reported as in the majority, which may be caused by lower survey coverage and real absence of mobile men in the working age population (see Section 3.5.1). The 2005 NRVA showed a similar pattern, but with consistently higher sex ratio levels.

3.2.2 Geographic distribution

The Afghan population is overwhelmingly rural: 74 percent (around 18.5 million people) lives in rural areas and only 20 percent (5.0 million) in urban areas, whereas six percent (1.5 million) is classified as nomadic Kuchi (see *Table 3.2*).

Table 3.2: Population, by residence, sex, and by age; also stating total sex ratio

Age	Residence, sex											
	Urban			Rural			Kuchi			National		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
In thousands												
0-14	1,094	1,075	2,169	4,748	4,458	9,206	383	363	745	6,225	5,896	12,120
15-24	581	551	1,133	1,705	1,567	3,272	137	106	243	2,423	2,225	4,647
25-39	377	398	775	1,473	1,629	3,102	119	127	246	1,970	2,154	4,123
40-64	354	374	728	1,279	1,192	2,471	96	85	181	1,729	1,651	3,380
65+	102	57	159	313	175	488	26	17	43	441	248	689
Total	**2,510**	**2,454**	**4,964**	**9,517**	**9,021**	**18,538**	**760**	**698**	**1,458**	**12,787**	**12,173**	**24,960**
In percentages												
0-14	44	44	44	50	49	50	50	52	51	49	48	49
15-24	23	22	23	18	17	17	18	15	17	19	18	19
25-39	15	16	16	15	18	18	16	18	17	15	18	17
40-64	14	15	15	13	13	13	13	12	12	14	14	17
65+	4	2	3	3	2	3	3	2	3	3	2	3
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Total Sex Ratio		**102**			**105**			**109**				**105**

The urban population has a significantly smaller share of under-fifteens (44 percent) than the rural and Kuchi populations (50 and 51 percent, respectively), and a larger share of persons in the age range 15-24 (23 percent, compared to 18 and 17 percent). This is the effect of lower urban fertility (see Section 3.4.1) and probably also selective in-migration of young adults looking for jobs on the urban labour market.

On the basis of common sex-specific migration patterns one would expect relatively larger shares of males in urban areas. The NRVA data, however, indicate the opposite with an urban sex ratio of 102 males for every 100 females, compared with 105 for the rural population. It is expected that female under-reporting in the latter populations – particularly in the age range 10-19 – can largely explain this observation. In addition, urban-rural migration is significantly more dominated by men than migration in the reverse direction.

At provincial level, the share of children under 15 in the total population ranges from less than 44 percent (Kabul, Badghis, Jawzjan and Nooristan) to over 53 percent (Farah, Kandahar, Nimroz and Wardak). Provincial sex ratios even more diverge, varying from under 100 in Daykundi, Kunduz, Bamyan, Jawzjan, Panshir and Balkh to over 127 in Paktya and Helmand (data not shown here). A more in-depth analysis of possible contributions of age-specific and sex-specific under-coverage is beyond the scope of the present report.

3.3 Household structure and marriage patterns

3.3.1 Household structure

The total number of households in Afghanistan is estimated at around 3.4 million. This implies an average household size of 7.3 persons, about the same as found in the 2005 NRVA (7.4 members per household). With an average size of 7.6, Kuchi households are larger than rural and urban households (see *Table 3.3*).

Table 3.3 Household structure indicators, by residence

Selected indicators	Residence, sex							
	Urban		Rural		Kuchi		National	
	Thousands	Percentage	Thousands	Percentage	Thousands	Percentage	Thousands	Percentage
Household size								
1-3 persons	52	8	207	8	11	6	270	8
4-6 persons	249	37	930	36	72	37	1,251	36
7-9 persons	253	37	944	37	68	35	1,265	37
10-13 persons	103	15	379	15	31	16	513	15
14 persons or more	25	4	102	4	11	6	138	4
Total	**682**	**100**	**2,563**	**100**	**193**	**100**	**3,438**	**100**
Average								
Household size	7.3		7.2		7.6		7.3	
Number of children (0-14)	3.2		3.6		3.6		3.5	
Number of elderly (65+)	0.2		0.2		0.2		0.2	
Share of								
Children (0-14)	44		50		51		49	
Elderly (65+)	3		3		3		3	

The large majority of households (73 percent) have 4 to 9 members, whereas around 19 percent (some 650 thousand households) accommodate 10 or more people, and only eight percent has three or fewer persons. The population distribution across household size is much more shifted towards larger households: close to one-third of all Afghans live in households with 10 or more people and less than three percent do so in households with three or fewer people. *Figure 3.2* shows the distribution of households and population by household size.

On average, the share of children amount to almost half of the total household size, although in urban households this share is lower (*Table 3.3*). The small share of elderly of 65 years and over ranges between 2.6 percent in rural households and 3.2 percent in urban households.

In the Afghan context, the absence of a male head of household can signify a highly vulnerable position of the household members in terms of income security and social protection. Around two percent of households – corresponding to some 70 thousand households – are female headed. The 2005 NRVA revealed a similar percentage. In similar vein, households headed by young or old people can be in vulnerable conditions. Around 11 percent of households (380 thousand) are headed by either heads age 65 and over or under 20.

Figure 3.2 Households and population, by household size (in percentage)
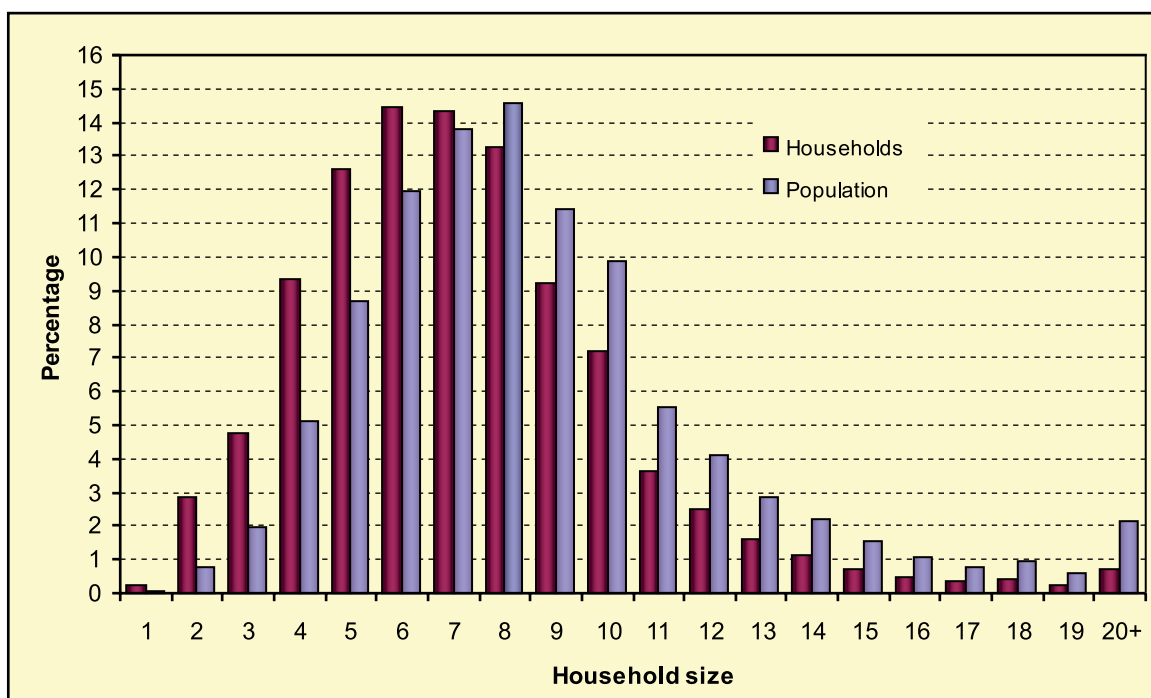
3.3.2 Marriage patterns

Marital status is a key principle in the social relations in Afghan society. Marriage as a universal phenomenon is indicated by the fact that less than one percent of the population of 35 and over remained unmarried. In the total population, however, 61 percent is unmarried due to the large weight of the age cohorts under-15 – of whom virtually no one is married – and 15-24 – of whom 73 percent is still unmarried (*Table 3.4*).

Marriage is also the leading determinant of women's exposure to the risk of pregnancy in countries with low levels of contraceptive use (see also Section 8.4.1 in this report). Early marriages lead to early childbearing and a longer period of exposure of women to reproductive health risks and maternal mortality, as well as to high fertility. In Afghanistan, the mean and median age of first marriage for women currently aged 15-49 are, respectively 17.9 and 18 years. The percentages of women who were married before they reached age 15, 18 and 20 are, respectively, 8, 35 and 52 percent[1].

_____

[1] Data limitations do not allow corresponding analysis for males.

Table 3.4 Population, by sex, marital status, and by age

Age	Male					Female					Both Sexes				
	Married	Divorced, separated	Widowed	Never married	Total	Married	Divorced, separated	Widowed	Never married	Total	Married	Divorced, separated	Widowed	Never married	Total
In thousands															
0-14	2	0	0	6,222	6,224	4	0	0	5,890	5,895	6	1	0	12,112	12,119
15-24	342	0	2	2,078	2,423	891	1	7	1,325	2,224	1,233	1	10	3,403	4,647
25-39	1,725	2	7	236	1,970	2,011	4	48	90	2,154	3,736	6	55	326	4,123
40-64	1,667	1	49	11	1,729	1,319	7	318	7	1,651	2,986	8	368	18	3,380
65+	363	0	76	2	441	91	3	152	2	248	454	4	227	5	689
Total	**4,098**	**4**	**135**	**8,549**	**12,786**	**4,317**	**16**	**526**	**7,314**	**12,172**	**8,415**	**20**	**660**	**15,863**	**24,958**
In percentages															
0-14	0	0	0	100	100	0	0	0	100	100	0	0	0	100	100
15-24	14	0	0	86	100	40	0	0	60	100	27	0	0	73	100
25-39	88	0	0	12	100	93	0	2	4	100	91	0	1	8	100
40-64	96	0	3	1	100	80	0	19	0	100	88	0	11	1	100
65+	82	0	17	1	100	37	1	61	1	100	66	1	33	1	100
Total	**32**	**0**	**1**	**67**	**100**	**35**	**0**	**4**	**60**	**100**	**34**	**0**	**3**	**64**	**100**

While divorce and separation are practically invisible in the marital status distribution, the incidence of widowhood increases with age, especially for women. Whereas around 3 and 17 percent of men aged, respectively, 40-64 and over-65 are widowers, the corresponding figures for women are 19 and no less than 61 percent. In absolute numbers, Afghanistan has around 135 thousand widowers, but considerably more than half a million widows. The two major causes of this large number of widows are high male mortality in the last three decades of conflict in Afghanistan and large age differences between spouses. Irrespective of the cause, widowed women can be classified as being in a vulnerable position.

The marital sex differentiation is clearly visible from *Figure 3.3*: women tend to get married earlier than men and become widowed earlier and in significantly larger shares.

Figure 3.3 Population, by age, and by marital status, for (a) males and (b) females (in percentage)

a.Male
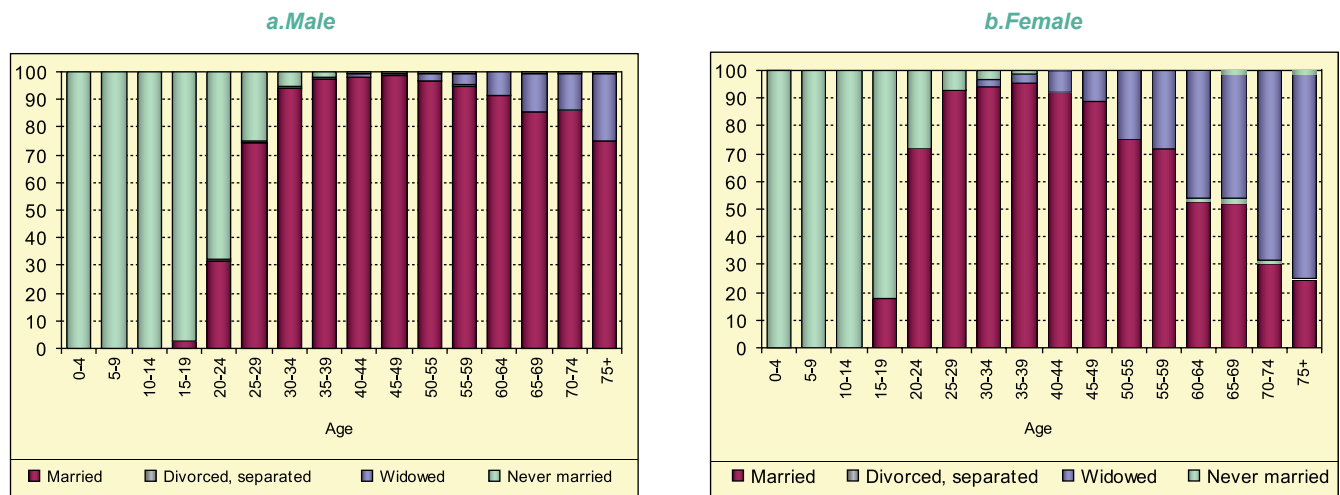
b.Female

Early age at marriage for women – and early widowhood – is closely related to the practice of polygamy, as a polygamous marriage market creates an unequal demand for male and female spouses. The NRVA data indicate that around 6 percent of married women (some 256 thousand) are in union with a husband who has more than one wife. The incidence of polygamous marriages is higher (over 10 percent) among Kuchis and lower (around 4 percent) in the urban population.

The NRVA data also allows the observation of significant social change in marriage patterns. Whereas on average in the older age group 60-69 husbands are more than eight years older than their wives, this age difference consistently declines to five years in the age group 15-24. *Figure 3.4* shows that the share of couples with relatively small spousal age differences (less than four years) has dramatically increased for each younger age group of women (from 16 percent among women age 70 and over to 54 percent of those under 20). At the same time, the shares of couples with large (10-19 years) and very large (20 years or more) age differences has similarly declined from 47 percent in the oldest age group to 12 percent in the youngest. This development toward a more balanced age pattern between spouses is likely to contribute to women's empowerment within marriage and the family (see also Section 10.2.1).

With respect to the female age at first marriage, a noticeable decline of very early marriages can be observed. Whereas the 30-34 age cohort reported 11 percent of marriages contracted before reaching age 15, this has steadily declined to around three percent for the 15-19 age group. The percentage of women married before age 18 and 20 declined from, respectively 45 and 66 percent to 39 and 60 percent between the 30-34 and 20-24 age cohorts.

As can be observed in Figure 3.4, the cohort-related pattern of increasing spousal age difference by age seem to be curbed in the age group of over-70. At the same time the share of women with younger husbands is significantly larger in this group. This phenomenon can be explained by the excess mortality of husbands who are much older, but probably also by the incidence of levirate marriage, a practice especially prevalent in the Pashtun population, whereby a widow is required to marry a – possibly younger – relative of her late husband.

Figure 3.4 Spousal age difference, by current age of wife (percentage distribution)
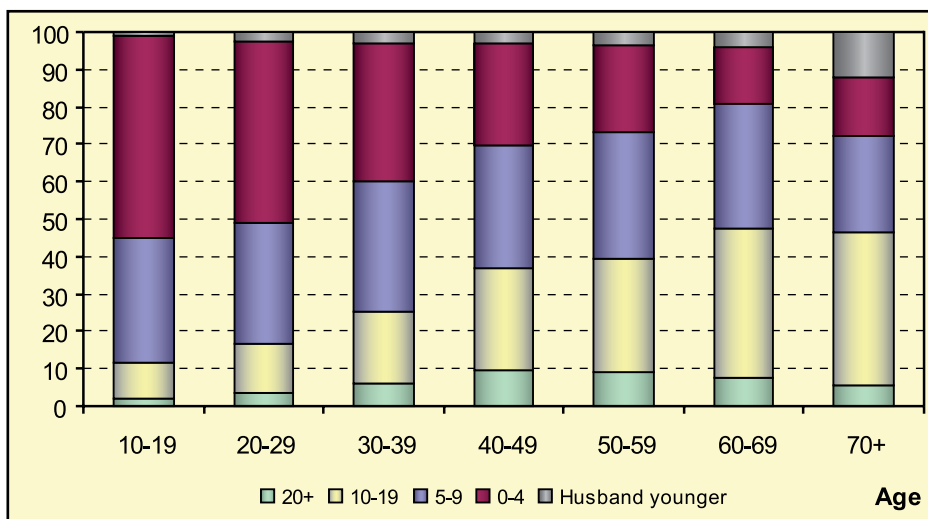
3.4 Fertility and mortality

3.4.1 Total Fertility Rate

High fertility tends to increase poverty by slowing per capita economic growth and by skewing the distribution of consumption against the poor. It also has adverse effects to the health of mothers and children, and reduces female access to education, gainful employment and other personal development opportunities. The determinants and compounding factors of high fertility are many, but generally include poor health services (especially related to information about and provision of family planning), limited knowledge of contraceptive methods (cf. MRRD-CSO 2007[2]), low contraceptive prevalence (see section 8.4.1 of this report), low education and limited empowerment of women (see Section 10.2.1 on reproductive decision making in the household). The Total Fertility Rate (TFR) was added to the Afghan Millennium Development Goals (MDGs) because of the particular importance of high fertility to Afghanistan (Government of Afghanistan 2009).

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[2] The NRVA 2005 indicated that only 31 percent of married women had heard about methods to avoid pregnancies.

As noted in the box titled, "Quality of age reporting" in Section 3.2.1, reporting of ages is notoriously inaccurate in Afghanistan, and up to one million children may be erroneously omitted from estimates of the total Afghan population derived from the NRVA survey. Therefore, caution must be used in interpreting estimates of fertility derived from the survey. For this reason, more than one method was used to calculate fertility to estimate a range of plausible fertility rates (for a detailed description of the applied methods, refer to Annex III).

The first method calculated fertility directly from information on recent deliveries (since August 2005) and included a correction for unreported births of children who later died. *Table 3.5* indicates that for the full period from August 2005 until September 2008, the directly calculated Total Fertility Rate is 5.3 live births per woman (column 2). Fertility rates in the period since February 2007 were lower than the period up to then, suggesting that fertility rates have declined in the last three years across all age categories.

Total Fertility Rate

The Total Fertility Rate (TFR) is a synthetic indicator and refers to the number of live births a woman could expect to have during her reproductive years if she followed the levels of fertility currently observed at every age. The TFR is calculated as the sum of average annual age-specific fertility rates for all reproductive age groups (15-49) in the three years before the survey.

Table 3.5 Fertility estimates

Age	Fertility Rates		Mean Parity
	Direct method	Indirect method, adjusted	
(1)	(2)	(3)	(4)
15-19	0.103	0.122	0.118
20-24	0.259	0.308	1.354
25-29	0.253	0.300	3.293
30-34	0.207	0.246	4.963
35-39	0.134	0.159	6.278
40-44	0.061	0.073	7.023
45-49	0.038	0.045	7.274
TFR	5.274	6.266	

In an indirect method of fertility estimation, the age-specific fertility rates found by application of the direct method are reconciled with the level of fertility indicated by the average parity – the number of children born to a woman – of young women. This procedure combines information about the observed age pattern of fertility with information that likely most accurately indicates the level of fertility, resulting in fertility rates that may be more reliable than either of the constituent data components (United Nations 1983, p. 33).

Application of the indirect method – in more detail described in Annex III – yields adjusted age-specific fertility rates as reported in Table 3.5 (column 3), and a corresponding adjusted TFR of 6.27. While it is impossible to determine which is the most accurate estimate of the total fertility rate in Afghanistan, given data quality issues and limitations in the estimation methods, it is most likely that the current overall TFR is close to 6. Therefore, we propose the current estimate of TFR in Afghanistan is the adjusted rate of 6.27 over the last three years.

The calculation by age group of the ratio between average parity and 'estimated parity equivalents' derived from the direct approach provides an opportunity to identify recent fertility change. If this ratio increases with age, it is likely that recently fertility has declined. Apparently, this is the case for Afghanistan (see Table A.III.3 in Annex III). Fertility decline can also be deduced directly from parity information in Table 3.5 (column 4) if the suggested TFR of 6.27 is compared with the average parity of women aged 40-44 and 45-49. These women have nearly completed their reproductive careers and their parity is a measure of fertility in the past. The difference of around 0.9 with the current TFR is noticeable, but relatively modest.

In international perspective, Afghan fertility is extremely high. Estimates of Afghanistan's TFR by the UN Population Division amounted to 7.03, implying the third-highest fertility in the world after Niger (7.16) and Guinea-Bissau (7.04)

(UNFPA 2008). The present – better evidence-based – NRVA estimate of 6.27 suggests a somewhat lower TFR, but still only ten countries rank higher in the UN list.

Within Afghanistan fertility is higher in rural areas (with a TFR of 6.49) compared to urban ones (5.25), and highest among the Kuchi population, whose women have on average more than seven live births over the course of their lifetimes (see *Table 3.6a*). Education is also related to fertility levels, and women with primary schooling have on average one fewer lifetime birth than women with no schooling (a TFR of 5.49 compared to 6.53). Those with secondary schooling and college education have the lowest fertility levels, with an average of only four births during their lifetimes.

Table 3.6 Total Fertility Rate, by (a) residence, and (b) educational level of mother

a. Residence	TFR	b. Education	TFR
Urban	5.25	None	6.53
Rural	6.49	Primary	5.49
Kuchi	7.28	Secondary	4.01
		College	4.10
Total	**6.27**	**Total**	**6.27**

The negative impact of high fertility and frequent or ill-timed pregnancies on maternal and child health and mortality is well documented. So is their effect on a variety of other development issues, including environmental degradation, poverty (at macro-economic level, as well as at levels of the community and family), malnutrition, and low educational attendance and attainment (Moreland and Talbird 2006, UN Millennium Project 2006, World Bank 2007, Eastwood and Lipton 2001). Consequently, progress on achieving many MDGs depend on addressing fertility in the implementation of Afghanistan's development policies, particularly by reducing mortality, increasing education and improving access to health services, especially those related to reproductive health and family planning.

3.4.2 Child mortality estimates

Infant- and under-five mortality rates are important factors in the explanation of natural population increase and are by far the most important contributors to low life expectancy in most developing countries. In connection with this, they are also among the most revealing indicators of the health status of a population and the functioning of a country's health system.

Infant- and Under-five Mortality Rate

The *Infant Mortality Rate* (IMR) is defined as number of deaths to children under twelve months of age per 1,000 live births. The *Under-five Mortality Rate* (U5MR) relates to the number of deaths to children under five years of age per 1,000 live births.

The NRVA 2007/8 survey included an abbreviated birth history and child mortality section, as part of the women's questionnaire. This section asked ever-married women of reproductive age about any births during their lifetimes, and about their total number of children currently alive, as well as those dead, by sex. A full methodological elaboration is provided in Annex IV to this report.

Sources of error in mortality estimates

Annex IV discusses several sources of error that must be considered when calculating child mortality estimates for Afghanistan from a household survey. One of these related to reporting problems concerning the sex of the child. The natural sex ratio at birth has been found in most settings to be approximately 105 boys for every 100 girls, and the most extreme estimates range from 104 to 107 boys per 100 girls (Dubuc and Coleman 2007). As can be seen in Annex Table A.III.2, the ratio of boys ever born to girls ever born is well above 1.05 for all age groups, at an average of 1.10. The ratio is particularly high among the younger age groups of women.

Sex ratios at birth that are highly skewed can be found in societies with a preference for sons, such as India and China, and may be due to sex-specific feticide. However, although there may be a preference for sons in Afghanistan, none of these considerations can plausibly explain the too-high sex ratio at birth. The skewed ratio is most likely resulting from one or both of two phenomena: intentional misclassification of girls as boys (e.g., due to the perceived shame of having mostly or only girl children) and underreporting of girl children, under the assumption that the total number of boys reported is correct (Ministry of Public Health 2008). The former would affect sex-specific mortality ratios, but not the overall mortality ratio, while the latter would likely affect female mortality ratios as well as the overall mortality ratio.

There is also some evidence of underreporting of dead girls and misclassification of girls as boys when there are all or mostly girl children for a given mother. Sensitivity analyses that were conducted to model likely under-reporting of girls indicate that final mortality estimates did not vary much across different assumptions about the possible missing girls, as the overall proportion of missing girls was not very high.

Final estimates and concluding notes

Based on the data presented from NRVA 2007/8, it is concluded that the best estimate of infant mortality in Afghanistan is 111 deaths per 1,000 live births and that for under-five mortality is 161 deaths per 1,000 live births. These figures for males are 119 and 169, respectively, and are 102 and 153, respectively, for females, for a reference date of April 2004, as shown in *Table 3.7*.

Table 3.7 Infant and child mortality estimates, by sex

Mortality indicator	Sex		
	Boys	Girls	Both Sexes
Infant mortality rate	119	102	111
Under-five mortality rate	169	153	161
Reference period	April 2004		

The estimates from NRVA 2007/8 data of infant and under-five mortality differ somewhat from the estimates based on the Afghan Health Survey (AHS), which estimated infant- and under-five mortality rates at 129 and 191 per 1,000 live births, respectively, for a similar reference date (November 2004) (Ministry of Public Health 2008). There are several possible reasons for differences between these and AHS estimates. First, the NRVA is a national estimate, including urban, rural and Kuchi areas, while the AHS survey only sampled rural households. Second, the AHS used different age groups (the youngest and second-youngest) in calculations of mortality, which directly impacts the estimates, as the youngest age category is known to have higher-than-average child mortality due to more first-time, higher-risk births. Finally, in addition to being a rural-only survey, the AHS excluded areas that were relatively insecure at the time of the survey, including four southern provinces and one eastern one.

Earlier estimates used by the Ministry of Public Health suggested that the infant mortality in Afghanistan was 165 per 1,000 live births (Government of Afghanistan 2009). Although methodological differences could contribute to the difference with the present finding, it is also likely that children are benefiting from improved health care and access to vaccinations for diseases such as measles, polio and tetanus (see also section 8.3 of this report). The estimates of mortality are not very comparable, but the large difference (the NRVA 2007/8 results are 33 percent lower) suggests that infant mortality is declining.

Additional caution should be used in interpreting the mortality estimates, especially infant mortality rates. The Brass method assumes that fertility is relatively constant in the population, and that under-five mortality is constant or linearly declining (United Nations 1990b). Both these assumptions are tenuous in Afghanistan, particularly the first, given the likely declining fertility as seen in the previous section. In the absence of a functioning vital registration system in Afghanistan, a household survey with a full pregnancy or birth history, including dates of children ever born, could produce more robust and accurate estimates of infant and under-five mortality levels.

MDG Indicator 4.1 – Under-five Mortality Rate – and 4.2 – Infant Mortality Rate

Despite possible improvement, only few countries in the world have child mortality rates as high as Afghanistan. For instance, only 11 countries worldwide have an under-five mortality higher than the rate of 161 indicated by the present analysis. The comparable figure for Southern Asia is 77, still high compared to the total of 49 children dying before age 5 worldwide. The table below compares IMR and U5MR for Afghanistan and its neighbouring countries.

Country	U5MR	IMR
Afghanistan	161	111
Pakistan	94	67
Iran	35	30
Tajikistan	94	59

Source for other countries: UNFPA 2008

3.5 Migration

3.5.1 General migration

In-migration

Of Afghanistan's 3.4 million households, a sizable proportion (13 percent) has household members who were living elsewhere sometime during the five years preceding the survey (*Table 3.8*). They may be either internal or international migrants. This overall percentage hides significant variation: 28 percent of Kuchi households have migrants. Furthermore, rural households (13 percent) are more migratory than urban households (10 percent). Especially in the western region – bordering Iran – households tend to be quite migratory.

> **Migration definitions**
>
> An *in-migrant* is defined as someone who during the past five years lived outside the current area of residence for at least three consecutive months. In many cases this in-migrant is a 'return-migrant', that is someone who lived in the current area of residence before. The term 'in-migrant' is used here irrespective of whether the migrant arrived from elsewhere within Afghanistan or from abroad.
>
> An *out-migrant* is anyone aged 15 years or older who was a household member one year ago but has moved away and is no longer considered a member of the household. Note that out-migration is under-estimated to the extent that complete households have moved away.
>
> A *seasonal migrant* is someone who during the past twelve months spent at least one month away from the household for seasonal work.

Table 3.8 Households, by migration status during past five years, and by current residence

Residence	Migration status of household					
	Without any migrant		With migrant(s)		All households	
	Thousands	Percentages	Thousands	Percentages	Thousands	Percentages
Urban	616	90	66	10	682	100
Rural	2,235	87	328	13	2,563	100
Kuchi	139	72	54	28	193	100
National	2,990	87	448	13	3,438	100

All in all, 730 thousand Afghans (6 percent) lived somewhere else during the past five years, of which 46 percent lived abroad (*Tables 3.9* and *3.10*). By comparison, other types of migration are relatively minor: rather surprisingly, rural to urban migration was almost negligible (only 3 percent). In most developing countries rural-to-urban migration is the most important type of move and also other research seems to indicate its importance in Afghanistan (see e.g. AREU 2005). The reverse type of move was more frequent (14 percent). Obviously, Kuchi nomadic moves figure importantly as well, but these too are dwarfed by immigration from abroad. There is some difference between women and men: among women, apart from international moves, Kuchi migration is most important.

Table 3.9 Population, by migration experience during past five years, and by sex

Sex	Migration experience					
	No migration		With migration		Total	
	Thousands	Percentages	Thousands	Percentages	Thousands	Percentages
Male	5,572	91	565	9	6,137	100.0
Female	5,732	97	165	3	5,897	100.0
Both sexes	11,304	94	730	6	12,034	100.0

All over the world, people mostly migrate when they are young adults. We see this pattern reflected among the Afghan men. Like the latter, Afghan women too migrate young, but the difference in age distribution between migrant and non-migrant women is small. There is also little difference in educational levels between in-migrants and non-migrants, although migrants slightly more often attended primary school, compared withnon-migrants.

Neighbouring Iran is by far the most important place of origin of in-migrants, but it is even more important as a destination for out-migrants (*Table 3.10*). Apart from proximity, the fact that people speak the same language may explain part of Iran's popularity as a destination. Pakistan remains an important country of origin, but it is somewhat surprising that it figures rather marginally as far as out-migration is concerned. This might be related to the recent more strict position of the Government of Pakistan to Afghan citizens in the country. On the other hand, countries on the Arabian Peninsula have become important destinations.

Table 3.10 Place of origin of in-migrants and place of destination of out-migrants

Place of origin / Destination	In-migrants		Out-migrants	
	Thousands	Percentages	Thousands	Percentages
Same province, urban	77	11	19	6
Same province, rural	79	11	28	9
Other province, urban	119	16	22	7
Other province, rural	118	16	6	2
Pakistan	102	14	17	5
Iran	228	31	175	56
Arabian Peninsula	2	0	32	10
Other country	5	1	15	5
Total	**730**	**100**	**315**	**100**

Three in five of those who in-migrated sometime during the past five years, originally moved away because of work-related reasons (see also Section 4.5). Seeking security or protection was the reason to move for another 12 percent (also see Section 3.5.2 below), while 7 percent migrated for family-related reasons (marriage or family reunification). Education and health were fairly unimportant reasons. Those who moved abroad (but have since returned), almost universally went there to work or look for work. The exception is Pakistan, where 48 percent had moved because of security reasons. Inter-provincial migration too is dominated by labour migrants. The mean duration of residence elsewhere was 21 months. Especially migration to the Arabian Peninsula and to countries other than Iran and Pakistan, is dominated by fairly short-term stays: 21 and 38 percent of migrants to these destinations stayed at most half a year.

Out-migration
While 13 percent of the households house an in-migrant, 7 percent saw a household member leave during the past year. Out-migration is almost twice as important in rural as in urban areas. In the latter – much smaller – category, less than 5 percent of the households has an out-migrant. Of the 12.8 million Afghans of 15 years and older, 312 thousand – 2.4 percent – have moved out of their household in the past year. This figure is – to an unknown extent – an underestimation of the general out-migration rate, as it does not take into account those households who moved as a whole. Although based on the survey we cannot make reliable estimates of total out-migration, the survey does provide data on the characteristics of migrants who left their household behind. An overwhelming majority of three-quarters of all out-migrants went abroad, with Iran being the most popular destination (56 percent of all out-migrants). Almost all international out-migrants are men (*Figure 3.5*); only in rural-to-rural migration women are in the majority, probably because of marriage. Kuchi migration too involves many women, equally with men. Out-migrants are considerably younger than the general population: almost half the male out-migrants and six out of ten women out-migrants are under 25 (*Table 3.11*).

It is difficult to compare the educational distribution of the population by migration experience. For out-migrants the data are by educational attainment, for the general population by educational attendance. However, as far as comparison is possible, there seems little difference in education between the resident population and the out-migrants. There is no clear evidence of a brain drain and international migrants do not seem to be higher educated than internal migrants.

Most out-migration is work-related, four out of five out-migrants leave for work elsewhere. This is particularly true for the international destinations, and it forms a clear indicator of poverty and the lack of local income-generating opportunities. For rural and short-distance urban migrants, marriage is an important reason to migrate, while for those heading for the towns education plays a role. Security and protection is an important motive for intra-provincial migrants. Pakistan as well as countries outside the region attract students.

Three out of four male out-migrants work as employees, while female out-migrants are more likely not economically active; also in their role as migrants, women remain a largely untapped economic resource. Only among women moving abroad about one in three works as an employee.

Figure 3.5 Percentage male among out-migrants, by type of move
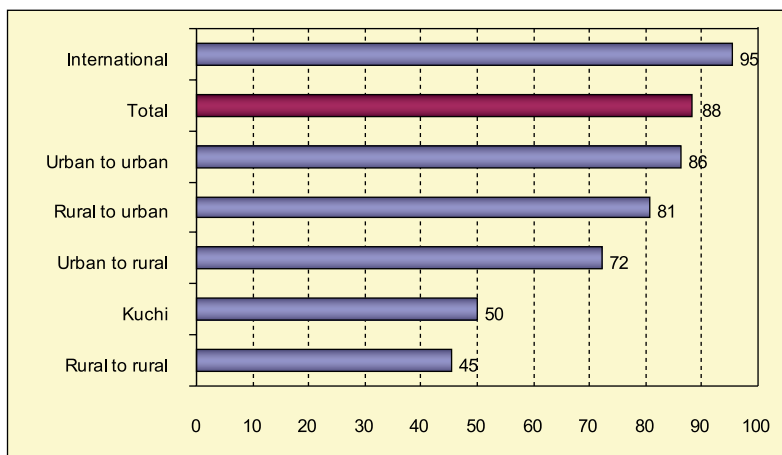
Table 3.11 Percentage distribution of population, by migration experience, and by sex, age[a]

Sex, age	Resident population			Out-migrants during past year
	No migration experience	In-migrants past 5 years	Total	
Male				
15/16-24	33	31	33	49
25-39	31	45	32	42
40+	36	24	35	9
Total	**100**	**100**	**100**	**100**
Female				
15/16-24	32	34	32	59
25-39	36	34	36	29
40+	32	33	32	12
Total	**100**	**100**	**100**	**100**

[a] In-migrant population ages 16 and over, out-migrants ages 15 and over.

3.5.2 Security and returnees

As a consequence of the many years of war and civil unrest, a considerable number of people have fled, once or repeatedly. In recent years, large numbers of refugees and internally displaced have started to return or have resettled elsewhere in Afghanistan. When asked, 60 percent of all households report that this large influx of refugees has affected them negatively during the past year, whether directly or indirectly. Such negative effects are more keenly felt in rural areas (65 percent) and among Kuchi households (61 percent) than in the towns (39 percent).

In order to estimate the size of the phenomenon, heads of households were asked if their household had returned from displacement from outside or inside Afghanistan. *Table 3.12* provides the main results. A total of 265 thousand households have returned, 8 percent of all households and representing over two million people. Displacement has affected Kuchi households most. Half the households were internally displaced, either within the same province, or in

another province (a quarter each). A further quarter has come back from Iran, and the remaining quarter from Pakistan, together representing more than one million persons. Return from other countries has been negligible so far.

Table 3.12 Households returned from displacement, by current residence

Residence	Returned houshoulds						Total
	Total	Of which from:					
		Iran	Pakistan	Other country	Afghanistan		
					Same province	Other province	
In thousands							
Urban	76	18	30	1	17	10	
Rural	122	45	32	1	33	12	
Kuchi	67	2	10	0	12	42	
Total	**265**	**65**	**71**	**2**	**62**	**64**	
In percentages							
Urban	11	23	39	1	23	13	100
Rural	5	37	26	1	27	10	100
Kuchi	35	4	15	0	18	64	100
Total	**8**	**25**	**27**	**1**	**23**	**24**	**100**

Based on the set of questions on general migration in the interview schedule, 5 percent of the households include an in-migrant who had left originally to seek security or protection elsewhere (*Table 3.13*). The national average hides significant differences between types of residence: urban and especially Kuchi households have substantially more returning security seekers than rural households. The low incidence in rural areas may partly be related to the fact that returnees do not always go back to their (rural) place of origin, but instead settle in the towns and cities. It is important to note that the number of households reported differ substantially between Tables 3.12 and 3.13. The former does not include a specific time frame, but that is unlikely to explain all of the difference. It is not obvious how to reconcile these figures.

Many more security seekers have 'returned' and settled in households in the past five years than new ones have left households during the past year (*Table 3.14*). In total 87 thousand security seekers have returned, involving nearly 24 thousand households, while another 11 thousand left, involving 3 thousand households. In so far as they returned, they have stayed away for an average of 32 months. Almost half the returnees come from Pakistan. But two-thirds of those who have moved away to seek security during the past year stayed within the same province; one in four went to Iran.

Table 3.13 Households with in-migrants (past 5 years) and out-migrants (past year)
respectively, who left for reasons of security/protection

Residence	In-migrants		Out-migrants	
	Thousands	Percentages	Thousands	Percentages
Urban	8.0	12	0.6	2
Rural	7.8	2	2.2	1
Kuchi	8.0	15	0.2	2
Total	**23.8**	**5**	**3.0**	**1**

Table 3.14 Place of origin/destination of security seekers

Place of origin / Destination	In-migrants		Out-migrants	
	Thousands	Percentages	Thousands	Percentages
Same province, urban	3.0	3	3.0	27
Same province, rural	7.9	9	4.2	38
Other province, urban	9.0	10	0.2	2
Other province, rural	7.1	8	-	-
Pakistan	48.7	56	-	-
Iran	11.4	13	2.6	24
Arabian Peninsula	-	-	0.8	8
Other country	-	-	0.2	2
Total	87.2	100	11.0	100

Compared to all in-migrants, returning former security seekers are slightly higher educated. On the other hand, among security seeking out-migrants those with no education are over-represented (79 percent against 67 percent among all out-migrants), as are those with tertiary education (4 against 2 percent).

3.6 Conclusions

Afghanistan faces the challenges of a very young and rapidly growing population. Among other things, these challenges emerge in high and increasing demand for education, health services and basic infrastructure, as well as in growing numbers of youth entering the labour market. The present 15-19 years age group of 2.7 million, who should receive secondary education or look for jobs, will in five years time be replaced by the next age cohort, who presently number 3.7 million – one million more. Sectoral development planning and efforts to achieve the MDGs will have to take these perspectives into account. These prospects also emphasize the need of a comprehensive population policy addressing the high levels of fertility and child mortality. For well-founded population policy and population projections required for development planning, a demographic and health survey and a full population census are urgently needed.

The large-scale return of refugees in recent years has augmented the pressure on Afghanistan's infrastructure, labour market and resources. It is telling that the influx of refugees was by far the most frequently experienced shock for resident households. Further investigation into the effects of this influx on the resident population and the present conditions of returned refugees and IDPs themselves is warranted.

Internal and international migration seem to be strategies applied by many to cope with the challenges facing Afghan households. Thirteen percent of households have a member who migrated in recent years, mostly for employment reasons. The present analyses do not show any sign of brain drain in the international migration patterns. Given the apparent high mobility in the Afghan population, the population census should include a well-designed module to capture international and internal migration patterns, especially also in view of population projections.

Special attention should also be given to full coverage of the population in census and survey activities. The common under-enumeration of very young children in developing countries is magnified in surveys among Afghan populations. This is a feature that needs to be investigated in more detail, preferably also using qualitative research. In addition, it is likely that many women are omitted from the statistics, especially those in the adolescent and older age ranges. Each of these groups can be considered in vulnerable conditions and, for instance, constitute specific target groups for health services.

Other vulnerable groups can be defined in terms of household structure. Some 70 thousand households are female-headed and some 380 thousand are headed by either elderly of 65 and over, or by heads under age 20. Also girls engaged in early marriage can be considered in a vulnerable condition, since they often bear responsibilities beyond their physical and emotional capacity. Teenage pregnancy and related maternal health risks, and inequity due to large spousal age differences are common challenges faced by these adolescent girls. The prevailing Afghan marriage pattern also leads to large numbers of widows at relatively young ages. Altogether, more than half a million women are widowed.

On the positive side, the NRVA also exposes encouraging social change. It finds a clear tendency towards smaller age differences between spouses and a noticeable decline of early marriages, which are likely contributions to women's empowerment within marriage and the family. The analysis also provides indications of decreasing fertility and child mortality. The latter reflects the improvement of health services in recent years (see also Chapter 8). Strengthening these developments should be prioritized in policies and programmes on population, health and women.

4 Labour force characteristics

SUMMARY. *Afghanistan's labour market has the typical characteristics of a less developed economy: it is dominated by the agricultural sector and performs poorly in providing productive employment and decent work. More than 90 percent of jobs can be classified as vulnerable employment that does not secure stable and sufficient income. The relatively high labour force participation rate of 67 percent might indicate that many people are compelled to find work for bare household survival. In the case of Afghanistan, the fairly high employment-to-population ratio (62 percent) and the modest unemployment rate (7 percent) should also be interpreted in the sense that people simply cannot afford to be unemployed. This becomes even more evident in view of the barriers for women to participate in the labour force, with the effect that the overall figures disguise an extremely high male employment-to-population ratio and labour force participation rate of 80 and 86 percent, respectively. Closer examination of the hours worked per week and the shares of the employed and unemployed that are unable to meet the most basic needs, indicates that the dichotomy of employment-unemployment as applied in developed economies is of very limited use in Afghanistan, and should be supplemented by measures of underemployment.*

The gender disparity of the labour market is also visible in the distribution of the status in employment – showing that 95 percent of working women are in vulnerable employment (against 67 percent for men) – and in average working hours (30 hours per week for women and 39 for men). Thus, Afghan women face multiple disadvantages on the labour market: fewer work, for less hours and in less secure jobs. For all labour market indicators, the gender gap is especially large in the urban areas.

Widespread poverty and inadequate educational opportunities drive many households to send their children looking for work. In total 1.9 million Afghan children aged 6-17 (21 percent) are employed. According to the formal definition of child labour, of these children at least 1.2 million (13 percent) are performing child labour, thereby jeopardising their health or development. Labour migration is another frequent coping mechanism to escape from poverty. The importance of this strategy is indicated by the fact that 7 percent of all households have a labour in-migrant, 6 percent saw a member leave for work elsewhere and 14 percent had seasonal labour migrants.

4.1 Introduction

The involvement in the production of goods and services is the main livelihood strategy for the vast majority of Afghan households. In a society where pensions and social security benefits are available to only very few and where employment opportunities are scarce, households resort to a variety of employment strategies to escape from poverty. Among others, these include subsistence activities, involvement in low-paid and irregular jobs, child labour and labour migration.

One of the major additions to the NRVA 2007/8 was a number of modules on labour force characteristics. These allow insight into employment strategies and the overall labour market structure of Afghanistan. Section 4.2 describes general labour force characteristics, including labour force participation, employment and unemployment, and Section 4.3 briefly addresses the job characteristics of the employed population. Subsequently, Section 4.4 deals with children engaged in jobs, and more specifically child labour, whereas the final Section (4.5) provides an analysis of labour migration.

> **Decent work**
>
> The concept of decent work is central in the work of the International Labour Organization (ILO). Decent work sums up the aspirations of people in their working lives – their aspirations for opportunity and income; rights, voice and recognition; family stability and personal development; and fairness and gender equality. It is captured in four strategic objectives: fundamental principles and rights at work and international labour standards; employment and income opportunities; social protection and social security; and social dialogue and tripartism.

4.2 Labour force, employment and unemployment

Due to the very large share of children, less than half of the Afghan population is in the official working age of 16 years and over. Within this working-age population of over 12 million people, one-third (four million) is inactive and two-thirds

(8 million) are currently actively engaged in the labour market, either by working or by looking for work. *Table 4.1* gives a breakdown by activity status and by sex and age of the working-age population of Afghanistan.

Table 4.1 Working-age population, by residence, sex, and by activity status, age (in thousands)

Activity status, age	Urban			Rural			Kuchi			National		
	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes
Employed												
16-17	45	14	58	239	134	372	21	13	34	304	160	464
18-24	223	44	267	803	426	1,229	21	41	115	1,100	510	1,610
25-39	337	75	412	1,344	947	2,291	113	85	198	1,795	1,107	2,901
40-64	308	67	375	1,113	617	1,730	85	51	136	1,506	736	2,242
65+	40	4	45	150	32	182	11	4	15	201	40	241
Total	**953**	**203**	**1,156**	**3,649**	**2,155**	**5,804**	**304**	**194**	**498**	**4,906**	**2,553**	**7,458**
Unemployed												
16-17	8	7	15	29	34	63	2	1	3	39	42	81
18-24	39	19	59	74	56	130	3	3	6	116	78	194
25-39	22	12	34	70	26	96	3	2	5	95	40	136
40-64	18	5	22	62	26	88	3	2	5	83	33	116
65+	5	1	6	22	9	31	2	2	4	29	12	41
Total	**93**	**44**	**136**	**256**	**152**	**408**	**14**	**10**	**24**	**363**	**205**	**568**
Inactive												
16-17	78	119	197	112	163	275	4	8	12	193	290	484
18-24	105	262	367	157	511	668	3	26	29	265	799	1,065
25-39	17	309	325	56	651	708	3	39	42	76	999	1,075
40-64	28	300	327	102	541	643	7	32	39	136	873	1,009
65+	56	50	106	140	129	269	13	10	23	209	189	398
Total	**283**	**1,040**	**1,322**	**567**	**1,996**	**2,563**	**29**	**116**	**145**	**879**	**3,151**	**4,030**
Total working-age population												
16-17	131	139	270	379	331	710	27	22	49	536	492	1,028
18-24	368	325	693	1,034	992	2,027	80	70	150	1,482	1,388	2,869
25-39	375	396	771	1,471	1,624	3,095	119	127	246	1,965	2,146	4,112
40-64	353	371	725	1,277	1,185	2,462	96	85	180	1,726	1,641	3,367
65+	101	55	156	312	170	482	26	16	42	439	242	680
Total	**1,328**	**1,287**	**2,615**	**4,472**	**4,302**	**8,775**	**347**	**320**	**666**	**6,148**	**5,909**	**12,057**

4.2.1 Labour force participation

Afghanistan's labour force – all persons in the working age of 16 and over who are currently active by being either employed or unemployed – amounts to over 8 million people, 5.3 million males and 2.8 million females. The labour force participation rate – the share of the working-age population that is currently employed or unemployed[1] – is a key indicator in the analysis of the human resources available for the production of goods and services and for the projections of labour supply. Comparison of labour force participation for both sexes combined – see *Figure 4.1* – show high rates in rural areas and among Kuchi's (respectively 71 and 78 percent). This is typical for less developed economies, in which educational opportunities are few, where most people are engaged in labour-intensive agricultural activities, and where wage earning opportunities are scarce, so that many household members need to work to provide sufficient income. In urban areas, the overall labour force participation is significantly lower (49 percent), indicating opportunities other than employment, such as school attendance (see Section 7.3) and perhaps less necessity to work due to lower poverty (see Chapter 6). Compared to the region of South Asia and the world at large, the overall labour force participation in Afghanistan is high.

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[1] For definitions of employed and unemployed, refer to the glossary at the end of this report.

Figure 4.1 Labour force participation rate, by residence and by sex
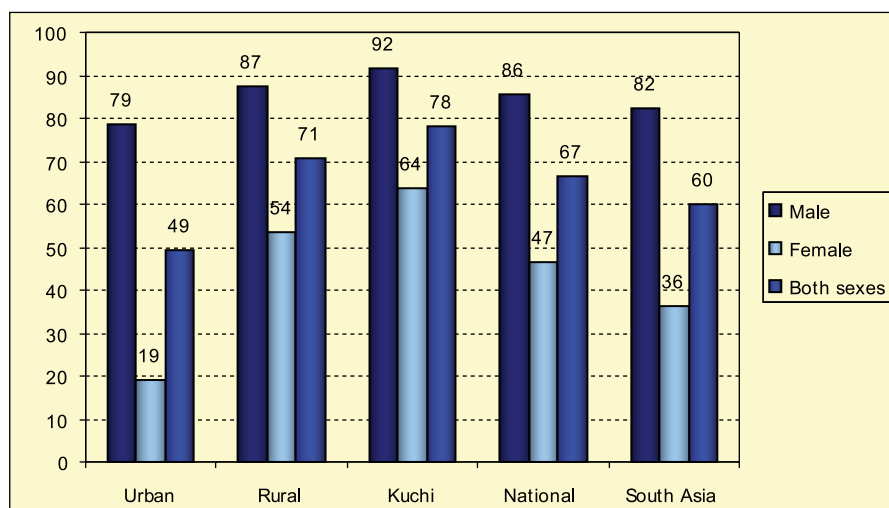
Source for South Asia data: ILO 2007

The overall labour force participation rate of 67 percent in Afghanistan conceals large differences by sex and age. Although generally labour force participation is lower for females than for males, in the Afghan economy this gender gap is large. Less than half (47 percent) of the working-age females is currently active on the labour market, against 86 percent of males, a gap of 39 percent points. The gap is relatively small in the rural and Kuchi populations (respectively 34 and 28 percent points), due to female engagement in agricultural and pastoral activities. However, in urban areas it is as large as 60 percent points because of a very low female labour force participation of 21 percent.

The low female participation rates indicate that women are still a significant untapped potential in the country. Underlying causes are a variety of competing demands and barriers for women, such as their care-taking responsibility for children, elderly and the disabled, high fertility, household chores, low educational attainment and restricted mobility.

Labour force participation by age group shows a typical inverted U-shape with a peak in the prime working-age spans of 25-39 and 40-64 (see *Figure 4.2*). The pattern for males is more pronounced and at a higher level and than for females. The largest gender gap of 45 percent points is found in the age group 40-64.

Figure 4.2 Labour force participation rate, by sex and age
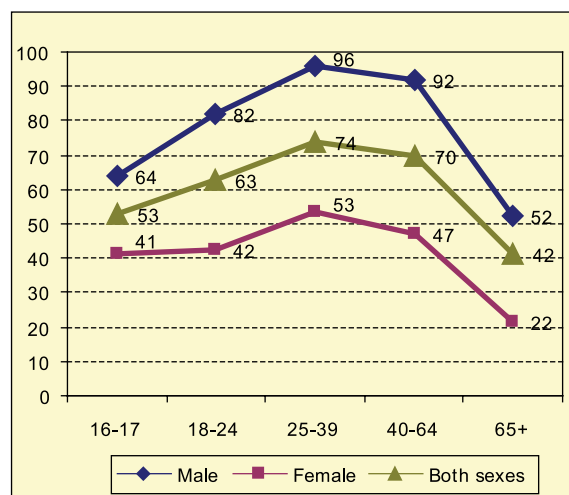
4.2.2 Employment and unemployment

Conceptualisation of employment and unemployment

The labour force participation rate should be seen in conjunction with the employment-to-population ratio and the unemployment rate (see below). These two indicators are usually considered the single, most informative indicators for the performance of the labour market – in particular its ability to create employment – and of the economy as a whole. However, their interpretation may be far from straightforward and as an indicator for policy purposes, the unemployment rate is of limited use in developing countries. A high employment-to-population ratio and a low unemployment rate are typically considered as positive, but paradoxically in developing countries they often disguise substantial underemployment, poverty and low productivity. In countries without well-developed social protection schemes, many individuals simply cannot afford to be unemployed, but must resort to unproductive, low-paid jobs, often in the informal sector and for the few hours that work is available. In these situations a low unemployment rate should be interpreted in the sense of poorly performing labour markets. However, the unemployment rate by itself does not shed light on the quality of jobs – that is the extent to which jobs are productive and provide workers with sufficient and secure incomes (cf. ILO 2008a, see also the Box on 'Decent work' in Section 4.1).

At present, no agreed exact definition of employment and unemployment exists in the statistical system of Afghanistan. In accordance with ILO recommendations, the analyses in this report classifies all working-age persons who are engaged in economic activities as employed (ICLS 1982). This definition is necessary in order to allow for an exact correspondence between employment statistics and production data, as required for the estimation of GDP in agreement with the System of National Accounts (SNA). The inclusion of people working for only few hours a week – even if it is only one hour – is also of particularly importance to assess the contribution of women and children, who disproportionally work fewer hours for whatever reason (not willing, difficult access to employment, competing commitments like household chores and education).

Of the remainder of the working-age population that is not working, people are classified as unemployed if they satisfy the condition of seeking work.[2] In addition, the 'relaxed definition' of unemployment is applied, meaning that potential workers who have become discouraged in their attempts to find work and have stopped looking for it, are included in the unemployed.

For the purpose of designing employment policies in Afghanistan it is of evident importance that appropriate indicators are developed that overcome the limitations of the unemployment rate. Efforts to create productive and gainful employment do not only relate to unemployment as such, but in the context of Afghanistan in particular to underemployment. Therefore, in a future Labour Force Survey measures of genuine labour underutilization should be incorporated.

The NRVA 2007/8 did not include such measures for underutilization of labour, but adopting an alternative criterion of working for at least 8 hours a week for being employed may give some indication of time-related underemployment in Afghanistan. Analysis in the last part of this sub-section indicates the implication of applying the 8-hour criterion.

Employment-to-population ratio and unemployment rate [3]

Table 4.2 provides a breakdown of the employment-to-population ratio – the proportion of the working-age population that is employed – and the unemployment rate– the number of unemployed as a percentage of the labour force. It shows overall fairly high participation in employment (62 percent) and low unemployment (seven percent). However, a strong differentiation exists if the employment-to-population ratio is broken down by sex, especially in the urban context. Although variation by gender in overall unemployment is very small, again in the urban context a noticeable difference is observed, indicating on the one hand a relatively strong desire for urban women to work and on the other restrictions to their access to the labour market.

Additional analysis (not shown here) indicates that pockets of unemployment occur among youth under age 25 (with an unemployment rate of 10 percent for males and 15 for females), and among literate women (16 percent, against seven percent for literate men) and women with any form of education (18 percent, against eight percent of educated men). Apparently, the Afghan labour market provides difficult access to new entrants and educated women, which implies a serious waste of human resources.

In absolute numbers, the employed population consists of 4.9 million males and 2.6 million females. The gender imbalance is even much stronger if the category of family workers is excluded and only persons engaged in paid employment are concerned (see also Section 4.3.1). The total number of unemployed consists of 363 thousand males and 205 thousand females.

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[2] The third formal condition for unemployment – next to not working and seeking work – is availability for work. The NRVA did not measure this attribute; in the analysis it is assumed that people who seek work are also available.
[3] All figures are based on the standard 1-hour work criterion for being employed.

Table 4.2 Employment-to-population ratio and unemployment rate, by sex, and by residence

Residence	Employment-to-population ratio, sex			Unemployment rate, sex		
	Male	Female	Both sexes	Male	Female	Both sexes
Urban	72	16	44	9	18	11
Rural	82	50	66	7	7	7
Kuchi	88	61	75	4	5	5
National	**80**	**43**	**62**	**7**	**7**	**7**

The agricultural nature of Afghanistan's economy and the country's climate conditions produce considerable fluctuations in unemployment rates. *Figure 4.3* shows especially volatile changes in unemployment in rural areas across the farming seasons, ranging between 65 and 169 percent of the annual rural unemployment rate. Urban unemployment varies less, although it also peaks in the period November-January. Besides seasonal changes in urban employment opportunities, this is possibly also caused by a competition and replacement effect of rural labour seeking temporary jobs in urban areas in the low agricultural season. The annual variation in unemployment is more pronounced for men than for women, except in urban areas.

Figure 4.3 Unemployment rate, by season and by residence
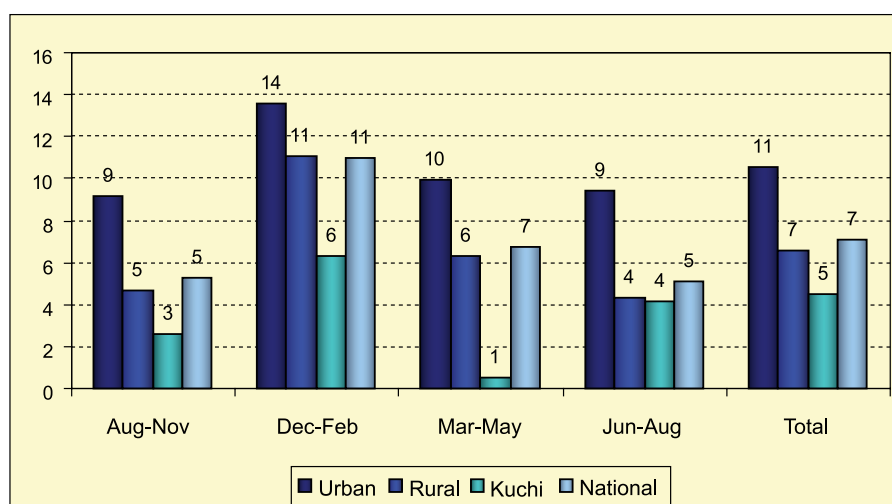
Underemployment

The unemployment rate is an inadequate indicator to measure the performance of the labour market and widespread labour underutilization in Afghanistan. One alternative way to get some grip on this phenomenon with available NRVA data is to consider those who are working less than 8 hours per week as unemployed, even if this uses the incorrect assumption that these persons are available for more work and are seeking or willing to work more hours. This assumption is particularly questionable in the case of many women and children-in-education, who are occupied for the largest part of the day by household tasks and schooling.[4]

In the absence of better alternatives, the 8-hour criterion for being employed is applied and the results are compared with the standard unemployment rates in *Figure 4.4*. As per definition, the 8-hour unemployment rate is higher than the standard 1-hour version: 15 percent compared to 7 percent at national level. One relevant observation is that overall unemployment in urban areas shows only a small increase – from 11 to 13 percent – whereas in rural areas it more than doubles – from 7 to 15 percent. This indicates that in urban areas relatively few people work less than 8 hours (2 percent of the labour force) and in rural areas relatively many people work few hours (8 percent of the labour force) (see also Section 4.3.3).

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[4] People working less than 8 hours, but who are not available for more work and/or are not seeking more work should be classified as 'inactive' and not as 'unemployed'. To the extent that this would apply to all persons working less than 8 hours, the labour force participation rate would decrease from 67 to 61 percent (for men from 86 to 82 and for women from 67 to 61 percent), and the unemployment rate would slightly increase from 7 to 8 percent (for men the rate remains almost the same and for women it increases from 7 to 9 percent).

Even more remarkable is the gender-specific impact of the adjusted definition. Overall, male unemployment rises from 7 to 12 percent and rural male unemployment even slightly more (to 13 percent). However, urban unemployment does not change to a significant degree (a rise from 9 to 10 percent only), again indicating that only few urban workers work less than 8 hours per week. On the other hand the unemployment pattern for women completely changes: the share of unemployed triples to 21 percent and shows particularly high unemployment rates in rural and urban areas (20 and 28 percent, respectively). This indicates that a significant 14 percent of women work less than 8 hours.

Figure 4.4 Unemployment rates for 1-hour and 8-hours work criteria, by residence and sex
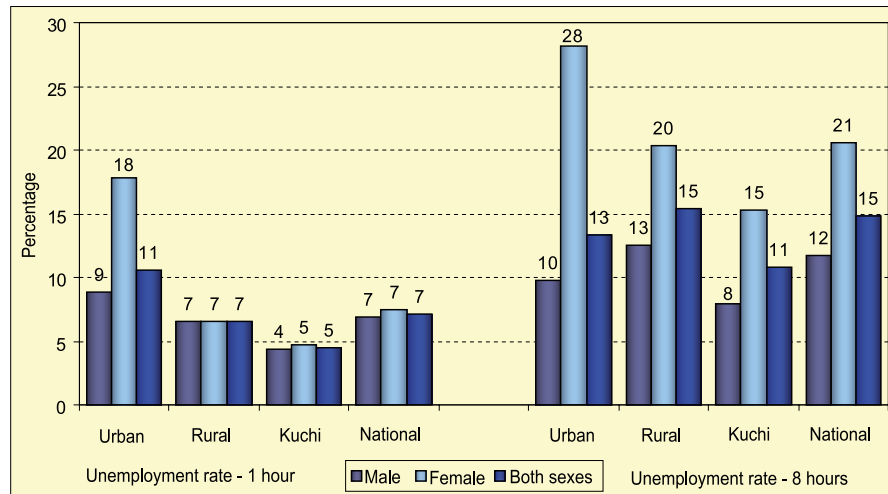
The 8-hour unemployment measure for women is, however, particularly unreliable. It is likely that many of the additionally unemployed women are occupied with care and household tasks and cannot or do not want to be engaged in more work than they presently do. Therefore, these women should not be classified as unemployed, but as either inactive or employed. Since it is especially the contribution of these women that raises the overall unemployment rate from the 1-hour to the 8-hours definition, the credibility of the latter as a measure of unemployment or even underemployment is critically undermined.

Cross-classifying the weekly working hours of the employed by poverty status (see also chapter 6) indicates that at any level of working hours a significant share of the employed cannot extract sufficient income to provide sufficiently for their families. Overall, 35 percent of the employed are poor, but even of those working 60 or more hours per week, 29 percent cannot meet the basic needs (*Figure 4.5*). On the other hand, it is observed that the percentage poor among the labour force that is unemployed (38 percent) hardly differs from that of the employed. This may indicate that being unemployed is not necessarily a sign of impoverishment, but may partly be representative of those that can afford being unemployed, for instance because of other household incomes.

The message of Figure 4.5 is clearly that being employed or unemployed according to the one-hour criterion, nor any other criterion solely referring to the actual number of hours worked, provide an adequate indication of the extent to which the labour market of Afghanistan is able to provide sufficient and productive labour opportunities. Measures of underemployment are essential to supplement the deficient concept of unemployment in the situation of Afghanistan.
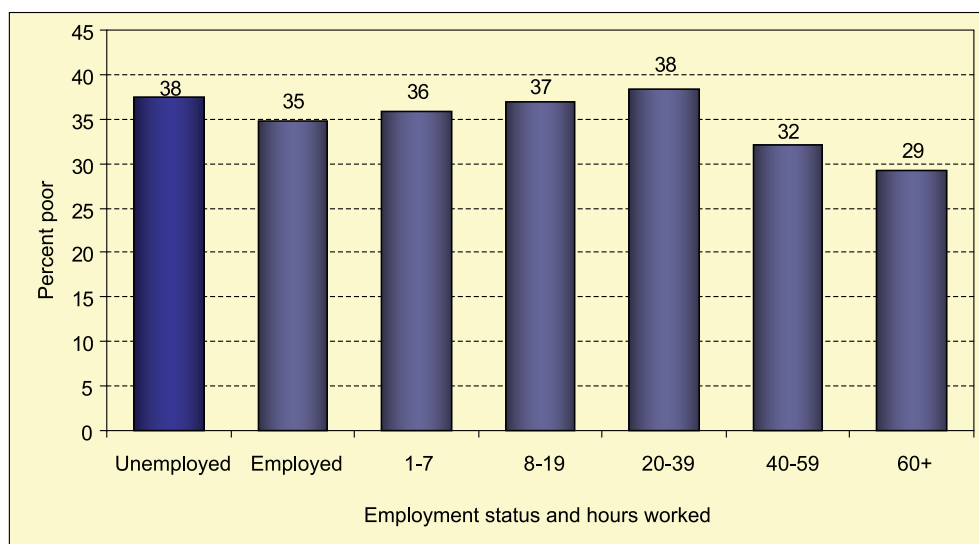
4.3 Characteristics of employment

4.3.1 Status in employment

Status in employment is an indicator of the types of economic risk that the employed face in their work, the strength of institutional attachment between the person and the job, and the type of authority over establishments and other workers. The NRVA 2007/8 distinguishes several categories of workers, largely in line with the International Classification of Status in Employment (ICSE-93). A breakdown of employment information by status in employment provides a statistical basis for describing workers' behaviour and working conditions, and for defining an

> **MDG Indicator 1.7: Proportion of own-account and contributing family workers in total employment**
>
> This indicator is another recent addition to the official international list of MDG indicators for monitoring progress on achieving target 1.B: Achieve full and productive employment and decent work for all.
>
> The NRVA indicates that 77 percent of the employed are in the vulnerable categories of own-account and contributing family workers. If day labourers are also included, the figure would rise to 91 percent The situation in neighbouring Pakistan and Iran is considerably better with, respectively 62 and 48 percent in vulnerable employment.

individual's socio-economic group. Thus, a high proportion of salaried workers in a country generally signifies advanced economic development. On the other hand, if the proportions of day labourers, own-account workers and family workers are sizeable, it may be an indication of a large agriculture sector and low growth in the formal economy. According to the ILO, these groups can be considered to be in vulnerable employment, since they are likely to be characterised by informal work arrangements and insecure employment, unstable and inadequate earnings, low productivity, and a lack of safety nets that guard against loss of incomes during economic hardship (ILO 2007, ILO 2009).

Table 4.3 shows that overall, the large majority of the employed in Afghanistan (77 percent) fall within the category of vulnerable employment.[5] Almost all women (95 percent) and Kuchi (90 percent) do so. Salaried workers – with nine percent of the total labour force – are the only recognizable group in the labour market that can be considered to have secure jobs. As indicated in table 4.3, the occurrence of salaried work is mainly an urban phenomenon.

There is a strong gender differentiation across the status-in-employment categories, as day labourers, salaried workers, employers and own-account workers are mainly male (ranging between 84 and 97 percent, data not shown here), and the category of unpaid family workers is largely female (78 percent).

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[5] For reasons of international comparability, day labourers are not included in vulnerable employment, since many countries do not distinguish this as a separate group in labour statistics. However, they fully qualify the criteria of vulnerable employment. If this category would be included, the total percentage of vulnerable workers would rise to 91 percent.

Table 4.3 Population 16 years of age and over, by residence, sex, and by status in employment (in percentages)

Status in employment	Residence, sex											
	Urban			Rural			Kuchi			National		
	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes
Day labourers	14	3	12	22	1	14	14	1	9	20	1	14
Salaried workers	29	27	29	8	2	6	2	0	1	12	3	9
Employers	0	0	0	1	0	1	0	0	0	1	0	0
Own account workers	54	31	50	57	20	43	62	15	44	56	20	44
Unpaid family workers	3	39	9	12	77	36	22	84	46	11	75	33
All employed	100	100	100	100	100	100	100	100	100	100	100	100
Vulnerable employment	71	73	71	91	98	94	98	100	99	88	96	91

4.3.2 Industry and occupation

The economy of Afghanistan is dominated by the agricultural sector. Around 59 percent of the employed population is engaged in work in agriculture or livestock (see *Figure 4.6*). Only urban areas have a more balanced distribution, with trade (29 percent), various services (18 percent) and public administration (14 percent) being the most important industries.

Given the under-representation of women on the labour market, it can be expected that most industries reflect a strong majority of male workers. This is indeed the case in construction, transportation and communication, trade, education, and public administration, with a male presence ranging from 74 (education) to 99 percent (construction, transport and communication) (data not shown here).

MDG Indicator 3.2: share of women in wage employment in the non-agricultural sector

The MDG indicator is a measure of gender equality and women's empowerment, as well as the degree to which labour markets are open to women in industry and service sectors, which affects not only equal employment opportunity for women but also economic efficiency through flexibility of the labour market and, therefore, the economy's ability to adapt to change. A higher share in paid employment could secure for women better income, economic security and well-being.

In Afghanistan, women remain at a disadvantage in securing paid jobs. Their overall share in wage employment in the non-agricultural sector is only eight percent, which is even significantly below the average for Southern Asia (17 percent), the region with the lowest share in the world.

The only sectors with large female contributions are 'other services' (32 percent) and agriculture and livestock (44 percent), whereas manufacturing has a majority of women in largely home-based craft industries (70 percent; among Kuchis even 95 percent). Urban areas deviate from the general picture in the sense that there is almost a gender balance in the education and manufacturing sectors (49 and 48 percent women, respectively) and more women than men are engaged in the agriculture and livestock industry.

Figure 4.6 Distribution of the employed population 16 years of age and over across economic sectors and residence (in percentages)
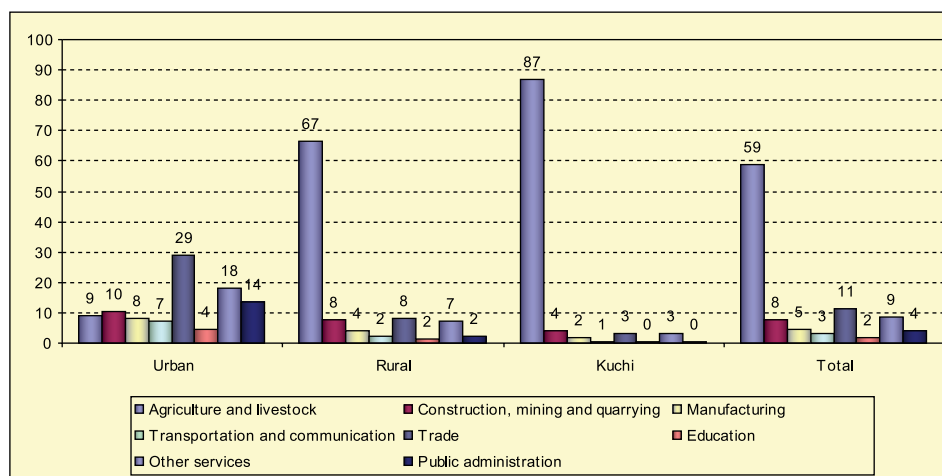
The NRVA 2007/8 did not collect population-wide information about occupations, but the occupational distribution can largely be deduced from the industry distribution. There can be little doubt that the large majority of employed persons is employed as agricultural workers, either skilled or unskilled, at a distance followed by craft and trade workers, construction labourers and service workers.

4.3.3 Working hours

Noticeable differences exist between the number of hours worked across the urban, rural and Kuchi populations. The urban employed work on average significantly longer than the rural and Kuchi: 48 hours per week against 34 and 38 hours, respectively (*Figure 4.7*).[6] For 28 percent of the urban workers an average working week of even 60 hours or more was reported, and only 9 percent work less than 20 hours. The variation across the residential populations is largely caused by male workers, as averages for females vary only little.

Figure 4.7 also shows that women are occupied in work for much less time than men, especially in the urban sector. This further deteriorates women's disadvantaged position on the labour market, given their already low employment ratio. There is also a differentiation in average working hours by age, revealing an inverse U-shaped pattern, with working hours peaking in the age group 25-39. The age effect is more pronounced for men than for women, and more among rural workers than in the other working populations.

Figure 4.7 Average number of weekly working hours by the employed population, by residence, and by sex
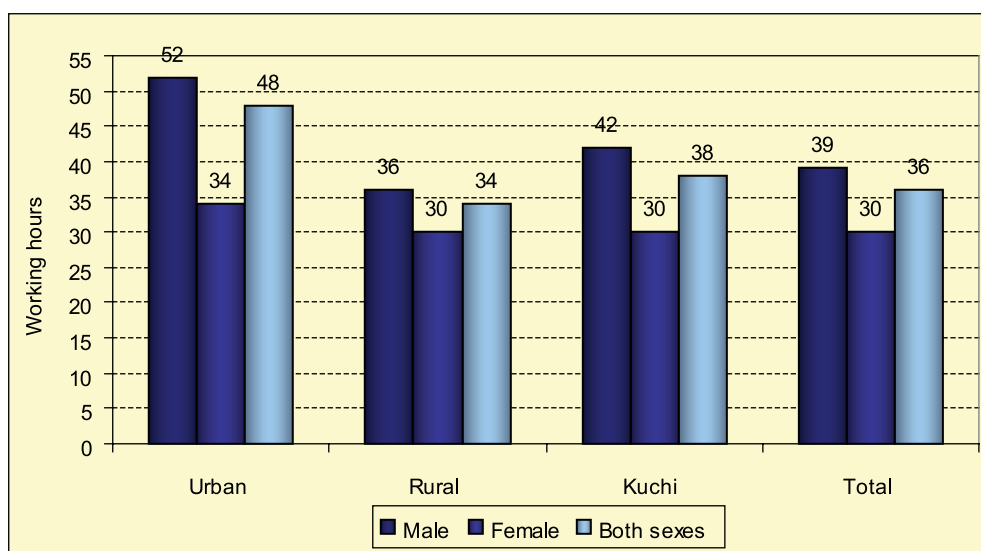
4.4 Children and work

In view of participation in education (see Section 7.3) and the need for additional income in many Afghan households, a significant number of children is involved in work or employment. The risk of children engaged in employment is that the work activities in various ways may jeopardize their health or development. However, this is not necessarily the case for all child employment. The concept of child labour was introduced to identify the type of child employment that exposes children to harmful conditions. Its definition is a long-debated issue on many international fora, and is applied differently across countries. Nevertheless, international recommendations were approved at the 2008 18th International Conference of Labour Statisticians, in consultation with – among others – ILO and UNICEF (ILO 2008b).

The adopted definition specifies child labour along four dimensions (see also Box 'Child labour' below):
- Covering economic production activities, falling in the System of National Accounts (SNA) production boundary.
- The nature of the work children are involved in, in the sense of (a) light work, (b) other, not hazardous work, (c) hazardous work, and (d) worst forms of child labour.[7]

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[6] In the period August-October, covering the harvest season, working hours of the rural and Kuchi working population are significantly higher than the annual average.

[7] For definitions, see the glossary at the end of this report.

- Age, according to recommended age brackets of 5-11, 12-14 and 15-17 years of age.
- Number of hours worked.

In Afghanistan, no clear determination of child labour exists, other than that the formal age at entry in the labour market is 16 years, and that for specific types of light work a minimum age of 14 is allowed. In view of the international guidelines for child labour, the present analysis attempts to produce statistics accordingly. However, the NRVA data do not sufficiently specify the nature of the work done by children, so that the results are at best a conservative approximation. Consequently, a more general description of children engaged in productive work – working or employed children – is also provided.

The total number of working children in the age range 6-17 is around 1.9 million, which corresponds to 21 percent of all children in that age bracket (see *Table 4.4*). The incidence rises from 12 percent in the youngest age group of 6-11 year olds, to 27 percent in the middle group aged 12-14, and to 42 percent in the oldest age group of 15-17 year olds. It is consistently higher among Kuchis than among rural and especially urban populations. The working incidence of girls is consistently lower than that of boys, typically at a level of around 60 percent of that of boys, except for urban areas where it is even lower and the gap is increasing with age.

Child labour

In accordance with the recommendations of the 18th ICLS, child labour includes the following categories of children:

1. Children age 5–11 years, engaged in any economic activity;
2. Children age 12–14 years, engaged in any economic activity for at least 14 hours a week, or any hazardous work or worst forms of child labour;
3. Children age 15–17 years, engaged in non-hazardous economic activities for at least 43 hours per week, and those engaged in any hazardous work or worst forms of child labour.

Looking at the narrower ILO definition of child labour, similar patterns at lower levels are observed for the incidence by sex and residence, but here the highest incidence by age is found in the middle group. Overall, at least 13 percent of children aged 6-17 are involved in child labour. This corresponds to around 1.2 million children, of whom close to 800 thousand are boys and 400 thousand are girls, and some 550 thousand are children under age 12. As the NRVA data cannot provide full specifications of the nature of work done by children, the true figure for child labour is between the identified 1.2 million and the 1.9 million of all working children.

Most child labour is done within the dwelling (41 percent), on the land or in gardens (37 percent). However, the distribution sharply differs by sex in accordance with practices of female mobility. Around 73 percent of girls work inside the dwelling against 25 percent of boys; the corresponding figures for work on the land is 18 and 47 percent. Urban child labour deviates from the overall pattern, as here the employment in shops, restaurants, markets, etc. is the major place of work (37 percent), next to the dwelling (35 percent) and selling on the street (10 percent). Even more than among the rural and Kuchi populations, the work of urban girls is confined within the house (90 percent).

Engagement in work is clearly a risk for the educational development of children. For each of the primary, secondary and high school age groups, the share of working children not attending school is twice as high as the corresponding share of children not working (respectively 8 versus 4, 17 versus 8, and 32 versus 14 percent). Children involved in work according to the narrower definition of child labour have even higher non-attendance rates. The adverse effect of working seems to be stronger for boys than for girls.

Age, child labour and working children	Residence, sex											
	Urban			Rural			Kuchi			National		
	Boys	Girls	Both sexes	Boys	Girls	Both sexes	Boys	Girls	Both sexes	Boys	Girls	Both sexes
Absolute numbers (in thousands)												
6-11	444	427	870	1,944	1,809	3,753	158	142	300	2,546	2,377	4,923
Working children, of whom	15	8	23	292	167	460	43	24	67	351	199	550
Child labour	15	8	23	292	167	460	43	24	67	351	199	550
Not working	429	419	847	1,651	1,642	3,293	115	118	233	2,195	2,179	4,373
12-14	250	237	487	879	794	1,673	72	52	124	1,200	1,083	2,284
Working children, of whom	40	13	52	323	175	497	40	19	59	402	206	608
Child labour	37	11	48	243	121	365	33	14	47	313	146	459
Not working	210	225	435	557	620	1,176	32	33	65	798	877	1,675
15-17	204	215	419	651	553	1,204	56	34	90	911	803	1,714
Working children, of whom	61	18	79	377	202	580	41	18	60	479	238	718
Child labour	30	6	36	77	33	111	13	4	18	121	43	165
Not working	144	197	341	273	351	625	14	16	31	431	564	996
Total	**898**	**879**	**1,777**	**3,474**	**3,157**	**6,630**	**286**	**228**	**514**	**4,657**	**4,264**	**8,921**
Working children, of whom	116	39	154	992	544	1,536	125	61	186	1,232	644	1,876
Child labour	83	24	107	613	322	935	90	42	132	785	388	1,174
Not working	782	840	1,623	2,481	2,613	5,094	161	167	328	3,425	3,620	7,045
Incidence rates												
6-11												
Working children	3	2	3	15	9	12	27	17	22	14	8	11
Child labour	3	2	3	15	9	12	27	17	22	14	8	11
12-14												
Working children	16	5	11	37	22	30	55	37	48	33	19	27
Child labour	15	4	10	28	15	22	46	27	38	26	13	20
15-17												
Working children	30	8	19	58	37	48	74	53	66	53	30	42
Child labour	15	3	9	12	6	9	24	13	20	13	5	10
Total												
Working children	13	4	9	29	17	23	44	27	36	26	15	21
Child labour	9	3	6	18	10	14	31	19	26	17	9	13

4.5 Labour migration

4.5.1 In-migration

Widespread poverty and a lack of income-generating opportunities drive many Afghans to go and look for work elsewhere (see e.g. Ghobadi et al. 2005; AREU 2005). It is therefore not surprising that work is the most important reason for in-migrating Afghans to have moved elsewhere during the past five years (see also section 3.5). More than half the households with in-migrants (239 thousand, or 53 percent) include such labour migrants. As for general in-migration, the western region stands out, with above average returning labour migrants. Labour migration is an almost exclusively male phenomenon: 94 percent of labour in-migrants are men, compared to 77 percent of all in-migrants (and to 51 percent of the total population aged 16 or older).

> **Labour migration**
>
> A (returning) *labour in-migrant* as defined here is someone who has moved to the current place of residence some time during the past five years and whose original reason for moving away was work-related.
>
> A *labour out-migrant* has moved away from the present household during the past year in order to go and (look for) work elsewhere.

Almost three out of four labour in-migrants did not attend school, but those in urban areas much more often have primary or secondary education (see *Figure 4.8*).

Figure 4.8 Highest level of education attended by returning labour migrants, by residence (in percentages)
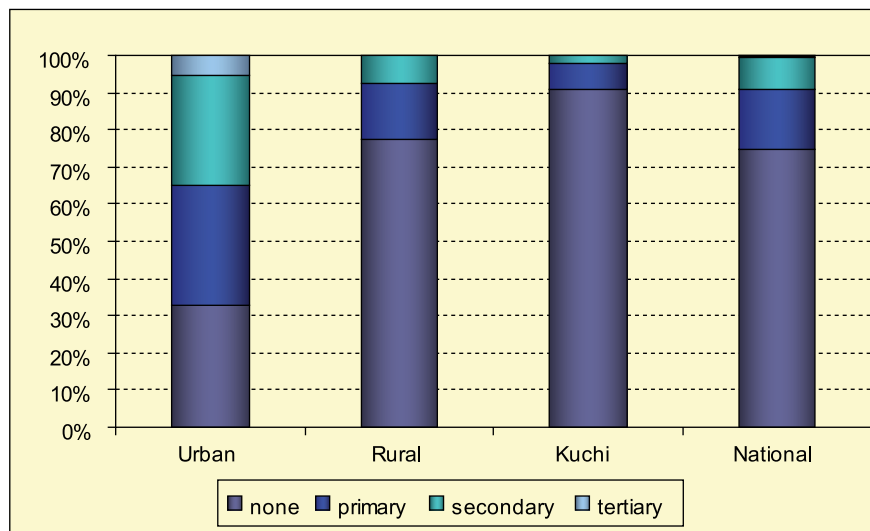
Iran is by far the most important origin of Afghan labour immigrants and it is also the destination of almost two in every three recent labour out-migrants (*Table 4.5*). Clearly, labour-migration is a strategy employed by many, and it is all the more feasible for households in the region neighbouring Iran. Mean duration of residence abroad is 16 months, with most returning labour migrants (61 percent) staying abroad between 6-23 months. Most of the labour migration within Afghanistan is interprovincial, whether rural or urban in origin.

Table 4.5 Place of origin of labour in-migrants and place of destination of labour out-migrants

Place of origin / Destination	In-migrants		Out-migrants	
	Thousands	Percentages	Thousands	Percentages
Same province, urban	16	4	7	3
Same province, rural	21	5	7	3
Other province, urban	85	19	16	7
Other province, rural	76	17	3	1
Pakistan	34	8	11	4
Iran	205	46	169	67
Arabian Peninsula	2	0	31	12
Other country	3	1	10	4
Total	443	100	254	100

4.5.2 Out-migration

Seven percent of all households host a returning labour in-migrant, and 6 percent saw a household member leave during the past year, to go to work elsewhere. Thus, slightly over half the households with an in-migrant is affected by labour migration, but among households with out-migrants this figure rises to 81 percent, indicating the dominance of labour-related motives in out-migration (within Afghanistan, but especially to other countries). As for all out-migrants, there seems no evidence of brain-drain among labour out-migrants.

Given that male labour out-migration is so dominant in total male out-migration, the characteristics of the two groups differ relatively little (cf. section 3.5.1). Relative to returning labour in-migrants, out-migrants are more concentrated in the age group 15-24 and few are over 40 (*Table 4.6*). The small group of female labour migrants stands out. For one thing, they tend to be quite older than the total group of female in-migrants (which is dominated by marriage migration): more than 30 percent of female labour out-migrants is 40 years or older, and in that they differ not only from the female out-migrants in general (12 percent age 40 or older), but also from male out-migrants over 40 (9 percent).

Table 4.6 Age distribution of labour migrants, by sex (in percentages)

Age	Male		Female	
	In-migrants	Out-migrants	In-migrants	Out-migrants
15-24	29	49	28	35
25-39	50	42	42	33
40+	21	9	31	32
Total	**100**	**100**	**100**	**100**

4.5.3 Seasonal migration

In order to assess the importance of short-term or seasonal migration, people were asked whether any household member had spent at least one month away from the household for seasonal work in the past 12 months. Of all households, 14 percent was involved in seasonal work. Among the Kuchi, obviously, the figure is well above average, with 22 percent of the households involved in seasonal work. In urban households, on the other hand, seasonal work is a rare phenomenon (5 percent). With 16 percent, rural households take the middle. The western region, but also some provinces in the northwest, east and northeast have above average involvement in seasonal migration. Ghor (66 percent households with seasonal migrants) and Faryab (82 percent) stand out particularly.

The age distribution of seasonal workers is somewhat younger than that of the non-migrant population; 75 percent is below age 40, compared to 64 percent of non-migrants. Seasonal work is more often carried out by those who attended at most primary school, while those with at least a secondary education tend to be somewhat less involved: among seasonal migrants, 11 percent had at least secondary education, against 16 percent of non-migrants. An exception seems to be with urban residents, where the highly educated report more frequently involvement is seasonal work.

Urban seasonal workers mostly go abroad or to another urban area, especially within the same province (*Figure 4.9*). Destinations of rural seasonal workers are quite diverse, with about half staying in a rural area within the same province or going to a town in another province. Kuchi seasonal migration is practically all rural, over longer or shorter distances.

In accordance with the way the interview question was phrased, duration of seasonal migration per definition is between 1 and 12 months. The mean overall duration was slightly over four months, but for urban seasonal workers it is somewhat longer (5.6 months).

Figure 4.9 Place of stay during absence for seasonal work, by current residence (percentage distribution)
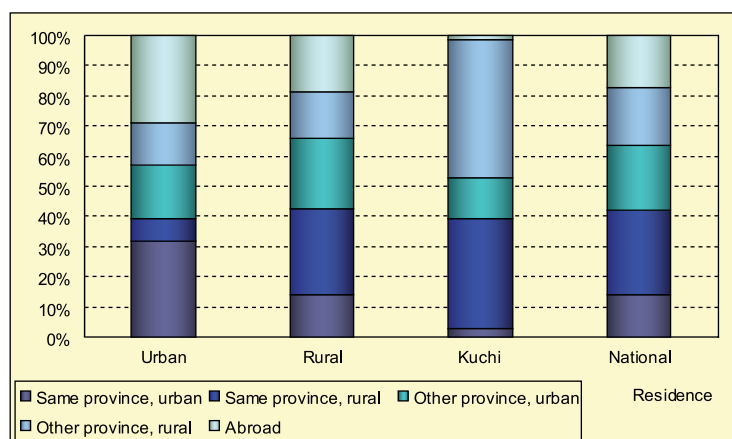
4.6 Conclusions

The analysis of labour market characteristics on the basis of the NRVA 2007/8 provides a wealth of information on Afghanistan's labour force and labour market performance. The most striking result is the very large gender disparity for almost any labour market indicator and that this is most pronounced in the urban sector. Women are not only disadvantaged because fewer participate in employment, but also because those who are employed are working fewer hours and in jobs that are less secure. Development policy should aim to better tap the human capital of women, for equity reasons as well as for reasons of strengthening Afghanistan's economy and society. Sensitisation about women's actual and possible contributions to household income, micro-credit programmes and job placements that target women, protection at the work place, and relieving the burden of large families – by lowering fertility or providing day care facilities – could be relevant strategies in this respect.

In general terms, the analysis encounters the paradox, prevalent in many developing countries, that relatively low unemployment (a rate of 7 percent only) and high proportions of employed (62 percent and for males even 80 percent) do not indicate a well-performing labour market, but the opposite. Under the conditions of Afghanistan, these figures should be interpreted in the sense that people simply cannot afford being unemployed. In the context of Afghanistan, the figure of 7 percent unemployed and the complementary 93 percent employed sheds little light on the degree to which people engage in productive and gainful work. In view of the high poverty rate (see Chapter 6), there is every reason to believe that many workers are not engaged in jobs that provide them with sufficient and secure income. In order to grasp this phenomenon, a re-definition of unemployment can be considered by classifying those who work less than 8 hours as unemployed. This would raise the unemployment rate to 15 percent of the labour force. However, closer examination reveals that this figure most probably includes a significant number – particularly women – that cannot justifiably be classified as unemployed.

The complexity of the determination of employment and unemployment questions the relevance and comparability of labour market indicators like the labour force participation rate, employment-to-population ratio, and, particularly, the unemployment rate. Stakeholders – among others the Ministry of Labor and Social Affairs, the Ministry of Economy and CSO as a main producer of statistics – should engage in a discussion about the most appropriate definitions and labour-market indicators for the context of Afghanistan. Definitely, for evidence-based employment policy additional information is required to provide a more straightforward assessment of labour market performance, with particular attention to the informal economy and underemployment.

Although labour force information is a crucial element in poverty and vulnerability analysis, it is questionable whether expansion of NRVA questionnaire modules is the most appropriate strategy to obtain the required additional information. A targeted Labour Force Survey (LFS) would be much better equipped to investigate into underemployment and the informal economy, in conjunction with standard LFS modules. Nevertheless, improvement of NRVA data on labour force characteristics can also be obtained in several areas, without loosing essential comparability or greatly increasing the number of questions. In particular, opportunities for improvement relate to applicable age ranges and the assessment of occupations and industries.

In view of the high poverty rate in Afghanistan, there is little doubt that the government should actively work on job creation, preferably in sectors of high productivity and in the formal economy. This would also help to reduce the number of people working in vulnerable employment. From a development perspective investments in the education and health sector are imperative (cf. Chapters 7 and 8). The task of job creation is the more urgent given the high population growth and ever increasing number of new entrants to the labour market.

A Labour Force Survey would also be the appropriate instrument to collect data on child labour and labour migration. The NRVA questionnaire lacks essential information to comprehensively identify child labour, and a LFS would be better positioned to cover this issue. There is no doubt, however, that child labour is widespread: at least 1.2 million children aged 6-17 (13 percent) are engaged in activities that can be defined as child labour. This high prevalence demands strong government policy and interventions to protect the health and development of Afghan children. Providing adequate education is a prominent strategy in this respect.

International labour migration – particularly to Iran, the Arabian Peninsula and Pakistan – is applied by many as a coping strategy to escape from poverty. As such it justifies the inclusion of a migration module in the NRVA questionnaire, although the survey could benefit from a more robust and consistent battery of migration questions. Some 250 thousand households have a member who migrated to other countries in recent years. The present analyses do not show any sign of

brain drain in the international migration patterns. The Government of Afghanistan could consider incorporating migration in developing strategies, thereby relieving the pressure on the internal labour market, and generating remittances and human capital that may fuel the national economy. Facilitating the transfer of remittances is one possibility to stimulate labour migration and importing international currencies. Given the apparent high mobility in the Afghan population, the population census should include a well-designed module to capture international and internal migration patterns, especially also in view of population projections.

5. The agricultural sector

SUMMARY. *Agricultural activities are the main livelihood strategies for the Afghan population, as 55 percent of households are engaged in farming and 68 percent have any type of livestock. However, productivity in the agricultural sector is relatively low, as for instance reflected by the 37 percent contribution of agriculture to the GDP in 2007.*

Household access to land increased with 8 percentage points from the 47 percent reported in the NRVA 2005, which is especially due to an increase in access to irrigated land. Overall, 40 percent of households have access to irrigated land, 17 percent have access to rain-fed land and 11 percent grow vegetables and fruits on garden plots. Although Afghan farmers grow a large variety of crops, wheat is by far the most important one: this is the case for 77 percent of households farming on irrigated land in summer and for 94 percent farming on rain-fed land. An alarming result is that 10 percent of households that are engaged in agriculture are growing opium. This national figure can almost exclusively be attributed to the production in six provinces, with Urozgan and Helmand having the highest proportion of households producing opium (82 and 67 percent, respectively).

In general, farmland size is small – 7 Jerib for irrigated land and 14 Jerib for rain-fed land – and productivity is hampered by water shortage (due to poor irrigation systems and lack of rain water), lack of credit, little mechanization, insufficient outreach of agricultural and veterinary extension services, and poor accessibility of markets and communities. However, with regard to the latter, the NRVA 2007/8 observed that more than half of the households mention that road conditions have improved over the three years preceding the interview.

5.1 Introduction

Agriculture is by far the most important economic activity and livelihood component in Afghanistan. Over half of the households are involved in agriculture, as reflected by the percentage of households that have access to land through either owning or managing agricultural land or garden plots (55 percent). The World Bank's 2007 data profile for Afghanistan reports that agriculture contributes by 37 percent to the GDP. [1]

With a varied geography and topography, out of 652 thousand square kilometers of total land area of the country, only an estimated 12 percent is arable, three percent of the land is considered forest covered, 46 percent is under permanent pasture and 39 percent is mountainous, not usable for agriculture (CSO 2007).

This chapter deals with various aspects of Afghanistan's agricultural sector. The next section (5.2) is devoted to the access to land, irrigated and rain-fed land, as well as garden plots. Section 5.3 describes agricultural output from farming and livestock raising. Sections 5.4 and 5.5 discuss, respectively, different inputs into the agricultural sector and agricultural constraints.

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[1] http://ddp-ext.worldbank.org/ext/ddpreports/ ViewSharedReport?&CF=&REPORT_ID=9147&REQUEST_TYPE=VIEWADVANCED

5.2 Access to land

Table 5.1 shows that over half of the households (55 percent) have access to land through either owning or managing agricultural land or garden plots. In comparison to NRVA 2005 (reporting 47 percent of the households involved in agriculture), this suggests that nationally there was 8 percent increase in access to land. This increase in land access is matched by an increase in cereal production of 8 percent between 2005 and 2007 (see Section 5.3.1).

Possible reasons for this increase include the return of refugees and IDPs taking back their land, as well as improvement in rainfall and snowfall, encouraging more households to engage in agricultural activities. However, the aggregate figure conceals variations at lower levels, where for some areas decreases in access were reported. Security conditions may be one reason to negatively affect access to land, although no clear pattern is observed in this respect.

> **Access to land**
>
> Households' access to land means that the household either owns land or farms land based on renting, sharecropping or mortgaging arrangements.

Table 5.1 Percentage of households with access to land, by NRVA assessment, and by residence

Residence	Access to land		
	NRVA 2005	NRVA 2007/8	Increase
Urban	5	10	5
Rural	58	69	11
Kuchi	12	19	7
National	47	55	8

As expected, rural households have the most access to land (69 percent), and have shown an increase of 11 percentage points since 2005. In rural Afghanistan access to land was highest in Urozgan, Nooristan, Daykundi and Paktika, and lowest in Jawzjan, Sar-E-Pul and Kandahar. The provinces of Urozgan, Baghlan and Laghman had the highest increase in access to land while Sar-E-Pul, Jawzjan and Kunarha province had the highest decrease respectively.

Around 10 percent of urban residents have access to land. In comparison to NRVA 2005 access to land for urban dwellers has doubled, which could be due to movement to urban areas because of security reasons. Urban households of Takhar, Kunduz, Baghlan and Nangarhar have the highest access to land, while in contrast those in Kandahar, Jawzjan and Kabul have the lowest access. The highest increase in access to land for urban dwellers occurred in Baghlan and Nangarhar, while Faryab and Jawzajan had the highest decreases. Kuchi access to land increased by 7 percent in the period between 2005 and 2007-08.

Overall, the provinces with highest percentages of households with access to land or garden plots (80 percent or more) are Nooristan, Daykundi, Urozgan, Bamyan, Ghor, Helmand and Paktika, while lowest access is found in Kabul (16 percent), Jawzjan (21 percent), Kandahar (29 percent), Sar-E-Pul (31 percent), Herat and Nimroz (42 percent) provinces (*Figure 5.1*). The provinces with highest access to land are mostly remote provinces except Helmand, where probably lack of access to non-agricultural livelihood activities compel most of the households to largely remain engaged in agriculture. The provinces with the lowest access to land are provinces with large urban populations and access to non-agricultural activities. Nimroz has little agriculture land available, but close access to the Iranian boarder provides other business opportunities.

Figure 5.1 Percentage of rural households with access to land, by province
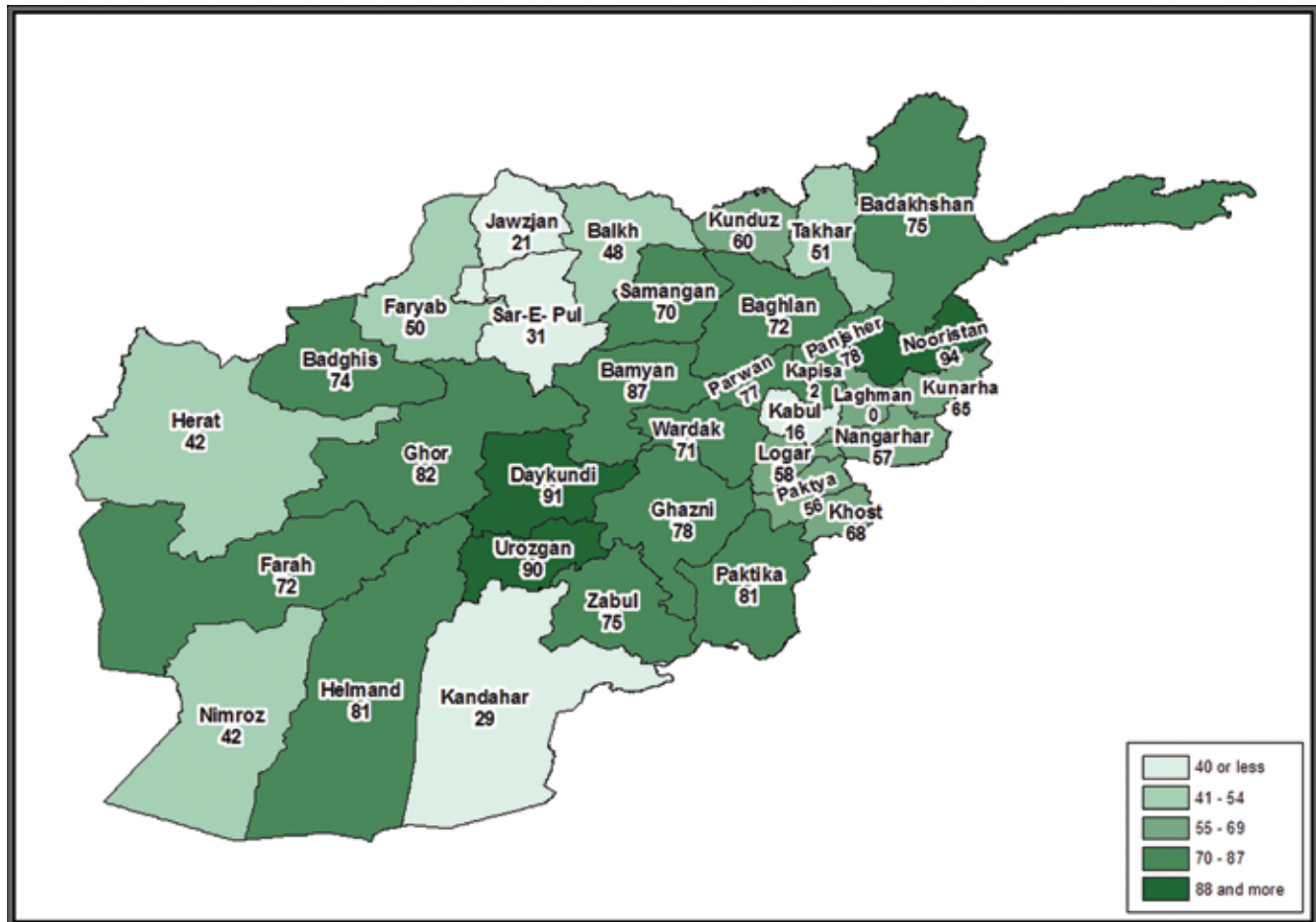
5.2.1 Irrigated land

Forty percent of all Afghan households have access to irrigated land (*Table 5.2*). The access to irrigated land is highest among rural households (52 percent), while only 12 percent of Kuchi and 4 percent of urban households have access.

Twenty-eight percent of households who have access to irrigated land have less than 2 Jerib[2] and only 6 percent have more than 20 Jerib. More than half of all households with irrigated land have less than 4 Jerib; in other words typical irrigated land access in Afghanistan is less than 4 Jerib. Average irrigated land access among all households is 2.7 Jerib with a median of zero, implying that more than half of all households do not have access to irrigated land. Average irrigated land access among those who do have access to irrigated land is 6.7 Jerib, while the median is 3 Jerib. Surprisingly, urban households seem to have the largest irrigated land size – 15.7 against 6.7 Jerib nationally. One explanation could be that large landowners do not remain in the countryside, but move to urban centers for better living conditions. Of all households engaged in agriculture, those in Paktika, Nooristan, Helmand, Daykundi and Urozgan have almost all access to irrigated land, while the lowest access was reported for households in Badghis, Sar-E-Pul, Faryab, Jawzjan, Kabul and Kandahar.

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[2] Jerib is an Afghani unit of land measure; one Jerib equals two thousand square meters.

Table 5.2 Households, by residence, and by access to irrigated land, size of land (in percentages)

Access to land, land size	Residence			
	Urban	Rural	Kuchi	National
No irrigated land	96	48	88	60
With any irrigated land, of whom	4	52	12	40
Less than 2.0 jerib	24	28	22	28
2.0-3.9 jerib	20	27	15	26
4.0-5.9 jerib	20	15	18	15
6.0-9.9 jerib	14	13	12	13
10-19.9 jerib	7	11	23	11
20 or more jerib	15	6	10	6
Total with irrigated land	100	100	100	100
Total	**100**	**100**	**100**	**100**
Mean statistics				
Mean land size, all households	0.7	3.4	1.0	2.7
Median land size, all households	0.0	0.5	0.0	0.0
Mean land size, households owning irrigated land	15.7	6.4	8.2	6.7
Median land size, households owning irrigated land	4.0	3.0	5.0	3.0

Seventy nine percent of households engaged in agriculture have access to irrigated land. *Figure 5.2* shows the prevalence of access to irrigated land among urban, rural and Kuchi households, and the change from 2005 to 2007-08. For each group, the prevalence increased in the period between the two latest NRVA assessments.

Figure 5.2 Households engaged in agriculture who own or manage irrigated land,
by NRVA assessment, and by residence (in percentages)
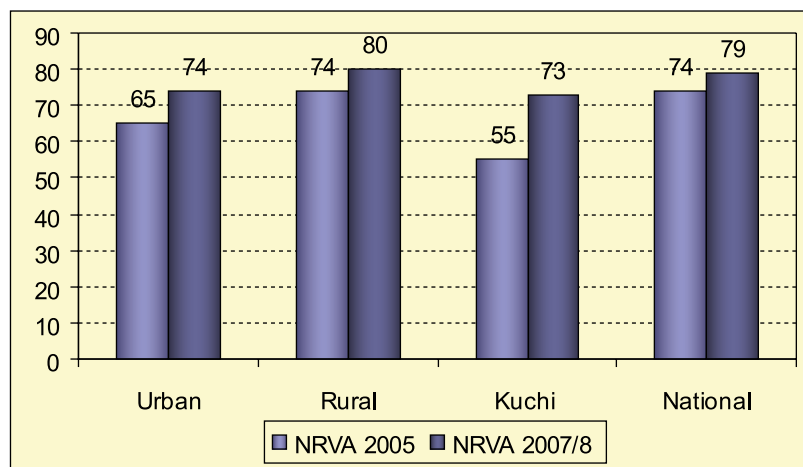
The most important sources of irrigation in summer as well as winter are rivers, canals or dams, followed by Kariz, and a variety of other sources (*Table 5.3*). Households in the provinces of Sar-E-Pul, Nooristan, Kunduz, Jawzjan, Badakshan, Baghlan, Balkh, Takhar, Ghor and Parwan all depend for more than 90 percent dependency on rivers, canals or dams for irrigation. Those in Ghazni, Wardak, Daykundi and Farah provinces use these sources least (less than 30 percent).

Table 5.3 Sources of irrigation in summer and winter (in percentages)

Season	River, canal, dam	Deep-well pump	Spring	Kariz	Nawara	Absialab, snow melt, flood	Other	Total
Summer	67	6	8	13	4	2	1	100
Winter	75	3	5	11	1	3	1	100

Nimroz, Farah, Paktika, Kabul and Ghazni are the main users of deep irrigation (between 16 and 47 percent of households), while there was no use reported in Badakshan, Badghis, Baghlan, Bamyan, Daykundi, Kunarha, Kunduz, Laghman, Parwan, Samangan, Sar-E-Pul, Takhar and Urozgan. Using a spring as irrigation source is reportedly highest in Panjsher, Samangan and Urozgan (all more than 30 percent), while no use of springs have been reported in Sar-E-Pul, Nooristan, Jawzjan, Kandahar and Nimroz. Kariz usage was highest in Zabul, Kandahar, Paktika and Ghazni provinces (40 percent or more). Provinces of Sar-E-Pul, Nooristan, Jawzjan, Kunduz, Badakshan, Balkh, Baghlan, Takhar, Faryab, Parwan, Bamyan, Kapisa, Samangan and Panjsher reported no use of Kariz as irrigation source at all.

5.2.2 Rain-fed land

Overall 17 percent of households across the country reported that they have access to rain-fed land (*Table 5.4*). The highest access to rain-fed land is among rural households (22 percent), but only few Kuchi and urban households have access to this type of land (8 and 2 percent, respectively). Among those who are engaged in agriculture, 32 percent have access to rain-fed land. Within this group, Kuchis have the highest rate of access (41 percent), followed by rural households (32 percent) and urban households (19 percent).

Table 5.4 Households, by residence, and by access to rain-fed land, size of owned land (in percentages)

Access to land, land size	Residence			
	Urban	Rural	Kuchi	National
No rain-fed land	98	78	92	83
With any rain-fed land, of whom	2	22	8	17
Less than 2.0 jerib	4	6	2	6
2.0-3.9 jerib	14	20	10	19
4.0-5.9 jerib	11	16	18	16
6.0-9.9 jerib	6	14	22	14
10-19.9 jerib	22	25	21	25
20 or more jerib	42	20	26	21
Total with rain-fed land	100	100	100	100
Total	**100**	**100**	**100**	**100**
Mean statistics				
Mean land size, all households	0.7	2.9	1.2	2.4
Median land size, all households	0.0	0.0	0.0	0.0
Mean land size, households owning rain-fed land	37.9	13.4	15.1	14.0
Median land size, households owning rain-fed land	10.0	8.0	8.0	8.0

The access to rain-fed land differs from that of irrigated land in the sense that land size is generally larger (see Table 5.4). Of all households with rain-fed land, only very few (6 percent) own less than 2 Jerib land, while one fifth (21 percent) have 20 Jerbib or more. Close to half of all households owning rain-fed land have access to 10 Jerib or more. For urban household the typical rain-fed land access is 20 Jerib or more.

Average rain-fed land size of all households across the country is 2.4 Jerib, with the highest figure found for rural households (2.9 Jerib) and lowest for urban households (0.7 Jerib). Average rain-fed land size among those with rainfed land is 14 Jerib, with the largest land size reported for urban households (around 38 Jerib) and the smallest (around 13 Jerib) for rural households, with the Kuchi figure in between. Of all households engaged in agriculture the highest rate of access to rain-fed land exists in Badghis (100 percent), Ghor (88 percent), Samangan (81 percent), while no access is reported in Urozgan and Nimroz provinces and very little in Nooristan, Farah and Wardak (1 percent).

Figure 5.3 shows access to rain-fed land by residence and comparison between NRVA 2007/8 and NRVA 2005. The figure indicates that only for Kuchi households the share that had access to rain-fed land has increased.

Figure 5.3 Households engaged in agriculture who own or manage rain-fed land, by NRVA assessment, and by residence (in percentages)
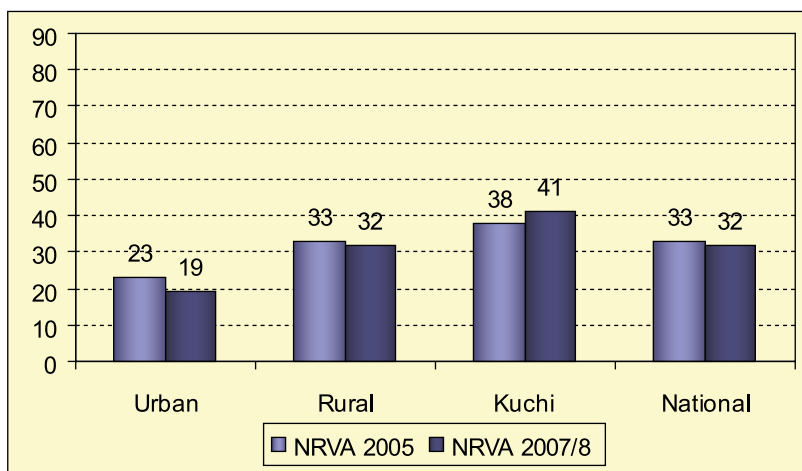
5.2.3 Garden plots

Garden plots play an important role in household income and nutrition, at least in those parts of the year when either fruits are produced or when vegetables are produced. Self-grown fruits and vegetables are sources of vitamins and minerals, especially in remote areas with limited access to the market. Garden plot ownership is reported by 11 percent of households across the country. Rural households reported the highest access (13 percent), followed by Kuchi and urban households (3 percent each) (see *Table 5.5*). Two thirds of all households owning garden plots have less than 2 Jerib.

Twenty percent of households engaged in agriculture own or manage garden plots. *Figure 5.4* shows the comparison of NRVA 2007/8 and NRVA 2005.

The agricultural sector

Table 5.5 Households, by residence, and by ownership of garden plot, size of garden plot (in percentages)

Access to garden plot, size of garden plot	Residence			
	Urban	Rural	Kuchi	National
No garden plot	97	87	97	89
With any garden plot, of whom	3	13	3	11
Less than 1.0 jerib	24	33	58	33
1.0-1.9 jerib	25	34	25	33
2.0-3.9 jerib	24	20	12	21
4.0-5.9 jerib	12	6	5	6
6.0-9.9 jerib	10	5	0	5
10.0 or more jerib	4	3	0	3
Total with garden plots	100	100	100	100
Total	**100**	**100**	**100**	**100**
Mean statistics				
Mean land size, all households	0.1	0.3	0.0	0.2
Median land size, all households	0.0	0.0	0.0	0.0
Mean land size, households owning garden plots	3.5	1.9	1.0	2.0
Median land size, households owning garden plots	2.0	1.0	0.5	1.0

Figure 5.4 Households engaged in agriculture who own or manage garden plots,
by NRVA assessment, and by residence (in percentages)
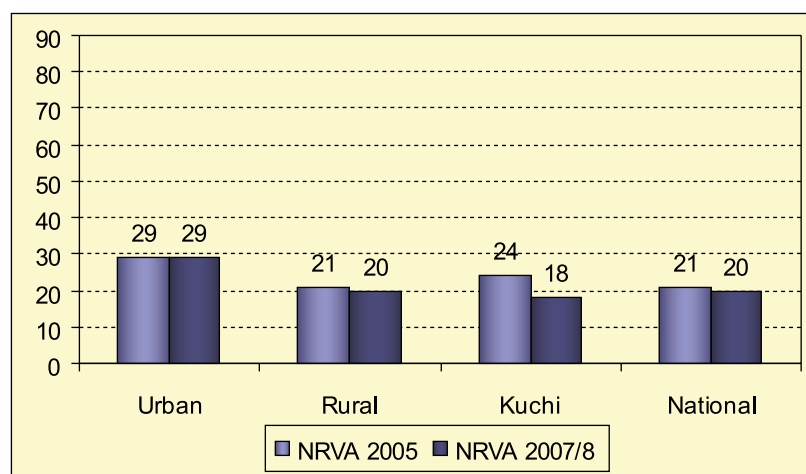
5.3 Agricultural production

5.3.1 Crop production

Wheat is the main staple food in Afghanistan, as it accounts for around 70 percent of total cereal consumption. Normally, the country is not self-sufficient and has to import wheat to fulfill its food demand. Due to natural disasters and variable climate conditions, wheat production fluctuates strongly. According to the Ministry of Agriculture, Irrigation and Livestock (MAIL), average imports for the years 2000-04 accounted for 33 percent of total demand (Ministry of Agriculture, Irrigation and Livestock 2009). For 2009 – an exceptional good year – the provisional estimated production for all cereals is 6.3 million tons, while requirements are 6.53 million tons, resulting in a deficit of 220 thousand tons (see *Table 5.6*) .

Table 5.6 Afghanistan food balance sheet 2009 (in thousand tons)

Crop	Requirements					Domestic production	Surplus/ deficit
	Food	Seed	Feed	Loss	Total		
All wheat, of which	4,175	319	0	761	5,255	5,064	-191
Irrigated wheat		201	--	508		3,387	
Rain-fed wheat		118	--	253		1,677	
Milled rice	444	21	0	33	498	469	-29
Maize	52	8	195	45	300	300	--
Barley	26	29	353	72	480	480	--
Total	**4,697**	**377**	**548**	**911**	**6,533**	**6,313**	**-220**

Source: Ministry of Agriculture, Irrigation and Livestock 2009

Other cultivated grains include barley, maize, rice and pulses. Full series of agriculture production are provided by the Central Statistics Organisation (CSO 2008). A condensed overview is presented in *Table 5.7*. There are also several types of summer and winter vegetables and fruits, like potatoes, onions, tomatoes, okra, cauliflower, melons, water melons, apricots, pomegranates, apples and grapes. Afghan grapes and watermelons are highly appreciated in other countries. Other significant agriculture exports (although in decline) are dried fruits and nuts (mainly raisins) pistachio, almonds and apricots.

Table 5.7 Afghanistan, cereal production 2002-2009 (in thousand tons)

Crop	2002	2003	2004	2005	2006	2007	2008	2009
All wheat, of which	2,686	4,362	2,293	4,266	3,363	4,343	2,623	5,064
Irrigated wheat	2,110	3,017	1,867	2,728	2,604	2,878	2,406	3,387
Rain-fed wheat	576	1,345	426	1,538	759	1,465	217	1,677
Milled rice	260	291	310	325	361	425	410	469
Maize	298	310	234	315	359	360	280	300
Barley	345	410	220	337	364	370	333	480
Total	**3,589**	**5,373**	**3,057**	**5,243**	**4,447**	**5,498**	**3,646**	**6,313**

Source: FAO/WFP CFSAM 2002-2004, MAIL 2005-2009

In the NRVA 2007/8 survey, the households were asked to identify and to rate the crops most frequently grown on their irrigated land in summer. Overall, the households responded that the most important crops were wheat, opium and potatoes (*Table 5.8*, panel a). The crops that were mentioned as second most important crops were afalfa, barley and wheat. Those mentioned as the third most important crops were alfalfa, potatoes and other vegetables. This overall crop portfolio contributes to food security, forage for livestock production, and cash for the Afghan households. The most important crops in the winter season are maize/sorghum, rice and cotton (panel b). Overall 59 percent of households engaged in agriculture are cultivating winter wheat and only 7 percent grow rice across the country. On rain-fed land by far the most popular harvested crop was wheat (94 percent; panel c).

5.3.2 Opium production

The relative importance of opium production on irrigated land in summertime warrants special attention. Afghanistan was the largest opium producer in the world up to late 1990s, producing up to 70 percent of illicit opium or its derivate heroin. Southern and eastern parts of the country were the main areas of production. The Taliban ban on opium spread the opium cultivation to northern parts of the country.

Table 5.8 Households producing crops on (a) irrigated land in summer, (b) irrigated land in winter (c) rain-fed land, and (d) garden plots, by importance of crop, and by three most frequently mentioned crops (percentage mentioned between brackets)

Frequency of mentioning	Importance of crops		
	First most important crop	Second most important crop	Third most important crop
a. Irrigated land in summer			
Most	Wheat (77)	Alfalfa/clover/other fodder (24)	Alfalfa/clover/other fodder (38)
Second most	Opium (12)	Barley (17)	Potatoes (12)
Third most	Potatoes (3)	Wheat (17)	Other vegetables (8)
b. Irrigated land in winter			
Most	Maize/ sorghum (53)	Maize/ sorghum (19)	Other vegs (34)
Second most	Rice (15)	Melon/ watermelon (11)	Alfalfa/clover/other fodder (16)
Third most	Other (10)	Cotton (11)	Melon/ watermelon (12)
c. Rain-fed land			
Most	Wheat (94)	Barley (71)	Flax (29)
Second most	Cotton (1)	Maize/ sorghum (9)	Melon/ watermelon (26)
Third most	Barley (1)	Melon/ watermelon (6)	Other (19)
d. Garden plots			
Most	Fruit / nut trees (39)	Other fruits (25)	Other fruits (29)
Second most	Grapes (33)	Fruit / nut trees (18)	Other (14)
Third most	Other (15)	Other (17)	Other vegetables (12)

The current NRVA 2007/8 shows opium production in 13 out of 34 provinces of Afghanistan(see *Figure 5.5*), with six provinces reporting substantial proportions of households engaged in opium production, predominantly on irrigated land. Poppy cultivation or opium production is reported by 6 percent of all households. Of households engaged in agriculture, 10 percent reported opium production, while 12 percent of those using irrigated land in summer reported opium as first important crop (see Table 5.8, panel a). This figure implies a significant increase from the corresponding 3 percent reported in the NRVA 2005. Since poppy cultivation is illegal, it can be expected that these figures represent a significant under-estimation.

Provinces with the highest percentages of households reporting being involved in opium production are Urozgan and Helmand, with 82 percent and 67 percent, respectively (see Figure 5.5). When limiting the analysis to the 55 percent of households engaged in agriculture, the figures further increase – for instance, the proportions for Urozgan and Helmand rise to, respectively, 90 and 82 percent.

5.3.2 Livestock

Some 2.3 million out of 3.4 million Afghan households (68 percent) have any kind of livestock, which indicates the importance of this sector within agriculture. In comparison, the NRVA 2005 reported that 64 percent of households owned livestock of any type. As expected, ownership of livestock is predominant among the Kuchi population – 94 percent of households own any type of livestock – but also among sedentary rural households the large majority (79 percent) raises any type of animals (see *Table 5.9*). Even among urban households a considerable minority (18 percent) does so. The average number of animals per household nationwide is 12, but for households who own any livestock the figure is 18.

Of those households who do own any livestock, almost all rural and Kuchi households and nearly half of the urban households have any type of major livestock (cattle, oxen, horses, donkeys, camels, goats or sheep). Kuchi households have by far the largest herds; on average they own 63 animals, whereas the average number of major livestock for rural households is 9 (data not shown here). Nationally, the average number of major livestock per household with any livestock is 13, which suggests an overall number of some 30 million animals in Afghanistan. Ownership of poultry of any kind is most widespread among the urban and rural households.

Figure 5.5 Percentage of households cultivating opium, by province

Figure 5.5 Percentage of households cultivating opium, by province
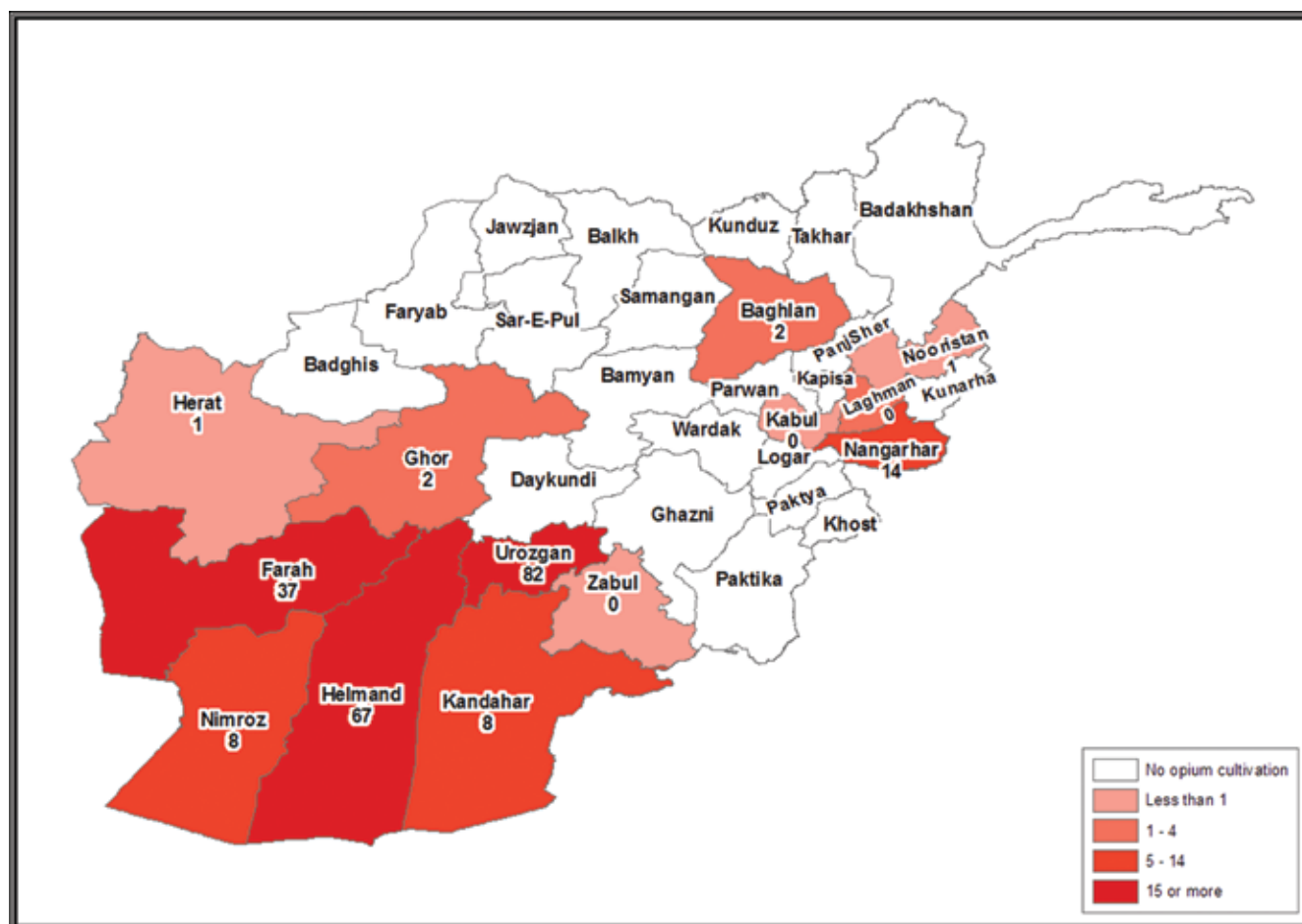
Table 5.9 Households, by residence, and by livestock-owning status, type of livestock (in percentages); also stating mean and median number of livestock

Livestock-owning status, number of livestock	Residence			
	Urban	Rural	Kuchi	National
No livestock	82	21	6	32
Any livestock, of whom have	18	79	94	68
Major livestock	48	94	99	92
Poultry	78	77	60	76
Major livestock and poultry	26	71	59	68
Mean number of livestock	7	14	67	18
Median number of livestock	4	10	45	10
Total	**100**	**100**	**100**	**100**
Mean number of livestock	1	11	63	12
Median number of livestock	0	7	43	6

5.4 Agricultural inputs

5.4.1 Traction for cultivating land

The main source of land traction power reported by Afghan households is animals (52 percent), followed by mechanical and manual sources (39 and 8 percent, respectively). In general, the use of traction power is similar among urban, rural and Kuchi households, with a slight dominance of mechanical traction by urban households and animal plowing for Kuchi households (see *Table 5.10*). In comparison to the results of NRVA 2005, there seems to be slight increase in using land traction power by mechanical means, while there was a similar reduction of in usage of manual cultivation.

Table 5.10 Use of traction power, by type of power used, and by residence (in percentages)

Residence	Manual cultivation	Animal ploughing	Mechanical / tractor	All types
Urban	9	44	47	100
Rural	8	52	39	100
Kuchi	2	40	39	100
National	8	52	39	100
NRVA 2005 national	12	54	35	100

Nooristan has the highest proportion of manual cultivation (75 percent). Small and sloping plots in this mountainous province restrict mechanization and make it difficult to use animals for traction. Manual cultivation also prevails in Wardak, Parwan, Logar and Laghman, each with 24 percent or more households using mainly this. It is almost absent in Urozgan, Nimroz, Bamyan, Kunduz and Zabul.

The provinces with the highest use of mechanical cultivation are Nimroz, Helmand, Khost, Zabul and Farah (each reporting more than 90 percent mechanical traction), while it is not at all applied by the households surveyed in Bamyan, Daykundi, Panjsher, Sar-E-Pul, Ghor and Nooristan, and only applied to a very limited extent in the provinces of Badakshan, Kapisa, Badghis, Parwan, Faryab and Takhar.

5.4.2 Use of fertilizers and pesticides

Nearly two thirds (62 percent) of households who reported cultivation in the last summer season (mainly rural households) used Di-Ammonium Phosphate (DAP) and/or Urea on their agriculture land *(see Table 5.11)*. For the majority of the DAP users the amount used was sufficient to meet all fertilizer needs.

Table 5.11 Households cultivating in last summer season, by residence, and by DAP/Urea use, level of DAP/Urea need fulfillment (in percentages)

Use of fertiliser, level of fertiliser need fulfillment	Residence			
	Urban	Rural	Kuchi	National
No fertiliser used	62	37	47	38
Fertiliser used, of which fulfilled	38	63	53	62
Less than a quarter of needs	2	3	2	3
Around one quarter of needs	4	6	10	6
Around half of needs	15	13	20	14
Around two thirds of needs	14	18	16	18
All needs	65	60	53	60
Total	**100**	**100**	**100**	**100**

Only 17 percent of cultivating households used pesticides and/or herbicides in the last summer season. Limited use of pesticide and herbicide may be due to lack of access and knowledge and may adversely affect agriculture production in the country.

5.5 Agriculture constraints

5.5.1 Reasons for not cultivating land

Agricultural production is subject to variations imposed by the high mountain climate, with dry, cold winters in the highlands and arid and semi-arid climates in the lowlands. Afghanistan is a country prone to natural disasters. The occurrence of natural disasters such as earthquakes, landslides, floods, heavy rain, hailstorms, frosts and severe cold temperatures affect entire regions or localized communities, and have a negative impact in the agricultural sector.

Around 17 percent of households with access to irrigated land reported that they have left fallow at least part of their land. The majority of these (75 percent) stated the lack of water for irrigation as the main reason (see *Figure 5.6*, panel a). Lack of budget for cultivation accounts for only 12 percent and all other reasons are relatively trivial. In a country with limited irrigated land available this poses a severe challenge and could be avoided by improving irrigation systems. Accordingly, the top development priority of male Shuras was the rehabilitation of irrigation systems (see Section 11.3 of this report). Other strategies include cultivation of drought-resistant crops, provision of credits to farmers and soil fertility increase through proper crop rotations and/or the use of fertilizers.

For rain-fed land, the reasons for leaving fallow land are more evenly distributed, with lack of rain, lack of soil fertility and budget constraints as the most important reasons (*Figure 5.6*, panel b).

Figure 5.6 Main reason for leaving fallow land (a) irrigated land, (b) rain-fed land (in percentages)
a. Irrigated land
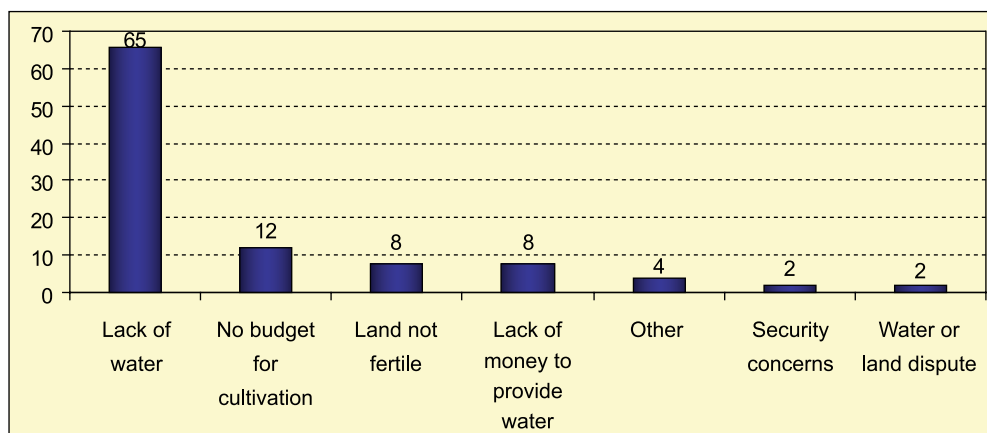
b. Rain-fed land
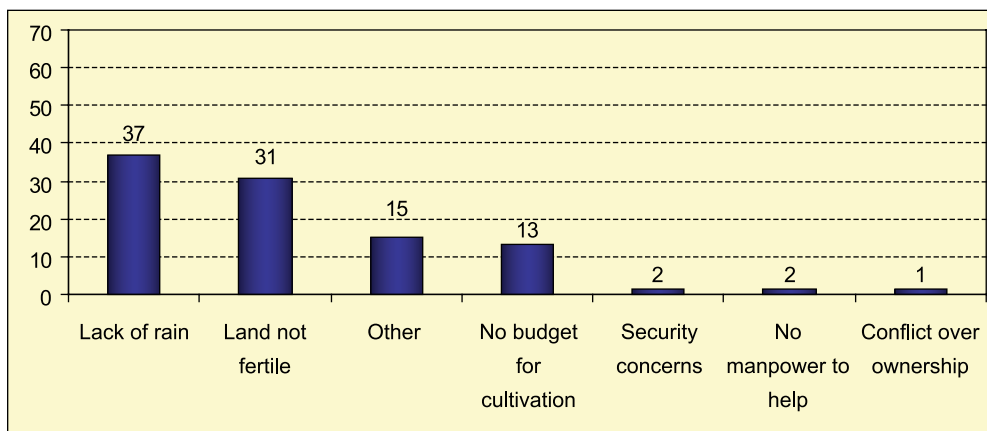
5.5.2 Use of extension services

Only 10 percent of households engaged in agriculture received advice on agriculture production (*Table 5.12*) and of these, 94 percent were satisfied with advice received. However, the majority (90 percent) did not received any advice and only around one quarter of these did not so because they did not need advice. Another 29 percent could not afford advice or could not reach the service because of distance (16 percent) or lack of knowledge how to find it (19 percent). In view of this, increased agriculture awareness through media and extension services are apparently promising strategies to improve agricultural practices and production. General improvement of literacy levels would also be beneficial.

Outbreaks of diseases and pest infestations may occur under different microclimatic conditions and can wipe out subsistence and commercial crops. Monitoring of growing conditions is essential for timely interventions of pest control and the pay offs can be high (RAMP 2006a). Animal diseases can be prevented with the use of vaccines and timely veterinary services that can reduce the spread of diseases. Systematic provision of veterinary services has proven to be highly cost-effective in Afghanistan (RAMP 2006b).

In NRVA 2007/8, veterinary service provision was reported by only 15 percent of households with livestock ownership, and of these, 74 percent indicated satisfaction with the service (*Table 5.13*). Another 21 percent reported that the services are too expensive. The large majority (85 percent) had not received any veterinary service and 43 percent of this group mentioned having difficulties in accessing the services.

Table 5.12 Households with access to farming land, by information on agricultural production received, reason for not obtaining information (in percentages)

Received advice on agricultural production, reason for not receiving advice	Percentage
Received advice	10
Did not receive advice, because	90
Did not need advice	26
Could not afford	29
Too far away	16
Do not know how to find/obtain	19
Service would not work with me	5
Other reason	5
Total	100
Total	**100**

Table 5.13 Households with livestock, by veterinary information received, reason for not using veterinary services (in percentages)

Obtained veterinary service in last 12 months, reason for not obtaining service	Percentage
Obtained veterinary service	15
Did not obtain veterinary service, because	85
Did not need help	18
Had too few animals / poultry	26
Could not afford / too expensive	13
Too far away	18
Do not know how to find / obtain	13
Service would not work with me	10
Other reasons	2
Total	100
Total	**100**

5.5.3 Community accessibility

Easy access to markets is another facilitating factor for the agricultural sector, for both selling agricultural produce and purchasing inputs to farming. The NRVA 2007/8 indicated that the percentage of households within one hour and three hours reach of the nearest food market by foot is only 26 and 51 percent, respectively. If private vehicles or taxis are used, the corresponding figures are 31 and 44 percent.

Around 29 percent of households are more than two kilometers removed from the nearest drivable road and the average distance is 3.4 kilometer (4.3 for Kuchi households, 3.8 for rural households and 0.3 for urban households). An encouraging proportion of households (51 percent) mentioned that in the last three years road conditions had improved, even though another 13 percent reported road deterioration. This development is likely to have had positive effects on access to markets and agricultural services, as well as to health and education facilities. Around 78 percent of all rural communities mentioned an increase in motorized road traffic in last 3 years.

5.6 Conclusions

Agricultural activities are the main livelihood strategies for the Afghan population, as 55 percent of households are engaged in farming and 68 percent have any type of livestock. However, productivity in the agricultural sector is relatively low, as for instance reflected by the 37 percent contribution of agriculture to the GDP. Frequently, farming households have access to only small areas of land, and provision of water is cited as a main problem for both irrigated and rain-fed cultivation. The rehabilitation of irrigation systems is also the main priority for community development according to the male Shuras interviewed in the NRVA survey. The relatively low rate of mechanized traction in farming is another factor in the low productivity, and so is the significant proportion of farming households that is not using fertilizers (38 percent) and the large proportion that is not reached by agricultural extension services (90 percent for information on agricultural production and 85 percent for veterinary services). Finally, remoteness of communities and access to markets are impeding factors for the development of the agricultural sector.

Strategies that would benefit the agricultural sector include improvement of irrigation systems, cultivation of drought-resistant crops, provision of credits to farmers, soil fertility increase through proper crop rotations and/or the use of fertilizers, increased agriculture awareness through media and extension services, and all-weather road construction. With regard to the latter, significant development is reported, as more than half of the households mention that road conditions have improved over the three years preceding the NRVA 2007/8. Another positive development is that the share of households with access to land has increased in the period between the 2005 and 2007/8 NRVAs.

In a wider perspective, increased education and literacy would provide farmers and livestock owners with better knowledge and access to relevant information. Also, decline in fertility would help to reduce the ever-increasing pressure on the limited available arable land in Afghanistan.

On a separate note, it should be mentioned that 10 percent of Afghan households engaged in agricultural activities produce opium, a figure which likely is a considerable under-estimation. Six provinces account for almost all reports on opium production, with Urozgan and Helmand having the highest proportion of households producing opium (82 and 67 percent, respectively).

6 Poverty incidence and poverty profiling

SUMMARY. The Cost of Basic Needs estimate of poverty reveals that 36 percent of the Afghan population is not able to meet their basic needs. The incidence of poverty is very unevenly distributed and pockets with very high poverty rates are found among the Kuchi population (54 percent) and in South, West-Central and East regions of the country (more than 44 percent). Poverty among the Kuchi's is not only more widespread, poor Kuchi's are also significantly poorer than the rural and urban poor. Although the national Gini index of 29 is low in international perspective, substantial inequality exists in shares of consumption: whereas the richest quintile of the population has a share of 39 percent of total consumption, the poorest quintile has only 9 percent. Noticeably, the average consumption level of the second – non-poor – quintile is only little above the poverty threshold of 1,255 Afs, suggesting that a significant proportion of these are vulnerable to falling under the poverty line. Average per-capita monthly consumption expenditure of poor Afghans is only 950 Afs, but the corresponding figure for the non-poor is still less than 2,100 Afs.

Poverty incidence is significantly associated with household size and number of children in the household. It is likely that high fertility is an important contributing factor to poverty in Afghan households. Also various characteristics of the head of household and of household members are correlated with poverty. This is particularly the case for the sex of the household head, and the head's educational attainment, employment status and industry of work. Child labour and seasonal migration are coping strategies that seem particularly to be employed by poor households, and net primary and secondary enrolment of poor children (50 and 13 percent, respectively) is lower or substantially lower than that of non-poor children (respectively, 53 and 18 percent). Access to land is also importantly related to poverty: whereas 26 percent of land-owning households are poor, this is the case for no less than 42 percent of households that cultivate land on the basis of renting, sharecropping or mortgaging arrangements. Finally, the face of poverty is revealed in poor access to basic services like safe drinking water, improved sanitation and electricity.

6.1 Introduction

The measurement of poverty, its geographic distribution, its evolution in time and its relation to key demographic and socio-economic variables are critical to understand the causes and consequences of material deprivation, design effective poverty reduction policies – such as the Afghanistan National Development Strategy (ANDS) – and monitor the progress towards higher levels of material well-being.

Poverty is a multidimensional phenomenon and accordingly there is a wide variety of approaches to its measurement. Conventionally poverty has been defined in terms of income or expenditure based on the assumption that persons' material standard of living largely reflects their well-being. The poor are then identified as those with a material standard of living below a certain level. The analysis in this chapter follows the method advocated by the World Bank and is based on the so called Cost of Basic Needs (CBN) approach.

This chapter begins with a brief description of the main poverty measures applied in the present poverty analysis of Afghanistan (Section 6.2). Further details, technical backgrounds and assumptions are described in detail in Annex V. Section 6.3 provides the general poverty estimation and its temporal and spatial distribution, and the subsequent section elaborates on the issue of inequality in the country. Section 6.5 explores several correlations with other development indicators, such as employment, disability, literacy and access to land. This analysis offers a more in-depth profile of the poor in Afghanistan and the possible sources of vulnerability. The findings presented in these sections can inform policy makers and programme designers about the appropriate interventions for poverty reduction and development.

6.2 Conceptualization of poverty

The welfare of a person can be determined by the amount of goods and services he or she consumes. Consequently, poverty can be defined as a condition of deprivation characterised by a lack of food, clothing, shelter and a possible other array of human needs. According to the relative approach, wealthier societies will have a relatively higher poverty line as the concept of deprivation is assessed with respect to a living standard that is generally considered as an acceptable minimum in a specific society at a specific time. The poverty line is then often expressed as a percentage (40-60 percent) of a central tendency indicator (average or median) of the per-capita income or consumption distribution. Such relative conceptualisation of poverty extends beyond the basic physiological needs. In contrast to the relative approach, the absolute conceptualisation of poverty assumes it is possible to define a minimum standard of living based on a persons' physiological needs for food, water, clothing and shelter

> **Poverty measures**
>
> The *headcount rate* or *poverty incidence* is the proportion of the population whose per-capita consumption is below the *poverty line*.
>
> The *poverty line* or *poverty threshold* is the minimum level of per-capita consumption expenditure at which the members of a household can be expected to meet their basic needs (comprised of food and non-food consumption).
>
> The *poverty gap index* is a measure of the 'depth of poverty' and provides information about the extent to which individuals fall below the poverty line as a proportion of the poverty line.
>
> The *squared poverty gap index* is a measure of 'poverty severity' and the inequality among the poor, by taking into account the distribution of persons' consumption distance to the poverty line.

– that is, their basic subsistence needs. Among the advantages of the absolute approach is that there are reasonably objective norms for poverty measurement, and that it allows for comparisons over time or between different groups, and it is thus well suited to monitor progress in a society that starts off from extremely low levels of material well being.

The present analysis is based on an absolute definition of poverty. It assumes that people live in conditions of poverty if the basket of goods and services they consume is insufficient to produce a minimum level of material well-being. The threshold for this level of basic needs – the CBN poverty line – is calculated on the basis of the monetary value of the minimum basket of goods and services. The poverty line that is applied here captures the value of per-capita food consumption that is required for survival and the value of a basic set of non-food goods and services available to individuals. Although one should recognize that poverty measured in terms of per-capita consumption is strictly speaking a measure for economic welfare only, its impact clearly involves wider dimensions, as in most settings, consumption is closely associated with other dimensions of welfare, such as education or health.

The headcount rate indicates the proportion of the population with a per-capita consumption that is below the poverty line. Whereas this indicator provides information about the share of poor people in the population, the poverty gap index measures the depth of poverty, by calculating the mean aggregate consumption shortfall relative to the poverty line across the whole population. The poverty gap gives an indication of the total resources required to bring all the poor up to the level of the poverty line. The squared poverty gap provides a measure of the severity of poverty by assigning a greater weight to the poor who are further away from the poverty line.

6.3 Poverty across space and time

The overall headcount rate for Afghanistan is estimated at 36 percent of the total population and indicates that some 9 million Afghans are not able to meet their basic needs. The national average poverty line is 1,255 Afs. per person per month, representing the typical cost of attaining 2,100 calories per person per day and of meeting some basic non-food needs.[1] A breakdown of the poverty incidence reveals that the incidence is high in any part of the country, but large differences exist by residence and regions. Whereas poverty in the rural population is close to the national average (36 percent), the incidence in the urban population is relatively low (29 percent) and in the Kuchi population very high (54 percent) (*Figure 6.1*). The corresponding figures for major regions range from 23 percent in Southwest to 45 percent in East and West-Central.[2]

The depth of poverty is a considerable 8 percent, which indicates that when averaged over the total population, there is an 8 percent gap between the poverty line and consumption levels (treating the non-poor as having a gap of zero). Alternatively, when focusing on the population of poor people, the ratio of the poverty gap to the headcount index reveals that the average consumption level for poor people is 22 percent below the poverty line. The sum of all differences between the CBN poverty line and the consumption level of poor people provides a measure of the total consumption shortfall.[3] In terms 2007 prices (quarter 1), this gap is about 28.4 billion Afs. (or approximately 570 million USD).

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[1] In terms of fall 2007 prices from urban areas of central Afghanistan. The poverty line reflects regional differences in the cost of living, and also accounts for inflation over the time of the survey.

[2] Central: Kabul, Kapisa, Parwan, Wardak, Logar, Panshir; South: Ghazni, Paktika, Paktya, Khost; East: Nangarhar, Kunarha, Laghman, Nuristan; Northeast: Badakhshan, Takhar, Baghlan, Kunduz; North: Samangan, Balkh, Jawzjan, Sar-I-Poul, Faryab; West: Badghis, Herat, Farah; Southwest: Nimroz, Hilmand, Kandahar, Zabul, Urozgan; West-Central: Ghor, Bamyan, Daikundi.

[3] This is sometimes described as the cost of eliminating poverty if it were possible to costlessly and perfectly target cash transfers to the poor.

Figure 6.1 Poverty headcount rate, by residence and major region1
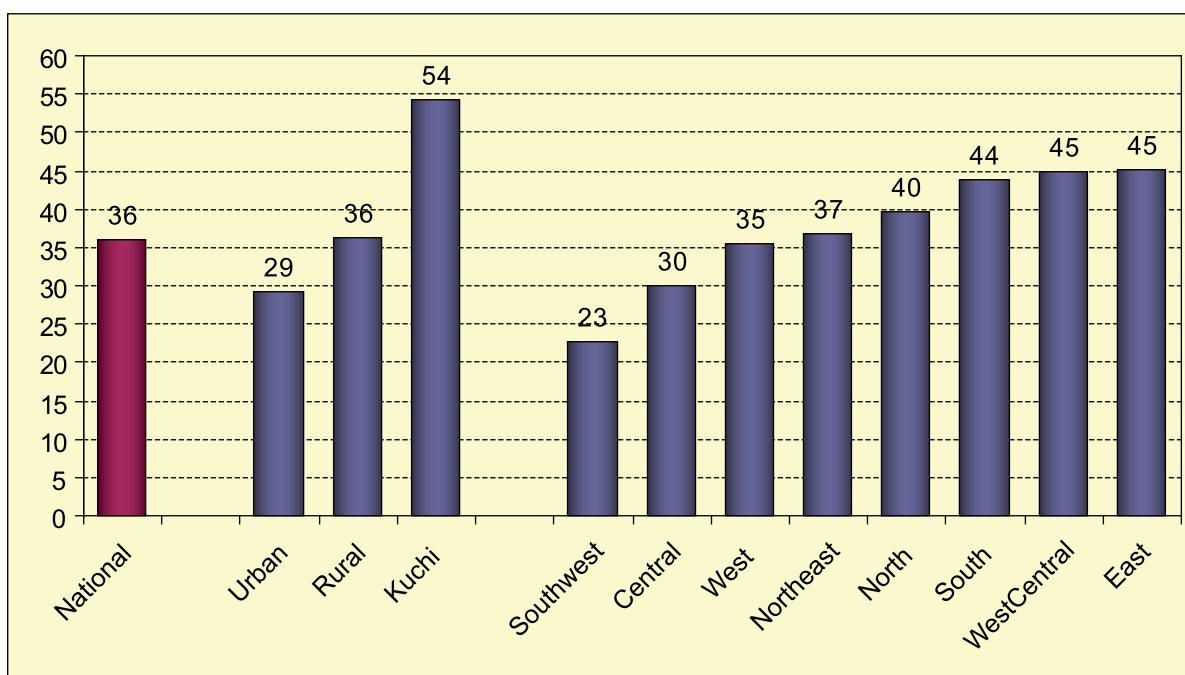
The poverty gap index across residential groups reveals the same pattern as that of the headcount rate for urban and rural areas: the rural figure is almost identical to the national rate (8 percent) and the urban rate is lower (6 percent). Because the poverty gap is lower in urban areas, but in the same proportion to the headcount, the urban poor are on average just as poor as the rural poor. In contrast, the poverty gap for the Kuchi is relatively higher at 14 percent, which indicates that the Kuchi not only suffer from a higher prevalence of poverty, but the Kuchi poor are on average also poorer compared to other groups.

MDG Indicator 1.2: Poverty gap ratio

The poverty gap ratio is the same as the poverty gap index and is an indicator to measure progress towards MDG target 1.A: Halve, between 1990 and 2015, the proportion of people whose income is less than one dollar a day.

The estimated value of 8 percent for Afghanistan is considerably higher than calculated poverty depth indices for Pakistan (4.4), Iran (0.5) and Tajikistan (5.1), but lower that that of India (10.5) (UN Statistics Division).

Table 6.1 Poverty measures

Poverty measure	Urban	Rural	Kuchi	National
Poverty head count rate	29.1	36.4	54.3	36.0
Poverty gap index	6.2	7.9	14.0	7.9
Squared poverty gap index	2.0	2.6	5.2	2.6

The analysis of poverty throughout the year reflects variations associated with seasonality, as well as the food price crisis in the first half of 2008. In agriculture-dominated economies like Afghanistan, one would expect seasonality to play a big role in welfare: poverty rate in winter or spring is expected to be higher than during the harvest season in fall. On the other hand, food prices had increased dramatically during the first half of 2008. For example, wheat flour price in Afghanistan rose with a country-wide average of 58 percent between January 2007 and January 2008.[4] The observed trends in *Figure 6.2* are a combination of both factors described. More research should be done to disentangle the two intervening effects of seasonality and food price crisis.

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[4] Afghanistan Joint Appeal for The Humanitarian Consequences of the Rise in Food Prices, January 2008

Figure 6.2 Poverty headcount rate, by season

Fall-harvest 2007: 23 · Winter 2007/08: 32 · Spring 2008: 44 · Summer 2008: 46 · Annual average: 36

Legend: Seasons — Annual average
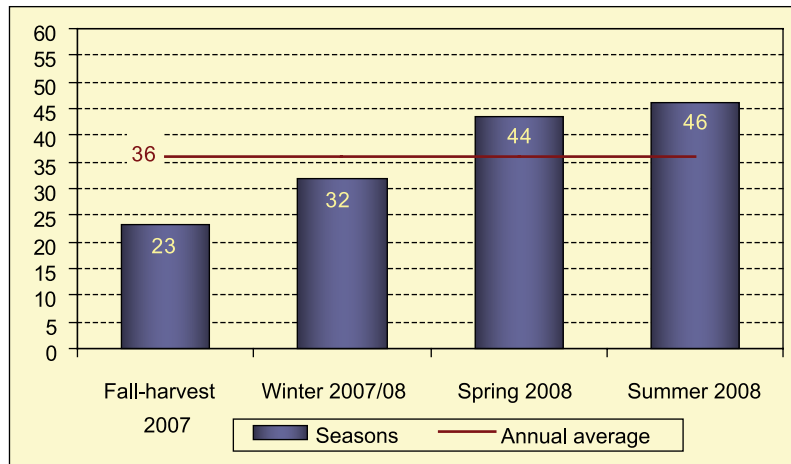
6.4 Equality in consumption expenditure

Overall inequality in Afghanistan, represented by the national Gini index (see Text box) of 29, is low and also lower than neighbouring countries in South and West Asia (*Figure 6.3*). There is, however, differentiation across regions in the sense that in several south-western regions inequality is very low. It can be noted that the regions Southwest and West-Central link high equality with particularly widespread poverty (compare Figure 6.1).

Gini Index

The Gini Index measures the extent to which the distribution of consumption among individuals or households within a country deviates from a perfectly equal distribution. A value of 0 represents absolute equality with everybody consuming the same amount, a value of 100 represents absolute inequality, where all consumption is concentrated in one person.

Figure 6.3 Gini index, by residence and region, and for selected countries [a]

National: 29 · Urban: 28 · Rural: 25 · Southwest: 20 · South: 23 · WestCentral: 25 · North: 26 · West: 27 · East: 28 · Northeast: 29 · 30 · Pakistan: 31 · Tajikistan: 34 · India: 37 · Iran: 38
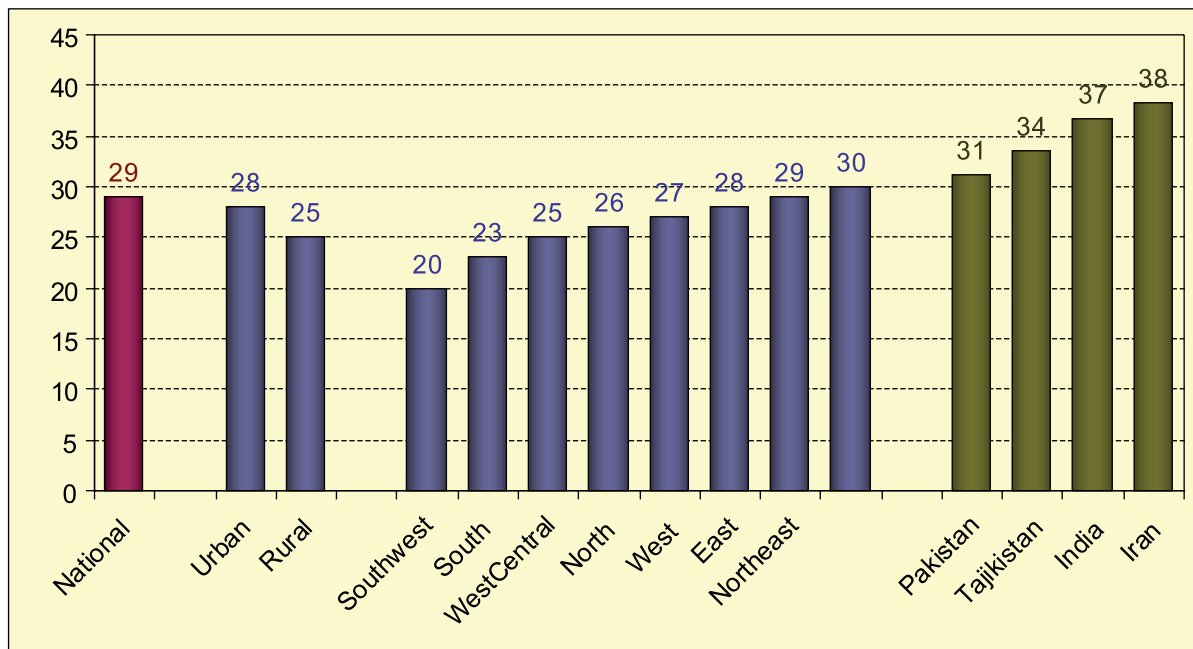
[a] Source for other countries: World Bank 2009.

The distribution of per-capita real consumption expenditure shows that the richest quintile has a share in total consumption expenditure of 39 percent, more than four times higher than that of the poorest quintile (*Table 6.2*, panel a). However, the shares of the two quintiles below the richest do not much deviate from the 20 percent that would be implied by equality. This indicates that inequality importantly originates in a relative wealthy top quintile and that the other successive quintiles only moderately differ from one to another. In fact the per capita expenditure of the middle quintile is close to the poverty line, suggesting that a significant proportion of the non-poor can be considered vulnerable to falling under the poverty line.

Table 6.2 Mean per-capita monthly real consumption expenditure and share in consumption, by (a) population quintile, (b) poverty status

Poverty variable	Population share	Consumption		
		Per-capita expenditure	Share	Cumulative share
a. Poverty quintile				
Poorest	20	758	9	9
Second poorest	20	1,100	13	22
Middle	20	1,416	17	39
Second richest	20	1,858	22	61
Richest	20	3,231	39	100
b. Poverty status				
Poor	36	950	20	20
Non Poor	64	2,079	80	100

6.5 Profiling the poor

Poverty is closely linked to a wide variety of household and individual characteristics, such as household size, education, disability and employment. In addition, contextual characteristics – for instance, the labour market, accessibility and geographic features – may bear an impact on the poverty status. However, the causal relation between poverty and such individual, household and context variables may not always be directly evident. Moreover, they are likely to interact in intricate ways and more advanced multivariate analysis is required to disentangle this interplay and to find the true determinants. This is, however, beyond the scope of the present report.

6.5.1 Household size and composition

There is an apparent correlation between poverty and household size. Overall, the average size of poor households is 8.0 persons, compared to 6.9 for non-poor households. *Figure 6.4* shows that the proportion of poor households is progressively higher for households with more members up to household size nine.[5] A likely cause for this initial correlation is the increase in number of dependents, particularly children who do not, or only to a limited extent, contribute to household income. In this perspective, the levelling off of the effect for households with more than nine members could be related to the possibility that these large households increasingly involve extended or composite households with additional adult members engaged in income generating activities. This is also in line with the difference in the dependency ratio between the poor and non-poor; whereas the ratio of dependents (children and elderly) to the working-age population for the latter is 106, for the poor population it is a very high 128. Accordingly, the proportion of poor households is positively and strongly correlated to the number of children, but negatively with the number of persons in the working age 15-59 for households with three or more persons in this age group (see *Figure 6.5*).

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[5] Caution in the interpretation of this correlation is warranted since the definition of household wellbeing, per capita consumption, is intrinsically linked to household size.

Figure 6.4 Percentage of poor households, by household size
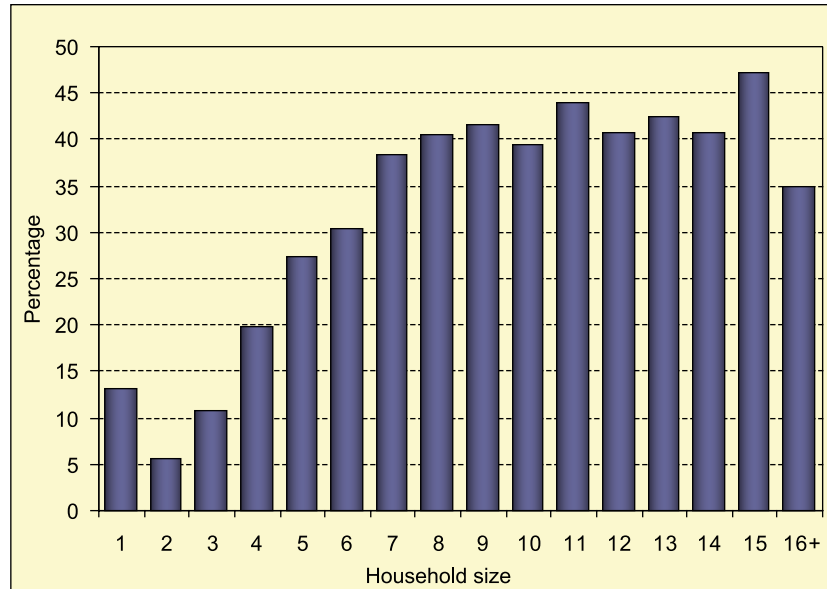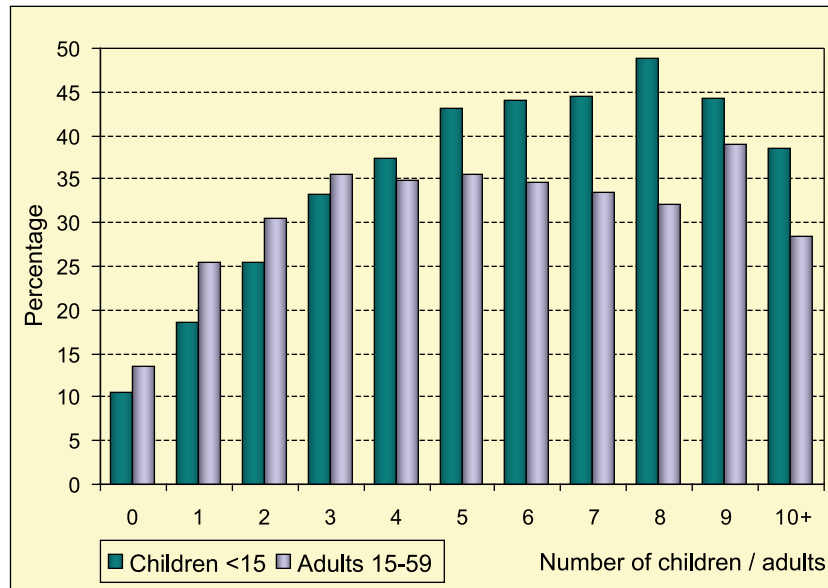
Even though reverse causality is well possible, it is likely that large household size due to high fertility and a large number of children negatively affects the per-capita consumption level in the household. Therefore, the higher fertility among Kuchis resulting in a larger number of children per household (see chapter 3) can be a contributing factor to their higher poverty incidence and poverty depth.

6.5.2 Characteristics of the head of household

The head of household is in most instances the single most determining person for the conditions of living in the household. This is especially the case in Afghanistan where households are almost exclusively male-headed (98 percent; see Section 3.3.1 on household structure) and men are the main or sole decision makers in almost all life domains

(see Section 10.2.1 on household decision making). Therefore, it can be expected that the attributes of the head of household have considerable predictive power for the poverty status of the household.

From *Figure 6.6* it can be deduced that in the rare cases that households are female-headed, on average poverty is more widespread than in male-headed households. Underlying factors could be that women have less access to employment (see Section 4.2 on labour force and employment) or that widows lack the support of a partner for income generating.

Figure 6.6 Percentage of poor households, by selected attributes of household head
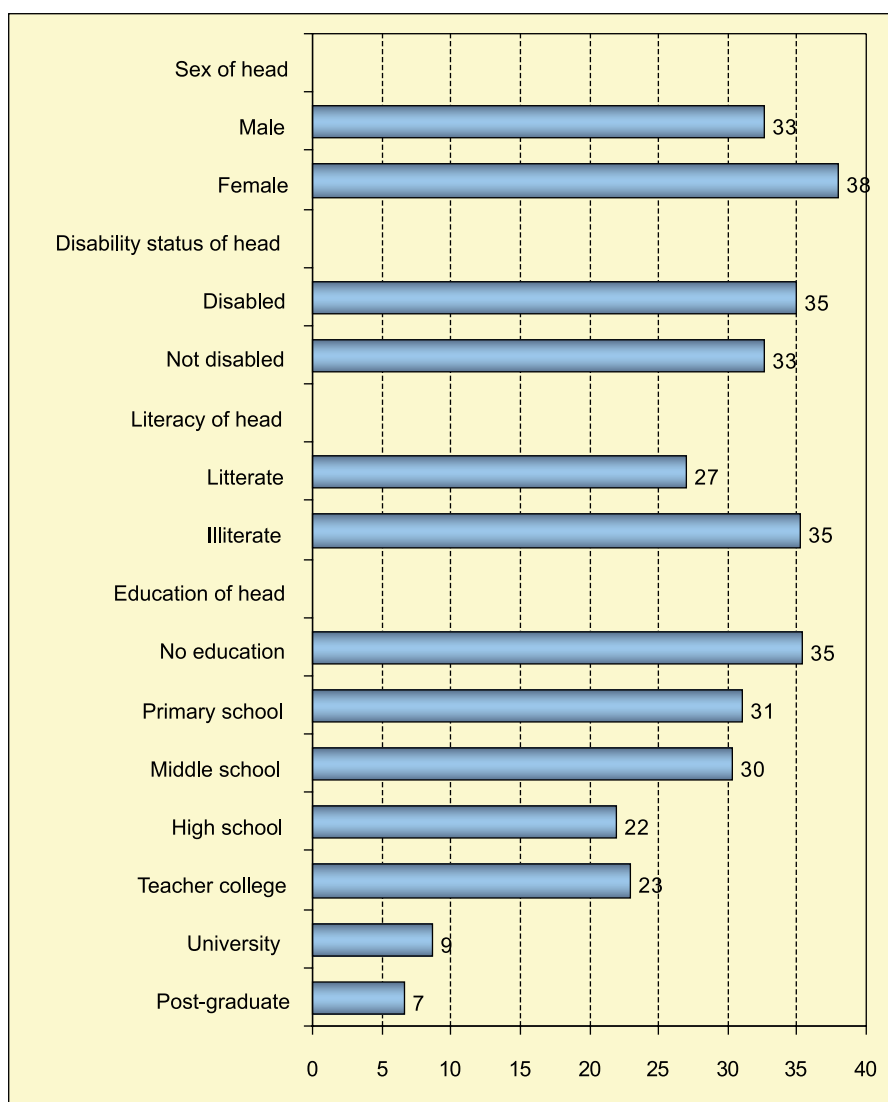
Literacy and educational attainment apparently are key factors in the explanation of poverty, and therefore should be incorporated in poverty reduction strategies. The ability to read and write and knowledge learned in the education system are strong facilitators for adequate performance on the labour market and in social life. Households of illiterate heads are 31 percent more likely to be poor than those of literate heads, and the household poverty rate decreases steadily with higher levels of education: the likelihood of being poor for households with uneducated heads is 1.5 to 5 times higher than those with heads that have any educational attainment above middle school. However, there is not very much differentiation between households of heads with middle school and primary school. The age of the household head does not show any clear effect on poverty (data not shown).

Households headed by a disabled person are also somewhat more likely to be poor, but the effect is small. The correlation is likely to work again through labour force participation and employment, as the likelihood that disabled persons participate on the labour market is only half of that of non-disabled persons (see Section 8.5.3).

With regard to labour characteristics of the head of household, *Table 6.3* indicates that those who are unemployed are significantly (14 percent) more likely to be poor than households with employed heads. Somewhat surprisingly, households with inactive heads report the lowest incidence of poverty. A possible explanation could be that these concern elderly heads who reside with younger generations who can provide for sufficient household income. The table also clearly shows large variation across industries in which the household head is working. If households have heads working in sectors that require extended levels of education – such as communication, public administration, health and education – the likelihood of securing adequate provisions is significantly higher than when heads work in the large agricultural sector and in construction, manufacturing, and mining and quarrying.

Table 6.3 Percentage poor households, by (a) activity status of household head and (b) Industry of working household head

a. Activity status	Share poor	b. Industry	Share poor
Employed	32.9	Transport/communication	22.3
Unemployed	37.5	Public administration	24.0
Inactive	29.5	Health	25.5
Total	32.8	Trade	28.5
		Education	29.9
		Other services	33.0
		Agriculture and livestock	35.5
		Construction	35.9
		Manufacturing	38.4
		Mining and quarrying	49.1

6.5.3 Characteristics of household members

Apart from the attributes of the head of household, specific characteristics of other household members may also be linked to poverty. There are some 266 thousand households in Afghanistan in which at least 1.2 million children perform child labour.[6] Usually, child labour is performed in view of pressing needs to supplement household income. It is, therefore, not surprising to find that households with at least one child engaged in child labour are significantly more often poor than those without child labour (*Figure 6.7*). The effect of having one or more disabled household members is visible in the graph, but very small.

The relation between poverty and migration is a complex one, and one of which the direction of causality is not immediately evident. No effect is found for households with or without members who left to live somewhere else, mostly for work-related reasons. However, a substantial difference in the proportion poor is shown between households that have one or more seasonal migrants (38 percent) and households with no seasonal migrants (32 percent). This effect can readily be interpreted in the sense that seasonal migration provides a coping strategy to many vulnerable and poor households. Additional analysis is required to further explore the interaction between poverty and migration.

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[6] For a definition of and information on child labour, see Section 4.4 of this report.

Figure 6.7 Percentage of poor households, by selected attributes of household members
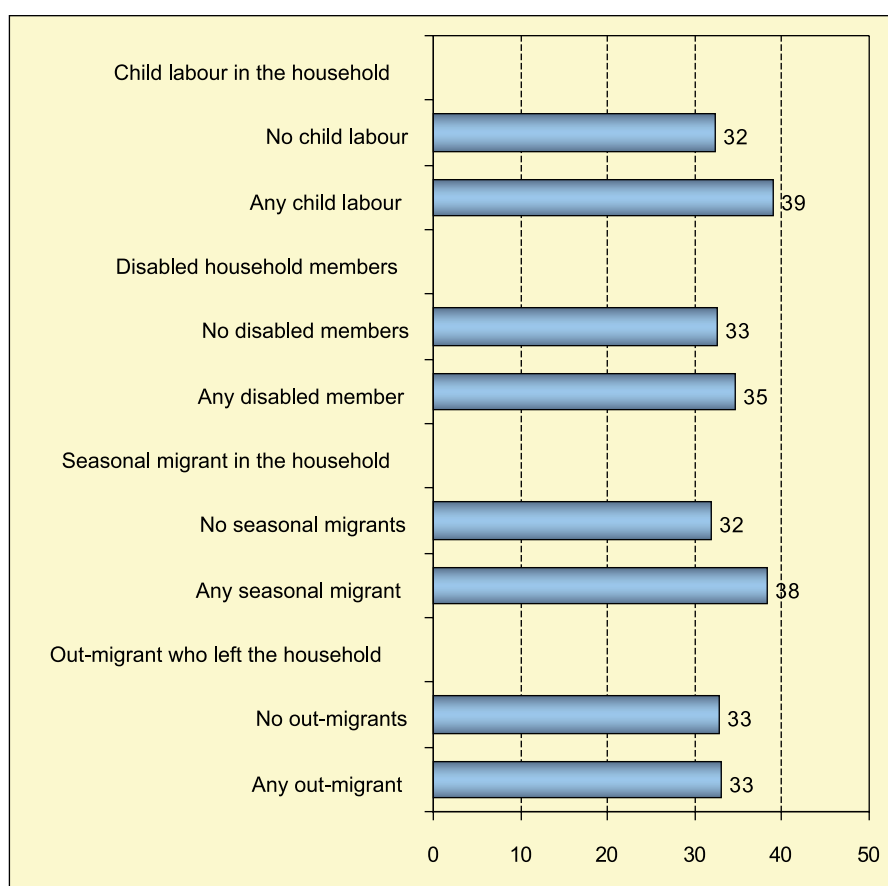
Looking into the difference in children's educational attendance between poor and non-poor households would also give an indication of the relative educational disadvantage of poor children, as well as of their potential to break the reproduction of poverty. As indicated in *Table 6.4*, net primary enrolment in poor households is somewhat lower than that in non-poor households, reflecting a moderate disadvantage for poor children. Apparently, the primary education system, which is likely to have recently improved coverage (see chapter 7), is not very discriminative for poverty. However, the chance that poor children continue to secondary education is significantly lower than that of the non-poor: the respective net secondary enrolment ratios of 13 and 18 percent indicate that children from non-poor households have a 40 percent larger chance of attending secondary education. The earlier mentioned correlation between poverty and educational attainment of the head of household suggests that secondary school attainment – and more particularly high school attainment – is likely to provide opportunities to escape from poverty.[7]

Table 6.4 Net enrolment ratios, by household poverty status, and by education level

Education level	Net enrolment ratio		
	Poor households	Non-poor households	All households
Primary school	50	53	52
Secondary school	13	18	16

_____

[7] Again, reverse causality is also plausible: children from richer households are more likely to attend secondary education.

6.5.4 Access to land and services

In view of the finding that the majority of households is engaged in any type of farming (Section 5.2), access to land is a key factor for Afghan livelihoods. Poverty is intricately related to access to land and the various arrangements that provide access. Thus, as indicated in *Figure 6.8*, the lowest proportion of poor households (26 percent) is found among those that own land and the highest (42 percent) among those that do not own land themselves, but have access only through renting, sharecropping or mortgaging land. The combination category of households that own land and cultivate land on the basis of these other arrangements takes an intermediate position.

Figure 6.8 Percentage of poor households, by access to land and selected services
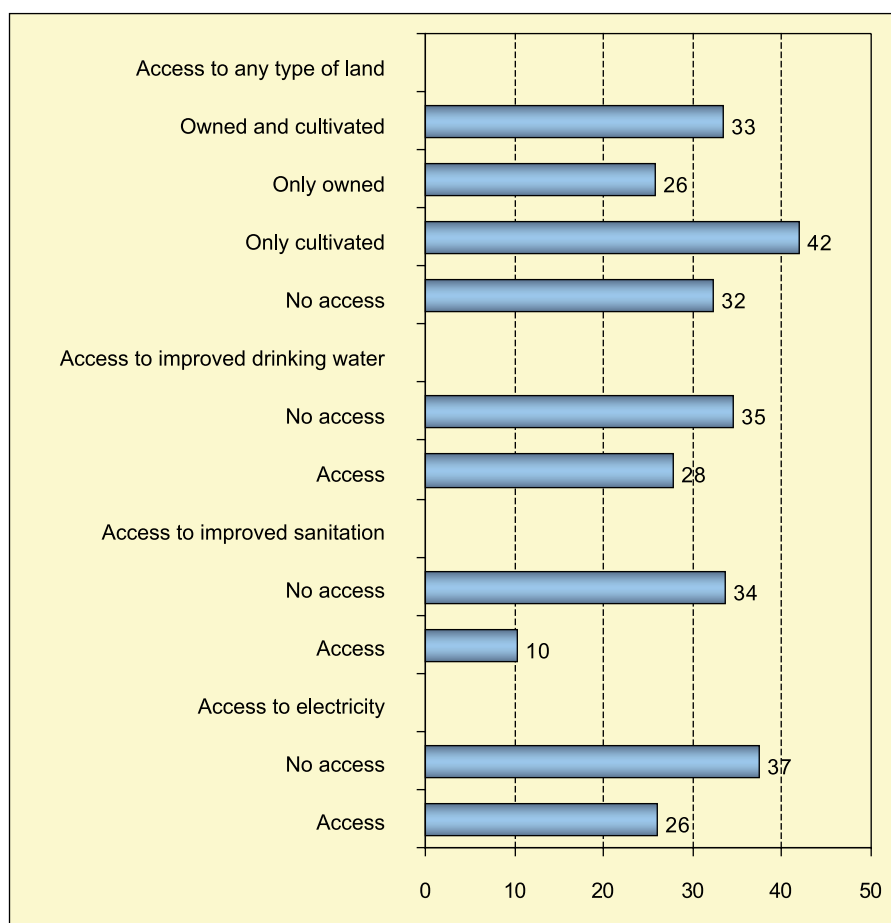
These figures could suggest that land ownership, even more than access to land, is a barrier against the risk of falling to poverty. However, it could also be that poverty is a barrier to acquiring land, thereby reverse the line of causality. Households without access have a higher risk of being poor than households owning land, but a smaller likelihood than those relying on other arrangements to cultivate land. This group also includes households that are engaged in other economic activities to provide a living.

With regard to the correlations between poverty and access to the services presented in Figure 6.8, it is more evident that generally access can be considered the dependent variable, although richer households also tend to live in locations with better service provision.

Nationally, 27 percent of the population has access to improved drinking water, 5 percent has access to improved sanitation, and 42 percent has access to any source of electricity (see Section 9.3). To the extent that poverty is indeed a determinant of these levels of access, there is considerable effect on the access to any of the services, but particularly on access to improved sanitation.

6.6 Conclusions

The present analysis offers various opportunities to mitigate the effects of poverty through well-designed and targeted policies. In particular, the correlates of poverty identify population pockets where disproportionate poverty prevails, such as female-headed households, the disabled, the unemployed and workers in specific economic sectors. At the same time, it suggests potential handles for intervention strategies, which may refer to employment and education opportunities (including adult literacy programmes), family planning services, facilitation of labour migration and access to land, and rehabilitation of irrigation systems (see also chapter 5 on agriculture and Section 11.3 on community preferences). In addition, the analysis identifies areas that can be addressed to improve the wellbeing of the poor by extending access to safe drinking water, improved sanitation and electricity, as well as providing other basic infrastructure.

It should be noticed that this report only touches a fraction of the poverty-relevant material that is included in the NRVA data. It is strongly recommended to facilitate more detailed and in-depth research into the covariates and consequences of poverty. In particular, multivariate regression analysis is required to identify the possible and likely interaction between various factors and specify their net effect on poverty beyond the present simple bivariate results.

7 Education

SUMMARY. The overall indicators of education and literacy in Afghanistan reflect an education system that has performed very poorly. In addition, they invariably show very large gender gaps. Overall, only 17 percent of the population aged 25 years and over has attended any type of formal education, and the corresponding figure for women is as low as 6 percent. This manifests the lack of human capital in the country, which is required for good public administration and strong private sectors in the economy. The low literacy rates – 26 percent of the total adult population, and 12 and 39 percent for females and males, respectively – also imply that the large majority of people is denied access to much information relevant to them and to further personal development.

Despite these extremely poor overall indicators, there are signs of strong improvement in recent years, probably since the overthrow of the Taliban regime. Although still 2.3 million primary-school age children are not attending primary school, the net primary enrolment ratio reported in the NRVA 2007/8 is 52 percent against 37 percent in the 2005 round. Analysis of literacy by age also supports this sign of improvement of the education system. In the youngest age groups beyond primary school age literacy rates rise sharply. This suggests that after decades of stagnation, male literacy increases from around 30 to 62 percent in the youngest age group, and female literacy from below 10 to 37 percent. In addition, the literacy gender gap has started to narrow, indicating that educational improvement has especially benefitted girls. This effect is, however, particularly observed in urban areas; in rural areas the absolute gap between male and female literacy rates is largely maintained. The rural population lags behind in educational development to the extent that literacy rates and gender gap indicators of the youngest age groups is now at the level of the urban population at the start of the observed recent surge in literacy levels.

7.1 Introduction

Education is one of the most important aspects of human development. The Convention on the Rights of the Child – the most widely ratified human rights treaty – enshrines the right of all children to a primary education that will give them the skills they need to continue learning throughout life. Yet, a large majority of Afghan people have been denied this right, most of them women and girls. Consequently, they are bereft of many opportunities for personal development and contributions to society.

The present chapter starts out with an assessment of the main findings of the 2007/8 survey on literacy, one of the key effects of education (Section 7.2). Subsequently, Section 7.3 addresses the present performance of Afghanistan's educational system by reviewing attendance and non-attendance, and some of their backgrounds. Finally, a brief section (7.4) is dedicated to the accumulated human capital in terms of highest educational levels attained by Afghanistan's adult population. The chapter also presents most of the education-related MDG indicators.

7.2 Literacy

Literacy generally denotes the ability to read and write and to use written words in everyday life. Literacy is one of the intended outcomes of education, as well as a measure of a person's ability to function in society and his or her potential for further intellectual growth and contribution to economic and socio-cultural development of society. The complementary illiteracy indicates the extent of need for policies and efforts in organizing adult literacy programmes and quality primary education.

The adult literacy rate – referring to the population age 15 and over – indicates the accumulated achievement of primary education and literacy programmes in providing basic literacy skills to the population. *Table 7.1* shows very low adult literacy rates for Afghanistan, also compared to its neighbouring countries. The difference between male and female literacy – 39 and 12 percent, respectively) is very large with 27 percentage points. The gender gap expressed as a ratio shows that the female literacy rate is only 32 percent of the male rate. This ratio calculated for the youth sub-population is one of the MDG indicators to measures progress towards gender equity (see the box on MDG Indicator 10 below).

> **Self-reported literacy**
>
> In surveys it is often observed that people overstate their ability to read and write because they may be reluctant to admit to their illiteracy. In addition, if one household respondent, such as the household head, reports on literacy for all household members, he or she may be mistaken in literacy of other household members.
>
> The 2007/8 NRVA included a request to the male household head and to the primary female household member to read a sentence from a flash card in order to check the (self-) reported literacy. Tested and self-reported literacy were remarkably similar. This suggests that literacy figures of the survey have a high validity.

Table 7.1 also shows that residential distribution of literacy is highly unequal. The urban population has by far the highest literacy levels, as well as the smallest – but still very large – gap between men and women. The literacy rates for the rural and especially the Kuchi populations are significantly lower, with extremely large gender gaps. The maps of *Figures 7.1a* and *7.1b* below allow a comparison of literacy rates by province and sex.

The MICS 2003 and the NRVA 2005 had slightly higher literacy rates (overall 29 and 28 percent, respectively), which would suggest a decline in literacy. It is more likely, however, that this unexpected finding is to be attributed to a difference in phrasing of the survey questions on literacy.[1]

Figure 7.2 strongly supports the notion of significant improvement of literacy recently. The graph provides a look back in time and is a measure of the effectiveness of the primary education system at the time the respondents were in primary school age. It suggests that for decades, no improvement of education was achieved, as people with reported ages in the mid-twenties and older all have similar literacy rates – females between 5 and 10 percent; males just above 35 percent. A remarkable surge in literacy is observed for the younger ages, resulting in rates of 37 percent for girls in the age group 12-16 and 62 percent for boys in the same age group.

MDG Indicator 2.3: Literacy rate of the 15-24 year-olds, women and men

This youth literacy rate is one of the indicators to monitor progress towards the goal of universal primary education (MDG goal 2). It reflects the outcomes of primary education over the previous roughly 10 years. As a measure of the effectiveness of the primary education system, it is often seen as a proxy measure of social progress and economic achievement.

The NRVA indicates that the overall youth literacy rate is 39 percent, indicating that in recent years the education system of Afghanistan was able to provide 39 percent of its young population (53 percent of the male and 24 percent of the female population) basic reading and writing skills. The respective figures for this MDG indicator for the urban, rural and Kuchi populations are 63, 33 and 12 percent.

Together with Niger and Mali, Afghanistan takes a bottom-three ranking in international performance (UNICEF 2009). However, compared with the NRVA 2005 figure – 31 percent – it is a significant increase, and the more so since the figure is based on a broader definition of literacy.

Table 7.1 Literacy rates and gender gap indicators of population aged 15 years and over, by residence, and by sex

Sex	Residence						
	Afghanistan				Pakistan	Iran	Tajikistan
	Urban	Rural	Kuchi	National			
a. Literacy rates							
Male	62	35	14	39	65	84	100
Female	33	7	3	12	29	70	99
Both sexes	48	21	8	26	n.d.	n.d.	n.d.
b. Gender gap indicators							
Absolute difference	29	28	11	27	36	14	1
Female/male ratio	54	20	19	32	45	83	99

Source for Iran, Pakistan and Tajikistan: UNFPA 2008

The upturn in literacy rates is directly accompanied by an increase in the ratio between female and male literacy rates (the blue dotted line). For every age above 26, the female literacy rate is less than 25 percent of the male rate, but for the youngest age group the figure rises to 63 percent. Whereas the absolute gender gap remains the same for the older age groups that experienced the literacy improvement (around 30 percentage points; the red line), in the younger cohorts it has decreased to 20 percentage points. The basic message of these figures is that in recent years a large improvement must have been achieved in primary education, and that, relatively, girls benefitted more than boys and begin to catch up with them. In no previous living generation has the gender gap been so small. Given the timing of the start of the surge in literacy and the observed gender effect, there is every reason to directly link these developments to the overthrow of the Taliban regime.[2]

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[1] In addition, the MICS 2003 did not include the Kuchi population with particularly low literacy rates.

[2] The relatively progressed age at which the start of the literacy improvement is observed is likely caused by a combination of the use of five-year age groups, age misreporting and educational catch-up at ages beyond the formal primary school age.

Figure 7.1a Male literacy rates, by province
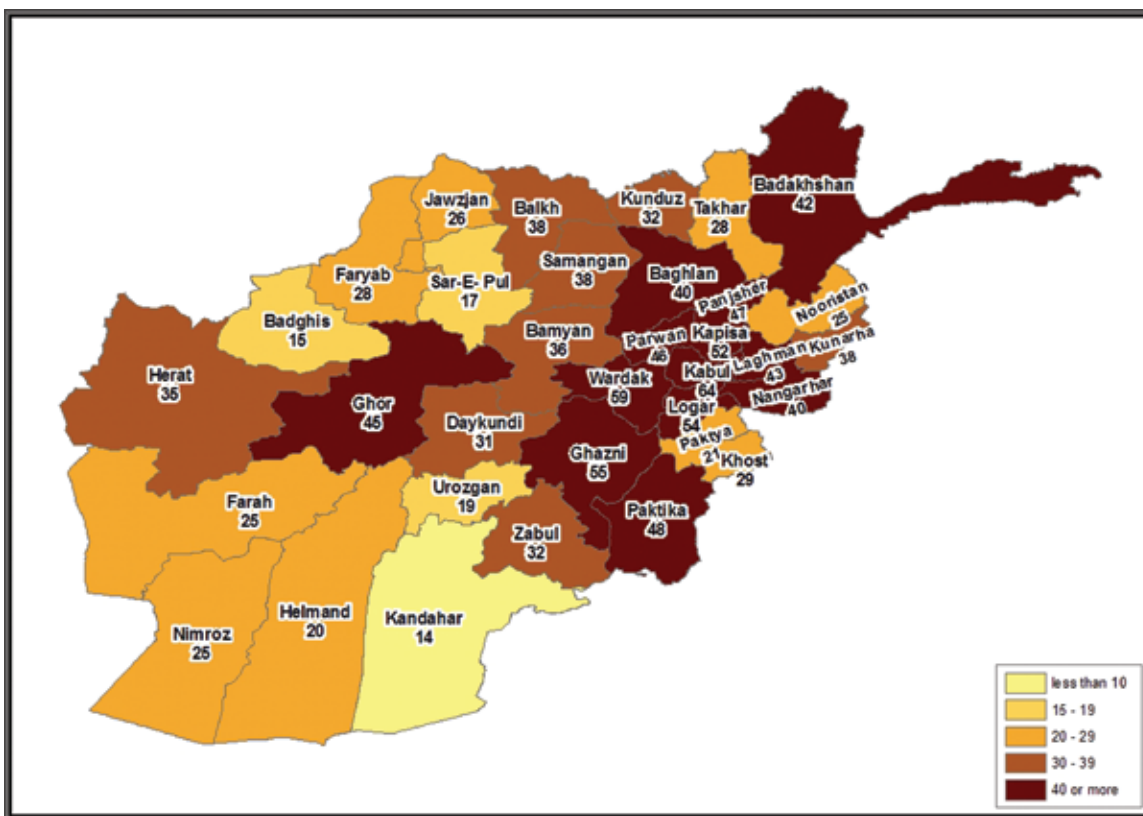
Figure 7.1b Female literacy rates, by province

Figure 7.2 Literacy indicators, by age and sex [a]
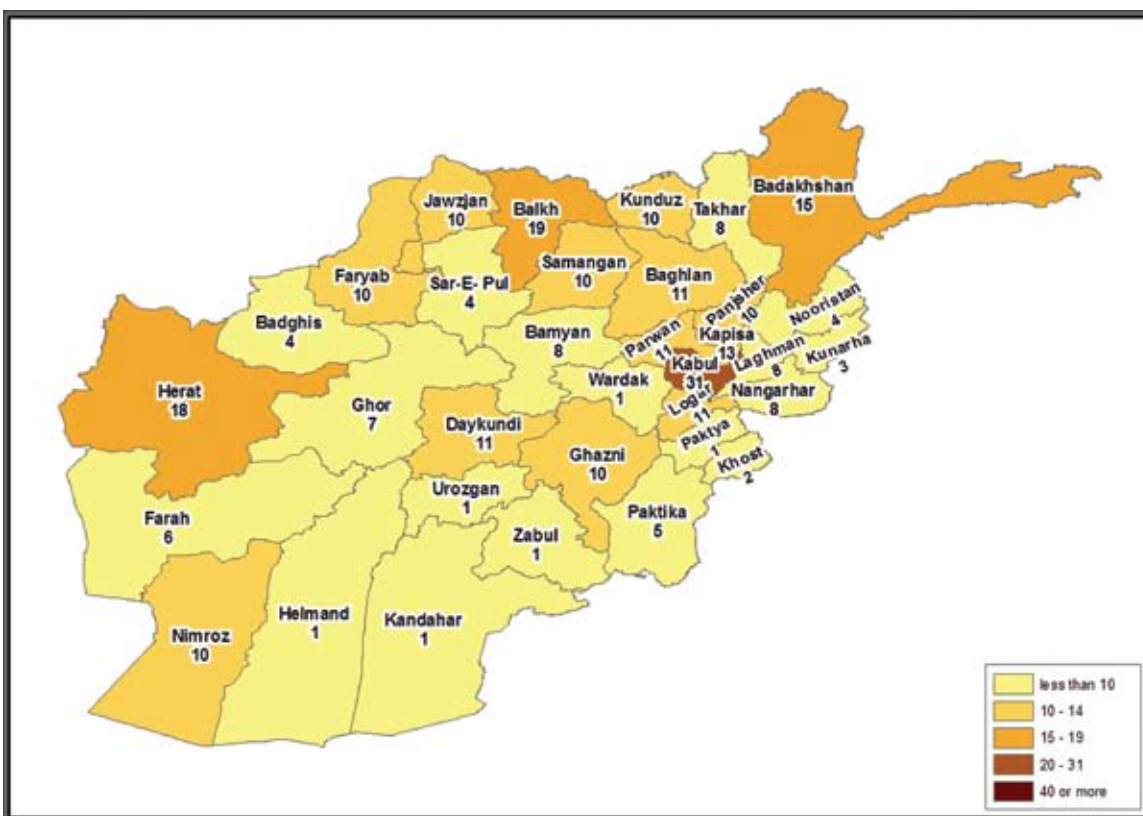
Figure 7.2 Literacy indicators, by age and sex [a]
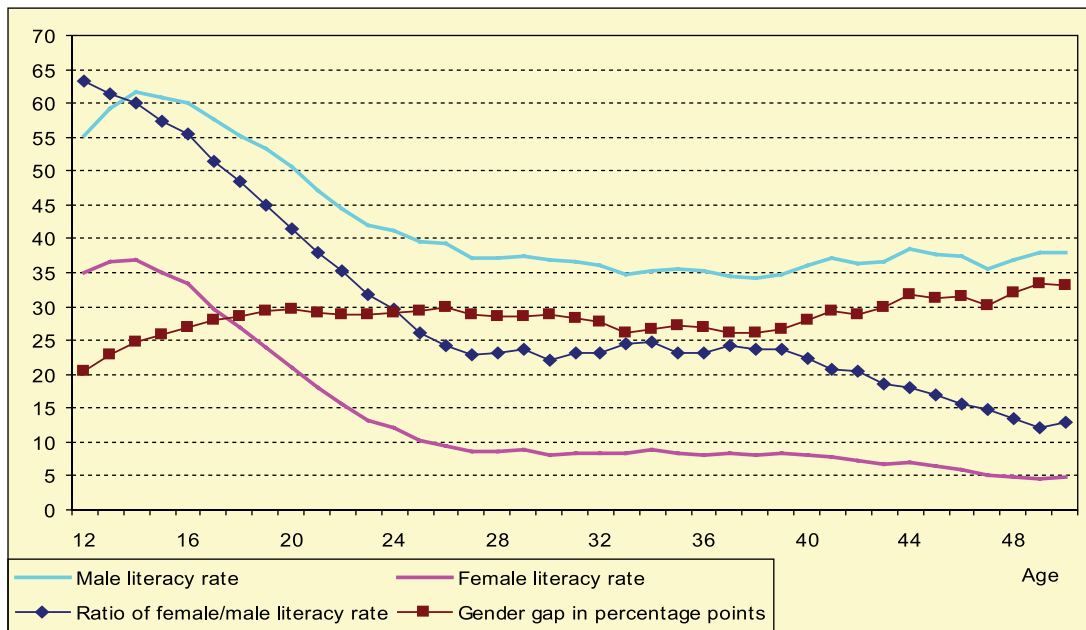
[a] Based on 5-year moving averages.

MDG Indicator (10): The ratio of literate women to men, 15–24 years old

The ratio of the female literacy rate to the male literacy rate for the age group 15–24 measures progress towards gender equity in literacy and learning opportunities for women in relation to those for men. The index is also a key indicator of empowerment of women in society, as literacy is a fundamental skill to take control of one's life, to engage directly with authority and to gain access to the wider world of learning. In the revised list of official international MDG indicators, this index has been removed, but it still figures in the Afghanistan National Development Strategy.

The value of the indicator at national level is 45 percent, an improvement up from 37 percent in the NRVA 2005 and 34 percent in the MICS 2003. The corresponding figures for the urban, rural and Kuchi populations are, respectively 71, 31 and 39 percent.

A further breakdown by residence shows that the gain of girls relative to boys is larger in urban than in rural areas. Here, in recent years the absolute literacy rate gap narrowed from 32 to 16 percentage points and literacy of young girls is 85 percent of that of boys (corresponding to literacy rates that rise from 31 to 63 for girls, and from 63 to 80 for boys). The rural absolute gender gap across ages is more or less the same at around 30 percentage points, indicating that the increasing number of children attending school are made up of equal numbers of girls and boys. However, in relative terms, also in rural areas girls gain on boys, as the ratio of literacy rates rise from 13 to 51 percent (corresponding to literacy rates that rise from 4 to 31 for girls, and from 13 to 51 for boys). In the Kuchi population, improvements are small, resulting in extremely low literacy rates for the youngest girls and boys at, respectively, around 10 and 20 percent.

Of the altogether 9.5 million illiterate adult people in Afghanistan, 5.5 million or 58 percent are women and 4.0 million or 42 percent are men. The absolute gap of 1.5 million could be interpreted as the number of women who should be made literate to achieve at least equality between the sexes.

7.3 Participation in school

Whereas literacy rates reveal past performance of the education system, enrolment ratios indicate the present capacity of the system to enroll students. The net enrolment ratio shows the extent of participation in a given level of schooling of children belonging to the official age-group corresponding to that specific level of education. The net primary enrolment ratio is another MDG indicator to monitor progress towards the goal of achieving universal primary education (see Box on MDG Indicator 2.1). Primary education provides children with basic reading, writing, and mathematics skills, along with an elementary understanding of such subjects as history, geography, natural science, social science, art and music.

Table 7.2 provides the net enrolment ratios for each of the primary and secondary education levels. It implies that 48 percent – 2.3 million – of the primary-school age children are not attending primary school.[3] The net enrolment rates for each successive level of education decrease, indicating an insufficient capacity of the system, children's commitments to household chores or income-generating activities (see Section 4.4), or a combination of these. For girls, in addition, cultural barriers to attend school play a role, which explains the increasing enrolment gap between girls and boy for each higher level of education.

Table 7.2 Net enrolment ratio, by sex, and by level of education

Level of education	Sex		
	Male	Female	Both sexes
Primary	60	42	52
Secondary	21	10	16
Middle	26	14	20
High	17	6	12

A large number of covariates of enrolment can be considered, analysis of which is beyond the scope of this report. However, it was found that school attendance was significantly lower for working children, and especially children engaged in child labour (see Section 4.4). Educational attainment of the head of the household is positively associated with enrolment, as well as with equity of boys and girls in school participation. On the other hand, there seems no strong seasonal effect, which could have been expected in an agricultural society like Afghanistan. As can be seen in *Figure 7.3*, there is also a strong age effect. This causes an attendance rate peak at age 11 for boys and girls, due to late entry into the school system for a significant share of the children.

Figure 7.3 Age-specific attendance rates

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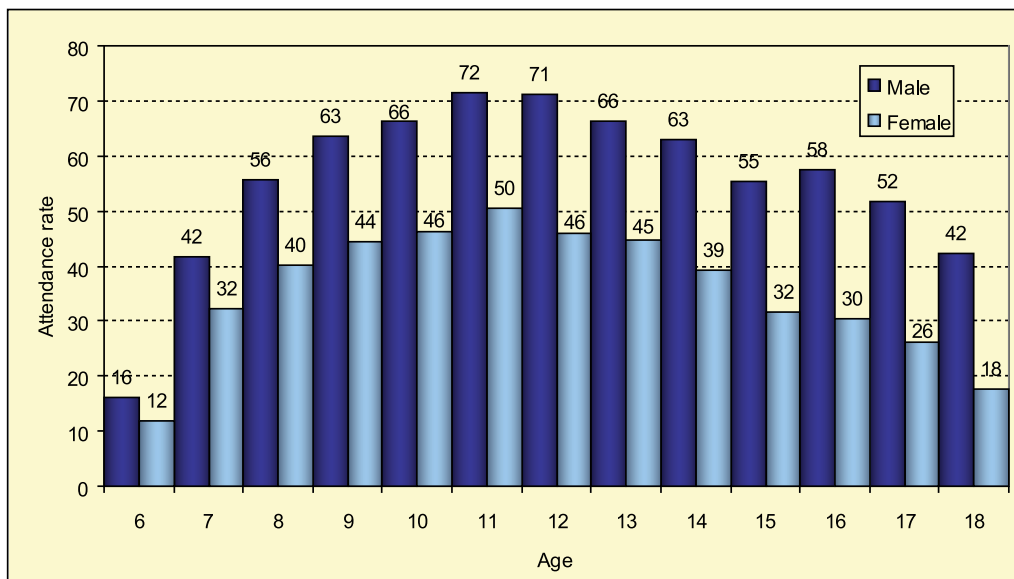
[3] This could mean that they are either completely outside the education system or attend secondary school.

Table 7.3 reflects the answers to the question about the reasons for not attending school for children in the school age who did not attend school. A consistent pattern is revealed, implying that for rural and Kuchi children access to school is importantly prohibited by distance to the school. Financial reasons – including the requirement for children to work or help in the household – are other important barriers. They are mentioned much more often for boys than for girls, probably because for girls the overriding obstacle is formed by cultural considerations. For them, exclusion from education because the family did not allow going to school was, after 'distance', the single most important reason mentioned.

Table 7.3 School-age children not attending school, by sex, school age, and by residence, reason for non-attendance (in percentages)

Residence, reason for non-attendance	Sex, school age											
	Boys				Girls				Both sexes			
	7-12	13-15	16-18	Total	7-12	13-15	16-18	Total	7-12	13-15	16-18	Total
Urban												
Distance /access	14	19	6	12	17	9	9	12	16	12	7	12
Financial reasons	12	35	54	31	4	6	5	5	7	14	24	15
Cultural reasons	12	15	9	11	31	61	61	49	23	48	40	35
Security reasons	5	4	3	4	4	4	8	5	4	4	6	5
Other reasons	57	28	28	42	44	20	18	29	49	22	22	34
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Rural												
Distance /access	43	34	34	41	39	36	35	37	41	39	35	39
Financial reasons	13	27	37	21	6	8	6	6	9	16	18	13
Cultural reasons	7	6	6	7	28	38	39	33	19	25	25	22
Security reasons	4	5	7	5	6	6	8	6	5	6	7	6
Other reasons	32	19	19	26	22	12	12	17	26	15	15	21
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Kuchi												
Distance /access	61	66	55	61	60	59	49	58	60	63	52	59
Financial reasons	12	16	20	14	6	7	10	7	9	12	16	11
Cultural reasons	2	2	1	2	15	24	29	19	8	10	14	10
Security reasons	2	0	0	1	2	3	6	3	2	10	3	2
Other reasons	24	17	23	22	17	8	6	13	20	13	15	18
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
National												
Distance /access	43	44	31	40	39	34	31	36	40	38	31	38
Financial reasons	13	26	36	22	5	8	6	6	9	15	19	13
Cultural reasons	7	6	6	7	27	40	42	34	18	26	27	22
Security reasons	4	4	6	4	5	6	8	6	5	5	7	5
Other reasons	34	19	21	27	24	13	13	18	28	15	16	22
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

MDG Indicator 3.1: Ratio of girls to boys in primary, secondary and tertiary education

This indicator relates to the number of female students enrolled at primary, secondary and tertiary levels in public and private schools to the number of male students, regardless of age.

The indicator of equality of educational opportunity, measured in terms of school enrolment, is a measure of both fairness and efficiency. It is used to measure progress to achieving MDG 3 – Promote gender equality and empower women. Eliminating gender disparity at all levels of education would help to increase the status and capabilities of women. Female education is also an important determinant of economic development.

The ratios for primary, secondary and tertiary education are, respectively, 69, 49 and 28 percent, indicating a large inequality of access to education that is increasing with educational level.

7.4 Educational attainment

Educational attainment is used as an indicator of the stock and quality of human capital within a country. As such, it also reflects the structure and performance of the education system. It is measured by the percentage distribution of the adult population – here those age 15 and older – by the number of years or highest level of schooling attended, or completed. The NRVA provided information about highest attendance as reflected in *Table 7.4*.

The typical patterns for Afghanistan can be observed, revealing large gender and urban-rural/Kuchi differences. In the latter populations, women are almost totally without schooling, whereas among their urban sisters only one-quarter ever attended any form of education. Around one-quarter is also the share of all men with any level of schooling. The relatively high share of persons with high school attendance – especially among urban men – is somewhat surprising and may need further investigation. One line of understanding would be that it indicates that once children start secondary school, relatively many continue to the highest level. Also the 11 percent urban males having attended at least university level is unexpected and should be treated with caution.

Table 7.4 Population age 25 years and over, by sex, residence, and by highest educational attendance (in percentages)

Highest level of education attended	Sex, residece											
	Boys				Girls				Both sexes			
	Urban	Rural	Kuchi	Total	Urban	Rural	Kuchi	Total	Urban	Rural	Kuchi	Total
No education	43	78	91	72	76	98	100	94	60	88	95	83
Primary school	14	10	4	10	8	1	0	3	11	6	2	6
Middle school	9	5	3	5	4	0	0	1	6	3	2	5
High school	21	6	2	9	7	0	0	2	14	3	1	3
Teacher college	3	1	0	1	3	0	0	1	3	0	0	1
University / Post-graduate	11	1	0	3	2	0	0	0	6	0	0	2
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

7.5 Conclusions

Afghanistan is faced with a huge challenge to meet the human right of children to receive at least primary education. This should provide them with necessary skills for life and provide the country with the human capital required to make progress to the goals it has set for development. Past performance of the education sector has resulted in a very poor overall adult literacy rate of 26 percent and a very low educational attainment level, as only 17 percent of the total population aged 25 and over has attended any type of formal education. In addition, the difficult access to education for girls is reflected in large gender gaps and even worse female education indicators.

Present enrolment figures are still among the worst in the world – net primary and secondary enrolment rates are, respectively, 52 and 16 percent – but in comparison with the NRVA 2005 they show a significant improvement. Also age-specific literacy rates indicate that in recent years primary school-age children have been much better served: 62 percent of boys around age 14 are literate, compared to only 30 percent of the 26-year old men; female literacy in corresponding ages rises from below 10 to 37 percent. These figures also imply a narrowing gender gap, especially in urban areas where the literacy rate of girls at the end of primary school age is nearly 80 percent of that of their male age peers.

It is the task of the Afghan government to maintain this momentum and further expand educational opportunities for the new generations. This will become increasingly hard since underserved areas – especially rural areas – are usually the ones that are more difficult to penetrate with development programmes. In addition, the very high population growth will provide ever larger numbers of school-age children in the near future.

Besides a focus on rural and Kuchi populations, education policy needs to further emphasize learning opportunities for girls. Not only because of equity principles, but also to be able to tap their potential for national development. Policy and programme development should take notice of the reasons mentioned for not attending schools. Distance and access issues, as well as financial obstacles should be addressed, but also cultural barriers for girls. Leveling the latter would imply building support in the communities and, for instance, training more female teachers. A more detailed analysis of reasons for not attending school among targeted sub-populations is recommended to focus future education programmes.

8 Health

SUMMARY. *The NRVA analysis paints a stark picture of the present performance of Afghanistan's health sector and its implications for the health status of the population. On most internationally comparable health indicators, Afghanistan is among the most poorly performing countries. Decades of conflict and social conservatism have left a health structure that is particularly adverse to the reproductive health needs of women. The results are reflected in the NRVA findings of poor accessibility of health facilities, low contraceptive prevalence, continuous high fertility, and low levels of antenatal care and skilled birth attendance. It was also found that, invariantly, improvement of health facilities ranked among the top priorities for community development, regardless of gender perspective.*

Despite its very weak state, the health system is now experiencing reconstruction and delivering some results. Although caution for methodological discrepancies is warranted, comparison with previous surveys suggest that use of skilled birth attendance has improved from 16 percent in 2005 to 24 percent in the 2007-08 period of the NRVA. In addition, the overall contraceptive prevalence increased from 10 percent in 2003 to 23 percent, and a current total fertility rate of 6.3 is found to be nearly one live birth below the fertility level experienced by women aged 40-49. Also, a declining trend was observed for the share of women marrying before age 20, which exposes fewer to the risk of early pregnancy complications.

With regard to child health care, improvements seem to have been made, with the notable exception of measles immunization. For the vaccinations included in the Expanded Program on Immunization (EPI) – BCG against tuberculosis, OPV3 against polio, DTP3 against diphtheria, pertussis and tetanus, and Measles – the estimated immunization rates of the children aged 12-23 months were, respectively 74, 71, 43 and 56 percent. Full immunization is only received by 37 percent of the children, whereas 15 percent have never been vaccinated. Immunization against neonatal tetanus was received by only 33 percent of eligible women. Furthermore, 69 percent of children aged 6-59 months received vitamin-A supplements against infections and 61 percent of households used iodized salt, which helps to prevent goiter and brain damage in children. Finally, with a prevalence of 78 percent, exclusive breastfeeding of children aged 0-6 months seems to be relatively high. However, when information about additional liquids in the first days is included, the overall exclusive breastfeeding rate drops to only 35 percent.

The NRVA reported 406 thousand disabled in Afghanistan, implying a disability prevalence of 1.6 percent. The prevalence rate increases with age, adding to the vulnerable position of the elderly. However, younger disabled persons also face negative consequences: school attendance of disabled children of primary school age and labour force participation of people of working age are only half of that of their non-disabled counterparts.

8.1 Introduction

The health system of Afghanistan is recovering from a collapse in the recent decades of conflict. Many of the country's main health outcome indicators – although improving – remain at the very bottom of the international rankings. The poor general health conditions in Afghanistan are directly related to many factors such as nutrition, access to safe drinking water and adequate sanitation. Yet one of the main causes for these poor health outcomes not being overcome is the inadequate availability, access and quality of health care services.

The 2007/8 NRVA covered several issues related to health. Other parts of this report deal with fertility and mortality (Section 3.4), and access to drinking water and sanitation (Section 9.3.1). This chapter specifically focuses on aspects of access to health care (Section 8.2), child health – in particular child immunization and breastfeeding practices (Section 8.3), reproductive health (Section 8.4) and disability (Section 8.5). Information on the latter subjects directly relate to components of the *Basic Package of Health Services* (BPHS) in Afghanistan: maternal and newborn health, immunization and disability.

8.2 Access to health services

Access to health services is a multi-dimensional concept. It does not only relate to the physical distance to health facilities or the travel time involved, but also involves the costs of travel and services, as well as opportunity costs, cultural responsiveness to clients' needs, mobility of women, and even the 'value' attached to the health and survival of

specific household members, such as children and women. The NRVA 2007/8 provides information about travel time and travel costs required to reach health facilities, as well as some information related to the disadvantaged position of women in this respect.

8.2.1 Travel time and travel costs

The improvement of local health facilities – especially for women – ranked among the top priorities for community development in the NRVA inventory of Shura preferences, regardless of residence or the gender composition of the Shura (see Section 11.3). The community module of the NRVA includes a battery of questions on the time and costs involved in travelling to different health facilities – health posts, public clinics, district or provincial hospitals, private doctors or hospitals, and private pharmacies – and on means of transport – by foot or animal, shared or public transport and private transport. *Table 8.1* collapses the different health facilities into public and private categories and shows, respectively, the share of the population that can reach these facilities within one hour (panel a), and the mean and median costs for traveling to the nearest health facility (panels b and c).

The results indicate that the large majority of the Afghan population (85 percent) can reach at least one type of health facility within one hour by any way of transport. The situation in urban areas, where the entire population can reach a health facility within one hour, is better than among rural and Kuchi populations, where 81 percent can reach a health facility within an hour. Not surprisingly, the province with the best access to health services is Kabul, followed by Jawzjan and Kapisa (all with at least 85 percent of the population within one hour travel of any health facility; see Figure 8.1). Access is the lowest in the more centrally located provinces of Ghor, Dyakundi, Urozgan and Zabul (where only 25 percent or less of the population can reach a facility within one hour).

Table 8.1 Population, by residence, type of health facility, and by travel time and travel costs[a] to reach the nearest health facility, way of transportation (in percentage)

Access indicators, means of transportation	Residence, type of health facility											
	Urban			Rural			Kuchi			National		
	Public	Private	Any	Public	Private	Any	Public	Private	Any	Public	Private	Any
a. Travel time to nearest health faclity: percentage with access within one hour												
By foot or animal	79	96	97	54	41	63	37	25	46	57	51	68
Working children, of whom	77	66	79	53	41	56	64	44	66	58	44	60
By private transport	88	87	89	63	53	66	66	54	70	68	57	70
By any type of transport	99	99	100	78	65	81	77	57	81	82	71	85
b. Mean travel costs to nearest health faclity (in Afs.)[b]												
By public or shared transport	22	13	22	101	221	101	94	234	94	92	198	92
By private transport	52	45	52	213	463	213	241	419	241	194	408	194
By public/shared or private transport	22	25	24	101	321	119	94	249	94	92	282	106
c. Median travel costs to nearest health faclity (in Afs.)[b]												
By public or shared transport	10	10	10	37	60	37	50	80	50	30	50	30
By private transport	40	20	40	80	150	80	120	180	120	70	110	70
By public/shared or private transport	10	10	10	37	100	40	50	80	50	30	70	30

[a] One-way travel for one person

[b] Travel by foot or animal involves no costs

The most common means of transport for Afghans is on foot or by animal (Ministry of Public Health 2006). If access time is indicated in terms of this type of travel, one-hour access to any type of health facility drops to around two-thirds of the population at national level. However, in urban areas almost all people (97 percent) can reach any type of health facility within one hour walking, against less than half (46 percent) of the Kuchi's, and 63 percent of the rural majority. *Figure 8.1* provides the provencial percentage of population with access to any health facility in less than one hour walking.

Table 8.1 also shows that whereas generally walking time to the health facilities in urban areas is less than for the rural and Kuchi populations, this is even less for travel time to private facilities. Some 79 percent of the urban population can reach any public health facility – health post, public clinic, or district or provincial hospital – in urban centers within one hour walking against only 54 percent of the rural population, but the corresponding shares for reaching private health facilities – a doctor, hospital or pharmacy – are, respectively 96 and 41 percent.

As can be expected, private transport is a more time-efficient travel mode than either walking or public transport. However, the involved costs are correspondingly higher, which can raise a significant barrier to its use and to access to health care. Whereas no costs are involved in walking, a one-way trip to any health facility costs on average around 100 Afghanis by any motorized transport. Travelling by private transport is around twice as expensive as by public or shared transport, and the costs for reaching the nearest private health facility by private transport is again twice as high (more than 400 Afghanis). Very large differences can be observed between rural and urban travel expenditures, amounting to around a fourfold for the rural population.

Given the large weight on the average costs by high travel expenses in remote areas, the median travel costs provide a better picture of the expenses most Afghans have to bear to reach health care services. The differentiation between travel expenditure for private and public transport, to private and public health facilities and between urban and rural areas is similar to that of the average expenses, but at a lower level.

Summarizing, with regard to access to health care services, the rural and Kuchi populations are severely disadvantaged compared to the urban population. The disadvantage is cumulative, since not only can fewer people reach a health facility within one hour walking, they also have to pay significantly more for motorized transport, even more so since public transport is often unavailable.

Figure 8.1 Percentage of population with access to nearest health facility within one hour by foot or animal, by province
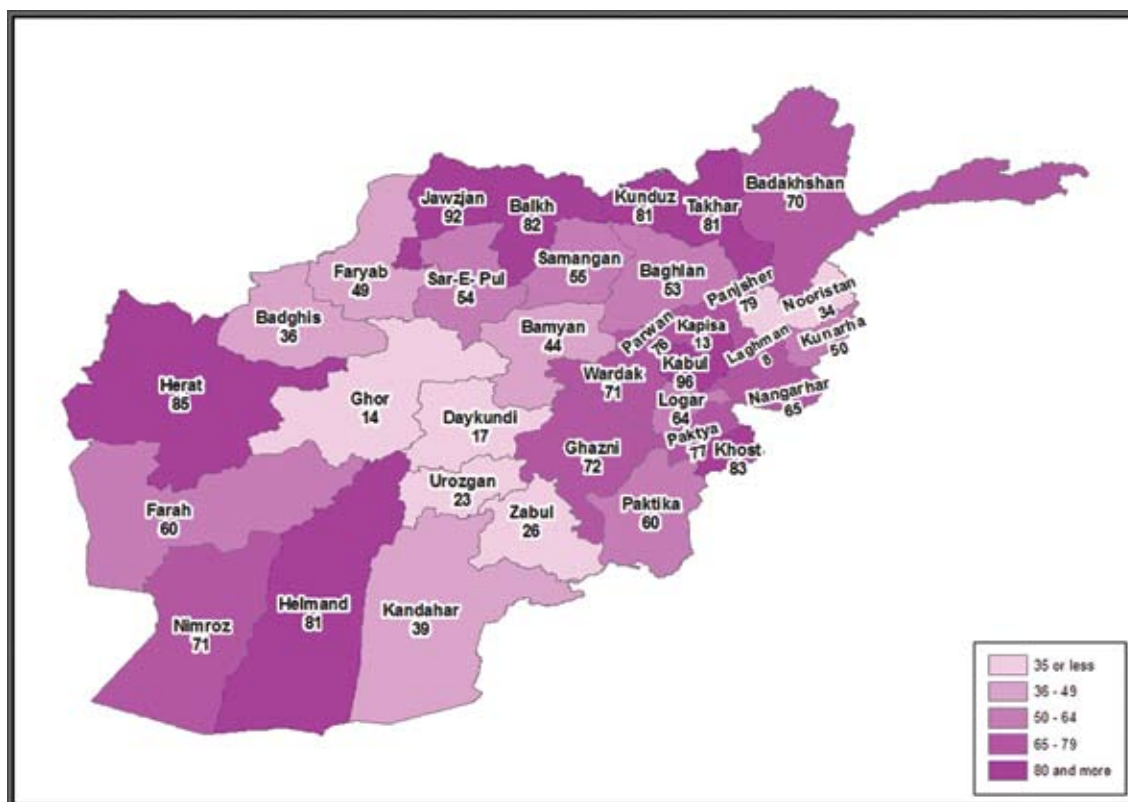
8.2.2 Impeded access for women

It should be borne in mind that access to health services is even more constrained for women, since they are usually required to be accompanied by a male, doubling any travel costs. Thus, for a typical female rural patient, a return trip to a health facility will easily amount to several hundreds Afghanis, which is a large sum in a low cash-flow economy like that of Afghanistan. Another section in the NRVA questionnaire investigated into the reasons for not seeking medical care by women and girls who had been ill or injured.[1] This showed that among the multiple reasons that could be mentioned, 47 percent of women and girls cited distance as a reason and 49 percent cited expenses (without specifying travel costs or other medical costs).

Apart from restricted mobility, the provision of services itself may also involve cultural barriers if a female client or her husband or family disapproves of treatment by male health staff. This barrier is real, as the health system not only faces a critical shortage of health care workers at every level, but especially of female staff, which is also related to low female education levels (see chapter 7). *Table 8.2* shows the assessment of the presence of female health staff by community shuras in various health facilities. It is evident that within the public health structure only higher up in the referral system and in urban areas any presence of female staff reaches higher levels. However, the picture should not disguise the fact that even in clinics and hospitals, the share of female staff is inadequate within the cultural context of Afghanistan. This underrepresentation of female health personnel may significantly contribute to the low level of antenatal care and professional birth attendance (see section 8.4.2), and consequently to the presumed high maternal mortality ratios.

The survey question on reasons for not seeking care indicated that 6 percent of women and girls mentioned the lack of female health personnel, 5 percent mentioned that there was no one to accompany them, and another 5 percent mentioned other traditional constraints, such as prohibition by the husband or family.

Table 8.2 Percentage of female staff among total health staff, by residence, and by type of health facility, type of staff (Shura assessment)

Type of health facility, type of staff	Residence			
	Urban	Rural	Kuchi	National
a. Health post				
Community health worker	36	28	20	169
b. Clinic				
Doctor	74	38	38	45
Nurse	77	48	42	53
Midwife	74	60	64	62
c. District or provincial hospital				
Doctor	98	87	88	89
Nurse	99	89	87	91
Midwife	98	92	89	93
d. Private doctor of hospital				
Doctor	93	52	51	60
Nurse	84	47	38	54
Midwife	91	58	52	64
d. Private pharmacy				
Doctor	15	12	7	12

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[1] No less than 2.4 million women and girls of age 10 and over reported having been ill or injured in the month preceding the survey, which corresponds to 32 percent of the female population in that age range.

8.3 Child health

8.3.1 Supplementation of micro-nutrients

Vitamin A supplementation

Vitamin A is effective in preventing infections and reducing overall mortality in young children. It is routinely given to children through health centres and outreach campaigns in many low-income countries, including Afghanistan. Overall, 69 percent of children aged 6 to 59 months were reported to have received a Vitamin A capsule within the last six months. This was somewhat higher in urban populations (82 percent), compared to rural (68 percent) and Kuchi (60 percent) populations (see *Table 8.3*). However, rates of Vitamin A receipt were fairly high across both residence and mother's education categories.

Table 8.3 Children 6 to 59 months, by vitamin A supplementation in the last 6 months, and by (a) residence, (b) educational attainment of mother (in percentages)

Residence and education of mother	Vitamin A supplementation		
	No	Yes	Total
a. Residence			
Urban	19	81	100
Rural	32	68	100
Kuchi	40	60	100
b. Educational attainment of mother			
No education	32	68	100
Primary school	17	83	100
Secondary school	17	83	100
Doctor	13	87	100
Total	**31**	**69**	**100**

Salt iodization

Deficiency of iodine in the diet causes goiter, an enlargement of the thyroid gland, and can cause brain damage before birth or during infancy or childhood. The iodization of salt is a low-cost way of preventing iodine deficiency disorders.

In NRVA 2007/8, interviewers questioned the senior female household member about her familiarity with iodized salt, and tested household salt for iodization. A small majority of women (53 percent) had heard about iodized salt (85 for urban women, 46 for rural women and 22 percent for Kuchi women). The most frequently mentioned means of information were radio (cited by 46 percent of the women), television (38), relatives (25) and neighbours (20). In 61 percent of tested cases, the household actually used iodized salt.[2] Rural and Kuchi households use significantly less than urban households (56 and 53, against 79 percent) and very large differences exist between provinces, ranging from 83 percent in Kabul to only 9 percent in Zabul. The effect of information can be deduced from the finding that 75 percent of the households with women who heard about iodized salt used the preferred type, against 43 percent of households where the woman was ignorant about it.

8.3.2 Child immunization

The official immunization schedule for children in Afghanistan includes BCG immunization against tuberculosis at birth; DPT3 and Hepatitis B at 6, 10, and 14 weeks;[3] oral polio vaccine at birth, 6, 10, and 14 weeks, and 9 months; and measles vaccine at 9 and 18 months (WHO 2008). As is standard in many surveys of immunization coverage – including the DHS – immunization coverage was reported for children aged 12-23 months, as all children should have received full vaccination coverage by 12 months of age. For reporting on vaccinations, immunization cards and mothers' recall were used (see Annex VI.A for further explanation).

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[2] Methodological differences do not allow direct comparison with the MICS 2003, but the present figure will imply a large improvement from the 2 percent of households using iodized salt in the latter survey.

[3] The Haemophilus Influenza Type B (Hib) vaccine was added to this schedule in January 2009.

Measles immunization

Measles is a vaccine-preventable disease that has a high case-fatality rate. Public health experts estimate that one percent of all under-five deaths could be prevented with universal measles immunization coverage (Jones et al. 2003). Afghanistan still has outbreaks of measles across the country, highlighting the importance of achieving high measles vaccination coverage.

MDG Indicator 4.3: Proportion of 1 year-old children immunized against measles

This indicator is used to measure progress towards the goal of reducing child mortality. The NRVA 2007/8 figure of 56 percent is among the lowest in the world and implies hardly any change compared to the NRVA 2005. The corresponding UN estimates for Pakistan and Iran are 80 and 97 percent, respectively.

More than half of 12-23-month-olds (56 percent) were reported to have been immunized for measles (see *Table 8.4*). This level was similar to the mean national measles coverage found in the 2005 NRVA survey of 55 percent. This varied significantly by residence, with urban children much more likely to be immunized than rural children (73 percent compared to 54 percent, respectively). Less than one-quarter of Kuchi children were reported to have been immunized for measles (24 percent). Education of children's mothers was an important factor related to immunization status, and mothers with any education were significantly more likely to have their children immunized for measles.

Table 8.4 Percentage of vaccinated children 12-23 month old, by (a) residence, (b) educational attainment of mother

Residence and education of mother	Vaccination					No vaccination
	BCG	OPV3	DTP3	Measles	Full immunization	
a. Residence						
Urban	88	87	72	73	63	7
Rural	73	68	39	54	33	15
Kuchi	41	59	16	24	13	31
b. Educational attainment of mother						
No education	73	70	41	54	35	15
Primary school	86	88	66	70	57	6
Secondary school	93	88	77	84	70	6
College or more	92	92	83	89	83	7
Total	**74**	**71**	**43**	**56**	**37**	**15**

DPT3 and OPV immunization

DPT3 vaccination, effective in preventing diphtheria, pertussis and tetanus, was defined as receiving at least three doses of DPT, among children aged 12 to 23 months. It is a good proxy measure of how the health system is reaching children, as it has to be given multiple times, either through static facilities or outreach teams. Unlike OPV (oral polio vaccine), DPT is not given during National Immunization (NID) campaigns, which might explain why OPV3 vaccination rates are usually higher than those for DPT. Overall rates of DPT3 in the NRVA 2007/8 were 43 percent, while those for OPV3 are much higher at 71 percent. Receipt of DPT dropped off after the first dose: DPT1 rates were 63 percent, dropping to 56 percent for immunization with two doses of DPT. Although the rate of DPT3 is low overall, it is significantly higher than the national rate of 19 percent found in the 2005 NRVA.

Similar to measles, DPT3 rates were significantly higher among urban dwellers compared to rural dwellers (72 percent versus 39 percent). Both rural and urban groups in the NRVA had significantly higher DPT3 coverage than Kuchis, whose children had only 16 percent full DPT immunization. Educated mothers were also significantly more likely to have their children fully immunized for DPT: 70 percent of those with primary education compared to 41 percent of those with no education.

The DPT3 estimates should be interpreted with caution. DPT requires that three doses be remembered, making it harder for respondents to recall accurately. Oral polio vaccine also requires that three doses be remembered, but it is also given through outreach campaigns, which may be more easily recalled. The fact that estimates for measles, which is given

after the third dose of DPT, is higher than DPT, raises concern. As explained in the 2006 Afghanistan Health Survey (Ministry of Public Health 2008), there are several possible reasons for this: 1) recent outreach campaigns provide measles (but not DPT) vaccination to populations without regular access to facilities and DPT3 immunizations; 2) some children receive measles vaccination from the health system, but do not have a chance to make sufficient numbers of visits thereafter to receive all (catch-up) DPT vaccines; and 3) error in mother's recall of vaccinations. Any combination of the aforementioned reasons is possible.

Immunization against tuberculosis

The schedule recommended by the WHO on immunization against tuberculosis (TB) – to give BCG as the first vaccine given at birth – is adopted in Afghanistan. The NRVA 2007/8 found that almost three-quarters (74 percent) of children aged 12-23 months had received a BCG vaccination. This indicates that these children had at least initial contact with the health care system.

Full immunization

Afghanistan has low rates of full childhood immunization. According to NRVA 2007/8, full immunization, consisting of BCG, OPV3, DPT3, and measles vaccinations, among children aged 12-23 months, is estimated at only 37 percent. Furthermore, 15 percent of children have never been immunized. Full immunization rates among urban children were nearly double those among rural children (63 versus 33 percent), and rural children in turn had more than twice the immunization rate of Kuchi children (13 percent). The low rates of all vaccinations among Kuchi children, which yield the extremely low rate of full vaccination among this migrant population, are cause for concern.

The national full vaccination rate according to the 2007/8 NRVA was nearly triple that found in the 2005 NRVA (33 percent versus 12 percent). Education was significantly related to full immunization status, with full immunization rates much higher among educated women (83 percent) than non-educated women (35 percent).

Figure 8.2 Percentage of children aged 12-23 months who received full immunization, by province
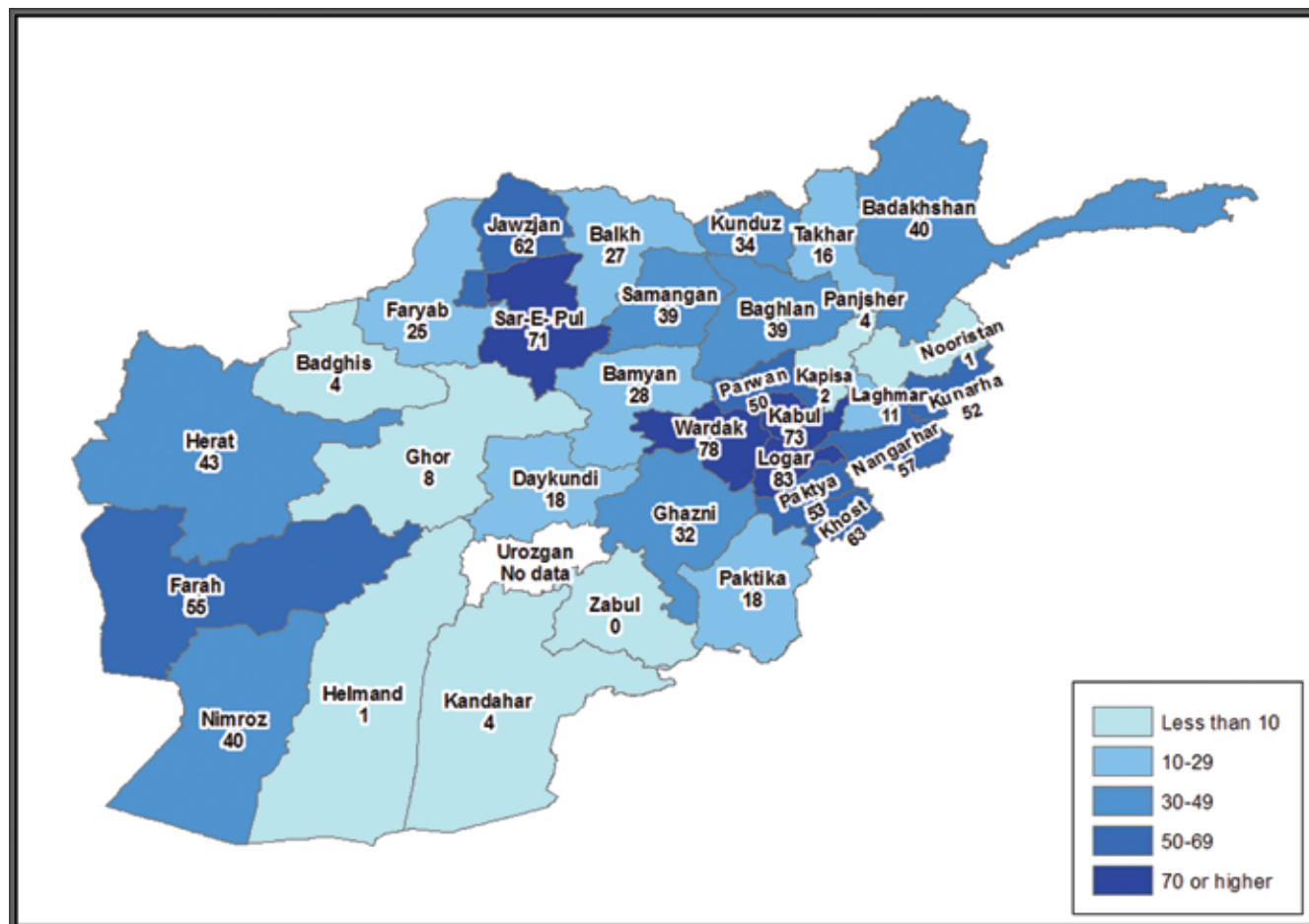
Tetanus toxoid coverage

Neonatal tetanus can be prevented by immunizing women of childbearing age with tetanus toxoid (TT), typically during pregnancy. A lifetime protection is provided if a woman has received the complete recommended series of 5 immunizations. However, according to WHO, "pregnant women with an inadequate or unknown immunization history should always receive 2 doses of tetanus toxoid-containing vaccine: the first dose as early as possible during pregnancy and the second dose at least 4 weeks later" (WHO 2006).[4]

Overall, 33 percent of eligible women, according to card and recall combined, received two or more doses of TT immunization status and are considered to be protected against neonatal tetanus. While there were no differences between urban and rural residents, there was a visible gap in coverage of Kuchi women (see *Table 8.5*). Interestingly, there does not appear to be a clear association between the TT coverage and level of education. However, this is likely to be a result of a low number of observations in each educational category because 92 percent of women do not have any formal education. There is also no association between the age at delivery and TT coverage.

Table 8.5 Percentage of women who received TT vaccination, by (a) residence, (b) educational attainment, (c) age at delivery

Selected variables	TT doses received	
	Less than 2	2 or more
a. Residence		
Urban	68	32
Rural	66	34
Kuchi	85	15
b. Educational attainment		
No education	68	32
Primary school	58	42
Secondary school	67	33
college or more	68	32
c. Age at delivery		
15-19	65	35
20-24	66	34
25-29	69	31
30-34	65	35
35-39	71	29
40-44	64	36
45-49	77	23
Total	**67**	**33**

8.3.3 Child feeding patterns

Exclusive breastfeeding [5]

Exclusive breastfeeding of young infants is one of the most powerful interventions for ensuring good nutritional status and preventing infections and deaths in children under five. Researchers have estimated that the largest proportion of under-five mortality – 13 percent of all deaths of young children – could be prevented with universal exclusive breastfeeding practices (Jones et al. 2003). Exclusive breastfeeding should be practiced with children from birth to six months of age, when complementary foods should be introduced and breastfeeding continued for at least another year. Colostrum, the yellowish, sticky breast milk produced at the end of pregnancy, is recommended by WHO as the perfect food for the newborn, and feeding should be initiated within the first hour after birth.

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[4] Annex VI.A includes a section on problems related to reporting on TT injections.
[5] Exclusive breastfeeding is defined as giving no other food or drink – not even water – except breast milk.

Rates of exclusive breastfeeding are relatively high in Afghanistan, but vary widely depending on the way they are measured. Calculating rates based upon whether children aged 0 to 6 months are currently breastfed and have not yet been introduced to solid foods yields a rate nationally of 78 percent, which does not vary considerably across either residence or educational status (*Table 8.6*). However, when calculation of the exclusive breastfeeding rate took into consideration responses to questions about actual child feeding during the first three days, in addition to current breastfeeding status, resulting rates were considerably lower, at only 35 percent nationally. Of concern is that only 77 percent of mothers reported giving their newborn breast milk within the first three days, a crucial period for ensuring proper nutrition, and 55 percent of mothers reported giving their newborn liquids other than breast milk, including sugar water, glucose, herb water or tea, melted butter, or powdered milk, during this period.

Table 8.6 Percentage of last born children who were reported exclusively breastfed, by supplementation of additional liquids in first three days after birth, and by (a) residence, (b) highest educational attainment of the mother

Selected variables	With additional liquids	Without additional liquids
a. Residence		
Urban	73	35
Rural	79	35
Kuchi	82	35
b. Educational attainment of mother		
No education	78	35
Primary school	77	20
Secondary school	83	38
College or more	65	42
Total	**78**	**35**

Complementary feeding
Once a child reaches about six months of age, breast milk alone is no longer sufficient to supply the energy needs of a child. Family foods should be introduced in complement to breastfeeding, which should ideally continue until 18 to 24 months of age. Proper complementary feeding is of critical importance for ensuring good nutritional status and healthy development among children. Experts estimate that if universal complementary feeding were practiced, 6 percent of child deaths under five worldwide could be prevented (Jones et al. 2003).

Nationally, 41 percent of 6-9-month-old children were given complementary feeding, according to NRVA 2007/8, which was defined as currently being breastfed as well as receiving solid foods as of age six months. Similar to exclusive breastfeeding patterns, there was little variation in complementary feeding patters by either location or educational status. The lower proportion of children of women with college education currently receiving complementary foods was not statistically different from the other groups, given the small number of women in this category.

Table 8.7 Percentage of 6-9-month-olds receiving complementary feeding, by (a) residence, (b) highest educational attainment of mother

Residence and education of mother	Complementary feeding
a. Residence	
Urban	46
Rural	39
Kuchi	45
b. Educational attainment of mother	
No education	40
Primary school	45
Secondary school	47
College or more	24
Total	**41**

The breastfeeding indicators should be interpreted with caution. The exclusive breastfeeding indicator varies considerably depending on whether or not feeding patterns during the first three days are included in calculation of the indicator. In addition, mothers were not directly asked what liquids the child was given in the past 24 hours, which may more accurately capture exclusive breastfeeding patterns. Regarding complementary feeding, the NRVA 2007/8 does not contain specific questions about the types of food that children were given in the last 24 hours, and therefore no information is available about the nutritional content and benefit of the complementary foods children are receiving. This is extremely important in the context of Afghanistan, where dietary diversity can be extremely limited in certain areas of the country.

8.4 Reproductive health [6]

Reproductive health implies that women and men are informed of and to have access to safe, effective, affordable and acceptable methods of fertility regulation, and the right of access to appropriate health care services that will enable women to go safely through pregnancy and childbirth and provide couples with the best chance of having a healthy infant. Although there are no reliable national data on mortality available in Afghanistan, the latest estimate of the maternal mortality ratio in Afghanistan is 1,600 per 100,000 live births (Government of Afghanistan 2009), which would be the third highest in the world (UNFPA 2008). The survival of mothers has enormous socio-economic ramifications and is a crucial development priority in Afghanistan and internationally. The Afghanistan National Development Strategy aims for a 50 percent reduction of the maternal mortality ratio (MMR) from 1,600 in 2002 to 800 in 2015, and a further decrease to 400 by 2020 (Government of Afghanistan 2009).

Key strategies to reduce Afghanistan's maternal mortality ratio are access to contraception to avoid unintended pregnancies, access to skilled care at the time of birth and timely access to quality emergency obstetric care. In addition, early pregnancies, narrowly spaced births and high fertility exacerbate maternal mortality. The NRVA 2007/8 provides information on most of these issues, which are the subject of the following sub-sections. All MDG indicators mentioned in this section refer to Goal 5 – improve maternal health.

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[6] Methodological considerations underlying the analysis of various reproductive health issues are provided in Annex VI.B.

8.4.1 Current use of family planning methods [7]

Family planning benefits the health and well-being of women and families. Using contraception can help to avoid unwanted pregnancies and space births, as well as to protect against sexually transmitted diseases, including HIV/AIDS, and provide other health benefits. As in other countries, a certain, but unknown number of pregnancies in Afghanistan are unplanned and unwanted, reflecting an unmet need of contraception and leading to a large reproductive burden. Each pregnancy multiplies a woman's chance of dying from complications of pregnancy or childbirth. However, many Afghan women face difficulties in supply of and information about contraception, especially modern contraceptive methods that are generally more effective and reliable than traditional methods.

Contraceptive methods – modern and traditional

For analytical convenience, contraceptive methods are often classified as either modern or traditional.

Modern methods include female and male sterilization, oral hormonal pills, intra-uterine devices (IUDs), male and female condoms, injectables, implants, vaginal barrier methods and emergency contraception.

Traditional methods include rhythm (periodic abstinence), withdrawal, lactational amenorrhea method (breastfeeding) and folk methods.

The proportion of women using at least one method of modern family planning in Afghanistan is relatively low: only 15 percent of currently married women. However, there were significant differences between women across different provinces. As *Figure 8.3* shows, respondents from urban areas were more likely to use modern family planning methods than those from rural areas (28 percent versus 13 percent).

Figure 8.3 Percentage women up to age 49 currently using modern contraceptives

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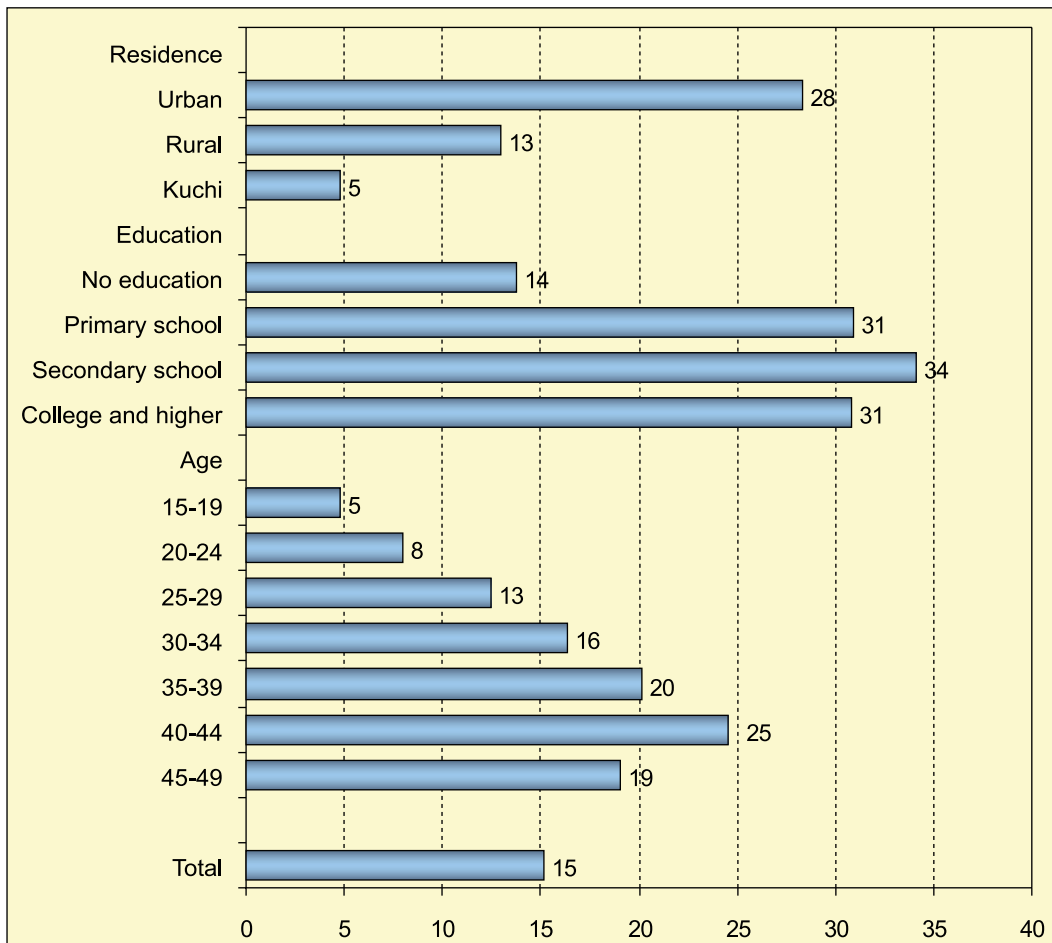
[7] Questions on use of family planning methods were asked only of currently married, non-pregnant women. However, use of modern contraception was calculated by including all women, including women who are pregnant or unsure of their pregnancy status, in the denominator. Limiting the family planning indicator to only non-pregnant married women results in a rate of modern contraceptive use of 21 percent.

Women with at least primary levels of education had twice the likelihood of using modern contraception than those with no education (31 percent versus 14 percent). Contraceptive use was also significantly associated with woman's age, as it was rising with each successive age group until the 45-49 cohort. The proportion women in the 40-44-year-old age group using modern contraceptive methods was three times than that for the 20-24-year-old group. Overall, the two most common methods of modern family planning among all currently married women of reproductive age were contraceptive injections (6 percent) and oral contraceptive pills (5 percent). Female sterilization was low at 1 percent.

> **MDG Indicator 5.3: Contraceptive prevalence rate**
>
> The contraceptive prevalence rate is the percentage of women married or in-union aged 15 to 49 who are currently using, or whose sexual partner is using, at least one method of contraception, regardless of the method used.
>
> The overall contraceptive prevalence rate (CPR) was found to be 23 percent. This is a little lower than the corresponding rate in Pakistan (26), and considerably lower than in Iran (74), Tajikistan (38) and the larger region of South Central Asia (53). However, compared to the CPR of 10 percent in 2003 (CSO-UNICEF 2003), it would signify a large increase.

8.4.2 Use of maternal health care

Antenatal care

Skilled antenatal care (ANC) services present opportunities for reaching pregnant women with interventions that may be vital to their health and that of their infants. These include medical check-ups, referrals of pregnancies that could result in complicated deliveries, and information about managing pregnancies and deliveries, immunization, breastfeeding and child spacing. Following the Afghanistan Health Survey 2006, skilled providers of antenatal care services included community health workers (CHWs), in addition to doctors, midwives and nurses. As compared to NRVA 2005, visits for getting injections of tetanus toxoid were not excluded when estimating skilled ANC services use.

> **MDG Indicator 5.5: Antenatal care coverage (at least one visit)**
>
> Antenatal care coverage (at least one visit) is the percentage of women aged 15-49 with a live birth that received antenatal care provided by skilled health personnel at least once during pregnancy, as a percentage of women age 15-49 years with a live birth. This is a recently introduced indicator to monitor progress towards Target 5.B – Achieving universal access to reproductive health (MDG 5 - improving maternal health).
>
> The percentage of pregnant women receiving antenatal care in Afghanistan – 36 percent – is low in international perspective. The comparable figure for Pakistan is 61 percent.

Overall, 36 percent of women reported the use of skilled ANC services. Around 17 percent saw a midwife, 13 percent saw a doctor, less than one percent a nurse, and 3 percent a community health worker. Use of ANC services during a woman's last birth in urban areas was more than twice the rate in rural areas (71 and 30 percent, respectively). The proportion of women using skilled ANC services was lowest among the Kuchi women (17 percent). Education was also significantly associated with skilled antenatal care during pregnancy: women with primary education had twice the likelihood (67 percent) of using skilled ANC care during pregnancy compared to women with no formal education (33 percent). Women with secondary school education and college education had even higher rates of antenatal care use (79 and 89 percent, respectively). Age of mother was not significantly associated with the use of skilled ANC services.

Skilled attendance at birth

Skilled birth attendance (SBA) is considered to be the single most critical intervention for ensuring safe motherhood, because it hastens the timely delivery of emergency obstetric and newborn care when life-threatening complications arise. It also implies access to a more comprehensive level of obstetric care in case of complications requiring surgery or blood transfusions. The proportion of births attended by skilled health personnel is an indicator of a health system's ability to provide adequate care for pregnant women.

The overall proportion of women delivering with a skilled birth attendant is very low in Afghanistan at 24 percent. More than a third of women (37 percent) delivered in the presence of relative or a friend. Use of traditional birth attendants is also common (33 percent). There are significant differences across provinces and among the nomadic, rural and urban populations. As with other indicators on use of health services, Kuchi women

> **MDG Indicator 5.2: Proportion of births attended by skilled health personnel**
>
> With the overall proportion of births attended by skilled health personnel estimated at 24 percent, Afghanistan ranks 9th of countries with the lowest percentages. Of its neighbouring countries, Pakistan has 54, Tajikistan 83 percent and Iran as high as 97 percent. The average proportion in South Central Asia is 47 percent (UNFPA 2008).
>
> Even though the overall figure of skilled birth attendance is very low, is signifies a substantial increase compared to previous estimates. The 2005 NRVA found a national rate of skilled birth attendant use of 15.8 percent –. and the MICS 2003 only 15 percent, implying an increase of skilled birth attendance of 60 percent since 2003

are least likely to use skilled birth attendants (8 percent). In addition, 15 percent of rural women as compared to 69 percent of urban women reported using skilled birth attendants for their last birth.

Figure 8.4 shows the percentage of SBA deliveries by province. It can be observed that 15 out of 33 provinces for which data are available have proportions of skilled birth percentages below 10. Three provinces stand out because of high shares of women receiving birth attendance: Wardak (60 percent), and Logar and Kabul (each 73 percent). It should be noticed that the provinces with presently the highest percentage of SBA deliveries are the ones that experienced the most improvement since 2003, indicating that fast improvements are possible with targeted health care programmes.

There are also significant differences in use of skilled birth attendants between women with different levels of education. Women with primary education were more likely to use skilled birth attendants than women with no education (57 percent versus 20 percent). The proportion of women with college education or higher that used skilled providers during their delivery was 93 percent.

Figure 8.4 Percentage of women using skilled birth attendants, by province

8.4.3 Fertility and pregnancy patterns

Over the years research has consistently demonstrated that pregnancies and births at young and old ages, having many children and closely spaced births involve significant health and survival risks for mothers and their children. Thus, the effect of waiting 36 months to conceive again would avoid 25 percent of under-five deaths (Rutstein 2008). Worldwide, pregnancy is a leading cause of death for those aged 15 to 49, but mothers aged 15 to 19 are twice as likely to die in childbirth as those in their 20s (UNFPA 2008).[8] The estimated total fertility rate of 6.3 (see Section 3.4.1) indicates a high reproductive health

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[8] Girls under age 15 are even five times as likely to die as women in their 20s. A teenage mother is at greater risk than women over age 20 for pregnancy complications, such as premature labour, anemia and high blood pressure.

burden for Afghan women. Each subsequent pregnancy exposes them to the risk of severe bleeding, infections, obstructed labour and eclampsia, most of which can be averted in an effective care health system.

MDG Indicator 5.4: Adolescent birth rate, per 1,000 women

The adolescent birth rate represents the risk of childbearing among adolescent women 15 to 19 years of age. It measures the annual number of births to women 15 to 19 years of age per 1,000 women in that age group.

For Afghanistan, an adolescent birth rate of 122 was found. This is very high in international perspective.

Currently pregnant women

Table 8.8 reports pregnancy status for currently married women, as well as for all women of reproductive age, regardless of marital status. Pregnancy among all women of reproductive age is 17 percent overall. The pregnancy rate is only 6 percent among 15-19-year-olds due to the relatively limited number of married girls in that age bracket. The rate increases to 23 percent among 20-24 year-olds and peaks at 27 percent among those 25-29 years old, before declining for older ages. Among currently married women, of whom nearly a quarter are currently pregnant, pregnancy rates are highest among 15-19-year-olds (36 percent) and steadily decline with age, dropping off more sharply after 39 years of age. The decline is likely the result of increasing proportions of women using effective methods of family planning (see Section 8.4.1) and – from age 40 onwards – rapidly falling fecundity. The data show that early marriage – before age 20 – implies high probability for getting pregnant, in turn implying high risks of medical complications and maternal death.

Table 8.8 Percentage pregnant women among all women and currently married women, by a. residence, b. age

a. Residence	Currently married	All women	b. Age	Currently married	All women
Urban	17.0	9.7	15-19	36.4	6.3
Rural	25.7	18.5	20-24	33.2	22.9
Kuchi	29.6	22.8	25-29	30.6	27.2
			30-34	26.2	24.2
			35-39	22.5	20.9
			40-44	10.1	9.0
			45-49	5.1	4.5
Total	**24.5**	**16.9**	**Total**	**24.5**	**16.9**

Current pregnancy status varied by residence, with significantly higher proportions of rural women indicating they were pregnant (26 percent among currently married women and 19 percent among all women) compared with urban women (17 percent among currently married and 10 percent among all women). Still higher proportions of Kuchi women reported being pregnant at the time of the survey, with more then one-fifth of all Kuchi women of reproductive age currently pregnant.

Birth intervals

Birth spacing, defined as the time elapsed between two successive births [9], is one of the key indicators in reproductive health. According to the World Health Organization, "after a live birth, the recommended interval before attempting the next pregnancy is at least 24 months in order to reduce the risk of adverse maternal, perinatal and infant outcomes" (WHO 2005).

Nearly one third of women had a birth interval of less than 18 months and more than half of the women had an interval of less than 24 months, the minimum recommended by WHO (*Table 8.9*). There are, however, differences between the more and less recent birth intervals: between the last and second-to-last birth, 48 percent of women had an interval of less than 24 months, whereas between the second-to-last and third-to-last birth, 78 percent of women had an interval of less than 24 months.

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[9] In this report, only surviving live births were included due to limited information regarding dead children and still births. Therefore, the true average birth intervals are likely to be even shorter than the ones presented here.

Table 8.9 Distribution of birth intervals, by birth interval ordera

Birth interval	Birth interval order [a]					
	Last to second-to-last birth		Second-to-last to-third-to-last birth		All birth intervals	
	Percentage	Cumulative percentage	Percentage	Cumulative percentage	Percentage	Cumulative percentage
Less than 18 months	24	24	52	52	29	29.
18-23 months	24	48	27	78	24	53
24-35 months	37	85	19	98	34	87
36-47 months	13	98	2	99	11	98
48 months and more	2	100	1	100	2	100
Total	**100**		**100**		**100**	

[a] All births 60 months before the survey

For the interval between the last and second-to-last births, education and residential area (rural, urban and Kuchi) did not have significant association with the length of a birth interval. However, there were significant differences in birth spacing among different age groups. Adolescent women (15-19 years of age) are most likely to face the greatest risks associated with short birth intervals: 59 percent of women in this age group had a birth interval of less than 24 months, compared to 47 percent of women age 20 to 39. Similar patterns were also present between the second-to-last and third-to-last births: again only age was significantly associated with the length of birth interval, and the prevalence of short (less than 24 months) birth intervals among adolescent women was higher (89 percent), compared to women aged 20-39 (77 percent). Since the question was related to live births in the five years preceding the survey, the significance of age in this case can partly be explained by lowered fertility among women in higher age groups. However, the figures show that adolescent women do not only face additional maternal health risks due to their physical immaturity, but also to a more rapid succession of pregnancies and births.

8.5 Disability

8.5.1 Conceptualisation and analysis of disability

Disability is a difficult concept to measure. According to the WHO's International Classification of Functioning, Disability and Health (ICF), disability is an umbrella term, covering impairments (problems in body function or structure), activity limitations (difficulties encountered by an individual in executing a tasks or actions), and participation restrictions (problems experienced by an individual in involvement in life situations). Consequently, the definition acknowledges that disability reflects an interaction between features of a person's body and features of the society in which he or she lives. In other words, people tend to assess any impairment and its severity in accordance with, for instance, their age, life stage, sex or work, or the demands of society. In addition, various methodologies to measure disabilities yield different results. Therefore it is hazardous to compare disability statistics from different countries, or even groups within countries, such as men and women.

The Washington Group on Disability Statistics

The questions used in the NRVA are largely in line with the 'short set of questions' recommended by the Washington Group for censuses and multi-purpose surveys. It involves questions on five types of disability (difficulty with seeing, hearing, walking, self-care and remembering), and for each assesses the level of severity (no difficulty, some difficulty, a lot of difficulty, cannot perform the function at all). In accordance with the recommendations, in the present analysis, a person is considered disabled if he or she scores at least 'a lot of difficulty' on at least one of the disability types.

Unlike the 2005 NRVA, the 2007/8 round included a full module that permits the measurement of disability (for specification, see Box 'The Washington Group on Disability Statistics'). In addition, the module asked questions about the cause and the timing of the onset of the problem.

In 2005, the National Disability Survey in Afghanistan (NDSA) was conducted in (Handicap International 2006). The survey results indicated that within the overall poor context of the country, no or only minimal difference between households of persons with disability and non-disabled households can be observed. Consequently, and in view of the scope of the present report, only disability analysis at individual level is performed here. The difference in applied methodology does not allow direct comparison of results between NDSA and NRVA.

8.5.2 The distribution of the disabled population

The number of disabled people in Afghanistan amounted to 406 thousand, implying an overall disability prevalence of 1.6 percent. Some 188 thousand of these suffer from more than one disability. The prevalence for males was found to be higher then for females: 1.9 against 1.4 percent. Overall, one household in every ten had one or more members with a disability. The NDSA reported a higher prevalence of disability, but this can at least partly be attributed to the capture of more disability categories than the NRVA.

As can be seen in *Figure 8.5*, disability prevalence increases with age. This is the common and expected pattern, as body functions tend to deteriorate with age, especially after age 60. Therefore, it is not surprising that despite their small share in the total population, age categories over age 50 comprise very large numbers of disabled. However, the largest number of disabled – 57 thousand – is found in the age bracket 10-19, even though this number represents only around one percent of the population in that age group. The 2005 NDSA found a similar pattern.

Figure 8.5 Number of disabled people (in thousands) and disability prevalence, by age
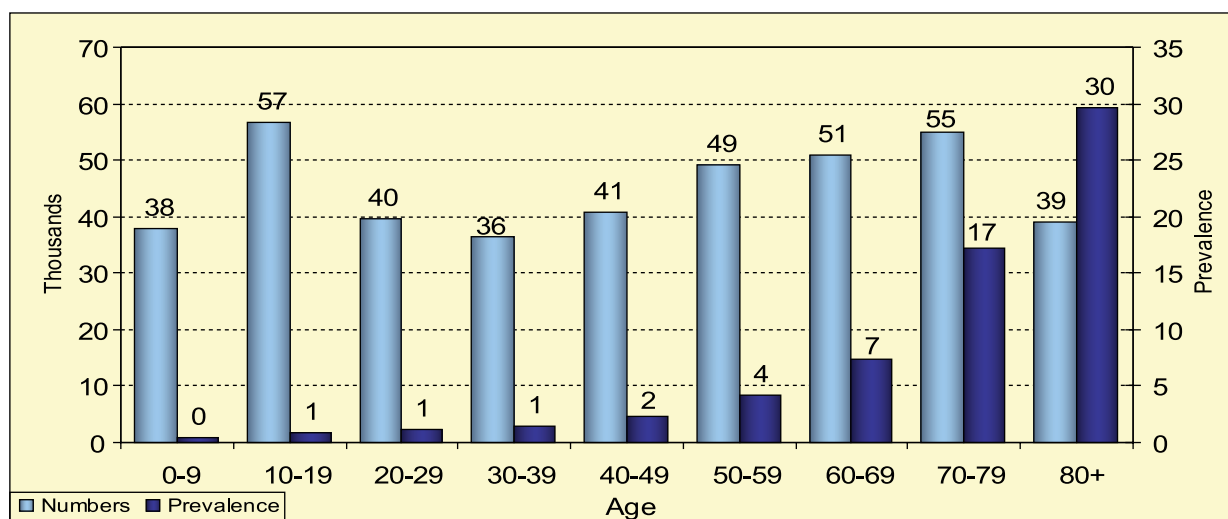
The most frequent type of disability is problems with walking, followed by problems with seeing and remembering. Respectively 179, 137 and 96 thousand people suffer these problems. The finding that problems with walking and moving have the highest prevalence is not very usual in disability distributions. However, in the past decades the risk of loosing feet or legs due to mines or UXO's is exceptionally high in the specific context of Afghanistan.

8.5.3 Causes and consequences of disability

As ageing is the most common cause of disability, it should be expected that this will also be noticeable in Afghanistan. In addition, given the poor health conditions in the country, illnesses – importantly polio – are also supposed to contribute to the prevalence of disability, and relatively more so at younger ages given the competing risk of ageing at higher age. In addition, the recent history of conflicts should be visible in the share of disability due to war and landmines.

Table 8.10 confirms these expectations. Overall, more than one third of disabilities was attributed to old age and illness. This concerns around the same number of males and females, although the relative share for males is lower, because of their exposure to additional risks. These additional risks are largely related to higher male participation in 'public' activities. The number of male victims of traffic and work accidents, and of mines and war is significantly higher than the corresponding figures for females. Overall 60 thousand people (13 percent) reported to be disabled because of mines, explosives, conflict and war, but 49 thousand (82 percent) of these are men. In the absence of large-scale conflict and the progress in clearing mines and UXO's, it is likely that the share of war- and mine-induced disability in the population will quickly decrease given the annual entry of very large new birth cohorts.

Disability may lead to exclusion effects and high vulnerability. This section limits itself to an assessment of disability consequences in terms of school attendance and labour force characteristics. With regard to school attendance, *Table 8.11* indicates that the probability that disabled primary-school age children attend primary school is half that of

their non-disabled peers (26 compared to 52 percent). Not attending school at present means that for the future, disabled children further minimize their already slim chances to find decent work on the labour market. For secondary school (middle and high school combined), the corresponding rates indicate even smaller chances to attend school for disabled children (17 percent compared to 45 percent for non-disabled children), although the effect is primarily with boys.

Table 8.10 Disability, by sex, and by cause of disability

Cause of disability	Sex					
	Male		Female		Both sexes	
	Thousands	Percentage	Thousands	Percentage	Thousands	Percentage
Traffic accident	7	3	3	1	10	2
Work accident	16	6	8	4	24	5
Other accident	17	6	10	5	27	6
Mines, explosives	24	9	4	2	28	6
Conflicts, war	25	10	7	3	32	7
Illness	78	30	82	41	160	35
Old age	83	32	84	41	167	36
Drugs	2	1	0	0	2	0
Other	9	4	5	2	14	3
Total	**260**	**100**	**202**	**100**	**462**	**100**

Table 8.11 Net-attendance rates of the school-age population, by sex, school age, and by disability status

Disability status, school attendance	Sex, school age					
	Boys		Girls		Both sexes	
	Primary age (7-12)	Secondary age (13-18)	Primary age (7-12)	Secondary age (13-18)	Primary age (7-12)	Secondary age (13-18)
Not disabled	61	56	42	32	52	45
Disabled	30	19	20	14	26	17
Total	**61**	**56**	**42**	**32**	**52**	**44**

The ratio of net primary attendance rates between disabled and non-disabled children is similar for girls and boys, although the level of attendance for the former is significantly lower. This suggests that there is no gender dimension in the probability of sending disabled children to primary school.

In similar vein, *Figure 8.6* shows that disabled persons are significantly less active on the labour market. The labour force participation rate for disabled men is around half that of the non-disabled, and for women it is even as low as around one-third. Moreover, among the disabled people who are currently active, a higher percentage is unemployed than among the non-disabled population as shown by the unemployment rates for the respective groups.

Figure 8.6 Labour force participation rates and unemployment rates, by disability status, sex
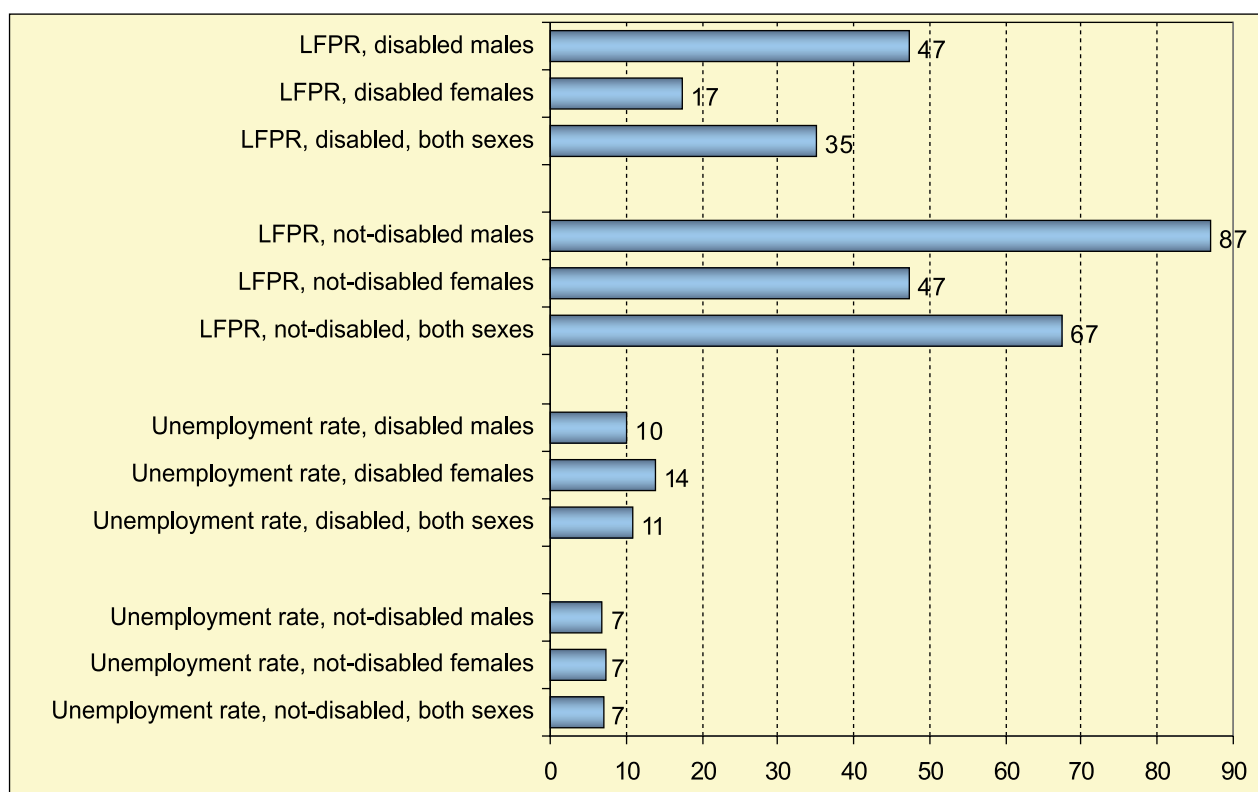
8.6 Conclusions

For various health indicators, the NRVA provided new information to assess the health status in the population and the performance of the health sector of Afghanistan. To the extent that methodological similarities allow, trends can be established by comparing the present results with the findings of the MICS 2003, NDSA 2005, NRVA 2005 and AHS 2006.

The overall conclusion of this assessment is that many health indicators are improving, but remain well below desirable levels, and are often abysmal in comparison to levels in other countries. The build-up of health infrastructure and access to health services, especially in rural areas, are badly needed. It is, therefore, not surprising to find that improvement of health facilities invariantly ranks among the top priorities for community development, regardless of gender perspective.

Presently, of the large rural majority seeking affordable public health care only about half (54 percent) can reach a facility within one hour walking. In remote areas, where motorized transport is required to reach health centers, transport costs play an additional role as barrier to health care access. Women are in a particularly disadvantaged position since they usually cannot travel alone, which doubles out-of-pocket expenditure on transportation. In addition, lack of female staff – only 29 percent of nearest health posts has a female community health worker – feeds the resistance to health center visits by women in need of medical assistance, probably especially if it concerns reproductive health.

These factors contribute to the low use of family planning (23 percent overall, 15 percent using modern contraceptive methods), antenatal care (36 percent) and skilled birth attendance (24 percent), and denies many women life-saving emergency obstetric care. Early pregnancies, closely spaced births (53 percent of reported birth intervals less than 24 months) and bearing many children (a TFR of 6.3) further make women pay a high price for giving new life. For almost all indicators, the figures underline the substantial differences that exist between rural, urban and Kuchi populations.

Whereas the NRVA analysis paints a harsh reality, it also discovers some hopeful signs of improvement. Section 3.3.2 reported that for successive younger cohorts the share of women marrying before age 20 declined and section

3.4.1 indicated that fertility is, slowly, declining (for women aged 40-49 a TFR of over 7 was estimated). The present analysis suggests that the use of contraceptives is rapidly increasing (from 10 percent for overall contraceptive use in 2003), that use of antenatal care has grown (from 32 percent in 2006), and the use of skilled birth attendance has substantially increased (from 15 percent in 2003). If these assessments reflect genuine developments, there is every chance that the latest estimate of the maternal mortality ratio of 1,600 is outdated and requires downward adjustment. A new effort should be undertaken to provide an up-to-date estimate of maternal mortality. This is, however, outside the scope of the NRVA.

Also with regard to child health care, improvements seem to have been made, with the notable exception of measles immunization. For the vaccinations included in the Expanded Program on Immunization (EPI) – BCG against tuberculosis, OPV3 against polio, DTP3 against diphtheria, pertussis and tetanus, and Measles – the immunization rates of the children aged 12-23 months were, respectively 74, 71, 43 and 56 percent, well above rates found in the 2005 NRVA. However, full immunization is only received by 37 percent of children, whereas 15 percent have never been vaccinated. Immunization against neonatal tetanus was received by only 33 percent of eligible women. Encouragingly, 69 percent of children aged 6-59 months received vitamin-A supplements against infections and 61 percent of households used iodized salt, which helps to prevent goiter and brain damage in children. Finally, with a prevalence of 78 percent, exclusive breastfeeding of children aged 0-6 months seems to be relatively high. However, when information about additional liquids in the first days is included, the overall exclusive breastfeeding rate drops to only 35 percent. The complementary feeding rate is relatively low at 41 percent. Notwithstanding advances in several areas, cost-effective immunizations and provision of micro-nutrients needs to become more widespread in order to improve the health and survival chances of children. Another strategy to this effect would be information campaigns about breastfeeding and supplementary feeding of young children.

A disability prevalence rate of 1.6 percent was found for the Afghan population – 1.9 for males and 1.4 for females – representing over 400 thousand disabled, of which some 188 thousand had multiple disabilities. The prevalence rate increases with age, adding to the vulnerable position of the elderly. However, also younger people may face negative consequences, as demonstrated by strong exclusion effects in education and labour force participation: school attendance of disabled children of primary school age and labour force participation of people of working age are only half of that of their non-disabled counterparts. The situation of the disabled requires more in-depth analysis, for which the NRVA can provide adequate data. In addition, population data collection to be conducted in the future – in particular also including the population census – should seriously consider including the recently developed disability module.

9 Housing

SUMMARY. *The housing conditions of the Afghan population can be defined as extremely poor. With regard to public services, only 27 percent of the population has access to safe drinking water, 20 percent is connected to the electric grid and no more than 5 percent has improved sanitation. The lack of basic infrastructure for water and sanitation implies high risks for contracting potentially fatal diseases, and is especially detrimental for the health and survival chances of infants and young children. Community Shuras also assign top priority to the water supply. The lack of electricity prohibits effective spread of information to the general public through mass media, like radio, TV and internet. Use of the latter is virtually absent among the population, whereas use of mobile phones has penetrated into only 6 percent of the population.*

Health conditions in the household are further impaired by overcrowding in 34 percent of the dwellings, and by the use of solid fuels for cooking (83 percent) and heating (98 percent). The breakdown by residence invariantly shows that rural and Kuchi populations are significantly disadvantaged compared to the urban population. The magnitude of this observation is further amplified by the notion that the MDG measure on urban living conditions indicates that 93 percent – 4.4 million people – live in conditions of poverty and physical and environmental deprivation. One component of this indicator is the share of the population that has insecure tenancy, an issue that gains relevance in view of absence and return of refugees and IDPs. It is observed that a large number (44 percent in urban areas, 23 percent overall) of households cannot prove the ownership of their dwelling by either inheritance, building the house, formal renting agreements or having a registered deed.

9.1 Introduction

The housing situation of a population is often a direct reflection of their living conditions and socio-economic development. This chapter describes different housing characteristics, including the tenancy status (Section 9.2) and various facilities usually related to the housing situation, such as water supply and sanitation, but also available communication and information means (section 9.3). Consequently, the chapter also covers several related MDG indicators, including the access to safe drinking water and adequate sanitation.

9.2 Housing ownership and characteristics

9.2.1 Housing type and ownership

The pattern of housing types in Afghanistan is dominated by single-family houses. Of the sedentary population in urban and rural areas this housing type accommodates, respectively, 55 and 76 percent of households (*Table 9.1*). While for rural households the figure is similar to that reported in the 2005 NRVA, the urban figure is lower, down from 63 percent in 2005. The segment of households in urban areas that share a dwelling has considerably increased since 2005, from 22 to 40 percent. Although such a large shift from separate to shared dwellings is difficult to explain, it has possibly to do with increasing pressure on the housing market due to internal population growth and urban in-migration. The latter refers not only to 'regular' rural-urban migration, but also to the relatively large in-flows of IDPs and returning refugees (see section 3.6.2). The drop of urban households living in temporary shelters or shacks from 7 to 3 percent may be an indication of the recovery of the urban housing stock after the large-scale destruction on the 1990s.

Table 9.1 Households, by type of dwelling, and by residence

Residence	Type of dwelling						
	Single family house	Part of a shared house	Appartment	Tent	Temporary shelter/shack	Other	Total
Urban	55	40	2	0	3	0	100
Rural	76	19	0	0	4	1	100
Kuchi	24	4	0	65	7	0	100
National	69	22	0	4	4	1	100

Living in tents is exclusively a phenomenon of the semi-nomadic Kuchi. The difference from the percentage of Kuchi living in tents in 2005 (71 percent then) is difficult to interpret in view of the different periods of data collection between the two surveys and the possibility of sedentary periods, especially in harsh winter conditions.

The large majority of urban and rural households (86 percent) claim ownership of the house where they live, by either inheritance (55 percent), purchase (9 percent) or construction (23 percent). This claim is even stronger among rural households (91 percent) than among urban ones (68 percent). Because of the mobility and continuous influx of new residents in urban areas, the share of inheritance is lower here than in rural areas (27 versus 62 percent) and the share of purchase is higher (21 versus 6 percent) (see *Figure 9.1*). For the same reason, renting is an almost exclusively urban phenomenon, and represents the tenancy status of 22 percent of households. The categories of tenancy used are less appropriate to describe the situation in the Kuchi population.

Figure 9.1 Households, by tenancy status, and by residence
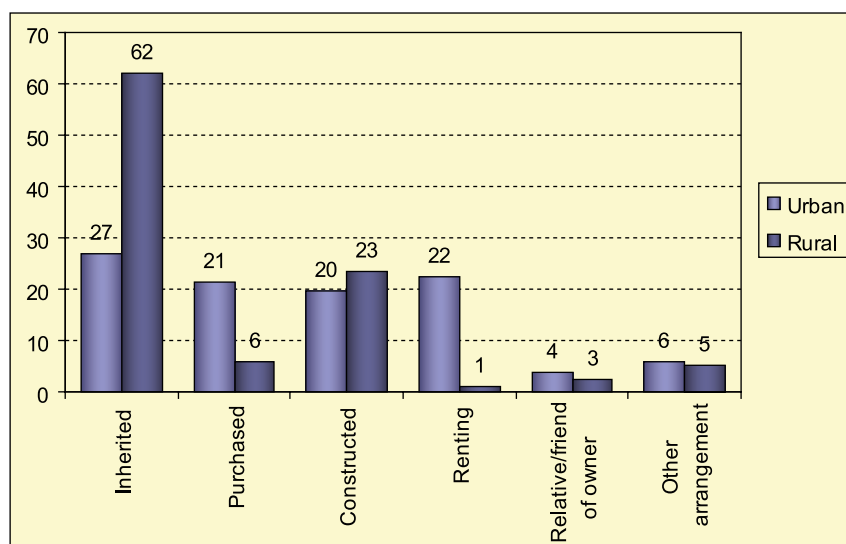
Despite the claim of ownership by most households, the large majority of rural households (88 percent) has no deed officially registered in court to prove their ownership. For urban households, this figure is 69 percent. A proof of ownership provides tenancy security to the occupant household and can have a determining influence in land and house disputes, especially in view of refugees and IDPs returning to their areas of origin. The concept of secure tenancy is also included in the MDG indicator on the proportion of urban population living in slums, which is used to monitor the target of achieving a significant improvement in the lives of at least 100 million slum dwellers (see Box on MDG Indicator 7.10). Approximately 4.4 million or 93 percent of the urban population live in slum households according to the definition of the MDG indicator. If the definition would be applied to measure the share of rural and Kuchi population living in conditions of poverty and physical and environmental deprivation, the figure would even be 100 percent.

MDG Indicator 7.10: Proportion of urban population living in slums
MDG Indicator 32: Proportion of households with secure tenure

The indicators are used to measure the share of urban population living in conditions of poverty and physical and environmental deprivation. Indicator 7.10 has replaced indicator 32 in the new international list of MDG indicators. A slum household is defined as a household lacking one or more of the following conditions:
- Access to improved water
- Access to improved sanitation
- Sufficient-living area
- Durability of housing
- Security of tenure.

The share of the urban population that meets these criteria and can be considered living in slum households is 93 percent.

Indicator 32 referred to one of the above criteria, i.e. households that own or are purchasing their homes, are renting privately or are in social housing or sub-tenancy. Although NRVA data do not allow exact application of this definition, a best estimate produces a proportion of 56 percent of urban households with secure tenure.

9.2.2 Housing characteristics

The construction materials of Afghan dwellings are relatively uniform, especially for rural and resident Kuchi households. A typical Afghan house is made of mud brick walls, a wooden roof and has a dirt floor (*Table 9.2*). Urban houses somewhat deviate from this general picture in the sense that concrete is a more common building material, especially for floors, as well as bricks and stone. Thereby, they provide more durable shelter than the traditional Afghan house.

Table 9.2 Household dwellings, by residence, and by dwelling part, construction material (in percentages)

Construction materials	Residence			
	Urban	Rural	Kuchi	National
a. Construction material of walls				
Fired brick/stone	17	4	1	7
Concrete	5	0	0	1
Mud bricks/ mud	78	90	91	88
Other	0	5	8	4
Total	**100**	**100**	**100**	**100**
b. Construction material of roof				
Concrete	10	0	0	2
Wood	72	81	86	79
Bricks	16	17	12	17
Other	2	2	2	2
Total	**100**	**100**	**100**	**100**
c. Construction material of floor				
Dirt / earth	60	98	100	90
Concrete/ tile	38	2	0	9
Other	1	0	0	0
Total	**100**	**100**	**100**	**100**

The most frequently observed numbers of rooms per dwelling for rural Afghan households are two and three, whereas for urban households it is three and four (*Table 9.3*, panel a). The distribution for Kuchis is measured in number of tents. Altogether, three-quarters of Kuchi households live in one or two tents. The consequence of this is visible in the average number of occupants per tent, which is 6.4 in the 43 percent of the Kuchi dwellings that consist of one tent only (panel b).

A clear pattern can be observed in panel b of Table 9.3: the fewer rooms a dwelling has, the larger is the average number of household members per room. The overcrowding that is especially reported for the smallest dwellings, indicates a relatively poor status of households occupying these small houses. It also indicates adverse health conditions for its members, among other things facilitating the spread of infectious diseases. The effect is more frequently reported for rural than for urban households; the overall average number of persons per dwelling is also lower for urban households than for their rural counterparts (2.1 and 2.7 persons per room, respectively). Overall, one-third (34 percent) of Afghan households can be considered overcrowded, meaning that on average more than three people share one room.

Table 9.3 Dwellings, (a) by residence, and by number of rooms (in percentages); (b) average number of occupants, by residence, and by number of rooms

Number of rooms	a. Residence (percentage)				b. Residence (mean occupancy)			
	Urban	Rural	Kuchi	Total	Urban	Rural	Kuchi	Total
1	2	8	43	9	5.4	5.7	6.4	5.9
2	16	28	33	26	3.2	3.2	3.8	3.3
3	25	29	14	27	2.3	2.4	2.9	2.4
4	27	19	5	20	1.9	2.0	2.7	1.9
5	11	7	2	8	1.5	1.7	2.2	1.7
6	9	4	1	5	1.4	1.5	1.7	1.5
7	3	1	0	2	1.2	1.3	2.0	1.3
8	3	1	0	2	1.0	1.1	1.8	1.1
9	1	0	0	0	0.9	1.1	0.9	1.1
10 or more	2	1	0	1	0.8	0.8	0.7	0.8
Total	**100**	**100**	**100**	**100**	**2.1**	**2.7**	**4.7**	**2.7**

9.3 Housing facilities

9.3.1 Water and sanitation

Basic hygiene provided by safe drinking water and adequate sanitation are the most effective strategies to improve the health status of the population. There is evidence that globally provision of adequate sanitation services, safe water supply, and hygiene education represents an effective health intervention that reduces the mortality caused by diarrhoeal disease by an average of 65 percent, and the related morbidity by 26 percent (WHO 2000). Inadequate sanitation, hygiene and water result not only in more sickness and death, but also in higher health costs, lower worker productivity and lower school enrollment. Access to improved water sources and sanitation are built into the indicator set to monitor the progress towards the targets of the Millennium Development Goals (see Boxes on MDG indicators 7.8 and 7.9 below).

Water supply

The inventory of community preferences for development among male and female Shuras emphasized the importance of water supply, as they assigned it top priority (see Section 11.3). Overall access to safe drinking water in Afghanistan is calculated at 27 percent of the population. Large differences in the share with access are observed between the urban population on the one hand and the rural and Kuchi populations on the other (*Table 9.4*), Similar differences exist between the provinces (*Figure 9.2*). The present figures are somewhat lower than those of the 2005 NRVA (31 percent overall),[1] and a little higher than the MICS 2003 finding of 23 percent [2]. However, different questionnaire designs and data collection methodologies prohibit direct comparison.

Table 9.4 Percentage of the total population with access to (a) safe drinking water, (b) improved sanitation, and by esidence

Residence and province	Access to	
	a. Safe drinking water	b. Improved sanitation
Urban	58	21
Rural	20	1
Kuchi	16	0
Total	**27**	**5**

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[1] Among other things, NRVA 2005 included water supply from water tankers and from bottled water in the category of safe drinking water, which is not in line with international guidelines. If these types of water supply are included in the 2007/8 figure, the population share with access to safe drinking water rises to 28 percent.
[2] The UNICEF Multiple Indicator Cluster Survey for the year 2003 did not include Kuchis. If the NRVA 2007/8 data would similarly be restricted to urban and rural populations, the population share with access to safe drinking water rises to 28 percent. There are, however, additional factors that complicate comparability.

Figure 9.2 Percentage of the total population with access to safe drinking water, by province
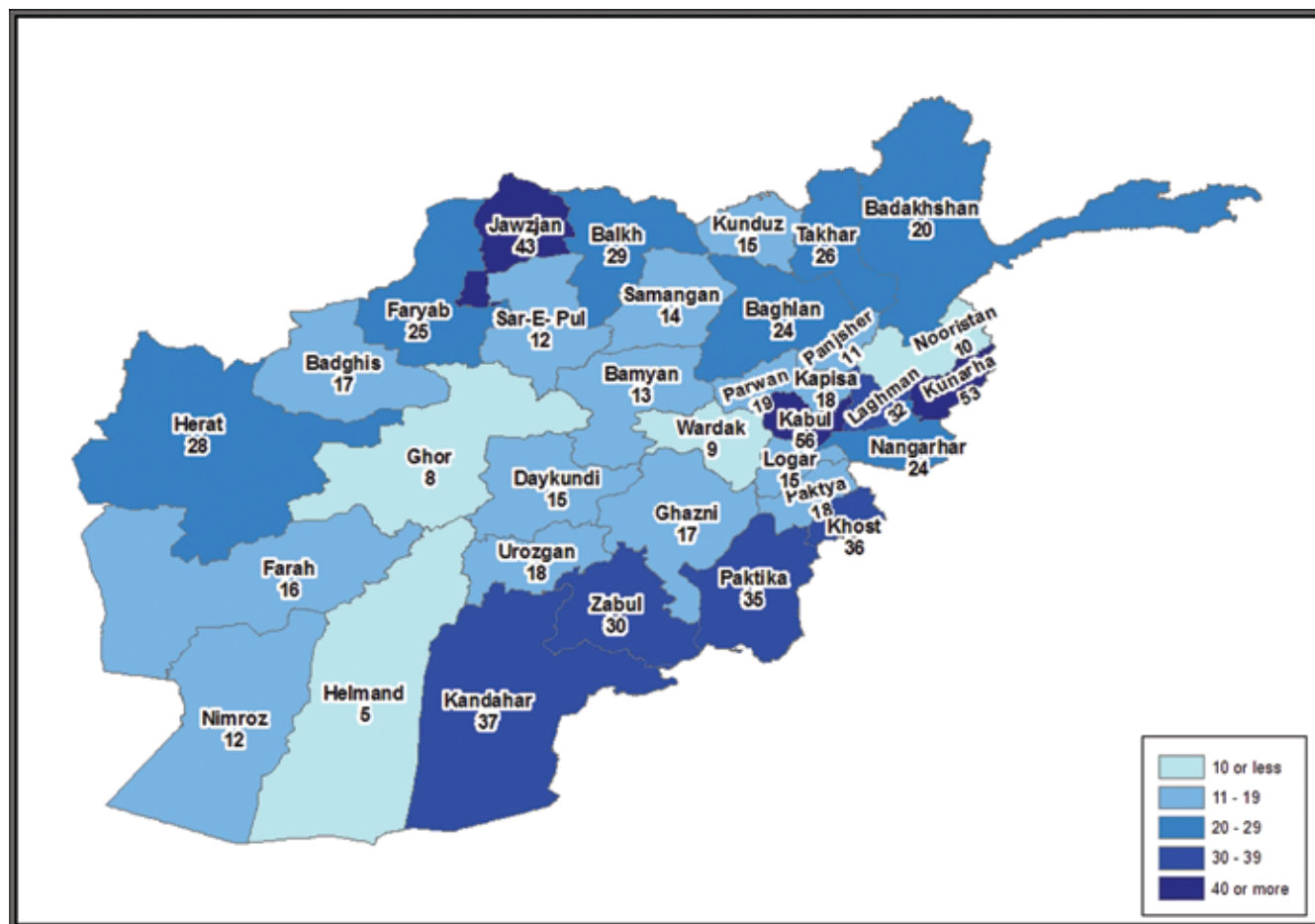
Next to the quality of water, the very access to water is a key factor in the provision of hygiene and adequate living conditions. Overall, for 42 percent of the households immediate access to water with no travel time is available. The corresponding figures for the urban, rural and Kuchi households are, respectively, 75, 35 and 21 percent. It takes up to half an hour to fetch water (return trip) for over half of the Kuchi and rural households and for just under one quarter of the urban households. Around 8 and 4 percent of the, respectively, Kuchi and rural households need more than one hour. The NRVA 2007/8 figures suggest an improvement compared to the 2005 results, as the overall share that had access to water within one hour increased from 86 to 97 percent. [3]

Sanitation
Safe disposal of human excreta creates the first barrier to excreta-related disease, helping to reduce transmission through direct and indirect – for example, animal and insect – routes. The 2007/8 NRVA found that 21 percent of the urban population had access to adequate sanitation facilities, but only 1 percent of the rural population and almost no Kuchis. Overall, access to improved sanitation was 5 percent (Table 9.4). These figures would imply a decrease in the share compared to 2005, when the NRVA reported improved sanitation for 7 percent of the total population. [4]

For sanitation purposes some 25 percent of the population use open field or 'darean', a place inside or outside the compound used for waste products. For the other types of sanitation combined, 89 percent of the population has access to sanitation within the compound (99 for urban, 87 for rural and 67 for the Kuchi population) and 22 percent shares the sanitation facility with other households.

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[3] Based on survey months July and August for reasons of comparability with NRVA 2005.
[4] A decrease in access to improved sanitation is difficult to explain. Seasonal and methodological effects are not in order, although fast population growth could have some impact.

9.3.2 Other facilities

Electricity

The access to the public electric grid at national level is 20 percent (ranging from 78 percent in urban areas to 6 percent in rural areas), an increase from 14 percent in 2005. It is by far the most important source of electricity. Other supply is provided by community generators (to 15 percent of households), private generators (5 percent) and a combination of other sources (3 percent). Overall, 42 percent of the population has access to any source of electricity (90 and 33 percent in urban and rural areas, respectively), which would imply an large increase from the 23 percent reported in 2005. However, it should be noted that the daily number of hours of electricity supply is limited: on average 11 hours per day by the electric grid and lower numbers for each of the alternative sources. Access to electricity for Kuchis is very limited (6 percent) due to their nomadic lifestyle.

Fuel for cooking and heating

The use of solid fuels for heating and cooking in homes usually results in incomplete combustion and hence in the emission of hundreds of compounds, some of which may induce cancer and other health problems. It also produces greenhouse gases that contribute to global climate change. The nature of the exposure to indoor air pollution and its consequences for health depends on the interactions between the source of pollution (fuel and stove type), its dispersion (housing structure and ventilation) and when household members are in the home. The type of fuel used in cooking has consistently been the most important predictor

of this exposure (United Nations 2003). The proportion of population using solid fuels is included as indicator for Target 9 – sustainable development and reversion of the loss of environmental resources – has recently been removed from the international list of MDG indicators. However, it still figures in the Afghanistan National Development Strategy.

In Afghanistan, 83 percent of the population relies on solid fuels, mainly firewood, bushes and twigs (59 percent), and animal dung (23 percent). The impact on health may be considerable since in 48 percent of households cooking occurs inside the dwelling. The present share is comparable to the one in 2005, when the dependency on solid fuels was around 85 percent. According to the NRVA 2007/8, the percentage of the population using solid fuels for heating in winter time is even 98 percent.

Information and communication means

Modern information and communication technologies are important instruments in the process of development. Telephones, computers and internet allow people to exchange experiences and learn from each other, enabling higher returns on investment and avoiding problems of duplication or missing information. They can also help people in rural areas to find out about market prices and sell their products at a better price, and can overcome traditional barriers to better education by making books and documentation available online. They can also make governments more transparent, thereby reducing corruption and leading to better governance. The use of these technologies is included as MDG indicators (see Boxes on MDG indicators 8.14-8.16).

In Afghanistan, these modern technologies are hardly available to the general population. With regard to telephone communication, the population seems to entirely skip the stage of landline phones, since only one in thousand persons has access to a telephone line, but 6 percent has a mobile phone.[5] The corresponding figures for the urban population are higher: 5 in thousand and 17 percent, respectively.

The use of internet is also reserved for extremely small pockets in the population. Only 3 of every thousand people used internet in the month preceding the survey. This share was 4 per thousand for males, 1 per thousand for females, and 11 per thousand in urban areas.

MDG Indicator 8.14 and 8.15: Telephone lines and cellular subscribers per 100 population	MDG Indicator 8.16: Internet users per 100 population
For the assessment of these indicators NRVA information about the availability of telephone landlines and mobile phones in the household is used. According to this information there is 0.1 telephone line per hundred population in Afghanistan, and 6 mobile phones.	NRVA 2007/8 reports that the number of internet users per 100 population is 0.3. This figure would imply the fourth-lowest internet use in the world after Myanmar, Sierra Leone and East Timor.

9.4 Conclusions

The main policy areas touched upon in this chapter refer to the provision of public services for water and sanitation, since these have an immense and direct impact on basic hygiene and public health. Priority to improvement of water supply also fully corresponds to the top ranking of development priorities by local communities. Even modest improvements in these areas could substantially reduce the high child mortality in Afghanistan (see Section 3.4.2) by reducing major killer diseases like diarrhoea. The present access of the population to safe drinking water and improved sanitation – 27 and 5 percent, respectively – are among the poorest, if not the poorest, in the world. Comparability problems with previous surveys prohibit proper monitoring of these indicators, but available figures suggest that large improvements in recent years are unlikely. This implies that accelerated efforts are required, which in the case of safe water supply can possibly rely on innovative and durable purification technologies.

The lack of provision of these services is part of generally very poor housing conditions in Afghanistan. The MDG indicator on the share of the urban population living in slum conditions reveals an astounding 93 percent. Besides access to water and sanitation, the indicator also applies the criterion of secure tenancy. In the situation of Afghanistan with many people uprooted by decades of conflict, a proof of ownership of a dwelling is particularly important for property claims in house disputes when refugees and IDPs return. The government should be prepared to issue registered deeds to the rightful owners, thereby taking precautions against possible corruption.

A fourth criterion of the mentioned MDG indicator relates to overcrowding, which is defined as households with more than three people sharing a room. To one-third of Afghan households this criterion applies, exposing the occupants to heightened risks of infectious diseases. In-house safety is also jeopardized by the high incidence – 83 percent – of burning solid fuels for cooking and heating. Programmes to stimulate efficient types of stoves and alternative sources of energy will contribute to health improvement, preservation of scarce resources and stalling global warming.

The provision of electricity to the population is still in an early stage, as only 20 percent is connected to the electric grid. However, this indicates a substantial increase compared to the 14 percent connection reported in the NRVA 2005. Electricity provides a source for light, but importantly also opportunities for mass communication through radio and television. Information, education and communication (IEC) to the public on various themes – health, family planning, gender equity, etc. – will therefore be more effective if electricity supply is increased. Other communication means, like mobile phones and internet, are hardly available to the general population. Only 6 percent of the population has a mobile phone, and use of internet is negligible as of yet.

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[5] These figures suggest a large discrepancy with the ANDS indicator that reports 21 percent mobile phone users (Government of Afghanistan 2009). No source was provided for this figure, which seems rather unrealistic.

10 Position of women

SUMMARY. *In many aspects, Afghan women and girls share the poor life conditions of their male counterparts. However, the NRVA 2007/8 confirms that a consistent pattern of relative deprivation for women exists across almost all dimensions of individual and social development. Moreover, the gender gaps are large. This is the case in decision-making power at community level and the level of the household, where women depend almost invariantly on their husbands, fathers or other families. Women's position on the labour market is also particularly weak. They participate less in economic activities, for fewer hours and predominantly in vulnerable employment. On the other hand, for those women who are currently active, the unemployment rate is as high as the male unemployment rate, and for the better educated women even twice as high. The positive by-product of gender-based barriers to the labour market is that child labour to a lesser extent occurs among girls and less affects their development, for instance in terms of educational deprivation.*

Also in the education sector large gender gaps persist. Literacy of women is less than one-third of that of men, but comparison of literacy across age groups shows an increase, and even an accelerating increase, of female literacy, which strongly suggest recent improvements of the educational system. This is supported by the increase of girls' – and overall – enrolment in primary education since 2005. Especially in urban areas the NAPWA target of 70 percent enrolment of girls is within reach, and girls are closing the gap with boys. Besides education of new generations, Afghanistan has an adult population of 9.5 million people who are illiterate – among whom 5.5 million women – who are in need of basic reading and writing skills.

Reproductive health has a particular bearing on women and girls, as a high – but not exactly determined – price is paid for high fertility, closely spaced births, early pregnancies and poor maternal health care in terms of antenatal and delivery care. In addition, the health system provides gender-specific barriers to women because of their restricted mobility and unresponsiveness by providing insufficient female health personnel. Despite the very low levels of maternal health care provision, the NRVA surveys suggest significant improvements in the last few years.

Also in terms of age at first marriage – important with respect to pregnancy-related health risks – and spousal age differences – important for, for instance, more gender balance in household decision making – noticeable changes can be observed. Increasingly smaller proportions of girls marry at young (18) and very young (15) ages, and the average age differences between wives and husbands has significantly declined. An issue that is partly related to large spousal age gaps is the large number of widows in the country – over half a million. In the context of Afghanistan, these women, along with 70 thousand female heads of households, can be classified as vulnerable. In general, women could be considered vulnerable to the extent that they are not captured in surveys and censuses. Although in this respect NRVA 2007/8 performed significantly better than the 2005 round, most probably a large number of women and girls are not reported.

The general conclusion should be that huge challenges remain with respect to women's mobility, participation in public life, decision making, health, and access to economic and educational opportunities. The most urgent needs are found among the rural and Kuchi populations, and in line with that, gender gaps are usually larger among these than in the urban population, with the notable exception of labour force participation and employment. But on the positive side, the NRVA suggests that significant improvements can be achieved in a relatively short time span, as in the case of the education and health sectors.

10.1 Introduction

Whereas on most development indicators Afghanistan ranks at the very bottom end of the international community, the position and living conditions of Afghan women are particularly poor. The commitments of the Afghanistan government to advance the status of women is embodied in various international legal and national policy frameworks, which include the UN Convention on the Elimination of Discrimination against Women (CEDAW), the Constitution, Afghanistan Compact, the ANDS Gender Strategy, and the National Action Plan for the Women of Afghanistan (NAPWA) (Ministry of Women's Affairs 2008). Within such frameworks, the government pays special attention to six sectors that are crucial to the overall improvement of women's life, namely: (i) security, (ii) legal protection and human rights, (iii) leadership and political participation, (iv) economy, work and poverty, (v) health, and (vi) education. The NRVA results in the various chapters of this report allow insight into several of these aspects and contribute to further development and implementation of gender-sensitive development policies.

The aim of the present chapter is to recapture the main findings of the report from the particular perspective of the position of women and women's development. As a lead-up, Section 10.2 addresses the related issue of women's involvement in decision making. The NRVA contained several batteries of questions on household decision making that give some statistical body to gender equality and women's empowerment. In addition, it contained a few entries on representative bodies in communities that relate to decision making at that level. The topics of decision making in the household and community, as the primary institutions where social rules are reproduced, are addressed in Sections 10.2.1 and 10.2.2, respectively. The summary of women's position in the Afghan society is the specific subject of Section 10.3.

10.2 The position of women in decision making

10.2.1 Household decision making

The society of Afghanistan is characterized by a very strong gender segregation and strict rules regarding the social and physical space to move, especially for women. It is therefore interesting to see in which life domains women can more or less freely determine outcomes in accordance with their own priorities, where they depend on others, or where they decide in consultation. Independency and dependencies may, of course, shift with life course stages, such as, for instance, determined by marital events – marriage, engagement, becoming a widow or divorce.

The domain of sexuality is typically one where there is little gender boundary crossing. However, in related reproductive decisions, larger family and male interests may overrule the immediate interests of the women involved. With regard to the decision to use birth control methods among ever-married women, the share of women deciding themselves is very modest, on average 8 percent. It is lowest – 3 percent – among women under 20, who are young and for whom there may be pressing expectations to bear a child. Relatively, the largest shares of women deciding by themselves – around 9-10 percent – are found in the mid-life ages, where continuous childbearing may become more of a burden and child spacing or termination of child bearing are desired.

Husbands who alone determine birth control is a category occurring as often as women deciding themselves in the matter. The locus of choice is more frequently situated in the marital nucleus of husband and wife or with 'nobody'. The latter probably indicates that family planning is not an issue of consideration. In the latter situation, indeed, non-contraceptive couples are overrepresented. Both categories alternate in terms of importance across age groups and are each responsible for between 35 and 45 of all 'decisions' on family planning. In urban situations, however, the couple as joint decision maker is significantly more important and always represents well over 50 percent of decision making, except for the age group 40-49. The influence of others is reportedly very small.

The decision for having a next child follows a similar pattern, although the woman as independent decision maker hardly exists anymore (in 2 percent only). On the other hand, the influence of the husband is somewhat larger, but particularly the additional answer that having a next child is 'in the hands of God' is an important category. Together with 'nobody' deciding on the issue, this characterizes situations where people feel that they don't have control over reproductive outcomes, or do not want to take control. It should be remarked that these two categories combined increase with age (representing 30 to 62 percent of the decision making), whereas decision-making by the couple together decreases proportionally with age (from 68 to 36 percent).

Table 10.1 summarizes who is the usual decision maker in less intimate and more common household situations. In almost all of these, the household head or father is by far the most important decision maker. This is even the case for normal household spending, and even when it concerns items for the head's wife. Only in typical family affairs – marriage of children, care of the elderly and somewhat less, education of children – is the representation of the head/father less overriding. It is in these domains that the wife has a relatively stronger say, although even here she hardly takes decisions entirely by herself, but usually together with her spouse. Another interesting finding is that the marriage of children virtually always involves the head or father, frequently in consultation with the wife and in a significant minority of situations the to-be-married child itself. For marrying daughters this is the case in 16 percent of the situations and for marrying sons in 19 percent. Monetary transactions seem largely to be outside the female domain.

The imbalance in decision making in financial matters is also clear from a series of questions on selling off selected items (livestock, poultry, agricultural equipment, agricultural land, house, gold and silver, and furniture). Invariantly, when the husband was the owner of the item, he was the only decision maker in more than 90 percent of the situations. When the wife was the owner, her exclusive decision-making power was far lower, ranging from 80 percent for selling poultry (related to typical women's activities) to only 30 percent for gold or silver. In all other cases, decision making was jointly with the spouse or by the spouse only.

Table 10.1 *Primary female household member's report on the usual decision maker in selected choice situations (in percentages)*

Decision on	Usual decision maker					
	Head/father	Wife of head	Head/father with wife	Head/father with concerned person	Head/father, wife & concerned person	Other combination
Household food purchase	80	2	7	0	0	10
Head's clothing purchase	84	4	5	0	0	7
Head's wife clothing purchase	61	15	18	0	0	6
Children's clothing purchase	63	11	17	0	0	8
Medicine spending for head's wife	80	4	8	1		7
Medicine spending for child	77	4	9	0	0	10
Son's marriage	42	4	24	6	13	11
Daughter's marriage	44	4	24	4	12	11
Education for boys	62	4	22	2	2	7
Education for girls	62	4	24	1	2	8
Care of elderly	47	24	10	1	1	17
Taking on or paying off debt	90	1	2	0	0	7

A well-visible effect of age and marital status on decision making about what to do with money earned by a women is shown in *Table 10.2*. Independent decision making by women clearly increases with age, whereas the influence of the family – very large in the youngest age group – declines accordingly. Differences are also noticeable for various marital statuses. Notwithstanding their vulnerable status in Afghan society, divorced, separated and widowed women far more often can themselves decide on how to spend self-earned money than married women. Young, never-married women usually decide with or depend on other family members. Obviously, there are interaction effects between age and marital status, one being clearly visible in the low figure of 3 percent of husbands deciding on income among 10-19 year olds.

Table 10.2 Females 10 years and over with self-generated income, by primary decision maker on spending the income, and by (a) age, (b) marital status (in percentages)

Selected variables	Decision maker				
	Woman herself	With spouse	With family	Spouse decides	Family decides
a. Age					
10--19	10	5	49	1	35
20-29	18	41	26	6	9
30-39	23	51	13	9	3
40-49	29	47	15	8	2
50-59	32	34	21	7	6
60-69	34	26	27	5	7
70-79	51	12	28	0	9
b. Marital status					
Married	21	52	16	9	3
Divorced, separated	64	0	26	0	11
Widow	58	0	34	0	8
Never married, but engaged	18	0	52	0	30
Never married, not engaged	11	0	51	0	37
Total	**20**	**33**	**28**	**6**	**14**

10.2.2 Community decision making

Shuras and Community Development Councils (CDCs) are two types of representative bodies existing in Afghan communities. *Table 10.3* indicates that representation of women in these bodies is far less widespread than that of men. Direct representation of women is nationally only established in 20 percent of the communities through Shuras and in 36 percent through CDCs, compared to 56 and 60 percent for male representation. The CDCs are much more common in the rural communities, whereas the presence of Shuras is only modestly larger in rural areas than in urban ones.

If there are no female decision-making committees in the community, in some 40 percent of the cases the male committees take women's views into consideration; 35 percent do this usually and 5 percent do this sometimes only. The followed procedure to represent women is usually to have their concerns voiced by their husbands. Only in around one-quarter of the situations direct representation or personal attendance to meetings by women is realized. Altogether, this means that female representation at community level is still exception rather than rule.

Shuras and Community Development Councils

The Shura, or local council, has traditionally been the institution around which people mobilize. It is an informal body for decision-making and dispute resolution on a range of economic, political and sometimes social issues. Like most traditional Afghan institutions, it is usually comprised of male elders and landowners. However, female and mixed Shuras also exist.

Community Development Councils (CDCs) are village organizations, relatively recently established within the framework of the National Solidarity Programme (NSP) under the auspices of the Ministry of Rural Rehabilitation and Development (MRRD). It is a country-wide initiative that provides block grants to communities to enable them to plan, prioritize, implement and finance their own development projects.

Table 10.3 Percentage of communities having representative bodies, by residence, and by type of body

Representative body	Residence			
	Urban	Rural	Kuchi	National
Male shura	49	54	67	53
Female shura	19	17	11	17
Male and female shura	1	3	1	3
Male NSP CDC	16	51	22	46
Female NSP CDC	8	25	11	22
Male and female NSP CDC	3	16	5	14

10.3 Women in Afghan society

Several development indicators covered by the NRVA have an important value for the assessment of women's and girls' living conditions, but have a general bearing rather than one specifically for women. Thus, housing characteristics – such as water and sanitation facilities and tenure arrangements, or household access to land – do not empower women above and beyond the general population, and will not be addressed here. This section only recaptures the information of previous chapters as far as the information is inherently relevant for women and girls – such as maternal health issues – or where gender differentiation adds to the understanding of their situation. In this respect, *Table 10.4* provides a selection of development indicators by sex and adds a gender gap indicator to assess the depth of the disadvantages that women face in Afghan society.[1]

10.3.1 The face of women in population and marriage

Even with improved coverage of the female population in NRVA 2007/8, the number of males continues to exceed that of women at an average of 105 males per 100 females (see Section 3.2.1). This figure provokes serious thinking as to what are the explanations of this. Doubtless, an important factor still remains under-enumeration of women. Among other things, this notion finds support in the a-typically high sex ratio in the age group 10-19, in which girls tend to be highly protected. Whatever the reason for underreporting women and girls, it is worrisome, as without being visible in the statistics, policies and programmes cannot take them sufficiently into account. Although the NRVA is not providing information on maternal mortality, reproductive health complications are another likely suspect of sex imbalances in the population due to excess female deaths. Especially the declining share of women beyond age 50 may point in this direction. From a women's and health perspective, accurate information about maternal mortality is urgently needed for policy making and priority setting in Afghanistan.

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[1] The gap indicator is calculated as the ratio between the female and male development indicators.

Table 10.4 Selected development indicators, by sex, residence and related gender gap [a]

Indicator	Sex, residence											
	Female				Male				Gender gap			
	Urban	Rural	Kuchi	National	Urban	Rural	Kuchi	National	Urban	Rural	Kuchi	National
a. Labour force indicators												
Labour force participation rate	19	54	64	47	79	87	92	86	24	61	70	54
Employment-to-population ratio	16	50	61	43	72	82	88	80	22	61	70	54
Unemployment rate	18	7	5	7	9	7	4	7	201	100	106	108
Share in wage employment in the non-agricultural sector	13	5	4	8	87	95	96	92	15	6	4	9
Proportion of own-account and contributing family workers in total employment	70	97	98	95	57	69	84	67	123	142	117	141
Share of working children among all children aged 6-17	4	17	27	15	13	29	44	26	34	60	62	57
Share of child labour among all children aged 6-17	3	10	19	9	9	18	31	17	30	58	59	54
b. Education indicators												
Literacy rate of population 15 years and older	33	7	3	12	62	35	14	39	54	20	19	32
Literacy rate of 15-24 year-olds	52	15	6	24	74	49	16	53	71	31	39	45
Net enrolment ratio in primary education	68	38	12	42	77	60	22	60	88	64	55	70
Ratio of girls to boys in primary education	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	88	63	53	69
Ratio of girls to boys in secondary education	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	71	32	58	49
c. Indicators of community representation												
Percentage of communities with representatation in Shuras	20	20	12	20	50	57	68	56	40	35	17	35
Percentage of communities with representatation in CDCs	11	41	16	37	19	68	27	61	57	61	61	60

[a] The gender gap is calculated as the ratio between the female and male indicator multiplied by 100.

Generally, early marriage and associated early births have been a major cause of rapid population growth, high maternal mortality, inability of girls to finish education, additional constraints to women's mobility and participation, and escalation of demands for public investments on social services. Fortunately, very early marriage appears to decline, as the percentage of women who were married before age 15 declined from 11 percent among women who are now 30-34 years old to 3 percent for the currently 15-20 year olds (Section 3.3.2). A somewhat smaller decline is suggested for the share of those who were married before age 18.

The average spousal age gap has also narrowed down to five years among younger couples, compared to eight years among older couples. The large age gap between spouses and male casualties during the three decades of war contribute to a greater number of women than men that have become widowed at age 40-64 (3 percent for men and 19 percent for women) and beyond 64 years (17 and 61 percent, respectively). There are over half a million widows, who can largely be classified as being in vulnerable position, along with 70 thousand female heads of households. Sharp focus on these groups of women and their families is needed in implementing the PRSP.

Women are much less predisposed to migration, as men represent the large majority migrants (Section 3.5.1). This especially applies to international migration. Women tend to migrate relatively more from rural to rural areas, probably due to marriage rather than to employment. Overall, female migrants are more likely to be economically inactive. These data indicate persistent cultural restrictions to women's mobility and highlight the dearth of economic opportunities for women in the country. Given, however, that youth represents a huge percentage of the country's population and that migration appears to be especially attractive among them, programmes for the youth, especially female youth, may be implemented to promote training/job-related migration as a group. As unstable security situations may be reinforcing female constraints to migration, the identification of 'peace zones' that could be classified as safe locations for women's in-country migration, may also be explored.

10.3.2 Women on the labour market

Women's participation in economic activities continues to be very low. Many factors bear down upon women's quest for economic productivity, including restrictions to mobility, reproductive responsibilities, limited economic opportunities, and open or covert preference for males on the labour market. Although the overall labour force participation of 67 percent in Afghanistan is high compared to the region of South Asia and the world at large, the gender gap in Afghanistan remains huge, given that only 47 percent of the working age females are currently active on the labour market (Section 4.2). This is only little over half (54 percent) of the 86 percent labour force participation rate of males (see Table 10.4). The gender ratio is larger in the rural and Kuchi populations (respectively, 61 and 70 percent), due to female engagement in agricultural and pastoral activities. In urban areas, the gender ratio is as small as 24 percent because of the very low female labour force participation of only 21 percent.

> **Measurement of the gender gap**
>
> In order to indicate gender inequality consistently throughout this section, the gender gap is calculated as the ratio between a female development indicator and the corresponding male indicator multiplied by 100. A result of 100 would indicate perfect equality; a figure of less than 100 would indicate that women's or girls' score on the development indicator is less than the corresponding boys' or men's indicator, expressed as a percentage of the latter.

The gender pattern for the employment-to-population ratio is almost exactly the same as for the labour force participation rate, reflecting large differences between women and men. However, in terms of unemployment the gender gap is very small. Nationally, unemployment for women and men is around 7 percent, but that of urban women (18 percent) is twice as high as male urban unemployment. This may indicate a strong desire for women to work on one hand and restrictions to women's access to the labour market on the other. Education, which is supposed to open the gate for women's active involvement in the labour market, does not seem to help, as data show a significantly higher percentage of educated women than educated men who are unemployed (18 and 8 percent, respectively). Greater incidence of female unemployment was also consistently noted among youth under age 25 (15 percent for females and 10 percent for males) and among literates (16 percent for females and 7 percent for males). Apparently, the Afghan labour market provides difficult access to new entrants and educated women, implying a serious wastage of human resources.

Given the under-representation of women on the labour market, most industries are predictably dominated (ranging from 74 to 99 percent) by males. The only sector with large female representation (44 percent) is agriculture and livestock, while manufacturing has overall a 70 percent majority of women in largely home-based crafts industries (among Kuchis even as high as 95 percent). This pattern does not hold true for urban areas where there is almost gender parity in education and manufacturing sectors (49 and 48 percent women, respectively) and more women than men are engaged in the agriculture and livestock industry.

The share of women in wage employment in the non-agricultural sector (MDG-3.2) is only 8 percent, indicating a serious disadvantage in securing paid jobs. Overall, 95 percent of working women work as own-account or family workers (MDG-1.7), against 67 percent of men. Thus, employed women have a 41 percent greater likelihood of being in vulnerable employment, characterised by informal work arrangements, insecure jobs, low productivity, and unstable and inadequate earnings. As employed women also work fewer hours than men, Afghan women face a cumulative disadvantage on the labour market: fewer work, for less hours and in less secure jobs.

There are around two million working children in the age group 6 to 17 (Section 4.4). The working incidence for girls is consistently lower at around 60 percent of that of boys, except for urban areas where it is even lower and the gap is increasing with age. Overall, at least 13 percent of children in age 6-17 are specifically involved in child labor, which is internationally considered to be unfavorable for their health and development. This corresponds to around 1.2 million children, of which close to 800 thousand are boys and 400 thousand are girls. Around 73 percent of girls work inside the dwelling compared to 25 percent of boys. The corresponding figure for work on the land is 18 percent for girls and 47 percent for boys. Confinement to home-based work is even higher among urban girls at 90 percent of the total. The adverse impacts of work to the children's educational development, appears to be more serious for boys than girls.

Labour migration is almost an exclusively male phenomenon representing 94 percent of all in-migrants (Section 4.5), confirming that economic opportunities are not a primary motivating factor for internal migration of females.

10.3.3 Educational disparities

NAPWA specifically calls for 50 percent increase in girls' enrolment at all levels, a minimum of 70 percent girls' net enrollment in primary schools, 50 percent female net enrolment in universities, and 50 percent reduction in female literacy, among others. Data from NRVA 2007/8 reveal that the realization of the above targets continues to be a remote possibility. However, there are data that show some advancement on female education, especially on the MDG indicators 2.1 and 2.3, and former indicator 10.

Under MDG indicator 2.1 – net enrolment ratio in primary education – Afghanistan attained 42 percent enrolment of girls, which represents a 5 percentage point increase from 2005 (Section 7.3). Overall, girls' enrolment ratio is at 70 percent of the corresponding ratio of boys (see Table 10.4), but for urban areas more equity is achieved since the gender ratio there is 88 percent. It is especially to be noticed that net primary enrolment of urban girls has risen to 68 percent, very close to the NAPWA target of 70 percent.

Overall female literacy is extremely low: only 12 percent of the female population 15 years and older are able to read and write, compared to 39 percent of males (Section 7.2). For the literacy rate of the 15-24 year olds (MDG indicator 2.3), an increase of 4 percentage points up from 2005 to 24 percent in 2007/8 was noted. The female literacy rate of this age group hovers at a low 45 percent of the male figure (former MDG indicator 10 on the ratio of literate women to men in the age group 15-24), even though this represents a 7 percentage point improvement from the 2005 figure. The consistent acceleration of literacy rates for the youngest age groups, especially for girls, has been remarkable, indicating that the inter-generational spread of illiteracy may be gradually grinding to a halt. The steady narrowing of the literacy gender gap in recent years has been so significant that in no living generation the difference has been so small. For the five-year age group around age 12, the absolute difference between girls' and boys' literacy rates is only 20 percentage points, down from 29 for the age group around age 19. The ratio of female to male literacy in this group is 63 percent, up from 45 percent in the 19 years age group.

Nevertheless, under MDG indicator 3.1 (the ratio of girls to boys in primary, secondary and tertiary education), the ratios of 69, 49 and 28 percent, respectively, indicate large inequalities in access to education. Moreover, providing remedial education for the 9.5 million illiterate adults, 5.5 million (58 percent) of whom are women, remains a formidable task. Likewise, constraints to female education persist, most notable of which are financial inadequacy, remoteness of schools, and denial of consent by the family, which may be an indication of the low value attached to female education.

There are also serious disparities on the literacy status of women and girls between urban, rural and Kuchi populations. While urban women seem to be gaining grounds, the improvement in rural areas is more modest and for Kuchi women very small. This requires special attention because the great majority of population lives in the rural areas. It is possible that the increased literacy levels in the urban areas are precipitated by the uneven distribution of opportunities and resources throughout the country, causing the migration of educated people from rural areas and depleting rural communities of human resources that are needed for their own development. Rural spread of economic programs and basic services need to be considered. The infrastructure component of education requires serious acceleration.

10.3.4 Health conditions

Although mortality information is seriously outdated, Afghanistan may be one of the very few countries in the world where women have a lower life expectancy than men (UNFPA 2008). Reproductive health complications stand as a leading cause of women's mortality, which is compounded by poor general health conditions such as those related to nutrition (Section 6.4), access to safe drinking water and adequate sanitation (Section 9.3.1), and grossly inadequate presence, access and quality of health care services (Section 8.2). In addition, early pregnancies, narrowly spaced births and high fertility will exacerbate maternal mortality. Key strategies to reduce Afghanistan's maternal mortality ratio are access to contraception to avoid unintended pregnancies, access to skilled care at the time of birth and timely access to quality emergency obstetric care.

The overall contraceptive prevalence rate in Afghanistan (MDG-5.3) was found to be 23 percent, but the proportion of currently married women using at least one method of modern family planning is significantly lower: only 15 percent of currently married women reported using at least one modern contraceptive. Large differences are observed between the urban, rural and Kuchi populations, by educational attainment differentials and age. For instance, urban women and women with at least primary levels of education had around twice the rate of effective protection against unwanted pregnancies than the women overall.

Low contraceptive use, in combination with early age at marriage and closely spaced births – both factors associated with increased risks for maternal and child health and deaths – lead to the estimated fertility level of 6.3 (see Sections 3.3.2, 3.4.1 and 8.4.3). This indicates a high reproductive health burden for Afghan women, as each subsequent pregnancy exposes them to the risk of severe bleeding, infections, obstructed labour and eclampsia, most of which can be averted by effective health services. However, the use of maternal health care is critically low in Afghanistan. Overall, 36 percent of women reported the use of skilled antenatal care services (MDG-5.5), which may provide them with medical check-ups, referrals of pregnancies that could result in complicated deliveries, and information about managing pregnancies and deliveries, immunization, breastfeeding and child spacing. The overall proportion of women delivering with a skilled birth attendant (MDG-5.2) is as low as 24 percent, but the use of frequently life-saving obstetric and newborn care is vastly different for urban (69 percent), rural (15) and Kuchi 8 percent) women, as well as for different provinces and women of different education levels. It can, therefore be concluded that Afghan reproductive health care is grossly inadequate for those who give new life.

NRVA data reveal that generally expenses and distance are the major constraints for women to accessing health services. The availability of a male companion, which is a culturally dictated practice, compounds these constraints, along with the value attached to women's health and the discretion of male family members to allow females to be treated by male health practitioners. In addition, the need for a male companion doubles the money needed for travel and may also contribute to reduction of earnings for those men who are gainfully employed. The common practice that the husband or family may disapprove treatment of a female patient by a male health staff is a real constraint considering that the sector has an enormous shortage of service providers, and especially among females.

Whereas the NRVA analysis paints a harsh reality on women's health, it also discovers some hopeful signs of improvement. It finds that for successive younger cohorts the share of women marrying before age 18, and especially before age 15, declined and that fertility is, slowly, declining. It also suggests that the use of contraceptives is increasing, that use of antenatal care has grown, and the use of skilled birth attendance has substantially increased. The decisive outcome indicator of maternal mortality is, however, badly needed to establish the true improvement in the field of reproductive health.

10.3.5 Decision-making

The previous section 10.2 on decision making indicated that women's say in various matters depends on the specific area of decision making, but that is generally is limited or very limited. On specific family affairs, such as family planning, and marriage and education of the children, women tend to have relatively more influence through joint decision-making with others, but even here far more often their husbands decide alone. In financial matters – taking or paying off debt or household spending – decision-making is in the large majority of situations the domain of the husband or father of the women. Even for the relatively few women who generate income themselves, only 20 percent decide on spending freely on their own. In various decision domains, however, women's empowerment seems to increase with age.

Representation of women's voices in the community is also poor compared to that of men. In the Community Development Councils, the rate of direct women's representation is only 60 percent of that of men, and in the traditional Shuras it is only 35 percent. It can, therefore, be concluded that in both these primary institutions of the household and the community, equity in decision making is far from established.

10.4 Conclusions

In many aspects, Afghan women and girls share the poor life conditions of their male counterparts. However, the NRVA 2007/8 confirms that a consistent pattern of relative deprivation exists across almost all development sectors. Moreover, the gender gaps are large. This is the case in decision-making power at community level and the level of the household, where women depend almost invariantly on their husbands, fathers or other families. At least at the level of communities, the government can augment women's representation by promoting female and mixed Community Development Councils.

Women's position on the labour market is also particularly weak. They participate less in economic activities, for fewer hours and predominantly in vulnerable employment. On the other hand, for those women who are currently active, the unemployment rate is as high as the male unemployment rate, and for the better educated women even twice as high.

The positive by-product of gender-based barriers to the labour market is that child labour to a lesser extent occurs among girls and less affects their development, for instance in terms of educational deprivation. Among other things, policy could be directed to facilitate women's employment in the public sector, especially public administration, health and education.

One precondition of such policy would be educational adequacy of women. In this development sector large gender gaps persist, especially in rural areas and even more among the Kuchi population. Literacy of women is less than one-third of that of men, which is already extremely low in international perspective. However, comparison of literacy across age groups shows an increase, and even an accelerating increase, of female literacy, which strongly suggest recent improvements of the educational system. This is supported by the increase of girls' – and overall – enrolment in primary education, compared to the NRVA 2005. Especially in urban areas the NAPWA target of 70 percent enrolment of girls is within reach, and girls are closing the gap with boys. Policy should, however, be primarily directed at the rural areas where the large majority of children live and where girls enrolment is around 38 percent. Besides education of new generations, Afghanistan has an adult population of 9.5 million people who are illiterate – among whom 5.5 million women – who should be provided with an opportunity to learn basic reading and writing skills.

Reproductive health has particular importance for women and girls, as a high – but not exactly determined – price is paid for high fertility, closely spaced births, early pregnancies and poor maternal health care in terms of antenatal and delivery care. In addition, the health system provides gender-specific barriers to women because of their restricted mobility and unresponsiveness in the sense of providing female health personnel. Policy measures should consider temporary importation of female health volunteers and intensified campaigns to enroll more women in health professions. The development of paramedics for rural deployment as well as mandatory up-skilling of existing female professionals may also be considered. In addition, from a women's and a health perspective, accurate information about maternal mortality is urgently needed for policy making and priority setting in the country. Despite the very low levels of maternal health care provision, the NRVA surveys suggest significant improvements in the last few years.

Also in terms of age at first marriage – important with respect to pregnancy-related health risks – and spousal age differences – important for, for instance, more gender balance in household decision making – noticeable changes can be observed. Increasingly smaller proportions of girls marry at young (18) and very young (15) ages, and the average age differences between wives and husbands has significantly declined. An issue that is partly related to large spousal age gaps is the large number of widows in the country – over half a million. In the context of Afghanistan, these can be classified as vulnerable, along with 70 thousand female heads of households. Sharp focus on these groups of women and their families is needed in designing and implementing development policies.

In terms of population information, any survey and census undertaking should pay particular attention to adequately capture women and girls in the data collection through targeted training and supervision of fieldworkers.

The general conclusion should be that huge challenges remain with respect to women's mobility, participation in public life, decision making, health, and access to economic and educational opportunities. The most urgent needs are found among the rural and Kuchi populations, and in line with that, gender gaps are usually larger among these than in the urban population, with the notable exception of labour force participation and employment. But on the positive side, significant improvements can be achieved in a relatively short time span, as is suggested for the education and health sectors.

11 Household shocks and community preferences

SUMMARY. *This chapter presents various problems of households, adopted coping strategies to deal with these problems, and preferences for community development that are partly related to these problems. More than two-thirds (71 percent) of Afghan households experienced in the year before the survey at least one household shock – a negative effect of events that is beyond their control. It came as a surprise that the most frequently experienced shock was the influx of refugees and IDPs: no less than 60 percent of all households mentioned this, followed by 39 percent that experienced any natural disaster, 22 percent suffering from agriculture and livestock problems, and 18 percent facing drinking water problems. Incidence of most types of shocks has declined compared to 2005, but the largest part of this improvement is attributed to urban areas, which could be interpreted as an indication of stabilizing and improving conditions there.*

The most prevalent strategies to deal with these challenges were reducing household expenditures, community support, food reduction and taking loans or credit. Income-generating and food programmes that assisted Afghan households in the year before the survey reached over 450 thousand households and contributed to food security, health and productive investments.

A rather consistent picture emerges across the urban, rural and Kuchi communities and across gender about the main priorities for community development. Heading the list are improvement of drinking water and health facilities, for rural areas in addition rehabilitation of irrigation systems, and for urban areas road repair.

11.1 Introduction

Development policy should take into account reality as experienced by communities, households and individuals, and as reflected in their preferences for change. This chapter presents the inventory of development priorities expressed by male and female Shuras (Section 11.3). These preferences may be the result of temporary or structural setbacks that can be experienced as shocks. The subsequent Section 11.2 provides an overview of household shocks and associated coping strategies.

11.2 Household shocks and coping strategies

Afghanistan is a country with a high-risk profile, due to a combination of climatic and natural circumstances and being a historically grown hotbed of social and political conflict and economic vulnerability. Households that face risky events with negative outcomes that are outside their control experience shocks. The consequences of household shocks can be temporary and relatively mild, but they can also shake the very existence of the household and its members, for which no coping strategy can provide an answer.

Like in 2005, the latest NRVA investigated into the shocks experienced by households in the 12 months preceding the interview. For reasons of comparability, the analysis approach of the 2005 report is repeated on the basis of the 2007/8 data. A basic classification of shocks is again made into generic shocks and idiosyncratic shocks. The first relate to general occurrences, like floods, livestock diseases, drought or general insecurity, whereas the second refer to events affecting specific households or persons, such as the death of a household member, loss of employment or a burnt-down home. The box on household shocks below provides the classification of specific shocks into larger categories. A few new categories were added in the 2007/8 questionnaire.[1]

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[1] Added categories refer to the influx of refugees and IDPs, loss of employment by a household member and reduced salary of a household member.

Household shocks	
Drinking water: reduced drinking water quantity and quality **Agricultural:** reduced agricultural water quality and quantity, unusually high level of crop pests and diseases, opium eradication, abandoning opium cultivation, unusually high level of livestock diseases, reduced availability of grazing areas, and reduced availability of Kuchi migration routes **Natural disasters:** earthquakes, landslides and avalanches, flooding, late damaging frosts, heavy rains preventing work, severe winter conditions and hailstorms. **Insecurity:** insecurity, violence and theft	**Financial:** unusually high increases in food prices, unusual decrease in farm gate prices **Epidemics:** unusually high level of human disease **Refugees/IDPs:** large influx of refugees and IDPs **Idiosyncratic:** bankruptcy of family business, serious illness or accident for working household member, death of a working household member, death or illness of other household member, involuntary loss of house or land, involuntary loss of livestock, loss of employment by a household member, reduced salary of a household member

One of the newly introduced shocks relates to the influx of refugees and internally displaced persons (IDPs), which may refer to arrivals in an area of refuge or to returnees. The most remarkable observation from *Table 11.1* on household shocks is that this experience has caused so much upheaval. Nationwide, no less than 60 percent of households experienced negative consequences of the influx of these refugees. Old feuds may be renewed, returnees may want to reclaim land and houses that in their absence have been occupied by others and, overall, additional pressure on scarce resources – also in view of high population growth – may cause conflicts. Table 11.1 also shows that the problems were less common in urban areas. *Figure 11.1* indicates that the refugee-related problems disproportionately affected the north-eastern half of the country.

Table 11.1 Incidence of households shocks in the 12 months before the survey, by type of shock, and by survey, residence (in percentages)

Survey, residence	Generic shocks								Idiosyncratic shocks
	Any shock	Water	Agricultural	Natural disaster	Security	Financial	Epidemics	Refugees/ IDPs	
NRVA 2007/8									
Urban	45	6	5	18	2	4	0	39	15
Rural	76	21	24	44	13	3	1	65	31
Kuchi	84	28	48	40	13	1	0	61	37
National	71	18	22	39	11	3	0	60	28
NRVA 2005									
Urban	18	23	10	36	9	27	9	N.D.	26
Rural	51	25	48	55	12	19	10	N.D	10
Kuchi	52	30	68	40	9	9	8	N.D	15
National	45	25	47	53	11	19	9	N.D	11

N.D: No Data

Figure 11.1 Incidence of household shocks in the past 12 months, due to influx of refugees and IDPs, by province (in percentages)
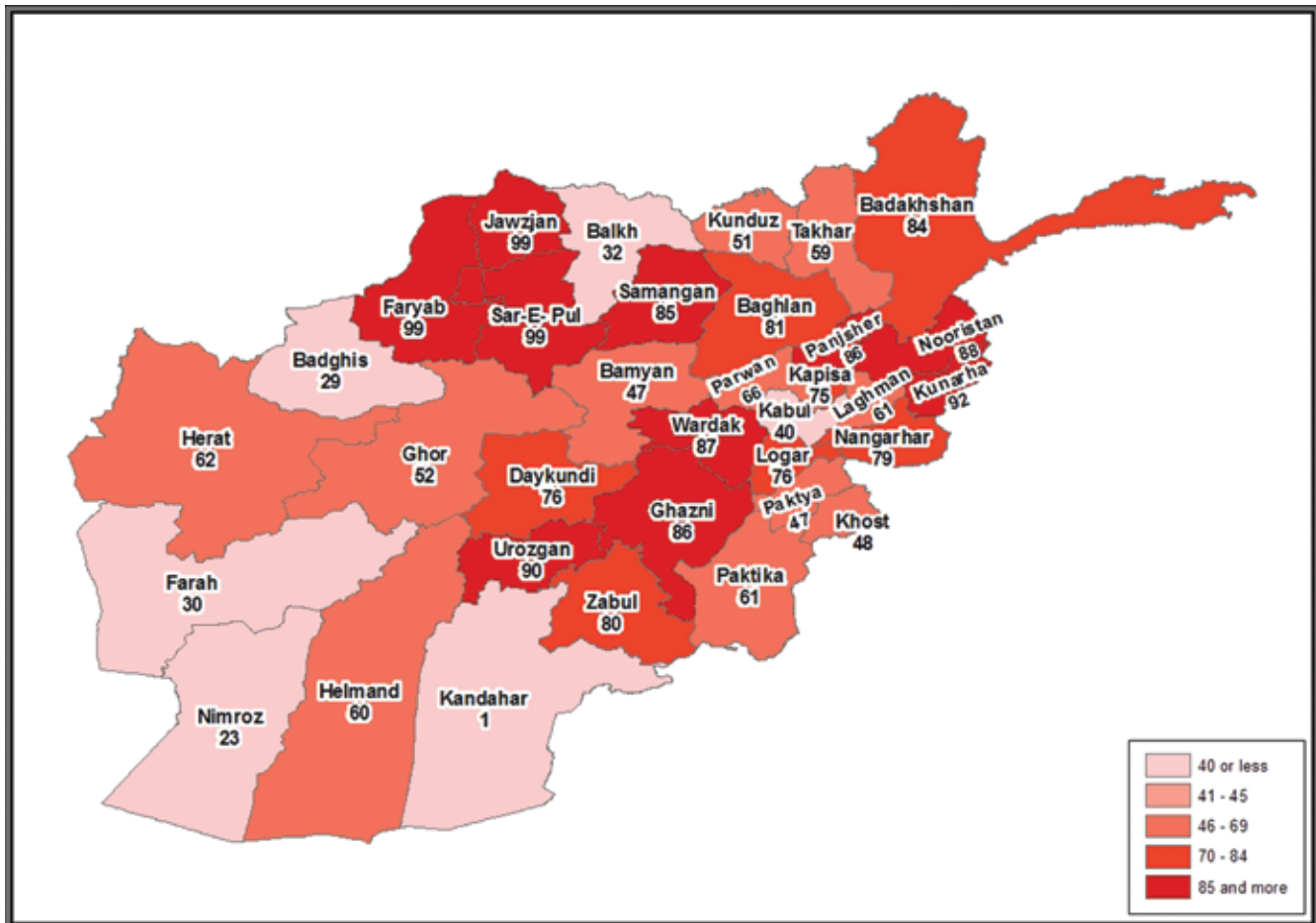
Next to the returnee issue, shocks related to natural disasters were faced most frequently (affecting 39 percent of households). With regard to water-related shocks, problems were mainly encountered in Northern Afghanistan (*Figure 11.2*). Another remarkable observation, is that almost half of the households experienced three or more shocks.

The newly introduced category of shocks related to influx of refugees also contributed to the overall increase of households experiencing shocks. In 2005, 45 percent of households faced any shock, and in 2007/8 this was 71 percent. However, for most other types of generic household shocks comparison with NRVA 2005 figures shows a decline. Even though it is likely that this picture is distorted by the introduction of the additional problem of refugee influx, it suggests an improvement in many fields except security. It is remarkable that for the largest part lower occurrence of shocks can be attributed to declines in the urban areas. One interpretation could be that urban life in Afghanistan has improved and has become more stabilized. On the other hand, the various idiosyncratic shocks occurred significantly more frequently: in 2007/8, 28 percent endured these shocks, compared to 11 percent in 2005. It is difficult to explain this large increase since by their nature, idiosyncratic events have more random causation.

In order to address the difficulties faced, Afghan households applied a variety of coping strategies (see *Table 11.2*). Of these, financial cutbacks in household expenditure were the ones most frequently applied, but help obtained in the community, food reduction, obtaining credit, and sale of means of production were also major strategies to address the problems. Although several of these strategies are problematic, the latter strategy is particularly worrisome, as it reduces the chances of recovery.

Figure 11.2 Incidence of household shocks in the past 12 months, due to water-related problems, by province (in percentages)
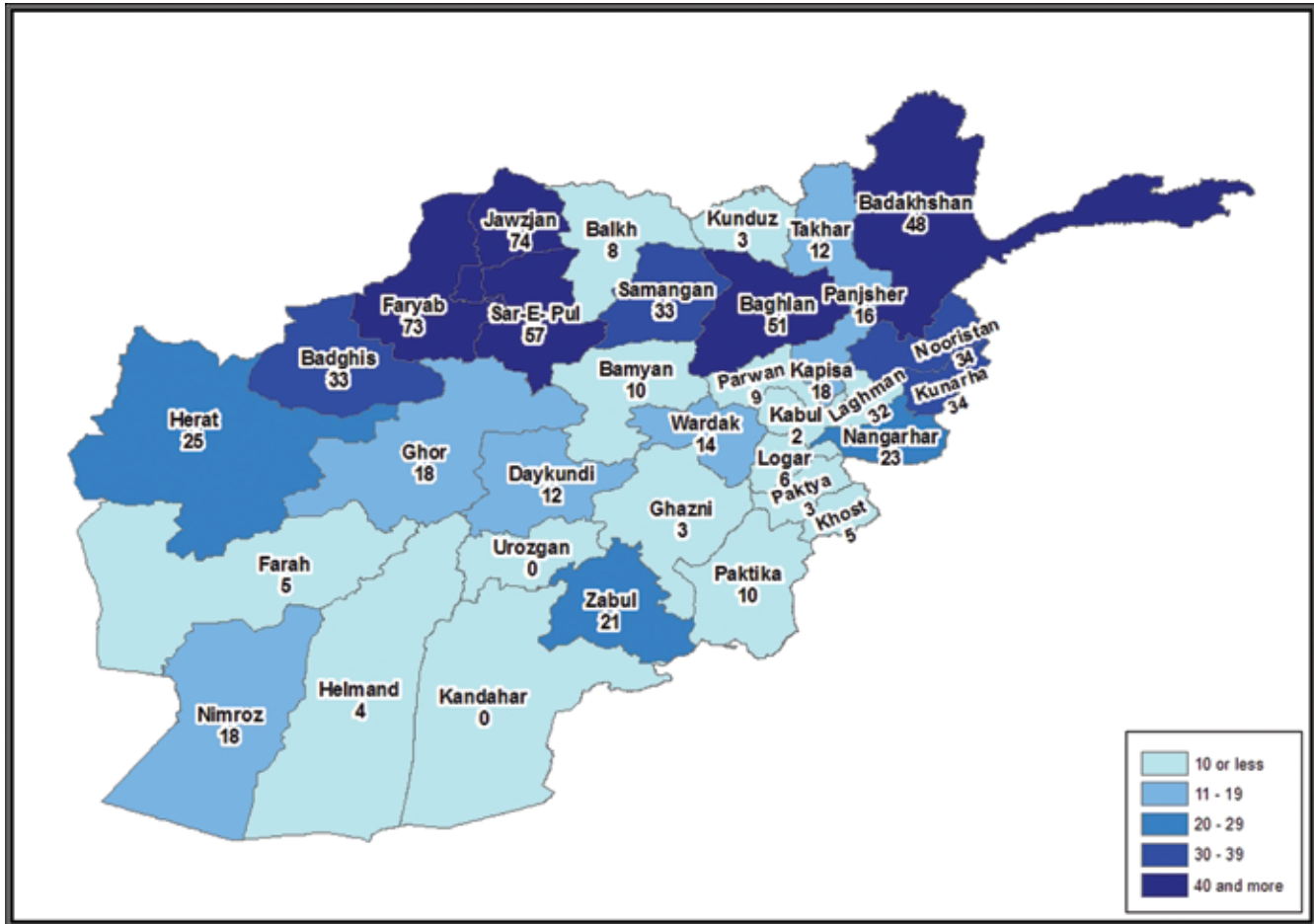
Table 11.2 Prevalence of coping strategies applied, by, residence (in percentages)

Residence	Coping strategy									
	Any strategy	Food reduction	Reduced expenditures	Loans, redits, mortgaging	Sale of production goods	Alternative work strategies	Working in aid programmes	Help from community	Other strategies	No strategy
Urban	44	17	27	20	7	3	1	28	3	1
Rural	76	39	45	31	29	13	9	38	4	6
Kuchi	84	33	46	41	22	12	30	33	1	3
National	70	34	41	30	24	11	9	35	4	5

Some 20 percent of coping strategies referred to specially designed programmes to assist vulnerable populations. Close to 280 thousand households had a member participating in cash-for work or other income-generating programmes. As a result, around 45 percent of the households participating in these programmes bought more food, and more or less equal shares – ranging from 13 to 17 percent – used the money to pay for medical expenses, meet financial obligations or invested in income generating.

As for the reasons why households did not participate in cash-for-work programmes, 72 percent of households reported that there was no such programme in their area, and 10 percent did not hear about this. Apparently, there could still be a very large demand for this type of assistance programmes.

A second type of support strategy is food-for-work or food aid programmes, in which some 224 thousand households participated. The most important benefit (35 percent) again was the increase of the quantity of food consumed, followed by the increase of the quality of food (24 percent), reduction of food expenditures, and improved education or literacy. Nine percent used the food received to sell this for cash. Altogether over 450 thousand or one in seven households participated in any of these types of programmes, reflecting precarious situations for many.

11.3 Community preferences

The male and female Shura questionnaires in the NRVA survey contained identical modules on priorities for government support to development. *Table 11.3* summarizes the main findings. A rather consistent picture emerges across the urban, rural and Kuchi communities about the top priority of water supply. Safe drinking water is provided to only 27 percent of the population (see Section 9.3.1), but even in urban areas where access to 58 percent of the population is realized, improvement is clearly the first priority, followed by construction or repair of roads. In the rural area the rehabilitation of irrigation systems is important. At the women's side, high priority is also assigned to the provision of health facilities, even more so than by the male Shura.

Table 11.3 Priorities for support to development of (a) male Shuras and (b) female Shuras, by residence (percentage mentioned as first priority between brackets)

Residence	Priority	a. Male Shura	Priority	b. Female Shura
Urban	1	Improved drinking water quantity (21)	1	Improved drinking water quantity (17)
	2	Repairing of local roads (17)	2	Repairing of local roads (13)
	3	New or improved local education facilities for women and men (12)	3	New or improved local health facilities for women and men (11)
	4	Improved drinking water quality (9)	4	Other (10)
	5	Other (8)	5	Improved drinking water quality (7)
Rural	1	Rehabilitation of irrigation system (16)	1	Improved drinking water quantity (13)
	2	Improved drinking water quantity (13)	2	New or improved local health facilities for women and men (13)
	3	New or improved local health facilities for women and men (10)	3	Rehabilitation of irrigation system (8)
	4	Electricity provision (9)	4	New or improved local health facilities, women (7)
	5	Other (9)	5	Repairing of local roads (7)
Kuchi	1	Improved drinking water quantity (18)	1	Improved drinking water quantity (25)
	2	Improved drinking water quality (14)	2	Improved drinking water quality (15)
	3	New or improved housing in community (9)	3	New or improved local health facilities for women and men (13)
	4	Improved veterinary services (7)	4	New or improved local health facilities, women (8)
	5	New or improved local education facilities for women and men (7)	5	Other (8)
National	1	Rehabilitation of irrigation system (14)	1	Improved drinking water quantity (14)
	2	Improved drinking water quantity (14)	2	New or improved local health facilities for women and men (13)
	3	New or improved local health facilities for women and men (9)	3	Repairing of local roads (7)
	4	Other (9)	4	Rehabilitation of irrigation system (7)
	5	Repairing of local roads (9)	5	New or improved local health facilities, women (7)

11.4 Conclusions

The climatic and natural circumstances of Afghanistan and its history of social and political conflict frequently create adverse conditions and events that are beyond the control of households. It is the role of the government to mitigate these shocks and preferably prevent their occurrence by effective policies and programmes. It comes as a surprise that the most frequently mentioned household shock was related to the influx of refugees and IDPs; no less than 60 percent of all households mentioned this in the survey. It is well possible that the associated problems relate to land and house disputes. In that case, legal settlements including registration of ownership may be required to find solutions. However, more detailed analysis, as well as additional research – possibly qualitative research – is required to investigate into the exact nature of this problem and to find out who and where are the main victims.

Other shocks that households frequently endured were natural disasters, agricultural problems, poor water supply and insecurity. The first of these two can only partly be addressed by policy measures (apart from mitigation), but for the latter, there is ample scope for effective interventions. For all types of generic household shocks – except for those related to security – comparison with NRVA 2005 figures show an improvement, with the reservation that this picture may be positively biased by the introduction of the newly identified problem of refugee influx. Most of the improvements can be attributed to urban areas, which could be interpreted as an indication of stabilizing and improving conditions there.

Among the strategies to cope with these challenges, financial cutbacks in household expenditure were the ones most frequently applied. Additionally, households regularly depend on help from the community, food reduction, obtaining credit, and sale of production goods. Implementation of various income-generating and food programmes assisted one of every seven households in the country. The benefits of these programmes especially related to food security, health and productive investments. As such, they seem to be instrumental in the improvement of life conditions of many.

Male and female Shuras provided information about the priorities for development in their communities. Water supply received a top ranking, and improvement of the health system – especially for women – and rehabilitation of the irrigation system were also consistently mentioned. For urban areas, road repair received high priority. It can be expected that the success rate of development programmes will be higher if interventions match community preferences.

12 Recommendations

The NRVA 2007/8 is the most comprehensive source of statistical information about Afghanistan to date. It has been the product of close collaboration between the Ministry of Rural Rehabilitation and Development and the Central Statistics Organisation, with financial support of the European Commission and valuable input from various line ministries and international agencies. The present NRVA also built on the experiences of the two previous rounds of NRVA. Thereby, NRVA has not only filled a large gap in key indicators required for development planning, it also contributed to important capacity building in fieldwork operations, sampling, data processing, conceptualisation of development issues, and statistical and policy analysis.

The main conclusions contained in this report are provided in the summaries at the start of each chapter and in the executive summary at the beginning of this report. This chapter will focus on main recommendations that can be drawn from the history of the NRVA.

12.1 Policy recommendations

As far as policy recommendations are concerned, it is the primary responsibility of the ministries to draw conclusions from the findings in this report, and preferably from additional analysis of the NRVA data. Although it is in no way the explicit task of the present report, in several sections statistical finding have been translated into policy clues. Therefore, at this place it is opportune to transcend the topical character of the various chapters and reflect some of the main considerations, without the aim of being anywhere close to comprehensive.

The NRVA analysis shows widespread and often severe poverty, and it is obvious that those who cannot meet their basic needs are a primary target group for poverty alleviation. However, the poverty pattern also shows that of those who are not immediately threatened in their survival, many are very close to falling into absolute poverty and that only very few live in affluence. This means that almost any development programme in Afghanistan will benefit people who face severe challenges.

A finding with major policy implications is also that consistently and in every development area, women and Kuchis are disproportionally disadvantaged. Almost invariantly also conditions in urban areas are better than in rural areas, even though urban conditions are very poor in any international standard. Such and similar observations were made in previous studies, but never in a way as comprehensive and nationally representative as in the present NRVA. The NRVA updates and substantiates most of these claims and makes corrections to few others. More specific target groups were identified in this report, including unemployed youth and educated women, girls in early marriage and generally adolescent girls, widows, and female-headed households, among others.

An issue that impacts on almost every development area – employment, education, health, food security, poverty, the position of women, environmental degradation, to name just a few – is Afghanistan's rapid population growth. Although an exact estimate of population growth is not possible on the basis of NRVA data, the population structure and the estimated total fertility rate sufficiently indicate that population growth is very high. As a consequence, increasingly larger birth cohorts add every year to the pressure on, for instance the education system and the labour market, which are already over-burdened and incapable to absorb the present number of school-age children and labour force, respectively. Having many children is one of the factors explaining household poverty and food insecurity, and the present very high fertility unquestionably means that women and infants alike pay a high price in terms of health impairment and death. It also implies a high burden for Afghanistan's fragile health system and an additional barrier for Afghan women to be educated, to be gainfully employed and to seize other opportunities for personal development. A comprehensive population policy aiming at reducing unsustainable fertility – necessarily including the individual perspectives of reproductive and child health, as well as societal considerations and cultural sensitivities – is at the very basis of development of Afghanistan.

The health system shows real signs of recovery, but is still incapable of servicing the Afghan population to an acceptable degree. Distance to health centres and lack of female staff especially deprives women of the possibility to access health facilities, implying that gender-specific perspectives are an essential part of policies aiming at health system improvement.

Improvement of the education system is also convincingly demonstrated in the NRVA analysis, although again present levels of school enrolment and literacy are very inadequate. Improvement of the quality of human capital by means of education is indispensible for the development of Afghanistan's governance and economy, as well as for improving conditions at the individual and household levels. In view of their disadvantaged positions, girls, rural populations and adult illiterates should be among the primary target groups for education strategies.

Water management in the broad sense is a key development area in Afghanistan. The provision of safe drinking water is presently denied to three-quarters of the population and implies significant health risks to these people, and especially to the infants and children. Provision of drinking water is also identified by Afghan Shuras as the highest priority for community development. On the other side, extension, improvement and rehabilitation of irrigation systems is a top priority for rural communities, reflecting the household-level information that lack of water is the main reason for not being able to cultivate land, either irrigated or rain-fed land.

A surprising finding in the NRVA 2007/8 is that of all problems that households faced, the influx of refugees or IDPs is the one most frequently mentioned. The exact nature of the problem cannot be deduced from NRVA information, but the prevalence of the problem warrants policy attention and further research.

12.2 Recommendations related to information provision

It is hoped and expected that the present report will provide a contribution to the efforts of the government, its partners and non-governmental organisations in the pursuit of the economic and social development of Afghanistan. However, more in-depth and cross-sectional analysis for various sector policies will be needed to design the most effective and efficient development policies and programmes. Line ministries should engage in this further investigation, if needed with technical assistance. But it is also strongly recommended to provide the NRVA database – at a sufficiently aggregated level and stripped from personal and household identification – in the public domain, allowing other stakeholders and the academic community to explore the wealth of information contained in the data. This will undoubtedly increase the insight into the Afghan society and fuel policy making and development planning.

Although the NRVA provides relevant information to new policy making, it should be acknowledged that at the very moment fieldwork was conducted, the information was out of date. A continuous and sustainable system of data collection in Afghanistan needs to be established in order to monitor policy achievements and detect new developments. For important areas – including poverty estimation and labour statistics – the NRVA 2007/8 should be regarded as the baseline, either because it relates to first-time data collection in a specific area or because advancing methodology application prohibits comparison with earlier survey results.

In addition, it should be acknowledged that NRVA is a multi-purpose survey that cannot accommodate the level of detail that is needed to establish all indicators required for policy making. Importantly, this applies to the fields of health, mortality, employment and underemployment, and child labour. Targeted surveys are required to fill the gaps left open by the NRVA. More specifically, it is recommended to conduct a Labour Force Survey, with special attention to the measurement of underemployment, and a Demographic and Health Survey, preferably with the opportunity to estimate maternal mortality. In addition, implementation of the postponed population census should be pursued.

It should be recognised that Afghanistan is only at the very start of building a sustainable statistical system and that any such system will be in continuous development. Conceiving this as a process accepts a step-by-step approach, accepts information gaps and accepts that mistakes are made, as long as involved parties learn from these mistakes. A crucial aspect in this process is the building of capacity, from the level of policy makers that have to apply the information, to analysts, to the interviewers in the field, and in the end to the population itself.

It cannot sufficiently be emphasised that the quality of any survey or census result critically depends on the input provided by the interviewers. This stresses the need for thorough training. Depending on the subject matter of data collection, specific concepts and methods need to be addressed, but in the context of Afghanistan special attention should also be given to adequately enumerating infants, young children, adolescent girls and women in general. Survey data on Afghan populations consistently show under-enumeration of these groups. An intermediate or long-term development strategy for the statistical system of Afghanistan should envision the introduction of a vital registration system and panel information, and preferably demographic and health surveillance.

Against the background of developing an open and transparent society, ministries and CSO should structurally work on collaborating in data collection and analysis, and in sharing and disseminating information. Providing the NRVA data in the public domain would be a courageous step that would receive wide acclaim.

Annex I NRVA 2007/8 national project team

The national input in the NSS/NRVA project team that managed the NRVA 2007/8 edition of the NSS project constituted of six CSO and 6 MRRD staff and group of private consultants. Due to staff turnover during the project's lifetime and extra temporary personnel that assisted the project team during peak periods, the following list of names longer than that.

CSO Staff	MRRD Staff	Project Staff
Mr Tamim Ahmad Shakeb	Ms Gulalai Habib	Mr Amanullah Assil
Mr Abdul Ahmad Sherzai	Mr Ghulam Sediq Zeyar	Mr Tariq Wardak
Mr Ahmad Khalid Amarkhel	Mr Abdullah Fakhri	Mr Abdul Ameed Qaderdan
Mr Mohammad Muneer Jamshidi	Mr Abdul Hakim Zarin	Ms Aryan Askarzada
Mr Mohhammad Sadeq Sidiqi	Mr Shahim Ahmad Kabuli	Mr Ahmad Fawad Barakati
Mr Farhad Barai	Ms Salima Rahimi	Mr Muhebullah
Mr Ahmad Sameer Samadi	Ms Pesta Gul	
Ms Shokria		
Mr Obaidullah Esmati		
Mr Mujtaba Danishwar		
Mr Mohammad Aman		
Mr Sakhi		
Mr Mohhammad Aman		

Annex II NRVA 2007/8 sampling design

Approach and comparison to sampling procedure for NRVA 2005

The sampling design of the NRVA 2007/8 was built on experience from the NRVA 2005. Most features and approaches of the sampling used in the NRVA 2005 are maintained. The biggest improvement in the design of the survey is the extension of the survey period from two months in the summer season to a full 12 month survey to ensure that seasonality is fully accounted for. The resulting sample is a total of 20,576 households; 2,441 PSU's selected creating a household sample of 19,528 from the settled urban and rural population and 131 PSUs (1,048 households) from the Kuchi (nomadic) population.

This will result in the NRVA 2007/8 survey that will:
• Fully capture seasonality of consumption and other dimensions of welfare
• Improve the quality of the collected data, by giving greater specificity of household selection within PSUs.
• Be fielded with a smaller number of interviewers, who can be carefully selected, well trained and properly supervised.
• Generate effective quality control procedures and iterative quality feedback to the survey teams.
• Produce national-level sample sufficient for a poverty estimate after the first few months of fieldwork, but this will be seasonally biased.
• Be consistent with recommended international standards.

The other main differences between NRVA 2005 and 2007/8 is that the NRVA 2007/8 sampling will:
• Use an updated sample frame
• Pre-select households in each selected PSU, with head of household name and size of household taken from household listing forms, except where there is no household listing data available.
• PSU sample randomly allocated into 12 monthly sub-samples

NRVA 2007/8 sample frame

Since NRVA 2005 there has been no household census, therefore the sampling frame used will for the most part be the same frame used for NRVA 2005, i.e. the pre-census household listing conducted by the Central Statistics Organisation from 2003-2005. Over a three-year period from 2003 until 2005, almost every household in Afghanistan was visited, and the number of males and females above and below 18 were enumerated, in preparation of the census to take place in 2008. Some listing enumeration took place after the NRVA 2005 sample was drawn, although security concerns prevented a complete enumeration of all households. At the time of drawing the sample for NRVA 2005, there were 42 districts with no household listing data available. The FAO livestock census (2002/03) at that time had produced the most complete village lists with estimated number of households per village, and this was used to complete the NRVA 2005 sample frame. As this FAO data came from a livestock census, it was recognized that the urban areas would not be fully represented, (see inclusion of urban Helmand to analytical domains in section below).

The household listing continued after the 2005 NRVA sample was drawn and the full listing was completed by early 2006. However, as a result of security concerns, eight (of 16) districts in Kandahar and three (of 11) districts in Zabul were not enumerated at all and there are some missing villages from various locations in Urozgan (Table A.II.1) when the pre-census household listing enumeration finished in 2006. For these unlisted areas, CSO conducted interviews with village Shura to get estimates of the total number of households and population, and introduced them into the sample frame, and it is this combined frame that was used for the NRVA 2007/8 frame.

Table A.II.1 Areas not enumerated for pre-census household listing

Province	District and district number
Kandahar	Arghestan (13)
Kandahar	Ghorak (6)
Kandahar	Maroof (14)
Kandahar	Myanesheen (15)
Kandahar	Nish (16)
Kandahar	Reig (10)
Kandahar	Shah Wali Kott (3)
Kandahar	Shorabak (11)
Urozgan	Some missing villages
Zabul	Arghandab (3)
Zabul	Daichopan (5)
Zabul	Kakar (4)

The NRVA 2007/8 survey aims to enumerate a sample covering the whole country, as was attempted with NRVA 2005. Poor security prevented enumeration in 11 districts in NRVA 2005, and some districts with poor security prevented female enumerators going, and in those situations, the consumption module of the female questionnaire was enumerated by men and the remaining modules were not used.

Cluster size

The number of households enumerated per cluster has been reduced from 12 to 8, as standard errors from NRVA 2005 suggested that this would produce an economy of survey resources with little reduction in precision of the standard errors.

Analytical domains, Stratification of the Frame

The analytical domains (or, the strata, areas at which we wish the data to be statistically representative) were 45 in total in NRVA 2005, and this was increased to 46 in 2007/8 (Table A.II.2)

Table A.II.2 Analytical domain structure for NRVA 2005 and 2007

Analytical domains	NRVA 2005	NRVA 2007
Provincial analytical domains	34 domains for each 34 provinces of rural or small urban populations	34 domains for each 34 provinces of rural or small urban populations
Urban analytical domains	10 urban domains from 10 provinces with the highest urban populations.	11 urban domains from 11 provinces with the highest provincial centre urban populations.
Nomadic pastoralists (Kuchi) analytical domains	1	1
Total Number Analytical Domains	45	46

Urban analytical domains

In both 2005 and 2007/8, the NRVA sample design stratified on each of the provinces, and then further stratified by urban and rural several of the more populous provinces. The design for both 2005 and 2007/8 entailed sorting provinces by the total number of urban households in the province. In 2005, the ten provinces with the greatest number of urban households were then stratified into urban and rural areas. At this time, there was no data available on the urban population for Helmand, and it was therefore not stratified by an urban and rural split. Since then, Helmand was enumerated, and for the 2007/8 design, it was determined that Helmand has a level of urban population that warrants its own urban analytical domain. The primary change made in the 2007/8 design then is that 11 provinces (the 10 from 2005 plus Helmand) are stratified by urban and rural areas, resulting in 22 strata. The stratification in both designs was based on the CSO definition of urban from the 2003-05 household listing. Table A.II.3 lists each of the provinces that have urban and rural strata.

The remaining 23 provinces, with the lowest population of urban households, were not stratified by urban and rural areas. Each of these provinces is a separate stratum, resulting in 23 more strata. There are households that are classified as urban in the CSO household listing in the other remaining 23 provinces, but they do not belong to there own urban stratum. For the purposes of sampling, households in these 23 provinces are neither classified as urban or rural, just as belonging to the province stratum. These urban households are in small districts or provincial centres and are not thought to be representative of a typical urban lifestyle that is significantly different from that of rural settled households.[1]

Table A.II.3 Number of households in the most urban populated provinces

Province	Urban HHs	Centre Urban HHs	Urban domains 2005	Urban domains 2007
Kabul	313,680	313,136	√	√
Hirat	76,423	66,760	√	√
Balkh	71,151	61,227	√	√
Kandahar	54,378	54,378	√	√
Nangarhar	31,800	31,289	√	√
Baghlan	23,727	16,532	√	√
Kunduz	25,685	16,219	√	√
Jawzjan	19,187	14,379	√	√
Helmand	13,907	12,859		√
Faryab	16,870	11,235	√	√
Takhar	17,201	10,508	√	√

Source: CSO/UNFPA pre-census household listing 2003-2005

Two-stage selection process

Within each of the 45 strata, households were selected following a two-stage design. In the first stage, CSO enumeration areas, the primary sampling units (PSUs), were selected with probability proportional to the estimated number of households (ratio of number of households in PSU to number of households in the stratum). Then in the second stage, 8 households were selected as the ultimate sampling units from each PSU (each selected with probability equal to 8 over the number of households in the PSU). The overall probability of household selection then is the product of the probability from the first stage and the second stage. In the second stage, there was no follow up listing procedure, so the product is a constant within each stratum. Random selection was based on a fixed-interval, random-start point procedure.

The number of PSU's per stratum was chosen to ensure robust representativeness for the smaller provinces. No stratum has fewer than 240 households, the largest stratum has 1,344 households. The resulting sample is a total of 2,441 PSU's selected creating a household sample of 19,528 from the settled urban and rural population for which there are 32 PSU's selected that do not have complete household listing (i.e. PSU's selected in the non-listed areas as detailed in Table A.II.1). In addition to this, an estimated 131 PSUs (1,048 households) will be sampled in three waves starting from late summer 2007 through early summer 2008 to capture the Kuchi (nomadic) population.

PSUs selected in those areas that were not enumerated in the household listing may still be in areas of poor security for some of the survey period. However, security is fluid, and to simply exclude PSU's in these areas with no household listing enumeration at the outset would be undesirable given the objective to obtain nationally representative estimates. The security situation at the time of planning the sample does not necessarily mean that the security situation will not improve at some point in 12 months survey period. Therefore the sample will assume that there is the potential to enumerate all areas and create a relatively flexible system for giving maximum opportunity for insecure areas to be enumerated at some point in the 12 month survey.

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[1] The NRVA data files allow the analyst to decide whether to identify these households as rural or urban. The data file called "area_name" contains two useful variables: urk and urbrur. The variable urk identifies households as urban (u), rural (r), or Kuchi (k) based on the design of the sample. This means that urban identifies only those households in the 11 urban strata. Rural identifies all households in the 11 rural strata and all households in the remaining 23 province-level strata. Kuchi identifies all of the Kuchi households wherever they were located when interviewed. The variable urbrur identifies households as either urban or rural as based on the definition in the CSO household listing from 2003-05. In particular, this variable will identify those urban households (as defined by CSO) in the 23 provinces that have not been stratified into rural and urban areas.

Calculation of weights, probability of selection and post-stratification

The expansion factor used at the household level, Whsq, expands the sample to the population of households. Similarly, the expansion factor whsq, is for use in household-level files and expands the sample to the population of individuals. The factors are estimated as:

$$Whsq= [prob(PSU)*prob(USU)] * [0.25*POP_{s,2008}] / \sum hsq\ HHSIZEhsq$$

$$whsq= Whsq * HHSIZEhsq$$

where h identifies the household, s identifies the stratum, and q identifies the calendar quarter. The term in the first square brackets is the product of the probabilities of selection in each of the two stages. The term in the second square brackets is the CSO population estimate for 2008 based on the 2003-05 pre-census household listing and CSO projections. This is part of an post-stratification adjustment to the probability of selection, ensuring that sample-based population estimates correspond to CSO population estimates. Population is divided by 4 to uniformly allocate the population to each quarter of the year (assuming away seasonal international migration). The denominator, HHSIZEhsq is the size of household h in stratum s sampled in quarter q. The denominator gives the total number of sample, non-Kuchi individuals in each stratum by quarter. The adjustment term in the numerator gives the population of individuals for each stratum by quarter as estimated by CSO household listing of the non-Kuchi population.

Household listing for PSUs without household listing data

The PSU's that do not have a household listing include those areas that were too insecure during households listing to be enumerated, and Kuchi (nomad) communities. For PSUs sampled where there is no household listing information, the household listing is not available and households cannot be drawn ex-ante from the sample frame. There will be two separate methodologies followed: one for the areas that were insecure during the household listings, and one for the Kuchi communities.

For areas that were insecure in the household listings:
The fact that the PSUs without the household listing still tend to be in the insecure areas is part of the reason for adopting the simple method outlined below of developing a random start with sample interval for selecting households within PSUs (rather than an in-situ listing which takes time and draws unwanted attention to the survey teams in the village).

The procedure of developing a sample of random households from PSUs without a listing is outlined below.

- ► Obtain as reliable as possible, and estimate of the number of occupied dwellings in the village. This can be cross referenced with the estimates previously provided by Shura members to CSO. Numbers are not expected to be exactly the same, but of a similar order of magnitude. If there is a huge difference between the two, further probing to try and understand the differences in the two numbers could be valuable in ensuring that the current estimate of the number of occupied households is realistic.
- ► Once the estimate of occupied households has been determined, refer to Annex 1 table row below with the appropriate household number to determine maximum random start and sampling interval.
- ► Randomly select a start number between 1 and the max start number indicated in the right-hand column. To do this use random number generator on a calculator to produce a number between zero and one, and then multiply this by the maximum start number. This provides the starting household number. Use the sampling interval on the same row and then select seven other households.
- ► If the number of households in the rural village is greater than 1000, then calculate the maximum start number and the interval by dividing the total number of households by 8. For example 1324/8=165.5 = 8*165 + 4. Therefore the maximum start number equals 165+4 = 169.
- ► If a household is empty, or the household members do not wish to be interviewed, go to the next nearest house and conduct the household questionnaire there.

For Kuchi communities we will first determine the number of communities in a district from the District Authorities, and then randomly select the communities to be enumerated. Once in the selected communities we will draw up a list of the household from speaking with the head of the community, then randomly select the households to interview. This process is described in detail later in this document.

Household identification for PSUs with household listing

Eight households are randomly selected per cluster based upon the household population for each selected PSU from the household listing based sample. The households are selected in a similar way to the procedure for PSUs without a listing, with a random start within the sample interval range, but using the total number of households as recorded in the household listing database. The number of the household is pre-printed on the tracking sheet for the PSU, then CSO staff find the appropriate hard-copy of the listing forms and write the name of the head of household to facilitate specific house identification in the PSU. (The household number but not the household head name was entered in the listing database, so looking manually at the listing sheets is required to get the correct household head name.) This improves upon procedures in the NRVA 2005, where a database with the head of household names was not available as the household listing was still underway.

Replacement households-within-cluster

Four reserve households are also drawn at the same time and printed on the cluster tracking form every time a reserve household is used, the reason for not using the original household sample has to be fully described on the cluster tracking sheet. Random checks of enumeration areas and reasons for not sampling selected households will be conducted by survey supervisors.

Replacement clusters-within-domain

Of the 2,441 non-Kuchi PSUs in the sample design, only 68 were replacement PSUs (less than 3% replacement). The majority of these replacements were due to reasons of insecurity. Replacement PSUs were almost always PSUs in the nearest secure district. Accepted reasons for replacing a cluster within the domain:
- Persistent poor security preventing enumerator access.
- Prolonged lack of access due to very long term winter conditions (unlikely occurrence).
- Change of use of most of the households in the cluster to non-residential purposes, i.e. businesses, shops, etc.
- Surveyors not granted permission by village elders to conduct the survey despite district supervisor making a second visit for further explanation of the purpose of the survey.

Of the four reasons above for a PSU not being able to be surveyed, the change of use is the only one that justified an immediate replacement PSU without further investigation or opportunity for sampling at another point within the survey schedule.

Strategy for dealing with PSUs that are temporarily or permanently inaccessible

The low replacement rate for PSUs was in part due to a flexible strategy for dealing with lack of access due to security or weather issues. Both of these causes are unpredictable and variable as to when and where they will prevent access to PSUs, although both have times of year when it is more likely. Therefore a strategy was followed that provided the maximum opportunity for these PSUs to be sampled at some point in the survey calendar. In the best case scenario, the factors that make a PSU inaccessible are not permanent, and most, if not all these PSUs will become available at some point during the year survey period. The simplest sampling strategy with PSUs that are inaccessible at the time they are meant to be enumerated would be to skip them, and hope that they become available at some point during the year-long survey.

The danger of this approach is that we end up towards the end of the survey period with a collection of PSUs that have remained inaccessible, for a large part of the survey period, but become accessible towards the end, because that's when they are reconsidered for enumeration, or their replacements are chosen. This bunching of inaccessible PSUs enumerated at one time of the year will create a confounding effect of insecurity and season. To prevent this, it is proposed to break up the year into four quarterly review periods. This is proposed as a mechanism to maintain geographic representativeness and seasonal sampling balance within an analytical domain. Within a three month period, the procedures for accommodating inaccessible PSUs would be the following:

► If a PSU is not accessible at the scheduled time, skip that PSU and move onto enumerate the next PSU in the schedule. Record this information.

► Monitor the conditions that prevented the initial visit to the PSU taking place, and should they change to the extent that it is now possible to enumerate the PSU that you have skipped within this same quarter, go back and enumerate that PSU as soon as conditions allow. This will ensure that the time delay between the scheduled and the actual enumeration time is minimised wherever possible.

► At the end of the fieldwork quarter, any PSUs that remained inaccessible until the end of the quarter, will be considered as to whether they are likely to continue to be inaccessible or that conditions will change to permit them to be enumerated in the next quarter.

► Those PSUs that are now accessible for the next quarter of survey should be reintroduced to the schedule. They should be enumerated towards the beginning of the next quarter because this will reduce the delay between the original schedule and actual enumeration.

► If there are PSUs for which it is considered that will not be accessible at the very least in the next quarter, replacement PSUs should be drawn, adhering to the principle to maintain the representativeness and balance of the analytical domain and season effects within the national sample.

► Replacement PSUs should be drawn randomly from within the same district (for rural populations)and urban district-nahia for urban populations. These replacement PSU's should be drawn from the shadow sample which is created in the same way as the original sample, but with a different seed random start.

The benefits of such a scheme are that:
• The flexible strategy allows for enumeration of inaccessible PSUs as soon as they become accessible.
• Replacement PSUs are distributed relatively evenly across seasons for all analytical domains where they are required.
• The shadow sampling scheme maintains the appropriate number of PSUs per district or nahia.

Strategy for the selection of Kuchi communities

Due to their nomadic nature, sampling Kuchi communities during their annual migrations is not practical. However, there are two times in the year when the locations of the Kuchi communities are most stable; winter, probably the most predictable time for finding Kuchi communities; and summer, when most communities have reached their final summer grazing location. Therefore the NRVA 2007/8 samples Kuchi communities both in winter and in summer locations during the 12 months survey, dividing into three waves. As the surveys started in late summer 2007, the summer sample will be split between late summer 2007 and early summer 2008, with a full winter sample taken in the winter 2007/8. That is, half of the Kuchi sample was interviewed in the winter while a quarter in summer 2007 and summer 2008 respectively. This sampling design follows the procedure developed during the NRVA 2005; but it was extended to accommodate the year-round nature of the NRVA 2007/8.

The sampling design for NRVA Kuchi communities was based on the 2004 National Multi-sectoral Assessment on Kuchi (NMAK). It gives an indication of how many Kuchi communities are in each district during the summer and winter. Migratory patterns change according to climate and land conflicts. Therefore rather than trying to draw a sample based upon the predicted number of Kuchi communities per district, and run the risk that this information is not accurate, we use the sample frame to draw a list of PSUs. The sampling strategy intended to sample 70 PSUs in the summer and 70 PSUs in winter to provide sufficient households to have a representative sample for the nomadic Kuchi analytical domain. The actual number of Kuchi PSUs is 131, yielding an effective sample size of more than 1,000 households.

The Kuchi community sample was selected as follows:
(1) a sample of 70 PSUs in the summer and 70 PSUs in winter was drawn from the NMAK sampling frame. Table A.II.4 indicates for both summer and winter, the number of districts where it was expected to find the 70 randomly selected PSUs.
(2) Districts to visit were determined from the selected Kuchi community PSUs. The summer sample of 70 PSUs was drawn, and found to be in 57 separate districts, while the winter sample of 70 PSU's was drawn from 58 separate districts (Table A.II.4).

It is important to note that the combined summer and winter location sample frame is ordered in terms of either winter or summer location districts for the respective winter or summer sample to be drawn. This is to ensure that the sampling interval moves through the population in the geographically ordered way that is applied in the sample procedures for other analytical domains of the settled population.

Table A.II.4 List of the number of PSU's per districts selected for the summer and winter Kuchi sample

Kuchi PSU's	# CSO districts from 70 PSUs (Summer)	# Kuchi communities expected (Summer)	# CSO districts from 70 PSUs (Winter)	# Kuchi communities expected (Winter)
1	47	47	49	49
2	7	14	8	16
3	3	9	0	0
4	0	0	0	0
5	0	0	1	5
Total	**57**	**70**	**58**	**70**

It is not expected that the number of PSU's as predicted by of the 2004 NMAK sample frame will be encountered. Therefore, after visiting the district, it was determined how many Kuchi communities are actually present before a decision is made on the number of Kuchi communities to sample in that district. The split late summer 07 and early summer 08 strategy provided an opportunity to modify the second sampling depending upon the number of communities encountered in the 1st summer round. The list of 57 districts chosen for would-be enumeration of the Kuchi summer component has been randomly split into two parts, with the intention of visiting one half of the districts in the summer of 2007 and the other half in the summer of 2008. A second list of 70 PSU's drawn from the sample frame with the unique districts was drawn for the winter sample.

Selection of Kuchi communities within districts

Upon their arrival into a district, fieldworkers will draw an actual list of all Kuchi communities in the district, using Form KUCHI-1. Once the team feels the information on the name and number of Kuchi communities in the district is complete, read it by phone to the Kabul headquarters survey coordinator. It is expected that this list can be drawn-up in consultation with knowledgeable officials in the district center and any Kuchi Shura representatives. This process does not require travel within the district. If there are no Kuchi communities at all in the district, there is no alternative sampling proposed.

Although the order of the communities in the list is immaterial, it is good practice to ask fieldworkers to draw the list in a certain ritualized order. It is proposed to record the Kuchi communities within the district in increasing distance from the district center.

Telephone Kabul headquarters who will select one or more Kuchi communities in the district and communicate the names of the selected communities to the fieldworkers immediately.

Procedure for determining number and identity of within district Kuchi community sample when there is no telephone reception

- ► Number the Kuchi communities in the list with serial numbers from 1 to N.
- ► If N is less than or equal to 15, then select a random integer between 1 and N. If N is greater than 15, then select a random integer between 1 and 15. Call R the random integer so selected.
- ► Select Kuchi Community Number R:
- ► If R+15 is less or equal N, select a 2nd Kuchi Community Number R+15.
- ► If R+30 is less or equal N, Select a 3rd at Kuchi Community Number R+30, and so forth.

The expectation from the information on the summer location of Kuchi communities from the 2004 NAMAK sample frame is that this selection procedure should give a sample size of 35 communities in each half summer sampling round, i.e. late summer 2007 and early summer 2008.

Selection of tents within a Kuchi community when there is no mobile telephone reception

► Fieldworkers will draw up the list of all tents (households) in the selected communities using Form KUCHI-2. It is expected that this list can be drawn in consultation with knowledgeable persons in the community. It does not require visiting all the tents in the community.
► Fieldworkers will then select the eight tents to be interviewed as follows:
► Number the tents in the list with serial numbers from 1 to N.
► Divide N by 8, and keep one decimal. Call the result "the sampling step" (S).
► Select a random integer between 1 and S. Call this number "the random start" (R).
► Compute numbers R, R+S, R+2S, …, R+7S, keeping one decimal.
► The numbers of the selected tents are the integer of the above numbers.

Tent selection example

► There are 90 tents in the community, N=90
► S=N/8 =90/8 = 11.25 =11.3 to 1 decimal place
► Random integer number between 1 and 11.3 (R) =random start 3
► R, R+S, R+2S, …, R+7S = 3, 14.3, 25.6, 36.9, 48.2, 59.5, 70.8, 82.1
► Select tents 3, 14, 25, 36, 48, 59, 70, 82

Selection of tents within a Kuchi community when there is mobile telephone reception in the community or close to it.

► Fieldworkers will draw-up the list of all tents (households) in the selected communities using Form KUCHI-2. It is expected that this list can be drawn in consultation with knowledgeable persons in the community. It does not require visiting all the tents in the community.

An Excel program that would generate the random selection of communities within district and households within Kuchi community has been written, and this is used when the surveyors phone in from the district for the number and identity of Kuchi communities to be enumerated, and also when they phone in from the actual Kuchi community for the identity of the households to be enumerated. Surveyors are encouraged to use the telephone procedure over the manual procedure wherever possible. For example, if mobile telephone reception is not available in the community but is available nearby, the surveyors are encouraged to call Kabul for selections.

Calculation of Kuchi weights

For Kuchi households we simply post-stratify to ensure that sample-estimates match the NMAK-based population estimates. By design, the Kuchi selection process is meant to be self-weighting (uniform weights across the Kuchi sample), and under the assumption that the process succeeded in a self-weighted design, our expansion factors are estimated as:

$W_{hw} = [\alpha * POP_{NMAK}] / \sum_{hw} HHSIZE_{ht}$ (household expansion factor, hh_weight)

where POP_{NMAK} is the Kuchi population estimate from the National Multi-sectoral Assessment on Kuchi (NMAK) in 2004, t identifies summer or winter round, and α is a scalar taking the value of 0.5 for winter, 0.25 for summer 2007 and summer 2008.

Annex III Estimation of Total Fertility Rate

III.1 Direct calculation method

A first method calculates fertility directly from information on recent deliveries (since August 2005) in the NRVA 2007/8. These deliveries were divided into two time periods, those taking place from August 2005 until January 2007, and those from February 2007 until the date of the survey (ranging from August 2007 until the latest survey date of September 2008). The person-years of 'risk' or 'exposure to fertility' contributed by all women of reproductive age, regardless of marital status, by five-year age category, were calculated as the denominator for each time period. The numerator consisted of the total number of live births to women in each age category during the time period. The numerator of live births should include live births that later died, but this was not the case in the recent delivery information collected in the NRVA 2007/8. Therefore, live births from the recent deliveries section were augmented by relevant mortality rates (to account for children who later died).

The average time elapsed since births in the first period was 21 months, and therefore the number of births was increased by a weighted average of the infant mortality rate and the mortality rate by age two.[1] The average time elapsed between births in period 2 and the survey date was 7 months, and births in this time period were up-weighted by 80 percent of the estimated infant mortality rate.[2] The two time periods were combined in the final analysis to most closely approximate the period that the Demographic and Health Surveys (DHS) uses for calculation of total fertility rate, which is 36 months prior to the survey.

Table A.III.1 indicates that for the period from 8/2005 until 9/2008, the directly calculated total fertility rate (TFR), which represents the total number of live births a woman is expected to have in her reproductive lifetime, is 5.3 live births per woman. Fertility rates in the later period were lower than the earlier period, suggesting that fertility rates have declined in the last three years across all age categories.

Table A.III.1 Total Fertility Rate calculated directly from recent deliveries, adjusted for under-reporting of children who later died, for August 2005 to September 2008

Age	Total person years	Total births	15-mo. mortality rate	Adjusted total births	Adjusted births / person years	Total Fertility Rate
15-19	3,085,949	285,799	0.113	318,009	0.103	
20-24	2,346,065	545,448	0.113	607,332	0.259	
25-29	2,129,844	483,694	0.113	538,512	0.253	
30-34	1,554,500	288,803	0.114	321,713	0.207	
35-39	1,585,096	190,120	0.114	211,747	0.134	
40-44	988,797	54,555	0.114	60,777	0.061	
45-49	371,328	12,741	0.110	14,147	0.038	
Total	**12,061,579**	**1,861,160**	**0.113**	**2,072,237**	**1.055**	**5.274**

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[1] Mortality rates were calculated indirectly from children ever born and children died to women in various reproductive age categories using the Brass method – see next section for further details.

[2] Globally, 38 percent of under-five deaths take place during the first month of life, and it is estimated that in Southeast Asia, this figure is 50 percent (Lawn, Cousens and Zupan 2005). Therefore, a reasonable estimate of the proportion of infant mortality that takes place by the seventh month of life is 80 percent.

III.2 Indirect calculation method

Since recent fertility levels in censuses, as well as in surveys, tend to be under-estimated (Moultrie and Dorrington 2008), a correction can be made to recent fertility estimates to provide adjusted age-specific fertility rates and adjusted total fertility estimates. This indirect method of fertility calculation follows the Brass approach that adjusts the level of observed age-specific fertility rates to agree with the level of fertility indicated by average parities of women in age groups younger than 30 or 35, through cumulation and interpolation (United Nations 1983). This method requires data on children ever born by five-year categories of mother's age, as well as births in a one-year period classified by five-year age group of mother. If assumptions hold, resulting fertility rates may be more reliable than either of the constituent data components (United Nations 1983, p. 33). Although this approach requires minimal data and does not need to deal with errors or distortions in exact dates of birth for all children, it assumes constant fertility levels, which may not be the case recently in Afghanistan, and it is best suited for countries where systematic age misreporting is not apparent, which also may not be the case in Afghanistan (United Nations 1983, pp 31-32).

Table A.III.2 Parity levels, by women's age, from data on children ever born

Mother's Age	Index i	# Women Repro. Age	Total live births	Parity (Pi)
15-19	1	1,286,895	151,551	0.118
20-24	2	937,620	1,269,230	1.354
25-29	3	851,727	2,805,086	3.293
30-34	4	684,296	3,396,014	4.963
35-39	5	616,950	3,873,047	6.278
40-44	6	493,619	3,466,543	7.023
45-49	7	389,168	2,830,829	7.274
TOTAL		**5,260,275**	**17,792,300**	

In this indirect method, presented in Table A.III.3, the cumulated fertility rate for each age group is calculated, as well as a corresponding estimated parity equivalent, F(i), using an estimation equation based on the Coale-Trussell fertility model (Coale and Trussell 1974). Parity, P(i), estimated from children ever born (see Table A.III.2) is divided by estimated parity equivalents, F(i), to get Pi/Fi ratios. Under assumptions of constant fertility levels, constant fertility across age distributions, and similar fertility levels among surviving women and those who do not survive to report on their children ever born, the P/F ratio should equal one, assuming perfect recall (Moultrie and Dorrington 2008). Typically the ratio is greater than one and can be used to diagnose and adjust for under-reporting of recent fertility levels. The Pi/Fi ratio, however, should be relatively constant, and ratios that increase with age group are likely indications of recent declines in fertility (United Nations 1983).

The increasing Pi/Fi ratios in Table A.III.3 indicate that there has probably been a recent decline in fertility in Afghanistan, and the fact that the ratio does not start at one for the younger age groups indicates underreporting of recent fertility as well. In this case, there is no obvious scaling factor to be applied to the current fertility rates to account for under-reporting, but P2/F2 is recommended as a potentially appropriate adjustment factor (United Nations 1983). Simulations have shown that this is probably the best factor to deal with falling fertility rates, and minimizes error rates to a level of approximately 5 percent (Moultrie and Dorrington 2008).

Table A.III.3 Indirect adjustments to 'direct' fertility rate, using cumulative period fertility rates, estimated parity equivalents, and the P/F ratio

Age category	Index I	Total person-years	Adjusted total births	Adjusted births / person-year f(I)	Direct' Total Fertility Rate	Cumu-lated period fertility rate (I)	Estimated parity equivalent (Fi)a	Parity (Pi)	Pi / Fi	Adjust ment factor Kb	Adjusted fertility rates	Adjusted Total Fertility Rate
15-19	1	3,085,949	318,009	0.103		0.515	0.176	0.118	0.671	1.188	0.122	
20-24	2	2,346,065	607,332	0.259		1.810	1.144	1.354	1.188	1.188	0.308	
25-29	3	2,129,844	538,512	0.253		3.074	2.455	3.293	1.347	1.188	0.300	
30-34	4	1,554,500	321,713	0.207		4.109	3.622	4.963	1.376	1.188	0.246	
35-39	5	1,585,096	211,747	0.134		4.777	4.466	6.278	1.411	1.188	0.159	
40-44	6	988,797	60,777	0.061		5.084	4.873	7.023	1.447	1.188	0.073	
45-49	7	371,328	14,147	0.038		5.274	5.217	7.274	1.400	1.188	0.045	
Total		**12,061,579**	**2,072,237**	**1.055**	**5.274**						**1.253**	**6.266**

a Based on the estimation equation: Fi = $\phi(i-1) + a(i) * f(i+1) + c(i) * \phi(7)$. Values for a, b and c are constants found on page 34 of United Nations 1983.
b Recommended to be P2 / F2 when evidence indicates falling fertility levels.

Adjusting the current fertility rates by the P2/F2 ratio of 1.188 yields an adjusted total fertility rate of 6.27, compared with 5.27 unadjusted. Taking into account the possible 5 percent error rate with this adjustment in contexts of falling mortality yields a TFR of 5.95. While it is impossible to determine which is the most accurate estimate of the total fertility rate in Afghanistan, given data quality issues and limitations in the estimation methods, it is probably that the current overall TFR is close to 6. Therefore, we propose the current estimate of TFR in Afghanistan is the adjusted rate of 6.27 over the last three years.

[1] Mortality rates were calculated indirectly from children ever born and children died to women in various reproductive age categories using the Brass method – see next section for further details.
[2] Globally, 38 percent of under-five deaths take place during the first month of life, and it is estimated that in Southeast Asia, this figure is 50 percent (Lawn, Cousens and Zupan 2005). Therefore, a reasonable estimate of the proportion of infant mortality that takes place by the seventh month of life is 80 percent.

Annex IV Estimation of infant- and under-five mortality rates

IV.1 Methodology

The NRVA 2007/8 survey included an abbreviated birth history and child mortality section, as part of the women's questionnaire. This section asked ever-married women of reproductive age about any births during their lifetimes, and about their total number of children currently alive, as well as those dead, by sex.

The Brass method of indirect mortality calculation was used to estimate infant and under-five mortality rates (IMR and U5MR) (United Nations 1983). The Brass method uses data on the total number of women, by reproductive age group, their children ever born, and children died. This information, as well as estimation equations based on model life tables, is used to derive estimates of q(x), the probability of dying between birth and age x, accounting for the duration of 'exposure' to the risk of mortality, which is approximated by the women's ages and the fertility pattern in the country. The number of women of each reproductive age includes all women, regardless of marital status, and the numbers of children ever born and died are collected from ever-married women between the ages of 15 and 49 in the women's section of the NRVA questionnaire.

The Trussell variant of the Brass method, which uses the Coale-Demeny series of model life tables, was used to estimate infant- and under-five mortality (United Nations 1990b). The West model life tables, which are useful when the underlying mortality pattern in a country is largely unknown (United Nations 1983), were used, along with QFIVE, a mortality estimation programme developed by the United Nations that uses the Brass method (United Nations 1990a).

The total numbers of women of reproductive age were taken from the household roster in Section 2 of the Men's Questionnaire (and several women's ages were corrected by cross-referencing to Section 17 of the Women's Questionnaire), and were weighted by the household weight. The total numbers of children ever born and died, by sex and women's age, were taken from Section 17 of the Women's Questionnaire, and were weighted by the women's weight. The women's weight equals the household weight adjusted for women's non-response, by province, to Section 17 of the Women's Questionnaire. It also up-weights rural and Kuchi women from Helmand province to account for the women not interviewed in Urozgan province due to lack of female surveyors (See previous Annex on 'Fertility' for further details on the women's weight.)

Table A.IV.1 Mortality estimates from the Brass method, using West model life tablesa

Age of woman	Reference date	IMR births	U5MR mortality
15-19	2007 May	216	322
20-24	2006 April	117	171
25-29	2004 May	107	155
30-34	2002 January	104	150
35-39	1999 June	100	143
40-44	1996 August	105	152
45-49	1993 August	94	134

a Estimates calculated using the QFIVE programme

IV.2 Sources of error in mortality estimates

There are several sources of error that must be considered when calculating child mortality estimates for Afghanistan from a household survey.[1] It was clear that there was underreporting of dead children among older women, as evidenced by Table A.IV.1, as it is highly unlikely that infant and under-five mortality would have been lower in the 1990s compared to the 2000s. Therefore, only three age groups were used to calculate IMR and U5MR: 20-24, 25-29, and 30-34 years.

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[1] This section focuses on non-sampling error, which is additional to the survey sampling error that is derived from taking a sample of the population as opposed to gathering data on everyone in the population.

Groups older than this had significant problems with under-reporting of dead children, which is common, as older women may forget to report children who died in the past or who may no longer be living with them (United Nations 1983). The youngest age group, 15-19, has a larger proportion of higher-risk births and is typically excluded from mortality calculations (United Nations 1983). Therefore, estimates of under-five and infant mortality were calculated using the average of the estimates from reproductive age groups 2, 3, and 4, weighting the average by the proportion of ever-married women in each of these three age groups (roughly one-third each).

Another source of error was women's reporting of their age, which is important for classifying women into five-year reproductive age groups to indirectly estimate age of the child and therefore duration of 'exposure' to mortality risk. High levels of illiteracy and digit preference for zero or five in Afghanistan contribute to the significant age heaping found in the survey. Having the correct woman's age is important for the indirect method of mortality calculation, although the use of five-year age intervals helps mitigate age errors to some degree.

In addition to potential under-reporting of dead children, particularly among older women, as well as errors in women's ages, it was clear that there were reporting problems concerning the sex of the child. The natural sex ratio at birth has been found in most settings to be approximately 105 boys for every 100 girls, and the most extreme estimates range from 104 to 107 boys per 100 girls (Dubuc and Coleman 2007).

As seen in Table A.IV.2, the ratio of boys ever born (CEBb) to girls ever born (CEBg) is well above 1.05 for all age groups, at an average of 1.099. The ratio is particularly high among the younger age groups of women.

Sex ratios at birth that are skewed high can be found in societies with a preference for sons, such as India and China, and may be due to sex-specific feticide or infanticide, as well as general neglect of girls. However, although there may be a preference for sons in Afghanistan, none of these reasons can plausibly explain the too-high sex ratio at birth (Ministry of Public Health 2008). The skewed ratio is most likely resulting from one or both of two phenomena: intentional misclassification of girls as boys (e.g., due to the perceived shame of having mostly or only girl children) and underreporting of girl children, under the assumption that the total number of boys reported is correct (Ministry of Public Health 2008). The former would affect sex-specific mortality ratio's, but not the overall mortality ratio, while the latter would likely affect female mortality ratio's as well as the overall mortality ratio.

There is also some evidence of underreporting of dead girls, as evidenced by the higher-than-expected ratios of the proportion of boys dead to the proportion of girls dead for parity levels two and three, when a mother has all girls or all boys (ratios = 1.392 and 1.554, respectively, in Table A.IV.3). There is also some evidence, as seen in Table A.IV.3, to suggest there is misclassification of girls as boys when there are all or mostly girl children for a given mother. We can see from the table that significantly lower proportions of mothers at given parity levels have all girl children, compared to what would be expected from the natural sex ratio at birth. Women with four children ever born are also significantly less likely to report having three girls and one boy (but are significantly more likely to report having three boys and one girl or two boys and two girls).

Table A.IV.2 Number of children ever born (CEB) and children died, by women's age group, and by sex

Age	No. of women in reproductive age	Both sexes			Boys			Girls			Sex comparison		
		CEB	CD	CD/CEB	CEB	CD	CD/CEB	CEB	CD	CD/CEB	CEBb / CEBg	CDb / CDg	CDb/CEBb / CDg / CEBg
15-19	1,286,895	151,551	26,822	0.177	79,443	14,784	0.186	72,108	12,038	0.167	1.102	1.228	1.115
20-24	937,620	1,269,230	166,943	0.132	664,963	95,563	0.144	604,267	71,380	0.118	1.100	1.339	1.217
25-29	851,727	2,805,086	391,390	0.140	1,473,744	219,306	0.149	1,331,342	172,084	0.129	1.107	1.274	1.151
30-34	684,296	3,396,014	500,885	0.147	1,775,636	278,067	0.157	1,620,378	222,818	0.138	1.096	1.248	1.139
35-39	616,950	3,873,047	586,878	0.152	2,014,201	315,419	0.157	1,858,846	271,459	0.146	1.084	1.162	1.072
40-44	493,619	3,466,543	599,188	0.173	1,806,059	314,827	0.174	1,660,484	284,361	0.171	1.088	1.107	1.018
45-49	389,168	2,830,829	472,904	0.167	1,502,755	259,199	0.172	1,328,074	213,705	0.161	1.132	1.213	1.072
Total	**5,260,275**	**17,792,300**	**2,745,009**	**0.154**	**9,316,800**	**1,497,165**	**0.161**	**8,475,500**	**1,247,844**	**0.147**	**1.099**	**1.200**	**1.091**

Table A.IV.3 Unweighted observed and expected women, dead girls and dead boys, by parity

	Parity = 2			Parity = 3				Parity = 4				
	CEBgg	CEBbb	CEBbg	CEBggg	CEBbbb	CEBggb	CEBbbg	CEBgggg	CEBbbbb	CEBgggb	CEBggbb	CEBbbbg
No. of mothers in parity group	2,446	2,446	2,446	2,540	2,540	2,540	2,540	2,573	2,572	2,572	2,572	2,572
Observed	445	672	1,329	215	289	927	1,109	94	150	1,076	534	718
Expected	582	642	1,223	295	341	929	975	146	177	963	612	674
p-value [a]	p<0.001	p<0.001	p<0.001	p<0.001	p=0.002	p=0.984	p<0.001	p<0.001	p=0.035	p=0.984	p<0.001	p<0.001
No. of boys dead	59	-	118	45	-	164	118	39	-	225	158	73
No. of girls dead	-	124	126	-	94	102	233	-	54	231	59	227
Ratio of proportion (boys dead) / (girls dead)	1.392	1.173	1.068	1.554	1.180	1.244	0.987	0.868	1.027	1.120	1.265	
Overall ratio of proportion (boys dead) / (girls dead)		1.173			1.180					1.118		

[a] p-values derived from binomial test of proportions

IV.3 Sensitivity analyses

It is extremely difficult to estimate the extent of misclassification of girls as boys and model how this would affect estimates of mortality in Afghanistan. However, sensitivity analyses were conducted that modelled likely under-reporting of girls. First, the number of 'missing' girls was calculated that would bring the sex ratio at birth in line with international estimates of 1.05. Next varying proportions of these girls were assumed to be dead (see Table A.IV.4). Very few studies have estimated the proportion of underreported girls who are dead; one of the two empirical studies to try and do this estimated this proportion at 25 percent (Becker & Mahmud, 1984) and the second at 85 percent (Espeut 2002). Plausible values of the proportion of underreported girls dead were selected to be within this range for the sensitivity analyses.

Table A.IV.4 Estimation of the number of 'missing' girls and the number of these dead, under varying assumptions of the proportion girls dead

Age of mother	Boys	Girls	Boys / girls	No. of girls expected [a]	No. of missing girls	'Missing' girls for varying mortality assumptions				
						0%	15%	25%	50%	75%
15-19	79,443	72,108	1.102	75,660	3,552	0	533	888	1,776	2,664
20-24	664,963	604,267	1.100	633,296	29,029	0	4,354	7,257	14,515	21,772
25-29	1,473,744	1,331,342	1.107	1,403,566	72,224	0	10,834	18,056	36,112	54,168
30-34	1,775,636	1,620,378	1.096	1,691,082	70,704	0	10,606	17,676	35,352	53,028
35-39	2,014,201	1,858,846	1.084	1,918,286	59,440	0	8,916	14,860	29,720	44,580
40-44	1,806,059	1,660,484	1.088	1,720,056	59,572	0	8,936	14,893	29,786	44,679
45-49	1,502,755	1,328,074	1.132	1,431,195	103,121	0	15,468	25,780	51,561	77,341
Total	**9,316,800**	**8,475,500**	**1.099**	**8,873,143**	**397,643**	**0**	**59,646**	**99,411**	**198,822**	**298,232**

[a] Calculated from CEBb/1.05

Results from Figure A.IV.1 indicate that results did not range considerably due to varying assumptions about the possible missing girls, as the overall proportion of missing girls was not very high. Estimates of under-five mortality ranged from 158 deaths per 1,000 live births overall, without any adjustment for missing girls, to 175, assuming that 75 percent of the missing girls were dead. Similarly, the under-five mortality rate for girls ranged from 146 (unadjusted) to 181 deaths per 1,000 live births (assuming 75 percent missing dead). The infant mortality rate ranged from 109 overall and 98 for girls, without any adjustment, to 119 overall and 118 for girls, assuming that 75 percent of the missing girls were dead (IMR for boys remained the same at 119 per 1,000 live births).

Given plausible estimates of resulting male-female under-five and infant mortality ratios (which average 1.13 for U5MR and 1.19 for IMR; for the likely range of these mortality rates, according to the West Model life tables, see Table A.IV.5), it is most likely that between 15 percent and 25 percent of 'missing' girls are dead. The latter is more plausible because it is more in line with estimates of the proportion of missing girls dead according to previous empirical studies.

Additional sensitivity analysis were conducted that entailed mortality calculations using the South model life tables, as opposed to the West tables. These estimates produced slightly higher mortality ratios but differed little from the West table models, indicating that the results were not very sensitive to choice of model life table.

a. IMR   **b. U5MR**
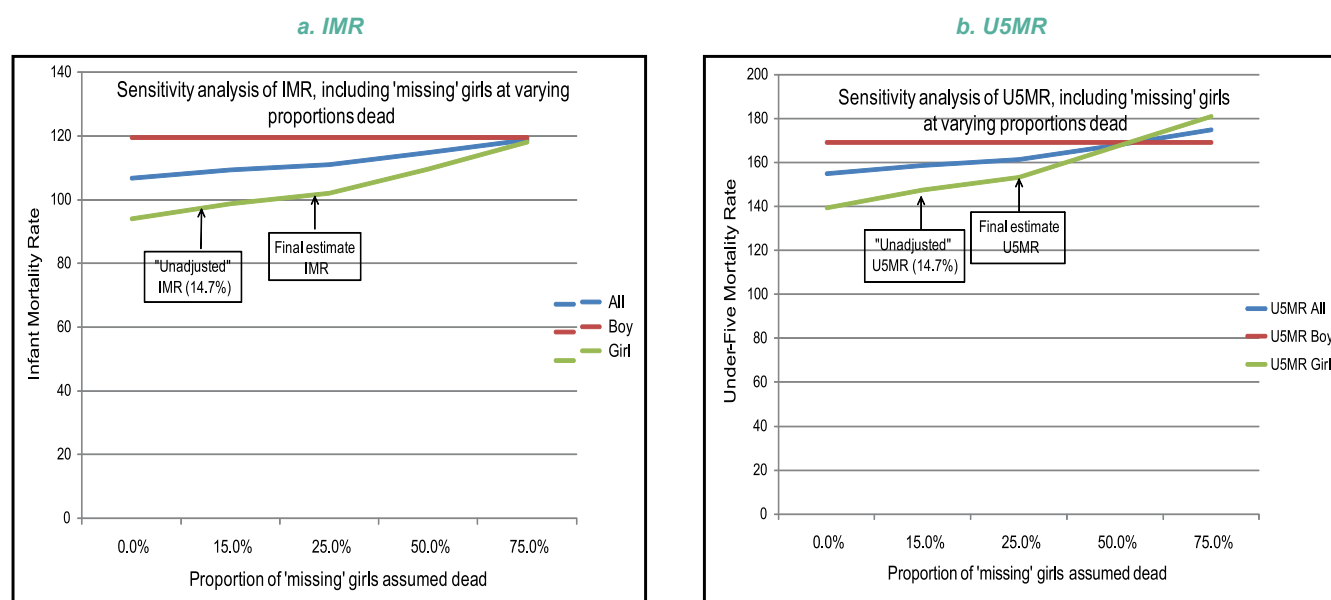
Table A.IV.5 Boy-girl mortality differentials from West Model Life Table

Level	U5 - both sexes	IMR - both sexes	U5 - boy	U5 - girl	Ratio	IMR - boy	IMR - girl	Ratio
14	168	115	177	159	1.113	125	105	1.190
15	148	103	157	139	1.129	111	93	1.194
16	129	90	137	120	1.142	98	82	1.195

Source: United Nations 1990b

IV.4 Final estimates

Based on the data presented from NRVA 2007/8, we conclude that the best estimate of infant mortality in Afghanistan is 111 deaths per 1,000 live births and that for under-five mortality is 161 deaths per 1,000 live births. These figures for males are 119 and 169, respectively, and are 102 and 153, respectively, for females, for a reference date of April 2004, as shown in Table A.IV.6.

Estimates of under-five mortality using the Brass method are more robust to the specific model chosen than are estimates of infant mortality (United Nations, 1990b). Caution should be used in interpreting both estimates, especially infant mortality rates. The Brass Method assumes that fertility is relatively constant in the population, and that under-five mortality is constant or linearly declining (United Nations 1990b). Both these assumptions are tenuous in Afghanistan, particularly the first, given the likely declining fertility as seen in the previous section. In the absence of a functioning vital registration system in Afghanistan, a household survey with a full pregnancy or birth history, including dates of children ever born, could produce more robust and accurate estimates of infant and under-five mortality levels.

Table A.IV.6 Final child mortality estimates, by sex

Mortality indicator	Sex		
	Boys	Girls	Both sexes
Infant Mortality Rate (IMR)	119	102	111
Under-five Mortality Rate (U5MR)	169	153	161
Reference period	**April 2004**		

Annex V Measurement of poverty

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1. Overview

Assessing poverty requires both the definition of some welfare measure and the definition of a threshold – the "poverty line" – representing the minimum level of welfare below which a person is deemed to be poor. The measure of welfare used in this analysis is per-capita household consumption. Consumption has been preferred to income for several reasons. First, consumption is considered a better indicator of living standards because it typically fluctuates less than income over a month or year. Second, in a rural and subsistence economy – such as the Afghan one – consumption data tend to be more accurate than income ones.[1] Third, the design of the National Risk and Vulnerability Assessment (NRVA) 2007/8 is such that the instrument collected extensiveinformation on consumption. It should be pointed out that consumption-based poverty is a measure of economic welfare. While other dimensions of welfare (e.g. education, health, etc.) are not directly taken into account in this definition of poverty, research has shown that consumption tracks other dimensions of welfare fairly closely.

The poverty line used in this analysis has been estimated using the Cost of Basic Needs (CBN) method.[2] The CBN poverty line represents the level of per capita consumption at which the members of a household can be expected to meet their basic needs (food consumption to meet their caloric requirement, and also non-food consumption).

The consumption aggregate has been constructed following the recommendations described in Deaton and Zaidi (2002). This methodology is consistent with the one used to measure poverty incidence from NRVA 2005. The greater detail and quality of information available in the NRVA 2007/8 – the survey covers all seasons and the consumption module includes assessment of more food and non food items - allows for more comprehensive measure of poverty, but the changes in the instrument also limit the comparability of poverty figures over time.

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[1] Household income in such economies tends to come from informal and non-monetary sources, making it challenging to capture in a household survey.
[2] CBN is a standard method widely used internationally.

Background on the NRVA 2007/8 survey

The NRVA 2007/8 is a multi-topic household survey that covers topics such as food consumption, demography, housing infrastructure, assets and credit, agriculture and livestock, migration, and child and maternal health. The 2007/8 survey covers 20,576 households in 2,572 communities. The salient feature of this data is its coverage; the data were collected from all 34 provinces of Afghanistan over the entire year period. The data is representative at the analytical domain level (or, the strata). Altogether, there are 46 domains, comprising 34 domains for each 34 provinces of rural or small urban populations, 11 urban domains from 11 provinces with the highest urban populations, and one domain for Kuchi populations. The fielding of the NRVA 2007/2008 survey spanned the entire 12 month period from Sunbula 1386 to Asad 1387 [3] to capture seasonality of poverty.

Evolution of NRVA instruments
As a result of consultations involving all stakeholders in Afghanistan, the NRVA 2007/8 questionnaires have improved greatly from those used for the previous round of the survey in 2005. Questions were added and dropped by consensus from users in respective fields and instruments were reviewed carefully to cover all areas of the Afghan Compact related to NRVA (IDP, disability, etc.). Directly related to poverty estimation, additional questions were added to better capture consumption of both non-food and food items.

For non-food items, the revision followed the guidelines from the National Account office of the Central Statistical Organization. As a result, the number of items surveyed was expanded from 13 in 2005 to 41 in 2007/8 to include both disaggregated items as well as completely new ones. For food consumption, more food items were added to accommodate the nature of NRVA 2007/8 as a year round survey; food items that may be consumed in other seasons were added. Moreover, food groups that do not contribute to calories but are often used by households—such as salt and spices--were also added. While the addition of new food consumption items increase the quality of information available for poverty estimation, NRVA 2007/2008 questionnaires still cover old food items (core items) and hence guarantee the comparability of data with previous surveys.

Effective sample size
The effective sample size for poverty analysis corresponds to 20,543 households. Observations of households without consumption data reduce the effective sample size for poverty analysis of NRVA 2007/8. The availability of food consumption data is crucial in poverty estimation; therefore, a clear guideline on effective sample must be devised before one can begin poverty analysis. In the NRVA sample, there are 50 households whose information on food consumption (from Section 15) is missing or does not exist.[4] Depending on whether consumption data can be considered missing at random or not, these problematic households can be divided into two groups and each group can be treated differently.

The first group consists of 4 communities (or 32 households) where all information from the Female Household questionnaire is missing. This includes food consumption as well as all other sections. These four communities are described in Table A.V.1.[5] The evidence suggests that the missing occurred due to systematic errors in the field operation, not random error originated at the households. Therefore, we will not include these observations in the poverty analysis.

Table A.V.1 PSUs missing female household information

Province	District	Village	Area
Laghman	Alishing	Islamabad	Rural
Laghman	Dawlat Shah	Gaman Dok	Rural
Nooristan	Kamdesh	Achamgari	Rural
Zabul	Day Chopan	-	Kuchi

The second group comprises households that reported no consumption of any food items in section 15 but nevertheless answered all other questions in the Female Household modules. A total of 18 households follow in this category. As opposed to the first group of households, the pattern of error in this case appears to be random. No more than one household per PSU reports zero food consumption while having valid information on other FH modules. Therefore, we may deduce that the zero food consumption occurred because of regular measurement error, and not because of a systematic field operation issue. Since measurement error is by definition random and not correlated to potential poverty determinants, these observations have been included in the poverty analysis.

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[3] September 2007 through August 2008

[4] A household was also dropped due to missing value on household size, therefore, per capita consumption and poverty status.

[5] However, the female community questionnaires for these communities have been completed by the team.

PSUs not fielded by female enumerators

As a rule, the NRVA survey teams comprised both male and female enumerators in order to interview the Male and Female Household questionnaires separately. However, the survey teams for Urozgan and Nooristan provinces only had male enumerators due to security reasons. For Urozgan province, male surveyors conducted only the female food expenditure module, by asking male respondents of the households. Due to a unique local culture in Nooristan province, male enumerators interviewed both male and female respondents together. Therefore, food questions, along with other sections of the Female Household Questionnaire, were asked directly from women. This issue might result in the inferior quality food consumption data, but there is no clear evidence for this concern.

2. Consumption aggregate

Welfare of a person can be determined by the amount of goods and services he or she consumes. The per capita consumption aggregate is obtained by adding the value of goods and services consumed by households and dividing it by the number of family members. As a rule, consumption aggregate should include as much information and items as possible.[6] The consumption aggregate from NRVA 2007/8 consists of four major components: food, non-food, rent, and durables. These expenditures are expressed in Afghani amounts per month. The following sections explain details of components of consumption aggregates.

Table A.V.2 Share of consumption expenditure by real PCE quintile (in percentages)

Quintile	Food	Non-food	Durables	Rent
1st (poorest)	66	25	2	7
2	64	27	2	7
3	61	30	3	7
4	57	31	3	9
5th (richest)	49	33	4	13
All	59	29	3	8

Food components of consumption aggregates

Values of food consumption used in the poverty analysis were calculated by multiplying food quantity and food price data from the NRVA 2007/8. Food quantity data are from the food consumption module (Section 15) of the Female Questionnaire; it collected data on the quantity of each food item the household consumed in the past 7 days. Food price data were drawn from the District Price Survey data (DPS); the treatment of data is discussed at length below. In order to make the consumption aggregate complete, we decided to include as many food items as possible, and hence to include in the analysis the food items classified as "other" and the "food away from home" category. It should be noted that food consumption data used in this analysis include food that may have been acquired from all sources including non-monetary transactions such as gifts, food aid, or home production. The pattern of food consumption expenditure is shown in Table A.V.3.

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[6] See Deaton and Zaidi (2002).

Table A.V.3 Shares of food group to total food consumption by PCE quintile (in percentages)

PCE quintile	1	2	3	4	5	Total
Bread and cereals	56	52	47	42	33	43
Meat and fish	6	9	12	15	18	14
Dairy products	10	10	10	10	9	10
Oils/ fat	9	8	8	7	6	7
Vegetables	8	8	8	9	9	9
Fruit	2	3	5	8	13	8
Sugar and candy	3	4	4	4	3	4
Beverages	3	3	3	3	3	3
Spices	1	1	2	1	2	2
Food away from home	1	1	2	2	4	2
"Other" food items	0.4	0.2	0.3	0.5	0.7	0.5
Total food	**100**	**100**	**100**	**100**	**100**	**100**

Food price data

The price data were obtained from the District Price Survey (DPS) module of the NRVA. The DPS was administered in conjunction with NRVA 2007/8 in order to collect prices of consumption items in the NRVA module. The DPS covers the price of all food items in the food module of the Female Household Questionnaire and a few other items such as grains and fuels. DPS data were collected during PSU visits. Team supervisors were responsible to visit the markets of the respective districts (or nahia in urban areas) and to administer the survey. The identification of the relevant market to be surveyed and its location – whether it would be in the district headquarter, provincial capital, or in a neighboring district – were guided by interviews within each community. In the case that the community purchased food from a neighboring district, then DPS would be administered in that neighboring district.

In order to link price data from DPS with household consumption data, we matched markets with PSUs by location for each month. In terms of month of interview, we code month from the dates of interview answered in both DPS and Male Shura data, according to Shamsi calendar, from Asad 1386 to Sunbula 1387. In terms of location, we matched by district codes as provides in both data sets (from question 3.1 and 3.2 in Male Shura questionnaire and question A9 and A9a in DPS). If the information is missing, the market code will be replaced with the district code in the coversheet of the questionnaire.

The most efficient way to match price data with the quantity of food consumption data is to create a complete matrix of prices by month, item, and district and multiply prices obtained from this matrix with any food items households may consume. However, since not all food items were available in all district markets at all times of the year, we imputed the missing elements to obtain a complete price matrix.[7] The imputation process filled in missing values using the first feasible methodology according to the following order: 1) median of the 20 nearest neighbors (weighted by inverse distance); 2) province median of that month; 3) national median of that month; 4) median price of 20 neighboring districts of the quarter (weighted by inverse distance); 5) province median of that quarter; and 6) national median of that quarter.

Prices of rice and wheat flour are weighted average of prices of domestic and imported varieties. Since the quality and price of imported versus domestically produced rice and wheat flour varieties differ significantly, it is important to apply appropriate prices to their consumption. As in the NRVA 2005's, the DPS of NRVA 2007/8 collected information on prices of both domestic and imported varieties of rice and wheat flour. The NRVA 2007/8 questionnaire also asked households about the percentages of imported rice and imported wheat flour they consumed. These percentages were then used as weights in the computation of the average prices of rice and wheat.

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[1] Before imputing missing cells in the price matrix, we cleaned the raw price data from DPS by removing duplicate records.

"Other" food consumption

The consumption aggregate also included expenditures for items grouped in the "other" food category, whose quantity consumed was collected at the end of each food group in the food consumption module (Section 15). The detailed list of items included in this category is shown in Table A.V.4. The "other" food categories were included in order to get as complete information as possible and not to underestimate the consumption aggregate. The treatment of this category of food consumption is an addition to the methodology used with the NRVA 2005 as these questions were added only in NRVA 2007/8.

Table A.V.4 Food items by group

"Other" items	Items in the food group
Other bread and cereals	Rice, Wheat flour, Purchased nan (pieces), Barley, Maize (corn), Beans, Mung, Chick peas, Lentils, Pasta/ macaroni
Other Meat and fish	Beef, Veal , Mutton, Goat, Chicken, Liver, Dried meat, Fish
Other dairy products	Milk (fresh), Milk (powdered), Yogurt, Curd (Chaka) , Krut(dried), Dogh, Ghee, Butter, Cheese, Eggs (number)
Other oils/ fat	Vegetable oil, cotton oil, or sesame oil; Animal fat
Other vegetables	Potato, Sweet potato, Onion, Tomato, Okra, Spinach, Cauliflower, Eggplant, Carrots, Pumpkin/ squash, Cucumber, Radish, Turnip, Cabbage, Leek, Broccoli, Hot pepper, Wild leafy vegetables, Coriander, Mint, Dried tomatoes, Dried vegetables, Pickled vegetables, Green beans
Other fruit	Apple, Grapes, Melon/ Watermelon, Peach, dried Apricots, Orange/citrus, Plum, Pomegranate, Pear, Banana, Raisins, Fresh mulberries, Dried mulberries, Mangoes, Walnuts, Pistachio, Almonds
Other beverages	Black tea, Green tea, Bottled/ canned beverages. mineral water (liters)
Other spices	Salt, Black pepper, Ginger and garlic, Tomato sauce, Mixed spices

Proxy prices for "other food". In order to include these items in the consumption aggregate, and lacking direct information from the District Price Questionnaire [8], we created a proxy for their prices. A general strategy for determining proxy prices is to take median of the items in each food group for each month-district. The detailed description and rationale are shown in Table A.V.5, only the price of "Other oils/ fat" was collected due to the nature of the food product. It should be noted that this exercise was done before we imputed the price matrix (as described in the previous section).

Consulting survey teams revealed that the "other fruits" category usually referred to fresh fruits. There are many types of fresh fruits in Afghanistan and most of them are seasonal and available in small localities. Since these varieties of fruits were not included in the food questionnaire, it is likely that the "other" category would indeed capture fresh fruit. Accordingly, the median price of fresh fruits was used as a proxy for price of other fruits.

Looking at the consumption of "other" foods vis-à-vis total food expenditure (see Table A.V.3), we found that the final consumption aggregate is not sensitive to the addition of these expenditures. The frequency and quantity of other foods are relatively small. Overall, households spend only 0.5 percent of their food expenditure on this food category. Moreover, the shares do not appear to be correlated with consumption quintile. Therefore, introducing these items, while adding precision to the estimates, would not create extra sensitivity in the final consumption aggregate.

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[1] Among the "other" items shown in items shown in Table 5, only the price of "Other oils/ fat" was collected due to the nature of the food product.

Table A.V.5 Rationales for proxy price

Food items 2007	Proxy price	Rationale
Other bread and cereals	Median, excluding nan	Prices of items in this group do not vary much, median prices of this group are between 20 to 60 Afs per kilogram.
Other Meat and fish	Median, excluding dried meat	Prices of items in this group do not vary much, median prices of this group are between 100 to 180 Afs per kilogram.
Other dairy products	Median of lower price dairy products (dogh, milk, and yoghurt) [9]	Prices of items in this group vary greatly from about Afs 10 per kilo for milk and yoghurt to Afs 2-300 for butter.
Other oils/ fat	Price exists	
Other vegetables	Median of fresh vegetables	Prices of items in this group do not vary much,
Other Fruit	Median of fresh fruits [10]	Prices of items in this group are Prices of items in this group do not vary much
Other Beverages	Price of bottled/ canned beverages and mineral water	Other beverages would be juices, which is similar to "Bottled/ canned beverages and mineral water". Teas are dried leaves, so, the prices would not be comparable to other beverages.
Other spices	Price of mixed spice	

Food away from home

Expenditure on food and drinks away from home was included as a part of the food consumption expenditure. The NRVA 2007/8 collected this information in Section 12 of the Male Household Questionnaire by asking "What has the household spent in the last 30 days for food & drinks consumed outside the home?". Being part of the household expenditures module, this question collected only values, and not quantities. For this reason, we used the value of food away from home for the imputation of total food consumption, but we did not attribute a caloric amount to it.

This category of expenditure was included in the food consumption expenditure for two reasons. First, logically, food away from home is actually a type of food. Even though the data were collected in a different module from other food items, it should not prevent us from including them in total food consumption.[11] Second, adding food away from home to the food consumption would make the measurement of food poverty and food security more accurate. Generally, one would define a person to be food poor if that person spends less that the cost of food poverty line. Therefore, food consumption should reflect any type of food consumed, independently of whether consumption occurred inside or outside home. A person who consumes a sufficient amount of food but only from sources outside home should not be categorized as food poor or food insecure.

Overall, expenditures on food and drinks away from home account for about two percent of household food expenditures (see Table A.V.3). Therefore, the inclusion of this item would not hugely affect aggregate consumption estimates because expenditures on food and drinks away from home are small relative to total food expenditures. The pattern of spending is logical in the way that richer households tend to spend on food away from home proportionately more than poorer households. Even though the treatment of food away from home expenditure in this analysis differs from the practice in the last round of NRVA poverty analysis, we do not expect it to affect the nature of poverty estimates because it only accounts for a small portion of food expenditure.

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[9] Regarding other dairy products price, the proxy price was calculated from the mean of low priced dairy products. As the NRVA questionnaire covered most of the main dairy products. The other dairy products in Afghanistan could be boiled diluted yogurt, colostrums and similar products. The household themselves are making some secondary products from the listed dairy products that they may not reported as 1st product and they put it as secondary products in the others list.

[10] Other fruits are referred to fresh fruits. As there are many types of fruits in Afghanistan that mentioning all of them in the food consumption and price data need lots of space and most of the fruit varieties are seasonal and available in small localities. Therefore, median price of fresh fruits was sued as proxy for price of other fruits.

[11] The inclusion is consistent with guidelines given by Deaton and Zaidi (2002).

Non-food components of consumption aggregates

Non-food items from NRVA 2007/8

Non-food expenditures were constructed by aggregating expenditures on non-food goods and services collected in various sections of the NRVA. Energy expenditures were obtained from Section 2 (Housing and utilities) while other items were from section 12 (Household Expenditures)[12] and from Section 16 (answered by female respondents). Expenditures such as medical expenses, education, transportation, and clothing were reported on an annual basis, and converted into monthly values. Energy expenditures cover all sources: electricity, gas, oil, firewood, charcoal, coal, straw, ping, and manure. It should be noted that our non-food expenditures aggregate does not include certain expenditures such as weddings, celebration, water, donation, talisman, other miscellaneous expenditures. These excluded expenditures can be grouped into three categories: (1) lumpy expenditures, (2) investment expenditures, and (3) expenditures not related to household well being.

The non-food consumption, in principle, should not include the so called "lumpy expenditures". Examples of lumpy expenditures are once-in-a-lifetime events such as weddings, funerals, and Haj as well as annual celebration and charitable donations. Purchases of durable goods such as cars and TVs are also considered lumpy and hence not included in the non food aggregate. In fact, while all households will spend on these large items at some stage of their lifetime, only few of them will incur such expenditures during the course of the NRVA survey. These expenditures were not included because (a) they would add inaccuracy to the poverty profile analysis and (b) they would lead to an artificially high level of inequality.[13]

Housing construction expenditures were not included because they were considered as an investment and not as consumption. Fines, debt payments and charitable donations, on the other hand, were excluded as they do not contribute directly household's welfare. Their inclusion would in fact potentially lead to a double counting bias as the household already consumed goods bought by money previously borrowed. Differences in local taxes would bear no relation to the amount of public goods provided. Regarding the exclusion of charitable gifts to other households, it might be argued that these transfers may yield welfare to the giving households as well. Nevertheless, their inclusion would result in double counting because the same items may also show up in the consumption of receiving households. Therefore, we did not include charitable transfer, debt payment, and fines. On the other hand, it should be noted that we included expenditures on talismans for health (Tahwiz/Shoyest) because they were considered a part of the expenditures on health, though traditional medicine.

Durable Goods

As discussed in the previous section, the direct inclusion of lumpy household expenditures on durable goods in the consumption aggregates might lead to biased results. A more appropriate approach would rather be to include the "value of services" that a household receives from the possession of all its durable goods and not just the expenses on those purchased during the survey recall period. A standard approach is therefore to use the so called "rental equivalent" or "user cost" of durable goods. This consumption expenditure can be thought of as comprising two components: (i) the opportunity cost of funds tied up in the durable good; and (ii) time depreciation of the good itself. Households, generally, cannot report such values; therefore, they must be imputed. For this reason, most surveys collect data on the stock and characteristics of durables, rather than on related expenditures.

A detailed inventory of durable goods can be obtained from the asset module (Section 5) of the Male Household Questionnaire. Data in this section include items such as refrigerator, stove/ gas balloon, sewing machine, iron, radio/ tape recorder, TV, VCR/DVD player, satellite phone, bicycle, motorcycle, car, tractor, thresher, mobile phones, carpets (khalin), gilim, blankets, and kitchen utensils.

The imputation of the "user costs" of household durables is generally done on the basis of data on date of purchase and cost of acquisition, combined with assumptions about the lifetime of the good and depreciation rates.[14]

In this exercise, we assumed the life of assets to be 10 years, and interest rate 4 percent, implying the effective discount rate used of 14 percent. Calculation results showed that an average household incurred a user cost of 439 Afs per month, which accounted for 2.5 percent of total household expenditures.

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[12] Both questions on energy and household expenditures are administered in the Male Household Questionnaire.

[13] Durable goods have been included in the consumption aggregate for their "use value". The methodology will be explained in detail in the following sections on service values from durable goods.

[14] This procedure is described in detail in Deaton and Zaidi (2002).

Expenditures on housing services

Housing is an important part of household expenditures, especially in urban areas. In an ideal world, housing expenditure should be included to capture the service that households enjoy from their dwelling. This item is usually captured by reported rent or – if a household does not report rent (for instance, if a household owns the house it lives in) – an imputed rent estimated statistically, using existing rent information and household characteristics. However, few households in NRVA reported rents. In NRVA 2005, only 4.5 percent of households (including less than 1 percent in rural areas) reported rent, which made it impossible to statistically impute rents for non-reporting households. For this reason, actual rent was not included in the consumption aggregate of NRVA 2005.

The revision and improvement of 2007/8 NRVA survey instruments led to the addition of several new questions meant to directly capture the value of the dwelling thus potentially allowing for a greater precision in rent estimation. Eventually, a sizeable number of households reported housing values and the quality of information available turned out to be very good. As many as 7,819 out of 20,576 households in the sample reported valid housing values, which accounts for about 48 percent of urban households and 38 percent of rural households.[15] Moreover, all 961 households that paid rent also reported self-evaluated dwelling values; this subsample will be used to validate the estimated rental values.[16] In order to obtain a measure of the rental values of housing, we first estimated a Hedonic pricing model to impute missing in the subjectively reported housing values. In a second step, we converted the housing value to monthly rent. Detailed methodology and sensitivity analysis are shown below.

Hedonic pricing model of housing value
A hedonic model decomposes the price of an item into separate determinants. In this case, for example, the price of a house depends on its size, its location and other factors. The statistical model that we use to estimate and predict housing value is a log-linear model, using amenities and characteristics of households found in the NRVA such as provincial locations, wall materials, floor materials, roof materials, type of toilets, age, type of kitchen, number of livable rooms, and accessibility to nearby roads. Characteristics of a typical household are shown in Table A.V.6. We used separate regressions to estimate predicting models of three dwelling groups: urban, rural, and tents. It should be noted that the rural dwellings group included Kuchi communities who lives in permanent dwellings in rural areas. Specifications of models were selected using stepwise regression method.[17]

Table A.V.6 Description of a typical house

Dwelling characteristics	Urban dwelling	Rural dwelling	Tents
Number of rooms	3.9	3.3	1.5
Access through footpath (%)	14	31	27
Access through paved Road (%)	30	3	1
Built 5 -< 10 years ago (%)	10	15	.
Traditional covered latrine (%)	73	58	2
Flush latrine (%)	13	0	0
Fired brick/stone wall (%)	17	6	
Concrete wall (%)	5	0	
Mud bricks/ mud wall (%)	77	89	

Note: Means are not weighted

Hedonic model results are close to the reported housing values. Table A.V.7 shows the medians of actual and predicted housing values from the three dwelling groups. The prediction result is closest to the actual value among rural households, which account for most of NRVA sample. The predicted values lie within two percent margin of the actual value. We will derive rents for all households from this predicted housing values, regardless of whether households reported actual housing values or not. This method would eliminate the situation where two households that are pretty much the same

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[15] Note that the survey questionnaire requires interviewers to fill with "888" if the respondent does not know the housing value. We assume the following values--8, 88, 888, 388, 488, 848, 688, 868, 880, 884, 886, 898—to be mis-scans of 888. These values were recoded to missing.

[16] As it will be discussed in next sections, the self reported housing values are sensible and vary within a credible range

[17] After selecting variables through stepwise process, we added variables that deemed important (such as having flush toilet) to the model specification..

in characteristics but the housing value are very different because one household reported housing value but the other does not (and was imputed). Looking at the data, this situation might to take place in the tail of distribution.

Table A.V.7 Comparison of medians of reported and predicted housing value (in Afghanis)

Dwelling type	Actual	Predicted
Urban dwelling	700,000	654,463
Rural dwelling	100,000	101,751
Tents	9,000	7,385

Note: Medians of predicted and actual housing values of households that reported housing values

The hedonic pricing model may not provide predicted housing values if some of the housing characteristics were missing. In this case, the missing housing values would be imputed with the PSU median. Overall, the hedonic pricing regressions yield 20,474 predicted values out of 20,543 households in the effective sample; therefore, only 69 households were replaced by the PSU median.

Sensitivity analysis was also carried out during the model selection exercise. During this process, we considered three models: (1) Ordinary least squares (OLS) estimation on natural log of housing values, (2) OLS on level of housing values, and (3) Least absolute deviations (LAD) estimation on level of housing values. The present model (model (1)) was selected because of two reasons. First, the median of predicted housing value was very close to the median of the actual reported value. Focusing on the median is preferable to the mean because the focus of this exercise to capture expenditures of population at the lower half of the distribution (and due to positive skewness, the mean is in the upper half of the distribution). Second, this model generated non-negative predicted values, while other models generated negative predicted values.

Converting housing value to monthly rent

In order to convert predicted housing values to monthly rents, we, first, rescaled housing values from shared dwellings. We, then, converted the effective housing values to monthly rents by applying appropriate depreciation and interest rates.

Rescaling housing values of shared dwellings. The NRVA data reveals that a sizeable number of households live in shared dwelling. About 4,000 households in NRVA 2007/8 sample reported that they share at least one room with another household. For these households, the values of housing service they received were less than those who had access to the entire house. Even if they lived in dwellings that were similar in all aspects—same type of floor, wall, roof, etc--, the quality of housing "service" that the shared household would enjoy will be less than the household that live by itself.

The rescale fraction was applied to households that reported they shared rooms with other households. We identified households in shared dwellings from questions 17 in section 2 of the Male Household Questionnaire, which asked if "Any of the rooms shared with another household?" The NRVA also collected the number of rooms that the households shared with other families. This proportion was used to rescale housing values.[18]

We converted housing value to monthly rent by imposing a relationship based on interest and depreciation rates. In this case, we used the value of discount rate (d) of 1.5 percent and interest rate (r) of 3 percent. The choice of discount rate can be validated by looking at the final predicted rents. The results confirmed that the chosen rate of 4.5 percent was justified because the mean of urban area was close to the mean of actual rent (see Table A.V.8). Since we knew that the rental market in urban areas is developed, the consistency between reported and actual rents in this case was an appropriate validating tool.

Table A.V.8 Predicted rents by total discount rates

Dwelling type	Actual rent	Imputed rent		
		Rate of 4%	Rate of 4.5%	Rate of 5%
Urban dwelling	3,170	2,765	3,110	3,456
Rural dwelling	1,493	495	557	618
Total	**2,816**	**2,285**	**2,571**	**2,857**

Note: Means of predicted rental values. Figures shown based on households that reported actual rents.

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[18] The formula for rescaling factor is #rooms/((#rooms-#shared rooms) + 2*(#shared rooms)). The formula is based on the assumption that a household would share facility with another similar household.

Validation of predicted rents

The predicted monthly rents from the process described above were then added to the consumption aggregate. It should be noted that we used actual reported rents when available and used the predicted rents when household did not report rent. Since actual reported rents were the only actual data existed, we tried to make the most use of it. The predicted rents are shown to be very consistent with actual rents.[19] The regression of housing value on rent shows that, among households that actually reported rents, the predicted housing values are very well correlated with actual rents. Moreover, the imputed rents are consistent with rental data from the Consumer's Price Index (CPI) database. The mean of predicted urban rents of Afghanis 3,563 per month is on par with rents from the CSO's CPI data (see Table A.V.9).

Table A.V.9 Rent in urban areas from CPI data in February 2009

Monthly rent	Kabul	Herat	Jalalabad	Mazar-e-sharief	Khost	Kandahar
Rent, 4 rooms non-concrete	8,042	4,667	5,333	5,500	3,500	5,500
Rent, house 2 rooms concrete	5,433	3,167	3,333	5,000	3,000	5,000
Rent, house 2 rooms non-concrete	4,625	2,333	2,500	3,000	1,750	3,000

Source: CSO

Price adjustment

Consumption aggregates need to be adjusted for price differences across regions and over time. This issue is even more crucial for NRVA 2007/8 because it is a year round survey that covers the food price crisis during the beginning of 2008. The goal of this exercise is to create an index to normalize all nominal figures to the price of urban areas in the central region in fall 2007. As the food prices rose much faster than non-food prices, we adjusted both food and non-food with different indices. The price data from DPS was used to adjust for food prices, while the CPI for non-food. The sections below explain the methodology used to derive food-price and non-food-price indices.

Food price adjustment

The purpose of the price index is to adjust for price differences on spatial as well as time dimensions. The food prices used for the index are average prices within each region for each quarter. In all, we divided the sample into 14 regions as described in Table A.V.10. Regional definition takes into account urban and rural differences. The urban-rural definition is consistent with the stratification in sampling frame; therefore, some regions comprise only rural areas. Kuchi households were combined with rural households in respective region. In terms of seasonal variation by quarters, we defined them as follow: 1st quarter: Asad – Aqrab 1386, 2nd quarter: Qaws – Dawa 1386, 3rd quarter: Hoot 1386-Sawar 1387, and 4th quarter: Jawza – Sunbula 1387.

Choice and construction of price index

Generally, important choices in constructing a price index are: (a) type of index, (b) level of geographical disaggregation (province vs. district), and (c) time disaggregation (month vs. quarter) and (d) reference basket. After review of the data, with a focus on sufficient sample size for estimating the index, we opted for the Laspeyres price index estimated at the region-level for each quarter, based on a reference bundle of goods consumed by relatively poor households.

Table A.V.10 Price index region

Price index region	NRVA region	Area	Price index region	NRVA region	Area
1	Central	Urban	8	North	Urban
2	Central	Rural	9	North	Rural
3	South	Rural	10	West	Urban
4	East	Urban	11	West	Rural
5	East	Rural	12	SW	Urban
6	NE	Urban	13	SW	Rural
7	NE	Rural	14	WCent	Rural

Note: Names of provinces in regions are shown in Table A.V.11.

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[19] Regression of predicted housing values on rent over the sample of households that reported rents. LHS: rents, RHS: Housing value: Coeff. (.0029147) t-stat (21.77) Number of obs = 961, adjusted R-squared = 0.3301.

Table A.V.11 List of regions and provinces

Region	Provinces					
Central	Kabul	Kapisa	Parwan	Wardak	Logar	Panjsher
South	Ghazni	Paktika	Paktya	Khost		
East	Nangarhar	Kunarha	Laghman	Nooristan		
Northeast	Badakhshan	Takhar	Baghlan	Kunduz		
North	Samangan	Balkh	Jawzjan	Sar-E-Poul	Faryab	
West	Badghis	Herat	Farah			
Southwest	Nimroz	Helmand	Kandahar	Zabul	Urozgan	
WestCentral	Ghor	Bamyan	Daykundi			

The only difference between ours and UNAMA's definition of regions is Ghor province.

The Laspeyres price index has the advantages of simplicity with fixed weights and it is consistent with the CPI calculation. In terms of the level of disaggregation, the index is calculated at the region-quarter level to average out the noise and variation in the district price data, as well as to reduce the reliance on imputed prices (to replace missing prices for certain items in some districts and months). Its simplicity of calculation also allows for relatively easy presentation of the index.

The reference basket in this price index is the average quantity of all items consumed by relatively poor households. Since the focus of the analysis is on poor households, we choose an index that reflects price changes of the goods most typically consumed by the poor. In order to identify what the relatively poor consume, we follow a two-step procedure. In the first step, when we only have consumption in nominal terms, we take all household within the 20-50th percentiles of per capita nominal consumption within each region.[20] From this subsample, we find the expenditure shares for every food item consumed to form the preliminary reference bundle. We then estimate how much the bundle costs (with quantity weights given by the expenditure shares) in each region and quarter. This cost forms the numerator in the price index. The denominator is the reference cost of the bundle, and we select the quarter 1 prices as our reference price. This ratio gives us our preliminary price index.

For the second step of the process, we deflate nominal consumption with the preliminary price index. This gives us a better approximation to real consumption. We resort the data, and repeat the process of selecting the 20-50th percentile of per capita consumption. This resorting of the data gives us a slightly different set of 'relatively poor' households and also a slightly different expenditure share weights for the reference bundle of food items. The relative cost of the reference food bundle from the second step then gives the final price index.

Constructing price indices at a lower level of disaggregation – for example at province level or by month – is made difficult by the fact that information on prices of certain items are missing for some cells. Moreover, the price index by region-month showed too much variation from month to month (e.g. increasing 10% one month, decreasing the next, increasing following this). We believed the level of fluctuations observed from the monthly data was due to sampling and small cell sizes, and exaggerated the true price fluctuations. We opted to use quarterly aggregates to increase the number of price observations in each cell and smooth out some of the fluctuations.

The level of disaggregation in this exercise (at regional level) is different from the one used in the poverty estimation in 2005, which calculate Laspeyres spatial price index based on provinces. The 2005 instrument had more observations, and was in the field for a shorter time period which produced less variation in prices.

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[20] In other words, 30% of households in each region belong to the sub-sample used to select the reference bundle of food items. By selecting 30% within each region, we ensure that the variation of consumption patterns across regions is represented in the reference bundle.

Figure A.V.1 Price index for food expenditures
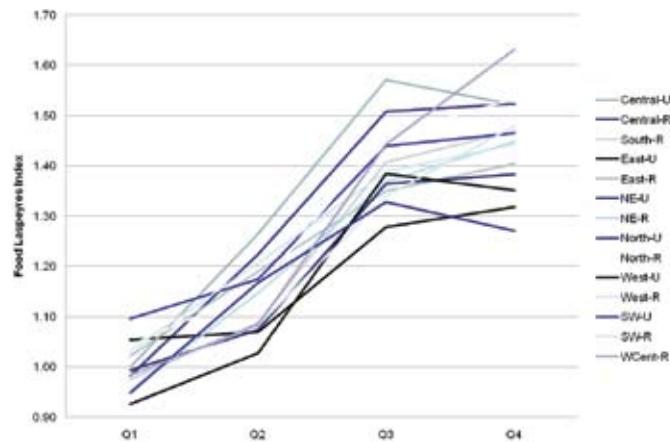
Non-food price index

The difficulty in constructing a price index for non-food expenditure is due to the lack of price data. Unlike food consumption where we have unit prices from the DPS, we do not have unit price data for non-food. Moreover, consumption data were collected in total expenditures not by number of units consumed. Using food price index to adjust for non-food, particularly in the temporal dimension, is not advisable because food prices rose by a larger magnitude than non-food's. (See Figure A.V.2). In this case we relied on external data and used the CPI provided by the CSO. The fact that CPI's basket contains similar items justified its use. A drawback of CPI data is that they were collected only from 6 major urban areas, and that the CPI does not capture spatial price differences. Therefore, we only used the temporal element from the CPI to deflate nominal non-food prices back to fall 2007.

Table A.V.12 Temporal deflator for non-food

Quarter	Temporal Deflator
1	1
2	1.030
3	1.025
4	1.076

Figure A.V.2 Trends in food and non-food CPI
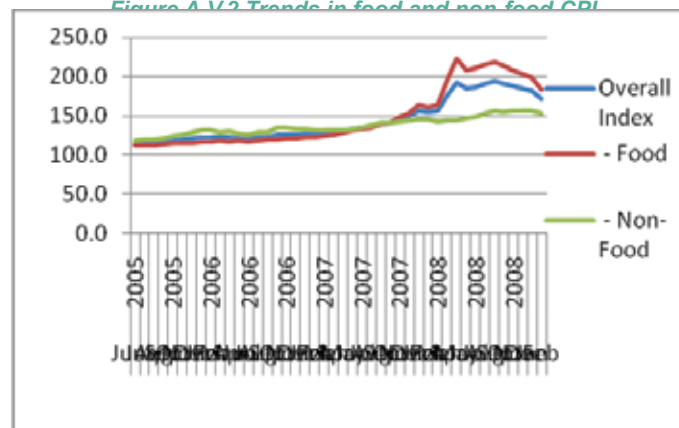
Source: CSO, CPI table February 2009

3. Poverty line

The poverty line consists of two components – the food poverty line and a supplement to the food poverty line to account

for basic non-food needs. The consumption aggregate is the basis of measuring wellbeing, and the poverty line is the benchmark for assessing whether a household has attained a minimum level of wellbeing. If the per capita level of household consumption is less than the poverty line, then all members of that household are considered as poor. Consumption at or above the poverty line is consider nonpoor. The methodology used to estimate the poverty line closely follows Ravallion (1998). Table A.V.13 lists the relevant sample sizes used to estimate the two components of the poverty line, as well as the sample sizes used for estimating the price index (discussed above).

Caloric intake
Caloric intake is an important building block for the estimation of poverty line, in which the food basket for poverty line is anchored at a caloric threshold. It is also a basic element in food security analysis. As a part of the poverty analysis of the NRVA 2007/8, we calculated an indicator for caloric intake. The method of calculation is straightforward and consistent with the method used for the NRVA 2005 exercise. Food consumption of households was converted to kilocalories by the same caloric conversion table used in 2005.

Table A.V.13 Sample size (households) for estimation of poverty line

Region	Sample distribution by region quarter for the price index				Sample distribution by region	
	1	2	3	4	Food bundle (20-50th%)	Non-food share (20% Total)
Central-Urban	336	216	408	384	403	269
Central-Rural	536	392	472	784	655	437
South-Rural	472	424	488	728	634	422
East-Urban	64	32	64	80	72	48
East-Rural	352	560	512	552	593	395
NE-Urban	160	104	184	272	216	144
NE-Rural	608	496	680	712	749	499
North-Urban	184	168	216	280	254	170
North-Rural	512	464	408	816	660	440
West-Urban	80	48	136	136	120	80
West-Rural	504	360	600	656	636	424
SW-Urban	104	112	168	144	158	106
SW-Rural	560	384	528	712	655	437
WCental-Rural	288	192	360	384	367	245

Food items for which consumption was recorded in number of pieces such as eggs and bread, were similarly converted to weight measurement with same conversion scale.[21] The conversion table was enhanced to accommodate the expanded food questionnaire of the NRVA 2007/8 where many more food items had been added. The caloric conversion table is shown in Table A.V.14. It should be noted that food consumption items in the "other" categories were not included in the caloric intake calculation. Figure A.V.3 displays the per capita caloric distribution and indicates that the estimated median per capita consumption level is 2,477 kilocalories per day.

Figure A.V.3 Per capita calorie consumption

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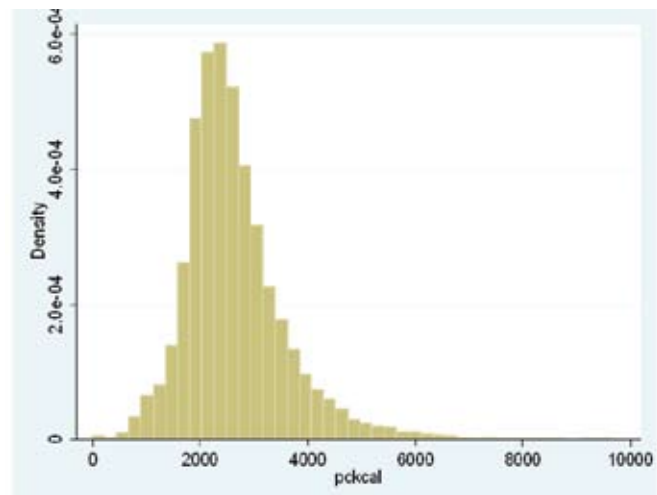
[21] An egg is assigned weight of 50 grams and a piece of bread is assigned a standard weight of 200 grams.

Table A.V.14 Caloric conversion table

Code	Food item	Kcal per Kg	Code	Food item	Kcal per Kg
1	Rice	3630	47	Turnip	230
2	Wheat flour	3570	48	Cabbage	160
3	Purchased nan	2840	49	Leek	440
4	Barley	3270	50	Broccoli	200
5	Maize	3630	51	Hot pepper	290
6	Beans	3500	52	Wild leaves	190
7	Mung	3400	53	Coriander	190
8	Chickpeas	3570	54	Mint	240
9	Lentils	3540	55	Dried tomato	2590
10	Macaroni	3790	56	Dried vegetable	2387
12	Beef	1240	57	Pickled vegetable	1447
13	Veal	1300	58	Green bean	310
14	Lamb	2355	60	Apple	490
15	Goat	1570	61	Grapes	670
16	Chicken	1270	62	Melon	270
17	Liver	1440	63	Peach	460
18	Dried meat	6295	64	Dried apricot	2960
19	Fish	460	65	Orange	330
21	Milk	855	66	Plum	460
22	Powdered milk	5070	67	Pomegranate	430
23	Yogurt	1530	68	Pear	560
24	Curd chaka	500	69	Banana	920
25	Krut	4842	70	Raisins	2930
26	Dogh	383	71	Fresh mulberries	820
27	Ghee	8730	72	Dried mulberries	3330
28	Butter	6930	73	Mangoes	400
29	Cheese	3100	74	Walnut	2770
30	Eggs	1420	75	Pistachio	3330
32	Vegetable oil	8840	76	Almonds	2470
33	Animal fat	9020	78	White sugar	3860
35	Potato	750	79	Brown sugar	3860
36	Sweet potato	730	80	Honey	3120
37	Onion	420	81	Chocolate	3940
38	Tomato	180	82	Black tea	0
39	Okra	390	83	Green tea	0
40	Spinach	250	84	Bottled water	0
41	Cauliflower	150	86	Salt	0
42	Eggplant	330	87	Black pepper	2370
43	Carrots	370	88	Ginger garlic	1000
44	Pumpkin	390	89	Tomato sauce	240
45	Cucumber	170	90	Mixed spices	3250
46	Radish	280			

Food poverty line

To estimate the food poverty line, we return to the bundle of food items used to estimate the price index. We use the same reference food bundle from the same subsample – the 20-50th percentile of real, per capita consumption in each region. The inclusion of households from each region in the construction of the reference food bundle ensures that the bundle reflects the regional diversity in consumption patterns. But, by setting the bundle to be the same for everyone in the country, we anchor our definition of minimum needs in terms of quantity of each of the food items. If the reference bundle varied across regions, it is more difficult to assert that the utility derived from the bundle is constant. For example, if there were two reference bundles, and one had more meat than the other one, it would be reasonable to think that the more meat intensive bundle reflected a higher quality or higher utility level (particularly given the results from Table A.V.3, which reveals a strong and positive PCE gradient in the consumption of meat).

This reference bundle, consisting of the average amounts consumed of each item by the subsample, contains 2,441 calories. We then estimate the cost of obtaining 2,100 calories (the benchmark determined to be the per capita minimum caloric requirement to meet basic needs) if those calories were obtained following the same consumption patterns as found in the reference food bundle. This essentially means scaling down the cost of the reference food bundle by a factor of 2,100/2,441. The estimated cost of this scaled food bundle is 690 Afghani per capita, per month when priced in terms of quarter 1, region 1 (Central, urban) prices. In real terms, the cost of the food poverty line is the same for everyone. In nominal terms, it differs across regions and over quarters.

Non-food allotment to poverty line

The 2007/8 consumption aggregate contains much more information about non-food consumption relative to the 2005 aggregate. In particular, the 2007/8 aggregate contains the estimated rent-value of housing and the estimated use-value of durable goods. Neither of these items was in the 2005 measure of wellbeing, but both are important factors in determining overall wellbeing and in helping to distinguish the poor from the nonpoor.

The challenge though in including these additional aspects of wellbeing is that the costs and needs of these items (in particular housing) differ significantly across regions, and in particular across urban and rural areas. For example, on average the estimated rental value of housing is equal to 6% of total consumption in rural areas; but is 19% on average in urban areas.

To account for the large differences in the costs and presumably needs of non-food consumption across regions, we estimate region-specific non-food allowances to supplement the food poverty line. To estimate the non-food allowance, we take a subsample of households in each region whose per capita food expenditure is relatively close to the food poverty line. When selecting this subsample, we have two criteria – we want sufficient sample size to provide ample support for the estimated non-food allowance, and we want the subsample to be balanced around the food poverty line with equal number of households with expenditures less than and greater than the food poverty line.

We obtain balance in the subsample by selecting equal proportions of the sample distributions above and below the food poverty line. We select 10% of the sample above, and 10% below. For example, if a particular region has 500 households, we select 50 households with food expenditures just under the food poverty line, and 50 households with food expenditures just above the food poverty line. This approach is illustrated in Figure A.V.4. The non-food allowance is then estimated as the median value of non-food expenditures for the subsample of households whose food expenditures are close in value to the food poverty line.

The overall poverty line is the sum of the food poverty line and the non-food allowance. A household is defined as poor if the total value of per capita consumption is less than the poverty line. If a household is defined as poor, all individuals in that household are deemed to be poor. Similarly, we also consider the measure of food poverty. This is defined as a household whose per capita value of food consumption is less than the food poverty line. This does not necessarily mean that the household is consuming an insufficient level of calories because they might be trading food quality for quantity. Food poverty is a case where a household is spending less on food than what is necessary to obtain 2,100 calories following the average consumption patterns of the relatively poor (20-50th percentile of the real per capita consumption).

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[22] This approach is in contrast to sub-sampling based on those households whose food expenditures are +/- some percent in value of the food poverty line. The weaknesses of this approach are two-fold: the strategy does not ensure a fixed, minimum sample size, and the strategy will frequently result in an unbalanced sample with more households above the food poverty line than below it. The unbalanced nature of the subsample is due to the empirical regularity that the food poverty line typically lies to the left of the mass point of the distribution of food consumption. Or, in other words, the slope of the food consumption distribution tends to be positive where the food poverty line intersects (meaning more mass immediately to the right of the food poverty line).

Figure A.V.4 Non-food allowance
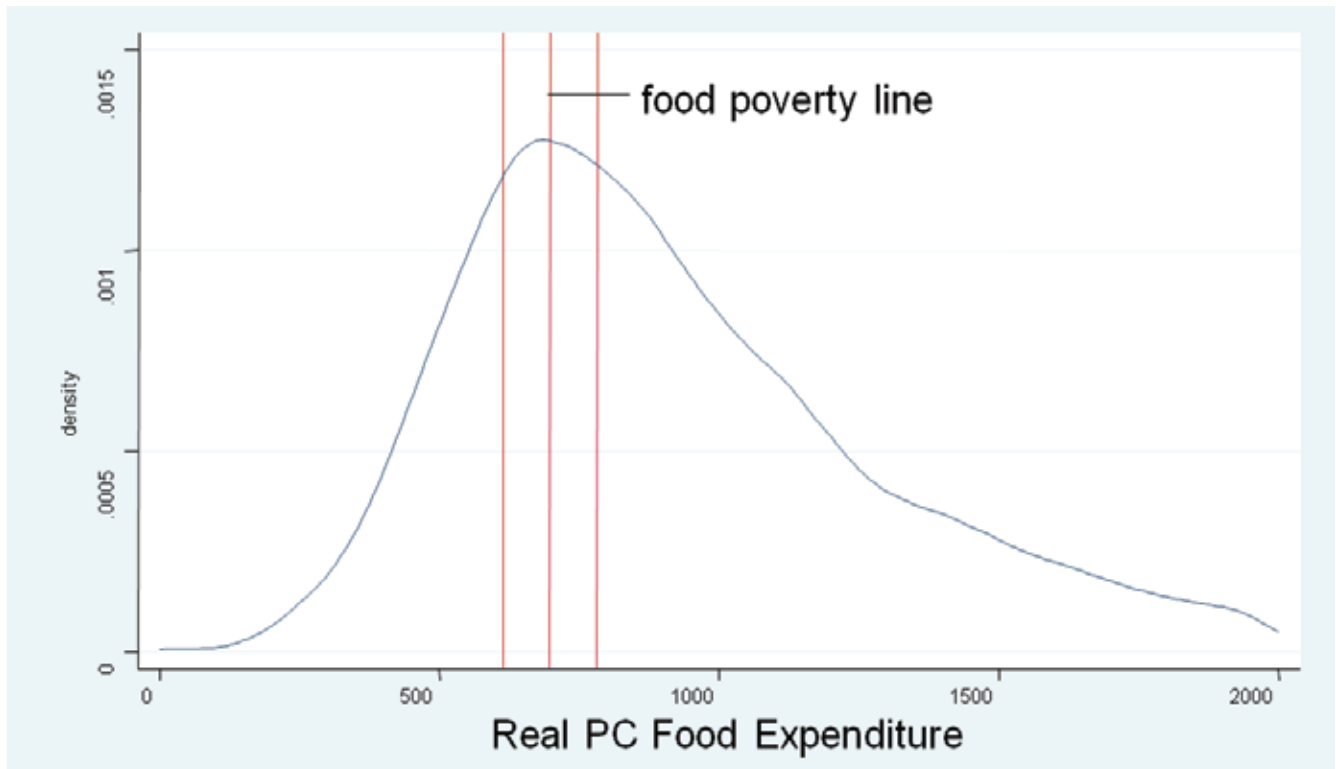
Annex VI Methodological issues in the estimation of reproductive and child health indicators

A. Child health

A.1 Recording of child immunization

When mothers had an immunization card for the child that surveyors could see (for 34 percent of 12-23-month-olds), surveyors recorded the dates of immunizations from this card. Immunization dates that were missing for children with cards – a significant proportion of responses for some vaccinations, from 2 to 25 percent – were treated as not immunized;[1] a sensitivity analysis assuming that missing card vaccination dates were all immunized yielded upper bounds of individual vaccination rates that were, on average, nearly 5 percentage points higher, and a full immunization rate that was 9 percentage points higher (data not shown).

Mothers were also asked whether the child received any immunizations not recorded on the card (for example, during a Nation Immunization Day campaign), and these were added to those recorded on the card. For children without an immunization card (40.5 percent of 12-23-month-olds) or those where the surveyor did not actually see the card (25.6 percent), calculation of immunization rates was based solely on mother's recall.

The NRVA data contains considerable problems due to the difficulty related to recording dates of vaccinations and ages of children, and the tenuous information provided from immunization cards, creating large non-statistical sources of error in the immunization estimates. In several cases, the date of vaccination listed preceded the child's date of birth. For these types of discrepancies less than 365 days, the date was assumed to represent a valid vaccination listed on the card. Children with discrepancies greater than 365 days for any vaccination date on the card were dropped from the analysis (n=23 for 12-23-month-olds).

A.2 Estimation of tetanus toxoid coverage

To estimate the TT coverage, all ever-married women with a birth since August 2005 were asked to present their TT immunization status cards. Only 14 percent of women were able to show their card to the interviewer. In addition, recall questions on receiving tetanus injections were asked of those women who could not show their cards to the interviewers or who had lost or never had such cards. Only women who delivered within the past 24 months prior to the survey and of reproductive age (15-49 years old) were included in the analysis, and only their most recent delivery was included. TT injections with invalid dates on the card such as years with missing months and days or with numbers exceeding the possible numbers of days or months in either Afghan or Gregorian calendars were considered missing.[2]

B. Reproductive health

B.1 General issues

Reproductive health indicators were calculated using data on ever-married women (contraceptive prevalence and parity), recent deliveries (antenatal care and skilled delivery attendance) as well as on children under five (birth intervals). All ever-married women up to age 49 were supposed to be included in the women's sections of the questionnaire, but some eligible women were mistakenly omitted (2.6 percent) and some refused or were not at home during the time of the survey (less than 1 percent combined). In order to properly account for non-response in the women's section (defined as women who refused, were incapacitated, were not at home, or were erroneously omitted from the section), the household weight was multiplied by the reciprocal of the women's non-response, by province, to get a women's weight, which was used to weight the reproductive health indicators. In addition, female enumerators were not present during the NRVA survey in Urozgan province, and therefore no women in Urozgan were interviewed for the women's section. To account for these omitted women, rural and Kuchi women in neighboring Helmand province, who are similar to rural and Kuchi women in Urozgan, were upweighted to represent these Urozgan women.

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[1] Missing and don't know responses for mother's recall were assumed to indicate no vaccination, in line with the DHS Guide to Statistics (Rutstein and Rojas 2003).
[2] Invalid dates constituted from 1 to 12 percent of dates for the various TT rounds. In addition, missing TT dates on the card (up to 84 percent for the 5th TT round) were assumed to be not immunized.

B.2 Family planning

Questions on use of family planning methods were asked only of currently married, non-pregnant women.[3] Women who were unsure about their current pregnancy status were counted as non-pregnant and included in questions regarding the use of contraceptives. Women who reported being pregnant were coded as not currently using any method. As per DHS guidelines, missing values in the numerator, i.e. the number of women reporting current use of any family planning method, were treated as not using any method. Those women who refused to answer the question on family planning method (n=796) were also counted as not using any method. Only women between 15 years of age and 49 years of age were included in the final estimates for international comparability.

B.3 Antenatal care

The questions on use of antenatal care (ANC) services included last births among currently married women, widows as well as those listed as currently separated or divorced who delivered in the 24 months preceding the survey. Women with missing ANC variables were counted as having received no ANC (Rutstein and Rojas 2003). If a woman reported seeing more than one type of provider, only the most skilled provider was counted. Following the Afghanistan Health Survey 2006, skilled providers of ANC services included community health workers (CHWs) in addition to doctors, midwives, and nurses. As compared to NRVA 2005, visits for getting injections of tetanus toxoid were not excluded when estimating skilled ANC services use.

B.5 Skilled birth attendance

According to DHS (Rutstein and Rojas 2003) and the Afghan Health Survey (Ministry of Public Health 2006), skilled birth attendance (SBA) is defined as assistance from medically trained and licensed personnel, including doctors and midwives, but in Afghanistan excludes Community Health Workers (CHWs), traditional birth attendants (TBAs), and nurses. The present analysis excludes these staff as well. The NRVA questions on SBA referred to a woman's last live birth in the 24 months preceding the survey.

B.6 Current pregnancies

Currently married women were asked whether they were pregnant at the time of the survey. Those who reported being unsure (3.1 percent) were assumed to be not pregnant, according to DHS guidelines (Rutstein and Rojas 2003). This may underestimate the proportion who are currently pregnant, as it does not capture those in early stages of pregnancy who may be unaware of their status, as well as those who do not wish to disclose their pregnancy status if they are pregnant (Rutstein and Rojas 2003).

B.7 Birth spacing

Birth spacing, defined as the distribution of births in the five years preceding the survey by specified grouped number of months since the preceding birth, is one of the key indicators in reproductive health. According to the World Health Organization, "after a live birth, the recommended interval before attempting the next pregnancy is at least 24 months in order to reduce the risk of adverse maternal, perinatal and infant outcomes" (WHO 2005). DHS counts all surviving and dead children who have a difference between the date of interview and their birth date of 0–59 months, excluding first-born children (Rutstein and Rojas 2003). In this report, however, only surviving live births were included due to limited information regarding dead children. Therefore, the true average birth intervals are likely to be even shorter than the ones presented here. Also, a birth was counted if it occurred within 60 months of the survey, even if the preceding birth occurred 60 or more months before the survey. Five groups of birth intervals were used: (i) less than 18 months, (ii) 18 to 23 months, (iii) 24 to 35 months, (iv) 36 to 47 months, and (v) 48 and more months.

A birth interval was calculated as the difference between the age of a child and age of a preceding child, grouped into categories. The reason for using the age of children, estimated in months, rather than their birth dates was the difficulty of collecting accurate birth dates in the current context. In line with DHS, for children of multiple births, the interval was based on the age of the preceding child, which was the number of months since the end of the preceding pregnancy that ended in a live birth.

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[3] If a woman's marital status was missing from the Women's questionnaire, but she responded questions on pregnancy, on use of family planning methods and on age at first marriage, she was included in the sample. In cases where a woman's marital status was known but her age was missing in the Women's questionnaire, it was imputed from the information provided in the general Household questionnaire.

Glossary

Child is an individual under the age of 18 years.

Contraceptive methods, modern include female and male sterilization, oral hormonal pills, intra-uterine devices (IUDs), male and female condoms, injectables, implants, vaginal barrier methods and emergency contraception.

Contraceptive methods, traditional include rhythm (periodic abstinence), withdrawal, lactational amenorrhea method (breastfeeding) and folk methods.

The *contraceptive prevalence rate* is the percentage of women married or in-union aged 15 to 49 who are currently using, or whose sexual partner is using, at least one method of contraception, regardless of the method used.

Disability is an umbrella term, covering impairments (problems in body function or structure), activity limitations (difficulties encountered by an individual in executing a asks or actions), and participation restrictions (problems experienced by an individual in involvement in life situations).

The *economically active population* comprises all persons who furnish the supply of labour for the production of goods and services during a specified time-reference period (one month in the NRVA 2007/8).

Employment / employed population comprises all persons aged 16 and over, who, during the reference period of one month, were either in paid employment or self employed for at least one hour per week.

Employers are those workers working on their own account or with one or a few partners, and, in this capacity, on a continuous basis have engaged one or more persons to work for them in their business as 'employee(s)' (The partners may or may not be members of the same family or household.).

The *employment-to-population ratio* is the proportion of a country's working-age population that is currently employed.

Exclusive breastfeeding is defined as giving no other food or drink – not even water – except breast milk.

Household is a domestic unit consisting of the members of a family who live together along with non-relatives, and who share food and cooking arrangements.

Household shock is defined as an uncontrollable and risky event that has negative consequences for the household.

The *Head Count Rate or poverty incidence* is the proportion of the population whose per-capita consumption is below the poverty line.

Hazardous work is work, which, by its nature or the circumstances in which it is carried out, is likely to harm the health, safety or morals of children.

The *Infant Mortality Rate* (IMR) is the number of deaths to children under twelve months of age per 1,000 live births.

An *industry* consists of a group of establishments engaged on the same, or similar, kinds of production activity.

Informal enterprises or informal sector are those enterprises with less than five employees that are not registered for tax payment or pay a fixed-rate tax and include (i) informal own-account enterprises (household enterprises owned and operated by own-account workers, either alone or in partnership with members of the same or other households, which may employ contributing family workers and employees on an occasional basis, but do not employ employees on a continuous basis), and (ii) enterprises of informal employers (household enterprises owned and operated by employers, either alone or in partnership with members of the same or other households, which employ one or more employees on a continuous basis).

An *in-migrant* is defined as someone who during the past five years lived outside the current area of residence for at least three consecutive months.

The *labour force or currently active population* comprises all persons of 16 years and over who fulfil the requirements for inclusion among the employed or the unemployed.

The *labour force participation rate* is the ratio of the labour force to the working-age population, expressed as a percentage.

A (returning) *labour in-migrant* is someone who has moved to the current place of residence some time during the past five years and whose original reason for moving away was work-related.

A *labour out-migrant* has moved away from the present household during the past year in order to go and (look for) work elsewhere.

Light work is any form of economic production that is performed for less than 14 hours a week that is not hazardous.

Live birth is complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of the pregnancy, which, after such separation, breathes or shows any other evidence of life.

Maternal mortality relates to the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration of the pregnancy, from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes.

The *net primary enrolment ratio* is the ratio of the number of children of official primary school age 7-12 who are enrolled in primary school to the total population of children of official primary school age.

An *occupation* is a set of jobs whose main tasks and duties are characterised by a high degree of similarity.

An *out-migrant* is defined as anyone aged 15 years or older who was a household member one year ago but has moved away and is no longer considered a member of the household. Out-migration is under-estimated to the extent that complete households have moved away.

Own-account workers are those workers who, working on their own account or with one or more partners, hold the type of job defined as a self-employed job, and have not engaged on a continuous basis any employees to work for them during the reference period of one month.

Paid employment jobs are those jobs where the incumbents hold explicit (written or oral) or implicit employment contracts, which give them a basic remuneration which is not directly dependent upon the revenue of the unit for which they work. Persons in paid employment include:
  a. Persons at work, which are persons who during the last week for at least one hour performed work for wage or salary, in cash or in kind.
  b. Persons with a job but not at work, which are persons who, having already worked in their present job, were temporarily not at work during the reference period and had a formal attachment to their job.

Parity relates to the total number of children born to a woman.

Poverty is defined as a level of consumption expenditure that is below the level of the consumption bundle that produces a minimum and acceptable level of material well-being.

Relative poverty is defined as a level of consumption expenditure that is below a certain level depending on the overall consumption expenditure pattern of the whole population.

Absolute poverty is defined as a level of consumption expenditure that is below an absolute standard of what households should be able to count on in order to meet their basic needs.

The *poverty gap index* is the mean income shortfall below the poverty line as a proportion of the poverty line, counting the non-poor has having zero shortfall. The index measures the depth of poverty.

The *poverty line* or *poverty threshold* is the minimum level of per capita consumption expenditure at which the members of a household can be expected to meet their basic needs (comprised of food and non-food consumption).

The *food poverty line* is defined as the level of consumption expenditure at which a person's typical food energy intake is just sufficient to meet a predetermined food energy requirement. Persons or households that do not attain this minimum level are considered extremely poor.

The *general poverty line* is also based on the food poverty line, but to this, a specific allowance for non-food goods, consistent with spending by the poor, is added.

Adequate sanitation include facilities such as sewers or septic tanks, poor-flush latrines and simple pit or ventilated improved pit latrines, provided that they are not public.

A *seasonal migrant* is someone who, during the past twelve months, spent at least one month away from the household for seasonal work.

Self-employment jobs are those jobs where the remuneration is directly dependent upon the profits derived from the goods and services produced (where own consumption is considered to be part of profits). The incumbents make the operational decisions affecting the enterprise, or delegate such decisions while retaining responsibility for the welfare of the enterprise.

Sex ratio is the number of males per 100 females.

The *squared poverty gap index* is a measure of 'poverty severity' and the inequality among the poor, by taking into account the distribution of persons' consumption distance to the poverty line.

Status in employment refers to the status of an economically active person with respect to his or her employment, that is to say, the type of explicit or implicit contract of employment with other persons or organisations that the person has in his/her job.

The *Total Fertility Rate* (TFR) is the number of live births a woman could expect to have during her reproductive years if she followed the levels of fertility currently observed at every age.

Underemployment exists when a person's employment is inadequate in relation to specified norms of alternative employment, account being taken of his or her occupational skill.

The *Under-five Mortality Rate* (U5MR) relates to the number of deaths to children under five years of age per 1,000 live births.

The *unemployed* comprise all persons aged 16 and over, who during the reference period of one month were:
a. without work, i.e. were not in paid employment or self-employment, and
b. seeking work or discouraged for finding employment

The *unemployment rate* is the number of unemployed as a percentage of the labour force.

Improved water supply includes piped water, public tap, borehole or pump, protected well, protected spring or rainwater.

Working or employed children are children engaged in economic production as defined by the SNA for at least one hour during the reference week, whether for the market or not, paid or unpaid, for a few hours or full time, on a casual or regular basis, in the formal or informal sector, and whether the activities are legal or illegal.

For definitions of *'worst forms of child labour other than hazardous work'* and 'potential worst forms of child labour', reference is made to para's 9.3.1 and 9.3.2 of the ILO report on child labour statistics (ILO 2008b).

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