



Reports



Food Security and Nutrition Survey conducted in September-October 2004

Azerbaijan

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**WFP Azerbaijan
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Azerbaijan - Food Security and Nutrition Survey Zones



* Zones not included in the survey.

** Orta-Kur and Kur Survey Zones together form Aran Economic Zone

1): Tartar-District, officially belonging to the occupied zone, is covered under Orta-Kur.

2): Khyzy-District, officially belonging to the Absheron peninsula, is covered under Guba-Kachmaz.

Map produced by ODA - VAM February 2005. Data source: Global Discovery Europa Technologies, USGS GTOPO30, FAO GIEWS, WFP Azerbaijan
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0 12.5 25 50 75 100
Kilometers



Executive Summary

WFP Azerbaijan's Protracted Relief and Recovery Operation (PRRO), targeted at the Internally Displaced Persons (IDPs) is due to terminate in December 2005. The Country Office with the support of the Vulnerability Analysis and Mapping (VAM) Units in WFP Headquarters and the Regional Bureau in Cairo initiated a household food security and nutrition survey in order to gain a better understanding of the food security, livelihoods and nutrition situation of both the resident and IDP populations in rural Azerbaijan. The specific objectives were to:

- Assess the overall socio-economic situation of residents and IDPs and their levels of food security
- Assess the malnutrition and health status of women of reproductive age (15-49 years) and pre-school children (0-59 months) by collecting anthropometric data and information on micronutrient deficiencies
- Provide recommendations to decision-makers on whether there is a need for food aid beyond 2005 and if yes, where and in which sectors.

Coverage and methodology

The household survey covered 210 rural communities (3,078 households) and 25 IDP-settlements (363 households) in 6 economic Zones, excluding the *Absheron Peninsula*, *Nakhchivan*, and two economic zones in the occupied area. A household questionnaire was developed to collect quantitative information on household demography, housing, assets, income sources and expenditures, food consumption, food sufficiency, risk, shocks and coping strategies, maternal and child health and nutrition. As part of the nutrition study anthropometric measurements of pre-school children (below 5 years) and their mothers were taken. Additionally a sub-sample of these women and children were tested for anaemia in the field using the HemoCue® machines.

Key-findings - Residents

Demography - Nearly 20% of the sampled households were headed by women, while one-third of the households were headed by an elderly person (over 60 years of age). Forty per cent of the households had a chronically ill member and about half of these were the heads of the households. Just over 20% of the sampled households had at least one member who was disabled and a third of them were head of the household. Literacy levels are high, about 90% of all household heads and their spouses were literate, averaging 9 years of formal education. However, literacy of female headed households (59%) was remarkably lower than that of male headed households (94%).

Housing - The majority of the households live in single-family dwellings except for households in *Kur* and *Lankaran-Astara*, where more than 30% of the resident families live in mudhouses. The average household size in the overall sample was 5.8, meaning about 6 persons per household. The median size was 5 persons in *Guba-Kachmaz*, *Sheki-Zagatala* and *Kur* samples and 6 persons in the others. In all, 17% of the sample households had 8 or more members – 'large households'. One-third of the households in the *Lankaran-Astara* sample were 'large' as compared to only 8% in *Sheki-Zagatala* and 10% in *Guba-Kachmaz*. Crowding (persons per room) was lowest in *Guba-Kachmaz* with 1.9 persons per room while the highest was 2.8 persons per room found in both *Ganja-Gazakh* and *Lankaran-Astara*. The average number of people per room is significantly correlated with both maternal and child morbidity.

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Household amenities - Households in *Guba-Kachmaz* and *Sheki-Zagatala* are more likely to regularly use safe drinking water¹, while just 10% of households in *Kur* and *Orta Kur* are regularly accessing water from improved sources. At least 90% households in all zones except *Lankaran-Astara* use electricity as the main source of lighting, although irregular supply of electricity is a problem across all regions and in varying degrees. In *Lankaran-Astara* one third of the households rely on oil lamps. Across the zones, households are either using gas or firewood for cooking, while firewood is the main source of heating in all the sample zones.

Household asset ownership – Analysis of the number of assets owned per household shows that households in most economic zones own about 9 assets with the exceptions being *Ganja-Gazakh* (8 assets) and *Lankaran-Astara* (7 assets).

The most commonly owned assets are quilts, beds, tables, chairs, and carpets being owned by nearly all households. For productive assets, nearly all households in the sample had farm implements with the exception of *Lankaran-Astara*, where only 72% own agricultural tools. Seventeen percent of the sample households own a sewing machine. Motorcycle ownership was quite low – only 3% ownership in the sample. Car ownership was higher with 15% ownership overall. Around 20% of the households in the *Guba-Kachmaz*, *Daglig Shirvan*, *Kur* and *Orta Kur* samples owned automobiles as compared to only 4% in *Ganja-Gazakh*.

Assets related to communication included radio, television, satellite dish and VCR/DVD. More than 80% of the sample households owned a television – more than 90% in *Guba-Kachmaz* and *Kur* but only two-thirds of the households in *Ganja-Gazakh* and *Lankaran-Astara*. In *Guba-Kachmaz*, 10% of the households owned a satellite dish and 15% owned a VCR or DVD player. Ownership of these items was much lower in all other economic zones. About one-quarter of the sample owned a radio with highest ownership in *Daglig Shirvan* (37%) and lowest in *Ganja-Gazakh* (13%). In all, 31% of the households in *Ganja-Gazakh* and 27% in *Lankaran-Astara* were without radio or television.

Livestock assets - Ownership of livestock is quite high in rural Azerbaijan with more than 70% of resident households owning livestock. Cattle ownership was fairly consistent across the zones with the exception of *Ganja-Gazakh* where only 63% of the households owned an average of just one animal. In *Daglig Shirvan* nearly 80% of the households owned cattle. Fewer households owned smaller ruminants with only 8% owning goats and 29% owning sheep in the entire sample. Ownership of chickens was very high for the sample with more than 90% keeping an average of about 11 birds per household. Again, chicken ownership was lowest in *Ganja-Gazakh*.

Access to loans/ credit - A large percentage of households in all economic zones, with the exception of *Guba-Kachmaz* have access to informal loans/credit either through relatives or friends or local money lenders. A common strategy among residents is to purchase food on credit or to borrow money to purchase food. Nearly all households in *Lankaran-Astara* reported that they often purchase food on credit, while in *Guba-Kachmaz* it was only every second household. More than 80% of households in *Sheki-Zagatala*, *Lankaran-Astara* and *Daglig-Shirvan* reported that they always purchase food on credit.

Household income – Almost all households in the sample receive income from state benefits (pension, child allowance and disability benefits). Also borrowing is

¹ UNICEF definition – drinking water from improved sources

commonly reported across zones and could possibly be a strategy used by the households to meet day to day needs. Income generating activities are sales of crops, fruits and vegetables, skilled and unskilled labour and livestock sales. However, some of these state benefits such as child allowance and disability benefit don't contribute much to the overall income, although contributions from borrowing and pension remain high.

More than two-thirds of household income in *Lankaran-Astara* and *Ganja-Gazakh* comes from borrowing and pensions, compared to 25% in *Guba-Kachmaz*, where contributions from skilled work are higher. The income from pensions and livestock sales is relatively high in *Daglig-Shirvan*, while in *Sheki-Zagatala* and *Kur* samples income from crop sales dominates. Female-headed households receive significantly greater shares of total income from borrowing and pension than households headed by men, while male headed households receive significantly greater share of total income from child allowance, crop sales, skilled work and unskilled wage labour than those headed by women.

Household expenditures - Households in the samples from *Ganja-Gazakh*, *Lankaran-Astara* and *Kur* have a high share of monthly expenditures for food (from 54-68%) – mostly for basic staple food items. In contrast, households in *Daglig-Shirvan*, *Sheki-Zagatala* and *Orta Kur* spend less on food, in particular on staple food, while having a higher share of expenditure on clothing, tobacco and alcohol. In terms of non-food expenditures, those for debt repayment range from 3% in *Guba-Kachmaz* to 20% in *Ganja-Gazakh*. Medical expenditure ranges from 7% in *Guba-Kachmaz* to 17% in *Daglig-Shirvan*. Analysis of per capita expenditures suggests that percentage allocation to food decreases as per capita expenditure increases, and as per capita expenditures increases, the reliance on income from borrowing increases while the reliance on income from pension decreases – both in a linear fashion.

Land use and agricultural production – The land privatization process has ensured that most resident households have access to agricultural land, although there are differences in size of land available. About 90% of the sampled households have access to agricultural land and/or a vegetable garden, except in *Guba-Kachmaz* where the ownership is lower (around 80%). While the average size of land owned is 1.3 hectares, ranging from 0.3 in *Ganja-Gazakh* to 2.6 hectares in *Daglig-Shirvan*.

Main crops produced by rural households in the sample are wheat, potatoes, maize, and vegetables, with households in zones with smaller plots more often producing potatoes while those with larger holdings producing wheat and vegetables more often. While home production is mainly consumed, households in *Orta Kur* and *Guba-Kachmaz* more likely to sell some of their produce, while almost all households in *Ganja Gazakh* consume all of their agricultural production. For all zones, most households own fruit and/or nut trees.

Perception of household food security – A section of the questionnaire was added to measure the household's perception of their own food security status in terms of food sufficiency. Households were asked three questions to assess their perception of their food security- whether they were worried that they would not have enough food or money to buy food; if they did not eat food of the preferred quality or quantity; and if they ran out of food and could not afford to buy more. Over 80% of the households had experienced at least one of the above situations 'often' or 'sometimes' in the past year, ranging from over 90% in *Orta-Kur*, *Sheki-Zagatala* and *Lankaran-Astara* to just about half of the households in *Guba-Kachmaz*.

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In response to the perceived food insecurity, about half of the households 'often' reduced their meals, 36% 'often' skipped meals, 28% 'often' ate less than they felt they should, 8% 'often' were hungry and yet did not eat, and only 5% 'often' passed a day without eating. In terms of severity of response, around 15% of the households in *Ganja-Gazakh* and *Orta-Kur* 'often' were hungry and yet did not eat and 15% of the households in *Ganja-Gazakh* 'often' passed a day without eating.

Exposure to shocks and coping strategies - The most often reported covariate shocks were economic, such as unusually high prices for food (about 90% of the households), followed by unusually high prices for services and high costs of agricultural inputs. Covariate shocks such as livestock disease or flooding were less often reported with variation between economic zones. Price shocks were more felt by households in *Lankaran-Astara*, *Ganja-Gazakh* and *Orta Kur*. The most experienced idiosyncratic shock was the serious illness or accident of a household member, reported by one-third of the sample households. Idiosyncratic shocks were more frequently reported by households in *Sheki-Zagatala* and *Daglig Shirvan*.

Seventy per cent of households across all economic zones indicated that the shock(s) decreased both income and in-kind receipts and nearly all households reported that the shocks decreased their ability to purchase enough food. Households typically responded to shocks by decreasing expenditures, followed by purchasing food on credit, reducing the quality and quantity of diet, taking loans from family or friends, selling livestock or spending their savings.

Child malnutrition - The prevalence of acute malnutrition or wasting among sample children 6-59 months of age was 6.1% (95% CI: 5.2, 7.0) while 15.1% (95% CI: 13.8, 16.5) were underweight and 32.8% (95% CI: 31.0, 34.6) were chronically malnourished or stunted. The levels of all types of malnutrition are among the highest in the region. The prevalence of wasting is highest among children 6-11 months of age (11%) while underweight peaks at the 12-23 months age group (22%). The prevalence of stunting was highest among children 36-47 months of age (39%).

By economic zone, acute malnutrition was highest in the *Daglig Shirvan* (8.3%) and *Lankaran-Astara* (7.8%) and lowest in *Sheki-Zagatala* (4.1%). Underweight prevalence was highest in *Daglig Shirvan* (20.8%), followed by *Guba-Kachmaz* (17.2%) and lowest in *Sheki-Zagatala* (9.5%). The prevalence of stunting was highest in *Daglig Shirvan* (40.4%), followed by *Guba-Kachmaz* (39.6%) and *Lankaran-Astara* (39.0%) and lower in *Orta Kur* (24.8%), *Ganja-Gazakh* (26.8%) and *Kur* (27.5%).

Additional analyses shows that for all z-score indicators, the boys in the sample were worse off than the girls, with significant differences in mean weight-for-age and mean height-for-age measures. However, when looking at the percentage of children with z-scores below -2.00 SD, the only difference was found in chronic malnutrition where 35% of the boys were stunted as compared to only 27% of the girls in the sample.

Child health - In the sample, the 2-week period prevalence of ARI in children 0-59 months was a 21% for acute respiratory infection (ARI), while 47% of the children had experienced an episode of diarrhoea, 40% had been coughing and 48% had a non-specific fever in the two weeks prior to the survey. For those children suffering from diarrhoea, 34% had received treatment at a health facility. Children who had experienced any illness in the two weeks prior to the survey were significantly more likely to be wasted and underweight.

Low birth weight in children – Around 20% of the children in the survey were described by their mothers to be 'smaller than normal' (18%) or 'very small' (2%) at birth, a proxy indicator of low birth weight (< 2500 grams). More than 25% of the children in the *Orta Kur* and *Sheki-Zagatala* samples were of low birth weight.

With the sample data, several analyses were conducted to see the relationships between potential causes of low birth weight and some of the negative effects of being born malnourished.

- Significantly more ($p < 0.05$) low birth weight children were born to mothers who are currently malnourished ($\text{BMI} < 18.5 \text{ kg/m}^2$). Mothers of low birth weight babies were significantly ($p < 0.05$) less likely to have received skilled antenatal care during their pregnancies. Mothers of low birth weight babies were significantly ($p < 0.001$) more likely to have experienced an episode of diarrhoea or fever in the 2 weeks prior to the survey.
- Children who were described as being very small or smaller than normal at birth are significantly ($p < 0.001$) more likely to be underweight at the time of the survey but not more likely to be wasted or stunted. Low birth weight children are significantly more likely to suffer from fever ($p < 0.001$), cough ($p < 0.01$), or diarrhoea ($p < 0.001$), but not acute respiratory infection. Low birth weight children are more likely to suffer from anaemia than those children of normal birth weight.

Malnutrition in women of reproductive age - For the sample, the prevalence of malnutrition in non-pregnant women aged 15-49 years was 6.4 percent (95% CI: 5.4, 7.4). The highest prevalence was 9.2% found in women from *Daglig-Shirvan* sample, followed by 8.7% in *Guba-Kachmaz*, 8.3% in *Orta Kur*, and 7.1% in *Kur* economic zone. The lowest prevalence of malnutrition in adult women (3.6%) was found in *Ganja-Gazakh* economic zone, followed by 4.3% in *Sheki-Zagatala*. In the other two zones, the prevalence was around the sample average.

Micronutrient deficiencies - The survey investigated three main types of micronutrient malnutrition at the individual and household levels – vitamin A, iodine and iron.

- **Vitamin A:** From the sample, 2.2% (95% CI: 1.6, 2.8) of women had suffered night blindness in their more recent pregnancy with a high of 4.7% (95% CI: 2.5, 7.0) in *Lankaran-Astara* to a low of 0% in *Daglig Shirvan* zones. Only 3% of the women in the sample had received vitamin A supplementation after their most recent delivery with the highest proportion found in *Ganja-Gazakh* (7%) while none of the women in *Daglig-Shirvan* sample had been supplemented. Only 5% of the sample children had ever received vitamin A supplements, according to the mothers. Supplementation was highest in the *Ganja-Gazakh* sample (10%), and lowest in *Guba-Kachmaz* sample (1%).
- **Iodine:** Clinical levels of IDD are known to cause goitre, cretinism, spontaneous abortion, premature birth, infertility and increased child mortality. Nearly one-quarter of the women reported that a member of the household had goitre - ranging from 46% in *Sheki-Zagatala* to 11% in the *Kur* sample. Around two-thirds of the households in the survey had been using adequately iodized salt. This was highest in *Lankaran-Astara* (87%) and *Ganja-Gazakh* (80%) and lowest in *Sheki-Zagatala* (34%) households. Fortification of salt with iodine is the most common method to prevent iodine deficiency.
- **Anaemia:** For the WFP study the haemoglobin levels of 516 non-pregnant women were analysed and 56.8% (95% CI: 52.5, 61.1) were classified as being at least mildly anaemic ($\text{Hb} < 12.0 \text{ g/dL}$). This ranged from a high of 80% (+/- 10%) in *Kur* economic zone to a low of 30% (+/- 10.5%) in the sample from *Lankaran-Astara*. In all, 1.9% of the women were severely anaemic ($< 7.0 \text{ g/dL}$), 6.2%

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were moderately anaemic (7.0-8.9 g/dL) and 48.6% were mildly anaemic (9.0-11.9 g/dL). The highest prevalence of moderate to severe anaemia was found in *Sheki-Zagatala* (17.1%). There were only 49 pregnant women in the entire sample who were tested for anaemia and 57% (+/- 15%) were classified as being at least mildly anaemic ($Hb < 11.0$ g/dL). A total of 675 children (6-59 months) were tested and from those, 52.1% (95% CI: 48.4, 55.9) had haemoglobin levels lower than 11.0 g/dL, which classifies them as being at least mildly anaemic.

Women's health – The women in the sample were asked if they had experienced an episode of diarrhoea or fever in the two weeks prior to the survey. Overall, 19% of the women had at least one episode of diarrhoea, ranging from highs of 34% in *Ganja-Gazakh* and 32% in *Lankaran-Astara* to a low of 7% in *Guba-Kachmaz* economic zone. Recent fever (non-specific) was reported by 21% of the women in the sample with the highest being 34% in *Lankaran-Astara* and 31% in *Ganja-Gazakh*. The lowest prevalence was found in the women from *Guba-Kachmaz* economic zone (9%).

Use of antenatal care - More than 60% of the children in the sample had received skilled antenatal care while in the womb. However, there were some large variations between economic zones – over 90% of the recent pregnancies in *Lankaran-Astara* had received skilled antenatal care, followed by 81% in *Orta Kur*, 79% in *Daglig Shirvan* and 77% in *Guba-Kachmaz*. However, only 8% of the children in the *Sheki-Zagatala* sample had received skilled ANC while in the womb. In all, 27% of the mothers in *Lankaran-Astara* had received at least one tetanus toxoid injection in their recent pregnancies, followed by 11% in *Ganja-Gazakh* and virtually none in the other economic zones.

Food consumption profiling - Residents

Using data on dietary diversity (number of different staple and non-staple foods consumed during the week prior to the survey), the frequency of consumption, sources of the foods consumed (purchased, own production, borrowed, or gifted) and per capita monthly expenditure, seven homogeneous groups of food consumption typologies were identified, using multivariate analysis. The seven distinct household typologies can be clustered into three groups – poor consumption, adequate consumption and good food consumption. Their characteristics are:

Households with poor food consumption (Groups A & B) – 27% of the sample households can be characterized as having poor food consumption. They are of two types:

- **Very poor households - very vulnerable to food insecurity (Group A - 12%)** - These households consume staple food items only and rarely consume non-staples. About 20% of the food consumed is acquired from their own production. For the rest of their consumption, about half of the households rely on purchases while the other half relies on a combination of purchase and borrowing. Food is their highest monthly expense while debt repayments are the highest non-food expenditure. For income, they rely mostly on borrowing or pension as well as some labour activities. In general, they are poor with low asset and livestock ownership and high reliance on purchase or borrowing for food. They have the highest percentage of underweight children and second highest prevalence of child stunting in the sample as well as the highest levels of recent child morbidity.
- **Poor households - vulnerable to food insecurity (Group B - 15%)**: These households have only slightly better consumption than Group A with the addition of fruits/vegetables and some dairy products to the diet. They access

their food through a combination of production (39%), purchase (33%) and borrowing (25%). Food expenditure is mainly for staple food items while debt repayment remains their highest non-food expenditure category. They also rely on borrowing and pension for income as well as some crop sales. This group can be described as the poor farmers of the sample as almost all own and use land and three-quarters own cattle yet they still have poor consumption. Acute malnutrition in children is high as well as high prevalence of child and maternal morbidity.

Households with adequate food consumption (Groups C, D, & E) - 41% of the sample households consume staple items plus at least one non-staple food on a daily basis while consuming other non-staples sometimes. They are characterized by different livelihood activities but all have problems with maternal and child malnutrition.

- **Vulnerable to maternal and child malnutrition (Group C – 15%):** While households in this group have adequate food consumption (at least in caloric terms), other wealth indicators are average within the sample. There is high dependence on income from social benefits. However, there are significant nutritional problems among women in these households with high levels of overweight or obesity and high prevalence of anaemia indicating adequate quantity but poor quality food. Lack of antenatal care is likely a contributor to the high percentage of low birth weight babies.
- **Livestock raising households with pockets of malnutrition (Group D – 19%):** These households have adequate food consumption and an above average level of well being indicators (assets and expenditure), although the main income source is state benefits. These households rely on agriculture and livestock both for consumption and income, and livestock assets are used to mitigate the effects of external household shocks. Maternal malnutrition is the highest in the sample.
- **Farming households vulnerable to malnutrition (Group E – 7%):** Households in this group have relatively good access to and consumption of quality staple food, such as animal products or fruit and vegetables. On the other hand, more households in this group had negative self-assessment in term of food availability across the year. A very large percentage of these households appear to often worry about running out of food and as a result, to have often to eat less preferred quality or variety of food. When analysed with the nutritional outcomes of these households, the high prevalence of anaemia but low levels of weight-related malnutrition show that the households may be getting enough macronutrients but the low diversity does not provide enough micronutrients in the diet.

Households with good food consumption (Groups F & G) – 32% of the households have good food consumption with

- **Good consumption - pockets of child malnutrition (Group F - 14%):** These households manage to consume the many staple food items as well as a variety of other foods, increasing the diversity of the diet. Half of the households rely heavily on purchase with some production while the other half relies on a combination of purchase, production and borrowing. About a third of them receive income from skilled work and thus their income earning potential is relatively higher. The stunting prevalence among children might indicate that, despite the abundance of food, chronic malnutrition could be the result of inadequate care or health and hygiene environments.
- **Good consumption - least vulnerable to food insecurity (Group G - 18%):** Shocks affecting food security of this group of households are common in every part of the country and to every household. Nevertheless, these households appear to be able to have a good quality diet. This seems to be due mainly to their ability of complementing their purchasing power with their own food production. In general, they seem to have better economic

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possibilities and better living standard. The nutrition analysis supports these findings.

Key-findings – IDPs

One of the most significant impacts of the Armenian Azerbaijani conflict over *Nagorno-Karabakh* conflict on Azerbaijan was the creation of a large group of refugees and internally displaced persons (IDPs). Overall there are more than one million IDPs and refugees in the country. The displaced population comprises one of the largest groups of IDPs in the world in per capita terms. Aside from the IDPs residing in the *Absheron*-peninsula, most IDPs live in a region often referred to as the IDP belt, an area in central Azerbaijan stretching from *Mingachevir* to *Bilasuvar*.

The majority of IDP settlements are located in 13 districts. As it was difficult to obtain a reliable sampling frame indicating the location of IDP-settlements, it was decided to draw a purposive sample based upon the settlement type. Hence, the results are not statistically representative and should rather serve as estimates to describe in general the food security situation of IDPs in the country. In total, 363 households in 25 settlements were interviewed, and 348 children less than 5 years of age were measured.

Displacement

- About 8% of the households reported the injury of at least one member in the war, and the same percentage of households reported that at least one member had been disabled. About 7% of the households said that one member of the household was killed during the war.
- Almost all IDP households in the sample receive money allowances from the Government². Free electricity is the second most often reported benefit - 95% of the households interviewed, followed by kerosene (86%), food products (60%), drinking water (26%), education (14%) and medical services (11%). Over 80% of the IDPs report receiving assistance from other agencies, an overwhelming majority from WFP.

Household characteristics & housing

- About 19% of the sampled IDP households are female headed and one in every four household is headed by an elderly person. More than half of the sampled IDP households have at least one member who is chronically ill and one-third have at least one member who is disabled.
- The median size (members per household) of the IDP households in the sample is 5 persons. About 8% of the households are 'large households' - having more than 8 members. On average 47% of the members in a household are dependents³ and 53% of the household members are females.
- Two thirds of IDP sampled households were consuming water from improved sources with households from dugout communities having the lowest access safe drinking water. Electricity was the main source of lighting for almost all of the sampled households, although just 30% of the households indicated regular availability. Nearly 60% of the sample households used electricity as cooking fuel, while half of the sampled households used electric heater for heating, a third of them used firewood.

Household assets, livestock and credit

- In the IDP sample households own on average 8 assets, however every fourth households only owns 2-6 assets. Similar to resident households nearly all

² About 525,800 IDPs receive US\$ 6.1 per person and month as bread allowance from the Government

³ Persons less than 14 years of age and over 59 years of age

households own quilts, tables, beds and chairs and more than 90% own carpets. For productive assets, only about half the households own farm implements. Only 11% own a sewing machine. Transportation assets such as a car or motorcycle are rare among the sample households. As for communication assets, nearly 80% own a television but only one-quarter own a radio and hardly any own a satellite dish or VCR/DVD.

- IDP households own fewer animal assets than resident households. Cattle are found in nearly one-quarter of the sample households, sheep (10%) and goats (5%). The commonly owned poultry are chickens, owned by nearly 60% of the households.
- Almost 90% of households in the IDP sample have access to loan/credit, either through local lenders (82%) and/or relatives and friends (50%). Nearly 90% of the households had purchased food on credit or borrowed money to purchase food with just over half stating they did this on a regular basis.

Agriculture, income & expenditures

- Forty per cent of the sampled households have access to agricultural land for farming and of these only 55% are using the land. Of the total sample of IDP households, one-third was growing vegetables, 14% potatoes, 13% wheat and 12% maize. Tree production was rare. In all instances, the households reported that they consumed most of their production.
- IDP-households are particularly dependent on social benefits. 99% of all IDP households in the sample mentioned IDP benefit as one of their four main income sources, followed by borrowing (84%), child allowance (45%), unskilled wage labour (26%) and skilled work (22%). The proportion of the total income deriving from IDP benefits is as high as 33%, followed by borrowing (25%).
- Even though IDPs are receiving food aid, they have a high share of expenditure for food (54%). While they spend less on bread and wheat (11%) which is the main item in the food aid basket, they have high shares for potatoes/rice/pasta (12%), meat and dairy (8%) and cooking oil (6%). Similar to residents they spent a high proportion on medical care (12%) and fines or debt repayments (10%).

Perceptions of food security, shocks and coping

- Households were asked three questions to assess their perception of their food security- whether they were worried that they would not have enough food or money to buy food; if they did not eat food of the preferred quality or quantity and if they ran out of food and could not afford to buy more. Of the sampled households, 93% answered 'often' or 'sometimes' to at least one of these statements, illustrating the feelings of uncertainty these IDP households have in terms of their own food security, despite the food rations and other benefits.
- In terms of strategies adopted to manage food security, households reported to have 'often' or 'sometimes' – reduced size of meals (72% of the households), skipped meals (55%), eaten less (56%), were hungry but not eaten (23%) and skip days with out eating meals (7%). This indicates again, that these IDP households worry a lot about having enough food to eat from day to day but they still manage to eat on a daily basis even if they are compromising on quality and quantity of intake.
- Overall only a few households reported that they were not confronted by any shocks - 98% of all household mentioned unusually high prices for food, followed by high prices of services (77%). The main idiosyncratic shock was serious illness of a household member, which was mentioned by 49% of the households sampled.

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- Most often IDPs reported decreasing expenditures, purchasing food on credit, changing dietary habits by reducing the quality or quantity of diet and taking loans from family or friends to cope with the shock.

Antenatal care & birth size

- Mothers received at least one tetanus toxoid injection for only 2.5% of the pregnancies. About half the pregnancies were attended by doctors, 8% with nurses, 13% with a midwife and 69% by a relative or friend. Eleven percent of the pregnancies received no antenatal care.
- Nearly 30% of the children were described as being very small or smaller than normal at birth, indicating a problem with low birth weight (< 2500 grams) in this population. Over 90% of the children had been breastfed and about 8% had received a high dose vitamin A supplement.

Child health and nutrition

- In the two weeks prior to the survey, about half the children had suffered from fever, 45% had a cough, 21% had acute respiratory infection, 52% had diarrhoea and 70% had any of the above illnesses. For those with diarrhoea, 45% had been treated at a local clinic.
- Seventy five children (6-59 months) were tested for anaemia. The mean haemoglobin was 10.82 g/dL (95% CI: 10.46, 11.18) and 54.7% (95% CI: 43.1, 66.2) were anaemic⁴.
- The total number of children (6-59 months) weighed and measured was 312. The prevalence of wasting or acute malnutrition was 5.3 percent (95% CI: 0.1, 10.5), the prevalence of underweight is 13.3% (95% CI: 5.5, 21.2), and the prevalence of stunting or chronic malnutrition is 24.0% (95% CI: 14.1, 33.9).
- Children from households using drinking water from safe sources were significantly less likely to suffer from cough or acute respiratory infection, or to be wasted.

Women's health and nutrition

- At the time of the survey, 7.6% of the women were pregnant and 22.3% were breastfeeding. Of those pregnant, only one woman was taking iron/folate tablets. Around 15% of the women reported having a miscarriage or still birth while 22% reported the death of a child.
- Less than 1% of the women had received a high dose capsule of vitamin A supplement after the birth of their last child. Two percent (95% CI: 0.3, 3.8) of the women suffered from night blindness during their most recent pregnancy.
- In the two weeks prior to the survey, 19% of the women had suffered from diarrhoea and 23% had a fever. Only 11% had suffered from both illnesses.
- Around one-quarter of the IDP households in the sample had a member who had been diagnosed with goitre and 35% of those had been treated. Nearly three-quarters of the households were using properly iodized salt at the time of the survey.
- The prevalence of anaemia for the non-pregnant women⁵ in the sample (n = 59) was 76% (+/- 11%) while half of the 6 of the pregnant women⁶ tested were anaemic.
- In the sample of non-pregnant women:
 - 4.5% were malnourished ($BMI < 18.5 \text{ kg/m}^2$)
 - 27% were overweight ($BMI \text{ } 25.0 - 29.9 \text{ kg/m}^2$)
 - 8.6% were obese ($BMI \geq 30.0 \text{ kg/m}^2$)

⁴ Haemoglobin < 11.0 g/dL

⁵ Haemoglobin < 12.0 g/dL

⁶ Haemoglobin < 11.0 g/dL

Food consumption profiling - IDPs

IDP-households were analyzed separately from resident households because of the different sampling frame and methodology, and because of the fact that most IDP-households rely heavily on food assistance. Using multivariate statistical techniques three clusters of households with distinct food consumption patterns were created.

1. **Good food consumption (33%):** None of these households has a food gap and it can be considered that their food consumption, which is highly diversified, is above the minimum nutritional requirements. They have high average expenditures on staple and non-staple foods. For bread or wheat flour, food aid was reported to be the main source for 72% of the households, followed by a combination of food aid and purchase (19%), while 8% relied on purchases only.
2. **Borderline/adequate food consumption (61%):** The majority of the sampled IDP-households fall into the borderline category. Although their minimum requirements of adequate food consumption are met, without food aid, these households would easily fall into the poor food consumption class. They have high average expenditures on staple foods but very low expenditures on non-staples. About one-third of the households rely on food aid only, while every second household supplemented their wheat rations with additional purchases.
3. **Poor food consumption (6%):** Only a few of the sampled IDP-households fall into the poor food consumption category, a sign that food aid has made an important contribution to the food security of the IDP households. These households are characterized by a high intake of carbohydrates and fats to guarantee the minimum caloric requirements. The diet has very little diversification; food aid for this group is essential. In terms of food expenditures they have the lowest average monthly expenditures for staple and non-staple foods. Most households rely on food aid only, around every fifth household supplements the food aid ration with additional purchases.

Ninety four percent of sampled IDP-households fall into the borderline or good food consumption classes meaning that most households were able to maintain minimum food consumption levels. This seems to be a direct result of the successful targeting of food assistance provided by the Government and WFP. In absence of food assistance about two thirds of IDPs would become food insecure. The fact that more than 60% of the sample households have borderline food consumption and most of them supplement their food rations with additional purchases of staple foods could indicate that for this group food rations alone are not sufficient to achieve desired levels of consumption.

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Part I – Background and socio-economic context

Section 1.1 - Overview

Azerbaijan lies on the south-eastern slopes of the Caucasus and on the western coast of the Caspian Sea. Neighbouring countries are Russian Federation and Georgia in the north, Armenia and Turkey in the west, and Iran in the south. Azerbaijan has a population of 8.3 million and covers an area of 86,000 square kilometres¹, of which 20% is currently under occupation by Armenian military troops. The country also has an estimated 800 kilometres of coastline on the Caspian Sea.

The climate is dry and semi-arid and the landscape is mostly flat lowland with the Great Caucasus Mountains to the north and the *Karabakh* Upland in the west. Baku lies on the *Absheron* Peninsula that juts into the Caspian Sea. Some scientists are concerned that the peninsula is ecologically deteriorating due to oil spills, the use of DDT as a pesticide and from toxic defoliants used in cotton production.

Azerbaijan has an average population density of 95 persons per square kilometer. Baku, the capital, is the largest city in the country, with approximately 1.8 million inhabitants. More than 90 percent of the population is Azerbaijanis², followed by Lezghis (2.2%), Russians (1.8%), Armenians (1.5%) and Talish (1.0%). Other distinct ethnic groups include, Avars, Ukrainians, Tatars, Jews, Turks and Georgians. The absolute majority of the population is Muslims. Literacy is estimated to be around 97% for the population aged 15 years and older.

The country is divided administratively into 65 districts, 13 cities, 69 towns and one autonomous republic. The Government has divided the *rayons* into 10 economic zones: *Guba-Kachmaz*, *Daghlig* (Upper) *Shirvan*, *Sheki-Zagatala*, *Aran*, *Ganja-Gazakh*, *Lankaran-Astara*, *Absheron*, *Nakhchivan*, *Yukhari* (Upper) *Karabakh*, and *Kalbajar-Lachyn*.

In terms of overall contribution to the GDP, 34.9% comes from industries³ which are mainly petroleum and natural gas, petroleum products, oil field equipment, steel iron ore, cement, chemicals and petrochemicals and textiles. Another 14.2% comes from agriculture while the rest is from the service sector. The main agriculture products are: cotton, grain, rice, grapes, fruits, vegetables, tea, and tobacco while the main livestock are cattle, pigs, sheep and goats.

Azerbaijan regained independence in 1991 following the collapse of the Soviet Union. The disruption of the economic ties caused unprecedented political, institutional and economic challenges. Social and economic costs of the transition from a centralized to a market economy were high, particularly in the initial years.

Section 1.2 - Conflict over Nagorno Karabakh

The challenges faced by the new Republic were further exacerbated by the Armenian Azerbaijani conflict over Nagorno-Karabakh. Sporadic fighting over *Karabakh* secessionism which started in the late 1980s escalated in a full scale war in 1992. The ceasefire negotiated in 1994 between the two countries has been maintained up to this day. However, Azerbaijan lost about 20% of its

¹ Includes the exclave of *Nakhchivan* Autonomous Republic and the *Nagorno-Karabakh* region; the region's autonomy was abolished in 1991.

² State Statistical Committee, 1999

³ Economist Intelligence Unit

territory as a consequence of the war. An estimated one million Azerbaijanis were forced to leave Armenia and the occupied territories constituting almost 10% of the population in the country. Internal displacement has since been one of the major challenges the country is facing. Pending a solution to the conflict, the Internally Displaced Persons (IDPs) in Azerbaijan have remained in precarious conditions. After ten years, many of them still live in substandard shelters that were originally envisaged as temporary, makeshift accommodations. They have little access to employment and are highly dependent on assistance provided by the Government of Azerbaijan and humanitarian agencies.

Section 1.3 - Economic reforms, oil and employment

Following the ceasefire agreement in 1994 and signing of the first oil contract in the same year, the government initiated comprehensive economic reforms. All this led to financial stabilization, economic growth and a drastic decline in inflation. Oil has generated considerable growth for the overall economy. For the period 1999-2003 the average annual real GDP growth rate was estimated at 9%, and the corresponding figure for 2003 was an impressive 11%. However, this growth has been restricted to the petroleum sector. While this economic growth had a positive impact on foreign investments, productivity and exports, it failed to translate into significant generation of employment. Although accounting for a third of GDP in 2001, petroleum extraction and refining activities account for just 1% of total employment. The growth rate in the non-oil sector has witnessed a sharp decline which was accompanied by a fall in employment. The decline in the employment in the public sector also contributed to the overall decline in the non-oil sector employment.

Section 1.4 - Agriculture and land reform

The fall in employment in the industrial sector was partly absorbed by the agricultural sector. Between 1995 and 2002 employment in the agricultural sector increased by 35%, while decreasing by 8.2% in the service sector and 20% in the industrial sector. The growth in the agricultural employment can be largely explained by the land reform which was carried out in 1996 through the free distribution of over 1.3 million hectares of agricultural land among rural residents⁴. More than 40,000 individual farms and 5,000 other farming units were created with owners having the right to buy and sell plots.

The process of land reform contributed to a higher labour force participation rate⁵ for the rural sector. However, many are employed in temporary jobs in the informal sector while those working in the formal sector earn low wages. Thus, the relatively high employment and labour force participation rates in the rural areas cannot be interpreted as income security. Poor maintenance of irrigation infrastructure, high levels of salinity in soil in varying degrees across the arable land, and limited access to agricultural inputs and technology are major constraints to the establishment of a sustainable rural economy.

Section 1.5 - Poverty

In striking contrast to the bright macroeconomic situation, are the latest estimates that nearly half of Azerbaijan's population are living below the poverty line. A study by the Government of Azerbaijan in 2004, based on a Household Budget Survey, estimates that about 46.7% of the 8.3 million people in

⁴ Displaced persons have been excluded from the land privatization process, which was open only to citizens in their home districts. In recent years, however the Government has distributed some land to IDPs.

⁵ Number of persons in the labour force as percentage of the population.

Azerbaijan spend less than US\$ 35.7 per person per month. Rural areas have a poverty rate of 45.4% which is only marginally lower than the urban poverty rate of 47.8 percent.

Section 1.6 - Education and health

The transition from a state controlled economy to a market economy has negatively affected the quality of the social services such as health and education. Though by law children are obliged to attend primary school and a high value is placed on education by the Azerbaijani society, low expenditures on the education sector have resulted in the deterioration of the school infrastructure. Also increasing poverty and lack of motivated and qualified teachers – especially in remote areas of the country – could lead to a further decline in school attendance, particularly among girls.

Even though citizens are entitled to free basic medical services, low wages of doctors have contributed to the rise of informal payments which makes treatment inaccessible to the poorer sections of society.

Section 1.7 - State benefits

The soviet system of social protection used active risk mitigation such as employment guarantees, price controls and employment related benefits. In the new market economy, Government's role is limited to mitigating social risks through for old age pensions, benefits for disability, unemployment etc. Further, households perceived to be vulnerable are provided with social assistance such as Child allowance, IDP benefits among others. While the role of the state is limited, it spent a substantial 5% of the GDP in 2001 towards these programmes and reaches large sections of the society⁶.

Section 1.8 - Malnutrition

Malnutrition rates, as measured in the last UNICEF Multiple Indicator Cluster Survey (MICS) survey (2000) were also significant, with nearly 20% of the children under-5 stunted, 17% underweight, and 8% with acute malnutrition nationally. Iodine deficiency disorders (IDD) are also problematic in Azerbaijan with one study showing 30% of women of reproductive age (15-49 years) suffering from goitre. Only 41% of households use iodized salt, according to the MICS survey. The prevalence of anaemia was 40% in non-IDP women, according to the 2001 Azerbaijan Reproductive Health Survey.

Section 1.9 - Government response to poverty

In 2003, in response to the high poverty incidence and deterioration of the general standard of living, the Government of Azerbaijan initiated the "State Programme on Poverty Reduction and Economic Development" (SPPRED). The six strategic objectives are the following:

- Facilitation of an enabling environment for growth of income generating opportunities;
- Maintenance of macroeconomic stability;
- Improvement in the quality of and equity in access to basic health and education services;
- Improvement in infrastructure including roads, delivery of utility services, communications and irrigation;

⁶ Average monthly pension is US \$ 19.2 and is paid to 1.2 million individuals, monthly child benefit of US\$ 1.9 is paid to 1.3 million children and monthly IDP benefit of US\$ 6.1 is paid to nearly 0.5 million IDPs.

- Reform of the existing system of social protection specially to give more effective protection to vulnerable population groups;
- Improvement of the living conditions and opportunities of the refugees and IDPs.

The 3-year programme will be reviewed annually and revised if deemed necessary. Expected outcomes are an increase of income generating activities, improved quality of education and health services, increased social protection especially of vulnerable groups, and improved standard of living of IDPs.

Section 1.10 - Internally displaced persons (IDPs)

One of the most significant impacts of the Armenian Azerbaijani conflict over *Nagorno-Karabakh* was the creation of a large group of refugees and internally displaced persons (IDPs). During the period, 1988-89, about 250,000 Azerbaijanis were forced to leave Armenia and moved to Azerbaijan. Subsequently, about 660,000 people from *Nagorno-Karabakh* and neighbouring districts were displaced from their permanent residence.

Most of the displaced people come from the area outside *Nagorno-Karabakh*, including *Fuzuli* (133,725), *Aghdam* (128,584), *Lachyn* (63,007), *Kalbajar* (59,274), *Jabrail* (58,834), *Gubadly* (31,276) and *Zangilan* (34,797)⁷. Overall there are more than one million IDPs and refugees in the country. The displaced population comprises one of the largest groups of IDPs in the world in per capita terms.

Displaced people resettled in 1,500 dense clusters across 62 districts of the country. Nearly half of the IDPs are living in cities (*Baku, Sumgait, Mingachevir* and *Ganja*), the remaining part settled in districts neighbouring the occupied zone. Aside from the IDPs residing in the *Absheron* peninsula, most IDPs live in a region often referred to as the IDP belt, an area in central Azerbaijan stretching from *Mingachevir* to *Bilasuvay*. Often the areas where IDPs settle do not resemble their former livelihoods and geographic environment, e.g. most of the agricultural workers now settle in urban areas; hence often their skill levels do not match the needs of the local labour markets.

Section 1.11 - WFP-assistance

WFP has provided assistance to the internally displaced population in Azerbaijan since 1994. Through the emergency operation (EMOP 5302), which started in 1994 lasted till 1999, WFP provided assistance to 500,000 beneficiaries. In July 1999, the emergency operation was converted to a protracted relief and recovery operation (PRRO 6121) with the aim to decrease the relief caseload as recovery activities started.

The second PRRO (10168) started in January 2003 and will last until December 2005. During the course of this program, WFP proposes to gradually shift focus from protracted relief to recovery operations. Currently WFP provides *free food aid* to around 140,000 beneficiaries, targeting both IDPs and other vulnerable groups such as invalids and orphans. At present, IDPs receive a take home ration equivalent to half their minimum energy, protein and fat requirement (Kcal per person per day). To date, 70% of IDP beneficiaries at distributions have been women and children. By the end of the three year programme, WFP intends to reduce the number of beneficiaries to 114,700.

⁷ Source: Norwegian Refugee Council

In January 2003, WFP introduced a pilot *school feeding programme*⁸ in collaboration with the Ministry of Education. Encouraged by the improved attendance, the program was extended and presently WFP provides fortified take-home rations to 5,334 primary school children⁹ in ten of the most economically disadvantaged districts. This additional support to families offsets the cost of school supplies and uniforms to some extent. Importantly, it is likely to prevent primary school children, especially girls, from dropping out of school. WFP recently signed an agreement with UNICEF to work jointly on an intervention, to augment the quality of education, through the introduction of child centred learning methodologies in the targeted schools.

In the first phase of PRRO (6121), WFP found it difficult to carry out *Food-for-Work* activities in IDP settlements. Projects were often hindered by a lack of matching inputs such as material, from other organizations and access to land.

In 2000, UNICEF and WFP joined efforts to support multi-functional *day care centres* for preschool children in IDP camps in 14 districts. The aim was to introduce low-cost family- and community-based models of early childhood care, survival, growth and development, and to train care providers. Building on the success of this initiative, the current PRRO supports 33 day care centres, assisted by 257 caregivers, who take care of 2,570 children across 15 districts. At these centres, food is given¹⁰ to the care givers in exchange for work rendered.

At the time of preparation of this report, WFP operations in Azerbaijan are facing a serious pipeline breakdown. WFP is facing a US\$ 4 million shortfall, out of a total of US\$ 21 million, for the three-year humanitarian operation, which started in January 2003. Despite efforts, there were not enough stocks to sustain the operation and thus free food distributions and day care centres activities came to a complete halt in January 2005. Coming in the wake of the harsh winter months where temperature plunges to as low as minus 20 degrees Celsius in certain parts of the country, this withdrawal for the mostly unemployed IDP community could serve a rather severe blow. Only WFP's school feeding program, which feeds more than 5,300 primary school children, continues. An essential part of the take-home rations provided to school children is vitamin fortified wheat soya blended food, and these stocks also ran out in January 2005.

The suspension of food distribution prompted the Government of Azerbaijan to contribute food commodities to the operation. WFP was also able to make local purchase of certain commodities, which together with the Government's donation allowed resumption of food distribution in February.

The pace of distribution in the following months would depend on the timely arrival of future shipment and the receipt of additional contributions. Cash contributions would enable WFP to procure commodities locally on time to avert shortfalls.

⁸ Monthly food ration per child includes 2.25 kg of wheat flour, 0.3 kg pulses, 0.15 kg sugar, 0.15 kg salt, 1.5 kg of wheat-soya blend and accounts for 50% nutritional requirement of the child. Children with at least 90% attendance in a month are entitled to this food ration.

⁹ Children from both resident and IDP communities

¹⁰ Monthly food ration for day care givers includes 16.7 kg wheat, 1.3 kg pulses, 1.2 kg oil, 0.5 kg sugar, 0.6 kg of tea.

Part II – Food security and nutrition survey in 6 economic zones

The primary aim of the food security and nutrition survey was to obtain a better understanding of the food security and nutrition situation of resident population as well as a sub-sample of IDPs in rural Azerbaijan. The report serves as key-input into WFP's decision-making process, with regards to the need for, or the shape of any WFP Programme after 2005.

Section 2.1 - Objectives

The objectives of the study were to:

- Assess levels of food insecurity of resident population in the six economic zones (shown on map) and IDPs living in various settlement types.
- Carry out a livelihood and vulnerability analysis to describe the overall food security situation of residents and IDPs
- Assess the malnutrition and health status of the sampled households by collecting anthropometric data and other relevant information on micronutrient deficiencies, namely anaemia and iodine deficiency
- To determine who the food insecure are, where they live, and why they are food insecure.
- Provide recommendations to decision-makers on the possible role for food aid, beyond 2005 in addressing household food insecurity.



Section 2.2 - Methodology and data collection tools

The Country Office with the support of VAM/HQ and VAM/ODC decided to carry out a household food security and vulnerability survey with a nutrition component. The survey was designed to draw samples of resident rural households from each of six economic zones in order to produce results at the zone level. In addition, a purposive sample of IDP communities and households within the zones were drawn to provide a relatively representative sample for analysis. Household questionnaires were used for interviews and anthropometric measurements were taken on women between 15-49 years plus their pre-school

children (0-59 months). A sub-sample of these women and children were tested for anaemia.

The household questionnaire was developed to collect quantitative information on household demography, housing and amenities, household and animal assets, income sources & contribution, agriculture, expenditures; food consumption, food sufficiency, household exposure to risks & shocks and coping strategies, maternal and child health and nutrition. A special section was designed for IDP households to assess their specific situation related to their displacement. The questionnaire was prepared in English and then translated into Azerbaijani for actual data collection.

For maternal anthropometry, height and weight were measured for non-pregnant women while weight and length/height were measured on children less than 5 years of age. This information would be used to calculate nutritional indicators (stunting, wasting, underweight and BMI).

During the interviews, household members were asked if anybody had been diagnosed with goitre and if they had been treated in order to assess iodine deficiency. In addition, households were asked to provide salt samples which would be tested on the spot to determine iodine content.

For assessing anaemia in the population, a sub-sample of women and children in each zone were selected. In the field, the teams used Hemocue® machines to measure haemoglobin levels in drops of blood from a finger prick. The questionnaire also contained questions regarding maternal night-blindness during pregnancy and coverage of vitamin A supplementation programmes in order to assess the situation regarding vitamin A deficiency.

Section 2.3 - Sampling

The main focus of the survey was on the food security and vulnerability of resident populations in rural areas of Azerbaijan. Hence, the majority of household interviews were from these resident populations with only a small sub-sample of IDP households in the six economic zones. Separate samples were drawn by WFP VAM-HQ from each group for the survey.

2.3.1 - Resident sample

A list of all communities and their populations in the economic zones of *Guba-Kachmaz*, *Daglig-Shirvan*, *Sheki-Zagatala*, *Aran* (divided into *Kur* and *Orta-Kur*)¹, *Ganja-Gazakh* and *Lankaran-Astara* was provided by WFP Azerbaijan. Not covered were *Nakhchivan* an isolated zone surrounded by Turkey, Iran and Armenia, the occupied area of *Nagorno-Karabakh* and the occupied districts surrounding it, and the *Absheron* peninsula, which is sparsely populated except for the greater Baku area. Exceptions were the two districts *Tartar* and *Khyzy* - *Tartar* officially belonging to the occupied economic zone is covered under the *Orta-Kur* sub-sample and *Khyzy*, officially belonging to the *Absheron* peninsula, is covered under *Guba-Kachmaz*.

A two-stage cluster sampling was applied; the first stage was to draw a sample of 20, 30 or 40 clusters (in total 210 clusters) depending on the population size of each zone or sub-zone. The second stage was to randomly select 12 to 15 households in each sampled community using interval sampling based upon the physical distribution of households within a grid. A total of 3,078 households

¹ It was decided to split *Aran* into two zones as it is covering a large geographic area. *Kur* and *Orta-Kur* are names that are commonly used to refer to these two sub-zones.

were interviewed, which included 27 IDP-households that lived mixed with local residents. The sample allows comparisons between Economic Zones but is not precisely representative of the population.

Economic zone	Population estimate ²	Number of communities planned – all achieved	Number of household interviews		Number of children measured
			planned	achieved	
Guba-Kachmaz	453,100	30	450	431	409
Daglig Shirvan	257,400	20	300	300	255
Sheki-Zagatala	531,900	30	450	444	453
Aran (Kur)	551,600	30	450	440	270
Aran (Orta Kur)	950,000	40	600	592	628
Ganja-Gazakh	794,300	30	450	439	520
Lankaran-Astara	753,700	30	450	432	514
Total	4,292,000	210	3,150	3,078	3,049

2.3.2 - IDP-sample

The majority of IDP settlements are located in 13 districts. As it was difficult to obtain a reliable sampling frame indicating the location of IDP-settlements, it was decided to draw a purposive sample based upon the settlement type. Hence, the results are not statistically representative and should rather serve as estimates to describe in general the food security situation of IDPs in the country.

At the time of the survey only one railway camp still existed, the sample size is therefore rather small for this category. It should also be noted that many

	Number of settlements	Number of households interviewed	Number of children measured
Dugout	4	57	47
ECHO	4	60	54
Mud house	4	54	52
Public building	7	102	109
New settlement	5	75	67
Railway	1	15	19
Total	25	363	348

households categorized as dugouts, now live in small basic mud-brick houses located next to their former underground dwellings where they now keep livestock. It was still decided to treat these households as a separate category as they reside in a distinct geographic area; it can also be assumed that their former livelihoods as herders still determine many aspects of their current situation and livelihood opportunities. In total, 363 households in 25 settlements were interviewed, and 348 children less than 5 years of age were measured.

Section 2.4 - Data collection

The design of the assessment methodology, data analysis and final reporting was done by the WFP Vulnerability Analysis and Mapping (VAM) units of Rome and Azerbaijan. The data collection was organized and carried by the NGO, Relief International (RI). After several days of training and field-testing, enumerators were divided into 8 teams of 4 members - 1 team leader, 2 enumerators, and 1 medical doctor who was responsible for anthropometric measurements, haemoglobin and iodine testing. Basically each team covered one zone including the sampled IDP settlements in the zone. *Kur*, with 40 clusters, was covered by two teams, also because the majority of IDP settlements were located there. The data collection process which took place from 01 September to 19 October 2004 was regularly monitored by WFP and Relief International staff members.

² Source: State Statistical Committee of Azerbaijan Republic

Section 2.5 Data entry and analysis

The data were entered on a rolling basis by a team of people employed by Relief International. They were supervised by RI and supported by WFP CO and HQ staff. The teams used Epi-Info Epi Info 6 [program]. 6.04d version. Atlanta: Centers for Disease Control and Prevention, 2001. software version 6.04d. The calculation of child anthropometric indices was conducted in EpiNut, a module within Epi-Info. All data were analysed using SPSS software, versions 11.5 and 12.0, except for the multi-variate analysis which was done using ADATTI software. Relief International made a preliminary analysis of the nutrition data and submitted a draft report. The final analysis and reporting were done by staff from WFP offices in Azerbaijan and Rome.

Part III – Household survey results - Residents

Section 3.1 – Demography, housing and household amenities

In this section, the findings of the survey modules on household demography, shelter and facilities for the sample of residents are presented by economic zone. The same information for the IDP sample is presented in a separate section of this report.

Of the nearly 3,100 households in the resident sample, nearly 85% were Azerbaijanis – all households in *Kur*, *Orta Kur* and *Ganja-Gazakh*. In *Guba-Kachmaz* more than 20% of the households were from the Lezgin ethnic group as were 4% in *Daglig Shirvan* and 11% in *Sheki-Zagatala*. Only half the households in the *Lankaran-Astara* zone were Azerbaijani while the rest were from the Talish ethnic group.

3.1.1 – Household headship

Nearly 20% of the sample households were headed by women, ranging from highs of 26% in *Ganja-Gazakh* and 24% in *Orta Kur*, to a low of 7% in the *Guba-Kachmaz* sample. More than 90% of the female heads of household were widowed and they have a median age of around 65 years. The male heads of household are considerably younger with a median age of 43 years. However, in the *Guba-Kachmaz* sample, the median age was 35 years for male heads of household. About one-third of the households in total were headed by persons over 60 years of age – ‘elderly headed’ households. Only 10% of sampled households in *Guba-Kachmaz* were ‘elderly headed’, but between 35-45% in the other zone samples.

Literacy of household head was high, with 87% of all household heads reporting to be literate, averaging 9 years of formal education. Ninety percent of their spouses were literate, also averaging 9 years of formal education. However, when investigating literacy by gender of household head, only 59% of the female heads of household were literate which was significantly lower ($p < 0.001$) than literacy for male heads (94%), who averaged 10 years of education. There were some differences in literacy of household head by economic zone with the lowest in *Ganja-Gazakh* (81%), *Lankaran-Astara* (82%) and *Kur* (83%) zones and the highest in *Guba-Kachmaz* (96%). Spouse literacy followed a similar pattern.

3.1.2 – Household size and composition

The average household size in the overall sample was 5.8, meaning about 6 persons per household. The median size was 5 persons in *Guba-Kachmaz*, *Sheki-Zagatala* and *Kur* samples and 6 persons in the others. In all, 17% of the sample households had 8 or more members – ‘large households’. One-third of the households in the *Lankaran-Astara* sample were ‘large’ as compared to only 8% in *Sheki-Zagatala* and 10% in *Guba-Kachmaz*. When investigating median household size by headship, the female-headed households had 6 members, compared to 5 for households headed by men, indicating that in this sample, when women are head of household they are most often older widows with adult child(ren) and their families.

The percentage of dependents (*members < 15 years or > 59 years*) was calculated for each household and then the average for each economic zone was calculated. This definition complies with the World Bank definition used to calculate the dependency ratio in populations. For the sample, on average just under half of the household members were dependents. The zones with the highest average percentage of dependents in the household were *Ganja-Gazakh* (52%), followed

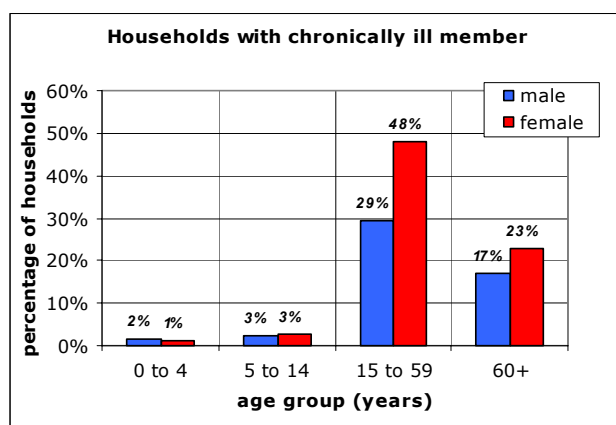
by *Sheki-Zagatala* (50%). *Kur* economic zone sample had on average only 38% of household members as dependents, indicating the presence of more potential earners per household.

The gender ratio was investigated in a similar way by calculating the percentage of females in each household and then the average for each economic zone sample. Overall, 51% of the total sampled household members were females, ranging from 53% females in the *Sheki-Zagatala* sample to an even 50% in both *Guba-Kachmaz* and *Kur* samples.

Families derive a certain amount of income from government pensions with women qualifying at the age of 57 years and men qualifying at 62 years. More than 40% of the sampled households had a female pensioner as compared to 24% having a male pensioner. Eighteen percent of households had both a male and female pensioner. Female pensioners were more likely to be found in the *Daglig Shirvan* sample (55%) and in *Ganja-Gazakh* (49%) and less common in *Guba-Kachmaz* (32%) and *Lankaran-Astara* (34%). A similar pattern is found for male pensioners in that they were found in 27% of the sample households in *Daglig Shirvan* and *Orta Kur* and only 17% of the *Guba-Kachmaz* sample households. Twenty-two percent of the sample households in *Daglig Shirvan* had both a male and female pensioner as compared to only 12% of the *Guba-Kachmaz* sample.

3.1.3 – Chronic illness¹ and disability

During the household interview, the families were asked if there were any persons chronically ill in the household. If there was such a person in the household, information was also collected on whether the head of the household was chronically ill as well as the age and gender of those suffering from chronic ailments. In all, about 40% of the households had a chronically ill member and of those, about half were the heads of households. By economic zone, 70% of the households in the *Sheki-Zagatala* sample had a chronically ill member, followed by 61% in *Lankaran-Astara*. Only 15% of households in *Guba-Kachmaz* and 22% in *Kur* reported chronically ill members. The household head was chronically ill in 54% of those households in *Kur* and only 31% in *Guba-Kachmaz*.



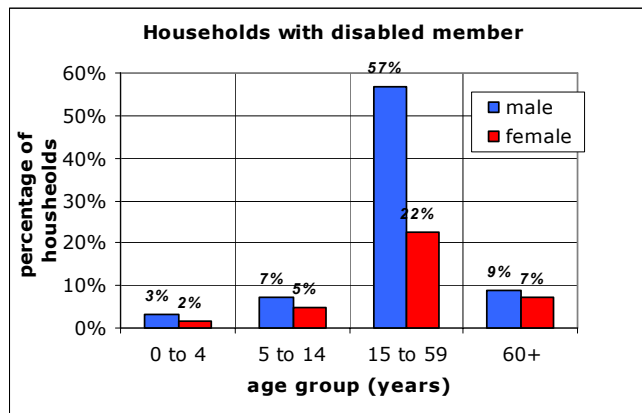
The chart on the left shows the percentage of households with a chronically ill member by age and gender. Very few households had a young member with a chronic illness. However, nearly half the households had a productive female member (15-59 years) with a chronic illness while nearly 30% had an ill male productive member. In the over 60 age group, there will still more households with a female chronically ill member

than a male member. By zone, households in *Kur* (35%) and *Daglig Shirvan* (34%) were more likely to have a chronically ill male member aged 15-59 while the lowest was found in *Ganja-Gazakh* (20%). Households in *Guba-Kachmaz* (69%) were most likely to have a chronically ill female member aged 15-59 years

¹ Chronic conditions were defined as: arthritis, asthma, allergies, cancer, chronic fatigue syndrome, diabetes, epilepsy, heart disease, hepatitis B or C, osteoporosis, overweight & obesity, stroke

old, followed by 55% of households in *Sheki-Zagatala* and *Lankaran-Astara*. Around 30% of households in *Daglig Shirvan* and *Ganja-Gazakh* had chronically ill female household members in the 15-59 year age group.

When asked about disabled household members, just over 20% of the sample households had at least one member who was disabled and in one-third of those cases, the disabled member was the head of the household. The exact nature of the disability was not determined. Very few young children were disabled but a few more in the 5-14 years age group were disabled as compared to chronically ill. Nearly 60% of households reported a disabled male member in the productive age group (15-59 years), as compared to only 22% of women in the same age group. Disability in the older ages was much less common than chronic illness with similar rates for both men and women. About one-third of the households in *Lankaran-Astara* reported a disabled member as compared to only 13% in *Guba-Kachmaz*. For those households with a disabled member, more than 40% were the head of household in *Kur*. About 70% of the households in *Kur* and *Orta Kur* economic zones reported a disabled male member aged 15-59 years.



3.1.4 - Housing

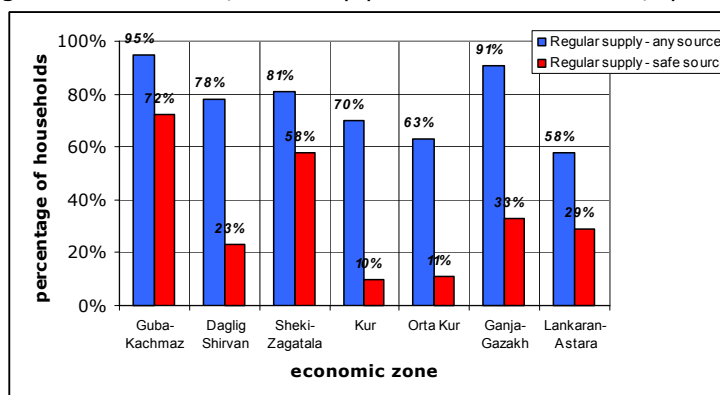
For five of the seven economic zone samples, the majority of the households live in single-family dwellings. However, in *Kur* and *Lankaran-Astara* zones, more than 30% of the resident families live in mud houses. Nearly all of the families own their homes – slightly fewer in *Guba-Kachmaz* sample (87%) than in the other zones but those not owning tend to live for free in their current dwelling. Most of the families across all economic zones have spent at least two decades in their current dwelling. Families in *Guba-Kachmaz* and *Ganja-Gazakh* have spent at least 20 years, while those in *Daglig Shirvan* have been around for nearly 40 years.

The number of people living in a single house is between 5 and 6 in all economic zones – similar to the average household size in the samples. The average number of rooms² for living and sleeping is between 2 and 3 in the zones. Therefore it is useful to look at the average number of people per room as an indication of crowding. The average number of people per room is significantly correlated with both maternal and child morbidity in this survey. The lowest level of crowding was found in *Guba-Kachmaz* with 1.9 persons per room while the highest was 2.8 persons per room found in both *Ganja-Gazakh* and *Lankaran-Astara*. Another way to look at this problem was to determine the percentage of households with 4 or more persons per room (very crowded). Only 5% of the households in the *Guba-Kachmaz* sample were very crowded as compared to 20% in *Ganja-Gazakh* and *Lankaran-Astara*.

² Not for storage, cooking or bathing

3.1.5 - Water and Sanitation

Access to safe drinking water is estimated by the percentage of households using improved drinking water sources as per UNICEF definitions³. According to this definition, safe drinking water includes, water piped in to household, public standpipe, boreholes, protected dug well, protected spring and rainwater collection. In the economic zones of *Guba-Kachmaz* and *Sheki-Zagatala*, about 70% of households were using water from improved sources (safe). In both zones the safe water was mainly piped in the dwelling or from a public tap but more households in *Sheki-Zagatala* used water that was piped into the dwelling. Households from *Orta Kur* were the least likely to be using water from safe sources – most were using water from unprotected springs or from a pond, lake or river. The graph above shows the percentage of households with regular supplies of water, comparing water from any source to water from improved sources. Households in *Guba-Kachmaz* have the best access to water from any source and from improved sources. Households in the *Ganja-Gazakh* sample had regular access to water but not from safe sources. Only about 10% of households in *Kur* and *Orta Kur* had regular access to water from improved sources.



Nearly all of the households in the sample reported that they use a traditional pit latrine to dispose of their waste. Very few were using flush toilets or latrines linked to a septic system.

3.1.6 - Source of lighting, cooking and heating

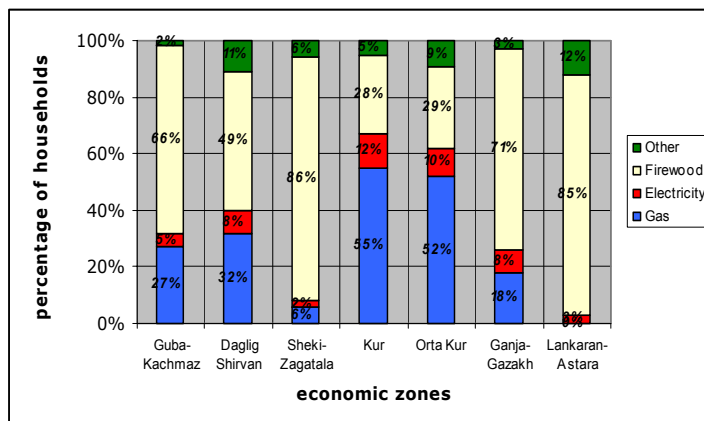
Ninety percent or more of the households in all zones except *Lankaran-Astara* use electricity as the main source of lighting. In *Lankaran-Astara* two thirds of the households use electricity as the main source while the rest of the households mainly rely on lamps. The access to electricity as the source of lighting does not however translate in to regular availability. As the table on the right shows, the irregular supply of electricity is a problem, across all regions in varying degrees⁴. Households in the *Guba-Kachmaz* sample were most likely to have regular supplies of electricity but that was only for about 40% of them.

	Availability of electricity (% of households)		
	Regularly	Sometimes	Rarely
Guba-Kachmaz	43%	54%	3%
Daglig Shirvan	9%	85%	6%
Sheki-Zagatala	5%	87%	7%
Kur	5%	76%	19%
Orta Kur	1%	85%	14%
Ganja-Gazakh	4%	96%	-
Lankaran-Astara	1%	94%	5%

³ UNICEF MICS study for rural Azerbaijan (2000) suggests that 58% of the rural population has access to safe drinking water. However, as per the Government of Azerbaijan this may be an over-estimate, since this analysis assumes that all piped water is safe, which may not be true (for instance, water coming from the Kur River is reported to be heavily polluted).

⁴ The World Bank estimates in 2002 suggest that the problem is pronounced in winter, when rural households receive on average seven hours of electricity per day.

While many households have access to electricity for lighting, few rely on it for cooking. Across the zones, households are either using gas or firewood for cooking.



More than half the households in *Kur* and *Orta Kur* were using gas for cooking while nearly all households in *Sheki-Zagatala* and *Lankaran-Astara* were using firewood.

Most households reported using wood

for heating. However 15% of the households in *Daglig Shirvan* are using gas heating and another 13% are using stoves, while nearly one-third of the households in *Kur* are using electricity for heating.

Section 3.2 – Household and animal assets and credit

3.2.1 – Household asset ownership

During the interview, the respondents were asked if any member of the household owned 16 household assets, ranging from basic assets like a bed or quilt to productive assets like a sewing machine or farm implements, to luxury assets like a satellite dish or automobile.

The most commonly owned assets are quilts, beds, tables, chairs, and carpets being owned by nearly all households. Stoves are owned by most households except those in *Lankaran-Astara* (37%), *Kur* (58%) and *Guba-Kachmaz* (68%). Over 40% of the households own a refrigerator, ranging from only 18% in *Lankaran-Astara* to 56% in *Daglig Shirvan* and 61% in *Kur* economic zones.

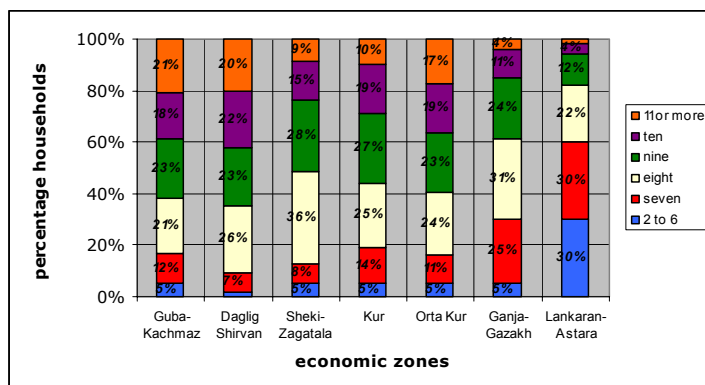
For productive assets, nearly all households in the sample farm implements with the exception of *Lankaran-Astara*, where only 72% own agricultural tools. Seventeen percent of the sample households own a sewing machine with highest levels of ownership found in *Guba-Kachmaz* (27%) and lowest in *Sheki-Zagatala* (9%) and *Lankaran-Astara* (10%). Trailers are owned by 7% of the households ranging from 11% in *Ganja-Gazakh* to 3% in *Kur* and *Lankaran-Astara* economic zones.

Motorcycle ownership was quite low – only 3% ownership in the sample. The highest percentage of households owning a motorcycle was 6% in *Orta Kur* while no households in *Ganja-Gazakh* owned them. Car ownership was higher with 15% ownership overall. Around 20% of the households in the *Guba-Kachmaz*, *Daglig Shirvan*, *Kur* and *Orta Kur* samples owned automobiles as compared to only 4% in *Ganja-Gazakh*.

Assets related to communication included radio, television, satellite dish and VCR/DVD. More than 80% of the sample households owned a television – more than 90% in *Guba-Kachmaz* and *Kur* but only two-thirds of the households in *Ganja-Gazakh* and *Lankaran-Astara*. In *Guba-Kachmaz*, 10% of the households owned a satellite dish and 15% owned a VCR or DVD player. Ownership of these items was much lower in all other economic zones. About one-quarter of the sample owned a radio with highest ownership in *Daglig Shirvan* (37%) and lowest

in *Ganja-Gazakh* (13%). In all, 31% of the households in *Ganja-Gazakh* and 27% in *Lankaran-Astara* were without radio or television.

Analysis of the number of assets owned per household shows that households in most economic zones own about 9 assets with the exceptions being *Ganja-Gazakh* (8 assets) and *Lankaran-Astara* (7 assets). When categorizing a count of the number of assets owned as a proxy indicator of wealth, one-third of the



households in *Lankaran-Astara* economic zone are found to be 'asset poor' while one-fifth of the households in *Guba-Kachmaz* and *Daglig Shirvan* can be described as 'asset rich'. The overall findings are presented in the graph on the left.

The *Orta Kur* sample also appears to have a fairly high percentage of 'asset rich' households while in *Ganja-Gazakh*, although not as asset poor as *Lankaran-Astara*, is definitely worse than the other economic zone samples.

3.2.2 – Animal asset ownership

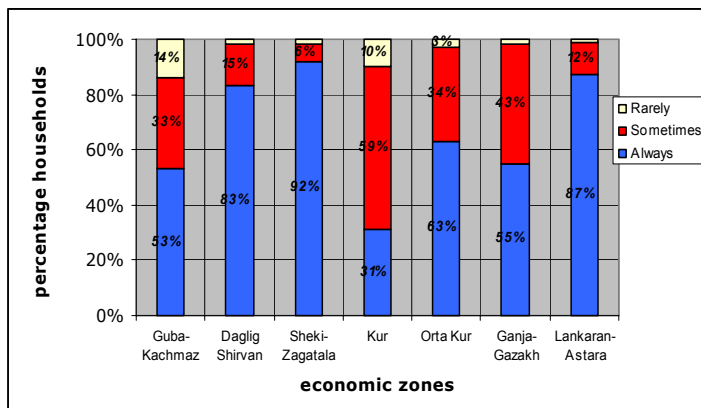
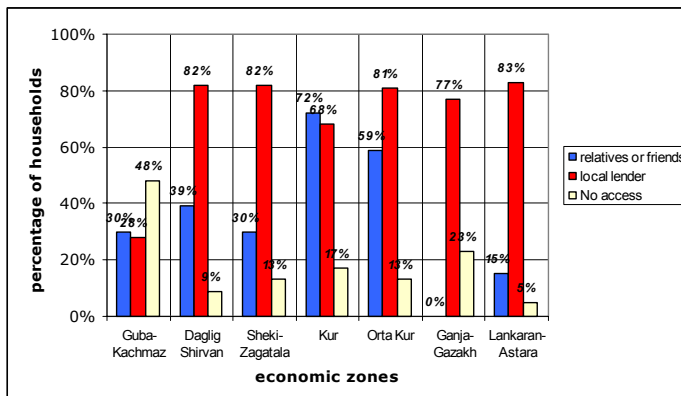
Ownership of livestock is quite high in rural Azerbaijan with more than 70% of resident households own cattle, oxen/buffalo, donkeys/horses, goats, and/or sheep. Cattle ownership was fairly consistent across the zones with the exception of *Ganja-Gazakh* where only 63% of the households owned an average of just one animal. In *Daglig Shirvan* nearly 80% of the households owned cattle. The ownership of oxen or buffalo was highest in *Orta Kur* (21%) and very low in *Guba-Kachmaz* (3%), *Lankaran-Astara* (4%) and *Ganja-Gazakh* (6%). The ownership of donkeys or horses was quite low in *Kur* (7%) while one-third or more of households in *Daglig Shirvan*, *Ganja-Gazakh* and *Lankaran-Astara* owned these animals.

Fewer households owned the smaller ruminants with only 8% owning goats and 29% owning sheep in the entire sample. For goats, the average number of animals owned was around 3 with the highest rate of ownership found in the *Daglig Shirvan* sample (21%). Half the sample households in *Daglig Shirvan* also owned sheep with an average of 8 animals per owning household. About one-third of households in *Guba-Kachmaz*, *Sheki-Zagatala* and *Kur* owned sheep as well but with a higher average number (9) of animals in *Sheki-Zagatala*.

Ownership of chickens was very high for the sample households with more than 90% keeping an average of about 11 birds per household. Chicken ownership was lowest in *Ganja-Gazakh* (87%). Turkeys were the next most common poultry, owned by about one-third of the households in the sample. More than half the households in *Orta Kur* had turkeys while ownership was lowest in *Sheki-Zagatala* (16%) and *Lankaran-Astara* (18%) economic zones. Most households owning turkeys had five birds. Ducks were owned by 12% of the sample and were most often found in the *Lankaran-Astara* sample (26%). Geese were found in 16% of the sample households, ranging from 23% in *Kur* to 6% in *Sheki-Zagatala*.

3.2.3 - Access to loans or credit

A large proportion of households across economic zones have access to loans or credit either through **relatives or friends** or **local money lenders**. Outstanding is *Guba-Kachmaz* where only every second household can access credit to borrow money. Hardly any households had access to credit through charities or NGOs. Borrowing from local lenders is equally common across economic zones with the highest prevalence in Lankaran-Astara (83%), again Guba-Kachmaz is the exception with only 28%. Borrowing from relatives and friends is very common in Kur (72%) and Orta Kur (59%), it is less common in Lankaran-Astara and Ganja-Gazakh with 15%, or less than 1% respectively.



A common strategy is to **purchase food on credit** or to borrow money to purchase food. The highest percentage is found in *Lankaran-Astara* where 95% of households reported that they often purchase food on credit. Similarly to the above findings, *Guba-Kachmaz* has the lowest prevalence with

only 49 percent. Striking is also the fact that 80-90% of households in *Sheki-Zagatala*, *Lankaran-Astara* and *Daglig-Shirvan* reported that they **always** purchase food on credit.

Section 3.3 – Household income

As regular employment is scarce it was important to assess both current employment as well as the main income activities household members are engaged in throughout the year.

3.3.1 – Current employment of household head

At the time of the survey just over half the heads of household under 60 years were currently employed. Current employment of household head (< 60 years) was highest in *Kur* (89%) and *Sheki-Zagatala* (80%) and between 30-40% in *Lankaran-Astara*, *Ganja-Gazakh* and *Orta Kur* economic zones. In fact, nearly three-quarters of household heads over 60 years in *Kur* EZ were employed at the time of the survey. For those not currently employed, only about 10% (< 60 years) had worked in the past week. This percentage was slightly higher in those zones with the lowest current employment rates. Most of these occasional workers had been engaged in unskilled wage labour and were paid in cash.

3.3.2 – Main income activities

In terms of **annual income sources** households in this sample heavily depend on social benefits such as pension, child allowance, disability benefits as well as borrowing. Households were asked to name their top four income activities and to estimate the contribution of each source to total annual income.

In terms of the **most important** income activity named by the households in each zone, an interesting finding was that three in four households in the *Lankaran-Astara* sample named **borrowing** as their most important source. Borrowing is commonly reported across zones and could possibly be a strategy used by the households to meet day to day needs. Borrowing as the most important income activity was also named by about 40% of the households in *Ganja-Gazakh*. **Pension** was the most often named in *Daglig-Shirvan* (27%), *Sheki-Zagatala* (27%), and *Orta Kur* (22%) samples while households in *Kur* named **crop sales** (36%) most often as their primary source of income. One-quarter of the households in the *Guba-Kachmaz* sample named **skilled work** as their most important source while another quarter rely most on **crop sales** for income.

A multiple response analysis was applied to assess the four main income sources. Borrowing is mentioned by most households to be one the four main income activities, ranging from 49% in *Guba-Kachmaz* to 94% in *Lankaran-Astara* where they also rely heavily on child allowance and disability benefits for income.

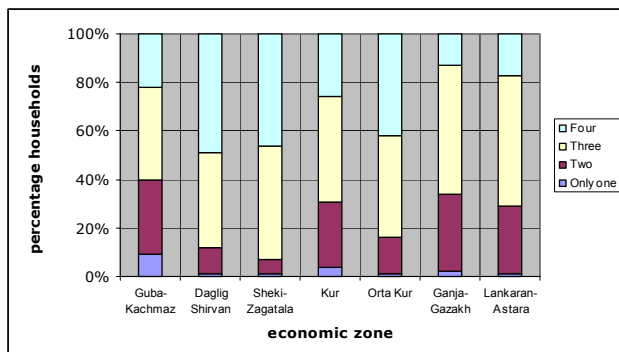
Income sources by Economic Zone based on multiple response analysis

	Guba-Kachmaz	Daglig-Shirvan	Sheki-Zagatala	Kur	Orta Kur	Ganja-Gazakh	Lankaran-Astara
Borrowing	49%	81%	80%	77%	78%	77%	94%
Child allowance	61%	50%	55%	30%	57%	60%	64%
Disability benefit	10%	14%	15%	9%	16%	14%	23%
Livestock sales	15%	43%	-	-	12%	-	-
Other	-	-	15%	13%	-	8%	13%
Pension	37%	60%	48%	47%	53%	53%	38%
Salary from employer	-	-	-	-	-	-	10%
Sales of crops, fruits & vegetables	35%	19%	65%	58%	32%	11%	-
Skilled work	32%	36%	22%	22%	28%	14%	23%
Unskilled wage labour	21%	15%	25%	13%	21%	27%	-

Around 60% of households in *Sheki-Zagatala* and *Kur* reported sales of crops, fruits and vegetable as one of their four main income activities. Nearly every second family in *Daglig-Shirvan* reported to sell livestock as one of their main income activities. Skilled work is mentioned across economic zones, and ranges from 14% in *Ganja-Gazakh* to 36% in *Daglig-Shirvan*. Reliance on unskilled labour activities ranges from around 15% in *Kur* and *Daglig Shirvan* to 25% or more in *Sheki-Zagatala* and *Ganja-Gazakh*. Overall *Ganja-Gazakh* and *Lankaran-Astara* appear to have the least income earning opportunities available if benefits and borrowing are not taken into consideration.

3.3.3 – Number of income activities

Since the households were able to name up to four sources of income it was of interest to see how many households relied on just one source or up to four sources. The graph below shows that the *Guba-Kachmaz* sample has the highest

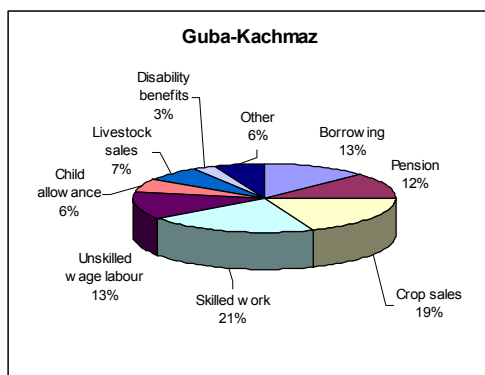


percentage of households with only one source and thus the highest with only one or two sources. *Daglig-Shirvan* and *Sheki-Zagatala* sampled households are most likely to have named three or four income sources. The most common income activities for households naming only one source are skilled work (35%), unskilled work (25%) and sales of crops, fruits &

vegetables (15%). For those naming only two sources, the most commonly reported activities were borrowing (30%), skilled labour (17%) and sales of crops, fruits & vegetables (15%). Households naming three activities were most often engaged in borrowing (31%), sales of crops, fruits & vegetables (17%) and received pension (17%). Those with four activities most often rely on pension (23%), sales of crops, fruits & vegetables (20%), skilled work (14%) and borrowing (13%).

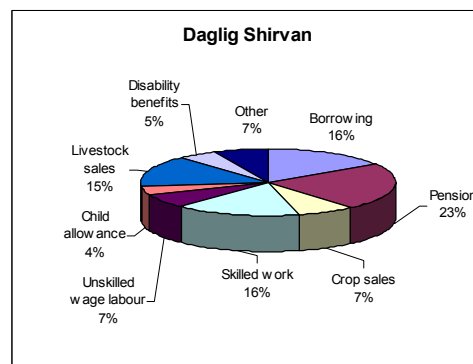
3.3.4 – Contribution to annual income

Respondents were also requested to estimate the relative **contribution to the annual income** of each activity. Some of the benefits such as child allowance and disability benefit contribute relatively less to the overall income even though most households named them as one their main four income sources. The proportion from borrowing⁵ and pension remains high, though it varies from zone to zone. Analysis for each zone sample is presented in the following graphs.



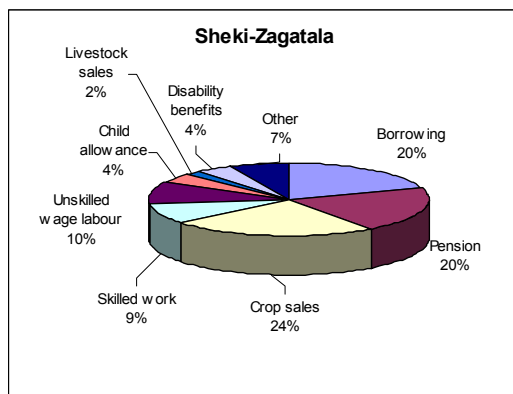
Households in *Guba-Kachmaz* receive the highest share of their annual income from skilled work – more than any other zone. This is followed by crop sales, unskilled wage labour (highest in the zones) and borrowing, the lowest of all the zones. The contribution from pension is also quite low when compared to the other zones.

For the households in the *Daglig Shirvan* sample, the largest share of annual household income is from pension, which is also the highest of all the zones. This



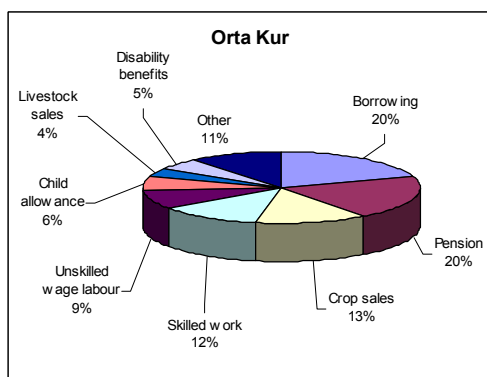
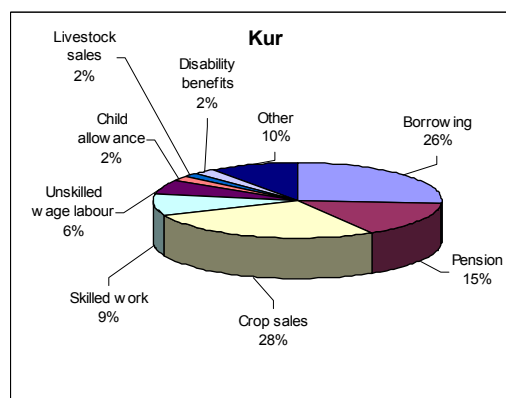
⁵ Although borrowing is a common practice in Azerbaijan, its contribution to the annual income is surprisingly high. Further analysis using qualitative methodologies would be required to assess the issue in more depth.

is confirmed by the fact that 55% of the households have a female pensioner (highest of all zones) and 27% have male pensioners in the family (also the highest of all zones). The contributions from borrowing and skilled work are 16% each. These households also have a high share of income from livestock sales – the highest of all groups.



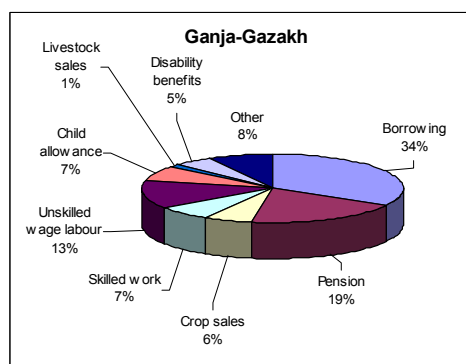
Households in *Sheki-Zagatala* zone receive one-quarter of their annual income from crop sales – among the highest of all the zones. According to the agriculture data, nearly all of these households has access to and is using agricultural land and almost all have a vegetable garden. Borrowing and pension each provide another 20% of income. All other sources present average contributions to total annual income.

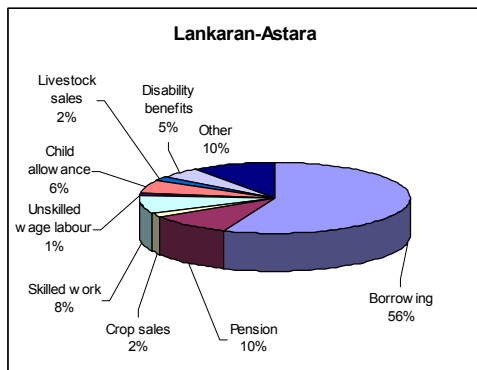
Income from crop sales is the largest contribution to total income for households in the *Kur* sample – more than in any other zone. Contribution from income from state benefits is lower than any other zone, especially for child and disability benefits. There is still significant reliance on the income from borrowing and 10% of the total comes from other types of income activities.



Households from the *Orta Kur* sample have no unique patterns regarding income from the various sources when compared to the other groups. They rely on income from borrowing, pension, crop sales and skilled work as well as from other sources. This indicates a more diverse sample from this group than probably the other zones.

About one-third of total income for households in *Ganja-Gazakh* comes from borrowing, which is higher than all other zones except one. Another third of their income is from state benefits such as pension, child allowances and disability benefits. They have a low contribution from skilled work and livestock sales but one of the highest from unskilled wage labour activities.





More than half the income for households in *Lankaran-Astara* is from borrowing – double the sample average. Income contributions from pension are low while income from crop sales and unskilled wage labour is very low. Essentially, the contribution to total income from actually working or selling is between 13 and 23 percent.

The analysis was then stratified by gender and age (head older/younger than 60 years) of household heads.

- **Gender of household head:**

- Female headed households receive significantly greater share of total income from borrowing ($p < 0.05$) and pension ($p < 0.001$) than households headed by men.
- Male headed households receive significantly greater share of total income from child allowance ($p < 0.05$), crop sales ($p < 0.001$), skilled work ($p < 0.001$) and unskilled wage labour ($p < 0.001$) than those headed by women.

- **Age of household head:**

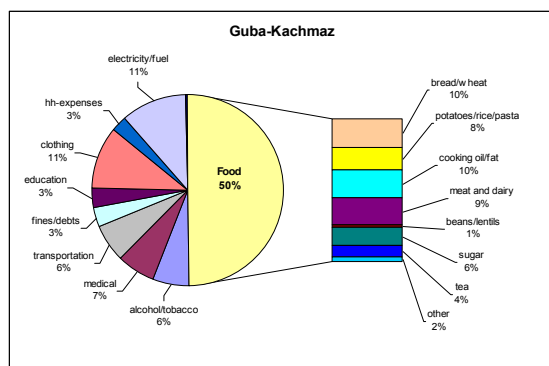
- Elderly headed households receive significantly more ($p < 0.001$) income from pension than those headed by persons under 60 years of age.
- Households headed by younger persons (< 60 years) receive significantly more income from child allowance ($p < 0.001$), crop sales ($p < 0.001$), skilled work ($p < 0.001$), unskilled wage labour ($p < 0.001$) and livestock sales ($p < 0.01$).

Section 3.4 – Household expenditure

During the interviews respondents were asked to provide estimates of recent expenditures for 8 food categories and 9 itemized non-food categories. Estimations of expenditure were based on a one week recall for food items plus alcohol & tobacco (items purchased on a regular basis), and a monthly recall for all other expenditure categories.

From this information the total estimated monthly expenditure was calculated. This estimate is not presented in absolute terms in this report as these are only relative estimations. However, for each category, the percentage contribution to total expenditure was calculated. These results are presented in a series of charts in this section.

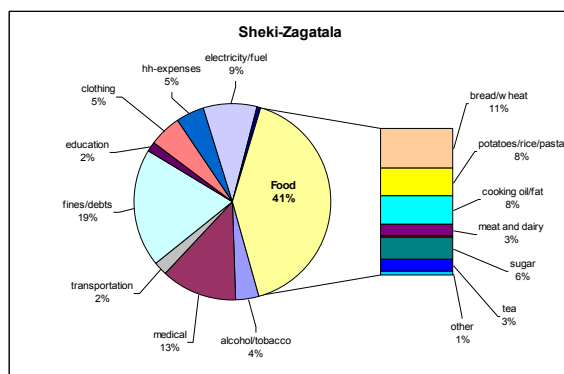
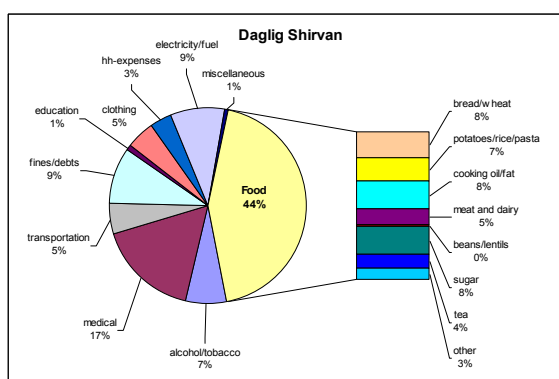
3.4.1 – Share of household expenditure



For the *Guba-Kachmaz* sample, half the total monthly expenditure was for food. Within food, the highest expenditures were for bread/wheat flour, cooking oil and meat/dairy products (the highest of all zones). They also had relatively high expenditure for tea. Highest non-food expenditure was for electricity/fuel and clothing (highest of all zones). They also had relatively high shares of expenditure for transportation and education but

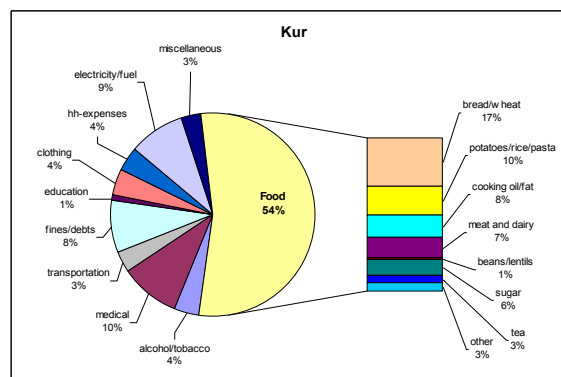
lower expenditure on medical services and debt repayment/fines.

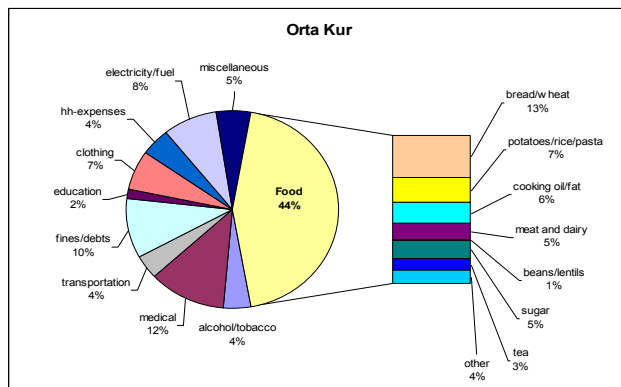
The expenditure patterns of households in *Daglig Shirvan* are unique mostly in terms of food expenditure. They have the lowest share of expenditure for bread/wheat flour and the highest for sugar, other foods, and tea. The share for alcohol and tobacco is also the highest of the zones. In addition, allocation to medical expenses is the highest of the zones.



The households in the *Sheki-Zagatala* sample had the lowest percentage of total expenditure for food of all the zones. They are also characterised by having a very large share of expenditure for fines or debt repayments. The households also had significant expenditure for medical costs and one of the highest share of expenditure for household items.

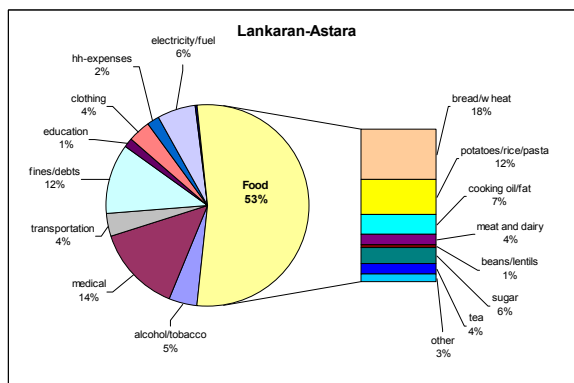
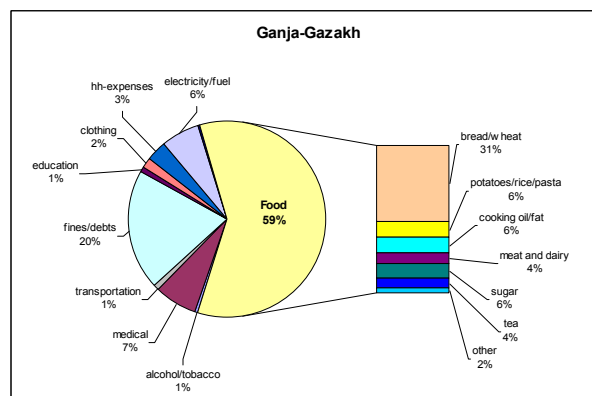
Expenditure activities for households in the *Kur* sample are characterised by relatively high share for food – especially for bread or wheat. However, these households receive about one-quarter of their annual income from crop sales. They also have a somewhat higher share of expenditure for meat, eggs and dairy products compared to the other zones. Share of expenditure for electricity is the highest in the sample.





There are no outstanding patterns of expenditure for households in *Orta Kur* sample. Allocation for the various food items is fairly even while non-food share of expenditure is primarily for medical, fines/debt repayment and electricity and fuel. Allocation to clothing/shoes is higher than all regions except *Guba-Kachmaz*.

Households in *Ganja-Gazakh* are characterized by having the greatest share of total expenditure for food. There could be some data collection errors for this group, especially since 31% of total expenditure is for bread or wheat flour. However, they are not heavily engaged in agricultural production. They also present low expenditure on medical services & items and a very high allocation to debt repayment.



In the *Lankaran-Astara* sample more than half the total household expenditure is for food. They have the highest share of expenditure for potatoes, rice and pasta. However, they present no other outstanding expenditure patterns except higher than normal allocation for medical items and services.

In summary, households in *Ganja-Gazakh*, *Lankaran-Astara* and *Kur* are characterized by having a high share of their expenditures on food items and within this group, on basic food staples. On the other hand households in *Guba-Kachmaz*, *Daglig-Shirvan*, *Sheki-Zagatala* and *Orta Kur* spend less on food, in particular on staple food, while having higher expenses on items such as clothing, tobacco and alcohol.

In terms of **non-food expenditures** high shares were spent on fines and debts ranging from 3% in *Guba-Kachmaz* to 20% in *Ganja-Gazakh*.⁶ Also medical

⁶ It is possible that in some cases expenses on debts were over-reported, as some respondents might have provided the actual amounts of total household debts instead of monthly repayments; still the high share corresponds with the fact that for many households borrowing is one of the main income sources.

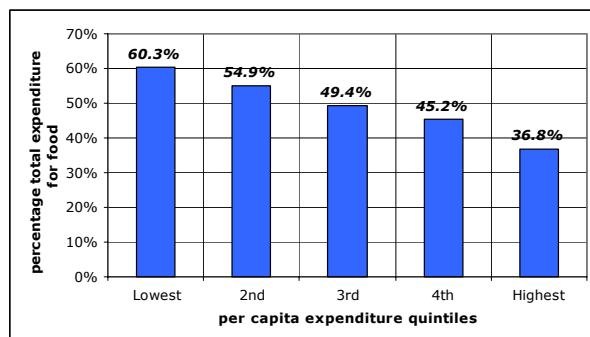
expenses which include services charges and costs for medicine have a high share ranging from 7% in *Guba-Kachmaz* to 17% in *Daglig-Shirvan*.

3.4.2 – Monthly per capita expenditures

Despite the fact that there are instances where the enumerators or respondents over- or under-estimated expenditure amounts, the monthly per capita expenditure was calculated for each household as a relative measure to compare different zones or groups. The following are the amounts for households in each zone:

- *Guba-Kachmaz* = 112,500 Manat or US \$23.0
- *Daglig Shirvan* = 96,700 Manat or US \$19.7
- *Sheki-Zagatala* = 133,400 Manat or US \$27.2
- *Kur* = 100,100 Manat or US \$20.4
- *Orta Kur* = 123,100 Manat or US \$25.1
- *Ganja-Gazakh* = 101,100 Manat or US \$20.4
- *Lankaran-Astara* = 121,000 Manat or US \$24.7

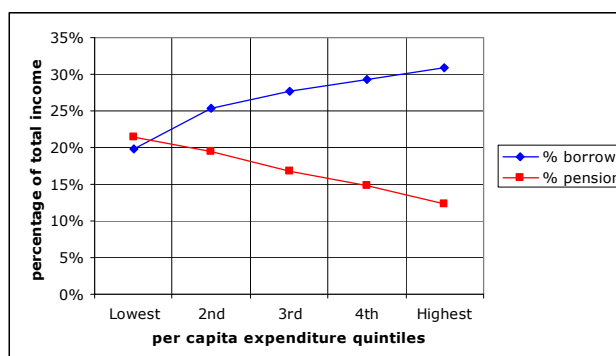
The monthly per capita expenditure was divided into quintiles and additional



analyses were run to determine the relationship between this variable and other indicators of wealth and food security. The results showed little relationship with asset ownership (relative wealth) except among the wealthiest group. However, relationships were found between per capita monthly expenditure and percentage total expenditure for food as well as percentage of total

income from various sources. The graph on the left shows that percentage allocation to food decreases as per capita expenditure increases.

The chart on the right illustrates the relationship between per capita expenditure and reliance on borrowing and pensions for income. For the lowest quintile of per capita expenditure, about 20% of income is from each source. However, as per capita expenditure increases, the reliance on income from borrowing increases while the reliance on income from pension decreases – both in linear fashions.



Reliance on income from sales of crops or livestock also shows interesting patterns in that households in the lowest per capita expenditure quintile receive about 17% of their total income from sales of crops while households in the other quintiles receive about 13-14% of income from this source. About 5% of household income in the lowest two per capita expenditure quintiles comes from livestock sales as compared to 3% in the highest per capita expenditure quintile. However, the highest per capita expenditure quintile households receive about

15% of total income from skilled labour activities as compared to about 10-11% for the other quintiles.

Section 3.5 – Land use and agricultural production

The land privatization process initiated in 1996, distributed most of the land held by the collective farms to the rural population. The size of land allocated during the land reform process was based on district level land availability, population density as well as the quality of the land. The land distribution in Azerbaijan is widely perceived to be fair although there are differences in per capita availability of land.

The transition from state controlled agriculture to small scale, private agriculture has ensured changes in cropping patterns. Production patterns have moved away from commercial crops to production of staple foods such as wheat, potatoes, vegetables and maize. However, the lack of quality irrigation infrastructure, soil salinity, lack of support services and limited access to former markets still pose serious constraint to the development of the agriculture sector.

3.5.1 - Access to and use of agricultural land

More than 90% of all households in the sample had access to agricultural land, with an average of 1.3 hectares available for farming. By economic zone, the access to any agricultural land was similar, ranging from 90% of households in *Ganja-Gazakh* to 99% in *Daglig Shirvan*. The exception was the sample from *Guba-Kachmaz* where only three-quarters reported having access to agricultural land. Of those households with access to land, 90% were actually using the agricultural land, farming an average of 0.75 hectares per household. Of the households with access, more than 90% were using the land in all zones except *Ganja-Gazakh* (89%) and *Lankaran-Astara* (82%). Reasons why land was not being used were not explored in this study. In addition, more than 90% of the households in all the zones had a vegetable garden except in those in *Guba-Kachmaz*, where only 84% of the households were growing vegetables.

The median value of hectares available for farming ranged from 0.3 in *Ganja-Gazakh* to 2.6 hectares in *Daglig-Shirvan*. The median area utilized for the overall sample is 0.75 hectares and ranged from 2.0 hectares in *Daglig Shirvan* to 0.25 hectares in

Ganja-Gazakh. The table on the right outlines these estimates for each of the zone samples as well as the percentage of land available that was being used. It appears that although the average amount of land available in the *Ganja-Gazakh* sample was very small, the households are using nearly all of it. High use is also found in the *Daglig Shirvan* sample. However, the households in *Lankaran-Astara* not only have access to smaller amounts of land, they appear to be less likely to cultivate much at all. Again, the survey did not collect information on constraints to good agricultural production.

	Hectares accessed	Hectares used	% of land used
Guba-Kachmaz	1.2	0.76	63%
Daglig Shirvan	2.6	2.0	77%
Sheki-Zagatala	1.5	0.8	53%
Kur	1.5	1.0	67%
Orta Kur	2.0	1.0	50%
Ganja-Gazakh	0.3	0.25	83%
Lankaran-Astara	0.9	0.36	40%

3.5.2 – Main crops produced by economic zone

As mentioned earlier, the main crops produced by rural households in the sample are wheat, potatoes, maize, and vegetables, with a few regions producing significant amounts of cotton tobacco and melons. The following are the main crops and percentage of sample households producing, by economic zone.

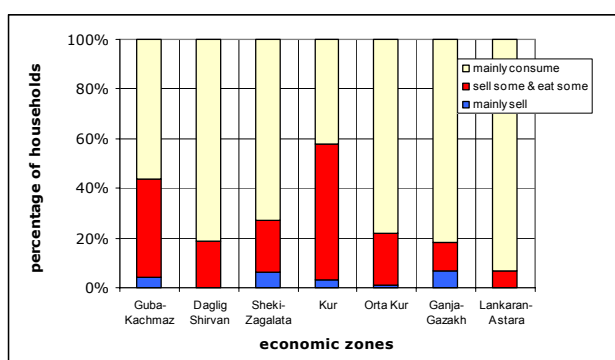
- **Guba-Kachmaz** – potatoes (84%), vegetables (80%), wheat (55%) and maize (8%)

- **Daglig Shirvan** – wheat (72%), potatoes (54%), vegetables (41%)
- **Sheki-Zagatala** – potatoes (85%), vegetables (78%), maize (48%), wheat (39%), tobacco (7%)
- **Kur** – vegetables (67%), wheat (43%), potatoes (33%), maize (23%), cotton (12%)
- **Orta Kur** – vegetables (69%), wheat (61%), potatoes (38%), maize (16%), cotton (9%)
- **Ganja-Gazakh** – potatoes (70%), vegetables (33%), wheat (16%), maize (14%)
- **Lankaran-Astara** – potatoes (75%), vegetables (66%), wheat (49%), maize (6%)

It appears that the zones using smaller plots of land prioritize the production of potatoes while those with more hectares are more likely to produce wheat and vegetables.

3.5.2.1 – Wheat production

In all, about 45% of the sample households had cultivated wheat, ranging from a high of 65% in *Daglig Shirvan* to a low of 16% in *Ganja-Gazakh*. Only 2% of the producing households are selling most of the wheat they grow. One-quarter of these households are selling some and keeping some for home consumption. The rest of the households (73%) are mostly consuming their wheat harvests. This is the case for more than 80% of the households in *Daglig Shirvan*, *Ganja-Gazakh* and *Lankaran-Astara*. Households in *Kur* are the most likely to sell some of their production.

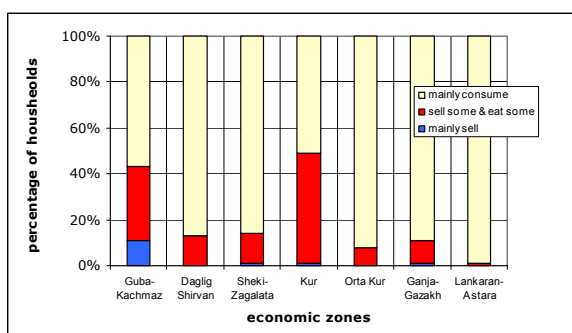


3.5.2.2 – Maize production

Nearly 20% of the sampled households were cultivating maize – nearly half the households in the *Sheki-Zagatala* sample and as few as 1% of the households in *Daglig Shirvan*. One-quarter of the maize producing households in *Sheki-Zagatala* were selling most of their production. In *Guba-Kachmaz* and *Kur*, about half the households were both selling and consuming their production. However, in *Orta Kur*, *Ganja-Gazakh* and *Lankaran-Astara* more than 90% of the maize producing households were consuming most of their harvest.

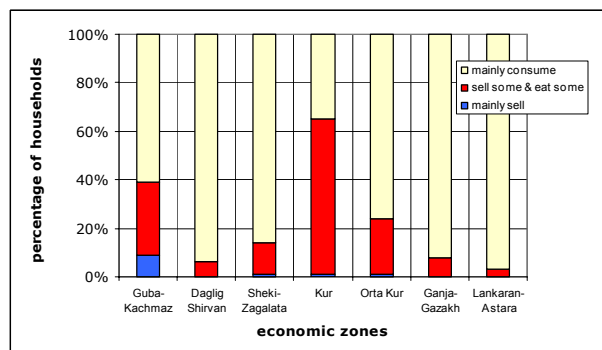
3.5.2.3 – Potato production

Potatoes are an important field crop for nearly 60% of the sampled households, and are produced by more than 80% of the households in *Guba-Kachmaz* and *Sheki-Zagatala* and more than 70% in *Ganja-Gazakh* and *Lankaran-Astara*. Potatoes are mostly kept for home consumption with less than 20% of the producing households selling any of their harvest. The graph shows the use of production by economic zone. Potato producing households in *Kur* and *Guba-Kachmaz* are more likely to sell some of their harvest while almost all in *Lankaran-Astara* are consuming all of what they produce.



3.5.2.4 – Vegetable production

Vegetables are cultivated by nearly 60% of the households. Three-quarters of the households in *Guba-Kachmaz* and *Sheki-Zagatala* are growing them but only about one-third of the samples in *Daglig Shirvan* and *Ganja-Gazakh* produce vegetables. About three-quarters of the producing households are eating most of what they produce – the majority of producing households in *Daglig Shirvan*, *Sheki-Zagatala*, *Orta Kur*, *Ganja-Gazakh* and *Lankaran-Astara*. Vegetable growing households in *Kur* are more likely to sell some or all of their production as is about 40% of the households in *Guba-Kachmaz* economic zone.



3.5.3 – Tree production

The household survey collected a lot of information on fruit and nut tree production, not in an attempt to enumerate exact amounts produced but rather to investigate the types of tree cultivation going on in the various economic zones and the use of the fruit and nut harvests by the households. More than 90% of the sampled households in the *Daglig-Shirvan*, *Sheki-Zagatala*, *Kur* and *Orta Kur* zones have fruit and/or nut trees. The percentages for the other zones are 83% for *Lankaran-Astara*, 81% for *Guba-Kachmaz* and 67% for *Ganja-Gazakh*. The following is a summary of the main types of trees grown by sample households in each economic zone.

- **Guba-Kachmaz** – Apples (67%), hazelnuts (42%), pears (38%), persimmon (30%), walnuts (20%), figs (14%), and plums (12%)
- **Daglig Shirvan** – Apples (40%), mulberry (38%), pomegranate (37%), pears (25%), plums (21%), grapes (20%), walnuts (19%), figs (11%)
- **Sheki-Zagatala** – Apples (79%), hazelnuts (50%), pears (33%), plums (24%), walnuts (22%), figs (14%), persimmon (11%), and grapes (10%)
- **Kur** – Pomegranate (87%), grapes (53%), figs (42%), plums (16%), apples (14%), apricots (8%)
- **Orta Kur** – Pomegranate (72%), plums (31%), figs (27%), grapes (24%), persimmon (22%), pears (20%), mulberry (14%), apple (12%), and apricot (12%)
- **Ganja-Gazakh** – Apples (67%), pears (35%), plums (23%), persimmon (21%), pomegranate (15%) and apricot (13%)
- **Lankaran-Astara** – Apples (43%), plums (31%), pears (28%), walnuts (28%), figs (28%), mulberry (25%), pomegranate (21%), citrus (13%) and grapes (10%).

3.5.3.1 – Apple cultivation

More than 40% of the sample households are cultivating apples with the highest percentages found in *Sheki-Zagatala* (79%), *Ganja-Gazakh* (67%) and *Guba-Kachmaz* (66%). Few households in *Kur* and *Orta Kur* were growing apples. Most (90%) of the production is used by the household, with little variation between zones although about 20% of the growing households in *Sheki-Zagatala* and *Kur* are selling some of their apple production.

3.5.3.2 – Pomegranate cultivation

Pomegranates are mainly grown by households in *Kur* (87%) and *Orta Kur* (72%) economic zones and some in *Daglig Shirvan* (36%) and *Lankaran-Astara* (21%).

In those zones, they are mostly consumed with about one-third of the producing households in *Kur* selling some of their production.

3.5.3.3 – Pear cultivation

About one-quarter of the sample households are growing pears, by about 20-35% of all households in each zone except *Kur* (6%). Of those households in *Kur*, about one-quarter are selling some of their production while for the rest, pears are kept mostly for household consumption.

3.5.3.4 – Fig cultivation

Figs are cultivated mainly in *Kur* (42%), *Lankaran-Astara* (28%) and *Orta Kur* (22%) sample households. Most producing households in the economic zones keep their figs for home consumption with the exception of about 40% of the producers in *Kur* EZ who sell some of the production.

3.5.3.5 – Plum cultivation

Plums are cultivated by households in every economic zone ranging from 11% in *Guba-Kachmaz* to nearly 30% in *Lankaran-Astara* and *Orta Kur* zones. Almost all households keep the production for consumption with a few in the *Guba-Kachmaz* sample selling some of their plums.

3.5.3.6 – Grape cultivation

Grapes are not grown as widely across the economic zones as the other fruits and are mainly cultivated in *Kur* (53%) with some significant cultivation in *Orta Kur* (24%) and *Daglig Shirvan* (20%) samples. About one-third of the producers in *Kur* sell some of their production while the rest of the households keep their grapes for home consumption.

3.5.3.7 – Hazelnut production

More than half the sample households in *Sheki-Zagatala* and 42% in *Guba-Kachmaz* are growing hazelnuts. Of the producing households in those two economic zones, about one-quarter are selling part of their production while the rest are keeping theirs for home consumption. There is very little production of hazel nuts in the other economic zones.

3.5.3.8 – Walnut production

Walnuts are grown by nearly 30% of the sample households in *Lankaran-Astara* and about 20% in *Guba-Kachmaz*, *Daglig Shirvan*, and *Sheki-Zagatala* zones. Only about 15% of the producing households in *Guba-Kachmaz* and *Sheki-Zagatala* sell a part of their production. For the rest, the walnuts are saved for home consumption.

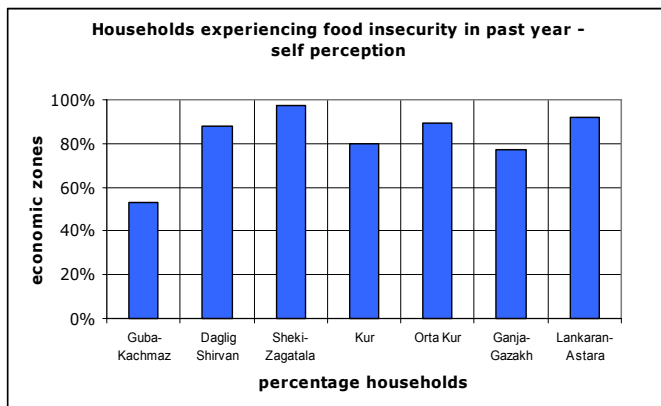
Section 3.6 – Food sufficiency

A section of the questionnaire was added to measure the household's perception of their own food security status in terms of food sufficiency. The questionnaire states: "The following questions are about the food eaten in your household in the past 12 months, since August of last year and whether you were able to afford the food you need or if you had enough food for your family's needs." The interviewer read a series of statements and the respondent was asked to state whether it was 'often', 'sometimes', 'rarely', or 'never' true for that household over the past 12 months. The results of this section will be presented by statement.

3.6.1 – Food insecurity: household self-perception

There were three statements describing situations that a household may have encountered over the past year where they:

- Worried that they would not have enough food or money to buy food
- Did not eat food of the preferred quality or quantity
- Ran out of food and could not afford to buy more



The chart on the left shows the percentage of households by economic zone that had experienced any of the above situations 'often' or 'sometimes' in the past 12 months. The households in the *Guba-Kachmaz* sample were less likely to have problems with household food security while in the other zones, between 80-90% of

households had experienced food insecurity. Nearly all the households in the *Sheki-Zagatala* sample had experienced periods of food insecurity at some time during the past year.

3.6.2 – Responses to perceived household food insecurity

In response to not having enough food or money to buy food, households were asked to describe how often they resorted to each of the five particular strategies outlined below.

- **Reduced the size of meals:** Nearly half the households experiencing food insecurity in the past year 'often' used this strategy. Nearly 90% of the households in *Daglig Shirvan*, *Orta Kur* and *Ganja-Gazakh* 'often' or 'sometimes' reduced meal size when there was not enough to eat. It was 'rarely' or 'never' used by 22% of the food insecure households in the *Guba-Kachmaz* sample and 25% in *Sheki-Zagatala* in the past year.
- **Skipped meals:** More than 35% of the sample households reported 'often' skipping meals during times of food insecurity in the past year. Eighty-five percent of the food insecure households in *Lankaran-Astara* 'often' or 'sometimes' used this strategy. On the opposite end, about one-third of the food insecure households in *Sheki-Zagatala* and *Ganja-Gazakh* 'rarely' or 'never' used this strategy to cope with household food insecurity.
- **Ate less than they felt they should:** This strategy was used 'often' by more than one-quarter of the households experiencing food insecurity over the past year. It was used 'often' or 'sometimes' by more than 80% of the food insecure households in *Daglig Shirvan* while nearly half in *Ganja-Gazakh* ate less 'rarely' or 'never' when they were short of food or money.
- **Were hungry but didn't eat:** This strategy is more extreme than the previous ones and consequently only 8% of the households 'often' used this in times of food insecurity. However, about 40% of the households in *Orta Kur* and *Ganja-Gazakh* used this strategy 'often' or 'regularly' to cope during times of shortages. It was 'rarely' or 'never' used by 80-90% of the food insecure

households in *Daglig Shirvan*, *Guba-Kachmaz* and *Sheki-Zagatala* in the past year.

- **Passed a day without eating:** Probably the most extreme of all possible strategies that could be used to manage episodes of household food insecurity and was used 'often' by only 5% of the households. It was 'rarely' or 'never' used by 94% of the households in *Daglig Shirvan* and 88% of the households in *Guba-Kachmaz* during times of food insecurity.

3.6.3 – Characteristics of households by strategy

- **Reduced the size of meals:** The households that 'often' reduced the size of their meals are more likely to have a disabled member in the household and to have fewer assets, including livestock (cattle). The head of household is much less likely to be currently employed and they also rely more on income from borrowing and unskilled labour and less on pension, crop sales or skilled labour. They are more likely to borrow food on credit and less likely to have access to agricultural land or to use the land they have. As a result, they are less likely to be cultivating wheat or potatoes and have a lower per capita monthly expenditure. The prevalence of maternal malnutrition is also higher than households using this strategy less often.

Households that 'never' use this strategy have more assets, including cattle, sheep and chickens. They are less likely to have a disabled member and very few live in crowding housing conditions. They are also much more likely to be using water from safe sources. The head is much more likely to be employed and they rely more on income from pension, skilled labour, crop sales and livestock sales, and much less on borrowing. Few borrow food on credit while almost all have a garden and agricultural land which they are using. They are much more likely to be cultivating wheat and potatoes and have the highest monthly per capita expenditure but the lowest percentage allocation to food.

- **Skipped meals:** Households that 'often' use this strategy when they don't have enough food or money are much more likely to have a disabled member less likely to own cattle, sheep or chickens. The household head is less likely to have a job. They are more likely to rely on borrowing and unskilled labour for income and less on pension, crop sales and skilled labour. They are also less likely to have a garden or access to agricultural land and, if they have land access, they are less likely to be farming the land. Consequently they are less likely to be growing wheat. They are likely to have lower per capita monthly expenditure and the women are more likely to be malnourished.

Households that 'never' skip meals are more likely to have a female pensioner and less likely to have a disabled member or to live in crowded conditions (4+ persons/room). They are much more likely to own cattle, sheep and chickens and to have a garden. They are less likely to borrow food on credit. The head is more likely to be employed and they are more likely to receive substantial income from pension, crops sales, skilled labour and livestock sales. Nearly all have access to agricultural land and are using it. They are much more likely to be growing wheat and/or potatoes and to have a lower percentage of total expenditure for food. Hardly any of the women are malnourished.

- **Ate less than they felt they should:** Households that 'often' use this strategy are more likely to have a disabled member and much less likely to own cattle, sheep and/or chickens. They are also less likely to have a household head who is working. They receive more income from unskilled labour and less from pension, crop sales, and skilled labour. They are less likely to have a garden

and to access agricultural land. In addition they are less likely to grow potatoes. The women are more likely to be malnourished.

Few of the households **'never'** eating less live in crowded conditions. They are more likely to own cattle, sheep and/or chickens. They are much less likely to borrow food on credit and the head is more likely to be employed. They receive proportionally more income from crop sales, skilled labour and livestock sales and much less from borrowing. They are much more likely to have a garden and access to agricultural land on which they are more likely to be producing wheat and/or potatoes. They have a lower per capita monthly expenditure but spend proportionally less on food. The women are less likely to be malnourished.

- **Were hungry but didn't eat:** Households that **'often'** didn't eat when they were hungry are much less likely to have female or male pensioners and much more likely to have a disabled household member and to live in crowded conditions. They are much less likely to own livestock, especially cattle, sheep or chickens. The head of household is much less likely to be employed and they receive proportionally more income from disability benefits and unskilled labour and less from pension, crop sales, and skilled labour activities. They are less likely to have a garden or access to agricultural land which they are using. Consequently they are less likely to cultivate wheat or potatoes but slightly more likely to be growing maize. They have lower per capita food expenditure and spend proportionally higher amounts for food. They women are more likely to be malnourished.

Households that **'never'** used this strategy are more likely to have a female and/or male pensioner and less likely to have a disabled member or to live in crowded conditions. They are also more likely to be using safe drinking water. They are more likely to own cattle and/or sheep. The household head is more likely to be employed and a greater proportion of income is coming from pension, crop sales, skilled labour and livestock sales. They are less reliant on income from borrowing. They have greater access to land and are much more likely to be growing wheat and/or potatoes. They have a much lower share of total expenditure for food.

- **Passed a day without eating:** Households that **'often'** skip days without eating are less likely to have a female or male pensioner and much more likely to have a disabled member and to live in crowded conditions. They are much less likely to own livestock and less likely to borrow food on credit. The head of household is less likely to be employed and they are more reliant on income from unskilled labour and disability benefits. They receive proportionally less income from pension, crop sales, and skilled labour. They are less likely to have a garden or to access and utilize agricultural land. They are less likely to be cultivating wheat. Their per capita monthly expenditure is low yet they have a high share of monthly allocation for food.

The households that **'never'** use this strategy are a bit larger than others and more likely to have a female and/or male pensioner and less likely to live in crowded conditions. They are more likely to own more livestock and the household head is more likely to be employed. They receive more income from pension, crop sales, skilled labour and livestock sales and proportionally less from borrowing and unskilled labour. They are much more likely to have a garden and to access and utilize agricultural land where they are growing wheat and/or potatoes. They are less likely to be producing maize. They have a high per capita monthly expenditure yet have a low share of total expenditure for food.

Section 3.7 – Household shocks and coping strategies

Also included in the household questionnaire was a section which was designed to collect information on whether the household had experienced any of five covariate shocks (shocks that can affect several households or communities, such as flooding, market prices, etc.) in the past year. They were also asked about experiencing idiosyncratic shocks (those that affect individual households, such as loss of employment or death of a household member). Of the shocks experienced, the households were asked to rank the top four shocks and then to identify the effect each had on the household's income and assets, their capacity to acquire food, the strategies used to manage the shock and if they had recovered from the effects of that particular shock.

There were a certain percentage of households that had not experienced any shocks at all – mostly those in *Guba-Kachmaz* economic zone (59%). About 20% in *Daglig Shirvan* and 15% each in *Kur* and *Orta Kur* had not experienced any shocks. Most households in the other zones had experienced some type of shock in the past year. On average, households in *Guba-Kachmaz* either did not experience any shocks or only one during the year, compared to households in *Sheki-Zagatala* that consistently reported at least 4 shocks to the household. Families in the other zones experienced between 2 and 3 shocks during the year.

3.7.1 – Covariate shocks

The most often reported covariate shocks were economic ones, such as **unusually high prices for food**, which was reported by nearly 90% of the households. The next most common was **unusually high prices for services** (57%) followed by **high costs of agricultural inputs**. Natural covariate shocks such as **high levels of livestock disease** or **flooding** were less often reported but showed more variation between the economic zones.

The table below shows the variation between the economic zones. Households in *Guba-Kachmaz* were more affected by economic shocks than natural ones, but to a lesser extent for all compared to the other zone samples. *Daglig Shirvan* households were also more affected by economic shocks. Nearly all the households in *Sheki-Zagatala* complained of the high prices for food items and services but one-third also had been affected by high levels of livestock diseases. Households in the *Kur* sample were similarly affected except that nearly 40% had been affected by flooding in the past year.

	High levels of livestock disease	Flooding	High prices for services	High prices for food	High costs of agricultural inputs
Guba-Kachmaz	12%	6%	34%	53%	25%
Daglig Shirvan	22%	9%	70%	66%	37%
Sheki-Zagatala	35%	18%	51%	97%	32%
Kur	34%	38%	46%	93%	23%
Orta Kur	20%	12%	75%	93%	23%
Ganja-Gazakh	7%	25%	51%	96%	0
Lankaran-Astara	33%	19%	61%	91%	6%
Total	24%	19%	57%	89%	20%

Households in *Orta Kur* were affected by both the high prices for food and for services and with fewer facing problems with natural events. Nearly all the households in *Ganja-Gazakh* had been affected by high food prices but none experienced the shock of high costs of agricultural inputs and only a few had problems with livestock diseases. Households in *Lankaran-Astara* were mostly affected by economic shocks, with the exception of high costs for inputs. About one-third were also affected by high levels of livestock disease.

3.7.2 – Idiosyncratic shocks

The most experienced idiosyncratic shock was the serious illness or accident of a household member, reported by one-third of the sample households. The percentages of households experiencing the various shocks are presented in the table below.

	HH member lost employment	Reduced salary of HH member	Serious illness or accident of HH member	Death of working member	Death of other HH member	Theft or violence
Guba-Kachmaz	3%	15%	49%	2%	10%	1%
Daglig Shirvan	12%	8%	67%	2%	6%	1%
Sheki-Zagatala	8%	32%	43%	8%	6%	2%
Kur	6%	1%	14%	2%	0	5%
Orta Kur	2%	2%	39%	1%	5%	4%
Ganja-Gazakh	1%	0	14%	0	1%	0
Lankaran-Astara	3%	1%	21%	2%	4%	2%
Total	5%	8%	33%	3%	4%	3%

Almost half the households in *Guba-Kachmaz* had experienced the serious illness or accident of a household member. In addition, 15% reported that the salary of a household member had been reduced during the past year. Lastly, 10% reported the death of a household member – the highest in the sample. Households in *Daglig Shirvan* mostly suffered from the serious illness or accident of a household member. However, the reported the highest percentage of households where a member lost his/her job. In *Sheki-Zagatala*, households seem to be affected by the illness of a member as well as the reduction in the salary of a member. Very few households in the *Kur* and *Ganja-Gazakh* samples had been affected by idiosyncratic shocks. Again, households in *Orta Kur* and *Lankaran-Astara* appear to be most affected by the serious illness or accident of a household member.

3.7.3 – Impact of shocks

Respondents were then requested to state if those shocks observed caused any decrease or loss for the household in terms of income and in-kind receipts, assets such as livestock or cash savings, or both. Income-loss could be recovered more easily, while loss of productive assets could make a recovery more difficult or impossible.

Only 6% of households in *Guba-Kachmaz* and 2% in *Daglig-Shirvan* reported that the shock(s) had no negative impact, while around 70% of all households across all economic zones – except for *Kur* with 42% – indicated that the shock(s) decreased both income and in-kind receipts. Reported impacts on the just the household asset base varied across zone from 5% in *Orta Kur*, 10-20% in *Guba-Kachmaz*, *Ganja-Gazakh* and *Daglig-Shirvan*, to around 30% in *Lankaran-Astara* and *Kur* zones. **Nearly all households across economic zones said that the shocks decreased the ability of the household to purchase enough food.**

3.7.4 – Management of shocks

Households under stress adopt a range of strategies to manage or mitigate negative impacts. **Coping strategies** can be characterized as non-erosive (easily reversible) or erosive (unsustainable, undermining resilience). Some coping strategies can be both non-erosive and erosive depending on the context, for example the selling of livestock at the right time can be a risk minimizing or loss management practice. At a certain point, however, household livestock holdings reduce to the level where they are no longer sustainable. Other coping strategies can be characterized as consumption modification (e.g. reduced quality/quantity of diet, decreased expenditures), selling of productive and non-productive assets,

inter-household transfers and loans, and income diversification (e.g. labour migration).

Most households that experienced at least one shock had used at least one coping strategy; however 25% of households in *Ganja-Gazakh* and 6% in *Guba-Kachmaz* did nothing to manage shocks. This could be related to the fact that either the shock was not severe enough or that the household was not able to respond.

For the sample, the most common response to any kind of shock was to decrease expenditures (73%), followed by purchasing food on credit (67%), reducing the quality and quantity of diet (60%), taking loans from family or friends (35%), selling livestock (31%) or spending savings (15%).

	Decrease expenditures	Purchase food on credit	Reduce quality & quantity	Take loans from family & friends	Livestock sales	Spending savings
Guba-Kachmaz	64%	37%	33%	26%	28%	21%
Daglig Shirvan	72%	83%	60%	37%	52%	20%
Sheki-Zagatala	70%	67%	60%	20%	41%	8%
Kur	58%	72%	84%	70%	27%	26%
Orta Kur	86%	79%	47%	48%	33%	15%
Ganja-Gazakh	70%	35%	47%	14%	6%	14%
Lankaran-Astara	79%	86%	81%	23%	33%	10%

The types of strategies used vary by economic zone. For households in *Guba-Kachmaz*, the most common strategy is to decrease expenditures. For *Daglig Shirvan*, the households preferred to purchase food on credit and then reduce expenditures, indicating a cash flow problem. In addition, they were most likely to sell livestock to manage the shock. In *Sheki-Zagatala*, they also decreased expenditures more often but also purchased food on credit and changed their food preferences. They were very unlikely to spend savings to manage the shock – perhaps they had none. Households in *Kur* were more likely to change their food preferences and then purchase those foods on credit. They also relied heavily on taking loans from family and/or friends. In *Orta Kur*, nearly all households decreased their expenditures or purchased food on credit to manage shocks while those in *Ganja-Gazakh* mostly decreased expenditures with very few selling livestock. In *Lankaran-Astara*, most households purchased food on credit, decreased expenditures and/or changed their food preferences. Very few used their savings but it is unlikely they had any to spend.

3.7.5 – Recovery from shocks

Finally respondents were requested to assess if they have recovered from the shocks at the time of the survey. Only 5% of households in *Guba-Kachmaz* and 3% in *Kur* had recovered completely as compared to very few from the other zones. On the other hand 94% of the sample households in *Sheki-Zagatala* reported no recovery at all. For the other zones, about half had recovered partially and the other half had not recovered at all.

The analysis shows that degrees of vulnerabilities to different shocks and risks differ from zone to zone, for example price shocks are more felt by households in *Lankaran-Astara*, *Ganja-Gazakh* and *Orta Kur*, while idiosyncratic shocks are more frequently reported by households in *Sheki-Zagatala* and *Daglig Shirvan*. However, it has to be stated that the analysis of shocks and their responses is highly complex. It is therefore recommended that in future studies qualitative methodologies such as focus group discussions could be applied for a more in-depth analysis especially with regards to the impacts caused by shocks and the application of coping strategies.

Part IV - Women and child nutrition and health - Residents

Section 4.1 – Women's nutrition and health

Main findings of the household survey for nutrition and health of women of reproductive age are presented in the following section. Data tables with the complete results of the analysis are found in Annex II of the report.

4.1.1 – Methodology and sampling

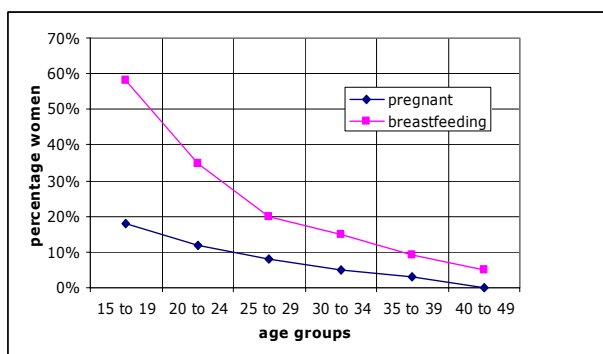
During the six weeks of data collection, the survey teams visited 210 rural communities and collected information on 2800 women of reproductive age (15-49 years). During the design, it was decided that eligible households must have at least one woman of reproductive age present at the time of the survey. If there were more than one in the household, the one with children under five would be interviewed, weighed and measured, along with the under-five child(ren). Weight was measured (in kilograms) using regular bathroom scales as no UNICEF SECA scales were available. Height was measured (in centimetres) by using a wall, ruler and a tape measure as no adult stadiometers were available in the country. Pull-down height measuring tapes were not practical since the teams were moving from place to place and they work best in stationary clinic settings.

The analysis gives a relatively good idea of the nutritional status of women of reproductive age in the seven economic zones, especially with such a large sample size, despite the fact that the anthropometric data faced certain constraints.

Much of the data are analysed by age group in order to capture trends among the cohort of women. Women of reproductive age can be grouped into 6 age categories – these age categories and the percentage of total sample are: 15-19 years (2.6%), 20-24 years (21.6%), 25-29 years (25.9%), 30-34 years (20.8%), 35-39 years (14.3%) and 40-49 years (14.8%).

4.1.2 – Current pregnancy and lactation

At the time of the survey (Sept-Oct 2004), 7% of the women interviewed were pregnant with about 45% in their first trimester, one-third in the second trimester and the rest in the third. More than 9% of the women in the *Kur* and *Guba-Kachmaz* EZ samples were pregnant while between 4-7% of the women in the other economic zones were pregnant. Nearly 20% of the women aged 15-19 were pregnant at the time of the survey, although there were only 77 women of that age in the sample. The likelihood of being pregnant decreased with age as seen in the below graph.



For the pregnant women, only 4% reported they had received iron/folate supplements – 11% in the *Guba-Kachmaz* EZ, 8% in *Sheki-Zagatala* and 5% each in *Kur* and *Orta Kur* zones. Only 2 women receiving iron/folate supplements had self-reported good compliance (7 tablets in the previous week).

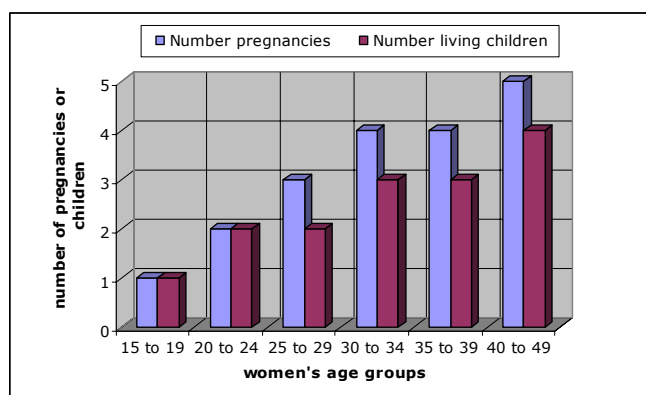
A total of 20% of the mothers were breastfeeding at the time

of the survey – 27% in *Orta Kur*, 25% in *Daglig-Shirvan*, and 23% in *Ganja-Gazakh*. Nearly 60% of the women aged 15-19 years were breastfeeding at the time of the survey as indicated in the chart on the left. This percentage decreased with age as well. There were no significant relationships found between current breastfeeding and nutritional outcomes when controlling for age in the sample of women.

4.1.3 – Pregnancy history and number of children

For the women in the sample, the average age was 30 years and the median age was 29 years. In total, the women reported a median number of 3 pregnancies and 2 living children. Fifteen percent reported a miscarriage or stillbirth, ranging from 7% in women 15-19 years of age, and increasing to 12% for women 20-24 years and peaking at 18% in the 30-34 year age group. For every age group, the average number of miscarriages or stillbirths was one. By zone, the percentage of women experiencing a miscarriage or stillbirth was highest in *Ganja-Gazakh* (25%), followed by *Sheki-Zagatala* and *Orta Kur*, with 17% each. The lowest was 9%, found in *Kur* and *Lankaran-Astara* zones.

The chart on the right shows that, for the younger women, the median number of pregnancies and living children are the same. However, from the 25-29 year age group onward, there is one more pregnancy than living child for these women. In this sample, by the time women reach 40 years, they are likely to have experienced 5 pregnancies but to have only four children.



Overall, 23% of the women in the sample reported the death of a child, ranging from 9% in the 15-19 age group, increasing to 26% for women aged 30-34 years, 32% in 35-39 years and up to 43% in the 40-49 years age group. By zone, the highest percentage of women experiencing the death of a child was 39% in *Lankaran-Astara* EZ. This was followed by 31% in *Guba-Kachmaz*, 29% in *Kur*, and 28% in *Daglig-Shirvan*. Only 10% of the women in the *Sheki-Zagatala* zone had lost a child.

The women were asked to remember how old they were when they had their first child. The average age was 21 years for the sample, but the average was between 22 & 23 years for women in the 30 to 49 year old age groups.

4.1.4 – Antenatal care

For each child less than five years of age, the mothers were asked to provide information on their use of antenatal care prior to delivery. For the analysis, 'skilled' antenatal care was defined as at least one visit to a doctor, nurse or midwife. Friends or relatives were not regarded as 'skilled' professionals with regards to antenatal care. More than 60% of the children in the sample had received skilled antenatal care while in the womb. However, there were some large variations between economic zones – over 90% of the recent pregnancies in *Lankaran-Astara* had received skilled antenatal care, followed by 81% in *Orta*

Kur, 79% in *Daglig Shirvan* and 77% in *Guba-Kachmaz*. Only 8% of the children in the *Sheki-Zagatala* sample had received skilled ANC while in the womb.

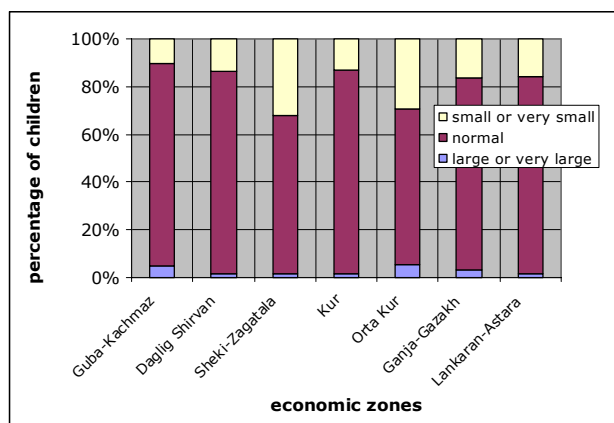
In the sample of children under 5 years of age, the mothers received at least one tetanus toxoid injection in only 7% of the pregnancies. The survey did not collect information whether the mother received the complete series of tetanus toxoid injections. In all, 27% of the mothers in *Lankaran-Astara* had received at least one tetanus toxoid injection in their recent pregnancies, followed by 11% in *Ganja-Gazakh* and virtually none in the other economic zones.

4.1.5 – Birth size & low birth weight

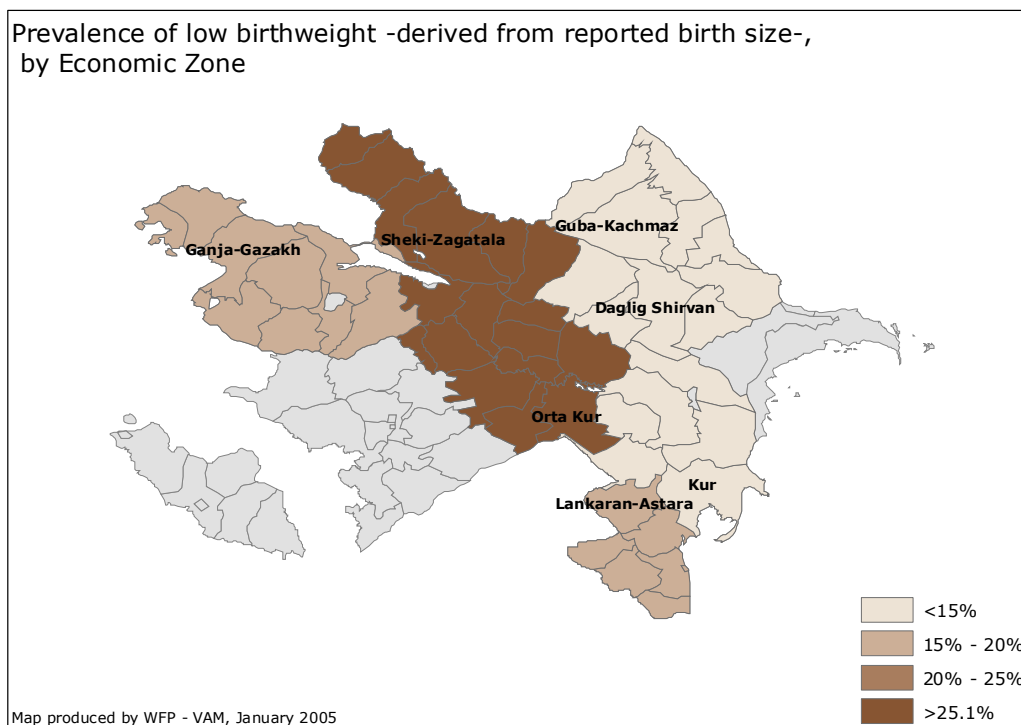
According to the ACC/SCN, Intrauterine Growth Retardation (IUGR) refers to foetal growth that has been constrained by inadequate nutritional environment *in utero* and is a characteristic of a newborn that has not attained its growth potential. There are two main types of IUGR: Group 1 are those born after at least 37 weeks of gestation and weigh less than 2,500 grams; Group 2 are those born prematurely and weigh less than the 10th percentile at birth (2,500 grams).

In most developing countries, it is difficult to determine gestational age so low birth weight (< 2500 grams) is used as a proxy for IUGR. Research shows that in 2000, 11% of newborns in developing countries had low birth weight at term. The main causes of IUGR are nutritional: inadequate maternal nutritional status before conception, short maternal stature, and poor maternal nutrition during pregnancy (low gestational weight gain primarily due to inadequate dietary intake). Diarrhoeal diseases, intestinal parasites, respiratory infections and malaria also have an impact on foetal growth. The underlying and more basic causes relate to the care of women, access to and quality of health services, environmental hygiene and sanitation, household food security, educational status and poverty.

In order to estimate incidence of low birth weight among children in the survey sample, the questionnaire included a question taken from the MICS survey where the mother is asked about the size of the child at birth. The child's birth size is described as being: very large, larger than normal, normal, smaller than normal, or very small. Overall, 3% were very large or larger than normal, 77% were normal, 18% were smaller than normal and 2% were very small. The graph above shows the estimated size at birth of children by zone. *Sheki-Zagatala* has the highest percentage of children who were small or very small at birth and is also the zone that had the lowest use of skilled antenatal care.



The map below shows the prevalence of low birth weight derived from reported birth size, by economic zone.



With the sample data, several analyses were conducted to see the relationships between potential causes of low birth weight (maternal health and nutrition, use of skilled antenatal care) and some of the negative effects of being born malnourished. Results of the causal analysis show that:

- Significantly more ($p < 0.05$) low birth weight children were born to mothers who are currently malnourished ($\text{BMI} < 18.5 \text{ kg/m}^2$).
- Mothers of low birth weight babies were significantly ($p < 0.05$) less likely to have received skilled antenatal care during their pregnancies.
- Mothers of low birth weight babies were significantly ($p < 0.001$) more likely to have experienced an episode of diarrhoea or fever in the 2 weeks prior to the survey.

Analysis of some outcome indicators shows that:

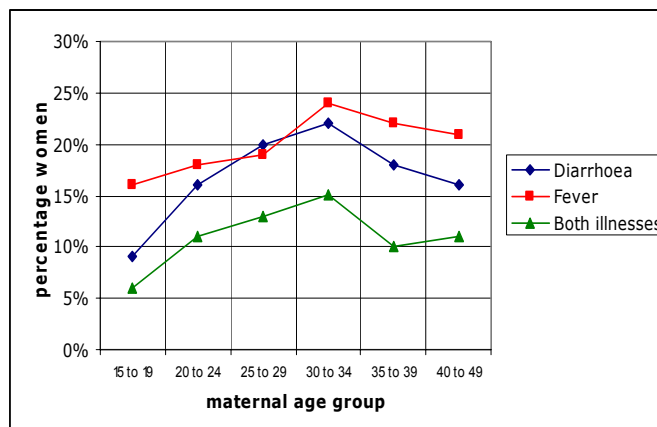
- Children who were described as being very small or smaller than normal at birth are significantly ($p < 0.001$) more likely to be underweight at the time of the survey but not more likely to be wasted or stunted.
- Low birth weight children are significantly more likely to suffer from fever ($p < 0.001$), cough ($p < 0.01$), or diarrhoea ($p < 0.001$), but not acute respiratory infection.
- Low birth weight children are more likely to suffer from anaemia than those children of normal birth weight.

4.1.6 – Current health and hygiene of women

The women in the sample were asked if they had experienced an episode of diarrhoea or fever in the two weeks prior to the survey. Overall, 19% of the women had at least one episode of diarrhoea, ranging from highs of 34% in *Ganja-Gazakh* and 32% in *Lankaran-Astara* to a low of 7% in *Guba-Kachmaz* EZ. By age group, the 2-week period prevalence of diarrhoea increased with age, peaking at 22% for the 30-34 year old age group and then dropping, as indicated in the chart below. Recent fever (non-specific) was reported by 21% of the women in the sample with the highest being 34% in *Lankaran-Astara* and 31% in

Ganja-Gazakh. The lowest prevalence was found in the women from *Guba-Kachmaz EZ* (9%). The 2-week period prevalence of fever by maternal age group was similar to that for diarrhoea, where the highest prevalence was found in women in the 30-34 year age group.

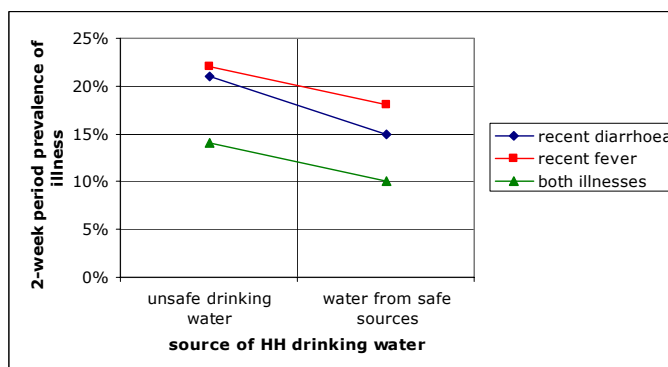
The prevalence of both illnesses in sampled women was also highest in *Ganja-Gazakh* (27%) and *Lankaran-Astara* (21%) and only 5% in *Guba-Kachmaz*, *Daglig Shirvan*, and *Sheki-Zagatala*. By age group, percentage of women reporting both illnesses increases with age, peaking at 30-34 years and then dropping slightly before increasing again. However, there are no significant correlations between illness, age and maternal BMI.



General appropriate hygiene practices were assessed by asking the mother what she normally used to wash her hands after defecation. This question was found to be slightly sensitive in some situations but the women were reportedly honest with their answers. Overall, 2% used water only to clean their hands after defecation while 96% used soap and water (good hand washing practices) while the rest used ash and water or nothing. By zone, 8% of women in *Lankaran-Astara* used only water to wash and 4% reported using water and ash while 6% of women in *Guba-Kachmaz* used water only to wash after defecation.

4.1.7 – Relationships between maternal morbidity & safe drinking water

The survey instrument collected information on the household's main source of drinking water during the year as well as type of toilet facility the household used. The definitions of water from safe sources and good sanitation are taken directly from UNICEF definitions. Water from safe sources were: piped into house or compound, public tap, tubewell/borehole, protected dug well or protected spring. Almost all households in the sample reported using a pit latrine so this variable was dropped from the analysis. With the rest of the data, several relationships were investigated between using water from safe sources and the prevalence of diarrhoea, fever, or both illnesses.



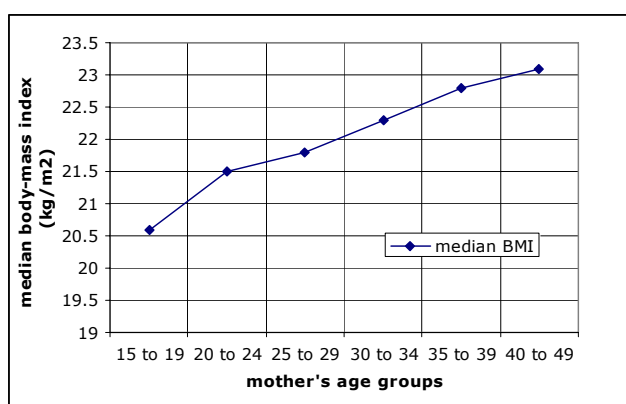
When the entire sample was analysed, it was clear that women using drinking water from safe sources were significantly ($p < 0.001$) less likely to have experienced diarrhoea in the past 2 weeks (15%) when compared to those using water from other sources (21%). The 2-week period prevalence of fever ($p < 0.01$) and both illnesses ($p < 0.001$) were also significantly lower in women from households using safe sources of drinking water. This statistically significant relationship between morbidity and use of drinking water from safe sources does

not hold true at the economic zone level, except in *Orta Kur* where the prevalence of recent diarrhoea or of both diseases is significantly lower ($p < 0.001$) in households using water from safe sources.

4.1.8 – Body-mass index (BMI) and malnutrition in women

The body-mass index was calculated for 2320 non-pregnant women in the sample during the analysis and it was found that the mean BMI was 22.9 kg/m^2 (± 0.2). When disaggregated by economic zone, the highest mean BMI was 24.4 kg/m^2 (± 0.5) in *Kur* Economic Zone and 24.2 kg/m^2 (± 0.4) in *Ganja-Gazakh* economic zone. The lowest mean BMI was 21.5 kg/m^2 (± 0.2) found in women from *Lankaran-Astara* economic zone. For the other zones, the mean BMI ranged from 22.0 to 23.3 kg/m^2 .

According to international standards, if a person has a BMI less than 18.5 kg/m^2 , he/she is considered underweight or **malnourished**. An individual is 'normal' if the BMI is between 18.5 and 24.9 kg/m^2 , while a BMI between 25.0 and 29.9 kg/m^2 indicates a person is **overweight**. A person is considered to be **obese** if the BMI is 30.0 kg/m^2 or more.

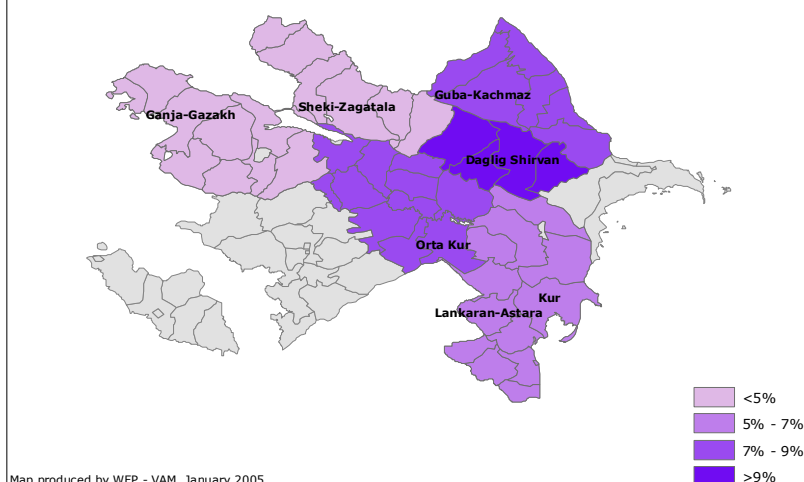


The chart on the left shows the median BMI for women by age group, and indicates an increase in BMI with age. The greatest increase in BMI is between the 15-19 years age group and the 20-24 years group, mostly because girls less than 18 years of age are not usually 'fully matured' and thus are still growing.

For the sample, the prevalence of malnutrition in non-pregnant women aged 15-49 years was 6.4 percent (95% CI – 5.4, 7.4). The highest prevalence of maternal malnutrition was 9.2% found in women from *Daglig-Shirvan* sample (± 4.3), followed by 8.7% in *Guba-Kachmaz* ($\pm 3.0\%$), 8.3% ($\pm 2.6\%$) in *Orta Kur*, and 7.1% ($\pm 2.9\%$) in *Kur* EZ. The lowest prevalence of malnutrition (3.6%, $\pm 2.0\%$) was found in women from *Ganja-Gazakh* EZ, followed by 4.3% in *Sheki-Zagatala* ($\pm 2.2\%$). In the other two zones, the prevalence was around the sample average.

Table 4.1 below shows that around 70% of the women in the sample were of 'normal' body-mass index at the time of the survey, while

Prevalence of non-pregnant women aged 15-49 years undernourished, by Economic Zone



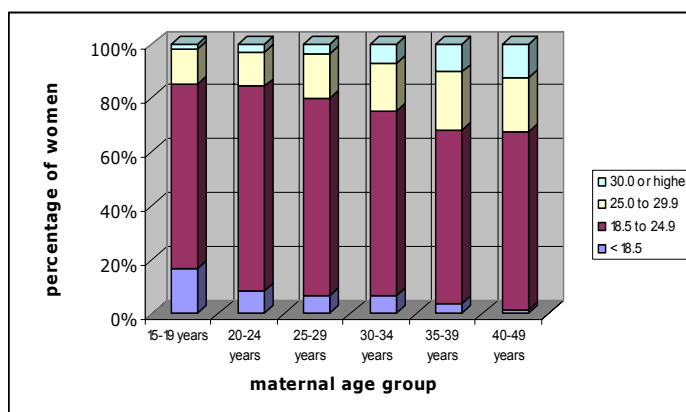
nearly 17% were considered 'overweight'. However, 6% of the women were classified as being 'obese' – nearly as many as were malnourished. The prevalence of obesity was highest among women in *Kur EZ*, followed by *Ganja-Gazakh*. However, there were no obese women found in the *Lankaran-Astara* sample and very few in *Sheki-Zagatala* and *Guba-Kachmaz*. It is interesting to note that, although the prevalence of malnutrition is quite low for women in *Sheki-Zagatala* and *Lankaran-Astara*, less than 10% of the women were overweight or obese.

Table 4.1 – Maternal nutritional status by type and zone

Economic Zone	Percentage of non-pregnant sampled women			
	Malnourished	Normal	Overweight	Obese
Guba-Kachmaz	8.7%	72.9%	14.5%	3.9%
Daglig Shirvan	9.2%	71.7%	13.9%	5.2%
Sheki-Zagatala	4.3%	86.6%	6.8%	2.2%
Kur	7.1%	51.9%	29.0%	12.1%
Orta Kur	8.4%	61.8%	22.0%	7.9%
Ganja-Gazakh	3.7%	60.1%	25.2%	11.0%
Lankaran-Astara	5.1%	88.2%	6.7%	0
Total	6.4%	70.7%	16.9%	6.0%
Armenia, 2000	4%	-	-	15%
Kazakhstan, 2000	7%	-	-	13%
Turkmenistan, 2000	10%	-	-	9%

When comparing these findings with those from nearby countries, it appears that the Azerbaijan sample has a higher prevalence of malnutrition in women of reproductive age than that found in the 2000 DHS for Armenia but similar to Kazakhstan and lower than Turkmenistan. However, the prevalence of obesity in women is much lower than found in any of those countries. These comparisons are made with rural populations only from the most recent DHS surveys in those countries.

When considering nutritional status or classification by maternal age group, as already noted the highest prevalence of malnutrition among non-pregnant women of reproductive age is in the youngest age group and decreases with increasing age group. Conversely, the prevalence of



overweight and obesity increases with age group where more than one-third of the women over 35 years of age are overweight or obese. These findings are illustrated in the chart on the right. There are virtually no undernourished women in the 40-49 years age group.

Only 5% of the women in the sample were classified as being 'underweight' (*weight < 45 kilograms*) with the highest found in *Daglig-Shirvan* (8%), *Kur* (8%) and *Orta Kur* (7%). The lowest percentage was found in women from *Lankaran-Astara* (3%). Adult stunting (*height < 145 cm*) was found in only 1% of the sampled women – 2% in *Ganja-Gazakh* and *Sheki-Zagatala*. These findings are similar to those found in DHS surveys for women in Armenia, Kazakhstan, Kyrgyz Republic, Turkmenistan and Uzbekistan.

4.2 – Micronutrient malnutrition

The survey was designed to investigate three main types of micronutrient malnutrition at the individual and household levels – deficiencies of vitamin A, iodine and iron.

Vitamin A is an essential micronutrient for child growth and development, immune function, epithelial cellular integrity and eyesight. It is a fat-soluble vitamin and adequate stores can satisfy the body's needs for up to six months. **Vitamin A deficiency** (VAD) in women can be clinically diagnosed through symptoms of night blindness, spots or scars on the eye. The mothers of children under five in the survey were asked if they had experienced night blindness (difficulty seeing at dusk) during their most recent pregnancy. From the sample, 2.2% (95% CI: 1.6, 2.8) had suffered **night blindness** with a high of 4.7% (95% CI: 2.5, 7.0) in *Lankaran-Astara* to a low of 0% in *Daglig Shirvan* zones. The International Vitamin A Consultative Group (IVACG) recommends that a maternal night blindness prevalence of $\geq 5\%$ as a cut-off at which vitamin A deficiency may be considered to be a problem of public health significance within the community. Hence, there may be such a problem in *Lankaran-Astara* economic zone.

For **vitamin A supplementation**, the women were asked if they had received a high dose capsule of vitamin A after their most recent delivery. These capsules are not only given to boost levels of vitamin A in the mother but also to ensure that she passes on the benefits of vitamin A to her newborn child through her breast milk while the child's immune system is developing. Only 3% of the women in the sample had received this vitamin A supplementation with the highest found in *Ganja-Gazakh* (7%) while none of the women in *Daglig-Shirvan* sample had been supplemented.

Clinical levels of **iodine deficiency disorder** (IDD) are known to cause goitre, cretinism, spontaneous abortion, premature birth, infertility and increased child mortality. Sub-clinical iodine deficiency impairs brain development and results in decreased IQ in children. IDD is the single most common cause of preventable mental retardation and brain damage. Less than a teaspoon of iodine is needed throughout the lifetime to prevent IDD. As iodine is not stored in the body, small amounts are needed on a regular basis. Iodine is not found in sea salt. Fortification of salt with iodine is the most common method to prevent iodine deficiency.

In the survey, the women were asked if anybody in their household had been diagnosed with goitre, which is an enlarged thyroid gland, caused by lack of iodine in the diet. Nearly one-quarter of the women reported that a member of the household had goitre, ranging from 46% of sampled households in *Sheki-Zagatala* to 11% in the *Kur* EZ sample. Of the households with affected members, 28% reported that the member had gone for treatment. Members from households in *Lankaran-Astara* (41%), *Daglig-Shirvan* (41%) and *Kur* (40%) were most likely to seek treatment for goitre, while those from *Guba-Kachmaz* (8%) were the least likely. A goitre survey conducted on school aged children in 2001 showed a total goitre rate (TGR) of 66% while a study conducted in 1996 found a TGR of 5.8% in rural resident populations. In comparison, a study of women of reproductive age in Armenia found a TGR of about 30 percent.

Around two-thirds of the households in the survey had been using adequately iodized salt, as confirmed by salt testing during the survey. Use of adequately iodized salt was highest in households from *Lankaran-Astara* (87%) and *Ganja-*

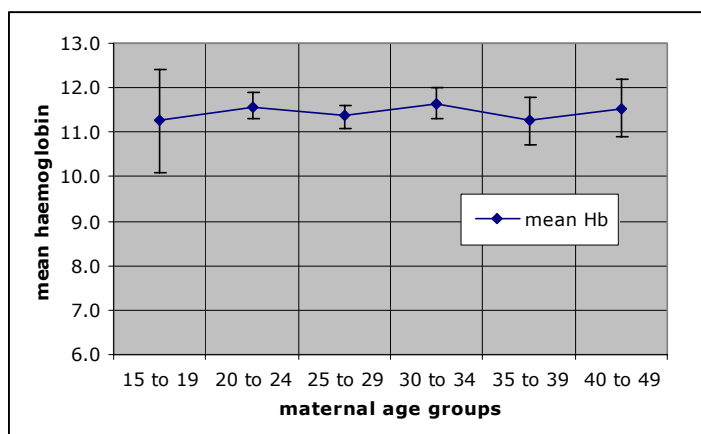
Gazakh (80%) zones as compared to only one-third of the households in *Sheki-Zagatala* economic zone.

A sub-sample of women was also tested for **anaemia** in the survey. A total of 565 women had their blood tested using the Hemocue® machines in the field. Anaemia is a condition of low haemoglobin concentration in the blood. It is caused by poor nutrition, malaria, intestinal parasites, genetic conditions or blood loss. Anaemia in women is associated with lowered resistance to infection, decreased work capacity, low birth weight and, in severe cases, an increased risk of maternal mortality. **Iron deficiency anaemia** (IDA) is the most common form of anaemia.

The Azerbaijan Reproductive Health Survey, 2001 (AZRHS₀₁) was the first nationally representative reproductive health survey in the country. The prevalence of anaemia amongst non-IDP resident women was 40.1 percent. According to the study, the higher levels of anaemia among women but with no evidence of high prevalence of hookworms, malaria or other micronutrient deficiencies (e.g., vitamin A) suggests that iron deficiency is the most probable cause of anaemia. The World Health Organization (WHO) considers anaemia prevalence of > 40% in a population as a severe public health problem.

For the WFP study the haemoglobin levels of 516 non-pregnant women were analysed and 56.8% (95% CI: 52.5, 61.1) were classified as being at least mildly anaemic ($Hb < 12.0$ g/dL). This ranged from a high of 80% (+/- 10%) in *Kur* economic zone to a low of 30% (+/- 10.5%) in the sample from *Lankaran-Astara* economic zone. The prevalence of anaemia in non-pregnant women in *Ganja-Gazakh* zone was also lower than the average – 43% (+/- 12%) while the levels for the other zones were around the sample average, with slightly higher levels in *Guba-Kachmaz* (66%) and *Orta Kur* (67%) zones.

In all, 1.9% of the women were severely anaemic (< 7.0 g/dL), 6.2% were moderately anaemic (7.0-8.9 g/dL) and 48.6% were mildly anaemic (9.0-11.9 g/dL). The highest prevalence of moderate to severe anaemia was found in *Sheki-Zagatala* (17.1%). There were only 49 pregnant women in the entire sample who were tested for anaemia and 57% (+/- 15%) were classified as being at least mildly anaemic ($Hb < 11.0$ g/dL).



The graph on the left shows the mean haemoglobin levels and the 95% confidence intervals for sampled women, by age group. The lowest means are found in the youngest and 35-39 year age groups. However, as the wide confidence intervals show, the sample size was very small for the 15-19 year age group

(only 10 women). The best levels were found for women aged 30-34 years. They also had the lowest prevalence on anaemia in the sample (51%, +/- 9%).

Section 4.3 – Child nutrition and health

Main findings of the household survey for child nutrition and health are presented in the following section. Data tables with the complete results of the analysis are found in Annex II of the report.

4.3.1 – Methodology and sampling

The planning team decided that only households with at least one woman of reproductive age (15 to 49 years) would be eligible for inclusion in the survey. When a survey team reached a village, they met with the village leaders to learn the approximate (or exact) number of households in the village. If the village leaders had a household listing, the survey team used the list to determine the households with women of reproductive age and to randomly select 12 to 15 households to be interviewed. If the household had more than one woman of reproductive age, then the woman with children under five years of age was selected and all of her children (0-59 months) were included in the child health and nutrition section of the questionnaire.

The age of children was determined simply by asking the mother for the date of birth. In most cases the teams felt they had accurate responses as the level of education of the women in the sample was quite high. However, it is likely that some ages were misreported in the final sample.

Each team had a doctor or nurse who was responsible for weighing and measuring the children and for haemoglobin testing. All of them had previous survey experience although there were some reports of inappropriate methods of measuring the children. The children were weighed on simple bathroom scales with weights reported up to 100 grams. Their length/height was measured using locally made measuring boards, designed to measure to 1/10th of a centimetre.

The final number of children 0-59 months included in the anthropometric analysis was 3003 while haemoglobin samples from 707 children were tested for anaemia.

Economic Zone	# measured	# haemoglobin testing
Guba-Kachmaz	406	111
Daglig Shirvan	255	87
Sheki-Zagatala	450	92
Kur	261	97
Orta Kur	604	138
Ganja-Gazakh	519	111
Lankaran-Astara	508	69
Total	3003	707

The numbers by economic zone are presented in the table on the left. Although the sample sizes for anthropometry by zone vary, the use of random sampling rather than cluster sampling reduces the design effect, allowing relative comparisons to be made between the zones while allowing the final estimates of malnutrition to be representative of

the areas included in the seven economic zones.

4.3. 2 – Comparison of results to 2000 MICS and to other countries in the region

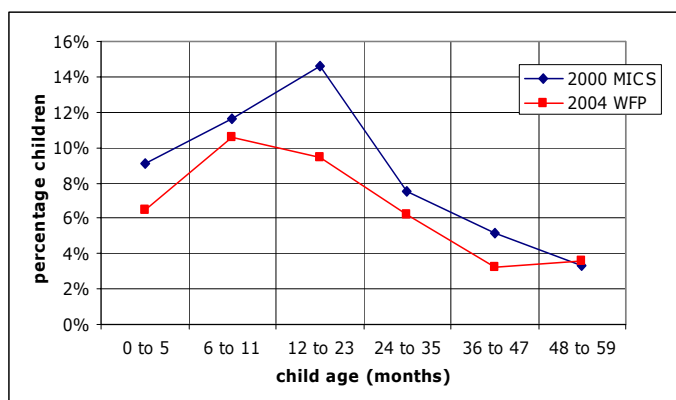
The results of the 2004 Food Security and Nutrition survey represent only rural communities with populations less than 1500 but greater than 80 persons. The table below compares nutritional outcomes also with those of countries in the region.

When comparing national studies, the prevalence of wasting in Azerbaijan is consistently higher than in the other countries. The 2004 WFP study showed a slightly lower prevalence of wasting among rural populations when compared to the rural results of the 2000 MICS. Regionally the prevalence of underweight is also higher in Azerbaijan with the prevalence from the 2004 WFP being a bit lower than the 2000 MICS.

The problem with chronic malnutrition is still worse in Azerbaijan than in neighbouring countries. However, the 2004 WFP study found a much higher prevalence of stunting in rural populations than the 2000 MICS. This does not necessarily indicate that the problem is increasing as the sampling and coverage were different for the two surveys. This comparison is only indicative.

Table 4.2 – Country comparisons of child nutritional outcomes (children 0-59 months)

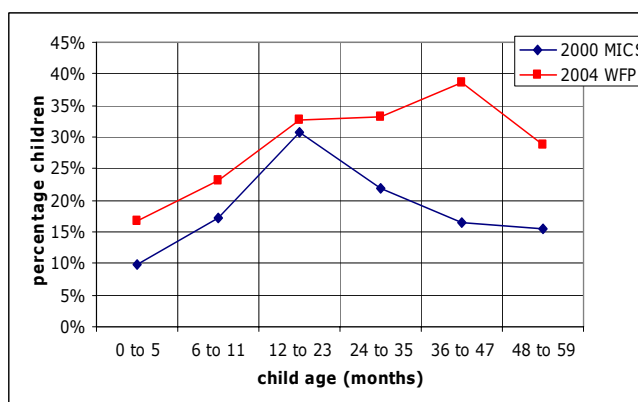
Source & year		At least moderate (< -2 SD)		
		Wasting ¹	Underweight ²	Stunting ³
Armenia	DHS 2000	2.0%	2.5%	13.6%
Azerbaijan (total)	MICS 2000	7.9%	16.8%	19.6%
Azerbaijan (rural)	MICS 2000	7.9%	18.5%	21.7%
Azerbaijan (rural)	WFP 2004	6.2%	14.9%	31.3%
Georgia	MICS 1999	2.3%	3.1%	11.7%
Iran	National Survey 1998	4.9%	10.9%	15.4%
Turkey	DHS 1998	1.9%	8.3%	16.0%



The chart on the left compares the prevalence of wasting by age group between the two surveys. The prevalence of wasting in both surveys is highest in children 6-24 months of age but the peak in 2004 study is less than that from the 2000 MICS. In 2000, wasting prevalence peaked in the 12-23 months age group at

around 15% while in 2004 the peak was just over 10% in the 6-11 months age group with a slight decline in 12-23 months. The two curves are otherwise similar in the other age groups.

The prevalence of stunting in the 2004 survey is higher than the 2000 MICS in all age groups except the 12-23 months group where it is just over 30 percent. The prevalence of stunting in the 2000 MICS decreases after that and flattens in the older age groups. This curve is not typical for stunting prevalence by age group. The 2004 survey curve is more typical, with

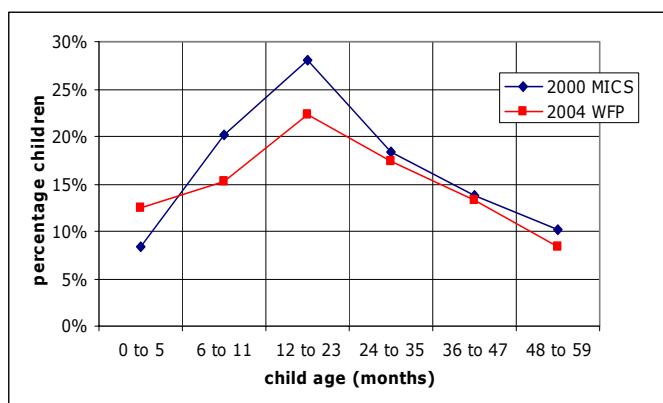


¹ A **wasted child** has a weight-for-height Z-score that is below -2 SD based on the NCHS/CDC/WHO reference population. Wasting or **acute** malnutrition is the result of a recent failure to receive adequate nutrition and may be affected by acute illness, especially diarrhoea.

² An **underweight child** has a weight-for-age Z-score that is below -2 SD based on the NCHS/CDC/WHO reference population. This condition can result from either chronic or acute malnutrition or a combination of both.

³ A **stunted child** has a height-for-age Z-score that is below -2 SD based on the NCHS/CDC/WHO reference population. Stunting or **chronic** malnutrition is the result of an inadequate intake of food over a long period and may be exacerbated by chronic illness.

sharp increases from the youngest group until the 12-23 month age group. This is followed by a slight drop in prevalence due to a change in standards for calculation of z-scores from 24-59 months. After that, the prevalence increases again and then declines a bit in the older children.



The patterns of underweight prevalence by age group are similar between the two studies except that the 2004 study has a lower peak in the 12-23 months age group than the 2000 MICS. This peak indicates that many of the nutritional problems are found during the critical weaning period and could suggest that nutritional problems in young

children are not simply related to access to food but also to caring practices such as breastfeeding/complementary feeding as well as health and hygiene. In addition, the 2004 study shows a slightly elevated prevalence of underweight in the youngest age group, perhaps indicative of a problem of low birth weight.

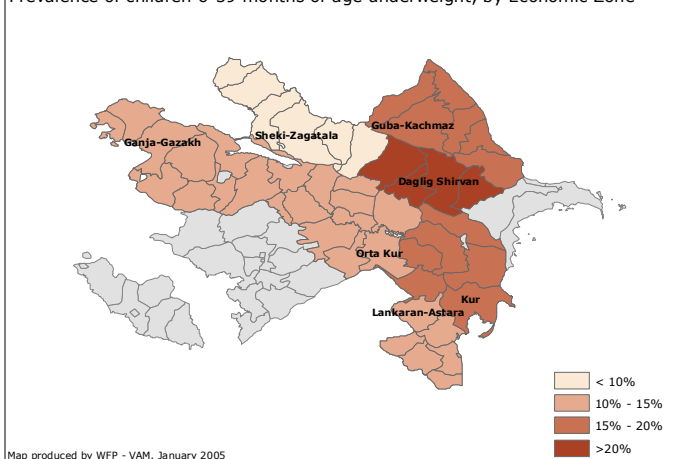
4.3.3 – Malnutrition by economic zone

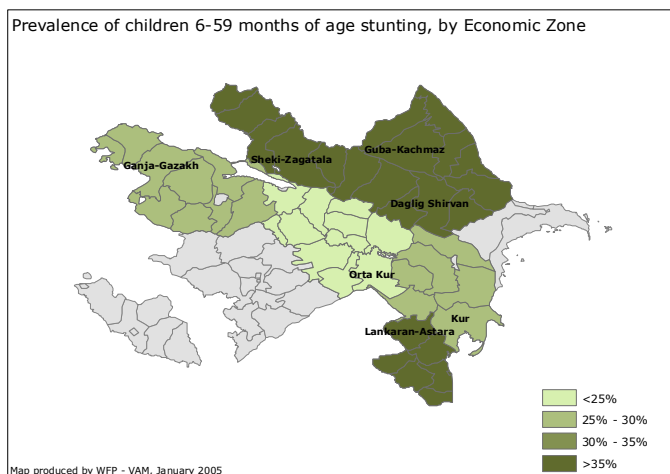
There was some variation in child malnutrition (6-59 months) by economic zone – especially for underweight and stunting.

Acute malnutrition or wasting ($whz < -2.00$ SD) was highest in the *Daglig Shirvan* sample (8.3%), followed by *Lankaran-Astara* (7.8%). The lowest prevalence of wasting was found in the *Sheki-Zagatala* sample – 4.1 percent.

The prevalence of **underweight** ($waz < -2.00$ SD) was highest in children from *Daglig Shirvan* (20.8%), followed by *Guba-Kachmaz* (17.2%) and *Kur* (16.8%) and lowest in *Sheki-Zagatala* (9.5%).

Prevalence of children 6-59 months of age underweight, by Economic Zone





About one-third of children 6-59 months in the sample were stunted. The prevalence of **chronic malnutrition** or stunting was highest in *Daglig Shirvan* (40.4%), followed by *Guba-Kachmaz* (39.6%) and *Lankaran-Astara* (39.0%). The children in samples from *Orta Kur* (24.8%), *Ganja-Gazakh* (26.8%) and *Kur* (27.5%) were the least likely to be suffering from chronic malnutrition.

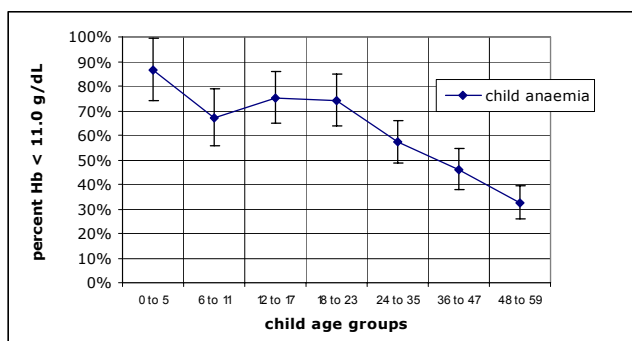
The percentage of children classified as being **severely underweight** ($waz < -3.00$ SD) was 2.5% for the sample and was highest in *Daglig Shirvan* (6.5%), followed by *Guba-Kachmaz* (4.0%) and lowest in *Orta Kur* (1.1%) economic zone. The prevalence of **severe stunting** ($haz < -3.00$ SD) was highest in *Lankaran-Astara* (16.2%), followed by *Sheki-Zagatala* (15.3%), *Guba-Kachmaz* (15.2%), and *Daglig Shirvan* (14.7%). The prevalence was lowest in the *Orta Kur* sample (5.4%).

4.3.4 – Child anaemia

A sub-sample of children were also tested for anaemia through the provision of blood samples drawn from a finger prick and analysed using the HemoCue® machine in the field. A total of 675 children (6-59 months) were tested and from those, 52.1% (95% CI : 48.4, 55.9) had haemoglobin levels lower than 11.0 g/dL, which classifies them as being at least mildly anaemic. The table on the left compares these findings

	Year	Moderate-to-severe	Any anaemia
Azerbaijan	2004	13%	52%
Azerbaijan	2001	-	32%
Armenia	2000	13%	31%
Kazakhstan	1999	26%	48%
Kyrgyz Republic	1997	25%	50%
Turkmenistan	2000	23%	44%
Uzbekistan	1996	27%	61%

with those from the AZRHS₀₁ and DHS surveys of countries in the region. The prevalence found in the 2004 WFP survey is much higher than that from the 2001 AZRHS₀₁. Some of this difference could be due to the different methods used in selecting communities and individuals. However, a prevalence of anaemia that is greater than 40% constitutes a serious public health problem, according to the World Health Organization (WHO). However, the prevalence of moderate-to-severe anaemia is the same as found in Armenia and lower than in Central Asian countries.



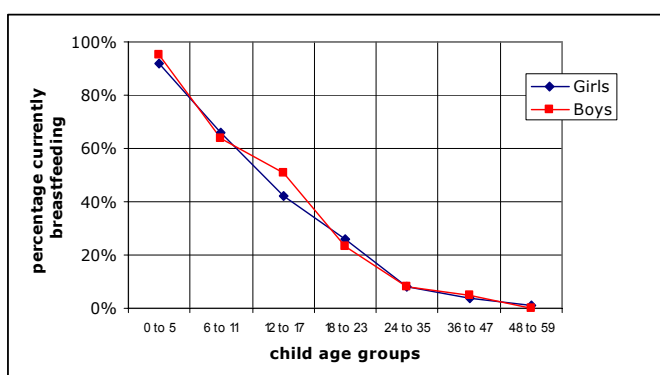
The graph on the left shows the prevalence of child anaemia and 95% confidence intervals by age group for the entire sample. Nearly all of the 30 children tested in the 0-5 months age

group were anaemic. The prevalence decreases in the 6-11 months age group and then increases again in the 12-17 and 18-23 months age groups – perhaps due to a number of factors such as poor quality weaning foods, independent movement increasing the chance of infections and illness. Then the prevalence decreases steadily with increasing age of the children. There is a significant ($p < 0.001$) correlation between maternal and child anaemia but the coefficient is only 0.142 meaning that only 14% of the relationship can be explained.

4.3.5 – Breastfeeding practices

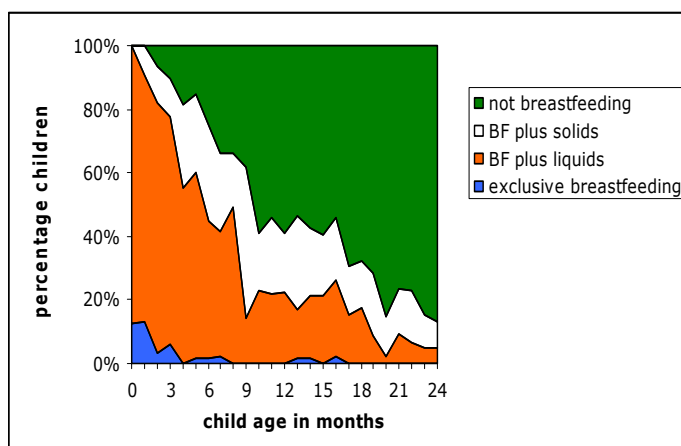
For each child in the survey, information was collected on breastfeeding initiation, duration and weaning practices. Over 90% of the children in the survey had been fed breast milk, ranging from 94% in *Lankaran-Astara* to 86% in *Sheki-Zagatala*. There is little information on the use of breast milk substitutes among this population of women. Information was also collected on initiation of breastfeeding but it was not complete and thus is not included in the analysis.

The chart on the right shows the percentage of boys and girls who were still breastfeeding by the time of the survey, by age group. Nearly all children 0-5 months are breastfeeding. This percentage decreases gradually by age group with the steepest decrease coming after the 24 month age group – the



most common age for weaning. Virtually no children over the age of 3 years were being breastfed. There are few differences by gender, except that slightly more boys than girls in the 12-17 months age group were being breastfed.

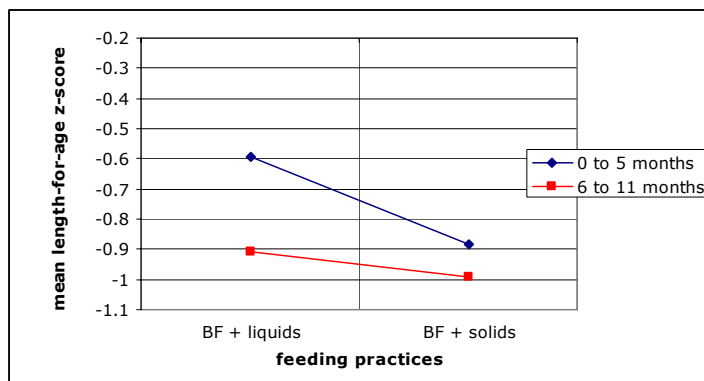
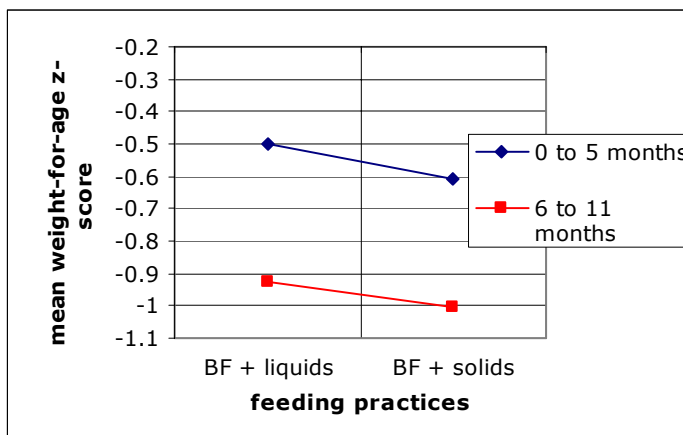
The results of this survey show that only 2% of children < 24 months of age are being fed only breast milk (no water). Only 13% of the children one month or



less are exclusively breastfed. Liquids are introduced to the diet almost immediately and solids are being introduced to more than one-quarter of the children by four months of age. By 10 months, nearly 60% of the children are no longer breastfed and by 2 years of age, nearly 90% of the children are not breastfeeding.

The types of feeding practices have an effect on child growth, as indicated in the two graphs on the right and below. For the sample of children under 1 year, the mean weight-for-age z-score is lower for children having breast milk plus solids than those having breast milk plus other liquids. This is true for both 0-5 months and 6-11 months age groups

although the curve is steeper for the younger children indicating that they are not getting the right type of nutrition for optimal growth.



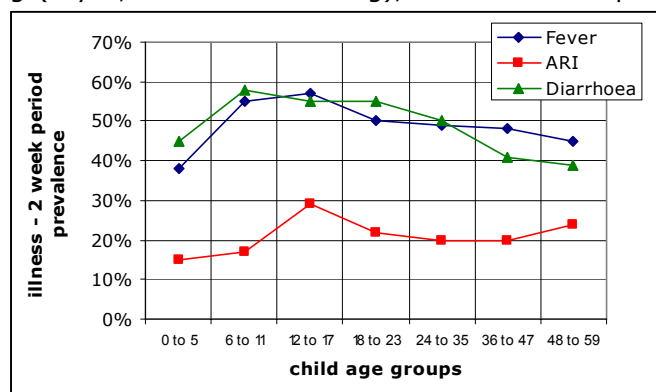
The graph on the left compares the mean length-for-age of children less than one year by the type of feeding practices. For the children 0-5 months who are not exclusively breastfed, those being fed breast milk plus solids have a much worse z-score than those with breastmilk plus other

liquids. The relationship is not as strong in the children 6-11 months of age. Again, this illustrates the dangers of introducing solid or 'adult' foods too early for young children – the potential impact on linear growth.

When asked about vitamin A supplementation, only 5% of the children had ever received supplements, according to the mothers. Supplementation was highest in the *Ganja-Gazakh* sample (10%), and lowest in *Guba-Kachmaz* sample (1%).

4.3.6 – Recent child morbidity

In the survey, the mothers were asked if their children had experienced an episode of diarrhoea, coughing (if yes, with fast breathing), or fever in the past two weeks. Overall, 47% of the children had experienced an episode of diarrhoea, 40% had been coughing and 48% had a non-specific fever in the past two weeks. Coughing with fast breathing is a sign of acute respiratory infection (ARI), which is one of the major childhood illnesses in the developing



world. In the sample there was a 21% period prevalence of ARI in children less than five years of age. For those children suffering from diarrhoea, 34% had received treatment at a health facility.

The prevalence of diarrhoea was highest in the 6-11 month age group and remains higher through the weaning period (24 months) before gradually reducing. The prevalence of fever and ARI was highest in the 12-17 month group. For all three illnesses, the prevalence was lowest in the youngest age group. The prevalence of each of the illnesses was slightly higher in boys than in girls.

For the children less than 6 months of age the prevalence of ARI was 11% for those receiving breast milk plus other liquids, which was significantly lower ($p < 0.05$) than the 23% for children receiving breast milk and solids.

The presence of illness has an impact on child nutrition for the overall sample. Children with recent **fever** had significantly ($p < 0.01$) lower mean weight-for-height and weight-for-age z-scores than those without fever. As a result, they were also significantly ($p < 0.01$) more likely to be at least moderately wasted. Those with recent **diarrhoea** had significantly ($p < 0.05$) lower weight-for-height z-scores and were significantly ($p < 0.05$) more likely to be suffering from acute malnutrition. In general, children who had experienced **any illness** in the two weeks prior to the survey were significantly ($p < 0.01$) more likely to have lower weight-for-height z-scores and to be wasted. In addition, they were also significantly ($p < 0.05$) more likely to have lower weight-for-age z-scores and to be underweight.

When considering recent child morbidity by economic zone, the prevalence of **fever** was highest in children from the *Lankaran-Astara* sample (63%), followed by *Ganja-Gazakh* (59%), while lowest in the *Guba-Kachmaz* sample (25%). The prevalence of cough was also highest in the *Lankaran-Astara* sample (55%), followed by *Ganja-Gazakh* (52%), and lowest in the *Guba-Kachmaz* sample (21%). The prevalence of **acute respiratory infection** was extremely high in the children in the *Lankaran-Astara* sample (46%) and quite low in *Guba-Kachmaz* (8%) and *Sheki-Zagatala* (11%). The prevalence of **diarrhoea** in children followed the same geographic distribution, being the highest in *Lankaran-Astara* (62%) and *Ganja-Gazakh* (58%) and lowest in *Guba-Kachmaz* (27%). Around 40% of the children with diarrhoea in *Daglig Shirvan* and *Lankaran-Astara* received treatment for their diarrhoea at a clinic.

4.3.7 – Nutrition and morbidity by gender

The data were analysed to better understand the relationships between nutrition and morbidity and gender. The findings are presented in the tables below. For both nutrition and morbidity there were differences by only a few were statistically significant.

Table 4.3 – Child nutrition (6-59 months) by gender

	Mean z-scores			% moderately malnourished		
	Weight-for-height	Weight-for-age	Height-for-age	Wasted	Underweight	Stunted
Girls	-0.10	-0.92	-1.32	6%	15%	27%
Boys	-0.17	-1.06	-1.53	6%	15%	35%
Significance	<i>n.s.</i>	< 0.001	< 0.001	<i>n.s.</i>	<i>n.s.</i>	< 0.001

The information in Table 4.3 shows that for all z-score indicators, the boys were worse off than the girls, with significant differences in mean weight-for-age and mean height-for-age measures. However, when looking at the percentage of

children with z-scores below -2.00 SD, the only difference was found in chronic malnutrition where 35% of the boys were stunted as compared to only 27% of the girls in the sample. It is not uncommon to find that in many countries girls are nutritionally better off than boys and some possible explanations can be made in terms of cultural/caring practices where girls are often kept closer to the mother while boys are allowed to go around more freely, perhaps expending more energy and likely increasing exposure to pathogens.

Table 4.4 – Recent morbidity and anaemia by gender

	Fever	ARI	Diarrhoea	Treated at health facility	Mean haemoglobin	Anaemic	N
Girls	47%	20%	45%	33%	10.71	55%	321
Boys	50%	22%	48%	34%	10.59	53%	384
Significance	<i>n.s.</i>	<i>n.s.</i>	0.051	<i>n.s.</i>	<i>n.s.</i>	<i>n.s.</i>	-

Table 4.4 shows that the boys are slightly more likely to have suffered from fever, acute respiratory infection and diarrhoea in the two weeks prior to the survey than girls. The difference for diarrhoea prevalence is almost statistically significant. However, there were no differences in the percentage of children with diarrhoea treated at a health clinic.

Even though the mean haemoglobin was slightly higher for the sample of girls, the prevalence of anaemia was slightly higher when compared to the boys. The sample size was higher for boys than girls.

Part V – Household food consumption typologies - Residents

Section 5.1 – Household food consumption typologies

Using data on dietary diversity, defined as the number of different foods consumed during the week prior to the survey, and the frequency by which these food are consumed, a sample of 3078 households from the resident population of Azerbaijan were analyzed in order to identify homogeneous groups of households based on their food consumption patterns.

From an exploratory analysis it was found that practically *every household* in rural Azerbaijan *consumed bread/wheat flour and sugar on a daily basis*. Since this information for these food items was virtually constant, they were left out of the household food consumption analyses.

The analysis used information on the frequency of consumption (0 to 7 days) for eight food items or food groups:

- | | |
|--|--|
| 1. pasta, rice and other cereals; | 5. eggs; |
| 2. potatoes; | 6. vegetable oil, fats and butter; |
| 3. beans/pulses; | 7. dairy products (milk, yoghurt and cheese); |
| 4. meat (including red, white meat and fish); | 8. vegetables and fruit |

The sources of the different foods consumed (purchased, own production, borrowed, or received as gift) were investigated in an attempt to understand how reliance on food sources can impact household food security. For the whole sample, purchases make up 44% of the total responses on access to food, own production 38% and borrowing 14 percent. Food received as a gift is slightly more than 4% of the total food source information.

The next pieces of information that were introduced into the analysis were the main sources for each food consumed by the household in order to better understand the household's reliance on a particular source in meeting their consumption needs. The most common sources of food in the Azerbaijan sample were from purchase, own production, borrowing or gifts. Households were allowed to name the main source plus a secondary source, if there were one. Often households supplement the main source, such as purchase, with additional amounts from a secondary source such as borrowing.

For each household, all items were coded as either 'purchased', 'produced' 'gift' or 'borrowed', both for main and secondary source of food. Then the number of responses for each source was counted and the proportion of consumption from each source calculated.

For example, a household consumed bread/wheat from purchase and borrowing, potatoes from own production and vegetables from own production and purchase. They also ate oil and meat which they purchased. To calculate percentage of consumption from each source, frequency of purchase (4), own production (2) and borrowing (1) were summed. These values were divided by the sum of all source frequencies ($4+2+1 = 7$) to get 57% of consumption from purchase ($4/7$), 29% from own production ($2/7$) and 14% from borrowing ($1/7$).

Per capita monthly expenditure was introduced into the analysis as a third variable in order to confirm the different patterns of consumption, mainly the relative reliance on purchases. In fact, the amount of money spent depends on the cost (more expensive or cheaper) of the consumed items, on the quantity purchased and, of course, on whether a particular item is purchased or could be acquired through production or borrowing. In this sense, the percentage expenditure, if used together with the other indicators of food consumption,

allows to estimate the consistency of information about different food items and their sources.

The dataset with information on 1) number of food items and their frequency of consumption, 2) share of consumed food from each food source and 3) per capita amount of money spent on food was analyzed using multivariate statistical techniques (principal component analysis followed by non-hierarchical clustering analysis) to create clusters of households characterized by distinct food consumption patterns, similar way of access food and similar relative per capita monthly expenditure for food.

Total share of expenditure for food and other basic needs and share of expenditure for individual food items have been calculated in order to describe the average economic outflows of households having similar food consumption and food sources profile.

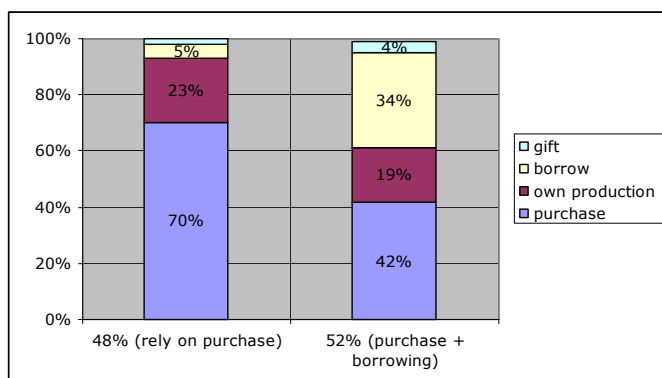
According to the methodology described above, **seven** household typologies have been determined.

Group A - 12% of the sample - households with limited access to food.

Households clustered in this group base their diet on a daily consumption of bread, sugar, potatoes and oil. Vegetables and fruit are often eaten, but food from the other food groups are consumed just 2 to 3 times per week.

Among households clustered in this group, two different ways of accessing food have been found: 48% of households tend to rely largely on purchase (70% of food consumed) while 52% of the group relies on purchase (42%) but also has a high dependence on *borrowing*, that was mentioned as source of food in 34% of the responses.

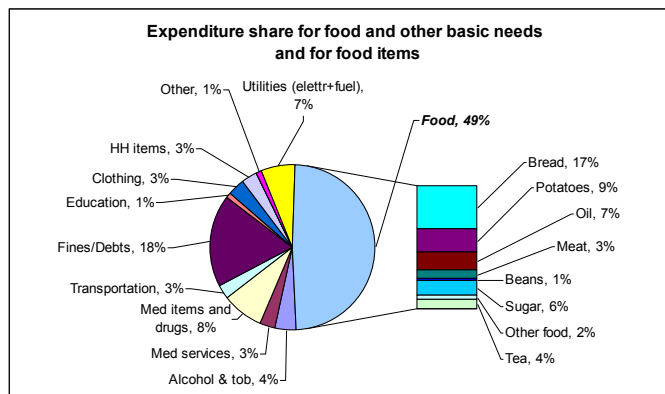
12%	never/rarely (0-1 day)	sometimes (2-3 days)	often (4-5 days)	daily (6-7 days)
Bread, wheat				
Sugar				
Pasta, rice				
Potatoes				
Pulses				
Meat				
Eggs				
Oil, fats				
milk, yoghurt, cheese				
Vegetables & fruit				



These households *have to rely on borrowing especially for their staple food needs*. In particular, sugar was borrowed in 56% of the responses about sugar source (purchase was 42%). The reliance on borrowing for cooking oil was similar. Borrowing was much lower for bread/wheat (25%) and for potatoes (28%).

This group of households is characterized by allocating 49% of their total monthly expenditure for food. The average per capita expenditure average value is 47,900 Manat per month, being slightly higher among those households with greater reliance on purchase (49,900 Manat versus 46,100 Manat). Most of the expenditure

for food is for bread/wheat flour (17% of total) and potatoes (9% of the total), followed by oil (7%) and sugar (6%). Debts or fines are the second biggest share of expenditure, accounting for 18% of total monthly spending.



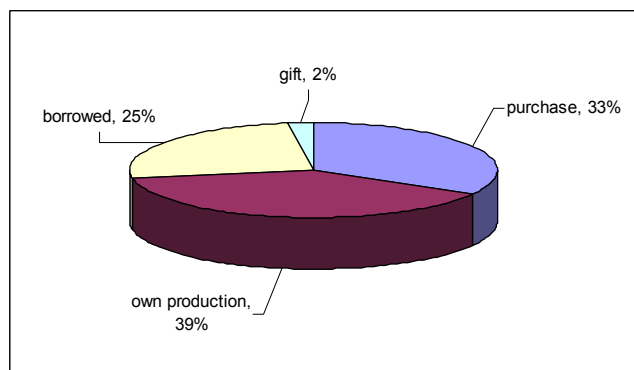
Group B - 15% of the sample. These households present a diet based on a daily consumption of bread, sugar, and potatoes. All households in this group have

15%	never/rarely (0-1 day)	sometimes (2-3 days)	often (4-5 days)	daily (6-7 days)
Bread, wheat				
Sugar				
Pasta, rice				
Potatoes				
Pulses				
Meat				
Eggs				
Oil, fats				
milk, yoghurt, cheese				
Vegetables & fruit				

frequent consumption of dairy products (milk, yoghurt and/or cheese) and vegetables and/or fruit. The large majority of the group consumes oil every day (80% of the group), but few households consume it rarely. Pulses and meat are hardly ever consumed, indicating a possible lack of protein in the

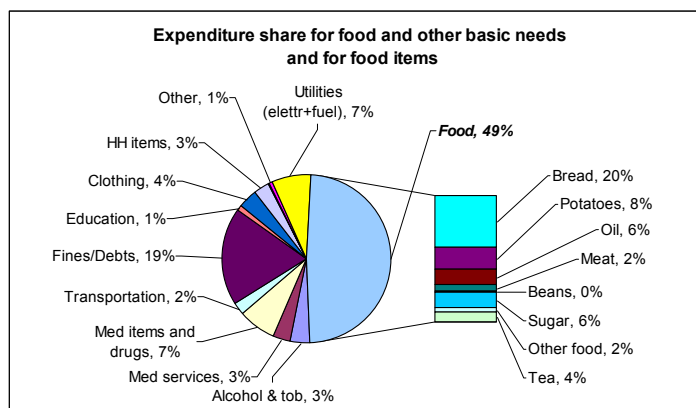
diet, outside that found in the dairy products. These households are mainly consuming calories from carbohydrates and fats.

The most important source of the food consumed for these households is from their own production - 39% of the responses about sources of food. Other food is purchased (33%) and an important share is borrowed (25%). In particular, borrowing is main sources for pasta (52% of the responses about sources), cooking oil (52%) and sugar (55%). Borrowing is source for potatoes but only for 18% of the responses.



Part V – Household food consumption typologies - Residents

Food again is 49% of household total monthly expenditure (average for the group). Average food expenditure is *46,200 Manat per capita per month*.

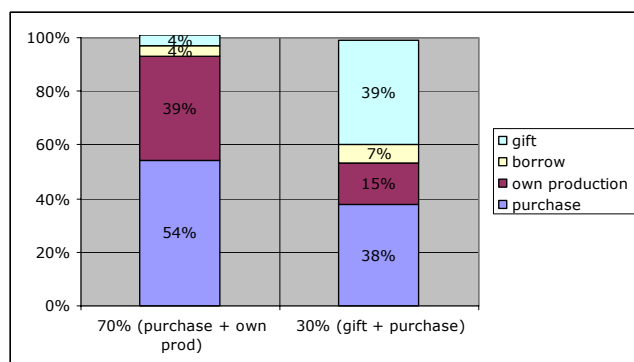


Bread/wheat flour accounts for 20% of the total outflow which is the highest of all groups, followed by potatoes (8%), cooking oil and sugar (6% each). The highest share of non-food expenditures are for debt repayments (19%) indicating a heavy reliance on borrowing among these households. Other

significant non-food expenditures are for medical services and items/drugs as well as utilities such as electricity and fuel.

Group C - 15% of the sample consumes bread/wheat flour, sugar, cooking oil, dairy products (milk, yoghurt and cheese) and fruits and vegetables every day. Potatoes are consumed often but not daily while pasta or rice, meat and eggs are consumed about 2-3 days per week. Pulses are hardly ever consumed by households in this group. This dietary pattern shows high consumption of carbohydrates and fats but relatively low consumption of protein, with the exception of dairy products.

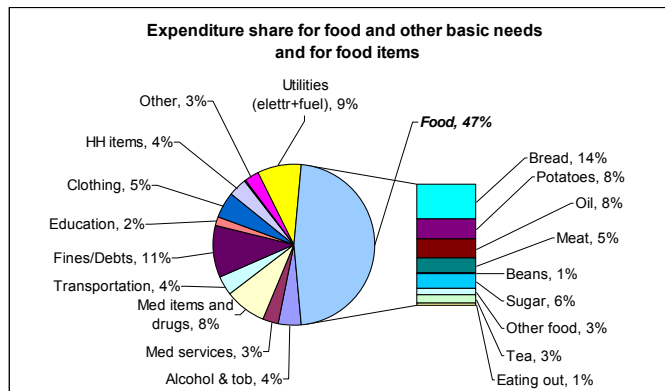
15%	never/rarely (0-1 day)	sometimes (2-3 days)	often (4-5 days)	daily (6-7 days)
Bread, wheat				
Sugar				
Pasta, rice				
Potatoes				
Pulses				
Meat				
Eggs				
Oil, fats				
milk, yoghurt, cheese				
Vegetables & fruit				



More than two-thirds of the households characterized by this consumption group manage to access their food through a combination of purchase and own production (54% and 39% of the food sources respectively). However, 30% of these households rely largely on gifts (39% of total) and purchases (38% of total) as their main food

sources. The foods most often received as gifts are dairy products (69% of total dairy responses), vegetables and fruits (55% of total) and potatoes (34% of total potato responses). Conversely, all these items are purchased or own produced by the rest of the households in this group.

Expenditure on food is 47% of the total household monthly expenditure with an average per capita spending on food of 51,100 Manat per month. This value is higher among households with large reliance on purchasing - 52,400 Manat versus 48,300 Manat among households relying on food gifts. While bread/wheat flour, potatoes and oil take the bigger shares (14%, 8% and 8% respectively on the total expenditure), expenditure on meat is more important (5%), even though this item is consumed just 2-3 times per week.



Fines/debts are again the largest non-food share of monthly household expenditure. However, debt repayment are much less incisive on these households' budget than on the previous groups' one, dropping to 11% of the financial resources. Utilities (costs for electricity and cooking fuel) are 9% of the total monthly expenditure.

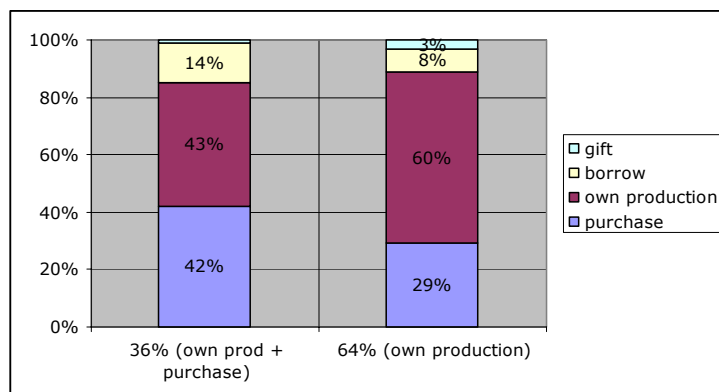
Group D - A group of **19%** of sampled households has been grouped together because they have daily consumption of bread/wheat flour, sugar, potatoes,

19%	never/rarely (0-1 day)	sometimes (2-3 days)	often (4-5 days)	daily (6-7 days)
Bread, wheat				
Sugar				
Pasta, rice				
Potatoes				
Pulses				
Meat				
Eggs				
Oil, fats				
milk, yoghurt, cheese				
Vegetables & fruit				

cooking oil and dairy products (milk, yoghurt and cheese). Some households in this group (36%) eat quite rarely vegetables or fruit, but the majority of them have a daily consumption of items from that food group. This group is also

characterized by more regular consumption of eggs but still low consumption of meat, pasta/rice and pulses. Overall, the diet is still high in carbohydrates and higher in fat than the others but also increases in protein consumption are found with addition of eggs to the diet.

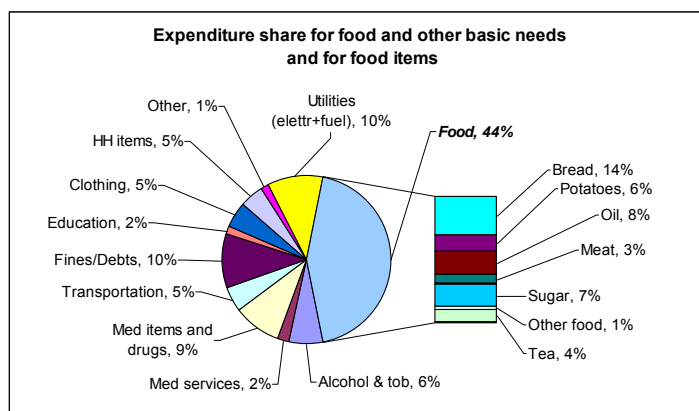
It is relevant to notice that households with regular consumption of vegetables and fruit have more access to food through own production (60% of their food source responses), while they purchase only 29% of their food. The other subgroup –



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households which rarely consumed vegetables and fruit – tend to access their food in equal share from own production and purchase (43% and 42%). Borrowing is around 10% for the total group access to food, being 8% for the “food producers”, and 13% for the ones which produce proportionally less. This group mostly borrows cooking oil and sugar (24% and 35% of the responses about these items). The first group tends to borrow cooking oil and sugar (29% and 36%) and also some bread/wheat (15%).

Expenditure for food is the lowest in the sample, being 44% of the monthly total. This group of households presents *the lowest per capita per month food expenditure value:*

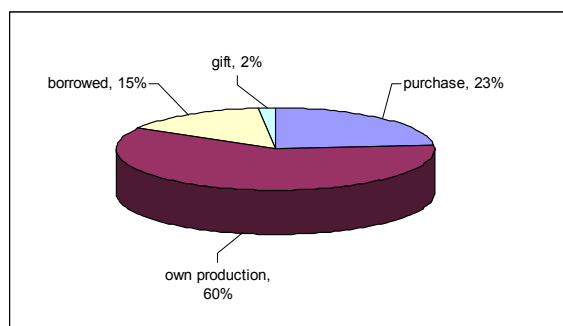


33,200 Manat, being on average lower among households with higher share of own produced food, even if the difference is minimal (34,500 versus 32,500 Manat in the two subgroups). Among food items, they spend proportionately more on bread/wheat flour (14%), cooking oil (8%) and sugar (7%).

Expenditure for potatoes appears to be the lowest among all household food consumption typologies, probably due to the fact that these households could grow some potatoes for their own consumption since they are eating them every day. The highest non-food expenditures are for fines/debt repayments and utilities, which take 10% of the household budget each, followed by costs for medical items and drugs, 9 percent.

Group E - 7% of the total sample present a dietary pattern that differs from the other groups because of daily consumption of potatoes, pulses, eggs, dairy (milk, yoghurt and cheese), and vegetables and fruits. Pasta, rice or other cereals are frequently consumed. Meat is the only food items consumed not very often, 2-3 times per week. Overall they present a good level of dietary diversity and are the first group to regularly consume pulses. Their overall protein consumption is better than previous groups even though the consumption of meat is still only a few days per week.

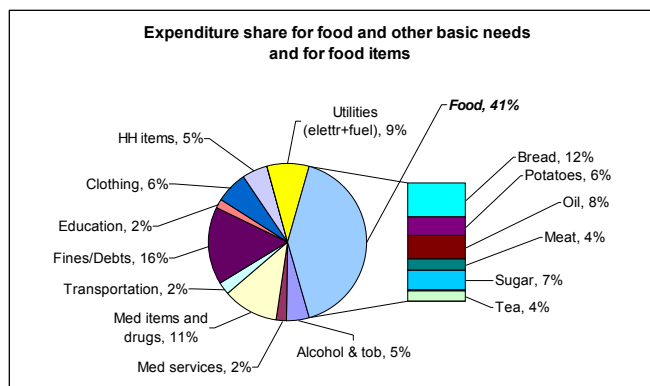
7%	never/rarely (0-1 day)	sometimes (2-3 days)	often (4-5 days)	daily (6-7 days)
Bread, wheat				
Sugar				
Pasta, rice				
Potatoes				
Pulses				
Meat				
Eggs				
Oil, fats				
milk, yoghurt, cheese				
Vegetables & fruit				



This group accesses their food mainly through own production (60%). Purchase was declared in 23% of the total responses. These households seem to borrow food a

bit more than households in the previous group – meaning they eat more but they rely more on borrowing as source of their food (15%). In particular, these households borrow cooking oil (41% of the responses about oil source), sugar (64%), pasta (22%) and bread/wheat (17% of the responses on this item's sources). Perhaps their high diversity is due to the fact that they are farmers and also have good social networks for borrowing foods which they cannot produce with the exception of bread/wheat flour.

Households clustered in this group has the lowest share of expenditure spend on food (41%), which confirms their capacity of accessing food through own production. Nevertheless, the average value of food expenditure per capita per month is 47,600 Manat. This level of expenditure, when considered together with the high level of own production, could mean these households are able to spend more on other food items, strengthening the diversity, and hence the quality, of their diet (particularly regarding consumption of pulses, eggs, and dairy products). Again, their highest share of monthly expenditure on non-food items is for debt repayments, followed by medical expenditures.



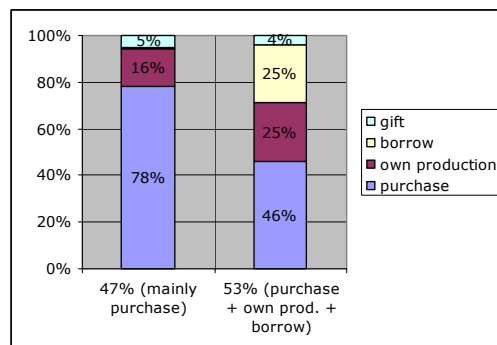
Group F - 14% of households have a good dietary pattern. They eat bread/wheat flour, potatoes, cooking oil, dairy (milk, yoghurt and cheese) and

14%	never / rarely (0-1 day)	sometimes (2-3 days)	often (4-5 days)	daily (6-7 days)
Bread, wheat				
Sugar				
Pasta, rice				
Potatoes				
Pulses				
Meat				
Eggs				
Oil, fats				
milk, yoghurt, cheese				
Vegetables & fruit				

vegetables and fruit on a daily basis. These households are also consuming meat and eggs quite often while pasta, rice or other cereals are eaten between 2 and 5 times per week. Pulses are the item consumed with the lowest frequency,

once or twice per week. Overall this dietary pattern has a good diversity and is distinguished from Group E by the greater frequency of consumption of meats and infrequent consumption of pulses.

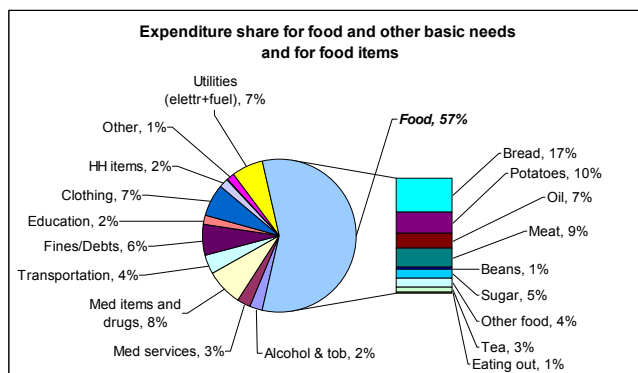
Purchase is the main way of accessing food for these household despite the two different access patterns. For about half of the households purchase accounts for 78% of the total responses about food sources while for the other half rely on purchase for 46% of their food with own production accounting for 25 percent. They also rely on borrowing for another quarter of the food consumed. Bread is purchased for about half the



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households while another third rely on borrowing and only 15% of bread consumed is from own production of wheat.

Potatoes have a similar source share pattern: purchased (46%), borrowed (29%) and own production (24%). Pasta, cooking oil and sugar are either purchased or borrowed. Basically, households in the second subgroup are consuming the same type of food items as the first but they substitute part of the purchased items with borrowed food.



The relatively high share of monthly expenditure for food (57%) and the high per capita monthly expenditure (87,800 Manat) for food indicates that households that borrow food manage to pay back to the lenders. Moreover, this information triangulates well with: these households presenting good dietary consumption because they spend more on food in

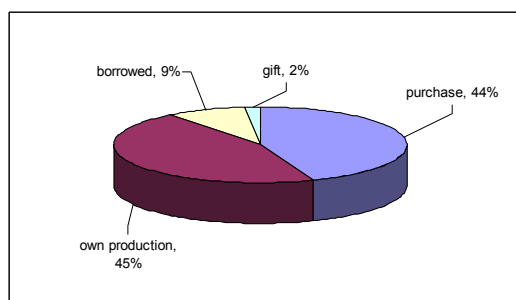
both absolute and in relative terms – dedicating the greatest share of all groups. In particular, meat is taking an important share of outflow with 9% of the total expenditure.

Costs for medical items and drugs account for 8% of the total expenditure, and are the second important share. Costs for clothing and shoes are 7% - significantly more than the other groups. Clothing expenditure seems to be directly related with the wealth status of the household - besides having a better access to food (and to more expensive food i.e. meat), the household is able to allocate more resources on non-essential items. Fines or debt repayments are quite low as compared to the other groups.

Group G - The last group clustered **18%** of the sample households. They present very good food consumption: eating meat very often (5 days per week) and most all other foods on a daily basis, with the exception of pulses. In this group, there may be a problem of over-consumption as more

18%	never/rarely (0-1 day)	sometimes (2-3 days)	often (4-5 days)	daily (6-7 days)
Bread, wheat				
Sugar				
Pasta, rice				
Potatoes				
Pulses				
Meat				
Eggs				
Oil, fats				
milk, yoghurt, cheese				
Vegetables & fruit				

than 8% of the women in this group are obese (BMI > 30.0 kg/m²) and another



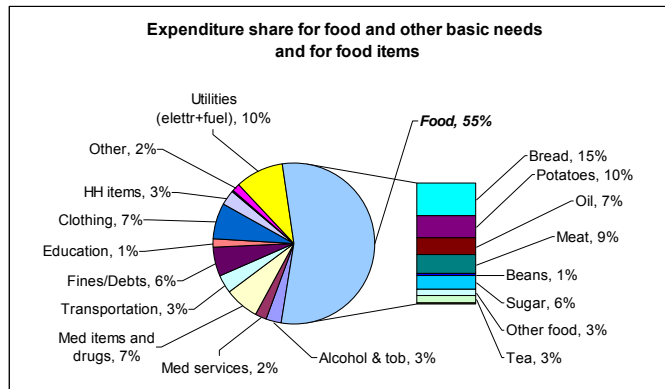
18% are overweight (BMI > 25 kg/m²). This is not the highest in the sample (Group C is highest) but still of concern.

Own production and purchase are the typical sources of food, being 45% and 44% of the total information about sources of food consumed. Still, even in this group, which is

presenting the best relative diet compared to the other household groups, borrowing food is fairly common, being the source of 9% of the consumed items. As in the other groups, cooking oil and sugar are the items which are more likely to be borrowed, even if percentages of borrowing out of the total responses for these foods are not high – 19% and 35% respectively. Eggs, dairy products and vegetables and fruits are the typical items that are from home production.

Food expenditure is 55% of the total monthly household outflow. The value of food expenditure per capita per month of 47,000 Manat is quite normal and reflects the high importance of production as a source of food for the households. As in the previous group, a high share of food expenditure is for meat

(9%), underlying the capacity of these households in accessing that item. Among non-food expenditures, household utilities take the greatest share of resources (10%), followed by costs for medical items and drugs and expenses on clothing and shoes. Again, fines or debt repayments are quite low as compared to the other groups.



Section 5.2 - Vulnerability of the 7 food consumption typologies

The concept of food security is based on the multidimensional approach that tries to integrate information on *food availability, access and utilization*. The vulnerability is a food security-related concept, defined by the *exposure to risks or shocks* and the difficulty in *coping* with them.

Household typologies, constructed using food consumption information, food sources and information on expenditure, have been described by other indicators related to the broad categories of food availability, access, utilization, shocks and coping mechanisms in order to detect and to characterize different types of vulnerability. The seven household groups have been then re-labelled according to the specific combination of the descriptive variables used and classified into three main consumption groups: poor, adequate or good consumption.

5.2.1 - Households with poor consumption - very vulnerable to food insecurity – Group A

Food consumption: access to a limited number of food items

Source:

- 48% of the group has: purchase 70% + own produced 23% + borrowed 5%
- 52% of the group has: purchase 42% + own produced 19% + borrowed 34%

Income: borrowing, state allowances, unskilled wage labour. Seventy percent have 3 or 4 income sources but 29% only have 2 sources.

- Borrowing contributes for 37% to the total income.
- Pension, child allowance and disability benefit together account for 25% (13%, 7% and 5% respectively).
- Unskilled labour accounts for 10% of the total income.

Presence of potential income earners: The lowest percentages of female (32%) and male (18%) pensioners have been recorded among households in this group. However, this source appears to be very important, as pension seems to be one of the biggest income sources all across the country. They have the highest percentage of dependents per

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household - one dependent per one income earner. There is the second highest percentage of household members with disabilities (25%). Household heads are usually quite young (42 years as median of the group).

Availability of land/livestock/assets (wealth proxy):

- 87% have land but only 78% are using their land - the lowest percentage across the 7 household groups.
- They have the lowest percentage of households with fruit trees and growing vegetables.
- Animal ownership is very low (83% own chickens, just 39% cattle – both are the lowest values across the household groups).
- They have the lowest percentage of households owning every specific asset but the stove (77% of those households do possess it). In particular, this group has the lowest percentage of households owning farm implements (83%). Just 61% of households possess a television, radio (23%), refrigerator (23%), sewing machine (7%) and just 5% owns a car.

Health and nutrition:

- They have the highest percentage of underweight children (19%) and the second highest prevalence of child stunting (36%).
- Highest prevalence of malnourished mother-child pairs (4%).
- Average levels of maternal overweight and obesity (19%).
- They have the lowest prevalence of anaemic mothers (45%). Lowest prevalence of mother-child anaemic pairs (23%). This combination (children malnutrition but lower anaemia) is probably due to a diet that doesn't meet caloric needs but is higher in dietary iron and/or lower in foods that inhibit iron absorption.
- The nutrition analysis seems to confirm this hypothesis: this group has the highest percentage of children with fever (60%), cough (52%) and diarrhoea (56%) in the two weeks prior to the survey – one-third suffered from ARI¹.
- In terms of maternal health indicators, 27% of the mothers suffered from fever and 29% from diarrhoea (highest in the 7 groups) during the 2 weeks preceding the survey.

Shocks: More than 80% of the households had experienced a shock resulting from high prices for food. Nearly 40% stated that this was the main shock affecting their household in the past year. About 30% reported a serious illness or accident of a household member.

Coping mechanisms: The most typical ways to cope with shocks were: purchasing food on credit, decreasing expenditure, reducing quality/quantity of diet and asking for loans from family or friends.

Conclusion: The main problem for households in this group is inadequate access to food through market mechanisms due to lack of cash availability – meaning *poverty*. This is even more real for the 22% of households that do not cultivate the available land (the highest percentage across the 7 groups). In this case, it can be inferred that the poverty levels contribute to household food insecurity because they are not able to access adequate or diverse amounts of quality foods.

5.2.2 – Households with poor consumption - vulnerable to food insecurity – Group B

Food consumption: Regular access to staple food – bread, sugar, potatoes and oil: the diet is particularly high in carbohydrates and fats, assuring the caloric intake. Dairy products and vegetables and fruit are part of the typical diet, being frequently consumed.

Source: 39% from own production + 33% purchase + 25% borrowing (the highest share from borrowing)

Income: borrowing, state allowance, sales of crops.

- On average, borrowing accounts for 38% as contribution to the total income – the highest share for this income source across the 7 groups.
- State allowances are 28% (pension 18%, child allowance and disability benefit 5% each).

¹ Acute respiratory infection

- Crop sales account for 10% of total income.

Presence of potential income earners: This group has the highest percentage of female headed households (23%), the highest prevalence of large households (8 members or more) and the highest proportion of households with a disabled member. There is also the lowest percentage of literate household head and spouse. The age of the household head appears to be quite high (52 years is the median value across this group). There are slightly more females than males, but there are more people in working age than dependents (younger than 15 years or older than 60 years).

Availability of land/livestock/assets (wealth proxy): Nearly every household owns land and fruit trees.

- A large percentage of these households produce potatoes and vegetables which are, in fact, an important part of their diet pattern, being frequently consumed.
- A large majority of households own cattle and poultry, which provide dairy products and eggs (again frequently consumed).
- Their household asset ownership is average compared to the others. There is the lowest percentage of households owning radio (23%) and second lowest with a car (8%).

Health and nutrition:

- Highest prevalence of recent maternal diarrhoea and fever.
- Lower maternal malnutrition
- Highest prevalence of children with acute malnutrition (7%) – all the other nutritional indicators are average.
- High prevalence of any illness in past 2 weeks for children under five.

Shocks: similar to Group A

Coping mechanisms: similar to Group A

Conclusion: Their household food security relies mainly on own production which is important both as a source of food and income. Their production appears not to be adequate enough to satisfy the households' food needs in terms of both quantity and diversity and thus is supplemented by purchase. However, income activities do not completely satisfy the cash needs of the family. The main problem seems to be related to the household composition, where they are more likely to be headed by women, to be very large households or to have a disabled member, meaning a lack of income earners, more mouths to feed and increased demands on other members to care for disabled members.

5.2.3 – Households with adequate consumption – vulnerable to maternal and child malnutrition – Group C

Food consumption: regular access to staple food

Source:

- 70% of the group has: purchase 54% + own produced 39% + borrowed 4%
- 30% of the group has: purchase 38% + own produced 15% + gift 39%

Income: borrowing, state allowance, sales of crops.

- The main income sources are borrowing and state allowances (borrowing is 20%, child allowance (16%) and pensions (5%)).
- 34% of households are involved in sales of crops and it accounts for 14% of total income.

Presence of potential income earners: These households have the highest percentage of literate spouse (93% versus 91% of household head being literate); the lowest percentage of disabled household members; but the highest percentage of households with at least one chronically ill member and, in more than half of those cases, that member is the head of the household.

Availability of land/livestock/assets (wealth proxy):

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- Households in this group have good access to land (88%) and to fruit trees (84%), especially pomegranates (54%), the highest value across the 7 groups.
- They have the lowest percentage of households cultivating potatoes (37%).
- Livestock ownership is relatively low, while the assets ownership is on the average of the entire sample.

Malnutrition:

- Prevalence of anaemia is the highest in the sample (67%) while the prevalence of overweight or obese women is highest in this group (31%). This could indicate a diet high in calories but low in diversity.
- Child malnutrition was average compared to the sample total. However, this group has a high percentage of mother and child malnourished pairs (3.7%) when compared to the other groups.
- More than one-quarter of the children in this group were reported to be “very small” or “smaller than the normal” at birth – low birth weight babies.
- Child anaemia is high but not the highest; this group has the highest prevalence of anaemia in mother-child pairs (44%).
- Child morbidity is average except that the group has the lowest reported 2-week period prevalence of fever.

Shocks: Similar to Group A and B – 22% reported to have experienced “no shock”.

Coping mechanisms: Similar to Group A and B

Conclusion: These households have adequate consumption, at least in terms of calories. Indicators of wealth show that these households are average within the sample. There is high dependence on state benefits – this income source might not be elastic enough to respond to increases in market price in case of shock. However, there are significant nutritional problems among women in these households with high levels of overweight or obesity and high prevalence of anaemia indicating adequate quantity but poor quality food. Lack of antenatal care is likely a contributor to the high percentage of low birth weight babies.

5.2.4 – Households with adequate consumption– Livestock raising households with pockets of malnutrition – Group D

Food consumption: regular access of staple food with more diversity in food consumed, indicating a better quality diet.

Source:

- 36% of the group has: purchase 42% + own produced 43% + borrowed 13%
- 64% of the group has: purchase 29% + own produced 60% + borrowed 8%

Income: Main income sources are borrowing, pension, child allowances and crops sales.

- More than 70% are engaged in borrowing which accounts for 21% of their income.
- Pensions account for 22%, being the highest value for this income source across the 7 groups.
- More than half the households receive child allowances but it only accounts for 5% of total income.
- 34% of households are engaged in sale of crops. This activity accounts for 14% out of the total income.
- 9% of the income comes from livestock sales. These households are more likely to own livestock but to not rely heavily on the sales of animals for a large portion of their income. Animals are likely kept for their products as well as savings.

Presence of potential income earners: high percentage of female headed households (22%) and of elderly headed households (41%). The median for the household head’s age is 52 years. More than half of these households have a female pensioner – the highest of any group.

Availability of land/livestock/assets (wealth proxy):

- Every household has access to land and just few of them have no fruit trees (9%).
- Wheat, potatoes and vegetables are the most common crops (53%, 71% and 63%).

- Livestock appears to be important in the livelihood of these households. This group has the highest percentages of livestock ownership: 89% of the households owning cattle; sheep (44%); chicken (97%) and turkeys (39%).
- Although ownership of other animals is not high for the overall sample, households in this group have the highest ownership levels of all groups.
- Ownership of household assets is average with the exception of agricultural tools which are owned by nearly all households in this group.

Malnutrition:

- Compared to the other groups, the prevalence of maternal malnutrition (low BMI) is the highest in this group (8%). All other indicators for maternal health and nutrition are average.
- Child malnutrition is also average compared to the other groups. Child anaemia is the lowest of all groups (41%).
- Overall, child morbidity is low but the children in this group having the lowest reported prevalence of recent fever.

Shocks: Similar to Group C - high prices for food and for services, serious illness or accident of household member. One-quarter of the households reported to have experienced “no shock” (the highest across food groups).

Coping mechanisms: Similar to previous groups - purchase food on credit, decreased expenditure, reduce quality/quantity of diet, asking for loans from family or friends, but with about 40% of the households report selling livestock to mitigate the effects of external shocks.

Conclusion: There is adequate food consumption in this group while the levels of well being indicators (assets and expenditure) are relatively high. Although the main income sources are again from state benefits, these households also rely on agriculture and livestock both for consumption and for income. The livestock assets are also used to mitigate the effects of external household shocks. Maternal malnutrition could be an issue to be tackled.

5.2.5 - Households with adequate consumption - Farming households vulnerable to malnutrition – Group E

Food consumption: Regular access of staple food including frequent consumption of “quality” (more expensive) food items.

Source: 60% own production, 23% of purchase and 15% of borrowing - the highest value for own production and the lowest for purchase.

Income: Main sources are borrowing, child allowance, crop sales and pension.

- Crop sales provide 23% of total income. Contribution from crop sales is second highest of all seven groups, second only to the most food secure group.
- Borrowing provides 22% of the total annual income
- Pension and child allowances provide 21% and 4% of the total income for these households – one of the highest contributions from pension for the 7 groups.
- Unskilled labour activities provide about 10% of total household income for these families.

Presence of potential income earners: Households in this group have the highest percentage of females in the family (54%). Large households (8 or more members) are quite rare – only 8% of the group. This group also has the highest prevalence of chronically ill household members (69%) but the lowest percentage of households with a disabled member (16%).

Availability of land/livestock/assets (wealth proxy): Every household owns and cultivates land, as well as fruit trees.

- The majority (80-90%) cultivates potatoes and vegetables and grows apples.
- Maize cultivation (37%) is more common than wheat (30%) and nuts are commonly grown.

Part V – Household food consumption typologies - Residents

- Conversely, livestock ownership does not seem to be as important as agriculture among these households. Cattle (77%) and poultry (97%) are the most common types of animals owned.

Malnutrition:

- There is the highest prevalence of maternal anaemia in this group (68%) and the lowest levels of mothers being overweight or obese (10%).
- Maternal illness is also lowest of the seven groups for both diarrhoea and fever.
- This group has the highest percentage of reported goitre amongst household members and, predictably, the lowest usage of iodized salt in all the groups (45%).
- For children, there are very low levels of wasting and underweight with the prevalence of stunting being average for the sample.
- However, about one-quarter of the children were reported to be low birth weight babies.
- The children presented low levels of reported illness with the lowest levels of reported ARI and diarrhoea of all the groups.

Shocks: The main reported shock was the reduced salary of a household member for the majority of the households. In general, the typical shocks are the ones reported by the entire sample (high prices for food and for services) but, among these households, serious illness or accident of a household member or the high cost of agricultural input appear to be much more relevant to the economic well-being of the household.

Coping mechanisms: These tend to be the same as the rest of the sample population - reducing quality/quantity of diet, decreasing the expenditure and purchasing food on credit. As mentioned before, some sell livestock to mitigate the effects of shocks on the household or other risks to food security.

Conclusion: Households in this group have been clustered together because of the quality of their diet - the access and frequency of quality staple food, such as animal products or fruit and vegetables. On the other hand, more households in this group had negative self-assessment in term of food availability across the year. In some parts of the country, availability of food is likely to be problem given the mountainous terrain, specifically, 89% of households in this group live in *Sheki-Zagatala*.

A very large percentage of these households appear to often worry about running out of food and as a result, to have often to eat less preferred quality or variety of food. When analysed with the nutritional outcomes of these households, the high prevalence of anaemia but low levels of weight-related malnutrition show that the households may be getting plenty of calories but not enough variety in the diet as a contribution to total intake.

5.2.6 - Households with good consumption - pockets of child malnutrition – Group F

Food consumption: good food consumption

Source:

- 47% of the group has: purchase 78% + own produced 16% + gift 5%
- 53% of the group has: purchase 46% + own produced 25% + borrowed 25%

Income: Borrowing, child allowances, pension and skilled work.

- Borrowing contributes to one-third of household income.
- Pension only contributes 11% of total income – by far the lowest of any group.
- Skilled work seems to be important among these households – this activity is source of income for 33% of households in the group, accounting for 17% as percentage of total income.
- Unskilled labour contributes 11% of total income, the highest of the seven groups.

Presence of potential income earners: 15% of households have a female head and 24% have elderly head - both are the lowest percentages among the 7 household groups. Household heads are frequently quite young (41 years as median of the group). Pensioner shares are low, both for male and female, compared to other household groups which triangulates well with the low contribution from pensions to total household income. Large

households (8 or more members) are 13% of the group. Within the households, there are more potential income earners than dependent people. These variables could mean these households are most likely to be small, to have a male and young (working age) head and that just few of them can rely on pension as income source (1/3 or the group).

Availability of land/livestock/assets (wealth proxy): The majority of the households possesses and cultivates land.

- The main crop is wheat, cultivated by 35% of households, while maize is cultivated just by 7% of them.
- Fruit, vegetables and potatoes appear to be grown by higher share of households: this might indicate that the available land is small and suitable for gardening only.
- The percentage of growers per each crop are generally well below 50% of the group, indicating that the trend of the group is far away from being subsistence farmers.
- These households are less likely to own livestock compared to households in the other 7 groups. Just 59% of the cluster own cattle but with poultry ownership being more common - 87% of households possess at least one chicken.
- Assets ownership seems to be average. The large majority of households have television and agricultural tools.

Malnutrition:

- The nutritional status of mothers in this group is average in comparison to the other groups.
- They report the lowest incidence of goitre in a household member and also have the highest usage of iodized salt (74% of households).
- There is a high prevalence of chronic malnutrition among children in this group with 37% of the under fives being stunted. However, the incidence of low birth weight is quite low.
- When ill with diarrhoea, these children are more likely to be treated in a clinic than those in any other group.

Shocks: high prices for food and services are the biggest reported problems also for households clustered in this group. A relevant share of households declared to have not experienced any shock in the past year (24%). Unusually high levels of livestock disease were also reported as a significant shock for 20% of these households.

Coping mechanisms: Reported coping mechanisms are the usual ones: decreased expenditure, reduce quality/quantity of diet, purchase food on credit and taking loans from family or friends. The share of households that have at least partially recovered from the experienced shocks is 2/3 versus 1/3 that has not recovered at all.

Conclusion: Shocks affecting food security of this group of households are common in every part of the country and to every household. Nevertheless, these households are able to maintain a good quality diet and to have adequate resources to cope with occasional shocks. This seems to be due mainly to their greater purchasing power (as explained above in the group expenditure analysis) and, to a lesser extent, to their productive capacity for own consumption. These households manage to consume the many staple food items as well as a variety of other foods, increasing the diversity of the diet. The stunting prevalence among children might indicate that, despite the abundance of food, chronic malnutrition could be the result of inadequate care or health and hygiene environments.

5.2.7 – Households with good consumption - least vulnerable to food insecurity – Group F

Food consumption: very good food consumption

Source: Food comes from purchase and own production on the same amount (44%). Borrowed food accounts for 10% out of the total food sources, scoring the lowest level of borrowing across the 7 household groups.

Income: Activities include borrowing, sale of crops, pension, child allowance and skilled work.

- The greatest contribution to total household income comes from crop sales (25%) which is an activity for more than half the households.

Part V – Household food consumption typologies - Residents

- Borrowing is an activity for two-thirds (lowest of the 7 groups) but only contributes 18% of total income while pension contributes another 18% to the total.
- Skilled work is an activity for one-third of households and it provides 14% of total income.

Presence of potential income earners: The percentage of dependents within the households is the lowest across the household groups, meaning that on average there are more working age people than non-working age ones in these households. A higher percentage of households have pensioners, both male and female, than in the other groups. Percentages of chronically ill or disabled people are lower than in other groups: this might mean that even if there could be fewer households entitled to receive disability benefits, more people are able to earn income for the household.

Availability of land/livestock/assets (wealth proxy): The majority of the households owns and cultivates land and fruit trees.

- The main crop is wheat, cultivated by 54% of households.
- Vegetables and potatoes appear to be grown by a large share of households, making available gardening products for own consumption.
- Most of these households own livestock: practically every household owns chickens, 85% of the group has cattle, nearly 40% has sheep and 37% has turkeys. Among these households, there is the highest share of oxen ownership (18%).
- Assets ownership is well above the average and scores the highest share per each specific asset compare to other household groups.

Malnutrition:

- Maternal malnutrition is average, despite the good levels of consumption. Overweight/obesity is elevated but not the highest of the seven groups.
- Reported goitre among household members is relatively low for the sample (21%), with relatively higher levels of consumption of iodized salt (70% of households).
- Child wasting is high in this group (7%) while stunting is the lowest (28%) among the seven groups.
- In addition, low birth weight is the lowest of the seven groups while the prevalence of mother-child malnutrition is quite low (1.8%).
- Prevalence of child anaemia is the highest in the group (66%) and anaemic mother-child pairs is among the highest across groups.
- However, the prevalence of fever and cough among children was the lowest in the sample.

Shocks: High prices for food and services are the biggest problems also for households clustered in this group. The high cost of agricultural input is a significant problem for 29% of households clustered in this group and serious illness or accident of a household member was reported by 24% of them.

Coping mechanisms: Group G is very similar to Group F. Reported coping mechanisms are the usual ones: decreased expenditure, reduce quality/quantity of diet, purchase food on credit and taking loans from family or friends. The share of people that has at least partially recovered from the experienced shocks is 2/3 versus 1/3 that have not recovered at all.

Conclusion: Shocks affecting food security of this group of households are common in every part of the country and to every household. Nevertheless, these households appear to be able to have a good quality diet. This seems to be due mainly to their ability to complement their purchasing power with their own food production. In general, they seem to have better economic possibilities and better living standard. The nutrition analysis supports these findings.

Part VI - Internally Displaced Persons (IDPs)

Section 6.1 - Background

One of the most significant impacts of the Armenian Azerbaijani conflict over *Nagorno-Karabakh* was the creation of a large group of refugees and internally displaced persons (IDPs) in Azerbaijan. During the period, 1988-89, about 250,000 Azerbaijanis, were forced to leave Armenia and moved to Azerbaijan. Subsequently, about 660,000 people from *Nagorno-Karabakh* and neighbouring districts were displaced from their permanent residence.

6.1.1 - Places of origin

Most of the displaced people come from the area outside *Nagorno-Karabakh*, including *Fizuli* (133,700), *Agdam* (128,600), *Lachin* (63,000), *Kelbadjar* (59,300), *Jabrayil* (58,800), *Gubadli* (31,300) and *Zangilan* (34,800). Overall there are more than one million IDPs and refugees in the country. The displaced population comprises one of the largest groups of IDPs in the world in per capita terms.

6.1.2 - Destinations

Displaced people resettled in 1,500 dense clusters across 62 districts of the country. Nearly half of the IDPs are living in cities (*Baku*, *Sumgait*, *Mingachevir* and *Ganja*), the remaining IDPs are settled in districts neighbouring the occupied zone. Aside from the IDPs residing in the *Absheron*-peninsula, most IDPs live in a region often referred to as the IDP belt, an area in central Azerbaijan stretching from *Mingachevir* to *Bilasuvär*. Often the areas where IDPs settle do not resemble their former livelihoods and geographic environment, e.g. most of the agricultural workers now settle in urban areas; hence often their skill levels do not match the needs of the local labour markets.

6.1.3 - Housing conditions

After more than 10 years of displacement, many IDPs still live in makeshift temporary locations such as tent camps, makeshift huts, uncompleted buildings, and dug-outs, public buildings such as schools and vocational colleges and railway wagons¹. Clearly, most of these substandard shelters provide insufficient insulation from rain and extreme temperatures. In general, IDPs remain separate from other residents of Azerbaijan, both spatially and socially.

- **Dug-outs:** Lived in by former semi-nomadic herders these shelters consist of dugouts on a dusty plain and are built as holes in the ground covered with dirt, sometimes with sticks, plastic and cardboard. In warmer weather and after heavy rains, many dwellings suffer severe water damage and damp conditions. People residing here are exposed to health risks such as Malaria and snake bites.
- **Public Buildings** such as schools, gyms, dormitories are also occupied by IDPs. Conditions are crowded and often rooms are without doors, thus raising concerns regarding lack of privacy and security. Electrical wires are exposed and over-used, with obvious multiple makeshift connections. These buildings are generally not winterized. Plumbing problems and water damage can pose health risks.
- **Railway wagons** lined in rows on tracks are referred to be as cold as a refrigerator in winter to be as hot as an oven in summer. In summer most families have made a living space underneath the boxcars. Inside the boxcars there is usually electricity and a single burner to cook on, a single small window allows very little daylight to get inside the wagon. Typically, electrical wiring has multiple makeshift connections.
- **Mud brick houses:** Many IDPs formerly living in tented camps live now in simple mud brick houses. Settlements are fairly densely populated with little space in between houses for keeping poultry or a small vegetable garden.
- **ECHO-camps** offer prefabricated one-room houses furnished by the European Community Humanitarian Office (ECHO). Typically, about 3-4 houses in one row share a toilet and bathroom and have underground water pipe which is shared by families. Intended for inhabitation for a maximum period of two years, these settlements have been home for IDPs for over a decade now.
- **New settlements** are newly constructed by the Government or non-governmental organizations. Usually these houses consist of a simple room(s) with a porch with all basic amenities in place. The primary problem with these places is that they are located in areas with little economic opportunities.

Source: Profile of Internal Displacement: Azerbaijan. Norwegian Refugee Council. May 2003

¹ Source: NRC: Global IDP Database

6.1.4 - Assets and livelihoods

When fleeing the conflict areas, IDPs left behind most of their assets and thus experienced significant loss of wealth. However, they managed to carry some assets such gold, wrist watches, jewellery, household goods and vehicles. During the initial years after displacement, most of these assets such as gold and carpets were sold off, leaving them with few coping alternatives. The lack of both fixed and movable assets further weakened the ability of IDPs to acquire capital to invest in economic activities.

Unemployment is a major problem for IDPs with over 70% of those in the working age being out of work. Many IDP settlements are located in areas far from employment opportunities. Also, the mass influx of IDPs increased the competition on the local markets, which were already struggling with the economic challenges of the transition period. The exclusion of IDPs from local social network puts them at a disadvantage in accessing private and public sector employment.

General understanding suggests that IDP employment is predominantly focused on the informal sector and occasional casual labour. Few keep livestock; others work as casual labour during agricultural season or in the construction sector. None of these activities represent a regular source of income.

6.1.5 - The role of the Government and humanitarian agencies

In the context of the high rate of unemployment, the displaced households typically depend on subsidies and allowances from the Government and direct assistance from humanitarian organizations for their subsistence.

In recent years many agencies³ discontinued the provision of relief assistance and the Government took over responsibility of in-kind food distribution. A separate State Oil Fund was created to channel resources for the development of the non-oil sector development and improvement in the living conditions of IDPs/refugees. A part of these funds are used for the provision of food aid to IDPs. At present, the Government of Azerbaijan takes care of 146,500 beneficiaries across 52 districts and cities, while WFP takes care of 140,000 beneficiaries across 23 districts and cities. The list of Government and WFP beneficiaries are mutually exclusive, however, it is possible that one *household* receives assistance from both sources, i.e. some household members receive food aid from the Government, others from WFP. Beneficiary cards ensure that there is no duplication of assistance.

Monthly Food ration per person		
	WFP²	Government
Wheat Flour	6 kg	5 kg
Rice	-	1 kg
Vegetable Oil	0.6 litre	1 litre
Peas	0.9 kg	-
Sugar	0.45 kg	1 kg
Salt	0.15 kg	-

Government Beneficiaries and annual expenditure on IDPs⁴		
	Number (est.)	Amount spent in 2004 (\$US million)
Monthly food aid	146,500	5.5
IDP benefit – bread money	525,800	32
Paraffin	88,600 families	2
Electricity	521,600	18
Natural Gas	208,200	1
Drinking Water	500,000	2
Telephone subscription fee	22,200	0.1

In addition to direct food aid, all IDPs and permanently settled refugees received US \$ 6.1 as food subsidy (increased from US \$ 5.1 in January 2005). Since 2002, the

² The Food aid from World Food Programme caters to half the nutritional requirement of an individual.

³ About 70 humanitarian organisations are currently operating in Azerbaijan and the total value of their assistance is estimated at US \$ 40 million in 2004

⁴ Source: Cabinet of Ministers, Government of Azerbaijan

Government also provides subsidies to IDPs for utilities such as electricity, gas, water and subscription fee for telephone. An amount of US\$ 3 per person per month is directly credited to the utility companies.

About 90,000 people living in areas without natural gas pipelines are provided with paraffin for heating during the winter months (October-February) every year. The Government gives 40 litres of kerosene per family per month as heating fuel (increased from 30 litres in January 2005). In addition, when the programme was initiated, IDPs were also provided with kerosene stoves.

In the last two years, the Government allocated some land to IDPs. About 60,000 hectares of land have been allocated for temporary use for 50,000 rural IDPs. However, most of these lands were the left-over from the privatization process – typically municipal land of poor soil quality. Also lack of resources to purchase tools and agricultural inputs, and limited access to water and irrigation systems limit IDPs' ability to make full use of these plots.

6.1.6 - Rehabilitation and resettlement

In recent years, drawing upon the resources from the State Oil Fund, the Government has taken initiatives towards rehabilitation of IDP living conditions. Up to this day, 33 settlements have been constructed to provide improved living condition for 6,410 IDP-families among the most vulnerable households at an expense of US \$ 73 million (between 2001 and 2004). In addition, 0.12 hectares of land adjoining the house and 0.5 hectare of land for sowing purpose has been provided for all IDP families who have moved to these new settlements and an amount of US\$ 204 (1,000,000 Manats) has been given to start agriculture.

The Presidential Decrees in 2004 gave a further impetus to this development. During the next three years (2005-2007), the Government proposes to rehabilitate at least 14,350 IDPs families primarily housed in ECHO camps and railway wagon. In addition, the Government aims to set up industries and small scale factories, such as fruit processing factories, to generate employment in IDP-concentrated areas.

While the extent of the success of these measures in improving the living conditions of IDPs remains to be seen, they represent a marked change in the Government's approach which now implicitly acknowledges that some internally displaced are unlikely to return even if peace did materialize. This new approach will help in mainstreaming IDPs in the general development process.

Survey Results

Section 6.2 – Displacement

6.2.1 - Sampled areas & types of settlements

The IDP settlements in the economic zones of *Kur*, *Orta Kur* and *Ganja-Gazakh* were sampled. The data shows that a few IDPs were also living within the local population, but the number of such households was far too few to allow a separate analysis. IDP settlements from the districts of *Aghdash*, *Aghjabadi*, *Barda*, *Beylagan*, *Imishli*, *Kurdamir*, *Yevlakh*, *Tartar* and *Mingachevir*⁵ in *Orta Kur* economic zone were surveyed and these comprise 84% of the total IDP households sampled. In *Kur* economic zone, IDP settlements from *Bilasuvay*, *Hajigabul* and *Salyan* districts were surveyed and these account for 11% of the

⁵ Although the report is focused on the rural households, an exception was taken in case of *Mingachevir*, which is one of the largest cities in Azerbaijan and hosts a huge IDP population.

IDP household sample. IDP households sampled from the *Ganja* district of *Ganja-Gazakh* economic zone account for the remaining 4% of the total IDP sample.

The sampling for IDP communities aimed at including the variety of settlement types, in a somewhat self-weighting sample to represent IDPs in general. Fifty-seven household interviews were conducted in settlements are classified as dugouts. People residing in dugouts are often considered worse off in the IDP community, and a lot of relief activity has been focused on the rehabilitation of these IDPs. Further, the rehabilitation through construction of new houses has often occurred next to the dugout itself⁶ and not all people living in dugout in a settlement have been rehabilitated⁷. Typically, IDPs in these settlements continue to pursue their principal livelihood means of grazing cattle and thus have a certain element of continuity in their livelihoods. Sixty interviews were conducted in ECHO camps, 54 in mud house communities, 102 for households living in public buildings, 75 in new settlements and 15 in railway camps for a total of 363 IDP household interviews.

6.2.2 – Movements and settling

- Respondents were asked to mention the number of times most of the household members have moved place of residence since 1992 for a minimum period of one month. About 28% of the sampled households have moved once, 32% have moved twice, 23% have moved three times and 16% four or more times.
- About one-third of the IDPs have lived in their current location for 11-12 years, 45% for 6-10 years, 6% for 3-5 years and about 14% for only 1 or two years.
- Most of the movements were to unconventional types of settlements which were perceived then to be temporary refuge. For instance, ECHO camps were designed and suitable for inhabitation for a maximum of two years. However, the relatively few times the IDPs have moved 'place of residence' and the prolonged time of their stay in these unconventional settlements highlights the extent of their uncertainty.
- Respondents were asked about their place of residence before displacement. They are from *Aghdam* (29%), *Lachyn* (23%), *Jabrail* (15%), *Fuzuli* (12%), *Kalbajar* (12%), *Nagorno Karabakh* (4%), and the rest from other affected areas.
- In the sample, most of the IDPs originating from *Aghdam* have settled in *Barda*, *Mingachevir* and *Yevlakh*;
 - IDPs from *Lachyn* have mainly settled in *Aghjabadi*;
 - Most of the IDPs from *Jabrail* have settled in *Bilasuvay* and *Imishli*;
 - IDPs from *Fuzuli* are mainly located in *Imishli*, *Beylagan* and *Bilasuvay*;
 - IDPs from *Kalbajar* are in *Yevlakh*, *Tartar* and *Mingachevir*;
 - Those from *Nagorno Karabakh* are in *Mingachevir*, *Tartar* and *Aghjabadi*.
- Most of the IDPs in the sample from *Aghdam* are living in public buildings, mud houses or ECHO camps. As expected, about two thirds of the IDPs from *Lachyn* are settled in dugouts, the rest are spread out in ECHO camps and public buildings or living in new settlements.
- About half the IDP households in the sample were in contact with community leaders from their place of origin. This was true for about 80% of the sample coming from *Lachyn* or *Kalbajar* regions. Of those still in contact, more than 40% confirmed that their leader was still active in supporting them. The people from *Lachyn* traditionally migrated to where they currently live (mostly in dugouts) and perhaps this familiarity of location and context has helped them remain in closer contact.

⁶ All dugouts are located in *Aghjabadi* which historically belongs to the occupied district of *Lachyn*

⁷ Given limited resources, donors pre-selected houses for resettlement using certain criteria such as female headed household, households with more than 4 children, households headed by disabled

6.2.3 - Injuries, disability and deaths during war

During the interview, households were asked how many of the household members were injured or disabled or killed during the war.

- About 8% of the households reported the injury of at least one member in the war, and the same reported that at least one member had been disabled. About 7% of the households said that one member of the household was killed during the war.
- Of all the households in the IDP sample, those originating from *Lachyn* appear to have faced least casualties due to war and households from *Kalbajar* and *Aghdam* appear to have been the worst affected.
- Just 2% of the households reported that they were caring for orphans or abandoned children and all originate from *Kalbajar*, *Aghdam*, *Fuzuli* or *Jabrail*.

6.2.4 - Assistance from Government

During the interview, each household was asked if it was provided with any food products, money allowance, and assistance for - education, medical services, electricity, kerosene, gas, drinking water and telephone by the Government. The table below summarises the results of the responses.

As expected, almost all IDP households in the sample receive money allowances from the Government. However the nature of the money allowance could vary across households. While the Government provides a food subsidy to IDPs (US\$ 6.1 per person per month), households could also be receiving child allowance or pensions from Government or disability benefit or benefit for war widows.

Free electricity is the second most often reported benefit received from the Government with another 86% of the sample households receiving kerosene benefits. Six out of every

10 IDP households surveyed reported receiving food products from the Government. While fewer IDP households reported receiving Government assistance for education and medical services, assistance for gas and telephone were rarely reported. Although education is free for all children across all years of schooling, percentage of households reporting to receive education benefits is surprisingly low. Although 56% of the IDP households have at least one school age child, just 14% report receiving education benefits from Government.

Households receiving Assistance from Government	
Money allowances	98%
Free electricity	95%
Kerosene	86%
Food products	61%
Drinking water	26%
Education	14%
Medical services	11%
Gas	3%
Telephone	2%

A high percentage of IDP households, across all settlement types, except those residing in railway wagon report receiving kerosene from the Government. A fairly high percentage of IDP households living in all types of IDP settlements, with the exception of dugouts, report receiving food products from the Government. Just 2% of the households in dugouts in our sample received food products from the Government. While the government and the WFP are targeting almost equal number of beneficiaries, the entire set of beneficiaries from *Aghjabadi*, which hosts all the dugouts, are assisted by the World Food Programme.

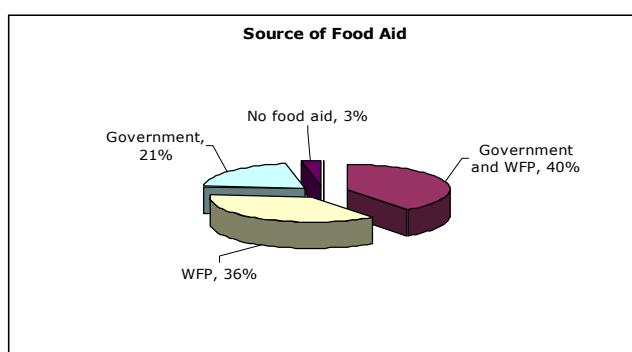
Interestingly, only the IDPs living in public buildings, ECHO camps and new settlements report receiving assistance for water. None of the IDP households in unconventional shelters such as dugouts, railway wagon or mud house report receiving assistance for water. In principle, ECHO camps and new settlements

have shared water sources (hand pumps) for groups of households and thus a relatively better off in terms of access to water facilities, quality notwithstanding.

Households were asked mention how often they received assistance form the Government. More than 80% of the IDP households reported receiving assistance of some form on a 'regular' basis, while 17% only 'sometimes' receive the benefits. Almost all IDP households in dugouts and new settlements report receiving benefits from the Government on a regular basis.

6.2.5 - Assistance from humanitarian organisations

Households were asked if they receive assistance from other humanitarian agencies such as the World Food Programme, World Vision, Save the Children, UNICEF, Oxfam, Danish Refugee Council, Red Crescent & Cross, Relief International or any 'other' agency. Eight out of every ten IDP household sampled received assistance from the one of these agencies, an overwhelming majority of them being from the World Food Programme.



The graph on the left shows the distribution of households by source of food aid. About 4% of the IDP households in the sample do not receive food from WFP or the Government while 36% receive food only from WFP. Over 20% of the sample households receive food aid from the Government alone and 40% receive both from

WFP and the Government. Over 80% of the IDPs report receiving assistance from other agencies, an overwhelming majority from WFP.

Section 6.3 - Household demographics, housing and amenities

6.3.1 - Household headship, size and composition

About 19% of the sampled IDP households are female headed. The median age of female household head is 62 years as opposed to just 40 years for the male head of household. While 77% of the female heads of household are widowed, the corresponding number for male heads of households is just 2 percent. For the IDP sample as a whole, one in every four household is headed by an elderly person⁸.

The median size (members per household) of the IDP households in the sample is 5 persons. About 8% of the households are 'large households' - having more than 8 members. On average 47% of the members in a household are dependents⁹. On average, 53% of the household members are females. One in every three IDP households has at least one pensioner.

Nine out of every ten head of household is literate, and is likely to have spent at least 9 years (on an average) in school. About 86% of the spouses in the IDP sample are literate, spending an average 9 years in school.

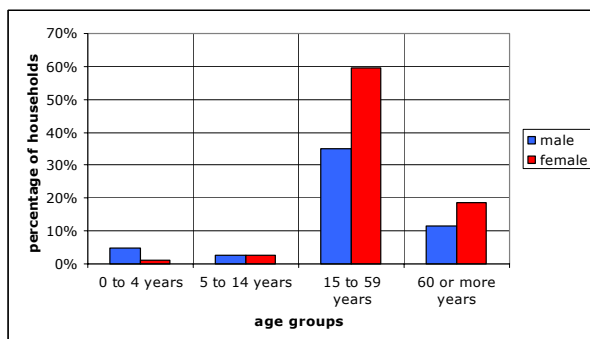
⁸ Person over 59 years of age

⁹ Persons less than 14 years of age and over 59 years of age

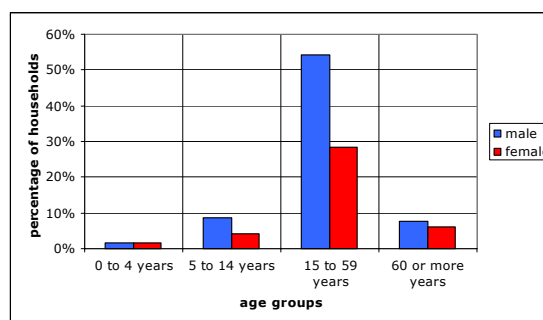
6.3.2 - Illness & disability

More than half the sampled IDP households have at least one member who is **chronically ill**.

Of those chronically ill persons, nearly 60% are the head of the household. By age and gender, nearly 60% of the IDP households reported at least one female member aged 15-59 as being chronically ill. About one-third of the households reported a male member of reproductive age as being chronically ill. There were very few households with a chronically ill child.



One-third of the sampled IDP households have at least one member who is **disabled**. Of those chronically ill persons, 55% are the head of the household. More than half the IDP household sample reported having a male member of productive age who was disabled. Nearly one-third reported a disabled female member aged 15-59 years. There were very few households with disabled children or elderly members.



6.3.3 - Housing and household amenities

Three out of every four IDP household own their place of residence, the rest say they live for free. All IDPs living in dug outs, ECHO camps and railway wagons, own their place of residence. About two-thirds of the IDPs living in public buildings, 19% in new settlements¹⁰ and 13% in mud houses, reported living for free. In general, the houses are small and crowding is a problem with an average of 3-4 persons per room, especially in dugouts, ECHO camps and railway cars.

Drinking water from improved sources (pipe, a public tap, tube well or bore well, protected spring, or vendor - UNICEF) was found in two thirds of IDP households sample and of these about half reported regular access to this water. Around three-quarters of all households have access to regular supply of water from some source. Households from dugout communities were least likely to access water from improved sources. Most of the households in the IDP sample use a traditional pit latrine while the rest use a flush toilet – mostly found in public buildings and new settlements.

Electricity was the main source of lighting for almost all of the sampled households and the rest relied on lamps. Two thirds of the households say that electricity is available only 'sometimes', while just 30% of the households indicate that it is 'regularly' available.

Nearly 60% of the sample households used electricity as cooking fuel, with the rest using gas, firewood, or kerosene. Use of gas was more common in public

¹⁰ It is interesting that IDPs in new settlement say they own their residence because as per their agreement the Government these residences are temporary allotments and occupants are not allowed to make even minor modification to the houses

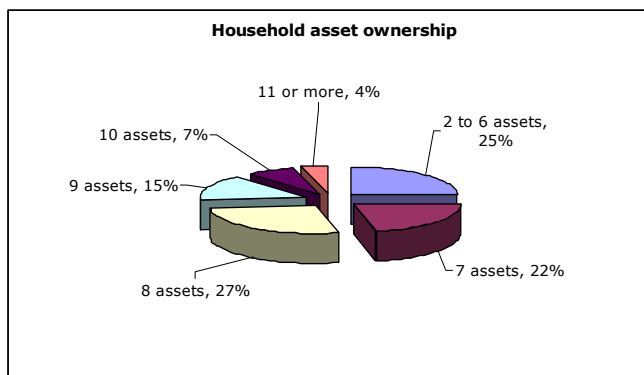
buildings and mud houses, while firewood was more common in dugouts and railway wagons. While half of the households used electric heater for **heating**, a third of them used firewood.

Section 6.4 – Household and animal assets and access to credit

During the interview, the respondents were asked if any member of the household owned 16 household assets, ranging from basic assets like a bed or quilt to productive assets like a sewing machine or farm implements, to luxury assets like a satellite dish or automobile.

6.4.1 - Household assets

IDP households from the sample on average own 8 assets. As shown in the graph on the right about one-quarter of the sample have only 2-6 assets, while about 11% are asset rich with 10 or more assets. Compared to the resident sample they own less assets which can be explained by the fact that most IDP households were not able to carry along their assets or were forced to sell their household assets since displacement.



Similar to resident households nearly all households own quilts, tables, beds and chairs and more than 90% own carpets. For productive assets, only about half the households own farm implements which, is not surprising as access to agricultural land is limited. Only 11% own a sewing machine. Transportation assets such as a car or motorcycle are rare among the sample households. As for communication assets, nearly 80% own a television but only one-quarter own a radio and hardly any own a satellite dish or VCR/DVD.

6.4.2 - Livestock assets

IDP households have fewer animal assets than resident households. Cattle are found in nearly one-quarter of the sample households. About 10% own sheep and only 5% have goats. For this IDP sample, the most commonly owned poultry are chickens, owned by nearly 60% of the households. Turkeys are owned by 19% and geese by 9% of the households. Across IDP settlements, households living in dug-outs or former dug-outs own more livestock than all other categories which means that they were at least partly able to maintain their livelihoods as herders.

6.4.3 - Access to loans or credit

Almost 90% of households in the IDP sample have access to credit, either through local lenders (82%) and/or relatives and friends (50%). Micro-credit schemes through charities or NGOs do not play any major role for this sample. Access to credit through money lenders was higher in new settlements. Nearly 90% of the households had purchased food on credit or borrowed money to purchase food in the past, with just over half stating they 'always' did this and the rest only 'sometimes'.

Section 6.5 – Agriculture, income and expenditure

6.5.1 – Land access and agricultural production

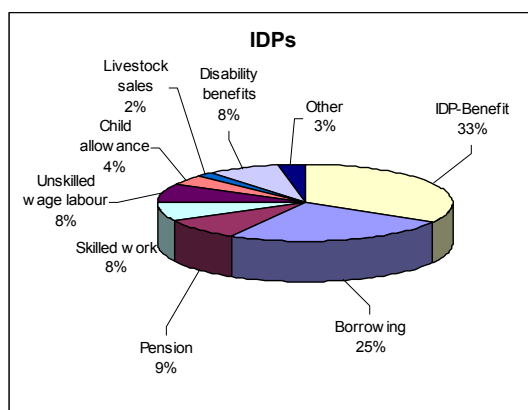
As already mentioned about half the households in the IDP sample owns agricultural equipments such as hoes, axes, sickles, shovels and spades. About one-third of the sample households had a vegetable plot/garden. About 40% of the households have access to agricultural land for farming but only 55% are using the land. Interestingly, only about three-quarters of the households cultivating land reported owning farm implements.

Of the total sample of IDP households, one-third were growing vegetables, 14% potatoes, 13% wheat and 12% maize. There were also a few households cultivating fruit trees but none with nut trees. In all instances, the households reported that they consumed most of their production.

6.5.2 – Household income

Since it is difficult for many IDPs to find regular employment, many households earn cash income from time to time throughout the year. The current employment status of the head and the annual income activities were assessed. At the time of the survey only 38% of household heads below 60 years old were currently employed. For those not currently employed, 12% had worked in the past week and most of them were engaged in unskilled wage labour and were paid in cash.

IDP-households are particularly dependent on social benefits. The number one income source named was IDP benefit (32%) followed by borrowing (23%) and skilled work (12%). When all four main income sources are considered, 99% of all IDP households in the sample mentioned IDP benefit as one of their four main income sources, followed by borrowing (84%), child allowance (45%), pension (31%), disability benefit and unskilled wage labour (26%) each; and skilled work (22%) - sales of crops, or livestock are not relevant at all (except for dugout communities). The fact that skilled labour plays an important role reflects that many IDPs are relatively well educated. Those IDPs living near labour markets obviously have an advantage in being able to access these work opportunities more than those living in remote settings.



Respondents were then requested to estimate the relative contribution of each activity to the total annual income. The proportion deriving from IDP benefits is as high as 33%, followed by borrowing (25%). On average only 8% of the income is generated through skilled labour and unskilled wage labour, and only 2% from livestock sales. Among residents residing in dugout-settlements 8% is generated through the sales of livestock.

Similar to the resident population income diversification is relatively high because of the various Government benefit schemes and the fact that borrowing forms an important income source for many households – both IDP and resident. Hence, no IDP household depends on only one income source, very few on two income sources (6%), while the majority rely on three (40%) or four income sources (53%).

The analysis was then stratified by gender and age (head older/younger than 60 years) of household heads.

- **Gender of household head:**

- Female-headed households receive significantly ($p < 0.001$) greater share of total income from pension (15%) than those headed by men (7%).
- Male-headed households generate significantly more income ($p < 0.01$) from skilled work (9% versus 4%).

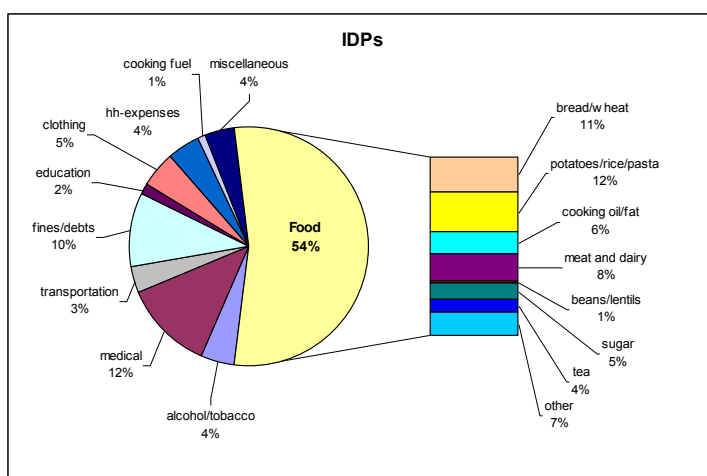
- **Age of household head:**

- Elderly headed households receive significantly more income from pension ($p < 0.001$) and borrowing ($p < 0.01$) than those headed by persons under 60 years of age.
- Households headed by younger persons (< 60 years) receive significantly more income from skilled work ($p < 0.001$) and unskilled wage labour ($p < 0.001$).

6.5.3 - Household expenditures

During the interviews respondents were asked to provide estimates of recent expenditures for 8 food categories and 9 itemized non-food categories. Estimations of expenditure were based on a one week recall for food items plus alcohol & tobacco (items purchased on a regular basis), and a monthly recall for all other expenditure categories.

From this information the total estimated monthly expenditure was calculated. This estimate is not presented in absolute terms in this report. However, for each category, the percentage contribution to total expenditure was calculated. These results are presented in a series of charts in this section.



Even though IDPs are receiving food aid, they have a **high share of expenditure for food** (54%). They are spending less on bread and wheat (11%) which is the main item in the food aid basket. However, they have high shares for potatoes/rice/pasta (12%), meat and dairy (8%) and cooking oil (6%). Similar to residents they spent a high proportion on

medical care (12%) and **fines or debt repayments** (10%). Expenses on transportation, education, clothing and other household expenses were relatively low. They spent only 1% of their budget on cooking fuel, while having no expenses on electricity as they are exempted from paying for this utility by the government.

Overall, IDPs residing in railway and mud houses can be characterized by spending a very high share of their expenditures on food and within this group on basic staple food, mainly bread and potatoes. Better off are those households residing in (former) dugouts who are able to spend higher proportions of their

income on non-food items, however, they have high expenses on medical care which could be related to the harsh climatic conditions of their location.

Per capita monthly expenditures for food were 110,000 Manat or US \$ 22.4 for the entire IDP sample, 111,800 Manat or US \$ 22.8 for female headed households and 109,500 or US \$ 22.3 for those headed by males.

Section 6.6 – Food sufficiency

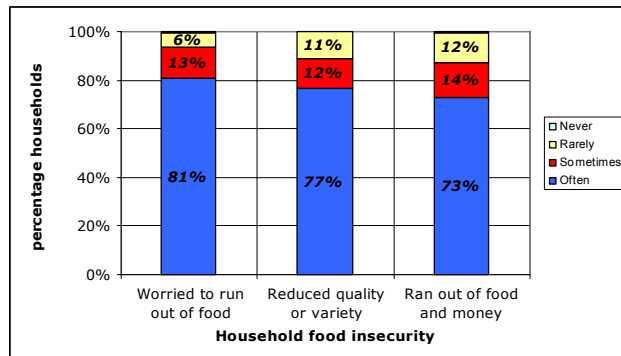
A section of the questionnaire was added to measure the household's perception of their own food security status in terms of food sufficiency. The questionnaire states: "The following questions are about the food eaten in your household in the past 12 months, since August of last year and whether you were able to afford the food you need or if you had enough food for your family's needs." The interviewer read a series of statements and the respondent was asked to state whether it was 'often', 'sometimes', 'rarely', or 'never' true for that household over the past 12 months. The results of this section will be presented by statement.

6.6.1 – Food insecurity: household self-perception

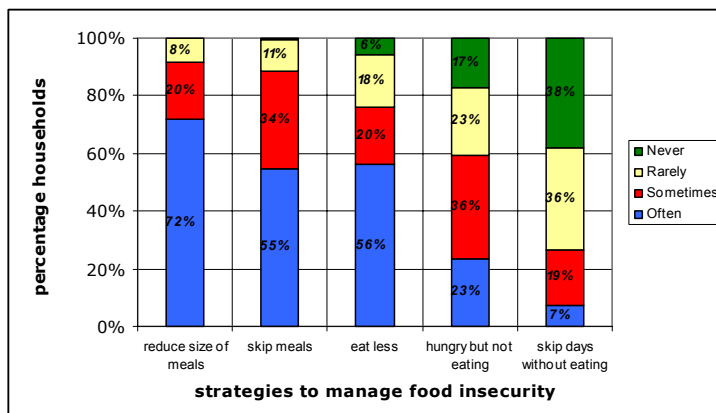
There were three statements where households describing situations which a household may have encountered over the past year where they:

- Worried that they would not have enough food or money to buy food
- did not eat food of the preferred quality or quantity
- ran out of food and could not afford to buy more

The chart on the right shows the percentage of households by response option (often, sometimes, rarely, or never) to the above statements. More households were 'often' worried about running out of food, slightly fewer 'often' changed their dietary preferences and fewer again 'often' actually ran out of food or money to buy food. However these percentages are still quite high and 93% of the sample households answered 'often' or 'sometimes' to at least one of these statements, illustrating the feelings of uncertainty these IDP households have in terms of their own food security,



despite the food rations and many other benefits. There were five strategies that the respondents were asked about in order to manage household food insecurity. As illustrated in the chart on the left, they increase in 'severity' from left to right. A



high percentage of households 'often' reduce the size of their meals when facing food insecurity while fewer actually 'often' skip meals or eat less than they felt they should. However, the percentage of households that 'often' don't eat even when they feel hungry drops considerably and very few households were regularly skipping days without eating. This indicates again, that these IDP households worry a lot about having enough food to eat from day to day but they still manage to eat on a daily basis even if they are compromising quality and quantity of intake.

Section 6.7 – Household shocks and coping strategies

Also included in the household questionnaire was a section which was designed to collect information on whether the household had experienced any of five covariate shocks (shocks that can affect several households or communities, such as flooding, market prices, etc.) in the past year. They were also asked about experiencing idiosyncratic shocks (those that affect individual households, such as loss of employment or death of a household member). Of the shocks experienced, the households were asked to rank the top four shocks and then to identify the effect each had on the household's revenue and assets, their capacity to acquire food, the strategies used to manage the shock and if they had recovered from the effects of that particular shock.

Overall very few households reported that they were not confronted by any shocks. For covariate shocks, the most often reported were economic:

- Unusually high prices for food = 98%,
- High prices for services = 77%,
- Floods = 13% and
- Livestock diseases = 5%

Idiosyncratic shocks were:

- Serious illness or accident of household member = 49%,
- Death of household member = 6%

High costs of agricultural inputs and loss of income play if at all a minor role as very few IDPs have access to land or regular employment. At the time of the study there have been reports announcing that prices were going to climb due to increased transportation costs caused by the oil price rise. This indicates that IDPs are particularly sensitive to cost increases for basic goods and services.

Respondents were then requested to state if those shocks observed caused any decrease or loss for the household in terms of income and in-kind receipts, assets such as livestock or cash savings, or both. Hardly any household mentioned that there had been no change due to the shock. Two-thirds of all households answered with income and in-kind receipts, while one-third mentioned that the shock(s) had negative impacts on both, income and asset base. All households across IDP settlement type said that the shocks decreased the ability of the household to purchase enough food.

Households under stress adopt **strategies** to manage or mitigate negative impacts. For the sample of IDPs who had experienced a shock in the past year, only 4% said they did nothing to manage the impact of the shock. Most often they used economic means such as decreasing expenditures (86%), purchasing food on credit (81%) or taking loans from family or friends (41%). In addition, many households changed their diet by reducing the quality or quantity of diet (57%). Less frequently used ways to manage the effects of shocks were spending savings (15%), selling household assets (14%) or receiving help from others in the community (13%). Interesting is the fact that far more IDPs than

resident households mentioned that they received help from others in the community.

Finally respondents were requested to assess if they have recovered from the shock at the time of the survey. Nearly 60% of the households had only partially recovered while the rest stated that they had not recovered at all.

The above analysis shows that IDPs are vulnerable to price shocks and idiosyncratic shocks, such as illnesses and deaths in their families. The data also indicates that IDPs have developed complex systems to respond to shocks. The question remains how sustainable these systems are over the long run as many of the strategies involve either living on credit or the depletion of non-productive assets.

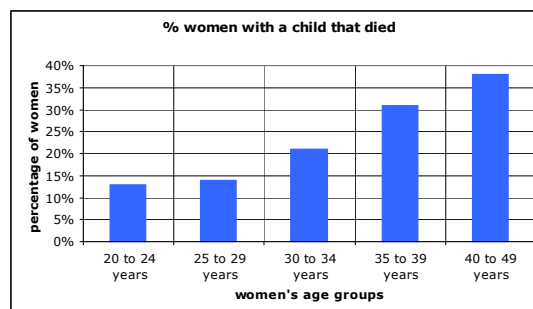
Section 6.8 – Women and child health and nutrition

During the six weeks of data collection, the survey teams visited 25 IDP communities in three economic zones and collected information on 358 women of reproductive age (15-49 years). Eligible households must have at least one woman of reproductive age present at the time of the survey. If there were more than one in the household, the one with children under five would be interviewed, weighed and measured, along with the under-five child(ren). Weight was measured (in kilograms) using regular scales as no UNICEF SECA scales were available. Height was measured (in centimetres) by using a wall, ruler and a tape measure as no adult stadiometers were available in the country.

6.8.1 – Women's health and nutrition

Much of the data are analysed by age group in order to capture trends among the cohort of women. Women of reproductive age can be grouped into 6 age categories – these age categories and the percentage of total sample are: 15-19 years (2.2%), 20-24 years (17.9%), 25-29 years (24.0%), 30-34 years (23.5%), 35-39 years (16.8%) and 40-49 years (15.6%).

- At the time of the survey, 7.6% of the women were pregnant and 22.3% were breastfeeding.
- Of those pregnant, only one woman was taking iron/folate tablets.
- The median number of times pregnant was 3.5 and the median number of living children was two. This varied by age group with the median number of pregnancies increasing with age up to 5 in women 35 or older while the number of living children ranged from 2 for women 20-29, three for women 30-39 and four for women over 40 years.
- Around 15% of the women reported having a miscarriage or still birth while 22% reported the death of a child.
- The likelihood of losing a child increases dramatically with the age of the women, especially at 30 years of age.
- On average, the women were 22 years old when they gave birth to their first living child.
- Less than 1% of the women had received a high dose capsule of vitamin A supplement after the birth of their last child.
- Two percent (95% CI: 0.3, 3.8) of the women suffered from night blindness during their most recent pregnancy.



- In the two weeks prior to the survey, 19% of the women had suffered from diarrhoea and 23% had a fever. Only 11% had suffered from both illnesses.
- Nearly all women use soap and water to wash their hands after using the toilet.
- Around one-quarter of the IDP households in the sample had a member who had been diagnosed with goitre and 35% of those had been treated.
- Nearly three-quarters of the households were using properly iodized salt at the time of the survey.
- The prevalence of anaemia for the non-pregnant women¹¹ in the sample ($n = 59$) was 76% (+/- 11%) while half of the 6 of the pregnant women¹² tested were anaemic.
- In the sample of non-pregnant women:
 - 4.5% were malnourished ($BMI < 18.5 \text{ kg/m}^2$)
 - 27% were overweight ($BMI 25.0 - 29.9 \text{ kg/m}^2$)
 - 8.6% were obese ($BMI \geq 30.0 \text{ kg/m}^2$)
 - 5.2% were underweight ($< 45 \text{ kg}$)
 - 1.1% were stunted ($< 145 \text{ cm}$)
- Women using **drinking water** from safe sources were significantly less ($p < 0.01$) likely to suffer from **diarrhoea** (15%) than those using water from unsafe sources (26%).
- Women using **drinking water** from safe sources were significantly less ($p < 0.01$) likely to be **malnourished** (2%) than those using water from unsafe sources (10%).

6.8.2 – Child health and nutrition

There were 348 children 0-59 months included in the IDP sample for child health and nutrition: 27 aged 0-5 months, 26 aged 6-11 months, 39 at 12-17 months, 33 at 18-23 months, 56 at 24-35 months, 75 aged 36 to 47 months and 92 aged 48 to 59 months.

- The gender distribution in the sample was 54% boys and 46% girls.
- Mothers received at least one tetanus toxoid injection for only 2.5% of the pregnancies.
- About half the pregnancies were attended by doctors, 8% with nurses, 13% with a midwife and 69% by a relative or friend. Eleven percent of the pregnancies received no antenatal care.
- Nearly 30% of the children were described as being very small or smaller than normal at birth, indicating a problem with low birth weight ($< 2500 \text{ grams}$) in this population.
- Over 90% of the children had been breastfed.
- About 8% had received a high dose vitamin A supplement.
- In the two weeks prior to the survey, about half the children had suffered from fever, 45% had a cough, 21% had acute respiratory infection, 52% had diarrhoea and 70% had any of the above illnesses. For those with diarrhoea, 45% had been treated at a local clinic.
- Seventy five children (6-59 months) were tested for anaemia. The mean haemoglobin was 10.82 g/dL (95% CI: 10.46, 11.18) and 54.7% (95% CI: 43.1, 66.2) were anaemic¹³.
- The total number of children (6-59 months) weighed and measured was 312. The mean weight-for-height z-score was -0.297 (95% CI: -0.504, -0.090) and the prevalence of **wasting** or acute malnutrition was 5.3 percent (95% CI: 0.1, 10.5).
- The mean weight-for-age z-score was -1.110 (95% CI: -1.313, -0.908) and the prevalence of **underweight** is 13.3% (95% CI: 5.5, 21.2).

¹¹ Haemoglobin $< 12.0 \text{ g/dL}$

¹² Haemoglobin $< 11.0 \text{ g/dL}$

¹³ Haemoglobin $< 11.0 \text{ g/dL}$

- The mean height-for-age s-score was -1.382 (95% CI: -1.638, -1.127) and the prevalence of **stunting** or chronic malnutrition is 24.0% (95% CI: 14.1, 33.9).
- Children from households using **drinking water** from safe sources were significantly less ($p < 0.05$) likely to suffer from **cough** (41%) than those using water from unsafe sources (54%).
- Children from households using **drinking water** from safe sources were significantly less ($p < 0.05$) likely to suffer from **acute respiratory infection** (18%) than those using water from unsafe sources (29%).
- Children from households using **drinking water** from safe sources were significantly less ($p < 0.05$) likely to be **wasted** (2%) than those using water from unsafe sources (8%).

Section 6.9 – Household food consumption typologies - IDPs

Data on the dietary diversity, defined as different foods consumed during the week prior to the household survey, and the frequency by which these food items are consumed were analysed to create homogeneous groups of households based on their food consumption. IDP-households were analyzed separately from resident households because of the different sampling frame and methodology, and because of the fact that most IDP-households rely heavily on food assistance. Most displaced households receive wheat, oil, sugar and pulses as food aid, often they purchase additional food both staple and non-staple foods such as meat, dairy and fresh vegetables and fruits. Unlike for the resident population, own production plays hardly any role at all.

The analysis used information on the frequency of consumption (0 to 7 days) for eight food items or food groups:

- | | |
|---|---|
| 1. Bread/wheat flour | 7. vegetable oil, fats and butter; |
| 2. pasta, rice and other cereals; | 8. dairy products (milk, yoghurt and cheese); |
| 3. potatoes; | 9. vegetables, |
| 4. beans/pulses; | 10. fruit |
| 5. meat (including red, white meat and fish); | 11. sugar |
| 6. eggs; | |

By applying a multivariate statistical technique clusters of households were created with distinct food consumption patterns. As a second step the costs of the food basket were estimated and their proportion in the total household monthly per capita food expenditures calculated, in an attempt to distinguish between households that are heavily reliant on food aid and those that are not or less dependent on this type of assistance.

6.9.1 - Food consumption classification

The data on food diversity and food frequency were analysed for all IDP-households. The food consumption classification followed a set of criteria based on the consumption of food items belonging to the seven food groups, cereals, tuber and roots, legumes and oil seeds, vegetable and fruits, animal products, oils and fats, milk and other dairy products. The criteria for a IDP household to be classified into one of the three food consumption groups are as follow:

- **Good food consumption:** Highly diversified diet through different foods that are consumed with high frequency. Daily consumption of basic food staples and a regular consumption of meat, dairy products, eggs, vegetable and fruits.
- **Borderline/adequate food consumption:** Fairly diversified diet through different food items that are consumed with varying frequency rates. Daily or at least regular consumption of staple food, regular consumption of protein-rich foods (either from meat or dairy products).

Part VI – Internally Displaced Persons (IDPs)

- **Poor food consumption:** Little diversified diet characterized by a daily or regular intake of carbohydrates and fats, all other food items are consumed with low frequency, while meat is never consumed.

Based on these criteria, 6 distinct profiles were identified with very different food consumption patterns:

Good food consumption (33%)

One third of all household are considered to have good food consumption. Two profiles are associated with this food consumption group: Profile 1 includes about 17% of the households. It is characterized by a daily consumption of staple foods and regular consumption of meat, dairy products, vegetables and fruits. These households rarely eat pulses.

Profile 1	Rarely/Never (0-1 days)	Sometimes (2-3 days)	Often (4-5 days)	Always (6-7 days)
bread				
pasta				
rice/maize				
potato				
oil				
pulses				
meat				
eggs				
milk				
yoghurt				
vegetable				
fruit				
sugar				

Profile 2	Rarely/Never (0-1 days)	Sometimes (2-3 days)	Often (4-5 days)	Always (6-7 days)
bread				
pasta				
rice/maize				
potato				
oil				
pulses				
meat				
eggs				
milk				
yoghurt				
vegetable				
fruit				
sugar				

The second profile of good food consumption which represents 15% of all households is quite similar except that they rely more heavily on dairy products and eggs which are consumed on a daily basis. Meat is only consumed 2-3 times per week. None of these households has a food gap and it can be considered that their food consumption is above the

minimum nutritional requirements.

Borderline food consumption (61%)

The majority of IDP-households fall into the borderline category. This category is comprised of three profiles.

The first profile contains 10% of the IDP-sample households. Staple food is consumed on a daily basis except for cooking oil which is consumed often. Eggs and dairy products are regularly consumed while meat – which forms an important part in the Azerbaijan diet – is rarely or never consumed. Vegetables are regularly consumed, fruits sometimes.

Profile 1	Rarely/Never (0-1 days)	Sometimes (2-3 days)	Often (4-5 days)	Always (6-7 days)
bread				
pasta				
rice/maize				
potato				
oil				
pulses				
meat				
eggs				
milk				
yoghurt				
vegetable				
fruit				
sugar				

The second profile includes 30% of the households. Bread, cooking oil and sugar

Profile 2	Rarely/Never (0-1 days)	Sometimes (2-3 days)	Often (4-5 days)	Always (6-7 days)
bread				
pasta				
rice/maize				
potato				
oil				
pulses				
meat				
eggs				
milk				
yoghurt				
vegetable				
fruit				
sugar				

are consumed daily, potatoes and vegetables often. Sources of protein such as meat, eggs and dairy products are consumed sometimes while pulses or other cereals are hardly ever consumed.

The third profile represents 21% of the sample. All staple foods are consumed daily. Eggs are consumed often while other animal and dairy products are consumed only sometimes. Households belonging to this profile hardly ever consume fruits, and vegetables only seldom.

Profile 3	Rarely/Never (0-1 days)	Sometimes (2-3 days)	Often (4-5 days)	Always (6-7 days)
bread				
pasta				
rice/maize				
potato				
oil				
pulses				
meat				
eggs				
milk				
yoghurt				
vegetable				
fruit				
sugar				

All three profiles meet the minimum requirements of adequate food consumption in the context of Azerbaijan.

Without food aid, however, these households would easily fall into the poor food consumption class.

Poor food consumption (6%)

Only 6% of all IDP-households fall into the poor food consumption category which is a sign that food aid has been successful in keeping a majority of the IDPs food secure. All of these households eat bread and cooking oil daily while some also eat potatoes and sugar daily. Others eat potatoes often while sugar is only

	Rarely/Never (0-1 days)	Sometimes (2-3 days)	Often (4-5 days)	Always (6-7 days)
bread				
pasta				
rice/maize				
potato				
oil				
pulses				
meat				
eggs				
milk				
yoghurt				
vegetable				
fruit				
sugar				

consumed sometimes. Pulses, meat and milk are rarely consumed while the rest of the foods are consumed only sometimes.

These households are characterized by a high intake of carbohydrates and fats to guarantee the minimum caloric requirements. The diet has very little diversification; food aid for this group is essential.

6.9.2 - Meal frequency

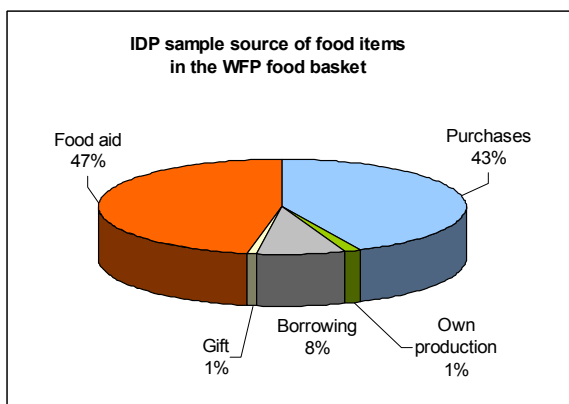
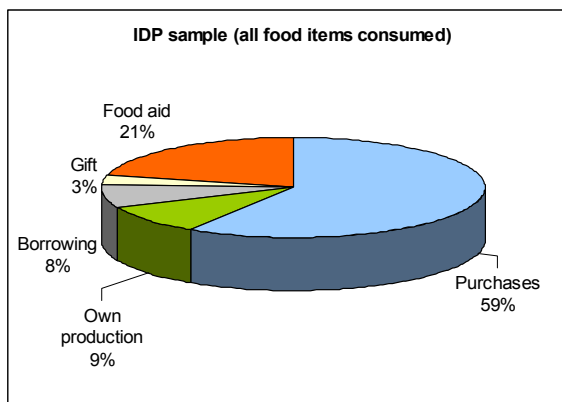
The analysis of consumption data showed that the majority of IDP-households are consuming three meals per day. However, among the poor and borderline food consumption groups around some consume 2 meals or less. In general, children are eating more frequently than adults, however around 5% of the borderline and poor consumption groups consume only 2 meals. The fact that there is very little

difference between IDPs and residents is an indication that food aid contributes directly to increased meal frequency of IDPs.

6.9.3 – Sources of food, household food expenditures and food aid

The most common sources of food for IDP-households were purchases and food aid. Households were allowed to name the main source plus a secondary source when applicable. For each household, all items were coded as either 'purchased', 'food aid', 'own produced', 'gift' or 'borrowed', both for main and secondary source of food. Then the number of responses for each source was counted and the proportion of consumption from each source calculated. First all food items were taken into account, in a second step only those food items were considered that are in the WFP food basket.

When all staple and non-staple foods consumed are considered the most important source is purchase (59%), followed by food aid (21%). Unlike for the resident population own production plays only a minor role with 9%, followed by borrowing (8%) and gifts (3%).



When only staple foods are considered that are part of the food ration, the reliance on food aid becomes even more evident. The most important source is food aid (47%), while the analysis also shows that many households complement their food rations with purchases (43%). Other sources except for borrowing with 8% play hardly any role.

Half of all IDP-households reported that food aid was their only source of the wheat flour/ bread they consumed during the past 7 days prior to the interview. Eleven percent relied on purchases, while 39% relied on a combination of food aid and purchases for this basic food staple.

Food consumption groups	Proportion of households in %			
	Total	Relying on food aid	Relying on food aid and purchases	Relying on purchases
Good	33%	24%	6%	3%
Borderline	61%	22%	31%	8%
Poor	6%	5%	1%	1%
Total		50%	39%	11%

As indicated beforehand, food assistance is provided to nearly all IDPs. The analysis above illustrates that the current food aid and its targeting is successful as 94% of all IDPs fall into the good or borderline food security classification which means that their minimum food requirements is guaranteed. Also the exclusion error of 1% (households with poor food consumption and not relying on

food aid) is very low. However, every third IDP household belongs to the borderline food consumption classification and relies both on food aid and purchases, an indication that households in this group choose to purchase additional staple foods in order to supplement the food ration. Their food consumption would benefit if the food basket that mainly consists of staple food would be increased. This would free up some of their expenditure on basic food items which then could be used to purchase non-staples and would help to diversify their diet.

As most households purchased non-staple foods and many also purchased food items from the food basket, **expenditure on staple and non-staple food items** were analysed and compared with the market value of the food aid basket received. Cereals, cooking oil, pulses and sugar are staple foods, while the non-staples are meat, dairy products, vegetable and fruits.

The first step of the analysis was to calculate the market value of the food aid-basket. This was done for each household by multiplying the amount of each commodity received during the last month, by its average estimated market price. As commodities provided by the Government and WFP slightly differ (see 6.1.5) but the dataset does not clearly distinguish between the two sources, an average was used.¹⁴ The second step was to calculate the total food expenditure for staple and for non-staples for the month prior to the survey, using the household expenditure data.

The ratio between expenditure for staple food and market value of the staple foods received as food aid was calculated as a measure indicating the household's need and/or ability to acquire staple foods. When this indicator was less than 1, the value of the household expenditure for staples is lower than the value of the food aid basket. When it is equal to 1, the value of the household purchase is equal to the value of the food basket, and when it is greater than 1, the value of the household expenditure for staples is higher (twice or more) than the value of the food basket.

Similarly, the ratio between non-staple food expenditures and market value of the staple food received is a measure of the households' access to other food needs and provides an indication of the resources available to diversify their food consumption. The food expenditure-based household classification was then cross-tabulated with the previous household food consumption classification.

Nearly 60% of the IDP household sample has low expenditures for non-staple foods (below the market value of the ration). Given the market prices, such low expenditure levels reveal a rather **limited purchasing power** for non-staples. Moreover, around 20% have very low levels of expenditures for staple commodities and consequently about one-third of the households have expenditures on staple and non-staple above the market value. In this category more than every second household falls into the good consumption group compared to only every fourth household in the borderline and poor food consumption groups.

In summary:

- Households in the **good consumption** class have high average expenditures on staple (US\$ 6.0) and non-staple foods (US\$ 5.3);

¹⁴ Many households benefit from both government and WFP food assistance as some of their members might be registered under one, the rest of the family under the other system.

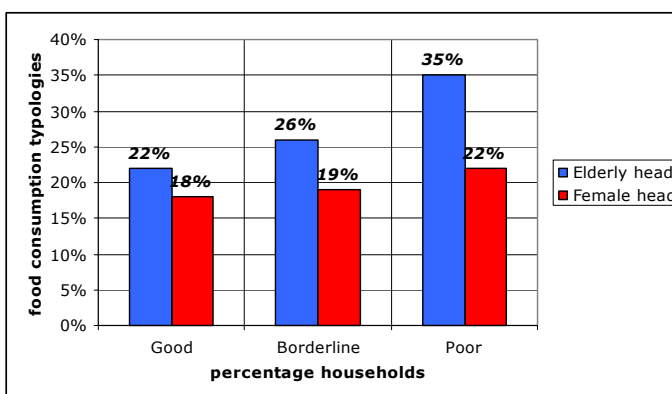
- Those in the **borderline** consumption class have very high average monthly expenditures on staple foods (US\$ 7.2) but very low expenditures on non-staple foods (US\$ 3.1).
- The **poor** consumption households have the lowest average monthly expenditures for staples (US\$ 4.9), their average expenditures for non-staples is US\$ 3.6.

6.9.4 - Characteristics of food consumption classes

Food consumption varies between IDP settlement types with households in dugouts and new settlements being relatively better off with more households in the good food consumption category. The majority of households in all settlement types are classified to have a borderline consumption.

The graphs show various indicators related to **household demographics**.

The poor food consumption class are characterized by a higher proportion of elderly headed households and female headed households as illustrated in the graph on the right. As household food consumption worsens, the percentage of elderly headed households and households headed by women increases.

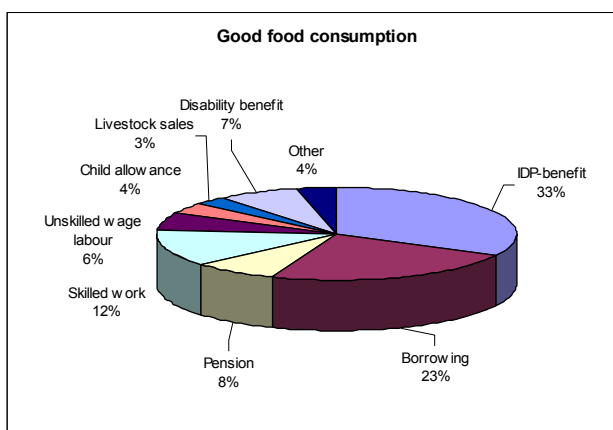


Households in the poor consumption group tend to have a higher percentage of dependents as compared to 'earners' as compared to the other typologies. In addition, the percentage of households very crowded (4+ persons/room) increases linearly across the food consumption groups from good to poor.

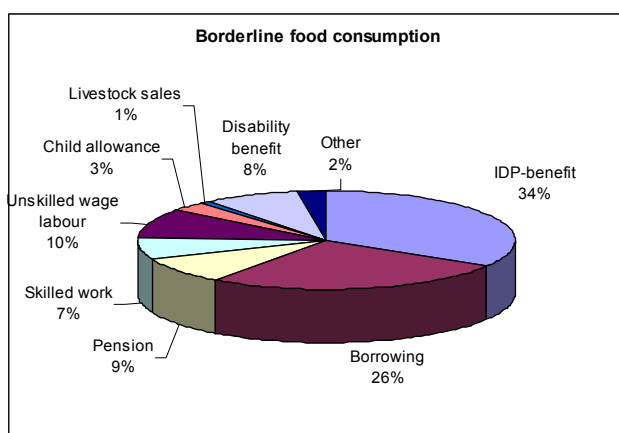
Asset ownership is highly related to food consumption in IDP-households. Only 4% of the poor food consumption class own 8 or more assets compared to 53% of the borderline and 63% of the good food consumption class, while 74% own only 2-6 assets compared to borderline (24%) and good food consumption (15%).

The result for **livestock ownership** is similar with 32% of households with good and 27% with borderline food consumption owning livestock compared to none of the households falling into the poor category. Only 17% of poor consumption households own poultry – much lower than the good (62%) and borderline (59%) typologies.

In terms of **income and employment**, households in the good food consumption class have the highest contribution to total income from IDP benefits, followed by borrowing – together

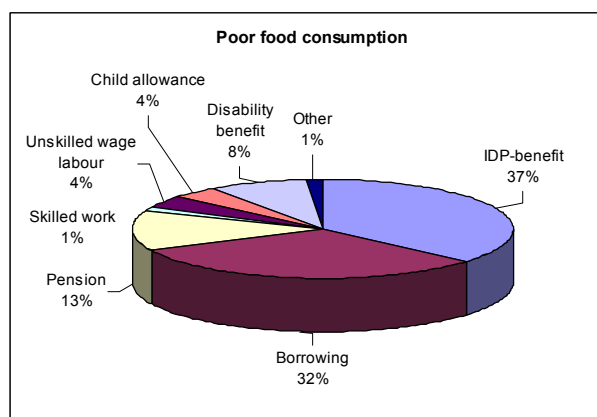


accounting for more than half the total household income. They also receive an important share from skilled work and some from unskilled labour. There is also some reliance on income from pension, disability benefits and child allowances.

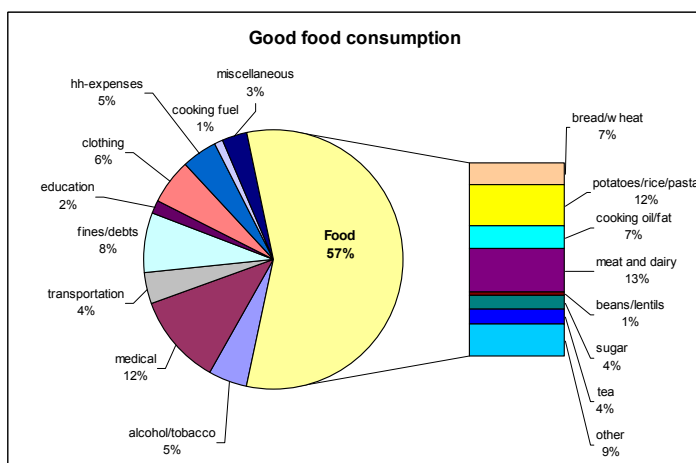


Households in the borderline consumption group also have substantial reliance on IDP benefits and borrowing for income – 60% of the total contribution. However they have a lesser contribution from skilled work and livestock sales, instead relying more on unskilled labour. They have significant contributions from pension and disability benefit but less from child allowance.

The households with poor food consumption are more reliant on IDP benefits and borrowing for income than the other groups, with the two sources accounting for nearly 70% of total household income. They earn very little from skilled or unskilled work and instead receive more from pensions and disability benefits. They have about the same reliance on child allowances as the other groups.



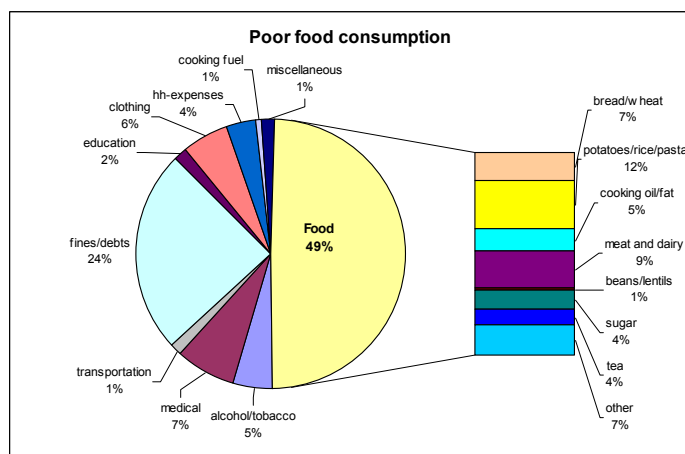
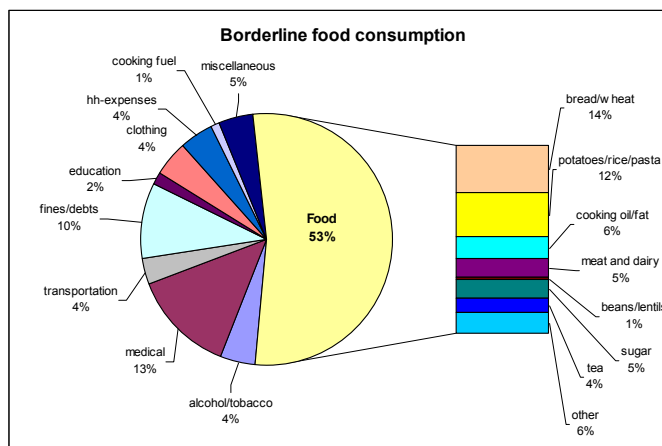
Shares of **household expenditures** on food ranged from 49% in the poor class, over 53% in the borderline class to 57% in the good food consumption class, indicating that the poorest relied more heavily on food rations and less on purchases. 13% of expenditures in the good food consumption class were spent on meat and dairy compared and 9% in the poor class. Expenditures on potatoes, rice and pasta



was 12% across category. The borderline class is characterised by a relatively high percentage of food spent on wheat and bread (14%) and a low percentage on meat and dairy products with 5% only.

Part VI – Internally Displaced Persons (IDPs)

In terms of non-food expenditures the highest percentage is spent on medical expenses ranging from 7% in the poor consumption class to 12% in the borderline and good food consumption class; and debts and fines ranging from 8% in the good food consumption class to 24% in the poor class. There is little difference in terms of expenses on clothing, education, household expenses, cooking fuel and alcohol/tobacco, however only 1% of expenditures are spent on transport among poor consumption households compared to 4% in the other two categories.



All households in the poor category perceived high prices of food as a shock during the past 12 months compared to 88% of the good food consumption category. The trend is similar for high prices of services. However, the differences are rather small. Households falling into the good category are more likely to report life-cycle related shocks,

livestock disease and high costs for agricultural inputs.

Part VII – Recommendations for programme interventions

Section 7.1 – Recommendations - Residents

7.1.1 – Main causes of food insecurity

The causes of food insecurity in rural Azerbaijan are mainly related to two factors. The first one is limited access to livelihood opportunities in both the agricultural sector and employment/labour market. Many households are dependent on borrowing and government allowances, both of which are not sustainable and can change over time. The second one is related to health and malnutrition. The high prevalence of malnutrition and micronutrient deficiency diseases, even among those groups with relatively good food consumption is an indication that malnutrition is not only related to lack of protein and energy in the diet, but also to inadequate maternal and child-care practices and poor water and sanitation facilities.

7.1.2 – Role of food aid

As the causes of food insecurity are complex and related to income and social poverty, food aid alone is not the answer to tackle food insecurity in Azerbaijan. However, in the short-term, food based programmes can be a viable solution to increase / improve the asset base of vulnerable resident households and improve their access to food. Non-food interventions from the Government or other agencies are essential.

The findings suggest that malnutrition and micronutrient deficiencies, especially among children are matters of concern in the country. Here, fortified blended food aid, targeted to expectant and nursing mothers can play a significant role in improving health and nutrition status.

7.1.3 – Programme Interventions

The problem of access to food can be addressed by poverty-reduction programmes or livelihood enhancement strategies. *Food-for-work* and *food-for-asset creation* programs could include activities to improve community infrastructure (health centres, schools, irrigation canals and tertiary roads). *Food-for-training* could include agricultural and livestock training and vocational training. Households with **poor food consumption** (Groups A and B) would benefit from such projects. Improvement of water and sanitation facilities through food-for-work could be a suitable option to improve utilization of food for households in Group A, where access to improved drinking water is particularly low.

Maternal and Child Health (MCH) programmes that provide fortified blended food and health and nutrition education programmes could contribute to improved food consumption, utilization and child care. The provision of fortified food to vulnerable groups (expecting and nursing mothers, pre-school children and adolescent girls) can address current micronutrient deficiencies. The education component should contain information on caring practices, hygiene, nutrition and sanitation and in particular the use of iodized salt and the consumption of iron-rich foods. Households with **adequate food consumption** but with higher levels of maternal and child malnutrition would benefit most from this type of intervention.

Although not specifically designed to directly address household food insecurity or to treat malnutrition, *school feeding programmes* are beneficial in providing an incentive for children to attend school every day. However, WFP can help by providing fortified food rations to children in combination with de-worming activities, can help to improve food utilization and improve consumption of essential micronutrients.

7.1.4 – Non food interventions

Non- food interventions could include *micro-credit schemes* and *cash-for-work*. Improved availability of micro-credit facilities to the resident population would help them procure agricultural inputs and increase their production. Improved information on commodity markets and improved market access to them would also be useful. Households with good food consumption could benefit from improved water and sanitation facilities through *cash-for-work* programmes.

7.1.5 – Geographic targeting

The following table presents the percentage of the households in each economic zone belonging to different food security groups

EZ code	Poor consumption		Adequate consumption			Good consumption	
	Group A (very poor)	Group B (poor)	Group C (vuln. to malnutrition)	Group D (livestock raising)	Group E (farmers)	Group F	Group G
Guba-Kachmaz	4%	10%	18%	23%	<1%	26%	19%
Daglig Shirvan	13%	10%	3%	48%	4%	6%	15%
Sheki-Zagatala	8%	14%	10%	9%	41%	3%	15%
Kur	5%	10%	19%	14%	1%	13%	39%
Orta Kur	10%	6%	35%	20%	1%	9%	19%
Ganja-Gazakh	21%	36%	6%	17%	<1%	13%	6%
Lankaran-Astara	27%	18%	7%	9%	1%	29%	8%
Total	12%	15%	16%	19%	8%	14%	18%

Nearly 60% of households in *Ganja-Gazakh* and 45% of households in *Lankaran-Astara* have poor food consumption which are the most food insecure households. These two economic zones should be prioritized for any intervention related to income and asset-creation as well as school feeding programmes.

Maternal and child (MCH) programmes would be beneficial across the country; however, they would be most effective in *Daglig-Shirvan*, *Sheki-Zagatala* and *Orta Kur* economic zones where more than half the households have adequate food consumption but elevated levels of maternal and/or child malnutrition or anaemia.

Resident households in *Kur* and *Guba-Kachmaz* where 52% and 45% respectively have good food consumption but could benefit from water improvement schemes and/or cash-oriented programmes.

7.1.6 – Beneficiary targeting

Traditionally, it is useful to explore the various socio-demographic characteristics of food insecure households in order to better describe them for program targeting purposes. For most of these characteristics of vulnerable households, the highest levels were found in either *Ganja-Gazakh* or *Lankaran-Astara* when looking only at the **households with poor food consumption**.

- Nearly 25% of the households in *Ganja-Gazakh* were headed by women – the highest of any zone.
- Almost 40% of the households with poor food consumption in *Lankaran-Astara* had 8 or more members while 60% of them had a chronically ill household member.
- For those households in *Ganja-Gazakh* with a chronically ill member, it was the head of household in 56% of the cases.
- Nearly 40% of the households with poor food consumption in *Lankaran-Astara* had a disabled household member.

- Households with poor consumption in *Ganja-Gazakh* are characterized by having the highest ratio of dependents to income earners.

Section 7.2 – Recommendations - IDPs

7.2.1 – Main causes of food insecurity

IDP-households are heavily dependent on cash and food assistance from the Government and international organizations. They hardly have any access to productive and sustainable activities for generating income. In absence of employment opportunities IDPs are heavily dependent on the bread allowance provided by the Government. They also have little access to agricultural land and own few productive household assets and livestock. Despite the fact that they are receiving food assistance from the Government and WFP, most IDPs spent a high share of their expenditures on staple foods, while having limited purchasing power for non-staples.

Other factors constraining food security are related to health and nutrition. Even though most IDPs have adequate or good food consumption, children in this sample show high prevalence of chronic malnutrition, which could be a result of inadequate maternal care, health and/or hygiene environment as most IDPs are still living in unsanitary living conditions. The level of micronutrient deficiency among this group is also high.

7.2.2 – Role of food aid

The analysis showed that most of the IDPs have adequate or good food consumption as a result of the food rations they receive. However, as IDPs rely heavily on external food assistance a phase-out of food aid is likely to have a serious negative impact on their food consumption levels which could further hamper their health and nutritional status, especially for women and children. However, WFP, in cooperation the Government should start to develop an exit strategy that is based on broadening the asset base and livelihood opportunities as free food distributions cannot be the long-term solution.

7.2.3 – Programme interventions

At this point of time (early 2005) WFP Azerbaijan is facing major challenges in securing enough funds to keep up the current levels of food distributions. However, in the short term the continuation of food aid is critical to ensure that IDPs maintain their current food consumption levels and to improve their health and nutrition status.

In the next programme cycle, starting in 2006, WFP could introduce activities such as *food-for-work* (FFW) and *food-for-training* (FFT) to assist IDPs in broadening their asset base. At the same time, targeted free food distribution to vulnerable population groups such as households headed by women or the elderly, or those with many dependents or with disabled members should be continued as they are less likely to participate in FFW or FFT activities.

The *school feeding programme* which was introduced to encourage enrolment/attendance rates and reduce drop-out, especially among girls, has gained popularity in the IDP community. The provision of food rations serves as an incentive to the children as well as to the parents. As school feeding contributes to nutritional adequacy amongst school aged children WFP, in partnership with the Government, could investigate potentials for the expansion of this activity.

7.2.4 – Non food interventions

As unemployment and poverty levels among IDP households are high, long-term development interventions will be essential. Even those IDP households in the new settlements who have recently received land from the Government have limited resources to cultivate it. Given this background, the implementation of agricultural programs and micro-credit schemes are crucial.

The Government has initiated resettlement programmes, which are to be welcomed given the fact that many IDP-families are still residing in makeshift shelters, environments that are contributing to low nutritional outcomes and health problems. At the same time, due care should be taken to locate new settlements in areas which are not too far from potential labour markets.

Annex I – Household survey data tables – Resident households

Table 1 – Sample size and ethnicity by zone

Economic Zone	N	Main ethnic groups in sample		
Guba-Kachmaz	431	Azeri = 68%	Lezgin = 21%	Other = 11%
Daglig Shirvan	300	Azeri = 88%	Lezgin = 4%,	Other = 7%
Sheki-Zagatala	444	Azeri = 74%	Lezgin = 11%	Other = 14%
Kur	440	Azeri = 100%	-	-
Orta Kur	592	Azeri = 100%	-	-
Ganja-Gazakh	439	Azeri = 100%	-	-
Lankaran-Astara	432	Talish = 51%	Azeri = 49%	-

Table 2 – Household headship

	% FHH	Female headed		Male headed		% elderly headed
		Age	% widowed ¹	Age	% widowed	
Guba-Kachmaz	7%	62	90%	35	2%	10%
Daglig Shirvan	16%	64	85%	43	2%	32%
Sheki-Zagatala	21%	64	96%	42	5%	35%
Kur	20%	67	96%	49	4%	40%
Orta Kur	24%	66	95%	49	5%	45%
Ganja-Gazakh	26%	65	89%	45	4%	42%
Lankaran-Astara	19%	65	93%	42	6%	35%
Total	19%	65	93%	43	4%	34%

Table 3 – Household size and composition

	HH total	% 8+ members	% dependents*	% females
Guba-Kachmaz	5	10%	48.6%	50.3%
Daglig Shirvan	6	22%	46.8%	51.0%
Sheki-Zagatala	5	8%	50.3%	53.3%
Kur	5	16%	38.5%	50.3%
Orta Kur	6	21%	45.5%	51.6%
Ganja-Gazakh	6	13%	52.2%	52.1%
Lankaran-Astara	6	34%	48.9%	51.1%
Total	6 persons	17%	47%	51%

*members < 14 years or > 59 years of age

Table 4 – Pensioners and education of head and spouse

	% with pensioners		Head		Spouse	
	Female	Male	Literate	Years education	Literate	Years education
Guba-Kachmaz	32%	17%	96%	10.5	97%	9.4
Daglig Shirvan	55%	27%	92%	9.4	94%	8.8
Sheki-Zagatala	43%	22%	92%	9.4	96%	9.7
Kur	43%	24%	83%	8.8	83%	8.2
Orta Kur	47%	27%	87%	9.0	86%	9.0
Ganja-Gazakh	49%	26%	81%	8.8	85%	9.0
Lankaran-Astara	34%	22%	82%	8.8	85%	8.6
Total	43%	24%	87%	9.2	90%	8.9

¹ Note: widowed, divorced or separated – otherwise single

Annex I – Household survey data tables – Resident households

Table 5 – Chronically ill or disabled members

	Chronic illness		Disability	
	Any member?	HH head*	Any member?	HH head*
Guba-Kachmaz	15%	31%	13%	30%
Daglig Shirvan	31%	45%	21%	34%
Sheki-Zagatala	70%	48%	19%	34%
Kur	22%	54%	17%	42%
Orta Kur	44%	52%	19%	39%
Ganja-Gazakh	38%	50%	20%	31%
Lankaran-Astara	61%	48%	36%	36%
Total	41%	49%	21%	36%

*Of those HH with any member chronically ill/disabled

Table 6 – Chronically ill by age and gender

	Male chronically ill				Female chronically ill			
	0-4 years	5-14 years	15-59 years	60+ years	0-4 years	5-14 years	15-59 years	60+ years
Guba-Kachmaz	6%	0	26%	5%	1%	6%	69%	17%
Daglig Shirvan	2%	5%	34%	24%	1%	2%	29%	29%
Sheki-Zagatala	0	3%	27%	17%	0	3%	55%	22%
Kur	0	2%	35%	17%	0	1%	40%	20%
Orta Kur	1%	2%	33%	19%	1%	3%	47%	26%
Ganja-Gazakh	4%	1%	20%	19%	2%	2%	31%	27%
Lankaran-Astara	1%	3%	32%	14%	1%	3%	55%	17%
Total	2%	3%	29%	17%	1%	3%	48%	23%

Table 7 – Disabled members by age and gender

	Male disabled				Female disabled			
	0-4 years	5-14 years	15-59 years	60+ years	0-4 years	5-14 years	15-59 years	60+ years
Guba-Kachmaz	4%	6%	52%	6%	2%	11%	22%	6%
Daglig Shirvan	3%	18%	55%	10%	2%	3%	23%	8%
Sheki-Zagatala	5%	5%	52%	11%	1%	2%	18%	8%
Kur	3%	4%	69%	5%	0	15	18%	9%
Orta Kur	1%	5%	70%	9%	2%	2%	19%	4%
Ganja-Gazakh	4%	3%	53%	10%	1%	8%	25%	3%
Lankaran-Astara	3%	10%	48%	9%	1%	6%	29%	10%
Total	3%	7%	57%	9%	2%	5%	22%	7%

Table 8 – Type of house and ownership

	Type of house		Ownership		
	Single family dwelling	Mud house	Own	Rent	Don't own but live for free
Guba-Kachmaz	94%	3%	87%	1%	12%
Daglig Shirvan	98%	< 1	96%	1%	3%
Sheki-Zagatala	99%	0.5%	95%	1%	4%
Kur	68%	31%	99%	< 1	1%
Orta Kur	92%	7%	96%	< 1	4%
Ganja-Gazakh	96%	4%	96%	2%	2%
Lankaran-Astara	61%	37%	96%	1%	3%
Total	87%	12%	95%	1%	4%

Table 9 – Tenancy and crowding

	Years in home	# people	# rooms	People/room	% with 4+ per room
Guba-Kachmaz	20 years	5	3	1.9	5%
Daglig Shirvan	40 years	6	3	2.2	9%
Sheki-Zagatala	29 years	5	2	2.3	10%
Kur	28 years	5	3	2.2	11%
Orta Kur	30 years	6	3	2.6	15%
Ganja-Gazakh	20 years	6	2	2.8	20%
Lankaran-Astara	25 years	6	3	2.8	21%
Total	27 years	5	3	2.4	13%

Table 10 – Source of drinking water

	Piped*	Public tap	Borehole, tubewell	Protected spring	Un-protected spring	Pond, lake, river	Bought	Other
Guba-Kachmaz	27%	35%	5%	9%	19%	4%	-	-
Daglig Shirvan	7%	-	-	-	52%	4%	26%	10%
Sheki-Zagatala	55%	14%	1%	1%	9%	10%	1%	9%
Kur	1%	-	26%	< 1	1%	68%	4%	-
Orta Kur	3%	< 1	9%	5%	36%	43%	4%	< 1
Ganja-Gazakh	2%	14%	9%	14%	52%	7%	2%	-
Lankaran-Astara	4%	-	2%	29%	52%	11%	1%	< 1
Total	14%	9%	8%	8%	31%	23%	4%	2%

*into house or yard

Table 11 – Availability of drinking water and sanitation

	Use water from improved source*	Regular supply – any source	Regular supply – improved	Use pit latrine
Guba-Kachmaz	76%	95%	72%	99%
Daglig Shirvan	33%	78%	23%	97%
Sheki-Zagatala	72%	81%	58%	99%
Kur	31%	70%	10%	99%
Orta Kur	21%	63%	11%	99%
Ganja-Gazakh	41%	91%	33%	100%
Lankaran-Astara	37%	58%	29%	98%
Total	44%	76%	33%	99%

*UNICEF definition

Table 12 – Lighting and availability of electricity

	Source of lighting				Availability of electricity		
	Electricity	Candle, flashlight	Lamp	None	Regularly	Sometimes	Rarely
Guba-Kachmaz	100%	< 1	-	-	43%	54%	3%
Daglig Shirvan	99%	< 1	< 1	-	9%	85%	6%
Sheki-Zagatala	96%	< 1	3%	-	5%	87%	7%
Kur	99%	-	1%	-	5%	76%	19%
Orta Kur	89%	< 1	11%	< 1	1%	85%	14%
Ganja-Gazakh	96%	-	< 1	4%	4%	96%	-
Lankaran-Astara	66%	1%	33%	-	1%	94%	5%
Total	92%	<1%	7%	1%	9%	82%	8%

Table 13 – Source of fuel for cooking

	Fuel for cooking					
	Gas	Electricity	Firewood	Coal	Kerosene	Other
Guba-Kachmaz	27%	5%	66%	-	-	2%
Daglig Shirvan	32%	8%	49%	4%	< 1	8%
Sheki-Zagatala	6%	2%	86%	5%	-	< 1
Kur	55%	12%	28%	< 1	5%	-
Orta Kur	52%	10%	29%	3%	2%	4%
Ganja-Gazakh	18%	8%	71%	-	< 1	3%
Lankaran-Astara	-	3%	85%	3%	8%	< 1
Total	28%	7%	58%	2%	2%	2%

Table 14 – Source of fuel for heating

	Fuel for heating						
	Electricity	Gas	Kerosene	Wood	Coal	Stoves	Other
Guba-Kachmaz	2%	5%	-	92%	< 1	-	1%
Daglig Shirvan	4%	15%	< 1	67%	1%	13%	< 1
Sheki-Zagatala	2%	2%	-	94%	2%	-	-
Kur	29%	4%	-	65%	1%	1%	-
Orta Kur	7%	< 1	< 1	88%	< 1	2%	2%
Ganja-Gazakh	2%	3%	-	96%	-	-	-
Lankaran-Astara	3%	1%	6%	78%	9%	4%	-
Total	7%	4%	1%	84%	2%	3%	1%

Table 15a – Asset ownership

	Bed	Table	Chair	Quilts	Carpet	Stove
Guba-Kachmaz	100%	100%	100%	100%	99%	68%
Daglig Shirvan	99%	99%	99%	100%	99%	98%
Sheki-Zagatala	99%	99%	99%	100%	95%	95%
Kur	100%	100%	100%	99%	96%	58%
Orta Kur	100%	99%	99%	99%	95%	88%
Ganja-Gazakh	100%	100%	99%	99%	94%	95%
Lankaran-Astara	92%	92%	91%	99%	88%	37%
Total	98%	99%	98%	99%	95%	77%

Table 15b – Asset ownership

	Radio	TV	Satellite dish	VCR/DVD	Sewing machine	Refrigerator
Guba-Kachmaz	30%	91%	10%	15%	27%	47%
Daglig Shirvan	37%	85%	7%	4%	21%	56%
Sheki-Zagatala	26%	79%	6%	6%	9%	44%
Kur	24%	91%	3%	-	16%	61%
Orta Kur	29%	86%	6%	2%	22%	45%
Ganja-Gazakh	13%	67%	-	-	12%	29%
Lankaran-Astara	26%	66%	3%	1%	10%	18%
Total	26%	81%	5%	4%	17%	42%

Table 15c – Asset ownership

	Motorcycle	Car	Trailer	Farm implements	Number of assets	
					Median	Mean
Guba-Kachmaz	1%	23%	8%	95%	9	9.1
Daglig Shirvan	2%	20%	4%	96%	9	9.2
Sheki-Zagatala	2%	9%	9%	94%	9	8.7
Kur	4%	19%	3%	97%	9	8.7
Orta Kur	6%	19%	9%	96%	9	9.0
Ganja-Gazakh	-	4%	11%	97%	8	8.2
Lankaran-Astara	2%	9%	3%	72%	7	7.1
Total	3%	15%	7%	93%	9	8.6

Table 16 – Asset ownership categories

	Asset ownership categories					
	2 – 6	Seven	Eight	Nine	Ten	11 or more
Guba-Kachmaz	5%	12%	21%	23%	18%	21%
Daglig Shirvan	2%	7%	26%	23%	22%	20%
Sheki-Zagatala	5%	8%	36%	28%	15%	9%
Kur	5%	14%	25%	27%	19%	10%
Orta Kur	5%	11%	24%	23%	19%	17%
Ganja-Gazakh	5%	25%	31%	24%	11%	4%
Lankaran-Astara	30%	30%	22%	12%	4%	2%
Total	8%	15%	27%	23%	15%	12%

Table 17a – Livestock ownership

	Cattle		Oxen/buffalo		Donkeys/horses	
	%	#	%	#	%	#
Guba-Kachmaz	71%	2	3%	1	27%	1
Daglig Shirvan	78%	2	15%	1	30%	1
Sheki-Zagatala	71%	2	15%	1	12%	1
Kur	71%	2	13%	1	7%	1
Orta Kur	72%	2	21%	2	15%	1
Ganja-Gazakh	63%	1	6%	1	33%	1
Lankaran-Astara	70%	2	4%	1	38%	1
Total	71%	2	11%	1	22%	1

Table 17b – Livestock ownership

	Goats		Sheep		Chickens	
	%	#	%	#	%	#
Guba-Kachmaz	7%	3	35%	6	90%	12
Daglig Shirvan	21%	2.5	50%	8	90%	15
Sheki-Zagatala	4%	5	30%	9	92%	10
Kur	10%	3.5	30%	5	94%	15
Orta Kur	7%	5	23%	9	94%	15
Ganja-Gazakh	8%	2.5	23%	5	87%	10
Lankaran-Astara	7%	2	24%	5	94%	15
Total	8%	3	29%	6	92%	11

Annex I – Household survey data tables – Resident households

Table 17c – Livestock ownership

	Ducks		Geese		Turkeys	
	%	#	%	#	%	#
Guba-Kachmaz	11%	5	13%	6	20%	5
Daglig Shirvan	13%	2.5	20%	5	36%	8
Sheki-Zagatala	3%	2	6%	4.5	16%	5
Kur	16%	5	23%	5	40%	5
Orta Kur	9%	4	20%	5	52%	5
Ganja-Gazakh	5%	5	14%	5	25%	4
Lankaran-Astara	26%	5	14%	5	18%	5
Total	12%	4	16%	5	30%	5

Table 18 – Access to loan/credit

	Place to borrow money			Purchase food on credit	How often?		
	Relatives /friends	Local lender	No		Always	Sometimes	Rarely
Guba-Kachmaz	30%	28%	48%	49%	54%	33%	14%
Daglig Shirvan	39%	82%	9%	86%	83%	15%	2%
Sheki-Zagatala	30%	82%	13%	85%	92%	6%	2%
Kur	72%	68%	17%	80%	31%	59%	10%
Orta Kur	59%	81%	13%	86%	63%	34%	3%
Ganja-Gazakh	< 1	77%	23%	77%	55%	43%	2%
Lankaran-Astara	15%	83%	5%	95%	86%	12%	1%
Total	36%	72%	18%	80%	67%	29%	4%

Table 19 – Recent employment of household head

	Head currently working?			If no, in the last 7 days?		
	All	< 60 years	Elderly	All	< 60 years	Elderly
Guba-Kachmaz	60%	66%	9%	4%	5%	0
Daglig Shirvan	36%	47%	11%	1%	2%	0
Sheki-Zagatala	60%	80%	22%	3%	9%	1%
Kur	82%	89%	73%	3%	3%	2%
Orta Kur	27%	39%	13%	9%	16%	3%
Ganja-Gazakh	22%	35%	5%	5%	10%	1%
Lankaran-Astara	28%	31%	22%	8%	12%	1%
Total	45%	56%	24%	5%	10%	1%

Table 20 – Main employment activities by zone and type

Guba-Kachmaz

Child allowance – 61%
Pension – 37%
Skilled work – 32%
Livestock sales – 15%

Borrowing – 49%
Sales of crops, fruits & vegetables – 35%
Unskilled wage labour – 21%
Disability benefit – 10%

Daglig Shirvan

Borrowing – 81%
Child allowance – 50%
Skilled work – 36%
Unskilled wage labour – 15%

Pension – 60%
Livestock sales – 43%
Sales of crops, fruits & vegetables – 19%
Disability benefit – 14%

Sheki-Zagatala

Borrowing – 80%	Sales of crops, fruits & vegetables – 65%
Child allowance – 55%	Pension – 48%
Unskilled wage labour – 25%	Skilled work – 22%
Disability benefit – 15%	Other – 15%

Kur

Borrowing – 77%	Sales of crops, fruits & vegetables – 58%
Pension – 47%	Child allowance – 30%
Skilled work – 22%	Unskilled wage labour – 13%
Other – 13%	Disability benefit – 9%

Orta Kur

Borrowing – 78%	Child allowance – 57%
Pension – 53%	Sales of crops, fruits & vegetables – 32%
Skilled work – 28%	Unskilled wage labour – 21%
Disability benefit – 16%	Livestock sales – 12%

Ganja-Gazakh

Borrowing – 77%	Child allowance – 60%
Pension – 53%	Unskilled wage labour – 27%
Skilled work – 14%	Disability benefit – 14%
Sales of crops, fruits & vegetables – 11%	Other – 8%

Lankaran-Astara

Borrowing – 94%	Child allowance – 64%
Pension – 38%	Skilled work – 23%
Disability benefit – 23%	Other – 13%
Salary from employer – 10%	

Table 21 - Most important income activity by economic zone

Guba-Kachmaz	Skilled work – 25%	Crop sales – 24%	Unskilled wage labour – 15%
Daglig Shirvan	Pension – 27%	Skilled work – 21%	Livestock sales – 14%
Sheki-Zagatala	Pension – 27%	Crop sales – 25%	Unskilled wage labour – 13%
Kur	Crop sales – 36%	Borrowing – 20%	Pension – 13%
Orta Kur	Pension – 22%	Crop sales – 17%	Skilled work – 17%
Ganja-Gazakh	Borrowing – 39%	Pension – 16%	Unskilled wage labour – 14%
Lankaran-Astara	Borrowing – 76%	Skilled work – 7%	Pension – 4%

Table 22 - Number of different income activities

	Only one	Two	Three	Four
Guba-Kachmaz	9%	31%	39%	22%
Daglig Shirvan	1%	11%	39%	49%
Sheki-Zagatala	1%	6%	46%	46%
Kur	4%	27%	44%	26%
Orta Kur	1%	15%	42%	42%
Ganja-Gazakh	2%	32%	53%	13%
Lankaran-Astara	1%	28%	54%	17%
Total	2%	22%	45%	30%

Table 23a – Contribution to total household income

	Borrowing	Pension	Child allowance	Disability benefits
Guba-Kachmaz	13%	12%	6%	3%
Daglig Shirvan	16%	23%	4%	5%
Sheki-Zagatala	20%	20%	4%	4%
Kur	26%	15%	2%	2%
Orta Kur	20%	20%	6%	5%
Ganja-Gazakh	33%	19%	7%	5%
Lankaran-Astara	56%	10%	6%	5%
Total	27%	17%	5%	4%

Table 23b – Contribution to total household income

	Crop sales	Skilled work	Unskilled wage labour	Livestock sales	Other
Guba-Kachmaz	19%	21%	13%	7%	6%
Daglig Shirvan	7%	16%	7%	15%	7%
Sheki-Zagatala	24%	9%	10%	2%	7%
Kur	27%	9%	6%	2%	10%
Orta Kur	13%	12%	9%	4%	11%
Ganja-Gazakh	6%	7%	13%	1%	8%
Lankaran-Astara	2%	8%	1%	2%	10%
Total	14%	12%	8%	4%	8%

Table 24 – Contribution to total income by headship

	Female vs Male head			Elderly vs non-elderly head		
	FHH	MHH	Significant	Elderly	Non-elderly	Significant
Borrowing	29%	26%	< 0.05	25%	27%	n.s.
Pension	26%	15%	< 0.001	36%	7%	< 0.001
Child allowance	4.5%	5.1%	< 0.05	4.2%	5.4%	< 0.001
Disability benefit	4.7%	4.2%	n.s.	3.9%	4.5%	n.s.
Crop sales	11%	15%	< 0.001	11%	16%	< 0.001
Skilled work	7%	13%	< 0.001	8%	14%	< 0.001
Unskilled wage labour	5%	9%	< 0.001	4%	11%	< 0.001
Livestock sales	4%	4%	n.s.	3%	5%	< 0.01
Other	10%	9%	n.s.	6%	11%	< 0.001

Table 25 – Access and use of garden and agricultural land

	Vegetable garden	Access to ag. Land	Hectares accessed	Land used?	Hectares used
Guba-Kachmaz	84%	76%	1.2	90%	0.76
Daglig Shirvan	97%	99%	2.6	97%	2.0
Sheki-Zagatala	98%	98%	1.5	97%	0.8
Kur	96%	95%	1.5	89%	1.0
Orta Kur	98%	98%	2.0	91%	1.0
Ganja-Gazakh	91%	90%	0.3	86%	0.25
Lankaran-Astara	95%	94%	0.9	82%	0.36
Total	94%	93%	1.3	90%	0.75

Table 26 – Main crops produced by economic zone

Table 20 - Main crops produced by economic zone			
Guba-Kachmaz			
Potatoes – 84%	Vegetables = 80%	Wheat = 55%	Maize = 8%
Daglig Shirvan			
Wheat – 72%	Potatoes – 54%	Vegetables – 41%	
Sheki-Zagatala			
Potatoes – 85%	Vegetables – 78%	Maize – 48%	
Wheat – 39%	Tobacco – 7%		
Kur			
Vegetables – 67%	Wheat – 43%	Potatoes – 33%	
Maize – 23%	Cotton – 12%	Melons – 10%	
Orta Kur			
Vegetables – 69%	Wheat – 61%	Potatoes – 38%	
Maize – 16%	Cotton – 9%		
Ganja-Gazakh			
Potatoes – 70%	Vegetables – 33%	Wheat – 16%	Maize – 14%
Lankaran-Astara			
Potatoes – 75%	Vegetables – 66%	Wheat – 49%	Maize – 6%

Table 27a – Cultivation of wheat

	Cultivate wheat	Use of production		
		Mainly sold	Some sold, some eaten	Mainly consumed
Guba-Kachmaz	53%	4%	40%	56%
Daglig Shirvan	65%	0	19%	81%
Sheki-Zagatala	37%	6%	21%	73%
Kur	38%	3%	55%	42%
Orta Kur	53%	< 1	21%	78%
Ganja-Gazakh	16%	7%	11%	82%
Lankaran-Astara	48%	0	7%	93%
Total	44%	2%	25%	73%

Table 27b – Cultivation of maize

	Cultivate maize	Use of production		
		Mainly sold	Some sold, some eaten	Mainly consumed
Guba-Kachmaz	8%	0	45%	55%
Daglig Shirvan	1%	0	0	100%
Sheki-Zagatala	46%	25%	17%	58%
Kur	20%	0	56%	44%
Orta Kur	14%	2%	8%	90%
Ganja-Gazakh	14%	0	4%	96%
Lankaran-Astara	6%	0	0	100%
Total	17%	12%	21%	67%

Table 27c – Cultivation of potatoes

	Cultivate potatoes	Use of production		
		Mainly sold	Some sold, some eaten	Mainly consumed
Guba-Kachmaz	80%	11%	32%	57%
Daglig Shirvan	49%	0	13%	87%
Sheki-Zagatala	82%	1%	13%	86%
Kur	29%	1%	48%	51%
Orta Kur	33%	0	8%	92%
Ganja-Gazakh	70%	1%	10%	89%
Lankaran-Astara	73%	< 1	1%	99%
Total	58%	2%	15%	82%

Table 27d – Cultivation of vegetables

	Cultivate vegetables	Use of production		
		Mainly sold	Some sold, some eaten	Mainly consumed
Guba-Kachmaz	77%	9%	30%	61%
Daglig Shirvan	37%	0	6%	94%
Sheki-Zagatala	75%	1%	13%	86%
Kur	60%	1%	64%	35%
Orta Kur	59%	1%	23%	76%
Ganja-Gazakh	33%	0	8%	92%
Lankaran-Astara	65%	0	3%	97%
Total	59%	2%	22%	76%

Table 28 – Tree production

Guba-Kachmaz = 81%

Apples = 67%	Hazelnuts = 42%	Pears = 38%	Persimmon = 30%
Walnuts = 20%	Figs = 14%	Plums = 12%	

Daglig-Shirvan = 97%

Apples = 40%	Mulberry = 38%	Pomegranate = 37%
Pears = 25%	Plums = 21%	Grapes = 20%
Walnuts = 19%	Figs = 11%	

Sheki-Zagatala = 96%

Apples = 79%	Hazelnuts = 50%	Pears = 33%
Plums = 24%	Walnuts = 22%	Figs = 14%
Persimmon = 11%	Grapes = 10%	

Kur = 91%

Pomegranate = 87%	Grapes = 53%	Figs = 42%
Plums = 16%	Apples = 14%	Apricots = 8%

Orta-Kur = 93%

Pomegranate = 72%	Plums = 31%	Figs = 27%
Grapes = 24%	Persimmon = 22%	Pears = 20%
Mulberry = 14%	Apple = 12%	Apricot = 12%

Ganja-Gazakh = 67%

Apples = 67%	Pears = 35%	Plums = 23%
Persimmon = 21%	Pomegranate = 15%	Apricot = 13%

Lankaran-Astara = 83%

Apples = 43%	Plums = 31%	Pears = 28%
Walnuts = 28%	Figs = 28%	Mulberry = 25%
Pomegranate = 21%	Citrus = 13%	Grapes = 10%

Table 29a – Cultivate apples

	Cultivate Apples	Use of production		
		Mainly sold	Some sold, some eaten	Mainly consumed
Guba-Kachmaz	66%	2%	11%	87%
Daglig Shirvan	39%	0	3%	97%
Sheki-Zagatala	79%	0	20%	80%
Kur	14%	0	22%	78%
Orta Kur	12%	0	3%	97%
Ganja-Gazakh	67%	1%	0	99%
Lankaran-Astara	44%	0	1%	99%
Total	44%	< 1 %	10%	90%

Table 29b – Cultivate pomegranate

	Cultivate Pomegranate	Use of production		
		Mainly sold	Some sold, some eaten	Mainly consumed
Guba-Kachmaz	6%	10%	10%	80%
Daglig Shirvan	36%	0	1%	99%
Sheki-Zagatala	6%	0	4%	96%
Kur	87%	1%	30%	69%
Orta Kur	72%	< 1	6%	93%
Ganja-Gazakh	15%	0	0	100%
Lankaran-Astara	21%	3%	0	97%
Total	38%	1%	13%	86%

Table 29c – Cultivate pears

	Cultivate Pears	Use of production		
		Mainly sold	Some sold, some eaten	Mainly consumed
Guba-Kachmaz	38%	1%	11%	88%
Daglig Shirvan	25%	0	4%	96%
Sheki-Zagatala	34%	0	11%	89%
Kur	6%	0	24%	76%
Orta Kur	20%	0	3%	97%
Ganja-Gazakh	34%	0	0	100%
Lankaran-Astara	30%	0	0	100%
Total	26%	< 1%	6%	94%

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Table 29d – Cultivate Figs

Cultivate Figs		Use of production		
		Mainly sold	Some sold, some eaten	Mainly consumed
Guba-Kachmaz	13%	0	14%	86%
Daglig Shirvan	11%	0	0	100%
Sheki-Zagatala	14%	0	10%	90%
Kur	42%	0	39%	61%
Orta Kur	22%	0	3%	97%
Ganja-Gazakh	6%	0	0	100%
Lankaran-Astara	28%	1%	0	99%
Total	21%	<1%	15%	85%

Table 29e – Cultivate Plums

Cultivate Plums		Use of production		
		Mainly sold	Some sold, some eaten	Mainly consumed
Guba-Kachmaz	11%	0	13%	87%
Daglig Shirvan	21%	0	2%	98%
Sheki-Zagatala	24%	0	2%	98%
Kur	16%	0	5%	95%
Orta Kur	29%	1%	1%	98%
Ganja-Gazakh	22%	0	0	100%
Lankaran-Astara	28%	0	0	100%
Total	22%	< 1%	2%	97%

Table 29f – Cultivate Grapes

Cultivate Grapes		Use of production		
		Mainly sold	Some sold, some eaten	Mainly consumed
Guba-Kachmaz	4%	0	29%	71%
Daglig Shirvan	20%	0	0	100%
Sheki-Zagatala	10%	0	7%	93%
Kur	53%	1%	31%	68%
Orta Kur	24%	1%	4%	95%
Ganja-Gazakh	3%	0	0	100%
Lankaran-Astara	10%	6%	0	94%
Total	19%	1%	15%	84%

Table 29g – Cultivate Hazelnuts

Cultivate Hazelnuts		Use of production		
		Mainly sold	Some sold, some eaten	Mainly consumed
Guba-Kachmaz	42%	1%	24%	75%
Daglig Shirvan	2%	0	0	100%
Sheki-Zagatala	51%	0	26%	74%
Kur	1%	0	20%	80%
Orta Kur	5%	0	4%	96%
Ganja-Gazakh	3%	0	0	100%
Lankaran-Astara	3%	0	0	100%
Total	16%	< 1%	22%	77%

Table 29h – Cultivate Walnuts

	Cultivate Walnuts	Use of production		
		Mainly sold	Some sold, some eaten	Mainly consumed
Guba-Kachmaz	20%	8%	16%	77%
Daglig Shirvan	20%	0	0	100%
Sheki-Zagatala	22%	0	14%	86%
Kur	1%	0	50%	50%
Orta Kur	8%	0	5%	95%
Ganja-Gazakh	5%	0	0	100%
Lankaran-Astara	29%	1%	0	99%
Total	14%	2%	7%	91%

Table 30a – Percentage of total monthly expenditure by category

	Guba-Kachmaz	Daglig Shirvan	Sheki-Zagatala	Kur
Bread/wheat	10.2%	7.9%	11.3%	17.4%
Potatoes, rice, pasta	7.9%	6.9%	7.6%	10.1%
Cooking oil/fat	9.5%	8.1%	7.9%	7.7%
Meat, eggs, yoghurt, milk	9.3%	4.7%	3.2%	7.1%
Beans/lentils	0.8%	0.4%	0.4%	0.8%
Sugar	6.3%	8.4%	6.2%	5.5%
Other foods	1.2%	3.2%	0.8%	2.8%
Tea	4.0%	4.1%	3.3%	2.7%
Food & drinks outside	0.4%	0	0.2%	0
TOTAL FOOD	49.5%	43.7%	40.9%	54.2%
Alcohol & tobacco	6.0%	6.7%	3.8%	3.9%
Medical services	1.6%	3.2%	2.0%	3.0%
Medical items & drugs	5.0%	13.4%	10.5%	6.5%
Transportation	6.2%	5.2%	2.2%	3.2%
Fines or debts	3.4%	9.4%	19.4%	8.3%
Education/school fees	3.3%	0.7%	1.8%	0.8%
Clothing/shoes	10.6%	4.9%	5.3%	4.3%
Soaps/detergents/HH items	2.7%	3.4%	4.7%	3.8%
Rent	0.1%	0.1%	0.1%	0
Cooking fuel	8.1%	4.5%	7.0%	4.0%
Electricity	3.2%	4.4%	1.9%	5.0%
Leisure activities	0.2%	0.3%	0.1%	0.1%
Miscellaneous/other	0	0.2%	0.2%	2.8%

Table 30b – Percentage of total monthly expenditure by category

	Orta Kur	Ganja-Gazakh	Lankaran-Astara
Bread/wheat	12.8%	30.8%	17.9%
Potatoes, rice, pasta	7.3%	6.5%	12.0%
Cooking oil/fat	6.3%	5.8%	6.8%
Meat, eggs, yoghurt, milk	4.7%	4.5%	3.8%
Beans/lentils	0.5%	0.2%	0.8%
Sugar	5.4%	5.6%	5.8%
Other foods	2.8%	2.2%	2.5%
Tea	3.3%	3.7%	3.6%
Food & drinks outside	1.2%	0	0.1%

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TOTAL FOOD	44.4%	59.2%	53.4%
Alcohol & tobacco	4.3%	0.6%	4.5%
Medical services	2.9%	3.1%	3.1%
Medical items & drugs	8.6%	3.9%	10.6%
Transportation	4.0%	0.7%	3.6%
Fines or debts	9.6%	20.0%	11.5%
Education/school fees	1.6%	1.0%	1.4%
Clothing/shoes	6.6%	1.6%	3.5%
Soaps/detergents/HH items	4.2%	3.3%	2.0%
Rent	0	0.2%	0
Cooking fuel	4.8%	2.9%	4.1%
Electricity	3.6%	3.5%	2.0%
Leisure activities	0.5%	0	0.1%
Miscellaneous/other	4.9%	0	0.2%

Table 30a - “We worried that our food would run out before we got enough money to buy more or could produce more ourselves.”

	Often	Sometimes	Rarely	Never
Guba-Kachmaz	40%	12%	30%	18%
Daglig Shirvan	77%	11%	6%	6%
Sheki-Zagatala	76%	29%	4%	1%
Kur	64%	16%	18%	2%
Orta Kur	72%	15%	8%	5%
Ganja-Gazakh	37%	38%	23%	1%
Lankaran-Astara	49%	43%	8%	1%
Total	59%	22%	14%	5%

Table 30b - “We did not eat foods of the quality or variety we preferred because we didn’t have enough money to purchase them.”

	Often	Sometimes	Rarely	Never
Guba-Kachmaz	42%	11%	29%	18%
Daglig Shirvan	78%	11%	6%	6%
Sheki-Zagatala	76%	19%	5%	0
Kur	58%	21%	17%	3%
Orta Kur	64%	24%	8%	4%
Ganja-Gazakh	18%	58%	22%	2%
Lankaran-Astara	50%	40%	9%	1%
Total	55%	27%	14%	5%

Table 30c - “The food we purchased and/or produced wasn’t enough and we didn’t have enough money to purchase more.”

	Often	Sometimes	Rarely	Never
Guba-Kachmaz	42%	10%	29%	18%
Daglig Shirvan	77%	11%	6%	6%
Sheki-Zagatala	72%	20%	7%	1%
Kur	52%	27%	15%	6%
Orta Kur	59%	27%	9%	6%
Ganja-Gazakh	28%	46%	24%	2%
Lankaran-Astara	53%	38%	9%	1%
Total	54%	26%	14%	5%

Table 31a - Reduced the size of meals

	Often	Sometimes	Rarely	Never
Guba-Kachmaz	56%	22%	13%	9%
Daglig Shirvan	69%	20%	6%	5%
Sheki-Zagatala	50%	25%	17%	8%
Kur	39%	52%	7%	1%
Orta Kur	46%	43%	10%	1%
Ganja-Gazakh	28%	61%	11%	0
Lankaran-Astara	45%	45%	10%	0
Total	46%	40%	11%	3%

Table 31b – Skipped meals

	Often	Sometimes	Rarely	Never
Guba-Kachmaz	55%	22%	12%	12%
Daglig Shirvan	57%	21%	8%	14%
Sheki-Zagatala	44%	26%	21%	10%
Kur	28%	52%	16%	3%
Orta Kur	27%	45%	23%	5%
Ganja-Gazakh	25%	41%	32%	1%
Lankaran-Astara	33%	52%	14%	1%
Total	36%	39%	19%	6%

Table 31c - Ate less than they felt they should

	Often	Sometimes	Rarely	Never
Guba-Kachmaz	48%	22%	15%	15%
Daglig Shirvan	40%	42%	10%	8%
Sheki-Zagatala	33%	25%	26%	16%
Kur	14%	43%	33%	10%
Orta Kur	29%	38%	24%	8%
Ganja-Gazakh	21%	30%	45%	4%
Lankaran-Astara	20%	57%	21%	2%
Total	28%	38%	26%	9%

Table 31d – Hungry but didn't eat

	Often	Sometimes	Rarely	Never
Guba-Kachmaz	6%	9%	10%	74%
Daglig Shirvan	3%	5%	4%	87%
Sheki-Zagatala	5%	10%	20%	64%
Kur	6%	22%	39%	32%
Orta Kur	14%	26%	30%	30%
Ganja-Gazakh	16%	22%	50%	12%
Lankaran-Astara	6%	30%	43%	20%
Total	8%	19%	30%	42%

Table 31e – Skipped days without eating

	Often	Sometimes	Rarely	Never
Guba-Kachmaz	5%	6%	9%	79%
Daglig Shirvan	3%	3%	1%	93%
Sheki-Zagatala	4%	10%	20%	66%
Kur	5%	15%	31%	49%
Orta Kur	4%	9%	23%	63%
Ganja-Gazakh	15%	18%	52%	16%
Lankaran-Astara	2%	12%	23%	62%
Total	5%	11%	24%	60%

Annex II – Nutrition and health data tables

Table 2.1 – Pregnancy and breastfeeding status and history by economic zone

	Pregnant	Breastfeeding	Rec'd iron/folate tablets	Had miscarriage or stillbirth	Had a child die
Guba-Kachmaz	9%	16%	11%	12%	31%
Daglig Shirvan	7%	25%	0	15%	28%
Sheki-Zagatala	4%	20%	8%	17%	10%
Kur	10%	15%	5%	9%	29%
Orta Kur	7%	27%	5%	17%	22%
Ganja-Gazakh	5%	23%	0	25%	12%
Lankaran-Astara	5%	13%	0	9%	39%
Total	7%	20%	4%	15%	23%

Table 2.2 – Pregnancy history by age group

	# pregnancies (median)	Ever miscarriage or stillbirth	# living children (median)	Ever had child die	Age at first live birth
15 to 19 years	1	7%	1	9%	18 years
20 to 24 years	2	12%	1	11%	20 years
25 to 29 years	3	16%	2	17%	21 years
30 to 34 years	4	18%	3	26%	22 years
35 to 39 years	4	14%	3	32%	23 years
40 to 49 years	5	17%	4	43%	23 years
Total	3	15%	2	23%	21 years

Table 2.3 – Antenatal care and birth size

	Received skilled antenatal care	Reported size at birth			
		Large or very large	Normal	Smaller than normal	Very small
Guba-Kachmaz	77%	4.9%	84.8%	10.0%	0.2%
Daglig Shirvan	79%	1.6%	84.7%	12.9%	0.8%
Sheki-Zagatala	8%	1.9%	65.8%	30.7%	1.5%
Kur	57%	1.9%	84.8%	11.1%	2.2%
Orta Kur	81%	5.6%	65.3%	26.0%	3.2%
Ganja-Gazakh	43%	3.3%	80.5%	14.7%	1.5%
Lankaran-Astara	92%	1.8%	82.5%	14.6%	1.2%
Total	63%	3.3%	76.8%	18.3%	1.6%

Table 2.4 – Low birth weight and possible causes

	Mother currently malnourished	During pregnancy		Recent maternal morbidity	
		No antenatal care	Skilled antenatal care	Diarrhoea	Fever
Normal	6.0%	18.1%	63.7%	18%	18%
Low birth weight	8.8%	14.0%	58.7%	26%	25%
Significance	< 0.05	< 0.05	< 0.05	< 0.001	< 0.001

Table 2.5 – Low birth weight and other outcomes

	< -2.00 SD			Ill in past 2 weeks			
	Wasted	Underweight	Stunted	Fever	Cough	ARI	Diarrhoea
Normal	5.9%	13.2%	30.7%	46%	39%	21%	45%
Low birth weight	7.5%	22.0%	33.8%	56%	45%	20%	54%
Significance	n.s.	< 0.001	n.s.	< 0.001	< 0.01	n.s.	< 0.001

Table 2.6 – Recent morbidity and hygiene practices by economic zone

	In past 2 weeks			Wash hands after defecation		
	Diarrhoea	Fever	Both	Water only	Soap & water	Other
Guba-Kachmaz	7%	9%	5%	6%	92%	2%
Daglig Shirvan	10%	15%	5%	0	100%	0
Sheki-Zagatala	10%	12%	5%	1%	98%	1%
Kur	13%	23%	10%	1%	99%	0
Orta Kur	19%	19%	10%	1%	99%	0
Ganja-Gazakh	34%	31%	27%	1%	98%	1%
Lankaran-Astara	32%	34%	21%	8%	88%	4%
Total	19%	21%	12%	2%	96%	2%

Table 2.7 – Recent morbidity and hygiene practices by age group

	In past 2 weeks			Wash hands after defecation		
	Diarrhoea	Fever	Both	Water only	Soap & water	Other
15 to 19 years	9%	16%	6%	1%	97%	2%
20 to 24 years	16%	18%	11%	1%	98%	1%
25 to 29 years	20%	19%	13%	2%	96%	2%
30 to 34 years	22%	24%	15%	3%	97%	0
35 to 39 years	18%	22%	10%	2%	97%	1%
40 to 49 years	16%	21%	11%	4%	94%	2%
Total	19%	21%	12%	2%	96%	2%

Table 2.8 – Maternal BMI and malnutrition by economic zone

	BMI (kg/m ²)		BMI < 18.5 kg/m ²		Body Mass Index		
	Mean	95% CI	%	95% CI	18.5-24.9 (normal)	25.0-29.9 (overweight)	≥ 30.0 (obese)
Guba-Kachmaz	22.3	(22.0, 22.7)	8.7%	(5.6, 11.7)	72.9%	14.5%	3.9%
Daglig Shirvan	22.4	(21.8, 23.0)	9.2%	(4.9, 13.5)	71.7%	13.9%	5.2%
Sheki-Zagatala	22.0	(21.7, 23.0)	4.3%	(2.1, 6.5)	86.6%	6.8%	2.2%
Kur	24.4	(23.8, 24.9)	7.0%	(4.1, 9.9)	51.9%	29.0%	12.1%
Orta Kur	23.3	(22.9, 23.8)	8.3%	(5.6, 10.9)	61.8%	22.0%	7.9%
Ganja-Gazakh	24.2	(23.7, 24.6)	3.6%	(1.7, 5.6)	60.1%	25.2%	11.0%
Lankaran-Astara	21.5	(21.3, 21.8)	5.1%	(2.9, 7.3)	88.2%	6.7%	0
Total	22.9	(22.7, 23.1)	6.4%	(5.4, 7.4)	70.9%	16.8%	5.8%

Table 2.9 – Maternal BMI and malnutrition by age group

	BMI (kg/m ²)		BMI < 18.5 kg/m ²		Body Mass Index		
	Mean	95% CI	%	95% CI	18.5-24.9 (normal)	25.0-29.9 (overweight)	≥ 30.0 (obese)
15 to 19 years	21.5	(20.6, 22.4)	16.7%	(7.0, 26.4)	68.3%	13.3%	1.7%
20 to 24 years	22.1	(21.9, 22.4)	8.5%	(6.1, 10.8)	75.7%	12.7%	3.1%
25 to 29 years	22.4	(22.2, 22.7)	6.4%	(4.5, 8.2)	73.5%	16.6%	3.4%
30 to 34 years	23.2	(22.8, 23.6)	6.6%	(4.4, 8.8)	68.4%	17.7%	7.2%
35 to 39 years	24.0	(23.5, 24.5)	3.8%	(1.6, 6.0)	64.2%	21.5%	10.4%
40 to 49 years	24.3	(23.8, 24.8)	1.4%	(-0.2, 2.9)	65.9%	20.5%	12.3%
Total	22.9	(22.7, 23.1)	6.4%	(5.4, 7.4)	70.9%	16.8%	5.8%

Table 2.10 – Maternal malnutrition and anaemia (non-pregnant) by economic zone

	Underweight (< 45 kgs)	Stunted (< 145 cm)	Haemoglobin – non-pregnant women				
			N	Haemoglobin		Anaemia (Hb < 12.0 g/dL)	
				Mean	95% CI	%	95% CI
Guba-Kachmaz	5%	0	64	11.51	(11.2, 11.8)	65.6%	(53.7, 77.6)
Daglig Shirvan	8%	1%	69	11.46	(11.1, 11.8)	53.6%	(41.6, 65.7)
Sheki-Zagatala	4%	2%	70	10.97	(10.5, 11.4)	60.0%	(48.2, 71.8)
Kur	8%	1%	70	10.60	(10.1, 11.1)	80.0%	(70.4, 89.6)
Orta Kur	7%	1%	93	11.20	(10.9, 11.5)	66.7%	(56.9, 76.4)
Ganja-Gazakh	6%	2%	72	11.75	(11.2, 12.2)	43.1%	(31.1, 54.8)
Lankaran-Astara	3%	0	78	12.80	(12.5, 13.1)	29.5%	(19.1, 39.8)
Total	5%	1%	516	11.48	(11.3, 11.6)	56.8%	(52.5, 61.1)

Table 2.11 – Maternal malnutrition and anaemia by age group

	Underweight (< 45 kgs)	Stunted (< 145 cm)	N	Haemoglobin – non-pregnant women			
				Haemoglobin		Anaemia (Hb < 12.0 g/dL)	
				Mean	95% CI	%	95% CI
15 to 19 years	15%	0	10	11.26	(10.1, 12.4)	60.0%	(23.1, 96.9)
20 to 24 years	7%	1%	129	11.57	(11.3, 11.9)	57.4%	(48.7, 66.0)
25 to 29 years	6%	1%	167	11.38	(11.1, 11.6)	59.9%	(52.4, 67.4)
30 to 34 years	6%	2%	120	11.63	(11.3, 12.0)	50.8%	(41.8, 59.9)
35 to 39 years	4%	1%	57	11.27	(10.7, 11.8)	57.9%	(44.7, 71.1)
40 to 49 years	2%	1%	33	11.51	(10.9, 12.2)	57.6%	(39.8, 75.4)
Total	6%	1%	516	11.48	(11.3, 11.6)	56.8%	(52.5, 61.1)

Table 2.12 – Vitamin A and iodine indicators by economic zone

	Night blindness during pregnancy		Rec'd vitamin A capsule after delivery	Any family member...		Use iodized salt
	%	95% CI		Diagnosed with goitre	If so, received treatment	
Guba-Kachmaz	0.9%	(-0.1, 2.0)	2%	25%	8%	67%
Daglig Shirvan	0	0	0	19%	41%	62%
Sheki-Zagatala	2.1%	(0.5, 3.6)	3%	46%	20%	34%
Kur	3.5%	(0.9, 6.1)	2%	11%	40%	69%
Orta Kur	1.4%	(0.4, 2.5)	2%	25%	33%	72%
Ganja-Gazakh	2.3%	(0.8, 3.9)	7%	24%	32%	80%
Lankaran-Astara	4.7%	(2.5, 7.0)	3%	19%	41%	87%
Total	2.2%	(1.6, 2.8)	3%	24%	28%	67%

Table 2.13 – Moderate malnutrition in children (6-59 months), by zone

	N	Mean age	Wasted		Underweight		Stunted	
			%	95% CI	%	95% CI	%	95% CI
Guba-Kachmaz	382	33.5	5.4%	(3.1, 7.7)	17.2%	(13.4, 21.1)	39.6%	(34.6, 44.6)
Daglig Shirvan	231	34.6	8.3%	(4.7, 11.9)	20.8%	(15.5, 26.1)	40.4%	(34.0, 46.9)
Sheki-Zagatala	401	34.6	4.1%	(2.1, 6.0)	9.5%	(6.6, 12.4)	36.0%	(31.2, 40.7)
Kur	240	34.9	5.6%	(2.6, 8.6)	16.8%	(12.0, 21.7)	27.5%	(21.7, 33.3)
Orta Kur	565	33.2	5.2%	(3.3, 7.1)	15.2%	(12.1, 18.2)	24.8%	(21.1, 28.4)
Ganja-Gazakh	476	35.1	6.8%	(4.5, 9.0)	15.1%	(11.9, 18.4)	26.8%	(22.7, 30.8)
Lankaran-Astara	478	34.9	7.8%	(5.4, 10.3)	14.4%	(11.2, 17.6)	39.0%	(34.5, 43.4)
Total	2665	34.3	6.1%	(5.2, 7.0)	15.1%	(13.8, 16.5)	32.8%	(31.0, 34.6)

Table 2.14 – Severe (6-59 months) & moderate (0-59 months) malnutrition by zone

	Underweight		Stunted		Children 0-59 months		
	%	95% CI	%	95% CI	Wasted	Underweight	Stunted
Guba-Kachmaz	4.0%	(2.0, 6.0)	15.2%	(11.6, 18.9)	6%	17%	38%
Daglig Shirvan	6.5%	(3.3, 9.7)	14.7%	(10.0, 19.3)	8%	20%	37%
Sheki-Zagatala	2.3%	(0.8, 3.7)	15.3%	(11.7, 18.9)	4%	11%	35%
Kur	1.7%	(0.0, 3.4)	10.9%	(6.8, 15.0)	6%	17%	26%
Orta Kur	1.1%	(0.2, 2.0)	5.4%	(3.5, 7.3)	6%	14%	24%
Ganja-Gazakh	1.9%	(0.7, 3.1)	8.5%	(6.0, 11.1)	7%	15%	25%
Lankaran-Astara	2.3%	(1.0, 3.7)	16.2%	(12.9, 19.6)	8%	14%	37%
Total	2.5%	(1.9, 3.0)	11.9%	(10.6, 13.1)	6%	15%	31%

Table 2.16 – Median z-scores and moderate malnutrition by age group

Age in months	Median z-score			% children		
	Weight-for- height	Weight-for- age	Height-for- age	Wasted	Underweight	Stunted
0 to 5	-0.20	-0.56	-0.64	7%	13%	16%
6 to 11	-0.16	-0.87	-0.99	11%	16%	24%
12 to 17	-0.20	-1.11	-1.52	9%	22%	28%
18 to 23	-0.36	-1.05	-1.60	10%	23%	38%
24 to 35	-0.27	-1.17	-1.43	7%	18%	35%
36 to 47	-0.01	-1.03	-1.65	3%	13%	39%
48 to 59	-0.03	-1.05	-1.39	4%	9%	29%
Total	-0.13	-1.02	-1.41	6%	15%	31%

Annex II – Nutrition and health data tables
Table 2.17 – Haemoglobin and anaemia in children 6-59 months, by zone

	N	Child haemoglobin (g/dl)		Hb < 11.0 g/dl	
		Mean	Median	%	95% CI
Guba-Kachmaz	109	10.93	11.0	48.6%	(39.1, 58.2)
Daglig Shirvan	81	11.30	11.4	29.6%	(19.5, 39.8)
Sheki-Zagatala	91	10.28	10.3	64.8%	(54.8, 74.8)
Kur	90	9.69	10.0	78.9%	(70.3, 87.5)
Orta Kur	132	10.45	10.7	59.8%	(51.4, 68.3)
Ganja-Gazakh	109	10.87	11.3	42.2%	(32.8, 51.6)
Lankaran-Astara	63	11.64	11.7	31.7%	(19.9, 43.6)
Total	675	10.68	10.9	52.1%	(48.4, 55.9)

Table 2.18 – Haemoglobin and anaemia in children by age group

Age in months	N	Child haemoglobin (g/dl)		Hb < 11.0 g/dl	
		Mean	Median	%	95% CI
0 to 5	30	9.82	10.35	86.7%	(73.8, 99.6)
6 to 11	67	10.31	10.3	67.2%	(55.6, 78.7)
12 to 17	69	9.80	10.0	75.4%	(64.9, 85.8)
18 to 23	70	9.80	9.90	74.3%	(63.8, 84.8)
24 to 35	126	10.55	10.65	57.1%	(48.4, 65.9)
36 to 47	141	10.95	11.2	46.1%	(37.8, 54.4)
48 to 59	202	11.31	11.4	32.7%	(26.2, 39.2)
Total	675	10.68	10.9	52.1%	(48.4, 55.9)

Table 2.19 – Child feeding and vitamin A supplementation, by economic zone

	Ever breastfed?	Children 0-24 months				Receive vitamin A supplement
		Exclusive BF	BF plus liquids	BF plus solids	Not breast-feeding	
Guba-Kachmaz	91%	< 1%	18%	21%	61%	1%
Daglig Shirvan	93%	3%	29%	30%	38%	3%
Sheki-Zagatala	86%	3%	22%	26%	49%	2%
Kur	91%	2%	24%	28%	46%	2%
Orta Kur	93%	2%	37%	17%	44%	6%
Ganja-Gazakh	90%	< 1%	51%	5%	44%	10%
Lankaran-Astara	94%	< 1%	28%	18%	54%	8%
Total	91%	2%	31%	19%	48%	5%

Table 2.20 – Two-week period prevalence of illness, by economic zone

	Fever	Cough	Acute respiratory infection (ARI)	Diarrhoea	Treat diarrhoea at health facility	Have any illness
Guba-Kachmaz	25%	21%	8%	27%	30%	39%
Daglig Shirvan	46%	35%	21%	42%	42%	60%
Sheki-Zagatala	54%	38%	11%	44%	31%	68%
Kur	48%	35%	22%	40%	35%	62%
Orta Kur	40%	36%	14%	44%	31%	58%
Ganja-Gazakh	59%	52%	23%	58%	28%	71%
Lankaran-Astara	63%	55%	46%	62%	40%	76%
Total	48%	40%	21%	47%	34%	63%

Table 2.21 – Two-week period prevalence of illness, by age group

Age in months	Fever	Cough	Acute respiratory infection (ARI)	Diarrhoea	Treat diarrhoea at health facility	Have any illness
0 to 5	38%	33%	15%	45%	55%	55%
6 to 11	55%	42%	17%	58%	37%	71%
12 to 17	57%	47%	29%	55%	40%	71%
18 to 23	50%	44%	22%	55%	33%	69%
24 to 35	49%	38%	20%	50%	33%	65%
36 to 47	48%	39%	20%	41%	29%	60%
48 to 59	45%	41%	24%	39%	25%	57%
Total	48%	40%	21%	47%	34%	63%