

FOOD DEPRIVATION IN IRAQ



Kurdistan region
statistics organization



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and information technology

unicef 



FOOD DEPRIVATION IN IRAQ

FOREWORD	1
EXECUTIVE SUMMARY	2
1. INTRODUCTION	2
2. ANALYSIS OF INDICATORS ON FOOD SECURITY	3
2.1. Analysis of the prevalence of food deprivation	3
2.1.1. Prevalence of food deprivation	3
2.1.2. Depth of hunger	5
2.2. Food consumption	5
2.2.1. Average dietary energy consumption	5
2.2.2. Share of food expenditures in total consumption expenditures	6
2.2.3. Share of food expenditures by food sources	6
2.2.4. Dietary energy consumption by sources of acquisition	7
2.2.5. Cost of food	8
2.3. Analysis of inequality	9
2.3.1. Inequality in access to food	9
2.3.2. Analysis of other inequalities	9
2.3.3. Income inequality (proxy total expenditures)	9
2.4. The Minimum Dietary Energy requirement (MDER)	9
2.5. Analysis of income demand elasticity	10
2.6. Analysis of diet composition	11
2.6.1. Macro nutrient consumption	11
2.6.2. Composition of food consumption	11
2.6.3. Analysis of consumption by income groups	14
2.6.4. Analysis of unit cost by food groups	15
3. CONCLUSION	15
4. TABULATIONS	15
Table 8. Food deprivation and some parameters	16
Table 9. Average food consumption in dietary energy and monetary value	17
Table 10. Share of food consumption to total consumption in monetary value and by food sources	18
Table 11. Share of food dietary energy by food sources to total food dietary energy consumption	19
Table 12. Coefficient of variation of food consumption, total consumption and income	20
Table 13. Dispersion Ratios of food consumption, total consumption and income	21
Table 14. GINI of food consumption, total consumption and income by population groupings	22
Table 15. Nutrient's contribution to dietary energy consumption	23
Table 16. Food consumption in monetary and nutrient values	24
Table 17. Food consumption in quantity equivalent, monetary and nutrient values by food commodity groups	25
Table 18. Nutrient costs by food commodity groups	25
Table 19. Share of each nutrient in total dietary energy consumption by food commodity groups	26
Table 20. Consumption in dietary energy and value and cost of the 50 most consumed food items	27
Table 21. Comparison of food expenditures using subsidised or commercial prices	28
Table 22. Comparison in food deprivation using subsidised or commercial prices	29
Table 23. Comparison in the shares of food consumption to total consumption in monetary value and by food sources	30
Table 24. Comparison in the nutrient cost by food group using subsidised or commercial prices	31
ANNEX	32
Survey methodology & preparation and processing of food consumption data	32
Background	32
Survey Objectives	32
Questionnaire	32
Time schedule	32
Sample	32
Processing of food consumption data	33
Population grouping	33
Glossary of food security terms	36
References	39

Foreword

We are pleased to present this analytical study on Food Deprivation in Iraq prepared by the Central Organization for Statistics and Information Technology (COSIT), the Kurdistan Region Statistics Office (KRSO) and the Nutrition Research Institute of the Ministry of Health (NRI) with technical support from UNICEF, WFP and FAO.

This study is essentially an analysis of food consumption in Iraqi households and is made possible by the availability of the extensive data set collected through the Iraq Household Socio Economic Survey (IHSES) conducted by the Central Organization for Statistics and Information Technology (COSIT) and the Kurdistan Region Statistics Office (KRSO) with the technical support of the World Bank in 2007.

The analysis of the IHSES data took place during a training workshop where the capacities of COSIT, KRSO and NRI analysts were strengthened and empowered to extract food security indicators from household expenditure survey data using the Food Security Statistics Module (FSSM) developed by FAO.

The analysis in this study allows for the development of a monitoring system that gauges the effect of rising food prices on the wellbeing of the Iraqi population. The collaboration between COSIT, UNICEF, FAO and WFP extends beyond this analysis and includes the development and piloting of the monitoring system.

The publication of this study, which reports on the first Millennium Development Goal (MDG) to combat hunger, is especially timely as we mark an important milestone in the efforts to achieve the targets of the Millennium Declaration by 2015.

The Public Distribution System (PDS) has ensured that only 7 out of 100 Iraqis suffer from food deprivation, however, this does not express the starker sub-national realities. The report has ample information to improve social transfer policies in Iraq. We recommend this report to all those who are actively involved in the fight against hunger to provide people in the lowest income quintile with capacity to make informed choices about maximizing their dietary energy consumption.

It is well-known that significant causes related to malnutrition can be addressed early on life by addressing the nutritional supplements of pregnant and lactating mothers and the exclusive breast feeding of new born children. A weak foundation may significantly affect food security among the adults.

We are grateful to the staff members who have participated in the training and in the writing of this report. In specific we are grateful to Ayad Hasan, Raghda Dhia, Saad Zaghlool, Fadel Nairoukh, Qusay Abdul Fattah, Firyal Mahmoud, Umeid Baker and Bashdar Ayoub for participating in the analysis. We are particularly grateful to Najla Ali for leading and coordinating the analysis team and supervising the writing of the report. Finally, we are grateful to the Information Analysis Unit (IAU) for their assistance in the layout and design of the final report.




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EXECUTIVE SUMMARY

Seven out of every 100 Iraqi individuals are undernourished. This is equivalent to an estimated 2.1 million Iraqis. In light of the history of conflict in Iraq and the current state of instability, this prevalence is rather low especially when compared to the overall prevalence of food deprivation within the Near East and North Africa region (7 percent in Iraq compared to 8 percent in the region).

The national prevalence, however, is not equally distributed at the sub national level as disparities exist between the Iraqi governorates. Although food insecure households exist in nearly all governorates of Iraq, they are found to be concentrated in Diyala, Babylon Basrah, Salah al Deen, Kerbala and Muthanna governorates where the prevalence of food deprivation ranges from 51 to 17 percent. The highest level of food deprivation is observed in Diyala governorate, where around one half of people were food deprived. The high prevalence of food deprivation in Diyala is attributed to disruptions in food distributions through the Public Distribution System caused by the incidence of violence and military campaigns during the data collection period.

The Public Distribution System (PDS) was established in 1991 to guarantee a provision of a minimum consumption needs to the Iraqi population through distribution of rations comprising of wheat flour, rice, sugar, vegetable oil, pulses, adult milk, infant formula and tea as well as other non food items at a highly subsidized price. The average daily dietary energy consumption in Iraq is 2580 kilocalorie per person, over half of which is acquired through the PDS.

At the level of household characteristics, food deprivation is concentrated within population groups characterized by low income, large households, whose head is over 50 years of age and is illiterate, involved in agricultural activities or unemployed.

Expenditures on food represents slightly more than one third (35 percent) of total household expenditures, of which, 80 percent is dedicated to commercial food purchases and the remaining twenty percent represents the value of the nominal payment required to receive the PDS food rations, the value of food produced and consumed by households and food purchased and consumed away from the home.

Despite having a share of 80 percent of all food expenditures, food purchased from the commercial markets provides only 44 percent of the kilocalorie consumption at the national level. Accordingly, the contribution of dietary energy from the PDS plays a critical role from the food security perspective while the contribution of purchased food plays an important role from the expenditure structure perspective and dietary energy acquired from food from own production is negligible. The high reliance of Iraqis within the lower income strata on food rations renders them vulnerable to any irregularities in the distribution system and market fluctuations.

The market price of 1000 kilocalories in Iraq is valued at 610 Iraqi Dinars on average. Accordingly, daily per capita expenditure on food is valued at 1590 Iraqi Dinars. When accounting for actual expenditures, subsidized prices of food provided through the PDS renders the cost of 1000 kilocalories to be 520 Iraqi Dinars on average, bringing daily per capita out of pocket expenditure on food down to 1360 Iraqi Dinars.

In general, the Iraqi diet is balanced from the perspective of macro nutrient consumption as the distribution of energy acquired from fat, carbohydrates and proteins is 26, 62 and 12 percent respectively. However, consumption of fat is nearer to the higher bounds and protein nearer the lower bounds of the FAO/WHO/UNU recommendations. Average daily cereal consumption of around 400 grams per person provides 53 percent of total dietary energy consumed, followed by oils and fats (12 percent) and sugar (11 percent).

Animal protein (meat, dairy products, eggs and fish) contributes 10 percent to the total dietary energy consumption.

Food consumption is not equally distributed amongst all Iraqi households, as households of higher income group consume on average twice the quantity of dietary energy than that consumed by households in the lowest income group. Inequality in total expenditures is higher than food consumption inequality as total expenditures in the lowest income group is seven times less than that of the highest income group.

1. INTRODUCTION

This report presents an analysis of food security indicators derived from the food consumption data collected in the 2007 Iraq Household Socio Economic Survey (IHSES). Amongst them is food deprivation, indicator 1.9 of the Millennium Development Goal of reducing by half the proportion of people who suffer from hunger by 2015. Indicators were derived using the Food Security Statistics Software developed by the Division of the Statistics at FAO and following the FAO methodology on estimation of food deprivation.

Food security indicators are presented at the national and sub national level to better target population groups suffering, or at risk of suffering, from hunger. As discussed in this report, the Public Distribution System (PDS) set up in Iraq in 1991, has created a dual model of consumption with, on one hand, consumption of food acquired through the ration at highly subsidised prices, and on the other hand, consumption of higher quality food acquired from commercial markets but far more expensive. Given the contribution of the PDS of more than half the Iraqi dietary energy consumption, this report is articulated around this dual food consumption model.

The report is organised as follows: Chapter 2 provides a description of the highlights of the food security analysis and specifically highlighting the results national and sub national level. The major indicators discussed in Chapter 2 are (i) food deprivation and depth of hunger, (ii) food consumption patterns, (iii) inequalities, (iv) energy requirements, (v) income demand elasticity and (vi) diet composition. Chapter 3 provides detailed tabulations of the results of the household consumption data analysis.

2. ANALYSIS OF INDICATORS ON FOOD SECURITY

2.1 Analysis of the prevalence of food deprivation

The prevalence of food deprivation, as defined by the FAO methodology, is estimated based upon a parametric approach with three key parameters under the assumption that the distribution of dietary energy consumption is log normal. These parameters are: the mean, estimated as the average dietary energy consumed (Section 2.2.1), the variance of the distribution estimated as a non-linear function of the coefficient of variation reflecting the inequality in access to food (Section 2.3.1) and the cut off point for the determination of food deprivation that is the minimum dietary energy requirement for a minimum acceptable body weight for attained-height while maintaining a healthy life and carrying out a light physical activity (Section 2.4).

Accordingly, food deprivation is defined as the number of people whose daily dietary energy intake is lower than the minimum dietary energy requirement (MDER).

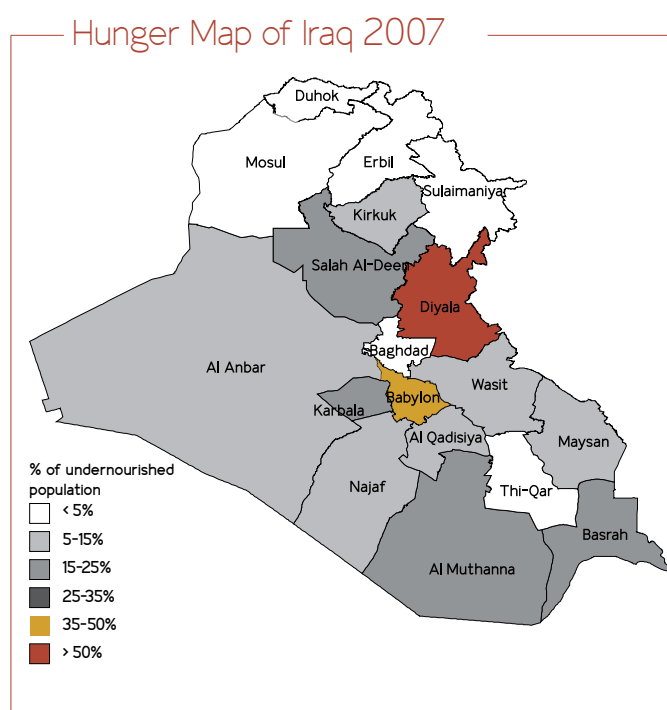
2.1.1 Prevalence of food deprivation

Owing to the continuation of the PDS, which theoretically guarantees a minimum of 2200 kilocalories per person per day, the prevalence of food deprivation in Iraq is low with only seven out of every 100 Iraqis suffering from hunger. (See Table 8). Yet this low prevalence masks significant disparities at the sub national level.

Geographically, food deprived people are located more in the central and southern governorates of Iraq than in the northern governorates of Iraqi Kurdistan and mainly in rural areas. The highest prevalence of food deprivation is observed in Diyala governorate where approximately half the population were found to be food deprived. Hunger in Diyala governorate is more the consequences of disruptions in the PDS than a demographic or geographic problem as the normal distribution of food rations was compromised by the many military operations that occurred in the region during 2007. Other than Diyala, the levels of food deprivation were highest in Babylon, Basrah, Salah al Deen, Kerbala and Muthanna governorates. Levels of food deprivation in Anbar, Maysan, Qadisiya, Wasit, Kirkuk and Najaf governorates were close to the national average with between six to eight people from every 100 being undernourished. Undernourishment is low in Baghdad, Mosul and Thi Qar governorates where the prevalence of food deprivation is below 4 percent and even lower in the Kurdistan region of Iraq where the prevalence is one percent.

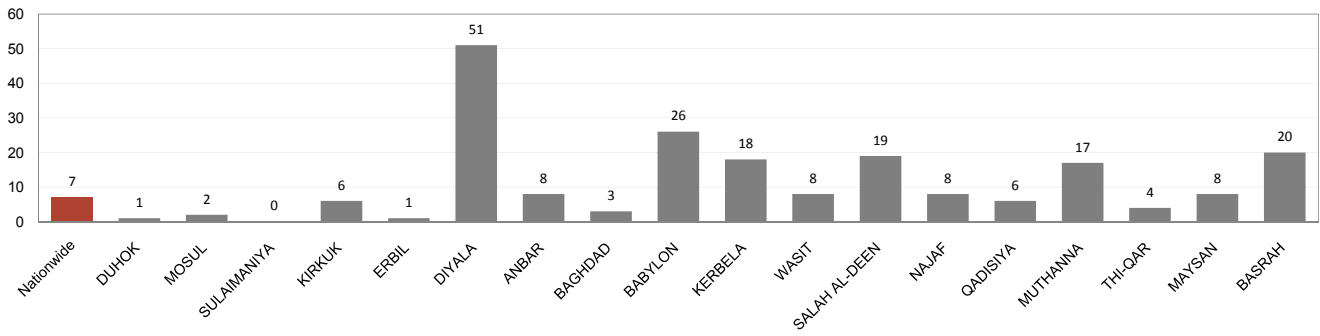
At the level of the household, characteristics associated with the incidence of food deprivation are income levels, household size and age and employment status of the household head.

Of all household characteristics, income level exerts the largest influence on the incidence of food deprivation. Seventeen percent of Iraqis within the lowest income quintile¹ are food deprived. This prevalence drops drastically to 4 percent of Iraqis within the second lowest income quintile and is virtually inexistent in households within higher income quintiles.

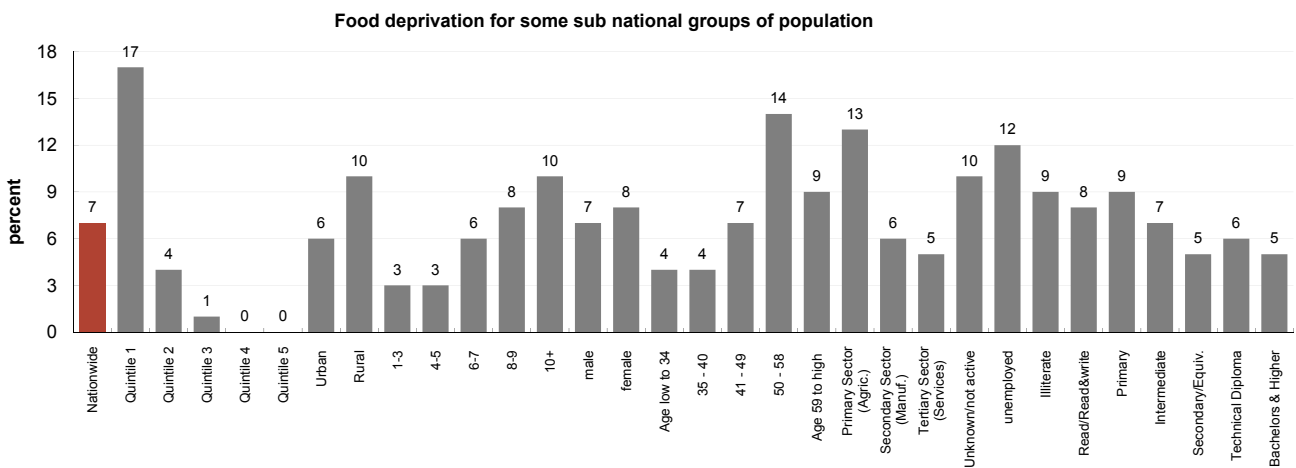


1. i.e. poorest 20 percent

Proportion of food deprivation in Iraq and its 18 governorates



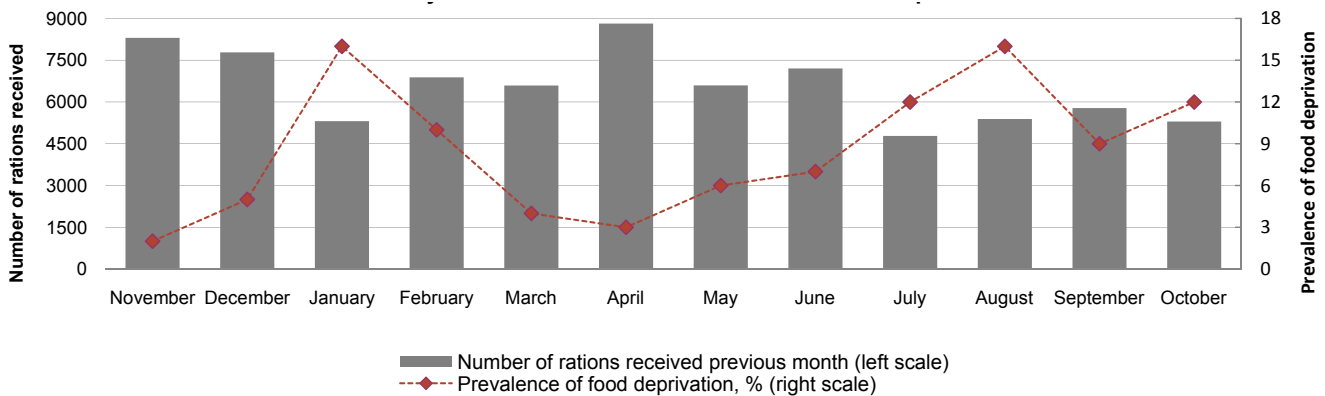
Food deprivation for some sub national groups of population



Household size and age of household head are also strongly associated with food deprivation. Individuals within larger households are more likely to be food deprived since larger households are more likely to be poor. Also, dietary energy requirements of larger households are greater than for smaller households, thereby increasing the potential for deficits in dietary energy consumption in larger households.

Households where the head is between 50 and 58 years of age are more likely to be food deprived than households where the head is younger as well as older. The fact that the prevalence of food deprivation increases incrementally with the age of the household head up to the age of 58 and then decreases for households where the head is over 58 years of age could be due to two influences: first, households where the head is elderly are more likely to be smaller in size. Second, pensions received by older heads of household form a regular income that the household can rely upon.

Number of monthly rations declared as received versus food deprivation¹



(1) As households declared rations they received within the past month, there is one month lag between survey period and period when rations were distributed

Households where the head is either involved in agricultural activities, unemployed or not economically active are also more likely to suffer from food deprivation (13, 12 and 10 percent respectively) when compared to households where the head is employed in secondary and tertiary sectors such as manufacturing and services (6 and 5 percent

respectively). It is worth noting that characteristics such as the sex and education attainment of the household head do not play a strong role in explaining the variations in the prevalence of food deprivation in Iraq.

Finally, the evolution of the prevalence of food deprivation over time is largely influenced by the PDS as it closely follows the pattern of distribution of rations. For example, the level of food deprivation was lower in November and April when people declared having received the ration while higher in January, July and August when less rations were distributed as can be seen in the graph below².

How much food is consumed by the food deprived and how far this consumption deviates from the minimum level of energy required to maintain a healthy life and perform a physical level of activity determines the depth of hunger.

2.1.2 Depth of hunger

Depth of hunger is measured as the difference between the minimum dietary energy requirement and the average dietary energy intake of the food deprived population. The intensity of food deprivation is low when it is less than 200 kilocalories per person per day and high when it is over 300 kilocalories per person per day. The greater the food deficit, the greater the susceptibility for health risks related to food deprivation.

In Iraq, the intensity of food deprivation is relatively low. The food deprived population, whose average kilocalories consumption is 1550 kcal/person/day, requires, on average, an extra 180 kcal/person/day in order to reach the minimum energy requirement of 1730 kcal/person/day. This is the equivalent, for example, of an additional 50 grams of rice, or 3 full spoons of oil, or 40 grams of sugar or 50 grams of fresh mutton per undernourished person per day.

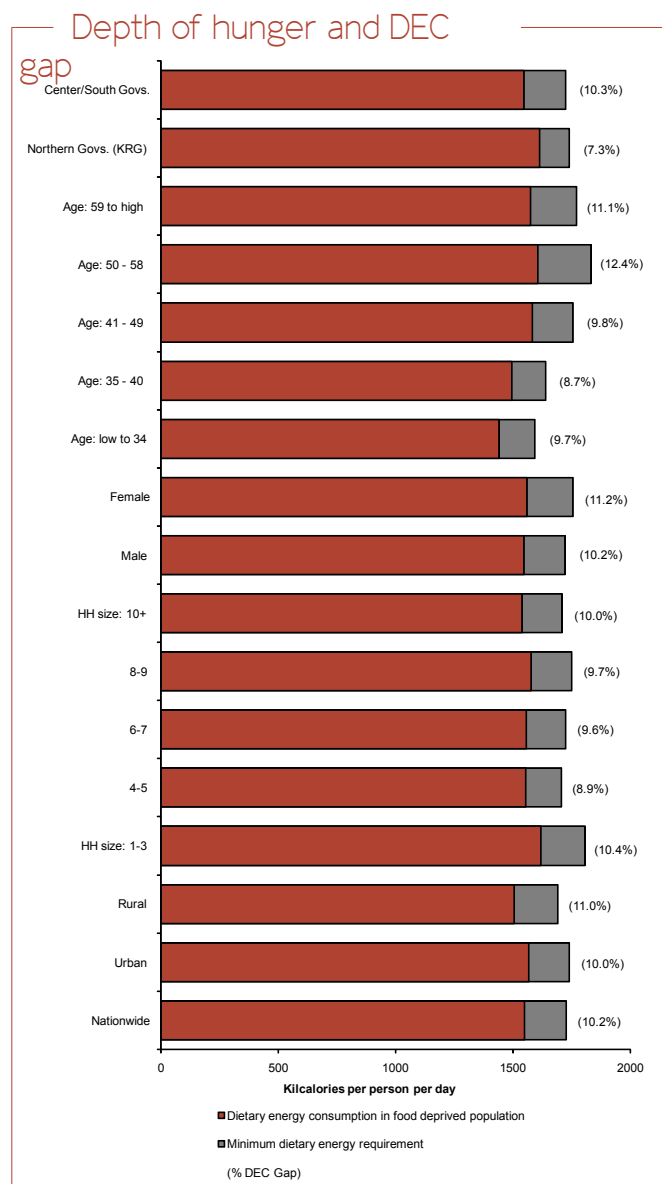
At the governorate level, the depth of hunger is most severe among the food deprived residing in the Diyala governorate where the dietary energy consumption gap is 24 percent as the minimum energy requirement is 1760 kcal/person/day and the average dietary energy consumption among the food deprived is 1335 kcal/person/day. In contrast, the depth of hunger is lowest in Sulaimaniya governorate where the dietary energy consumption gap is 7 percent as the minimum energy requirement is 1764 kcal/person/day and the average dietary energy consumption among the food deprived is 1643 kcal/person/day.

The depth of hunger within a specific group of population depends on the minimum dietary energy requirement specific to the population group and the average dietary energy consumed by the food deprived within the population group. Therefore, the depth of hunger can be high for some groups of population where food deprivation is not high but the gap between the amount of food consumed by the food deprived and the minimum energy requirement is high. This is observed for instance for households who count less than three people and for which the depth of hunger was more than the depth of hunger of households of more than ten people with respectively 188 kcal/person/day and 171 kcal/person/day.

2.2 Food consumption

2.2.1 Average dietary energy consumption

The average daily dietary energy consumption of Iraqi people is 2580 kcal per person (See table 9). As seen from graph



2. Data in table are extracted from the ration file and refer to number of records for which households declared having received a ration within the past month. Numbers associated to each month refers to the ration received last month but consumed within the month of the survey.

below, consumption increases with income, so that dietary energy consumption of households of the highest quintile is on average 1400 kcal more than that of the households of the lowest quintile with respectively 3400 kcal/person/day and 2000 kcal/person/day.

There is also a negative correlation between the size of household and dietary energy consumption. Households with more than 10 people consume on average 2370 kcal/person/day – about 1000 kcal/person/day less than households with 3 people or less.

Average dietary energy consumption of female headed households is only slightly higher than that of male headed households and age of the head of the households bears no significant impact on dietary energy consumption.

At the regional level, the level of consumption in the three northern governorates of Iraqi Kurdistan is much higher than that in the remainder of Iraq with 3100 kcal/person/day on average in Iraqi Kurdistan compared to 2510 kcal/person/day in the Central and Southern governorates. Average consumption level is highest in Sulaimaniya governorate with 3300 kcal/person/day and lowest in Diyala governorate where average consumption is 1860 kcal/person/day.

In terms of the evolution of dietary energy consumption over time, the lowest levels of consumption were observed during the months of January, July and August. As highlighted earlier, this is clearly due to disruptions in the PDS as it was during those months that the number of rations received by Iraqis was the lowest.

2.2.2. Share of food expenditures in total consumption expenditures

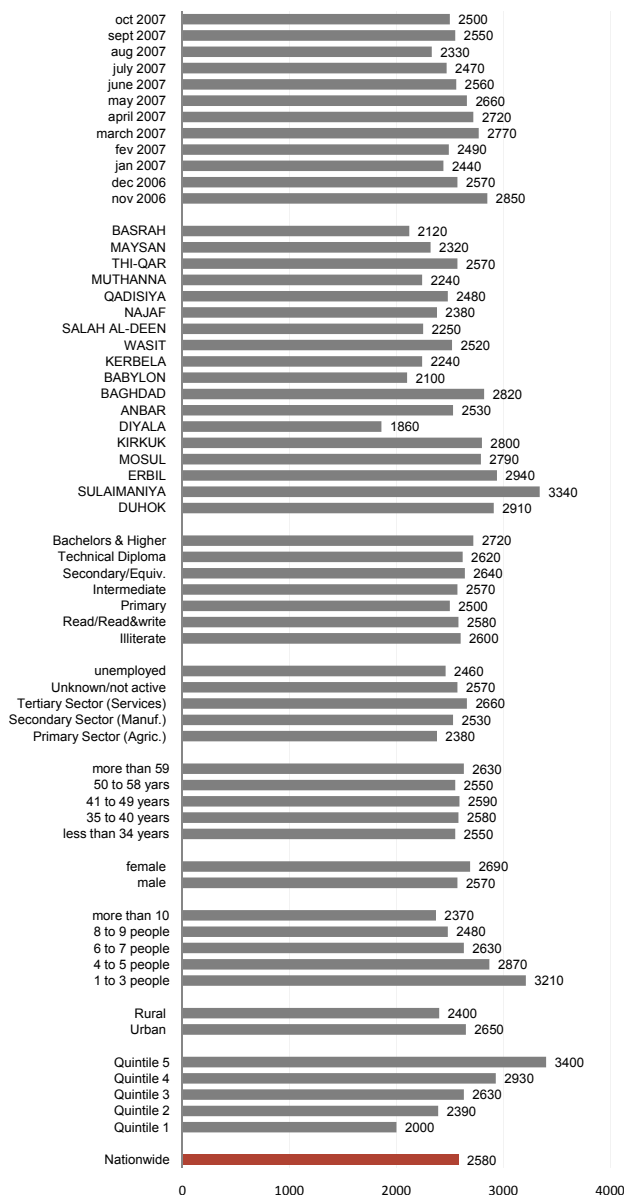
Iraqi households devote, on average, 35 percent of their total consumption expenditures to acquire food (See table 10). In line with Engel's law, the share of food expenditures from total consumption expenditures decreases as income increases. Household in the lowest income quintile devote 50 percent of the total consumption expenditures to acquire food, while this share decreased to 24 percent for households within the highest income group.

The ratio of food expenditures from total consumption expenditures is higher in the central and southern governorates, where the average income was much lower than that of the governorates of Iraqi Kurdistan. The poorest households of the Center/South and Northern governorates devoted 53 percent and 44 percent respectively of their total expenditures to food while these shares decreased to 24 percent and 16 percent for households of the higher income group.

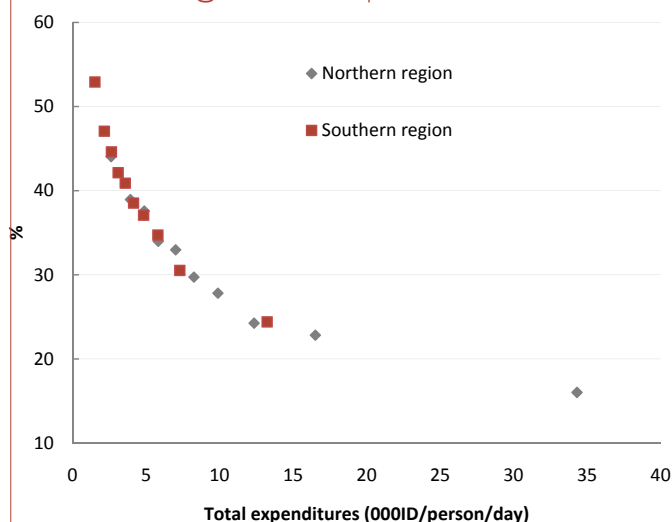
2.2.3. Share of food expenditures by food sources

Commercial food purchases represent 80 percent of total food expenditures (See table 23). This share increases with income and is higher in urban areas than in rural areas with respective shares of 83 and 73 percent.

Dietary energy consumption at national and sub national level (kcal/person/day)



Share of food expenditures in total consumption expenditures in Southern and Northern regions of Iraq



In the Northern governorates, households spend more to buy food than in the south with respectively 86 percent and 79 percent expenditures on commercial food. In Diyala, the share purchases from total food expenditures is the highest among all governorates at 91 percent, followed by Erbil and Sulaimaniya governorates where the share is 88 and 86 percent respectively. The value of food acquired from own production represents a small proportion in the total value food expenditures with a share of only 2.5 percent, this being higher in rural areas and in the regions of Babylon, Salah al Deen and Maysan (8 percent overall).

The market value of food acquired through the PDS represents 15.2 percent of the market value of total food expenditures. This share is only 2 percent when rations were valued at actual paid out of pocket prices.

The share of food expenditures on PDS rations increased among households with lower incomes; 30 percent of food expenditures for households among the lowest income quintile is dedicated to acquiring the PDS rations, indicating a higher reliance on rations for households of the lowest income group compared to a share of only 8 percent for households of the highest income group. The share of expenditures on PDS rations from total food expenditures is high also for households where the head is an agricultural worker, or for rural households in general and households with more than 10 individuals (34, 27 and 23 percent respectively).

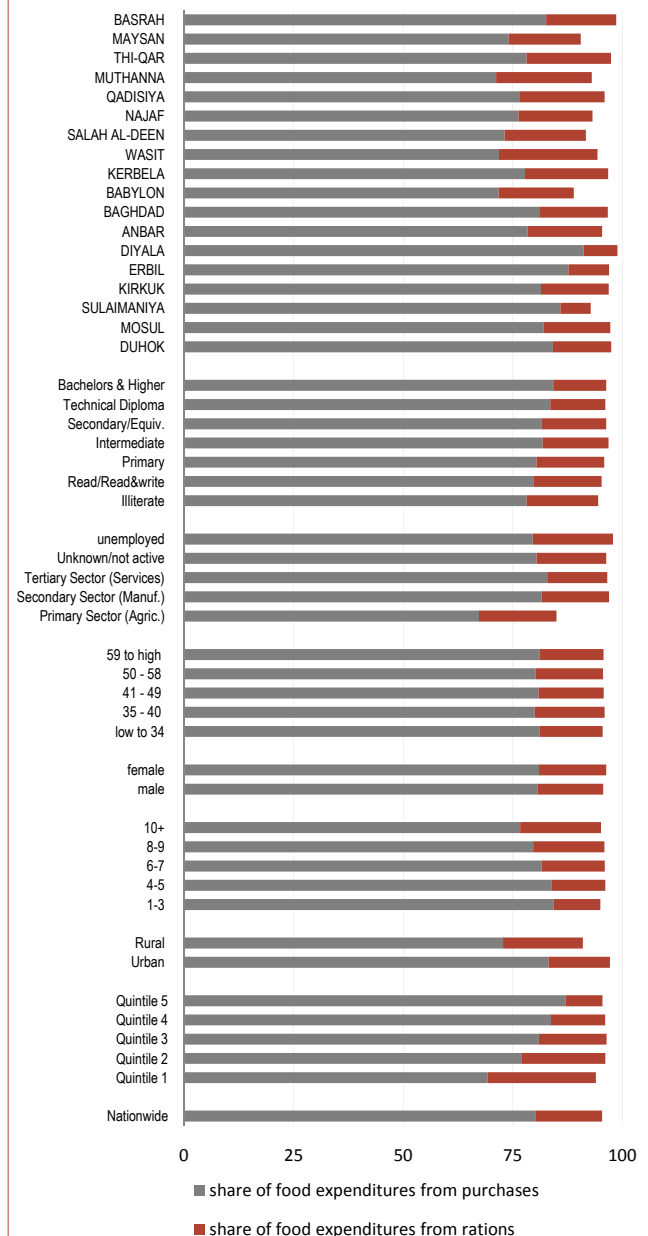
2.2.4. Dietary energy consumption by sources of acquisition

From the perspective of market monetary value, households appear to be widely dependent on food acquired from the market at commercial prices. However, when examining this dependency from the perspective of dietary energy consumption, it becomes apparent that the dependency on purchased food is rather low. At the national level, 53 percent of consumed dietary energy is acquired from the PDS while food purchased from the commercial markets provides only 44 percent of total dietary energy consumed in Iraqi households (See table 11).

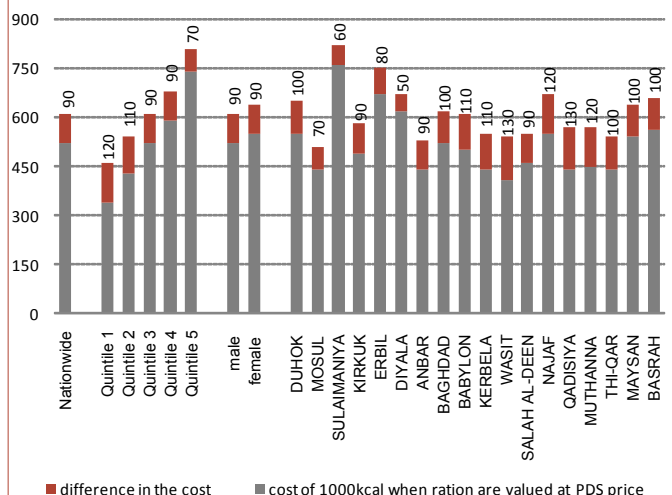
In other words, on average, 80 percent of total food expenditures among Iraqi households go towards the provision of only 44 percent of their dietary energy consumption. While food acquired through the PDS rations provides 53 percent of the dietary energy consumed though the value of the food acquired through the PDS rations represents only 15 percent (less than two percent when rations were valued at out of pocket expenditure price) of total household food expenditures. This underlines the dependence upon the PDS among Iraqi households in general.

When compared across income groups, this level of dependency is particularly higher among the households within the lowest income groups where the PDS ration provides 67 percent of the total dietary energy consumed.

Share of food expenditures by food sources



Subsidised unit cost and difference between subsidised and non-subsidised unit cost (ID/1000kcal)



Dependence upon the PDS rations decreases among households within higher income groups with 37 percent of the dietary energy consumed by households within the highest income group acquired from the PDS ration. This underlines the critical dependence upon the PDS among poorer Iraqi households in particular.

At the regional level, dependence on rations is higher for households residing in the central and southern governorates than for those residing in the northern governorates of Iraqi Kurdistan with a respective share of 56 percent compared to 38 percent. The share of dietary energy from the PDS food ration is the highest in Muthanna, Maysen and Wasit governorates with shares of 70, 68 66 percent respectively. Excluding Diyala governorate, where the functioning of the PDS was hampered by continuous military activities, this share is the lowest in Sulaimanya with 29 percent of the consumed dietary energy acquired from the PDS ration and 65 percent acquired from purchased food.

Consumption of dietary energy acquired from food produced by the household is very low in Iraq as it contributes only one percent of the average dietary energy consumption in Iraq. One possible explanation for this is that producers that grow cereals tend to fully sell their produce given the possibility of acquiring cereal products (i.e. wheat flour and rice) through the PDS at subsidized prices. Moreover, the fact that the monetary value of food acquired from own production represents 8 percent of the value of food consumed by rural households while the dietary energy acquired from own production is only 3 percent of total consumption implies that most of the food acquired from own production consists of mainly fruits and vegetables whose commercial value is high and dietary energy value is low.

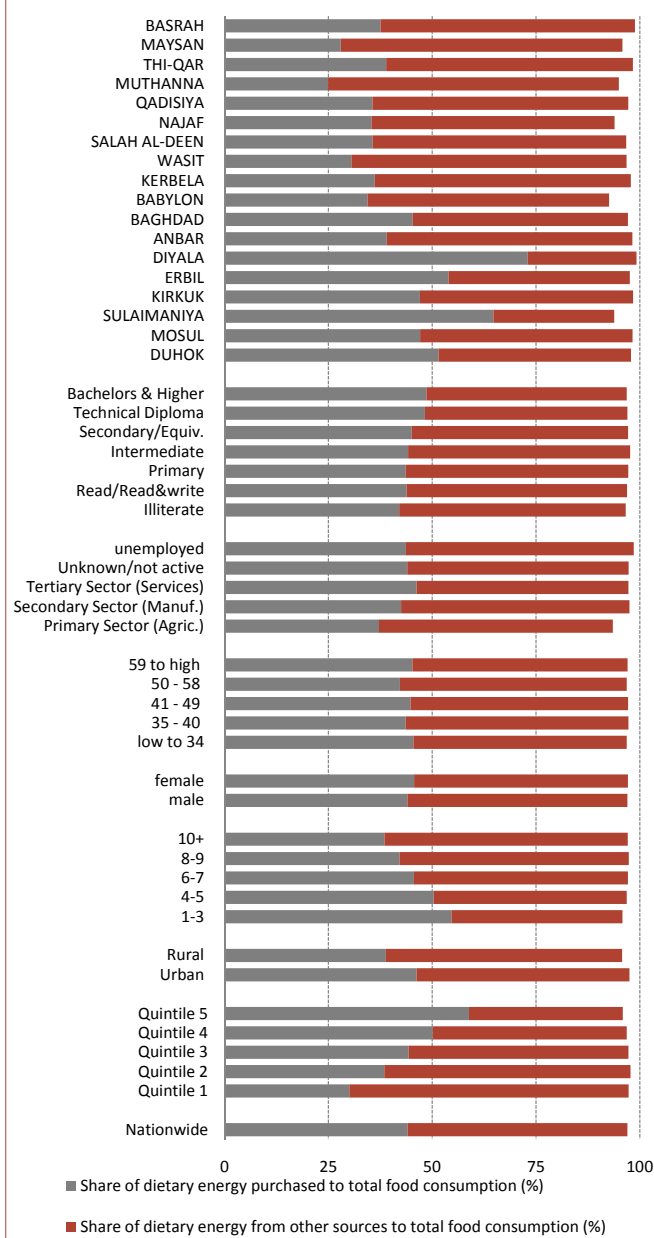
2.2.5. Cost of food

It costs the average Iraqi 610ID to acquire 1000 kcal. Households within the lowest income group spent 460ID to acquire 1000 kcal while richer households spent almost double (See table 21). Households within the lowest income group tend to consume food that is higher in energy value at lower costs and rely more on the subsidized PDS rations³.

At the regional level, the cost of dietary energy is generally higher in the Iraqi Kurdistan region than in the Center/South governorates. Within the Iraqi Kurdistan region, the cost of food was highest in Sulaimaniya followed by Erbil and lowest in Dohuk (820, 750 and 650 ID/1000 kcal respectively). Within the central and southern governorates, the cost of food is highest in Najaf and Diyala where the cost of 1000 kcal is 670 ID, followed by Basrah and Maysan, and ending with Mosul governorate where the cost of 1000 kcal is 510 ID.

When food acquired through PDS is valued at paid out of pocket prices, the average cost to acquire 1000 kcal in Iraq is 520 ID. The difference between the market price and paid price of 1000 kcal of 90 ID represents the explicit value of the food subsidy⁴ per 1000 kilocalories (See table 21). Given an average dietary energy consumption of 2580 kilocalories per person per day, the average daily value of food subsidies is estimated at 232.2 ID per average Iraqi per day. On a monthly basis, this is equivalent to 6,996 ID (approximately US\$ 5.5) per person per month.

Share of dietary energy consumption by sources of acquisition



3. In the IHSES survey, food acquired through the PDS ration was valued at market price to measure the actual value of food consumption regardless of the subsidy. On average PDS ration food is 100 times less expensive than commercial food.

4. The meaning of the term explicit value of subsidy utilized here is in contrast to the implicit value subsidy which can be considered as the mitigating effect on food prices due to the increased supply of food in the market through the PDS.

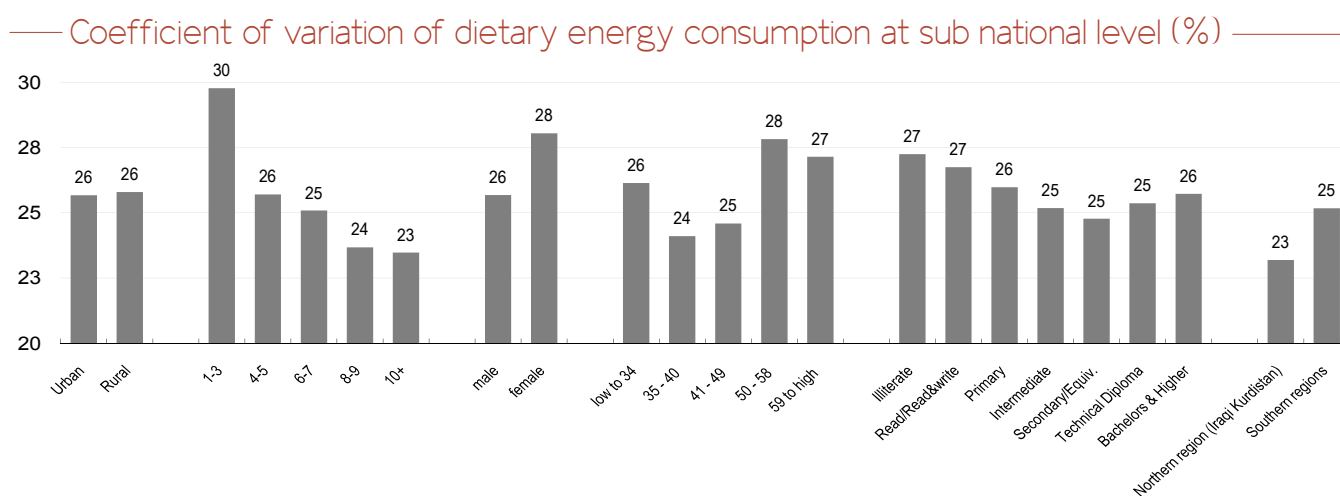
Among all governorates, Qadisiya and Wasit were the two governorates where the value of the food subsidy is the highest with a difference of 130ID between the cost of 1000 kilocalories when food is valued at paid or market price.

2.3 Analysis of inequality

2.3.1. Inequality in access to food

Food security exists when all people, at all times, have physical, social and economic *access* to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life. Inequality in access to food, measured by the coefficient of variation of the dietary energy consumption distribution, is one of the key parameter in the FAO determination of food deprivation.

The coefficient of variation of dietary energy consumption is measured as the sum of variation of food consumption due to income level and variation of food due to energy requirement of individuals. The later depends on the age-sex structure of the population group and variations in weight and physical activity levels. Empirical evidence indicates that the value of variation of food due to energy requirement of individuals is usually very close to 20 percent.



As seen from graph above, inequality in food consumption is highest within small households, female headed households, households where the head is at least 50 years old or with low levels of education. (See table 12). At the governorate level, inequality is highest in Kirkuk, Kerbala, Salah al Deen and Muthanna governorates and lowest in Duhok and Erbil governorates.

Dispersion ratios in food consumption explain more concretely the phenomenon of inequality. When inequality is expressed in terms of dispersion ratio, at the national level, the consumption of the last quintile was 1.7 times that of the first quintile. A similar level of inequality is observed in both urban and rural areas (See table 13). Food consumption of small households (1 to 3 individuals) within the highest income quintile was nearly twice that of small households within the lowest income quintile (dispersion ratio of 1.9) while within larger household sizes (minimum 10 individuals) the dispersion ratio is 1.5.

In Kirkuk and Salah al Deen governorates, the dispersion ratio is 1.8 compared to 1.4 in Duhok, Erbil and Baghdad governorates; accordingly, the dietary energy consumption of households within the highest income quintile is, respectively, 1.8 and 1.4 times more than that of households in the lowest income quintile.

2.3.2. Analysis of other inequalities

On average, expenditure on food by households within the highest income quintile is three times higher than that of first quintile. Inequality in food expenditures is found to be higher than in dietary energy consumption as wealthier households tend to spend more to acquire more diversified food of better quality while poorer households acquire that is less expensive but higher in energy content.

At the governorate level, inequality in food expenditures is lowest in Maysan governorate with a dispersion ratio of 2 and the highest in Muthanna governorates where the wealthiest households spent 3.2 times more to buy food than the poorer households of the governorate. With regards to household size, the gap between food expenditures of the highest income group and low income group is more significant within small households compared to larger households with dispersion ratios of 3 and 2.3 respectively.

2.3.3. Income inequality (proxy total expenditures)

Income inequality between the lowest and highest income quintiles is more pronounced than inequality of food consumption or expenditures. The total income of Iraqi households within the highest income group is seven times more than that of Iraqi households within the lowest income group.

In contrast to the similar level of food consumption inequality observed in urban and rural areas, income inequality is higher in urban than in rural areas. The fact that income inequality does not always translate into inequality in food consumption can be attributed to the availability of food through the PDS where the price subsidy improves the access of the poorer segments of the population to food.

Income inequality is higher in Iraqi Kurdistan than in the remainder of Iraq where the average per capita income of wealthier households is respectively eight times and five times higher than that of households within the lowest income group.

2.4 The Minimum Dietary Energy requirement (MDER)

The Minimum Dietary Energy Requirement (MDER) refers to the amount of dietary energy per person considered adequate to meet the daily energy required to maintain the minimum acceptable body weight for attained height while maintaining a healthy life and carrying out light physical activity. In the entire population, the MDER is the weighted average of the minimum energy requirements of the different age and sex groups in the population and is expressed as kilocalories per person per day. Accordingly, the MDER is specific to each country and is based on the distribution of the body mass index, the height of the individuals in the country, and the age-sex structure of the population of the country.

The Minimum Dietary Energy Requirement for Iraq⁵ as whole is 1730 kilocalories per person per day (See table 8). Given that the MDER is dependent upon the age-sex structure of the population group, it is calculated independently for each group. The analysis reveals that the MDER varies substantially at the sub national level.

The minimum energy required within households of small size is higher than the level of energy required by households with more than six people with respectively 1800 and 1720 kcal/person/day. This variation is explained by the fact that households of small size are mainly composed of adults⁶.

Moreover, households whose head is less than 34 year old include a larger proportion of children less than five years of age than those with older household heads. In contrast, the later include a larger proportion of adolescent youth. Accordingly, the minimum energy requirement of those households whose head is less than 34 year old (1600 kcal/person/day) is lower than that of households whose head is older than 50 years (1800 kcal/person/day).

Finally, the minimum energy requirement of individuals within the lowest income quintile is lower than that of the highest income quintile with respectively 1680 and 1790 kcal/person/day as households within the lowest income quintile consist mainly of large households largely composed of children.

* Distribution of children less than 15 year old according to size of the household, age of the head of the household and income group

		less than 5 year old	6 to 10 year old	11 to 15 year old	Total
Household size group	less than 3 people	658	107	142	907
	4 to 5 people	4249	1843	1263	7355
	6 to 7 people	5180	4818	3925	13923
	8 to 9 people	3973	3932	4130	12035
	more than 10	8759	5798	5812	20369
	Total	22819	16498	15272	54589
Age groups	low to 34	6937	2902	1205	11044
	35 - 40	5060	4708	3306	13074
	41 - 49	3695	4305	4992	12992
	50 - 58	3277	2658	3794	9729
	59 to high	3850	1925	1975	7750
	Total	22819	16498	15272	54589
Quintile of Income	1	6927	5292	4714	16933
	2	5261	3825	3590	12676
	3	4552	3076	2925	10553
	4	3586	2479	2354	8419
	5	2493	1826	1689	6008
	Total	22819	16498	15272	54589

5. This is calculated using the age-sex structure of the Iraqi population extracted from the 2007 IHSES as well as the average heights per age-sex group collected in the Iraq Living Condition Survey (ILCS) conducted by COSIT in 2004.

6. Children less than five years old represent only 12 percent of total population of this group whereas adult couples comprises 68 percent of the group..

2.5 Analysis of income demand elasticity

Income demand elasticity measures the change in food demand due to a change in income. As seen in table below, dietary energy consumption of households within the lowest income group is more responsive to changes in income than households within the highest income group as a 1 percent increase in income translates into a 0.4 percent and 0.2 percent increase in dietary energy consumption respectively.

In terms of food expenditures, the impact of income is much higher as it accounts for price effects. One percent increase in income increases food expenditures of households within the lowest income group by 1.4 percent as they tend to increase their dietary energy consumption through buying better quality food while the wealthiest Iraqi households barely change their food expenditures when their income increase. This means that high income groups have already satisfied their food consumption needs and are no more responsive to increases in income.

* Demand elasticity with respect to Income and population groupings

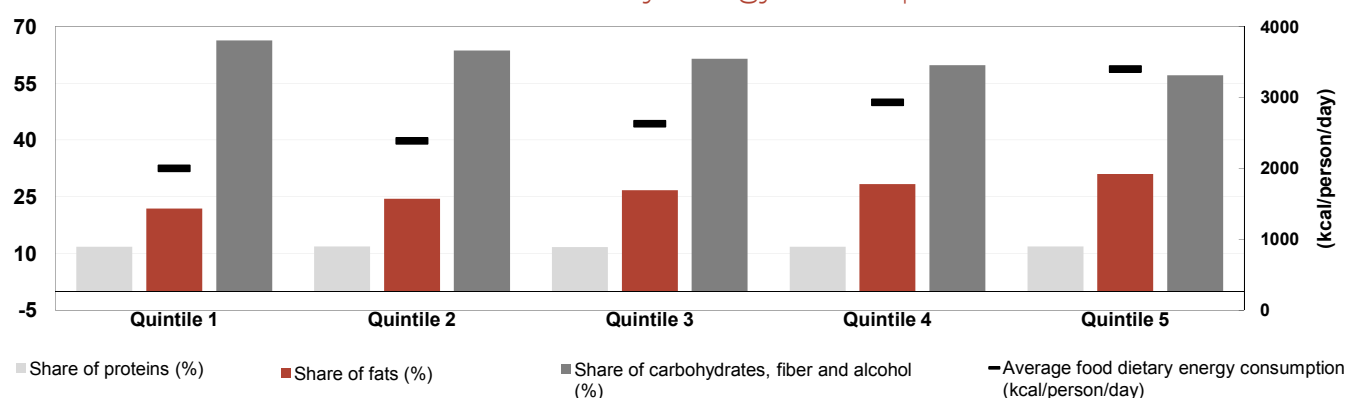
	Income deciles	Income (000ID/ppd)	Demand elasticity of dietary energy consumption (DEC) respect to income (%)	Demand elasticity of food consumption in monetary value (FMV) respect to income (%)	Demand elasticity of Engel ratio respect to income (%)
Income level					
Decile	1	1.58	0.4	1.4	0.8
Decile	2	2.27	0.3	0.9	0.7
Decile	3	2.82	0.3	0.8	0.7
Decile	4	3.33	0.3	0.7	0.7
Decile	5	3.90	0.3	0.6	0.7
Decile	6	4.57	0.3	0.6	0.7
Decile	7	5.44	0.3	0.5	0.6
Decile	8	6.63	0.2	0.5	0.6
Decile	9	8.74	0.2	0.4	0.6
Decile	10	18.68	0.2	0.3	0.4

2.6 Analysis of diet composition

2.6.1. Macro nutrient consumption

From the perspective of macro nutrient consumption, the diet of the Iraqi people is balanced⁷ since 62 percent of dietary energy is from carbohydrates, 12 percent from proteins and 26 percent from fats. (See table 12). Surprisingly, despite that the dietary energy consumption of the lowest income group is 1000 kilocalories less than that of the highest income group, the diet of households within the highest income group is less balanced as a result of being too rich in fat and too low in carbohydrates.

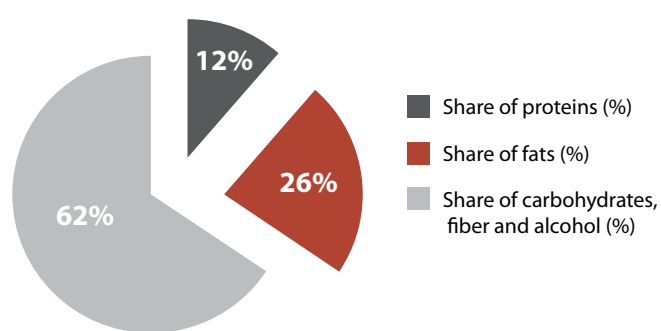
Share of macro nutrients versus dietary energy consumption



In terms of nutrient quantities, food consumed provided 76.4 g of protein, 376 g of carbohydrate and 76 g of fat per person per day (See table 16).

7. This means that the diet is in accordance with the FAO/WHO/UNU recommendations for a balanced diet consisting of 10-15 percent of proteins, 15-30 percent of fats and 55-75 percent of carbohydrates

— Share of macro nutrients in dietary energy consumption



remaining 28 percent is acquired by the other items contributing each to less than 1 percent of total diet.

2.6.2. Composition of food consumption

The vast majority (90 percent) of the dietary energy consumption in Iraq is acquired from 50 food items and the remaining 190 food items consumed by Iraqis provides very little dietary energy. The analysis mainly focuses on these 50 food items. The table below lists the food items contributing to 90 percent of the total dietary energy consumption, that is, 2347 kcal/person/day. The shaded area of the table identifies 13 food items that contribute 72 percent of total diet and for which individual contribution to total diet is higher than 1 percent. The shares of the individual food items from the total dietary energy consumption range from 27 percent (brown wheat flour) to 1 percent (commercial sugar), the

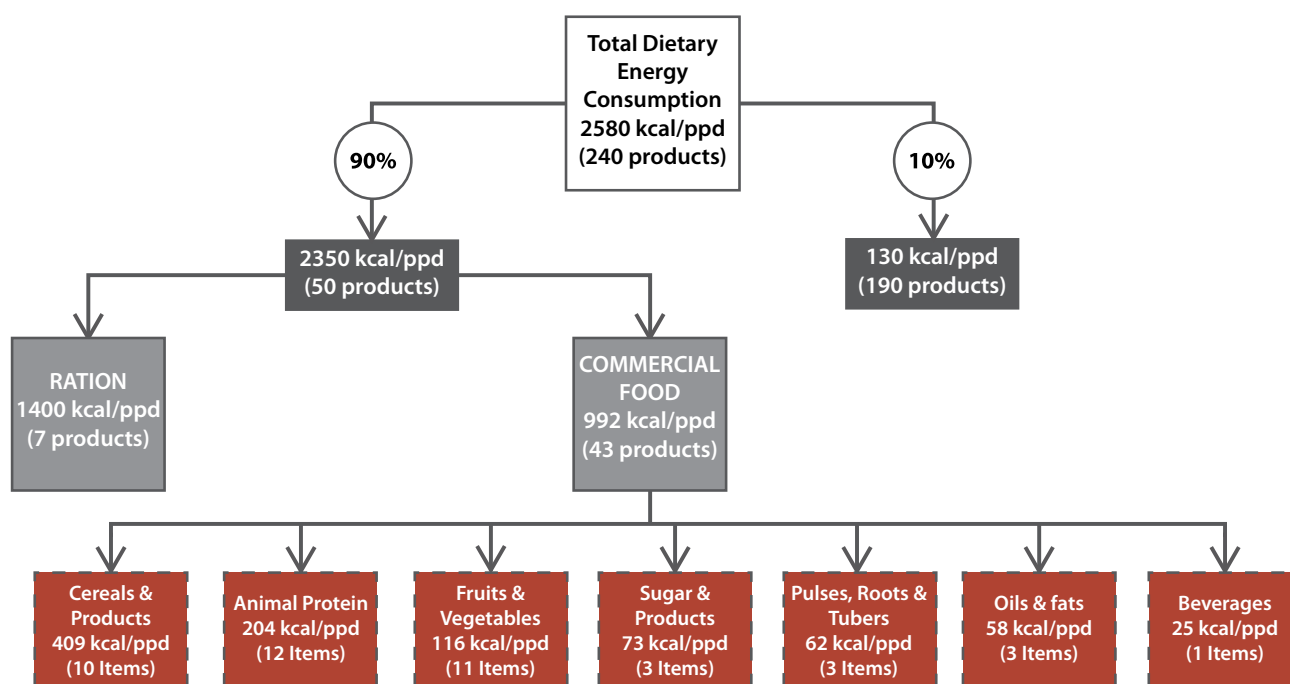
* List of food items contributing to 90% of national diet

Food group	Food Item	Dietary Energy Consumption (Kcal/person/day)	Share of each food item in total DEC
Cereals and products	Brown wheat flour (ration)	693	27.4%
Oils and fats	Vegetable oil (ration)	246	9.7%
Cereals and products	Ration rice	216	8.5%
Sugar and products	Sugar (ration)	200	7.9%
Cereals and products	Buns- all types and sizes	173	6.8%
Cereals and products	Commercial rice (imported)	59	2.3%
Cereals and products	Bread- all types	42	1.7%
Protein meat	Mutton- fresh	40	1.6%
Cereals and products	Brown wheat flour (commercial)	35	1.4%
Pulses, roots and tubers	Potato	34	1.3%
Cereals and products	White wheat flour (commercial)	29	1.1%
Cereals and products	Maccaroni and vermicelli	26	1.0%
Sugar and products	Sugar (commercial)	26	1.03%
Beverages	Gaseous beverages	25	0.99%
Sugar and products	Chocolate	25	1.0%
Oils and fats	Vegetable fat (commercial)	25	1.0%
Protein meat	Eggs (chicken)	23	0.9%
Sugar and products	Assorted sweets	22	0.9%
Oils and fats	Vegetable oil (commercial)	22	0.9%
Fruit and vegetable	Tomatoes	21	0.8%
Protein meat	Yogurt	20	0.8%
Protein meat	Beef- fresh	20	0.8%
Protein meat	Imported cheese	20	0.8%
Protein meat	Chicken- frozen	18	0.7%
Protein meat	powdered milk (ration)	18	0.7%
Cereals and products	White wheat flour (ration)	15	0.6%
Pulses, roots and tubers	Dry white beans (commercial)	14	0.6%
Cereals and products	Burghul (cracked wheat)	14	0.6%
Pulses, roots and tubers	Chick peas (commercial)	14	0.6%
Fruit and vegetable	Onions	13	0.5%
Protein meat	Other chicken offals	13	0.5%
Fruit and vegetable	Tomato paste	13	0.5%
Cereals and products	Commercial rice (local)	13	0.5%
Protein meat	Chicken- alive	12	0.5%
Protein meat	Local cheese	12	0.5%

Pulses, roots and tubers	Lentils (ration)	12	0.5%
Fruit and vegetable	Potato crisps	11	0.4%
Protein meat	Buffalo cream (local)	11	0.4%
Oils and fats	Sesame oil	11	0.4%
Fruit and vegetable	Water melon	10	0.4%
Fruit and vegetable	Apple	10	0.4%
Cereals and products	Biscuits	10	0.4%
Fruit and vegetable	Cucumber	9	0.4%
Protein meat	Fresh milk	8	0.3%
Fruit and vegetable	Grape	8	0.3%
Cereals and products	Jareesh and sameed	8	0.3%
Fruit and vegetable	Egg plant	7	0.3%
Fruit and vegetable	Orange	7	0.3%
Fruit and vegetable	Other fresh- frozen and dried vegetables	7	0.3%
Protein meat	Fresh water fish- fresh	7	0.3%

Amongst the 50 food items contributing to 90 percent of the total diet, seven of them are food items received through the public distribution system (PDS) and contribute 60 percent of dietary energy consumption (i.e. 1400 kcal/person/day). The remaining 947 kcal/person/day is acquired from food purchased from the market and, as shown in graph below, mainly consisted in animal protein (meat, fish, diary products and eggs), fruits and vegetables and pulses.

Structure of consumption at national level

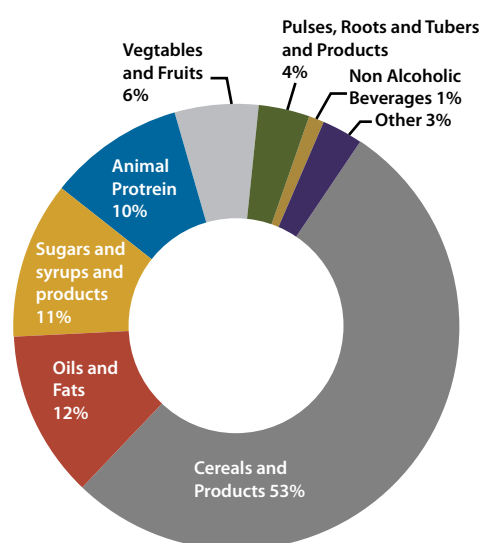


Indicators on food consumption are available for 19 groups of different products ranging from the group of cereals and products to the group of fish or to the group of eggs. As seen in the table below, not all the food groups contributed the same to the total diet. Cereals and cereal products contribute 53 percent of the total dietary energy consumption while eggs, fish and fish products and animal fats contribute less than one percent. To ease the analysis, food items are clustered into the following groups: Cereals and products (1), oils and fats (3), sugars and beverages (6), animal proteins (2), fruits and vegetables (4), pulses/roots/tubers (5) and beverages (7). Other groups being insignificant are not analysed in this report and classified into category "other".

* Share of food groups in total dietary energy consumption

Food commodity group	Share of dietary energy consumption in Total Energy Consumption (%)
CEREALS AND PRODUCTS	52.6
OILS AND FATS (vegetable oils)	11.8
SUGARS AND SYRUPS AND PRODUCTS	11.3
MEAT	4.7
MILK AND CHEESE	3.9
VEGETABLES AND PRODUCTS	3.5
FRUITS AND PRODUCTS	2.6
PULSES	2.3
MISCELLANEOUS AND PREPARED FOOD	2.3
ROOTS AND TUBERS AND PRODUCTS	1.3
NON ALCOHOLIC BEVERAGES	1.1
EGGS	0.9
FISH AND FISH PRODUCTS	0.5
OILS AND FATS (animal fats)	0.4
SPICES	0.3
OIL CROPS	0.2
TREE NUTS	0.1
ALCOHOLIC BEVERAGES	0.0
STIMULANTS	0.0

Contribution of remaining seven food groups to total dietary energy consumption



Based on the above grouping the table below gives an analysis of dietary energy consumption from food from ration and commercial food.

* Analysis of food items contributing to 90% of national DEC (2347kcal/person/day)

Food group	contribution of each food group in 90% of DEC	of which from ration	of which from commercial food	contribution of ration food in the group
Beverages	25	0	25	0%
Cereals and products	1333	924	409	69%
Fruit and vegetable	116	0	116	0%
Oils and fats	304	246	58	81%
Protein meat	222	18	204	8%
Pulses, roots and tubers	74	12	62	16%
Sugar and products	273	200	73	73%
Total	2347	1400	947	60%

The contribution of cereals and cereal products and animal proteins to the 947 kcal/person/day acquired on the commercial market are the highest with 43 percent and 22 percent respectively.

On average consumption of cereals and cereal products is close to 400g per person. Though Iraqis consume about half a kilogramme of fruits and vegetables daily, this contributes only six percent of the total dietary energy. The consumption of protein from animal origin (meat, fish, eggs and dairy products) was low, with only 169 grams per day that is 26 percent of total proteins consumed (20.1g) while most of proteins consumed (56 percent) are acquired from cereals (42.6g)⁸. In contrast, consumption of fats from vegetable and animal oils and fats is high with a daily consumption of 35 grams per person.

8. Note that consumption of fats from the group cereals and products comes from classification of cakes, biscuits, Rusk and Zwieback and other preparation made with cereal flour are included in group of cereals.

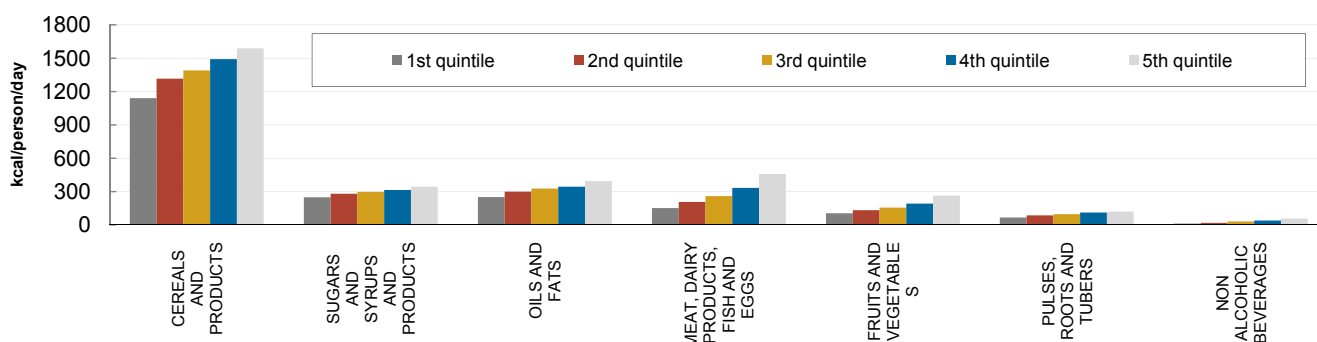
* Food consumption in quantity equivalent and nutrient values by food commodity groups

Food commodity group	Average food quantity consumed (g/person/day)	Average food dietary energy consumption (kcal/person/day)	Average food proteins consumption (g/person/day)	Average food carbohydrates consumption (g/person/day)	Average food fats consumption (g/person/day)
CEREALS AND PRODUCTS	391	1358	42.6	243.3	17.1
PULSES, ROOTS & TUBERS	79	93	5.2	14.3	0.5
SUGARS AND SYRUPS AND PRODUCTS	73	291	0.7	67.3	2.0
FRUITS & VEGETABLES	533	158	5.3	28.5	1.0
ANIMAL PROTEIN	169	263	20.1	6.4	17.2
OILS AND FATS	36	314	0.0	0.0	34.9
NON ALCOHOLIC BEVERAGES	272	29	0.1	7.0	0.1
OTHER	27	77	2.5	9.3	3.0

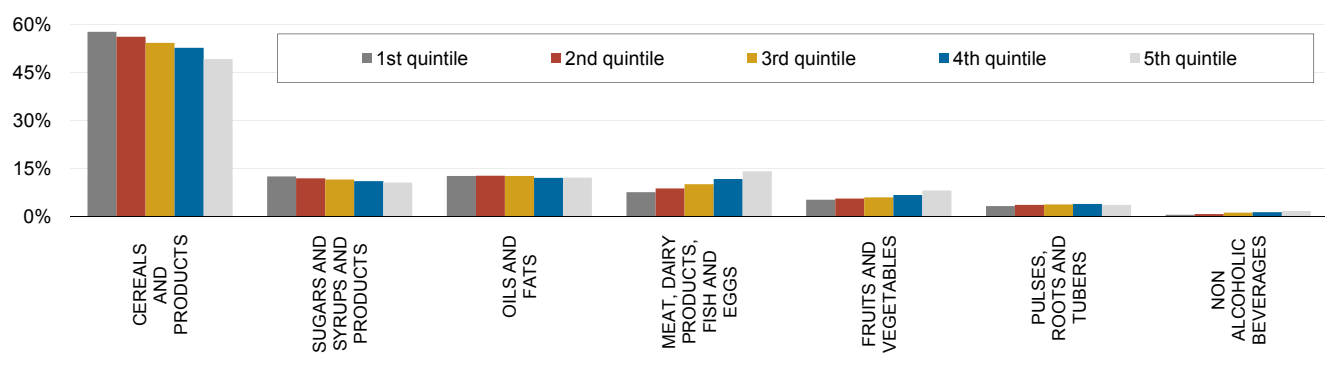
2.6.3. Analysis of consumption by income groups

Household consumption of cereals and cereal products is high regardless of income level though it is associated with income as the contribution cereals and cereal products to dietary energy consumption decreases from 60 percent to 50 percent between the lowest and highest income quintiles. Consumption of dietary energy from oils and fats and sugar is highest among the wealthiest Iraqis though its contribution to total dietary energy is almost the same for all income groups with an average of 12 percent of total dietary energy consumed across all income classes. Only consumption of proteins from animal origin increase both in absolute and relative terms as income increases where its contribution to total dietary energy consumption increases from 8 percent in the lowest income quintile to 14 percent in the highest income quintile. Finally, consumption of pulses, roots and tubers is inelastic to income.

— Dietary energy consumption by groups of products and income quintiles —



— Contribution of each food group to total dietary energy consumption by income quintile —



2.6.4. Analysis of unit cost by food groups

The analysis of unit cost by food group is presented in the table below (table 7) for the 19 different food groups as each group has its own unit cost and is analysed separately.

* Nutrient costs by food commodity groups

Food commodity group	Average Dietary Energy Unit Monetary Value (000ID/1000kcal)	Proteins Unit Monetary Value (000ID/100g)
CEREALS AND PRODUCTS	0.18	0.6
ROOTS AND TUBERS AND PRODUCTS	1.44	5.3
SUGARS AND SYRUPS AND PRODUCTS	0.33	13.8
PULSES	0.46	0.6
TREE NUTS	0.82	2.5
OIL CROPS	0.77	2.2
VEGETABLES AND PRODUCTS	3.29	6.9
FRUITS AND PRODUCTS	1.96	14.8
STIMULANTS	100.53	360.8
SPICES	1.95	4.7
ALCOHOLIC BEVERAGES	2.01	14.1
MEAT	2.27	2.5
EGGS	3.00	3.4
FISH AND FISH PRODUCTS	3.25	2.8
MILK AND CHEESE	1.46	2.9
OILS AND FATS (vegetable oils)	0.16	*
OILS AND FATS (animal fats)	0.33	9.6
NON ALCOHOLIC BEVERAGES	2.12	55.5
MISCELLANEOUS AND PREPARED FOOD	0.72	2.5

* Very low or no nutrient content or no consumption. 2007 Iraq Household Socio-Economic Survey, IHSES

The table above presents the cost of 1000 kcal as well as the cost of 100 grams of protein from each food group. Vegetable oil and fat and cereals and cereal products have the lowest energetic cost as 1000 kcal of products from these groups cost 160-180 ID, while to obtain 1000 kcal from fish or vegetables and products it costs on average 3250ID. Proteins from vegetable origin were less expensive than that from animal as it cost 600ID to acquire 100g of proteins from cereals and products but 2500ID to 3400ID to acquire 100g of proteins from meat or eggs.

3. CONCLUSION

The prevalence of food deprivation in Iraq is rather low in relative terms as only 7 percent of the population is undernourished. In absolute terms, however, this is equivalent to 2.1 million Iraqi individuals that do not have the means to consume even their minimum energy required to lead a healthy life and are more prone to suffer from health problems related to under nutrition.

Nonetheless, the role of the Public Distribution System (PDS) in reducing inequality in access to food cannot be ignored. The analysis of measures of inequality highlights the fact that inequality in food consumption is low in Iraq. The fact that inequality in food consumption is far lower than income inequality underlines the positive impact of the PDS on the poorest members of the Iraqi population. Accordingly, the findings presented within this report offer an opportunity for policy analysts and decision makers to improve the social transfer policies of the Iraqi Government

However, analysis of dietary energy consumption and expenditure patterns in Iraq also reveals that the PDS plays a far less significant role in improving the wellbeing of the wealthier segments of the Iraqi population. This is true from a purely economic perspective as well as from the food security perspective.

4. TABULATIONS

Table 8. Food deprivation and some parameters

Categories and Groupings	Number of sampled households	CV (%) of food dietary energy consumption (kcal/person/day) -FULL as defined by FAO	Minimum dietary energy requirement (kcal/person/day) as defined by FAO	Average of food dietary energy consumption (kcal/person/day)	Proportion of food deprivation in total population (%) as defined by FAO	Dietary energy consumption in food deprived population (kcal/person/day)	Depth of hunger (kcal/person/day)
Nationwide	17821		1726	2580	7	1549	177
Income level							
Quintile 1	3564		1674	2000	17	1528	146
Quintile 2	3564		1713	2390	4	1595	117
Quintile 3	3565		1733	2630	1	1626	108
Quintile 4	3564		1756	2930	0	1657	99
Quintile 5	3564		1789	3400	0	1594	194
Area							
Urban	12193	25.7	1739	2650	6	1566	173
Rural	5628	25.8	1692	2400	10	1507	185
HH Size							
1-3	2236	29.8	1807	3210	3	1618	188
4-5	4129	25.7	1707	2870	3	1555	152
6-7	4665	25.1	1724	2630	6	1558	166
8-9	3125	23.7	1749	2480	8	1578	170
10+	3666	23.5	1710	2370	10	1539	171
Gender of head of HH							
male	15916	25.7	1723	2570	7	1546	176
female	1905	28.0	1756	2690	8	1559	197
Age of head of HH							
low to 34	3950	26.1	1594	2550	4	1440	154
35 - 40	3273	24.1	1638	2580	4	1495	143
41 - 49	3572	24.6	1754	2590	7	1583	171
50 - 58	3589	27.8	1833	2550	14	1605	228
59 to high	3437	27.1	1771	2630	9	1574	197
Economic activity of head of HH							
Primary Sector (Agric.)	1719	27.5	1696	2380	13	1490	205
Secondary Sector (Manuf.)	2464	24.4	1692	2530	6	1532	160
Tertiary Sector (Services)	8128	25.1	1711	2660	5	1550	161
Unknown/not active	4800	27.1	1776	2570	10	1573	203
unemployed	710	28.4	1705	2460	12	1497	208
Education of head of HH							
Illiterate	3965	27.2	1744	2600	9	1550	194
Read/Read&write	2896	26.7	1717	2580	8	1533	184
Primary	4533	26.0	1709	2500	9	1527	182
Intermediate	1873	25.2	1723	2570	7	1551	171
Secondary/Equiv.	1714	24.8	1722	2640	5	1560	162
Technical Diploma	1411	25.4	1734	2620	6	1562	172
Bachelors & Higher	1429	25.7	1755	2720	5	1583	172
Region							
DUHOK	897	22.4	1699	2910	1	1575	124
MOSUL	967	24.5	1687	2790	2	1544	143
SULAIMANIYA	1033	23.5	1764	3340	0	1643	121
KIRKUK	955	28.6	1759	2800	6	1565	194
ERBIL	938	22.9	1740	2940	1	1610	130

Categories and Groupings	Number of sampled households	CV (%) of food dietary energy consumption (kcal/person/day) -FULL as defined by FAO	Minimum dietary energy requirement (kcal/person/day) as defined by FAO	Average of food dietary energy consumption (kcal/person/day)	Proportion of food deprivation in total population (%) as defined by FAO	Dietary energy consumption in food deprived population (kcal/person/day)	Depth of hunger (kcal/person/day)
DIYALA	902	38.3	1760	1860	51	1335	425
ANBAR	917	24.6	1736	2530	8	1564	172
BAGHDAD	1598	23.3	1766	2820	3	1620	145
BABYLON	953	26.0	1719	2100	26	1484	234
KERBELA	956	26.5	1716	2240	18	1498	217
WASIT	954	24.8	1721	2520	8	1549	172
SALAH AL-DEEN	960	26.5	1727	2250	19	1507	221
NAJAF	968	22.4	1688	2380	8	1533	154
QADISIYA	966	22.4	1701	2480	6	1553	148
MUTHANNA	969	26.2	1689	2240	17	1482	206
THI-QAR	957	22.5	1677	2570	4	1539	138
MAYSAN	970	21.8	1676	2320	8	1525	151
BASRAH	961	23.4	1694	2120	20	1498	196
Occupation of head of HH							
Agricultural worker	1505	27.7	1690	2370	13	1483	207
Professional/ Managerial/etc..	2881	25.2	1730	2680	5	1565	165
Skilled Occupations	4557	24.7	1692	2580	5	1533	160
Unskilled Occupations	656	26.3	1711	2570	7	1531	180
unemployed/ not active/not specified	8222	26.5	1750	2590	8	1561	189
Regional grouping							
Northern region (Iraqi Kurdistan)	2868	23.2	1740	3100	1	1612	128
Southern regions	14953	25.2	1724	2510	8	1546	177
Month the HH was surveyed							
nov 2006	1598	23.6	1734	2850	2	1596	138
dec 2006	1474	22.4	1738	2570	5	1589	149
jan 2007	1212	30.6	1727	2440	16	1489	238
fev 2007	1580	25.7	1748	2490	10	1558	190
march 2007	1356	25.6	1739	2770	4	1574	165
april 2007	1673	24.0	1715	2720	3	1567	148
may 2007	1336	26.7	1718	2660	6	1540	178
june 2007	1659	25.9	1716	2560	7	1538	178
july 2007	1308	28.0	1715	2470	12	1509	206
aug 2007	1560	29.1	1695	2330	16	1469	226
sept 2007	1362	27.2	1731	2550	9	1536	195
oct 2007	1108	28.6	1739	2500	12	1524	215

2007 Iraq Household Socio-Economic Survey, IHSES (I.c.=000ID)

Table 9. Average food consumption in dietary energy and monetary value

Categories and Groupings	Number of sampled households	Average number of people in household	Average food consumption in dietary energy value (kcal/person/day)	Average food consumption in monetary value (000ID/person/day)	Average dietary energy unit value (000ID/1000kcal)	Average total consumption (000ID/person/day)
Nationwide	17821	6.9	2580	1.59	0.61	4.68
Income level						
Quintile 1	3564	9.1	2000	0.92	0.46	1.89
Quintile 2	3564	7.5	2390	1.28	0.54	3.01
Quintile 3	3565	6.8	2630	1.59	0.61	4.15

Categories and Groupings	Number of sampled households	Average number of people in household	Average food consumption in dietary energy value (kcal/person/day)	Average food consumption in monetary value (000ID/person/day)	Average dietary energy unit value (000ID/1000kcal)	Average total consumption (000ID/person/day)
Quintile 4	3564	5.9	2930	1.98	0.68	5.85
Quintile 5	3564	5.0	3400	2.76	0.81	11.55
Area						
Urban	12193	6.6	2650	1.70	0.64	5.28
Rural	5628	7.6	2400	1.32	0.55	3.24
HH Size						
1-3	2236	2.5	3210	2.67	0.83	8.68
4-5	4129	4.5	2870	2.01	0.70	6.38
6-7	4665	6.5	2630	1.65	0.63	4.90
8-9	3125	8.4	2480	1.45	0.59	4.14
10+	3666	12.5	2370	1.26	0.53	3.40
Gender of head of HH						
male	15916	7.0	2570	1.58	0.61	4.64
female	1905	5.8	2690	1.72	0.64	5.05
Age of head of HH						
low to 34	3950	5.5	2550	1.65	0.64	4.78
35 - 40	3273	6.6	2580	1.54	0.60	4.46
41 - 49	3572	7.2	2590	1.57	0.61	4.69
50 - 58	3589	7.8	2550	1.55	0.61	4.63
59 to high	3437	7.4	2630	1.64	0.63	4.84
Economic activity of head of HH						
Primary Sector (Agric.)	1719	8.2	2380	1.32	0.56	3.24
Secondary Sector (Manuf.)	2464	6.4	2530	1.57	0.62	4.52
Tertiary Sector (Services)	8128	6.5	2660	1.69	0.64	5.19
Unknown/not active	4800	7.3	2570	1.56	0.61	4.57
unemployed	710	7.0	2460	1.39	0.56	4.00
Education of head of HH						
Illiterate	3965	7.2	2600	1.53	0.59	4.19
Read/Read&write	2896	7.4	2580	1.54	0.60	4.50
Primary	4533	7.0	2500	1.53	0.61	4.27
Intermediate	1873	6.4	2570	1.60	0.62	4.75
Secondary/Equiv.	1714	6.5	2640	1.65	0.62	5.18
Technical Diploma	1411	6.3	2620	1.74	0.66	5.34
Bachelors & Higher	1429	5.9	2720	1.88	0.69	6.81
Region						
DUHOK	897	6.5	2910	1.88	0.65	7.22
MOSUL	967	7.7	2790	1.41	0.51	4.02
SULAIMANIYA	1033	5.6	3340	2.72	0.82	9.50
KIRKUK	955	6.3	2800	1.63	0.58	4.63
ERBIL	938	6.4	2940	2.21	0.75	9.55
DIYALA	902	5.4	1860	1.26	0.67	3.39
ANBAR	917	7.1	2530	1.34	0.53	3.56
BAGHDAD	1598	6.3	2820	1.75	0.62	4.83
BABYLON	953	8.0	2100	1.29	0.61	3.57
KERBELA	956	7.3	2240	1.23	0.55	3.52
WASIT	954	7.7	2520	1.35	0.54	3.83
SALAH AL-DEEN	960	6.5	2250	1.24	0.55	3.27
NAJAF	968	7.5	2380	1.59	0.67	4.43

Categories and Groupings	Number of sampled households	Average number of people in household	Average food consumption in dietary energy value (kcal/person/day)	Average food consumption in monetary value (000ID/person/day)	Average dietary energy unit value (000ID/1000kcal)	Average total consumption (000ID/person/day)
QADISIYA	966	8.3	2480	1.41	0.57	3.74
MUTHANNA	969	9.2	2240	1.29	0.57	3.20
THI-QAR	957	7.8	2570	1.38	0.54	3.51
MAYSAN	970	7.1	2320	1.48	0.64	3.66
BASRAH	961	7.6	2120	1.39	0.66	3.86
Occupation of head of HH						
Agricultural worker	1505	8.4	2370	1.30	0.55	3.05
Professional/ Managerial/etc..	2881	6.1	2680	1.82	0.68	6.08
Skilled Occupations	4557	6.4	2580	1.56	0.60	4.42
Unskilled Occupations	656	7.0	2570	1.46	0.57	3.76
unemployed/not active/not specified	8222	7.2	2590	1.60	0.62	4.80
Regional grouping						
Northern region (Iraqi Kurdistan)	2868	6.1	3100	2.34	0.76	8.99
Southern regions	14953	7.0	2510	1.48	0.59	4.05
Month the HH was surveyed						
nov 2006	1598	6.8	2850	1.62	0.57	5.43
dec 2006	1474	6.8	2570	1.45	0.56	4.19
jan 2007	1212	7.3	2440	1.40	0.57	3.87
fev 2007	1580	7.1	2490	1.61	0.65	5.13
march 2007	1356	6.9	2770	1.71	0.62	5.15
april 2007	1673	7.0	2720	1.60	0.59	4.92
may 2007	1336	7.0	2660	1.61	0.61	4.66
june 2007	1659	7.0	2560	1.61	0.63	4.64
july 2007	1308	6.8	2470	1.63	0.66	4.67
aug 2007	1560	6.8	2330	1.55	0.66	4.29
sept 2007	1362	6.4	2550	1.68	0.66	4.43
oct 2007	1108	6.6	2500	1.61	0.64	4.21

2007 Iraq Household Socio-Economic Survey, IHSES (I.c.=000ID)

Table 10. Share of food consumption to total consumption in monetary value and by food sources

Categories and Groupings	Share of food consumption in monetary value to total consumption (%)	Share of food consumption in monetary value purchased to total food value (%)	Share of food consumption in monetary value from own production to total food value (%)	Share of food consumption in monetary value eaten away from home to total food value (%)	Share of food consumption in monetary value from other sources to total food value (%)
Nationwide	34.7	80.1	2.5	2.1	15.2
Income level					
Quintile 1	48.9	69.3	5.2	0.9	24.7
Quintile 2	42.5	77.1	2.7	1.2	19.0
Quintile 3	38.4	80.9	1.8	1.8	15.4
Quintile 4	33.9	83.7	1.6	2.4	12.4
Quintile 5	23.9	87.0	0.7	3.9	8.5
Area					
Urban	32.3	83.1	0.3	2.6	14.0
Rural	40.7	72.8	8.1	1.0	18.2
HH Size					
1-3	30.8	84.3	1.4	3.7	10.6
4-5	31.5	83.9	1.2	2.7	12.2

Categories and Groupings	Share of food consumption in monetary value to total consumption (%)	Share of food consumption in monetary value purchased to total food value (%)	Share of food consumption in monetary value from own production to total food value (%)	Share of food consumption in monetary value eaten away from home to total food value (%)	Share of food consumption in monetary value from other sources to total food value (%)
6-7	33.7	81.5	1.9	2.2	14.4
8-9	35.1	79.6	2.4	1.7	16.3
10+	36.9	76.7	3.2	1.7	18.4
Gender of head of HH					
male	33.9	80.6	2.2	2.2	15.0
female	34.1	81.0	1.2	2.5	15.3
Age of head of HH					
low to 34	34.4	81.1	2.0	2.5	14.4
35 - 40	34.6	80.0	2.0	2.1	15.9
41 - 49	33.5	80.9	2.2	2.1	14.8
50 - 58	33.5	80.1	2.1	2.3	15.4
59 to high	34.0	81.0	2.3	2.0	14.6
Economic activity of head of HH					
Primary Sector (Agric.)	40.8	67.3	14.1	1.0	17.6
Secondary Sector (Manuf.)	34.7	81.6	0.8	2.2	15.4
Tertiary Sector (Services)	32.7	82.8	0.9	2.6	13.7
Unknown/not active	34.1	80.4	1.7	2.0	15.9
unemployed	34.7	79.5	0.9	1.2	18.3
Education of head of HH					
Illiterate	36.6	78.1	3.5	2.1	16.4
Read/Read&write	34.3	79.6	2.6	2.2	15.6
Primary	35.7	80.4	2.1	2.1	15.4
Intermediate	33.8	81.8	1.1	2.1	15.0
Secondary/Equiv.	31.8	81.6	1.2	2.6	14.7
Technical Diploma	32.6	83.5	1.8	2.2	12.5
Bachelors & Higher	27.6	84.2	1.0	2.7	12.1
Region					
DUHOK	26.1	84.2	1.2	1.4	13.3
MOSUL	35.1	82.0	2.0	0.7	15.3
SULAIMANIYA	28.7	85.9	2.2	5.0	6.9
KIRKUK	35.2	81.4	1.9	1.3	15.4
ERBIL	23.1	87.7	1.2	1.8	9.2
DIYALA	37.1	91.1	0.4	0.7	7.7
ANBAR	37.7	78.4	4.2	0.4	17.0
BAGHDAD	36.3	81.0	0.8	2.5	15.7
BABYLON	36.0	71.7	8.0	3.2	17.2
KARBELA	34.9	77.8	1.4	1.9	19.0
WASIT	35.2	71.8	3.7	2.0	22.5
SALAH AL-DEEN	37.8	73.1	7.8	0.5	18.5
NAJAF	35.9	76.3	1.8	5.1	16.9
QADISIYA	37.7	76.5	1.8	2.3	19.5
MUTHANNA	40.2	71.2	3.1	3.9	21.9
THI-QAR	39.3	78.1	1.2	1.4	19.3
MAYSAN	40.5	74.0	7.8	1.7	16.5
BASRAH	36.0	82.6	0.2	1.3	16.0
Occupation of head of HH					
Agricultural worker	42.6	65.4	15.7	0.8	18.1

Categories and Groupings	Share of food consumption in monetary value to total consumption (%)	Share of food consumption in monetary value purchased to total food value (%)	Share of food consumption in monetary value from own production to total food value (%)	Share of food consumption in monetary value eaten away from home to total food value (%)	Share of food consumption in monetary value from other sources to total food value (%)
Professional/Managerial/ etc..	30.0	83.8	1.4	2.3	12.4
Skilled Occupations	35.3	81.3	0.8	2.2	15.7
Unskilled Occupations	38.8	79.5	2.1	2.2	16.2
unemployed/not active/ not specified	33.4	81.5	1.2	2.3	15.0
Gender of head of household					
Male	33.9	80.6	2.2	2.2	15.0
Female	34.1	81.0	1.2	2.5	15.3
Regional grouping					
Northern region (Iraqi Kurdistan)	26.0	86.2	1.7	3.2	8.9
Southern regions	36.6	79.3	2.2	2.0	16.5
Month the HH was surveyed					
nov 2006	29.9	82.8	0.9	1.8	14.6
dec 2006	34.7	79.4	0.9	1.1	18.6
jan 2007	36.2	80.2	1.6	1.9	16.3
fev 2007	31.4	82.3	1.6	2.1	14.0
march 2007	33.3	80.5	0.9	2.8	15.7
april 2007	32.5	78.4	1.9	2.6	17.0
may 2007	34.5	79.7	1.9	2.9	15.5
june 2007	34.7	81.5	2.3	2.3	13.9
july 2007	35.0	82.1	2.4	2.2	13.2
aug 2007	36.0	78.5	5.9	2.4	13.2
sept 2007	38.0	81.6	3.2	1.5	13.7
oct 2007	38.2	78.9	3.0	2.2	15.9

2007 Iraq Household Socio-Economic Survey, IHSES (I.c.=000ID)

Table 11. Share of food dietary energy by food sources to total food dietary energy consumption

Categories and Groupings	Share of dietary energy purchased to total food consumption (%)	Share of dietary energy from own production to total food consumption (%)	Share of dietary energy eaten away from home to total food consumption (%)	Share of dietary energy from other sources to total food consumption (%)
Nationwide	44.0	1.1	1.9	52.9
Income level				
Quintile 1	30.0	1.9	0.8	67.3
Quintile 2	38.4	1.1	1.2	59.3
Quintile 3	44.3	1.0	1.8	52.9
Quintile 4	50.1	0.8	2.4	46.7
Quintile 5	58.8	0.4	3.7	37.0
Area				
Urban	46.2	0.2	2.4	51.3
Rural	38.8	3.4	0.9	56.9
HH Size				
1-3	54.6	0.7	3.5	41.2
4-5	50.3	0.6	2.5	46.5
6-7	45.6	0.9	2.0	51.5
8-9	42.1	1.1	1.6	55.2
10+	38.5	1.4	1.5	58.6
Gender of head of HH				

Categories and Groupings	Share of dietary energy purchased to total food consumption (%)	Share of dietary energy from own production to total food consumption (%)	Share of dietary energy eaten away from home to total food consumption (%)	Share of dietary energy from other sources to total food consumption (%)
male	44.0	1.1	1.9	53.0
female	45.6	0.6	2.3	51.5
Age of head of HH				
low to 34	45.4	0.9	2.3	51.4
35 - 40	43.6	0.9	1.8	53.6
41 - 49	44.8	1.0	1.8	52.4
50 - 58	42.2	1.1	2.1	54.6
59 to high	45.2	1.2	1.8	51.8
Economic activity of head of HH				
Primary Sector (Agric.)	37.2	5.6	0.9	56.3
Secondary Sector (Manuf.)	42.5	0.5	2.0	55.0
Tertiary Sector (Services)	46.3	0.5	2.3	51.0
Unknown/not active	44.0	0.9	1.8	53.3
unemployed	43.6	0.5	1.0	54.9
Education of head of HH				
Illiterate	42.1	1.6	1.8	54.5
Read/Read&write	43.8	1.2	1.9	53.1
Primary	43.6	0.9	1.9	53.6
Intermediate	44.2	0.5	1.8	53.4
Secondary/Equiv.	45.0	0.5	2.3	52.1
Technical Diploma	48.2	1.0	2.0	48.8
Bachelors & Higher	48.6	0.7	2.5	48.2
Region				
DUHOK	51.5	0.8	1.3	46.3
MOSUL	47.1	1.1	0.7	51.2
SULAIMANIYA	64.7	1.4	4.8	29.1
KIRKUK	47.0	0.6	1.0	51.3
ERBIL	53.9	0.6	1.8	43.6
DIYALA	73.0	0.2	0.7	26.2
ANBAR	39.0	1.5	0.3	59.1
BAGHDAD	45.3	0.5	2.4	51.8
BABYLON	34.4	4.5	2.9	58.1
KERBELA	36.1	0.6	1.6	61.7
WASIT	30.5	1.4	1.8	66.3
SALAH AL-DEEN	35.6	2.8	0.5	61.1
NAJAF	35.4	1.2	4.9	58.5
QADISIYA	35.6	0.8	2.0	61.6
MUTHANNA	24.9	1.1	4.0	70.0
THI-QAR	38.9	0.5	1.2	59.4
MAYSAN	27.9	2.5	1.7	67.9
BASRAH	37.5	0.1	1.1	61.3
Occupation of head of HH				
Agricultural worker	35.3	6.1	0.8	57.8
Professional/Managerial/etc..	48.0	0.9	2.1	49.0
Skilled Occupations	43.0	0.4	2.0	54.6
Unskilled Occupations	44.1	1.0	2.0	52.9
unemployed/not active/not specified	45.2	0.6	2.1	52.1
Regional grouping				

Categories and Groupings	Share of dietary energy purchased to total food consumption (%)	Share of dietary energy from own production to total food consumption (%)	Share of dietary energy eaten away from home to total food consumption (%)	Share of dietary energy from other sources to total food consumption (%)
Northern region (Iraqi Kurdistan)	58.1	1.0	3.0	37.8
Southern regions	41.6	1.0	1.8	55.5
Month the HH was surveyed				
nov 2006	44.3	0.5	1.6	53.7
dec 2006	40.7	0.4	0.8	58.0
jan 2007	48.9	0.7	1.7	48.7
feb 2007	51.9	0.8	1.9	45.4
march 2007	45.4	0.4	2.6	51.6
april 2007	40.5	0.8	2.3	56.4
may 2007	40.7	1.0	2.5	55.8
june 2007	44.2	1.3	2.1	52.4
july 2007	45.0	1.1	2.1	51.9
aug 2007	42.0	3.1	2.4	52.5
sept 2007	43.7	1.7	1.6	53.1
oct 2007	39.5	1.4	2.0	57.0

2007 Iraq Household Socio-Economic Survey, IHSES (I.c.=000ID)

Table 12. Coefficient of variation of food consumption, total consumption and income

Categories and Groupings	Number of sampled households	Average number of people in household	CV of dietary energy consumption DUE TO income (%)	CV of food consumption in monetary value DUE TO income (%)	CV of total consumption DUE TO income (%)	CV of Income - FULL (%)	CV of dietary energy consumption FULL (%)	CV of food consumption in monetary value FULL (%)	CV of dietary energy consumption - FULL as defined by FAO (%)
Nationwide	17821	6.9							
Area									
Urban	12193	6.6	17.7	37.7	69.6	83.2	34.9	49.7	25.7
Rural	5628	7.6	18.6	36.3	62.4	67.0	38.5	49.1	25.8
HH Size									
1-3	2236	2.5	21.6	37.9	68.2	80.1	40.0	53.6	29.8
4-5	4129	4.5	17.9	33.6	66.5	80.9	35.4	46.5	25.7
6-7	4665	6.5	17.4	33.8	65.9	75.5	34.5	44.8	25.1
8-9	3125	8.4	14.8	31.4	61.8	69.0	34.1	42.5	23.7
10+	3666	12.5	14.7	29.9	56.4	66.2	34.2	40.8	23.5
Gender of head of HH									
male	15916	7.0	18.0	38.6	71.9	83.6	36.0	50.3	25.7
female	1905	5.8	20.2	40.1	67.7	79.8	36.6	52.8	28.0
Age of head of HH									
low to 34	3950	5.5	19.5	39.0	71.8	86.7	37.8	52.0	26.1
35 - 40	3273	6.6	17.2	37.5	71.6	81.4	34.8	48.4	24.1
41 - 49	3572	7.2	16.6	36.3	70.7	81.6	34.6	48.0	24.6
50 - 58	3589	7.8	19.6	40.6	69.9	81.2	36.6	51.6	27.8
59 to high	3437	7.4	18.9	40.8	73.8	85.3	36.6	53.1	27.1
Economic activity of head of HH									
Primary Sector (Agric.)	1719	8.2	20.9	38.2	72.2	76.6	38.9	50.5	27.5
Secondary Sector (Manuf.)	2464	6.4	16.5	36.1	66.9	80.7	33.8	47.6	24.4
Tertiary Sector (Services)	8128	6.5	17.4	37.4	69.9	82.5	35.1	49.3	25.1

Categories and Groupings	Number of sampled households	Average number of people in household	CV of dietary energy consumption DUE TO income (%)	CV of food consumption in monetary value DUE TO income (%)	CV of total consumption DUE TO income (%)	CV of Income - FULL (%)	CV of dietary energy consumption FULL (%)	CV of food consumption in monetary value FULL (%)	CV of dietary energy consumption - FULL as defined by FAO (%)
Unknown/not active	4800	7.3	19.0	39.9	71.6	81.8	36.7	52.4	27.1
unemployed	710	7.0	21.9	43.9	73.7	92.8	40.7	54.3	28.4
Education of head of HH									
Illiterate	3965	7.2	19.7	42.0	69.5	79.0	37.1	53.7	27.2
Read/Read&write	2896	7.4	19.4	41.9	75.3	89.7	36.2	53.6	26.7
Primary	4533	7.0	18.5	36.5	67.0	75.1	36.4	48.1	26.0
Intermediate	1873	6.4	17.4	36.9	66.7	77.8	34.5	47.8	25.2
Secondary/Equiv.	1714	6.5	16.8	36.7	69.2	86.4	34.3	49.0	24.8
Technical Diploma	1411	6.3	17.4	34.2	63.9	77.8	35.7	46.3	25.4
Bachelors & Higher	1429	5.9	17.7	37.0	77.2	90.8	35.7	50.3	25.7
Region									
DUHOK	897	6.5	13.3	31.4	66.8	74.1	33.2	48.7	22.4
MOSUL	967	7.7	16.7	31.8	54.8	57.4	35.3	48.0	24.5
SULAIMANIYA	1033	5.6	14.0	32.6	61.4	83.1	40.8	51.9	23.5
KIRKUK	955	6.3	21.5	38.0	53.7	61.0	37.0	50.2	28.6
ERBIL	938	6.4	13.5	30.0	69.9	88.4	31.9	46.1	22.9
DIYALA	902	5.4	33.4	34.0	55.2	58.3	59.5	48.8	38.3
ANBAR	917	7.1	16.3	38.8	60.6	65.3	29.5	45.9	24.6
BAGHDAD	1598	6.3	13.6	30.8	56.3	62.7	29.2	42.3	23.3
BABYLON	953	8.0	18.4	32.4	74.7	88.3	36.2	44.4	26.0
KERBELA	956	7.3	19.2	36.5	54.6	66.2	32.0	46.4	26.5
WASIT	954	7.7	16.6	34.9	66.5	70.3	29.7	46.8	24.8
SALAH AL-DEEN	960	6.5	19.2	37.2	66.0	68.7	34.7	47.1	26.5
NAJAF	968	7.5	13.4	33.1	56.4	69.2	32.8	44.3	22.4
QADISIYA	966	8.3	13.0	35.6	61.6	76.8	31.3	46.3	22.4
MUTHANNA	969	9.2	19.0	41.7	69.5	81.2	33.4	50.8	26.2
THI-QAR	957	7.8	13.7	37.2	56.7	66.9	33.6	48.1	22.5
MAYSAN	970	7.1	12.7	25.0	52.9	54.7	25.8	35.2	21.8
BASRAH	961	7.6	14.7	29.0	58.5	63.5	31.6	38.0	23.4
Occupation of head of HH									
Agricultural worker	1505	8.4	21.3	38.2	66.9	73.6	38.6	50.1	27.7
Professional/Managerial/etc..	2881	6.1	17.3	36.8	73.1	84.9	34.9	49.5	25.2
Skilled Occupations	4557	6.4	17.0	35.8	62.9	70.6	33.7	47.0	24.7
Unskilled Occupations	656	7.0	19.0	41.2	64.8	70.8	36.4	51.1	26.3
unemployed/not active/not specified	8222	7.2	18.7	39.4	71.8	85.7	37.0	51.7	26.5
Regional grouping									
Northern region (Iraqi Kurdistan)	2868	6.1	13.9	33.1	66.4	84.5	37.0	51.5	23.2
Southern regions	14953	7.0	17.2	34.7	59.5	66.4	35.0	46.0	25.2
Month the HH was surveyed									
nov 2006	1598	6.8	14.5	37.6	75.2	89.6	32.1	51.2	23.6
dec 2006	1474	6.8	12.9	34.0	61.2	66.9	32.2	45.4	22.4

Categories and Groupings	Number of sampled households	Average number of people in household	CV of dietary energy consumption DUE TO income (%)	CV of food consumption in monetary value DUE TO income (%)	CV of total consumption DUE TO income (%)	CV of Income - FULL (%)	CV of dietary energy consumption FULL (%)	CV of food consumption in monetary value FULL (%)	CV of dietary energy consumption - FULL as defined by FAO (%)
jan 2007	1212	7.3	24.5	44.2	67.9	80.2	43.1	55.0	30.6
fev 2007	1580	7.1	17.7	35.1	68.7	75.1	40.3	47.5	25.7
march 2007	1356	6.9	17.6	36.7	62.0	73.6	33.4	48.8	25.6
april 2007	1673	7.0	15.5	38.7	72.8	89.3	31.8	50.7	24.0
may 2007	1336	7.0	19.4	43.1	71.6	79.2	33.8	53.4	26.7
june 2007	1659	7.0	18.2	37.9	71.2	82.8	37.1	51.2	25.9
july 2007	1308	6.8	21.1	40.8	78.7	86.6	37.6	51.1	28.0
aug 2007	1560	6.8	22.7	40.0	82.5	93.5	38.3	49.7	29.1
sept 2007	1362	6.4	20.0	38.0	65.4	78.3	34.4	49.1	27.2
oct 2007	1108	6.6	21.7	43.8	73.0	88.1	35.1	53.2	28.6

2007 Iraq Household Socio-Economic Survey, IHSES (I.c.=000ID)

Table 13. Dispersion Ratios of food consumption, total consumption and income

Categories and Groupings	Dispersion ratio of food consumption in dietary energy (80/20)	Dispersion ratio of food consumption in monetary value (80/20)	Dispersion ratio of total consumption (80/20)	Dispersion ratio of income (80/20)
Nationwide	1.7	3.0	6.1	7.1
Area				
Urban	1.7	2.9	5.7	6.7
Rural	1.7	2.8	5.1	5.5
HH Size				
1-3	1.9	3.0	5.8	6.8
4-5	1.7	2.7	5.4	6.5
6-7	1.7	2.6	5.3	6.0
8-9	1.6	2.5	5.0	5.6
10+	1.5	2.3	4.4	5.1
Gender of head of HH				
male	1.7	2.9	6.1	7.1
female	1.8	3.2	6.0	7.0
Age of head of HH				
low to 34	1.7	3.0	6.1	7.3
35 - 40	1.6	2.8	5.9	6.6
41 - 49	1.6	2.8	6.0	6.8
50 - 58	1.8	3.1	6.0	7.0
59 to high	1.8	3.3	6.6	7.6
Economic activity of head of HH				
Primary Sector (Agric.)	1.8	2.8	5.5	5.9
Secondary Sector (Manuf.)	1.6	2.7	5.3	6.3
Tertiary Sector (Services)	1.7	2.9	5.8	6.8
Unknown/not active	1.7	3.1	6.3	7.2
unemployed	1.8	3.3	6.3	7.9
Education of head of HH				
Illiterate	1.8	3.3	6.2	7.0
Read/Read&write	1.7	3.0	6.2	7.3
Primary	1.7	2.8	5.4	6.0
Intermediate	1.7	2.9	5.7	6.5
Secondary/Equiv.	1.5	2.7	5.4	6.6
Technical Diploma	1.7	2.7	5.3	6.4

Categories and Groupings	Dispersion ratio of food consumption in dietary energy (80/20)	Dispersion ratio of food consumption in monetary value (80/20)	Dispersion ratio of total consumption (80/20)	Dispersion ratio of income (80/20)
Bachelors & Higher	1.7	3.0	7.2	8.5
Region				
SULAIMANIYA	1.5	2.5	5.5	7.8
ERBIL	1.4	2.4	6.0	7.7
BABYLON	1.7	2.4	6.1	7.4
MUTHANNA	1.7	3.2	5.9	6.9
DUHOK	1.4	2.5	5.9	6.5
QADISIYA	1.4	2.7	5.1	6.3
SALAH AL-DEEN	1.8	2.9	6.0	6.2
WASIT	1.6	2.6	5.6	5.9
ANBAR	1.6	3.0	5.2	5.6
NAJAF	1.4	2.4	4.4	5.3
THI-QAR	1.4	2.7	4.4	5.1
KARBELA	1.7	2.8	4.2	5.0
DIYALA	2.5	2.6	4.6	4.9
BAGHDAD	1.4	2.5	4.4	4.9
MOSUL	1.6	2.4	4.4	4.6
BASRAH	1.5	2.2	4.3	4.6
KIRKUK	1.8	2.9	4.0	4.4
MAYSAN	1.4	2.0	3.9	4.1
Occupation of head of HH				
Agricultural worker	1.8	2.8	5.2	5.8
Professional/Managerial/etc..	1.6	2.9	6.1	7.2
Skilled Occupations	1.6	2.7	5.0	5.5
Unskilled Occupations	1.7	3.0	5.2	5.7
unemployed/not active/not specified	1.7	3.1	6.2	7.3
Regional grouping				
Northern region (Iraqi Kurdistan)	1.5	2.7	6.0	7.8
Southern regions	1.6	2.7	4.9	5.4
Month the HH was surveyed				
nov 2006	1.5	2.9	6.4	7.6
dec 2006	1.5	2.8	5.3	5.8
jan 2007	1.9	3.4	5.9	6.9
fev 2007	1.6	3.0	6.4	6.9
march 2007	1.7	3.1	5.4	6.5
april 2007	1.5	2.9	6.0	7.3
may 2007	1.7	3.2	6.3	7.1
june 2007	1.7	2.9	6.2	7.2
july 2007	1.8	3.0	6.3	7.0
aug 2007	1.9	3.0	7.0	7.9
sept 2007	1.7	2.9	5.2	6.1
oct 2007	1.8	3.1	5.5	6.6

2007 Iraq Household Socio-Economic Survey, IHSES (I.c.=000ID)

Table 14. GINI of food consumption. total consumption and income by population groupings

Categories and Groupings	Number of sampled households	Average number of people in household	GINI of dietary energy Consumption DUE TO income (Log Normal assumption) (%)	GINI of Food Consumption in monetary value DUE TO income (Log Normal assumption) (%)	GINI of total consumption DUE TO income (%)	GINI of Income - FULL (%)	GINI of dietary energy Consumption - FULL (Log Normal assumption) (%)	GINI of Food Consumption in monetary value - FULL (Log Normal assumption) (%)	GINI of dietary energy consumption - FULL as defined by FAO (%)
Nationwide	17821	6.9							
Area									
Urban	12193	6.6	9.9	20.3	34.3	39.2	18.9	26	14.2
Rural	5628	7.6	10.4	19.6	31.5	33.3	20.8	25.7	14.2
HH Size									
1-3	2236	2.5	12	20.4	33.8	38.1	21.5	27.8	16.3
4-5	4129	4.5	10	18.3	33.1	38.4	19.2	24.5	14.2
6-7	4665	6.5	9.7	18.4	32.9	36.5	18.7	23.8	13.9
8-9	3125	8.4	8.3	17.2	31.2	34.1	18.6	22.7	13.1
10+	3666	12.5	8.2	16.4	29	33	18.6	21.9	13.0
Gender of head of HH									
male	15916	7.0	10.1	20.8	35.2	39.3	19.5	26.3	14.2
female	1905	5.8	11.2	21.5	33.6	38	19.8	27.4	15.4
Age of head of HH									
low to 34	3950	5.5	10.9	21	35.2	40.3	20.4	27.1	14.4
35 - 40	3273	6.6	9.6	20.2	35.1	38.6	18.9	25.4	13.3
41 - 49	3572	7.2	9.3	19.6	34.7	38.6	18.8	25.2	13.6
50 - 58	3589	7.8	10.9	21.7	34.5	38.5	19.8	26.9	15.3
59 to high	3437	7.4	10.5	21.8	35.9	39.9	19.8	27.5	15.0
Economic activity of head of HH									
Primary Sector (Agric.)	1719	8.2	11.6	20.6	35.3	36.9	20.9	26.4	15.1
Secondary Sector (Manuf.)	2464	6.4	9.2	19.6	33.3	38.3	18.4	25.1	13.5
Tertiary Sector (Services)	8128	6.5	9.7	20.2	34.4	38.9	19	25.8	13.9
Unknown/not active	4800	7.3	10.6	21.4	35.1	38.7	19.9	27.2	14.9
unemployed	710	7.0	12.2	23.4	35.9	42.3	21.8	28.1	15.6
Education of head of HH									
Illiterate	3965	7.2	11	22.4	34.3	37.7	20	27.8	15.0
Read/Read&write	2896	7.4	10.8	22.4	36.4	41.3	19.6	27.8	14.7
Primary	4533	7.0	10.3	19.7	33.3	36.4	19.7	25.3	14.3
Intermediate	1873	6.4	9.7	19.9	33.2	37.3	18.8	25.2	13.9
Secondary/Equiv.	1714	6.5	9.4	19.8	34.2	40.3	18.6	25.7	13.7
Technical Diploma	1411	6.3	9.7	18.6	32.1	37.4	19.4	24.5	14.0
Bachelors & Higher	1429	5.9	9.9	20	37.1	41.6	19.4	26.3	14.2
Region									
DUHOK	897	6.5	7.5	17.1	33.3	36	18.1	25.6	12.4
MOSUL	967	7.7	9.4	17.4	28.3	29.4	19.2	25.2	13.5
SULAIMANIYA	1033	5.6	7.9	17.8	31.1	39.2	21.8	27	13.0
KIRKUK	955	6.3	12	20.5	27.8	30.9	20	26.2	15.7
ERBIL	938	6.4	7.6	16.5	34.4	40.9	17.4	24.4	12.7
DIYALA	902	5.4	18.2	18.5	28.4	29.8	30.3	25.6	20.7

Categories and Groupings	Number of sampled households	Average number of people in household	GINI of dietary energy Consumption DUE TO income (Log Normal assumption) (%)	GINI of Food Consumption in monetary value DUE TO income (Log Normal assumption) (%)	GINI of total consumption DUE TO income (%)	GINI of Income - FULL (%)	GINI of dietary energy Consumption – FULL (Log Normal assumption) (%)	GINI of Food Consumption in monetary value - FULL (Log Normal assumption) (%)	GINI of dietary energy consumption - FULL as defined by FAO (%)
ANBAR	917	7.1	9.1	20.9	30.8	32.7	16.2	24.3	13.6
BAGHDAD	1598	6.3	7.6	16.9	28.5	31.6	16.1	22.6	12.9
BABYLON	953	8.0	10.3	17.7	36.2	40.9	19.6	23.6	14.3
KERBELA	956	7.3	10.7	19.7	28.2	33	17.5	24.5	14.6
WASIT	954	7.7	9.3	19	33.1	34.6	16.3	24.7	13.7
SALAH AL-DEEN	960	6.5	10.7	20.1	32.9	34	18.9	24.9	14.6
NAJAF	968	7.5	7.5	18	29	34.2	17.9	23.5	12.5
QADISIYA	966	8.3	7.3	19.3	31.1	37	17.1	24.5	12.4
MUTHANNA	969	9.2	10.6	22.3	34.3	38.5	18.2	26.5	14.5
THI-QAR	957	7.8	7.7	20.1	29.1	33.3	18.3	25.3	12.5
MAYSAN	970	7.1	7.1	13.8	27.4	28.2	14.2	19.1	12.1
BASRAH	961	7.6	8.2	15.9	29.9	31.9	17.3	20.5	13.0
Occupation of head of HH									
Agricultural worker	1505	8.4	11.8	20.6	33.3	35.8	20.8	26.2	15.2
Professional/ Managerial/ etc..	2881	6.1	9.6	19.9	35.6	39.8	18.9	25.9	13.9
Skilled Occupations	4557	6.4	9.5	19.4	31.7	34.7	18.3	24.8	13.6
Unskilled Occupations	656	7.0	10.6	22	32.4	34.8	19.7	26.7	14.5
unemployed/ not active/not specified	8222	7.2	10.4	21.2	35.2	40	20	26.9	14.6
Gender of head of household									
Male	15916	7.0	10.1	20.8	35.2	39.3	19.5	26.3	14.2
Female	1905	5.8	11.2	21.5	33.6	38	19.8	27.4	15.4
Regional grouping									
Northern region (Iraqi Kurdistan)	2868	6.1	7.8	18	33.1	39.6	20	26.9	12.9
Southern regions	14953	7.0	9.6	18.9	30.3	33.1	19	24.3	13.9
Month the HH was surveyed									
nov 2006	1598	6.8	8.1	20.3	36.4	41.3	17.5	26.7	13.1
dec 2006	1474	6.8	7.3	18.5	31	33.3	17.6	24.1	12.4
jan 2007	1212	7.3	13.5	23.5	33.7	38.2	23	28.4	16.7
fev 2007	1580	7.1	9.9	19.1	34	36.4	21.6	25	14.2
march 2007	1356	6.9	9.8	19.9	31.3	35.8	18.2	25.6	14.2
april 2007	1673	7.0	8.7	20.8	35.5	41.2	17.3	26.5	13.3
may 2007	1336	7.0	10.8	23	35.1	37.8	18.4	27.7	14.7
june 2007	1659	7.0	10.2	20.4	34.9	39.1	20.1	26.7	14.3
july 2007	1308	6.8	11.7	21.9	37.7	40.3	20.3	26.7	15.4
aug 2007	1560	6.8	12.6	21.5	39	42.5	20.6	26	16.0
sept 2007	1362	6.4	11.1	20.5	32.7	37.5	18.7	25.8	15.0
oct 2007	1108	6.6	12.1	23.3	35.6	40.8	19	27.6	15.7

2007 Iraq Household Socio-Economic Survey, IHSES (I.c.=000ID)

Table 15. Nutrient's contribution to dietary energy consumption

Categories and Groupings	Average food dietary energy consumption (kcal/person/day)	Share of DEC in total DEC coming from proteins (%)	Share of DEC in total DEC coming from fats (%)	Share of DEC in total DEC coming from carbohydrates, fiber and alcohol (%)
Nationwide	2580	11.8	26.4	61.8
Income level				
Quintile 1	2000	11.8	21.9	66.3
Quintile 2	2390	11.9	24.5	63.6
Quintile 3	2630	11.8	26.7	61.5
Quintile 4	2930	11.8	28.4	59.8
Quintile 5	3400	11.9	31.0	57.1
Area				
Urban	2650	11.7	27.7	60.6
Rural	2400	12.2	23.1	64.6
HH Size				
1-3	3210	12.5	28.9	58.6
4-5	2870	11.9	28.8	59.4
6-7	2630	11.8	27.1	61.1
8-9	2480	11.7	25.7	62.5
10+	2370	11.7	24.5	63.8
Gender of head of HH				
male	2570	11.8	26.3	61.9
female	2690	11.9	28.0	60.1
Age of head of HH				
low to 34	2550	11.9	26.6	61.5
35 - 40	2580	11.8	26.1	62.1
41 - 49	2590	11.8	26.7	61.5
50 - 58	2550	11.8	26.1	62.1
59 to high	2630	11.9	26.7	61.4
Economic activity of head of HH				
Primary Sector (Agric.)	2380	12.1	22.7	65.2
Secondary Sector (Manuf.)	2530	11.7	26.2	62.0
Tertiary Sector (Services)	2660	11.8	27.3	61.0
Unknown/not active	2570	11.9	26.4	61.7
unemployed	2460	12.0	26.3	61.7
Education of head of HH				
Illiterate	2600	11.8	25.7	62.5
Read/Read&write	2580	11.7	26.2	62.1
Primary	2500	11.9	26.1	62.0
Intermediate	2570	11.7	26.9	61.4
Secondary/Equiv.	2640	11.8	27.0	61.2
Technical Diploma	2620	12.0	27.2	60.8
Bachelors & Higher	2720	12.0	28.4	59.6
Region				
DUHOK	2910	11.5	31.4	57.2
MOSUL	2790	12.3	26.3	61.4
SULAIMANIYA	3340	11.6	30.1	58.3
KIRKUK	2800	11.8	27.5	60.7
ERBIL	2940	11.5	30.1	58.3
DIYALA	1860	12.3	28.4	59.3
ANBAR	2530	12.3	24.6	63.0
BAGHDAD	2820	11.2	29.4	59.5

Categories and Groupings	Average food dietary energy consumption (kcal/person/day)	Share of DEC in total DEC coming from proteins (%)	Share of DEC in total DEC coming from fats (%)	Share of DEC in total DEC coming from carbohydrates, fiber and alcohol (%)
BABYLON	2100	12.4	22.0	65.7
KARBELA	2240	11.2	25.9	62.9
WASIT	2520	11.9	21.0	67.1
SALAH AL-DEEN	2250	12.8	25.1	62.1
NAJAF	2380	12.1	24.5	63.5
QADISIYA	2480	12.0	22.5	65.5
MUTHANNA	2240	11.6	23.8	64.6
THI-QAR	2570	12.3	20.5	67.3
MAYSAN	2320	12.5	22.1	65.4
BASRAH	2120	12.5	23.1	64.4
Occupation of head of HH				
Agricultural worker	2370	12.1	22.2	65.7
Professional/Managerial/etc..	2680	12.0	27.7	60.2
Skilled Occupations	2580	11.6	26.5	61.9
Unskilled Occupations	2570	11.7	25.6	62.7
unemployed/not active/not specified	2590	11.8	26.8	61.3
Regional grouping				
Northern region (Iraqi Kurdistan)	3100	11.5	30.4	58.1
Southern regions	2510	11.9	25.7	62.4
Month the HH was surveyed				
nov 2006	2850	11.5	28.1	60.4
dec 2006	2570	11.6	26.8	61.7
jan 2007	2440	11.4	28.2	60.4
feb 2007	2490	11.7	28.2	60.1
march 2007	2770	11.9	27.8	60.4
april 2007	2720	11.9	26.7	61.4
may 2007	2660	11.6	26.3	62.1
june 2007	2560	11.9	25.6	62.6
july 2007	2470	12.0	25.3	62.7
aug 2007	2330	12.3	24.8	63.0
sept 2007	2550	12.3	23.6	64.1
oct 2007	2500	12.5	23.7	63.8

2007 Iraq Household Socio-Economic Survey, IHSES (I.c.=000ID)

Table 16. Food consumption in monetary and nutrient values

Categories and Groupings	Average food dietary energy consumption (kcal/person/day)	Average food consumption in monetary value of food consumed (000ID/person/day)	Average food protein consumption (g/person/day)	Average food carbohydrates consumption (g/person/day)	Average food fat consumption (g/person/day)
Nationwide	2580	1.59	76.4	376.1	75.9
Income level					
Quintile 1	2000	0.92	59.2	312.9	48.7
Quintile 2	2390	1.28	70.9	358.4	65.1
Quintile 3	2630	1.59	77.3	381.6	78.2
Quintile 4	2930	1.98	86.7	414.4	92.3
Quintile 5	3400	2.76	101.0	459.7	117.1
Area					
Urban	2650	1.70	77.5	380.4	81.6
Rural	2400	1.32	73.6	365.5	61.8
HH Size					

Categories and Groupings	Average food dietary energy consumption (kcal/person/day)	Average food consumption in monetary value of food consumed (000ID/person/day)	Average food protein consumption (g/person/day)	Average food carbohydrates consumption (g/person/day)	Average food fat consumption (g/person/day)
1-3	3210	2.67	100.2	442.7	102.9
4-5	2870	2.01	85.2	401.9	91.6
6-7	2630	1.65	77.8	379.5	79.2
8-9	2480	1.45	72.8	366.3	70.9
10+	2370	1.26	69.5	356.5	64.4
Gender of head of HH					
male	2570	1.58	76.0	375.5	75.1
female	2690	1.72	79.8	381.2	83.6
Age of head of HH					
low to 34	2550	1.65	75.6	370.7	75.5
35 - 40	2580	1.54	76.0	378.7	75.1
41 - 49	2590	1.57	76.4	375.9	76.8
50 - 58	2550	1.55	75.6	374.0	74.0
59 to high	2630	1.64	78.0	380.9	77.9
Economic activity of head of HH					
Primary Sector (Agric.)	2380	1.32	72.2	366.4	60.0
Secondary Sector (Manuf.)	2530	1.57	74.4	371.0	73.9
Tertiary Sector (Services)	2660	1.69	78.2	382.5	80.5
Unknown/not active	2570	1.56	76.2	374.4	75.4
unemployed	2460	1.39	73.9	357.8	72.2
Education of head of HH					
Illiterate	2600	1.53	76.9	383.8	74.2
Read/Read&write	2580	1.54	75.4	378.9	75.2
Primary	2500	1.53	74.3	366.0	72.6
Intermediate	2570	1.60	75.6	372.9	76.9
Secondary/Equiv.	2640	1.65	78.0	380.7	79.1
Technical Diploma	2620	1.74	78.4	376.1	79.2
Bachelors & Higher	2720	1.88	81.7	383.0	86.0
Region					
DUHOK	2910	1.88	83.5	395.4	101.6
MOSUL	2790	1.41	85.6	402.4	81.6
SULAIMANIYA	3340	2.72	96.7	462.8	111.7
KIRKUK	2800	1.63	82.8	400.3	85.7
ERBIL	2940	2.21	84.7	405.9	98.4
DIYALA	1860	1.26	57.3	258.9	58.8
ANBAR	2530	1.34	78.1	375.1	69.2
BAGHDAD	2820	1.75	78.6	396.8	92.0
BABYLON	2100	1.29	64.8	324.9	51.1
KARBELA	2240	1.23	62.9	334.3	64.5
WASIT	2520	1.35	75.1	397.4	58.7
SALAH AL-DEEN	2250	1.24	71.7	327.5	62.7
NAJAF	2380	1.59	71.6	357.2	64.6
QADISIYA	2480	1.41	74.3	384.3	62.0
MUTHANNA	2240	1.29	65.3	341.6	59.3
THI-QAR	2570	1.38	78.7	407.3	58.5
MAYSAN	2320	1.48	72.6	356.4	57.1
BASRAH	2120	1.39	66.0	320.5	54.5

Categories and Groupings	Average food dietary energy consumption (kcal/person/day)	Average food consumption in monetary value of food consumed (000ID/person/day)	Average food protein consumption (g/person/day)	Average food carbohydrates consumption (g/person/day)	Average food fat consumption (g/person/day)
Occupation of head of HH					
Agricultural worker	2370	1.30	71.9	366.9	58.4
Professional/Managerial/ etc..	2680	1.82	80.8	381.3	82.6
Skilled Occupations	2580	1.56	75.0	377.1	75.9
Unskilled Occupations	2570	1.46	74.9	380.9	73.1
unemployed/not active/ not specified	2590	1.60	76.8	375.3	77.2
Gender of head of household					
Male	2570	1.58	76.0	375.5	75.1
Female	2690	1.72	79.8	381.2	83.6
Regional grouping					
Northern region (Iraqi Kurdistan)	3100	2.34	89.3	426.6	104.5
Southern regions	2510	1.48	74.4	368.6	71.6
Month the HH was surveyed					
nov 2006	2850	1.62	82.0	406.6	89.0
dec 2006	2570	1.45	74.5	374.2	76.5
jan 2007	2440	1.40	69.3	349.0	76.5
fev 2007	2490	1.61	72.6	353.9	78.1
march 2007	2770	1.71	82.1	396.0	85.5
april 2007	2720	1.60	80.7	395.1	80.7
may 2007	2660	1.61	77.3	390.1	77.5
june 2007	2560	1.61	75.9	377.9	72.7
july 2007	2470	1.63	73.9	364.8	69.4
aug 2007	2330	1.55	71.5	344.9	64.2
sept 2007	2550	1.68	78.3	383.6	66.9
oct 2007	2500	1.61	78.2	374.8	65.8

2007 Iraq Household Socio-Economic Survey, IHSES (l.c.=000ID)

Table 17. Food consumption in quantity equivalent, monetary and nutrient values by food commodity groups

Food commodity group	Average food quantity consumed (g/person/day)	Average food proteins consumption (g/person/day)	Average food carbohydrates consumption (g/person/day)	Average food fats consumption (g/person/day)
CEREALS AND PRODUCTS	391.2	42.6	243.3	17.1
VEGETABLES AND PRODUCTS	365.7	4.4	14.4	0.6
NON ALCOHOLIC BEVERAGES	272.2	0.1	7.0	0.1
FRUITS AND PRODUCTS	167.1	0.9	14.1	0.4
SUGARS AND SYRUPS AND PRODUCTS	72.6	0.7	67.3	2.0
MILK AND CHEESE	69.7	5.1	5.4	6.6
MEAT	64.5	11.3	0.5	8.4
ROOTS AND TUBERS AND PRODUCTS	60.7	0.9	6.9	0.0
OILS AND FATS (vegetable oils)	34.9	0.0	0.0	33.9
PULSES	18.7	4.3	7.4	0.5
EGGS	18.7	2.1	0.1	1.6
FISH AND FISH PRODUCTS	16.0	1.6	0.4	0.6
SPICES	13.5	0.4	1.4	0.1
STIMULANTS	7.2	0.0	0.0	0.0

Food commodity group	Average food quantity consumed (g/person/day)	Average food proteins consumption (g/person/day)	Average food carbohydrates consumption (g/person/day)	Average food fats consumption (g/person/day)
MISCELLANEOUS AND PREPARED FOOD	3.2	1.8	7.7	2.2
OILS AND FATS (animal fats)	1.2	0.0	0.0	1.0
TREE NUTS	1.1	0.1	0.0	0.3
OIL CROPS	1.1	0.2	0.1	0.4
ALCOHOLIC BEVERAGES	0.4	0.0	0.0	0.0

2007 Iraq Household Socio-Economic Survey, IHSES (I.c.=000ID)

The data do not consider wastage

Table 18. Nutrient costs by food commodity groups

Food commodity group	Average Dietary Energy Unit Monetary Value (000ID/1000kcal)	Proteins Unit Monetary Value (000ID/100g)	Carbohydrates Unit Monetary Value (000ID/100g)	Fats Unit Monetary Value (000ID/100g)
OILS AND FATS (vegetable oils)	0.16	*	*	0.14
CEREALS AND PRODUCTS	0.18	0.57	0.10	1.41
OILS AND FATS (animal fats)	0.33	9.58	10.53	0.31
SUGARS AND SYRUPS AND PRODUCTS	0.33	13.78	0.14	4.76
PULSES	0.46	0.63	0.37	5.48
MISCELLANEOUS AND PREPARED FOOD	0.72	2.45	0.56	1.93
OIL CROPS	0.77	2.21	4.04	0.92
TREE NUTS	0.82	2.50	5.93	0.93
ROOTS AND TUBERS AND PRODUCTS	1.44	5.30	0.70	118.97
MILK AND CHEESE	1.46	2.90	2.73	2.25
SPICES	1.95	4.72	1.19	28.15
FRUITS AND PRODUCTS	1.96	14.75	0.94	36.39
ALCOHOLIC BEVERAGES	2.01	14.05	3.18	26.44
NON ALCOHOLIC BEVERAGES	2.12	55.52	0.88	98.97
MEAT	2.27	2.48	60.05	3.32
EGGS	3.00	3.42	55.21	4.31
FISH AND FISH PRODUCTS	3.25	2.78	12.36	6.92
VEGETABLES AND PRODUCTS	3.29	6.92	2.09	47.67
STIMULANTS	100.53	360.82	56.56	557.71

The data do not consider wastage.

1) The objective of this table is to identify commodity groups that are sources of low cost energy

2) Dietary Energy Unit Monetary Value is the average cost of 1000 Kcal provided by each commodity group consumed using food prices at the local market during the survey year.

Table 19. Share of each nutrient in total dietary energy consumption by food commodity group

Food commodity group	Share of dietary energy consumption in Total Energy Consumption (%)	Share of protein consumption in Total Protein Consumption (%)	Share of carbohydrates Consumption in Total Carbohydrates Consumption (%)	Share of Fats Consumption in Total Fats Consumption (%)
CEREALS AND PRODUCTS	52.6	55.8	64.7	22.6
OILS AND FATS (vegetable oils)	11.8	0.0	0.0	44.6
SUGARS AND SYRUPS AND PRODUCTS	11.3	0.9	17.9	2.6
MEAT	4.7	14.7	0.1	11.1
MILK AND CHEESE	3.9	6.7	1.4	8.7

Food commodity group	Share of dietary energy consumption in Total Energy Consumption (%)	Share of protein consumption in Total Protein Consumption (%)	Share of carbohydrates Consumption in Total Carbohydrates Consumption (%)	Share of Fats Consumption in Total Fats Consumption (%)
VEGETABLES AND PRODUCTS	3.5	5.7	3.8	0.8
FRUITS AND PRODUCTS	2.6	1.2	3.8	0.5
PULSES	2.3	5.6	2.0	0.7
MISCELLANEOUS AND PREPARED FOOD	2.3	2.3	2.0	3.0
ROOTS AND TUBERS AND PRODUCTS	1.3	1.2	1.8	0.1
NON ALCOHOLIC BEVERAGES	1.1	0.1	1.9	0.1
EGGS	0.9	2.7	0.0	2.2
FISH AND FISH PRODUCTS	0.5	2.1	0.1	0.8
OILS AND FATS (animal fats)	0.4	0.0	0.0	1.3
SPICES	0.3	0.5	0.4	0.1
OIL CROPS	0.2	0.2	0.0	0.5
TREE NUTS	0.1	0.1	0.0	0.4
ALCOHOLIC BEVERAGES	0.0	0.0	0.0	0.0
STIMULANTS	0.0	0.0	0.0	0.0

2007 Iraq Household Socio-Economic Survey, IHSES (I.c.=ID)

The data do not consider wastage

Table 20. Dietary Energy from various consumed food items

Food Item	Quantity Consumed (g/person/day)	Monetary Value (000ID/person/day)	Dietary Energy Consumption (Kcal/person/day)	Dietary Energy Consumption Unit Value (000ID/1000 Kcal)
Brown wheat flour (ration)	205.30	0.07	693	0.10
Vegetable oil (ration)	27.80	0.04	246	0.14
Ration rice	61.80	0.04	216	0.19
Sugar (ration)	49.90	0.05	200	0.23
Buns- all types and sizes	42.70	0.05	173	0.26
Commercial rice (imported)	16.90	0.02	59	0.27
Bread- all types	16.20	0.02	42	0.40
Mutton- fresh	12.10	0.08	40	2.10
Brown wheat flour (commercial)	10.20	0.01	35	0.15
Potato	60.70	0.05	34	1.43
White wheat flour (commercial)	8.20	0.00	29	0.15
Sugar (commercial)	6.40	0.01	26	0.24
Maccaroni and vermicelli	7.20	0.01	26	0.33
Vegetable fat (commercial)	3.30	0.00	25	0.19
Chocolate	4.80	0.01	25	0.54
Gaseous beverages	65.10	0.04	25	1.52
Eggs (chicken)	18.40	0.07	23	2.99
Vegetable oil (commercial)	2.50	0.00	22	0.18
Assorted sweets	5.50	0.02	22	0.69
Tomatoes	125.10	0.09	21	4.36
Beef- fresh	7.60	0.05	20	2.50
Imported cheese	7.00	0.03	20	1.31
Yogurt	32.20	0.04	20	2.01
Chicken- frozen	11.00	0.03	18	1.91
powdered milk (ration)	3.60	0.01	18	0.83

Food Item	Quantity Consumed (g/person/day)	Monetary Value (000ID/person/day)	Dietary Energy Consumption (Kcal/person/day)	Dietary Energy Consumption Unit Value (000ID/1000 Kcal)
White wheat flour (ration)	4.20	0.00	15	0.14
Burghul (cracked wheat)	4.30	0.00	14	0.31
Dry white beans (commercial)	4.50	0.01	14	0.57
Chick peas (commercial)	4.10	0.01	14	0.47
Other chicken offals	14.60	0.03	13	2.47
Tomato paste	14.60	0.02	13	1.80
Onions	35.80	0.02	13	1.84
Commercial rice (local)	3.60	0.00	13	0.22
Local cheese	4.60	0.01	12	1.06
Lentils (ration)	4.00	0.00	12	0.30
Chicken- alive	11.40	0.04	12	3.46
Sesame oil	1.30	0.00	11	0.41
Potato crisps	2.10	0.01	11	0.60
Buffalo cream (local)	1.90	0.01	11	1.04
Apple	21.00	0.02	10	2.07
Water melon	56.70	0.02	10	2.34
Biscuits	2.80	0.01	10	0.71
Cucumber	54.00	0.04	9	4.17
Grape	11.00	0.01	8	1.14
Jareesh and sameed	1.20	0.00	8	0.15
Fresh milk	12.70	0.01	8	1.28
Rusk and zwieback	1.50	0.00	7	0.39
Butter	1.00	0.00	7	0.32
Orange	21.20	0.02	7	2.96
Other sugar products	2.00	0.00	7	0.71
Broad beans	6.40	0.00	7	0.56
Fresh water fish- fresh	11.20	0.03	7	4.42
Other fresh- frozen and dried vegetables	20.60	0.02	7	2.51
Egg plant	38.00	0.03	7	4.36
Cake	1.70	0.00	6	0.71
powdered milk (commercial)	1.20	0.01	6	0.91
Jam	2.10	0.00	6	0.56
Banana	9.60	0.01	6	2.28
Dry garlic	1.70	0.00	6	0.47
Date syrup	1.60	0.00	5	0.46
Corn chips	0.90	0.00	5	0.62
Lentils (commercial)	1.50	0.00	4	0.35
Fish- frozen	1.60	0.00	4	1.15
Dried dates	1.40	0.00	4	0.32
Fresh dqtes	4.50	0.00	4	1.09
Red meats (imported)	1.30	0.00	3	1.30
Chick peas (ration)	1.00	0.00	3	0.41
Beef- frozen	1.20	0.00	3	1.37
Dry white beans (ration)	0.90	0.00	3	0.50
Okra	10.50	0.02	3	5.90
Melon	15.00	0.01	3	2.46
Ice-cream	1.30	0.01	3	2.20
Dry stringed beans	0.80	0.00	2	0.82
Pomegranate	5.10	0.00	2	1.97

Food Item	Quantity Consumed (g/person/day)	Monetary Value (000ID/person/day)	Dietary Energy Consumption (Kcal/person/day)	Dietary Energy Consumption Unit Value (000ID/1000 Kcal)
Dry broad beans	0.80	0.00	2	0.52
Yeast	0.80	0.00	2	1.64
other read meats imported	0.90	0.00	2	2.03
Ground chick peas	0.60	0.00	2	0.31
Squash- pumpkins	10.60	0.01	2	3.58
Tirshana (dried halved apricots)	0.90	0.00	2	0.77
Canned meat (including sausage)	0.80	0.00	2	1.39
Spices	0.70	0.00	2	2.49
Green onions	5.30	0.00	2	2.10
Habbiya (whole roasted wheat)	0.50	0.00	2	0.28
Pumpkin seeds	0.40	0.00	2	0.70
Sea fishes- fresh	2.70	0.01	2	4.73
Hazelnuts	0.50	0.00	2	0.11
Other	0.70	0.00	2	0.80
Mandarins	3.70	0.00	2	2.48
Vigna	0.40	0.00	1	0.42
Animal fat (ghee)	0.20	0.00	1	0.38
Canned and packed dates	0.50	0.00	1	0.35
Apricot	2.90	0.00	1	2.16
Peanuts	0.20	0.00	1	0.43
Mutton- frozen	0.40	0.00	1	2.04
Formula milk	1.80	0.01	1	8.17
Other fresh meat	0.80	0.00	1	3.81
Wheat	0.30	0.00	1	0.12
Green pepper	6.10	0.01	1	5.37
Milk skim	2.80	0.01	1	9.50
Starch	0.30	0.00	1	0.44
Canned- frozen and dried vegetables	1.40	0.00	1	1.56
Fig	1.20	0.00	1	1.28
Swisschard	4.50	0.00	1	4.51
Stringed beans	3.10	0.00	1	4.36
Fruit Juice	1.70	0.00	1	2.66
Pistachio	0.30	0.00	1	1.48
Ground rice	0.20	0.00	1	0.23
Other bread and bakery products	0.20	0.00	1	0.73
Kahi (local millefeuille)	0.20	0.00	1	0.48
Sultanas	1.00	0.00	1	3.41
Other wheat	0.20	0.00	1	0.18
Pickles	7.10	0.01	1	14.99
Other (currants- dried apricot paste)	1.30	0.00	1	4.71
Carrots	2.00	0.00	1	2.05
Peach	1.70	0.00	1	2.78
Pacha (lamb or cow head- legs- stomach and intes	0.80	0.00	1	2.67
Other mineral water	3.30	0.00	1	3.14
Grated coconut	0.10	0.00	1	0.42
Chicken wings and necks	0.40	0.00	1	1.40

Food Item	Quantity Consumed (g/person/day)	Monetary Value (000ID/person/day)	Dietary Energy Consumption (Kcal/person/day)	Dietary Energy Consumption Unit Value (000ID/1000 Kcal)
Lettuce	6.10	0.00	1	7.07
Cherry plum	1.10	0.00	1	1.71
Maize	0.20	0.00	1	0.23
Water melon seeds	0.20	0.00	1	0.91
Honey	0.20	0.00	1	4.15
Qaisi (dried whole apricots)	0.20	0.00	1	0.69
Walnut	0.30	0.00	1	3.46
Chicken liver- kidney and heart	0.40	0.00	1	2.63
Condensed milk	0.20	0.00	1	0.45
Other products from cereals (ground maize- popco)	0.10	0.00	1	0.36
Children food (commercial)	0.10	0.00	0	0.71
Canned olives	0.40	0.00	0	1.38
Artificially flavored juice	1.00	0.00	0	3.35
Turnip	2.20	0.00	0	2.60
Cardamon	0.10	0.00	0	2.15
Sauces and flavors	0.20	0.00	0	1.17
Spinach	2.50	0.00	0	5.81
Eggs- other	0.30	0.00	0	2.14
Fresh garlic	0.30	0.00	0	0.65
Coconut	0.10	0.00	0	0.35
Nomi Basrah	0.90	0.00	0	8.02
Sheep or cow liver	0.30	0.00	0	4.49
Lemon	1.90	0.00	0	5.37
Fish- dried	0.10	0.00	0	0.82
Sesame	0.10	0.00	0	0.42
Pear	0.70	0.00	0	1.68
Green beans	1.40	0.00	0	4.84
Fats and sheep tail fat	0.10	0.00	0	0.46
Corn crisps	0.10	0.00	0	0.34
Sherbet (all types)	0.60	0.00	0	1.89
Canned fish	0.20	0.00	0	2.35
Goat meat	0.30	0.00	0	6.39
Dried meats (Bastirma: spiced & dried)	0.10	0.00	0	1.94
Green Plum	0.70	0.00	0	2.35
Bulk treated olives	0.30	0.00	0	1.73
Olive oil	0.00	0.00	0	0.43
Raw olives	0.30	0.00	0	0.95
Cabbage	1.40	0.00	0	3.84
Children food (ration)	0.10	0.00	0	0.38
Klecha (local pastry) (dates with icing sugar)	0.10	0.00	0	0.68
Cauliflower	2.80	0.00	0	9.23
Other oils	0.00	0.00	0	0.20
Other	0.10	0.00	0	0.58
Radish	2.10	0.00	0	6.25
Other fresh fruits (quince- et	0.60	0.00	0	1.93
Sour orange	0.80	0.00	0	2.17
Plum	0.40	0.00	0	2.60

Food Item	Quantity Consumed (g/person/day)	Monetary Value (000ID/person/day)	Dietary Energy Consumption (Kcal/person/day)	Dietary Energy Consumption Unit Value (000ID/1000 Kcal)
Other types of fish and seafood	0.10	0.00	0	1.46
Shrimps	0.20	0.00	0	1.90
Fava beans (canned)	0.30	0.00	0	2.60
Mayyonaise	0.00	0.00	0	0.55
Readymade pizza	0.10	0.00	0	1.79
Beetroot	0.60	0.00	0	2.27
Barley	0.00	0.00	0	0.25
Almonds	0.10	0.00	0	2.26
Black pepper	0.00	0.00	0	2.15
Beer	0.30	0.00	0	3.17
Whisky	0.00	0.00	0	2.11
Other citrus fruits	0.30	0.00	0	2.17
Cocoa	0.10	0.00	0	3.71
Vinegar	0.50	0.00	0	5.51
Chewing gum	0.00	0.00	0	9.54
Baking powder	0.00	0.00	0	1.75
Arak	0.00	0.00	0	1.75
Other vegetable products	0.00	0.00	0	1.94
Peas	0.30	0.00	0	4.93
Truffle	0.10	0.00	0	2.87
Turnip cabbage	0.20	0.00	0	3.42
Cinnamon	0.00	0.00	0	1.85
Cactus fruit	0.10	0.00	0	0.58
Dried figs	0.00	0.00	0	0.93
Kiwi	0.10	0.00	0	3.08
Tea (ration)	4.20	0.01	0	176.65
Chestnut- acorn	0.00	0.00	0	0.73
Sauce (Ketchup)	0.00	0.00	0	2.73
Packed cream	0.03	0.00	0	2.86
Cherry	0.07	0.00	0	4.07
Barley flour	0.01	0.00	0	0.25
Cooked vegetables (canned)	0.12	0.00	0	4.94
Tea (commercial)	2.61	0.01	0	305.13
Mushroom	0.12	0.00	0	10.24
Other (lotus- azarole- etc.)	0.06	0.00	0	2.03
Other rice (broken rice- etc.)	0.01	0.00	0	0.26
Purslane	0.18	0.00	0	6.90
Other	0.10	0.00	0	11.53
Other meats (grouse- rabbit- etc)	0.02	0.00	0	4.19
Other (oat- etc)	0.01	0.00	0	0.49
Loquat	0.06	0.00	0	5.20
Mulberry	0.02	0.00	0	1.46
Brain	0.02	0.00	0	2.26
Margarine	0.00	0.00	0	0.22
Cornflakes	0.00	0.00	0	0.84
Sweet lemon	0.05	0.00	0	4.04
Citron	0.05	0.00	0	3.69
Camel meat	0.01	0.00	0	2.04
Buffalo meat	0.01	0.00	0	4.85

Food Item	Quantity Consumed (g/person/day)	Monetary Value (000ID/person/day)	Dietary Energy Consumption (Kcal/person/day)	Dietary Energy Consumption Unit Value (000ID/1000 Kcal)
Other alcoholic drinks	0.01	0.00	0	3.67
Sheep or cow kidney	0.01	0.00	0	6.35
Grape fruit	0.06	0.00	0	3.78
Wine	0.01	0.00	0	0.95
Canned fruits	0.02	0.00	0	4.44
Other canned vegetables	0.03	0.00	0	7.36
Tongue	0.00	0.00	0	3.08
Strawberry	0.02	0.00	0	11.17
Mustard	0.00	0.00	0	4.39
Pineapple	0.01	0.00	0	3.90
Coffee and instant coffee	0.11	0.00	0	*
Ice	4.33	0.01	0	
Salt (ration)	0.34	0.00	0	
Salt (commercial)	9.33	0.00	0	
Mineral waters	3.79	0.00	0	
Purchase water	192.32	0.00	0	
Soda Water	0.04	0.00	0	

Table 21. Comparison of food expenditures using subsidised or commercial prices

Categories and Groupings	Average food consumption in monetary value (000ID/person/day)	Average food consumption in monetary value (000ID/person/day)	Average dietary energy unit value (000ID/1000kcal)	Average dietary energy unit value (000ID/1000kcal)	Average total consumption (000ID/person/day)	Average total consumption (000ID/person/day)
Nationwide	1.36	1.59	0.52	0.61	4.45	4.68
Income level						
Quintile 1	0.70	0.92	0.34	0.46	1.66	1.89
Quintile 2	1.04	1.28	0.43	0.54	2.77	3.01
Quintile 3	1.37	1.59	0.52	0.61	3.92	4.15
Quintile 4	1.73	1.98	0.59	0.68	5.59	5.85
Quintile 5	2.52	2.76	0.74	0.81	11.32	11.55
Area						
Urban	1.46	1.70	0.55	0.64	5.04	5.28
Rural	1.10	1.32	0.45	0.55	3.02	3.24
HH Size						
1-3	2.44	2.67	0.74	0.83	8.44	8.68
4-5	1.77	2.01	0.61	0.70	6.14	6.38
6-7	1.42	1.65	0.54	0.63	4.67	4.90
8-9	1.22	1.45	0.49	0.59	3.91	4.14
10+	1.02	1.26	0.43	0.53	3.17	3.40
Gender of head of HH						
male	1.34	1.58	0.52	0.61	4.41	4.64
female	1.49	1.72	0.55	0.64	4.82	5.05
Age of head of HH						
low to 34	1.41	1.65	0.55	0.64	4.55	4.78
35 - 40	1.31	1.54	0.50	0.60	4.23	4.46
41 - 49	1.34	1.57	0.52	0.61	4.46	4.69
50 - 58	1.32	1.55	0.51	0.61	4.39	4.63
59 to high	1.41	1.64	0.53	0.63	4.61	4.84
Economic activity of head of HH						
Primary Sector (Agric.)	1.10	1.32	0.46	0.56	3.02	3.24

Categories and Groupings	Average food consumption in monetary value (000ID/person/day)	Average food consumption in monetary value (000ID/person/day)	Average dietary energy unit value (000ID/1000kcal)	Average dietary energy unit value (000ID/1000kcal)	Average total consumption (000ID/person/day)	Average total consumption (000ID/person/day)
Secondary Sector (Manuf.)	1.33	1.57	0.52	0.62	4.28	4.52
Tertiary Sector (Services)	1.46	1.69	0.55	0.64	4.95	5.19
Unknown/not active	1.32	1.56	0.51	0.61	4.33	4.57
unemployed	1.17	1.39	0.47	0.56	3.78	4.00
Education of head of HH						
Illiterate	1.29	1.53	0.49	0.59	3.95	4.19
Read/Read&write	1.31	1.54	0.50	0.60	4.27	4.50
Primary	1.30	1.53	0.52	0.61	4.05	4.27
Intermediate	1.36	1.60	0.53	0.62	4.51	4.75
Secondary/Equiv.	1.41	1.65	0.53	0.62	4.94	5.18
Technical Diploma	1.52	1.74	0.58	0.66	5.12	5.34
Bachelors & Higher	1.65	1.88	0.60	0.69	6.58	6.81
Region						
DUHOK	1.60	1.88	0.55	0.65	6.94	7.22
MOSUL	1.22	1.41	0.44	0.51	3.83	4.02
SULAIMANIYA	2.55	2.72	0.76	0.82	9.33	9.50
KIRKUK	1.38	1.63	0.49	0.58	4.38	4.63
ERBIL	1.99	2.21	0.67	0.75	9.33	9.55
DIYALA	1.15	1.26	0.62	0.67	3.29	3.39
ANBAR	1.12	1.34	0.44	0.53	3.34	3.56
BAGHDAD	1.48	1.75	0.52	0.62	4.55	4.83
BABYLON	1.06	1.29	0.50	0.61	3.35	3.57
KARBELA	0.99	1.23	0.44	0.55	3.29	3.52
WASIT	1.04	1.35	0.41	0.54	3.52	3.83
SALAH AL-DEEN	1.04	1.24	0.46	0.55	3.07	3.27
NAJAF	1.32	1.59	0.55	0.67	4.16	4.43
QADISIYA	1.12	1.41	0.44	0.57	3.45	3.74
MUTHANNA	1.01	1.29	0.45	0.57	2.93	3.20
THI-QAR	1.13	1.38	0.44	0.54	3.27	3.51
MAYSAN	1.26	1.48	0.54	0.64	3.43	3.66
BASRAH	1.19	1.39	0.56	0.66	3.66	3.86
Occupation of head of HH						
Agricultural worker	1.08	1.30	0.45	0.55	2.83	3.05
Professional/ Managerial/etc..	1.60	1.82	0.59	0.68	5.85	6.08
Skilled Occupations	1.31	1.56	0.51	0.60	4.17	4.42
Unskilled Occupations	1.23	1.46	0.48	0.57	3.53	3.76
unemployed/not active/not specified	1.37	1.60	0.53	0.62	4.57	4.80
Regional grouping						
Northern region (Iraqi Kurdistan)	2.13	2.34	0.68	0.76	8.78	8.99
Southern regions	1.24	1.48	0.49	0.59	3.81	4.05

Area in gray refers to food security indicators using commercial prices to value rations-

Table 22. Comparison in food deprivation using subsidised or commercial prices

Categories and Groupings	Proportion of food deprivation in total population (%) as defined by FAO	Proportion of food deprivation in total population (%) as defined by FAO
Nationwide	7	7
Income level		
Quintile 1	14	17
Quintile 2	4	4
Quintile 3	2	1
Quintile 4	0	0
Quintile 5	0	0
Area		
Urban	6	6
Rural	9	10
HH Size		
1-3	1	3
4-5	3	3
6-7	5	6
8-9	7	8
10+	10	10
Gender of head of HH		
male	7	7
female	7	8
Age of head of HH		
low to 34	4	4
35 - 40	3	4
41 - 49	6	7
50 - 58	13	14
59 to high	8	9
Economic activity of head of HH		
Primary Sector (Agric.)	12	13
Secondary Sector (Manuf.)	5	6
Tertiary Sector (Services)	4	5
Unknown/not active	9	10
unemployed	11	12
Education of head of HH		
Illiterate	8	9
Read/Read&write	7	8
Primary	8	9
Intermediate	6	7
Secondary/Equiv.	5	5
Technical Diploma	6	6
Bachelors & Higher	5	5
Region		
DUHOK	1	1
MOSUL	2	2
SULAIMANIYA	0	0
KIRKUK	6	6
ERBIL	1	1
DIYALA	51	51
ANBAR	7	8
BAGHDAD	2	3
BABYLON	24	26

Categories and Groupings	Proportion of food deprivation in total population (%) as defined by FAO	Proportion of food deprivation in total population (%) as defined by FAO
KARBELA	18	18
WASIT	7	8
SALAH AL-DEEN	19	19
NAJAF	7	8
QADISIYA	4	6
MUTHANNA	14	17
THI-QAR	3	4
MAYSAN	7	8
BASRAH	19	20
Occupation of head of HH		
Agricultural worker	13	13
Professional/Managerial/etc..	5	5
Skilled Occupations	5	5
Unskilled Occupations	7	7
unemployed/not active/not specified	8	8
Gender of head of household		
Male	7	7
Female	7	8
Regional grouping		
Northern region (Iraqi Kurdistan)	1	1
Southern regions	7	8
Area in gray refers to food security indicators using commercial prices to value rations.		

Table 23. Comparison in the shares of food consumption to total consumption in monetary value and by food sources

Categories and Groupings	Share of food consumption in monetary value to total consumption (%)	Share of food consumption in monetary value to total consumption (%)	Share of food consumption in monetary value purchased to total food value (%)	Share of food consumption in monetary value purchased to total food value (%)	Share of food consumption in monetary value from other sources to total food value (%)	Share of food consumption in monetary value from other sources to total food value (%)
Nationwide	31.2	34.7	92.7	80.1	1.8	15.2
Income level						
Quintile 1	42.2	48.9	88.9	69.3	3.0	24.7
Quintile 2	37.6	42.5	93.5	77.1	2.0	19.0
Quintile 3	34.9	38.4	94.0	80.9	1.7	15.4
Quintile 4	31.0	33.9	94.2	83.7	1.2	12.4
Quintile 5	22.2	23.9	93.9	87.0	1.1	8.5
Area						
Urban	29.1	32.3	95.5	83.1	1.2	14.0
Rural	36.3	40.7	86.1	72.8	3.0	18.2
HH Size						
1-3	28.9	30.8	91.3	84.3	3.1	10.6
4-5	28.8	31.5	93.8	83.9	1.7	12.2
6-7	30.4	33.7	93.7	81.5	1.6	14.4
8-9	31.3	35.1	93.5	79.6	1.6	16.3
10+	32.3	36.9	92.7	76.7	1.3	18.4
Gender of head of HH						
male	30.4	33.9	93.3	80.6	1.5	15.0
female	30.9	34.1	92.6	81.0	3.1	15.3
Age of head of HH						
low to 34	31.1	34.4	92.6	81.1	2.2	14.4

Categories and Groupings	Share of food consumption in monetary value to total consumption (%)	Share of food consumption in monetary value to total consumption (%)	Share of food consumption in monetary value purchased to total food value (%)	Share of food consumption in monetary value purchased to total food value (%)	Share of food consumption in monetary value from other sources to total food value (%)	Share of food consumption in monetary value from other sources to total food value (%)
35 - 40	30.9	34.6	93.2	80.0	2.0	15.9
41 - 49	30.1	33.5	93.6	80.9	1.4	14.8
50 - 58	29.9	33.5	93.4	80.1	1.4	15.4
59 to high	30.6	34.0	93.5	81.0	1.5	14.6
Economic activity of head of HH						
Primary Sector (Agric.)	36.4	40.8	79.8	67.3	2.1	17.6
Secondary Sector (Manuf.)	31.1	34.7	94.8	81.6	1.5	15.4
Tertiary Sector (Services)	29.5	32.7	94.9	82.8	1.1	13.7
Unknown/not active	30.5	34.1	93.4	80.4	2.2	15.9
unemployed	30.9	34.7	93.3	79.5	4.1	18.3
Education of head of HH						
Illiterate	32.7	36.6	91.3	78.1	2.1	16.4
Read/Read&write	30.7	34.3	92.3	79.6	2.1	15.6
Primary	32.1	35.7	93.4	80.4	1.7	15.4
Intermediate	30.2	33.8	94.9	81.8	1.4	15.0
Secondary/Equiv.	28.5	31.8	94.3	81.6	1.4	14.7
Technical Diploma	29.7	32.6	94.6	83.5	0.9	12.5
Bachelors & Higher	25.1	27.6	94.8	84.2	0.9	12.1
Region						
DUHOK	23.1	26.1	95.6	84.2	1.4	13.3
MOSUL	31.9	35.1	94.0	82.0	2.8	15.3
SULAIMANIYA	27.3	28.7	90.3	85.9	2.0	6.9
KIRKUK	31.5	35.2	94.9	81.4	1.4	15.4
ERBIL	21.3	23.1	95.9	87.7	0.7	9.2
DIYALA	35.1	37.1	97.7	91.1	1.0	7.7
ANBAR	33.6	37.7	93.0	78.4	1.5	17.0
BAGHDAD	32.4	36.3	94.8	81.0	1.3	15.7
BABYLON	31.7	36.0	85.1	71.7	1.4	17.2
KARBELA	30.3	34.9	94.3	77.8	1.6	19.0
WASIT	29.6	35.2	91.0	71.8	1.7	22.5
SALAH AL-DEEN	33.9	37.8	86.3	73.1	3.8	18.5
NAJAF	31.8	35.9	90.2	76.3	1.6	16.9
QADISIYA	32.6	37.7	93.9	76.5	1.1	19.5
MUTHANNA	34.6	40.2	89.8	71.2	1.3	21.9
THI-QAR	34.7	39.3	93.8	78.1	3.0	19.3
MAYSAN	36.6	40.5	87.2	74.0	1.6	16.5
BASRAH	32.4	36.0	96.7	82.6	1.6	16.0
Occupation of head of HH						
Agricultural worker	38.1	42.6	77.9	65.4	2.2	18.1
Professional/ Managerial/etc..	27.3	30.0	94.6	83.8	1.1	12.4
Skilled Occupations	31.5	35.3	95.1	81.3	1.4	15.7
Unskilled Occupations	34.7	38.8	92.7	79.5	2.2	16.2
unemployed/not active/not specified	30.0	33.4	94.0	81.5	1.9	15.0
Gender of head of household						
Male	30.4	33.9	93.3	80.6	1.5	15.0

Categories and Groupings	Share of food consumption in monetary value to total consumption (%)	Share of food consumption in monetary value to total consumption (%)	Share of food consumption in monetary value purchased to total food value (%)	Share of food consumption in monetary value purchased to total food value (%)	Share of food consumption in monetary value from other sources to total food value (%)	Share of food consumption in monetary value from other sources to total food value (%)
Female	30.9	34.1	92.6	81.0	3.1	15.3
Regional grouping						
Northern region (Iraqi Kurdistan)	24.2	26.0	93.1	86.2	1.5	8.9
Southern regions	32.6	36.6	93.3	79.3	1.7	16.5

Area in gray refers to food security indicators using commercial prices to value ratios.

Table 24. Comparison in the nutrient cost by food group using subsidised or commercial prices

Food commodity group	Average Dietary Energy Unit Monetary Value (LC\$/1000kcal)	Average Dietary Energy Unit Monetary Value (LC\$/1000kcal)
CEREALS AND PRODUCTS	0.10	0.18
ROOTS AND TUBERS AND PRODUCTS	1.44	1.44
SUGARS AND SYRUPS AND PRODUCTS	0.17	0.33
PULSES	0.36	0.46
TREE NUTS	0.82	0.82
OIL CROPS	0.77	0.77
VEGETABLES AND PRODUCTS	3.29	3.29
FRUITS AND PRODUCTS	1.96	1.96
STIMULANTS	55.26	100.53
SPICES	1.93	1.95
ALCOHOLIC BEVERAGES	1.98	2.01
MEAT	2.26	2.27
EGGS	3.00	3.00
FISH AND FISH PRODUCTS	3.24	3.25
MILK AND CHEESE	1.22	1.46
OILS AND FATS (vegetable oils)	0.05	0.16
OILS AND FATS (animal fats)	0.33	0.33
NON ALCOHOLIC BEVERAGES	2.10	2.12
MISCELLANEOUS AND PREPARED FOOD	0.60	0.72

Area in gray refers to food security indicators using commercial prices to value ratios.

ANNEX

Survey methodology & preparation and processing of food consumption data

Background⁹

The 2007 IHSES started in November 2006, was carried out over the course of a full year, covering all governorates of Iraq. The survey was conducted with the financial and technical support of the World Bank.

The IHSES survey constitutes the first component of the Poverty Reduction Strategy Project, which the Republic of Iraq is implementing in cooperation with the World Bank. The overall project consists of four components: (i) data collection (IHSES), (ii) poverty and inequality assessment, (iii) analysis of impact of proposed policies, and (iv) a poverty reduction strategy.

Survey Objectives

The main objectives of the survey were four fold, provide data to analyse food poverty, provide data to establish a new consumer price, provide data to meet the needs and requirements of national account, and finally, provide other indicators, such as consumption expenditure, sources of income, human development, and time use.

Questionnaire

The questionnaire is divided into 18 sections divided into five parts as follows:

Part One—Socio-Economic Data

Section 1: Household Roster

Section 2: Rations Received and Consumption of Provisions

Section 3: Housing

Section 4: Education

Section 5: Health

Section 6: Activities, Entertainment, and Hobbies

Section 7: Job Search and Past Employment

Part Two—Monthly, Quarterly, and Annual Expenditures

Section 8: Expenditures on Nonfood Services and Commodities (past 30 days)

Section 9: Expenditures on Nonfood Services and Commodities (past 90 days)

Section 10: Expenditures on Nonfood Services and Commodities (year)

Part Three—Expenditure, Income, and Other

Section 11: Daily Expenditure on Repetitive Food and Nonfood Commodities

Section 12: Jobs during the Previous 12 Months

Section 13: Wage Earnings

Section 14: Nonwage Earning Activities

Section 15: Income from Property and Transfers

Section 16: Durable Goods

Section 17: Loans, Credits, and Assistance

Section 18: Risk

Part Four—Diary of Daily Expenditure on Food Commodities

Part Five— activities performed by households over the last 24 hours

Time schedule

The survey started on October 30, 2006 and ended November 8, 2007. A time schedule was prepared to follow up on the recording of the daily household expenditures and to ensure accurate completion of the five-part questionnaire. Seven field visits were scheduled for each household. The schedule covered all tasks—from the first visit, when the daily expenditure diary was handed over to the household, to recovering the diary on the final visit.

The booklet was distributed during the first visit and households were encouraged to record all their expenditures by the following day, and fill out part one of the questionnaire. During the second to sixth visits, expenditures of 1st to 9th days were reported to section 11 of the questionnaire. Diary were withdrawn on the seventh visit and expenditures of the 10th day exported to section 11.

Sample

The analysis was carried out over a sample of 17821 households for which information on households and their related food consumption was available. Geographically, households are represented as follows, using respective sampling weights:

9. Most of material used in this section is coming from: Iraq socio economic survey – IHSES 2007, tabulation report. COSIT, World Bank.

* Sampling distribution of households by region

Region	Number of sampled households	Total number of people
DUHOK	897	895,000
MOSUL	967	2,820,000
SULAIMANIYA	1,033	1,574,000
KIRKUK	955	1,129,000
ERBIL	938	1,409,000
DIYALA	902	1,323,000
ANBAR	917	1,427,000
BAGHDAD	1,598	6,995,000
BABYLON	953	1,574,000
KARBELA	956	902,000
WASIT	954	1,056,000
SALAH AL-DEEN	960	1,158,000
NAJAF	968	1,113,000
QADISIYA	966	1,033,000
MUTHANNA	969	650,000
THI-QAR	957	1,687,000
MAYSAN	970	944,000
BASRAH	961	2,408,000
Total	17821	30,097,000

Processing of food consumption data

After the invasion of Kuwait 18 years ago, the Public Distribution System (PDS), was set up in Iraq in 1995 as part of the UN's Oil-for-Food program. Following the PDS, the entire population of Iraq is eligible to receive the food ration for a nominal fee. Adult rations consist of a food basket distributed through "food and flour agents". Food agents are typically local groceries. Each Iraqi within Iraq is entitled to receive the PDS ration, tied to his official residence. The PDS individual monthly ration is composed of wheat (9 kilos), rice (3 kilos), sugar (2 kilos), tea (200 grams), vegetable oil (1.25 kilo), detergent (500 grams), pulses (250 grams), adult milk (250 grams), soap (250 grams) and infant formula (1.8 kilo). This ration should supply 2,200 kcal per person per day. Therefore an important part of the food consumed by Iraqi is coming from food received as ration through the PDS. The rest of food consumed is bought from the market at commercial price or is received as gift or as payment or is self produced.

As rations are playing a crucial role in the diet of Iraqis, the 2007 Iraqi Household Socio-Economic Survey was designed in such a way that monthly consumption of all food items received as ration or similar to rations was captured separately from daily expenditures on repetitive food as follows:

i. Daily expenditures on food over ten days, excluding food received as ration, were collected through a diary in which households were asked to report their daily expenditures on food and non food (Section 11 of the questionnaire).

ii. Consumption of rations items and similar during the past 30 days was collected through a questionnaire in which households were asked to recall what they consumed the last 30 days (Section 2 of the questionnaire).

As section 11 of the questionnaire (diary) does not include information on rations received and section 2 of the questionnaire (recall information on monthly consumption) does not include other food consumed (fruits, vegetables, fresh dairy products, eggs, meat and fish), the two sets of information have to be combined to estimate total food consumption of Iraqi people. To do so, two different approaches can be adopted :

- 1st Approach: All the information from the section 2 of the questionnaire is added to the information from the diary excluding all consumption of food from rations captured in the diary.

- 2d Approach: All the information from the diary is merged to the food received as rations and extracted from section 2 of the questionnaire.

The report on food insecurity assessment in Iraq based on 2007 IHSES analyses food security indicators resulting from estimates using the 2d Approach¹⁰.

Processing of the information from the ration file

Only the total value of food item purchased at the market (from the ration item sold on the market and item similar to ratio but of better quality) was collected. This information was used to derive a unit value of food similar to ration but of better quality and of ration item purchased at the market. This unit value in turn was used to approximate the value of food item received as gift or self produced.

10. The rationale for use of this approach and the differences between the two approaches are discussed in the document "Processing of food consumption data from 2007 Iraqi Household socio-Economic survey, Methodological issues", Rome, 2009.

Rations were valued at the price the household would have paid to buy a food item of same quality from the market not at nominal out of pocket price normally paid to receive the PDS ration. Finally, all quantities and values were converted to daily consumption.

Process of the information from the diary

At the first day of the visit, households were given the supporting notebook (the Diary) and were encouraged to write down all their expenditures beginning the next day. Households were asked to report on the quantities and values of their daily expenditures and specify the unit of measurement in which quantities were reporting as well as the source of acquisition. Six different sources of acquisition were identified ranging from purchases, gift from other households, gifts from outside household sector, food for work, self production and other. Purchase was the most important food source representing 96 percent of total records.

Data from the diary was collected for about 260 food items. Food received as ration was not collected in the diary and "ration items" correspond to extra ration bought in the market at PDS price.

Conversion of all quantities into standard unit of measurement

Data on food consumption must be expressed into standard unit of measurement to allow for conversion in dietary energy value. All quantities in ration file were already converted into standard unit of measurement (kg). In the diary, 84 percent of total quantities of food items collected were converted into standard unit of measurement (kilogramme or litre) but still unit of measurement were missing for 10 percent of records and 6 percent of unit were corresponding to number (mainly eggs). Part of the 10 percent records for which unit of measurement was missing were referring to food consumed away from home (restaurants) or broad categories of food (sandwich, various meal dishes, etc) and in few cases to specific food. When market prices of specific food were available those were used to derive missing quantities from corresponding values and when market price was not available, median unit value of the food group to which the food item belong to, was used as proxy of the price. Quantities and values from diary were aggregated to derive total consumption over ten days and divided to obtain daily consumption of the food item and allow for aggregation with information from ration file.

Conversion of quantities into dietary energy value

All quantities are converted into dietary energy to allow for analysis of food security indicators in terms of quantity, nutrient and monetary values. The quantities were converted using food composition table that gives the nutrient value and nutrient composition of 100 grams of food product.

The food composition table of USDA and the food composition table compiled by FAO for the region of Middle East and North Africa were used to convert quantities into dietary energy value and add information on macro nutrient composition of the food, that is quantity in gram of proteins, fats and carbohydrates contained in 100 grams of products to allow for analysis of macro nutrient consumption.

The nutrient values of food corresponding to broad categories (other fresh fruits, other vegetables products etc) or not well specified food products were derived using a weighted average of the nutrient values of the food belonging to the same category. The nutrient value of food eaten away from home, though marginal, has been estimated using the unit value of the food purchased at household level.

Population grouping

The purpose of this analysis is to target more vulnerable group of population. To do so food security indicators are given at national but also at sub national level. This report will mainly focus on 11 groups of interest based on socio economic, temporal or geographic factors.

The analysis of food security by different income groups is a must and the report discusses food security for the five income groups (quintiles). Total expenditures are used as a proxy of income for being a better and more reliable welfare indicator.

This report mainly focuses on the analysis of food security for different groups of income and different size of households but also for other socio economic groups according to the main characteristic of the head of the household, such as the age, the gender, the level of education, his economic activity and occupation. The geographic localisation of the household through three different variables, urban/rural, governorates and northern and southern regions is also analysed with northern regions representing the Iraqi Kurdistan composed of Erbil, Sulaimaniya and Duhok. Finally the month the household was surveyed to see if food deprivation is seasonal or linked to the efficiency of the PDS. Groups are not balanced as some contain more households than other but they all contain at least 700 households to allow for an analysis at decile level.

Overall, urban households are more represented than rural households as these later represent less than 32 percent of total households, the same holds for households whose head is a female as only one household in ten is headed by a woman so that indicators on food insecurity for women may not be directly comparable to that of men. And finally amongst the major differences in groups of population, there is the geographical localisation of households between those from the north and those from the south with regions of the north being composed of the three northern

governorates of Duhok, Sulaymania, and Erbil. The Northern region concentrates 16 percent of total households of the sample.

In terms of composition of the groups as the analyse aims at targeting people most at risk, it is important to draw the profile of most vulnerable people that is those of the lowest income group (proxied by total expenditures).

* Distribution of households by income group and size of the household

		Quintile of Income					Total
		1	2	3	4	5	
Household size group	less than 3 people	71	176	331	601	1057	2236
	4 to 5 people	330	659	911	1097	1132	4129
	6 to 7 people	825	1034	1065	938	803	4665
	8 to 9 people	869	802	619	492	343	3125
	more than 10	1469	893	639	436	229	3666
Total		3564	3564	3565	3564	3564	17821

Households of the lowest quintile are mainly households of more than six people with 41 percent of household having more than 10 people and who concentrate 31 percent of the population less than 15 year old, of which 41 percent are less than five year old.

* Distribution of households by income group and age of the head of the household

		Quintile of Income					Total
		1	2	3	4	5	
Age groups	low to 34	670	743	851	833	853	3950
	35 - 40	755	717	644	580	577	3273
	41 - 49	775	746	730	715	606	3572
	50 - 58	742	684	713	708	742	3589
	59 to high	622	674	627	728	786	3437
Total		3564	3564	3565	3564	3564	17821

The age is also a characteristic of people of the lowest income group as 64 percent of the households of the first quintile are between 35 and 58 year old.

* Distribution of households by income group and education level

		Quintile of income					Total
		1	2	3	4	5	
Education status	Illiterate	1021	807	686	742	709	3965
	Read/Read&write	683	600	567	487	559	2896
	Primary	1011	1067	950	823	682	4533
	Intermediate	316	385	431	383	358	1873
	Secondary/Equiv.	247	283	366	409	409	1714
	Technical Diploma	145	248	326	347	345	1411
	Bachelors & Higher	141	174	239	373	502	1429
Total		3564	3564	3565	3564	3564	17821

Not surprising households whose head is illiterate or has a very low level of education are more likely to belong to the lowest income group.

* Distribution of households by income group and employment status

		Quintile of income					Total
		1	2	3	4	5	
Employment status	Primary Sector (Agric.)	638	396	297	239	149	1719
	Secondary Sector (Manuf.)	501	549	525	485	404	2464
	Tertiary Sector (Services)	1178	1507	1740	1793	1910	8128
	Unknown / not active	1015	973	879	931	1002	4800
	unemployed	232	139	124	116	99	710
	Total		3564	3564	3565	3564	3564

Households whose head was unemployed or not active the last seven days preceding the interview represent the largest share of households of the first quintile. But more surprising is that the employment status does not determine the level of income as tertiary sector absorbs most of households regardless the income quintile they belong to.

GLOSSARY OF FOOD SECURITY TERMS

ANTHROPOMETRY

Use of human body measurements to obtain information about nutritional status.

AVERAGE ENERGY REQUIREMENT

It refers to the amount of energy considered adequate to meet the energy needs for normative *average* acceptable weight for attained height while performing *moderate* physical activity in good health.

BALANCED DIET

The diet is balanced when it is judged to be consistent with the maintenance of health in a population. The balance can be examined in terms of the contribution of the various energy-yielding macronutrients and other nutrients. A macronutrient-based balance food consumption pattern should contribute to total energy from proteins, fats and carbohydrates within recommended ranges as follows: proteins from ten to 15 percent, fats from 15 to 30 percent and carbohydrates from 55 to 75 percent, as from a technical report of a 2002 Joint WHO/FAO Expert Consultation (WHO 2003).

CRITICAL FOOD POVERTY

The prevalence of critical food poverty (pCFP) refers to the proportion of persons living on less than the cost of the macro-nutrient balanced MDER (for Minimum Dietary Energy Requirement see below and for balanced diet see above) with food prices from households in the lowest income quintile. It can be estimated at national and sub-national levels.

DEGREE OF FOOD DEPRIVATION

A measure of the overall food insecurity situation in a country, based on a classification system that combines prevalence of undernourishment, i.e. the proportion of the total population suffering from a dietary energy deficit, and depth of undernourishment, i.e. the magnitude of the undernourished population's dietary energy deficit.

DEPTH OF FOOD DEPRIVATION

It refers to the difference between the average dietary energy intake of an undernourished population and its average minimum energy requirement (MDER).

DIETARY ENERGY UNIT COST

The dietary energy unit cost is the monetary value in local currency of 1000 kilo-calories of food consumed.

DIETARY ENERGY CONSUMPTION

Food consumption expressed in energy terms. At national level, it can be calculated from the FBS (see below); the FBS estimate refers to both private (households) and public (hospitals, prisons, military compounds, hotels, residences, etc) food consumption. At sub-national levels it is estimated using food consumption data, with quantities collected in national household surveys (NHS); these estimates refer to private food consumption.

DIETARY ENERGY INTAKE

The energy content of food consumed.

DIETARY ENERGY REQUIREMENT

It refers to the amount of energy required by individuals to maintain body functions, health and normal physical activity.

DIETARY ENERGY SUPPLY

Food available for human consumption, expressed in kilocalories per person per day (kcal/person/day). At country level, it is calculated as the food remaining for human use after deduction of all non-food consumption (exports, animal feed, industrial use, seed and wastage)

FOOD BALANCE SHEETS

Food Balance Sheets (FBS) are compiled every year by FAO, mainly with country-level data on the production and trade of food commodities. Using these data and the available information on seed rates, waste coefficients, stock changes and types of utilization (feed, food, processing and other utilization), a supply/utilization account is prepared for each commodity in weight terms. The food component of the commodity account, which is usually derived as a balancing item, refers to the total amount of the commodity available for human consumption during the year.

FOOD CONSUMPTION DISTRIBUTION

Food consumption distribution refers to the variation of consumption within a population. It reflects both the disparities due to socio-economic factors and differences due to biological factors, such as sex, age, body-weight and physical-activity levels.

FOOD DEPRIVATION

Food deprivation refers to the condition of people whose food consumption is continuously below its requirements. FAO's measure of food deprivation refers to the proportion of the population whose dietary energy consumption is below the minimum energy requirement (see below).

FOOD INSECURITY

A situation that exists when people lack secure access to sufficient amounts of safe and nutritious food for normal growth and development and an active and healthy life. It may be caused by the unavailability of food, insufficient purchasing power, inappropriate distribution, or inadequate use of food at the household level. Food insecurity, poor conditions of health and sanitation, and inappropriate care and feeding practices are the major causes of poor nutritional status. Food insecurity may be chronic, seasonal or transitory.

FOOD SECURITY

A situation that exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life.

GINI COEFFICIENT

The Gini coefficient measures the extent to which the distribution of income (or, in some cases, consumption expenditure, food dietary energy consumption) among individuals or households within an economy deviates from a perfectly equal distribution. A Lorenz curve plots the cumulative percentages of total income received against the cumulative number of recipients, starting with the poorest individual or household. The Gini coefficient measures the area between the Lorenz curve and a hypothetical line of absolute equality, expressed as a percentage of the maximum area under the line. Thus a Gini coefficient index of 0 represents perfect equality, while an index of 100 implies perfect inequality.

GINI COEFFICIENT DUE TO INCOME

The Gini coefficient is a measure of inequality in food consumption when income is used as the grouping variable and ranges from 0 (when income has no effect on food consumption) to one (when food consumption depends only on income). It can refer to inequality in food consumption due to income in monetary or in energy terms.

HOUSEHOLD CONSUMPTION EXPENDITURE

Household consumption expenditure refers to all monetary expenditure by the household and individual members on goods intended for consumption and expenditure on services, plus the value of goods and services received as income in kind and consumed by the household or individual members of the household. Thus the value of items produced by the household and utilised for own consumption, as well as the net rental value of owner-occupied housing and the gross rental value of free housing occupied by the household, each represent part of household consumption expenditure.

HOUSEHOLD FOOD CONSUMPTION EXPENDITURE

This refers to food consumed by household members during a specified period, at home and away from home, for example, at restaurants, bars, the work place, school, and so on. It includes food from all sources, purchased or from garden or farm. Further deductions should be made to allow for food given away to other households or non-household members and visitors as well as for wastage and losses occurring after acquisition.

HOUSEHOLD EXPENDITURE

Consumption plus non-consumption expenditure made by the household, both including food.

HOUSEHOLD NON CONSUMPTION EXPENDITURE

It refers to income taxes, other direct taxes, pension and social security contributions, remittances, gifts and similar transfers made by the household in monetary terms or in kind, including food such as given away, raw or ready to eat.

HOUSEHOLD INCOME

Income is the sum of all receipts, in money or in kind, which as a rule are received regularly and are of recurring nature, including food.

INCOME ELASTICITY OF FOOD DEMAND

The income elasticity of food demand measures the responsiveness of the quantity, monetary or nutrient value

demand of a good, to the change in the income of the people demanding the good. It is calculated as the ratio of the percent change in quantity demanded to the percent change in income.

INCOME INEQUALITY

Income inequality refers to disparities in the distribution of income.

INEQUALITY IN FOOD CONSUMPTION DUE TO INCOME

The inequality refers to the variation of the food consumption level within a population due to disparities in income distribution.

KILOCALORIE (Kcal)

The kilocalorie is a unit of measurement of dietary energy. In the International System of Units (ISU), the universal unit of dietary energy is the joule (J) but Kcal is still commonly used. One kilocalorie = 4.184 kilo-joules (KJ).

MACRONUTRIENTS

Used in this document to refer to the proteins, carbohydrates and fats that are required by the body in large amounts and that are available to be used for energy. They are measured in grams.

MICRONUTRIENTS

Refer to the vitamins, minerals and certain other substances that are required by the body in small amounts. They are measured in milligrams or micrograms.

MINIMUM DIETARY ENERGY REQUIREMENT

In a specified age and sex group, the amount of dietary energy per person is that considered adequate to meet the energy needs for minimum acceptable weight for attained-height maintaining a healthy life and carrying out a light physical activity. In the entire population, the minimum energy requirement is the weighted average of the minimum energy requirements of the different age and sex groups in the population.

NUTRITIONAL STATUS

The physiological status of an individual that results from the relationship between nutrient intake and requirement and from the body's ability to digest, absorb and use these nutrients. Lack of food as well as poor health and sanitation and inappropriate care and feeding practices are the major causes of poor nutritional status.

SHARE OF FOOD EXPENDITURE

The proportion of household consumption expenditure allocated to food; it is also known as the Engel ratio.

UNDERNOURISHMENT

Undernourishment refers to the condition of people whose dietary energy consumption is continuously below a minimum dietary energy requirement for minimum acceptable body weight and carrying out a light physical activity for maintaining a healthy life. The number of undernourished people refers to those in this condition.

UNDERNUTRITION

The result of undernourishment, poor absorption and/or poor biological use of nutrients consumed.

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