



WFP IRAQ – NORTH COORDINATION OFFICE



“Oil For Food” – Food Basket Adequacy Assessment Survey DRAFT

NOVEMBER 2001

Adequacy of the Oil for Food Programme Ration

Summary/Highlights

Context of the Adequacy Survey

The World Food Programme carried out a survey on a probability sample of 2,700 households in the three governorates of northern Iraq during 2000. The survey sought to determine how well the Oil for Food Programme¹ food rations met the needs of the population, what other foods were acquired, and how and where they were acquired. The survey provides information on adequacy of food rations, access to and consumer demand for food, and household economy overall.

Major Findings

Satisfaction with the present ration system among the population in northern Iraq is high. The ration continues a tradition of government subsidization and management of food distribution. The survey confirms nonetheless that rations provided by the Oil for Food Programme are not sufficient to cover all the nutritional needs of the population. Those families with the means to do so supplement the ration. They both purchase additional quantities of the foods found on the ration and other foods not provided by the ration. The latter mainly include fruits, vegetables, and meat. While a small portion of the ration is sold, families grow and purchase considerable additional food supplies. Families with higher incomes purchase more food. Purchases frequently exceed income, and are acquired in part through loans and the sale of household assets. The poorest families barely get by on the ration, facing some days without food each month. Affluent families have greater consumer demand for food and have a higher prevalence of obesity.

Key Findings:

- Food rations actually distributed during June/August 2000 averaged about 2,000 kcal per person/day. This provides about 90% of recommended caloric needs (2,250 kcal).
- In most households, the Oil for Food Programme ration was reported to be insufficient and was supplemented with other foods.

¹ The Security Council Resolution (SCR) 986 in 1995 established the programme.

- Nearly all households supplemented the ration with food purchases, 26% of households grew their own supplemental food, and 3% acquired food from other sources.
- Households on average acquire 30% more of the food items on the Oil for Food Programme ration via non-ration sources. Most households also acquire vegetables, meat and fruits that are not available on the ration. Such supplementation greatly improves the quality of overall diet.
- Together, rations and supplemental food sources provide on average a diet with recommended amounts of nine out of ten major nutrients examined.
- Most of these nutrients were available at levels that exceeded recommendations. Vitamin C was the highest at 7.6 times recommended levels. Food energy was over 50% above the recommended level.
- The market value at current prices of average household supplemental food acquired was OId 983 per month (USD 1 = OId 18). Of this, OId 630 (64%) was spent on food purchases, while the rest was acquired via self-production, gifts, or loans.
- Food acquired outside the ration was equivalent in value to 91% of average household income. As expenditures exceeded income, this was equivalent to only 37% of total household expenditures.
- Overall, food availability was good. Its affordability varied greatly according to income levels.
- About 7% of households reported a monthly income below OId 200. This did not provide enough money to acquire even average levels of supplements of the kinds of food included in the ration. Another 11% of households reported an income below OId 400. This provided enough money to purchase these items, but not enough to purchase foods not found on the ration.
- About 5% of households reported selling food received under the Oil for Food Programme ration.
- Two-thirds of households reported borrowing money and one-fifth reported selling assets during the last six months to meet basic needs. Most of the funds acquired in this way were reportedly used to purchase food. Further research is needed on patterns of resource generation and utilization to assess the accuracy and sustainability of these financial dynamics.

I. BACKGROUND

The Oil for Food Programme in Iraq has functioned since 1997. Food is the biggest single component of the Programme. The mandate of the World Food Programme (WFP) under SCR 986 is to observe the distribution of food, to assess the effectiveness of the distribution operation, to determine the adequacy of resources provided, and to assure that goods are distributed equitably.

To be consistent with the Oil for Food Programme in the rest of Iraq, observers routinely ask through household spot checks about quantity, quality and sufficiency of food rations received during the previous month. Most important among the complaints is that monthly food rations frequently do not last an entire month. To determine how vulnerable groups cope nutritionally, WFP carried out an Adequacy Survey throughout northern Iraq during June/August 2000.

I.1. Food Availability in Iraq/Northern Iraq Prior to Sanctions

During the 1980s Iraq had one of the highest levels of per capita food availability in the Middle East. Calorie availability data from FAO food balance sheets (see Annex I) show an increase from 1,958 kcal in 1961 to approximately 3,200 kcal during 1984 – 1990. The latter figure exceeds the estimated average caloric requirement of the Iraqi population of 2,250 kcal per person/day. Dietary habits and preferences included consumption of large quantities and varieties of meat, as well as chicken, pulses, grains, vegetables, fruits and dairy products. Common diets are believed to have had ample levels of most nutrients and obesity was increasingly common.

Due to the relatively fertile land and favourable climate, agricultural production in the three northern governorates accounted for 25-30% percent of all food produced in Iraq. Food items not produced locally were widely available and sold at subsidized price by the Government of Iraq (GOI).

I.2. Changes in Food Availability After Imposition of Sanctions

Production and importation of food declined rapidly in 1990 when comprehensive trade sanctions drastically reduced the country's purchasing power. The price of food soared, unemployment grew, and effective salaries and benefits dropped dramatically. Poverty became widespread.

The previous diet became unattainable for most Iraqis. Deprivation changed the food habits of most people. Rationing further influenced these habits. In an attempt to address the food security crisis, GOI re-introduced a public food rationing system in September 1990. GOI rationed wheat flour, rice, sugar, vegetable oil, lentils, tea, and milk powder. The composition of the ration over 1990-1997 changed several times, reflecting GOI's declining financial capacity to provide food for its population.

In the early 1990s, the food crisis was especially great in northern Iraq. Large -scale hunger and related diseases were prevented only through an important mobilization of international aide.

I.3. International and WFP Response to Food Crisis

In response to a request by GOI, WFP, as a part of UN Inter-Agency Humanitarian Programme, launched an Emergency Operation (EMOP) in 1991. At its peak the Programme supplied food to more than two million of the country's 22 million people (out of whom 660,000 people in northern Iraq) to complement the GOI ration. WFP' s emergency support was to cover the basic food needs of the most vulnerable people in Iraq. By the end of WFP EMOP in 1998, WFP had provided over 600,000 MT of food valued at USD 259 million.

Food availability improved considerably since the initiation of the Oil-for-Food Programme in 1997. Under 6-month Distribution Plans (DPs) I – VIII of the Programme, a total amount of 17 million MT of food commodities arrived in the country. Some 60,000 MT of food commodities are distributed each month to 3.5 million people in the three northern governorates. This represents a significant increase in the food available prior to 1997.

Yet during most months since 1997, food baskets were incomplete. They covered on average about 90% of the planned distribution of food energy. Food baskets mainly had shortfalls in pulses, salt, tea and oil. Of particular importance was a continuous shortage of pulses, which contributes a significant portion of proteins and micronutrients in the diet. The most efficient pipeline has been for wheat flour, covering 100% of cumulative requirements. The availability of food increased in successive Programme phases, providing on average 1,400 kcal per capita per day in DP I; 1,900 kcal in DP II; 2,000 kcal in DP III – DP VII; 2,200 kcal in DP VIII; and 2,150 kcal/person/day in DP IX.

I.4. Efficiency and Impact of the Oil for Food Programme Food Distribution

The Oil for Food Programme has allowed to meet the basic food needs of the population through the provision of about 2,200 kcal/person/day of food energy during the three most recent phases (VIII-X) of the Programme (see Annex II). This marks a substantial improvement over previous ration distributions. The distribution of food – for which only nominal fees are charged – frees up household assets to address other needs. It was presumed that many Iraqis sell or barter a portion of their monthly food ration.

The Oil for Food Programme has increased overall access to food and provided for sustained improvement in the overall nutritional situation. Between November 1997 and June 2001 in the North, chronic malnutrition decreased from 30.3 % to 11.4 % while acute malnutrition has stayed at about 3.1 %. The trend toward improved child nutrition began earlier, and has been greater in the three northern governorates than in the rest of the country. This is likely due in part to greater access to locally produced foods, the presence of more international staff, and a WFP supplementary food distribution programme in the North. Supplementary food distribution began in January 1998 and covers a monthly average of 200,000 beneficiaries. The beneficiaries include malnourished children and their families, pregnant/lactating mothers, hospital patients, people in institutions, and women in female-headed households.²

I.5. Sufficiency of the Oil for Food Programme Food Distribution

Since 1997, 60% of households interviewed in the South/Centre and 50% of those in the North of Iraq reported that rations lasted less than 20 days. Iodised salt, pulses and rice are depleted fastest, while sugar and wheat flour last longest.

A small-scale WFP survey was carried out in the three northern governorates in 1999. About a third of households reported supplementing rations with market purchases of wheat flour, rice, sugar, oil and salt. Households also added commodities not on the ration, including vegetables, fruits, meat and fish, eggs, and spices. It was not clear which families were more able to supplement their diets or whether and how families with low incomes acquired additional food.

As Iraqis used to have much greater access to higher quantities and quality of food, cultural patterns of food preference and eating habits likely influence the acceptability of current diets. Hence the goal of assessment of supplementation and the sufficiency of the Oil for Food Programme ration in a broader context emerged.

² See Garfield R. Studies on Young Child Malnutrition in Iraq. Nutrition Reviews 2000; 58(9): 269-277.

II. OBJECTIVES OF THE SURVEY

- To assess the adequacy of Oil for Food Programme rations in households with differing economic status.
- To assess people's capacity to supplement the Oil for Food Programme food ration with household resources.
- To assess the nutritional quality of the supplementary foods acquired.

III. METHODS

III. 1. Sample Design and Coverage

The sample size for this research was based on work prepared for WFP survey carried out in 1999.³ A sample target of 2,700 interviews was set.

The June 2000 WFP population database was used to estimate the total population by governorate. Almost everyone in the three northern governorates receives the WFP ration and is registered with one of 10,000 local food agents. In the first stage of sample selection, 270 food agents (ninety per governorate) were selected randomly. In a second stage, a cluster of ten households was selected from the area served by each of the 270 selected food agents. With over-sampling, a total of 2,870 households were targeted for inclusion in the sample in the three governorates of northern Iraq.

The sampling procedure and sample size were designed to provide comparative information at the level of the governorate⁴. An additional 600 households were sampled in the Erbil governorate to compare people in villages and a collective town. The results of the Erbil assessment will be presented in the future in a separate report.

³ Unpublished WFP study "Socio-economic survey of female headed households in the three northern governorates of Iraq", Erbil: 1999.

⁴ Observations from the Oil for Food Programme food distribution system are gathered by a random sampling approach different from the one employed for this survey. The results of monthly observations conducted by WFP observers in 640 randomly selected households per governorate per month during April 1997 - August 2000 on reported sufficiency of rations are similar to those in the survey (see Table 1).

III.2. Training

A three-day training session including a day-and-a-half of field training was conducted in each of the three governorates. The questionnaires were pre-tested prior to the training. A survey team consisted of WFP observers and the respective local Health Departments staff. Participatory training consisted of refresher courses on interviewing techniques and detailed explanation of the questionnaire, so that every staff member involved could reach a common understanding of each question. A manual describing each question was provided to each team. During the training, minor adjustments to the questionnaire were made. Hands-on training was provided in anthropometric measurements.

III.3. Fieldwork

The survey was administered during 15 June – 15 August 2000. The survey was coordinated by one person in each governorate. A survey team consisted of 7-10 groups per governorate, two persons per each group. There were a total of 72 interviewers and one supervisor for every three teams of surveyors.

III.4. Quality Control

All participating WFP staff members had already conducted routine household interviews during the previous 36 months. Trained staff from the Departments of Health with previous experience in anthropometric measurements also participated in survey teams to ensure the quality of anthropometric data. Each questionnaire was verified for accuracy and consistency by a team member after each interview. If a discrepancy was discovered, the team verified the information immediately. A supervisor randomly visited households during interviews to check on accuracy. Each day, the supervisor conducted one random re-interview as an additional check.

Prior to data entry each form was checked to ensure legibility. All quantities were converted into kilograms. Any income, gifts, etc. received in kind, were converted into estimated equivalent cash amount as per the local market values. The data were entered and analysed in SPSS version 8. A supervisor visually checked 10% of the interview forms for accuracy.

IV. RESULTS

IV.1. ADEQUACY OF RATIONS

The adequacy of rations will be assessed in two ways. First, the average number of days the ration lasted in the last month is determined. Later, costs incurred for supplementation will be assessed.

On average, the wheat flour ration lasted 25 days. Other commodities lasted for shorter periods of time: rice (19 days), pulses (14), sugar (22), tea (23), milk (23) and vegetable oil (22). Results varied little by governorate. See Figure 1.

Figure 1: Average

This research produced similar results to previous Oil for Food Programme observer findings. See Table 1.

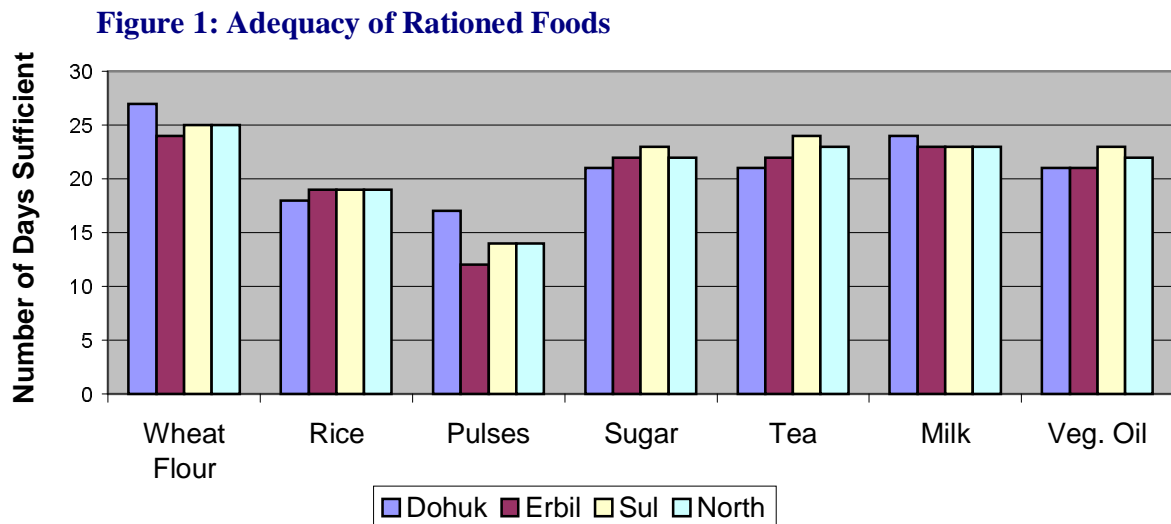


Table 1: Reported Adequacy: Survey vs. Oil for Food Programme Observation, Northern Iraq

Item/Reported Days Sufficient	Proportion of Households		Average Days Reported Sufficiency	
	Survey	Observation	Survey	Observation
Wheat Flour				
1-10 days	0.6	0.6	25	24
11-20 days	18.3	19.3		
21-25 days	13.1	20.5		
26-30 days	68.0	59.5		
Rice				
1-10 days	4.1	3.9	19	20
11-20 days	57.0	50.1		
21-25 days	22.7	25.6		
26-30 days	16.2	20.4		
Pulses				
1-10 days	48.6	45.2	14	13
11-20 days	22.8	33.2		
21-25 days	3.6	4.3		
26-30 days	25.0	17.3		
Sugar				
1-10 days	2.0	1.6	22	23
11-20 days	37.7	25.7		
21-25 days	23.7	23.8		
26-30 days	36.9	49.0		
Tea				
1-10 days	3.0	3.8	23	22
11-20 days	32.0	36.7		
21-25 days	14.1	18.8		
26-30 days	50.8	40.7		
Milk				
1-10 days	5.3	10.1	23	20
11-20 days	24.7	36.6		
21-25 days	8.0	10.3		
26-30 days	62.0	43.0		
Vegetable Oil				
1-10 days	2.1	2.2	22	22
11-20 days	40.3	34.7		
21-25 days	21.7	27.1		
26-30 days	36.0	36.1		

Data were grouped by duration of sufficiency of rations: 1-10 days, 11 – 20 days, 21 – 25 days, and 26-30 days. These responses are subjective assessments made by interviewees. Those with more limited resources with which to supplement the ration likely rate sufficiency differently from those with more abundant food. Results varied little by governorate. See Table 2.

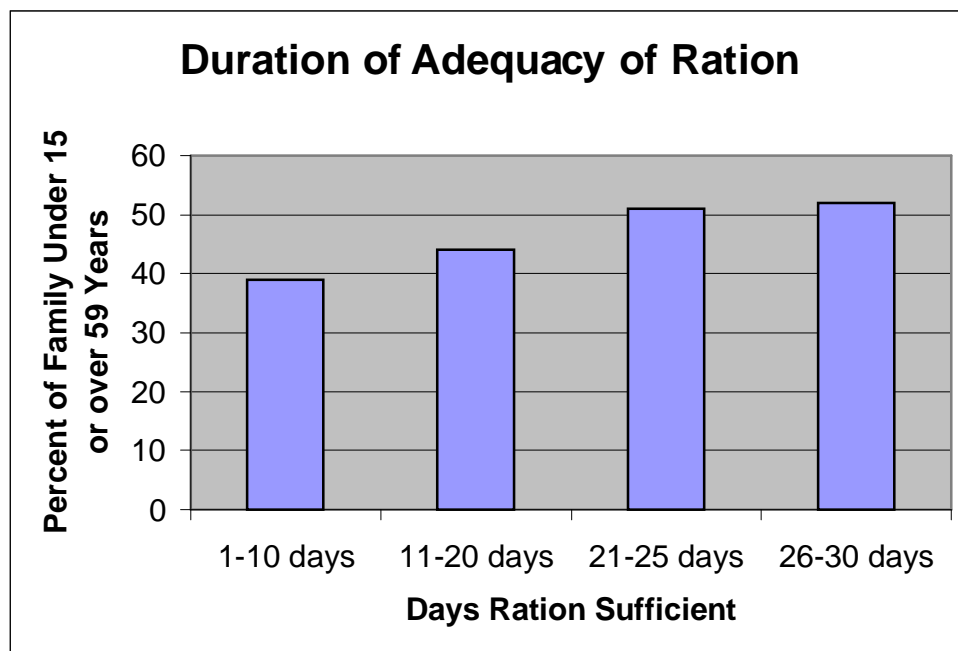
Table 2: Adequacy of the Ration, by Governorate

Item/Reported Days of Sufficiency	Proportion of Households		
	Dohuk	Erbil	Sulemaniyah
Wheat Flour			
1-10 days	0.38	1.14	0.21
11-20 days	7.69	25.43	16.76
21-25 days	6.73	16.23	13.04
26-30 days	85.19	57.21	69.99
Rice			
1-10 days	6.14	5.37	2.44
11-20 days	58.06	52.51	59.98
21-25 days	25.72	20.55	23.14
26-30 days	10.08	21.58	14.44
Pulses			
1-10 days	19.12	60.16	50.42
11-20 days	47.36	11.55	22.51
21-25 days	10.09	1.04	3.29
26-30 days	23.44	27.25	23.78
Sugar			
1-10 days	3.46	2.84	0.74
11-20 days	40.44	40.98	33.76
21-25 days	28.24	21.34	23.89
26-30 days	27.86	34.85	41.61
Tea			
1-10 days	4.42	4.32	1.49
11-20 days	36.31	35.68	27.75
21-25 days	24.40	12.84	11.42
26-30 days	34.87	47.16	59.34
Milk			
1-10 days	3.74	8.82	3.22
11-20 days	24.76	23.60	25.56
21-25 days	9.69	5.38	9.34
26-30 days	61.80	62.20	61.87
Vegetable Oil			
1-10 days	3.93	2.76	0.86
11-20 days	37.81	46.84	36.36
21-25 days	24.38	21.40	20.86
26-30 days	33.88	29.00	41.93

A third of households reported supplementing wheat flour during at least five days a month. Rice was supplemented by 84% of households; 19% supplemented for 10 days or longer. Rates for pulses were 75% and 61%; for sugar 98% and 71%, for tea 49% and 40%, for milk 38% and 35%, for vegetable oil 64% and 30%, respectively.

No significant variations in the adequacy of rations were found among households of different size, ethnicity, average income, ownership of the house, presence of agriculture production, or nutritional status of children below five years of age. In households with more men, more people engaged in heavy labour, or more people aged 15 – 59, calorie needs are on average greater. See Figure 2.

Figure 2: Adequacy of Wheat Ration by Predominant Age Groups in Household



Some families no doubt utilized more food for guests or wastage. Finally, some families with similar energy needs eat more than others. Consistent with this possibility, it was found that the ration was more often reported to be insufficient among households with a higher proportion of overweight adult members, higher food availability at home and higher expenditure on food.

An average household consisted of seven members and reported ration sufficiency of 20 days. Their supplementation needs include 12.6kg of wheat flour, 4.2kg of rice, 1kg of pulses, 2.8 of sugar, 1.75kg of vegetable oil, 700 g of dried whole milk and 200 g of tea per month.

Those households reporting sufficiency of the ration for only up to 10 days needed to supplement the ration with 126kg of wheat flour, 42kg rice, 9.8kg pulses, 28kg sugar,

17.5kg vegetable oil, 7kg dried whole milk and 2.1kg tea per month. See Table 3.

Table 3: Projected Need for Supplemental Food Items

Reported days of sufficiency	Wheat flour (kg/month)		Rice (kg/month)		Pulses (kg/month)		Sugar (kg/month)	
	Total need In kg/month	Suppl. need In kg/mo	Total need In kg/mo	Suppl. need In kg/mo	Total need In kg/mo	Suppl. need In kg/mo	Total need In kg/mo	Suppl. Need In kg/mo
1-10 days	189.00	126.00	63.00	42.00	14.70	9.80	42.00	28.00
11-20 days	94.50	31.50	31.50	10.50	7.35	2.45	21.00	7.00
21-25 days	75.60	12.60	25.20	4.20	5.88	0.98	16.80	2.80
26-30 days	66.32	3.32	22.11	1.11	5.16	0.26	14.74	0.74

Reported days of sufficiency	Vegetable oil (kg/month)		Milk (kg/month)		Tea (kg/month)	
	Total need In kg/month	Suppl. Need In kg/mo	Total need In kg/mo	Suppl. Need In kg/mo	Total need In kg/mo	Suppl. need In kg/mo
1-10 days	26.25	17.50	10.50	7.00	3.15	2.10
11-20 days	13.13	4.38	5.25	1.75	1.58	0.53
21-25 days	10.50	1.75	4.20	0.70	1.26	0.21
26-30 days	9.21	0.46	3.68	0.18	1.11	0.06

IV.2. FOOD SOURCES

The major sources of food are the Oil for Food Programme food basket and procurement from the market. Some households also acquired food from their own production, gifts from friends and relatives, or donations from UN agencies or social institutions. See Table 4.

Table 4: Percent of Households Acquiring Food from Various Sources

Source				
	Dohuk	Erbil	Sulemaniyah	North
Oil for Food Programme	100	100	100	100
Market	99.5	99.3	100	99.7
Farm Production	14.0	12.3	21.9	17.1
Institutional support ⁵ or “Zakat”	4.5	4.4	1.0	2.8

Acquisition, however, does not necessarily mean consumption. Nearly 5% reported to have sold the food they received in order to obtain cash.

IV.3. COST OF SUPPLEMENTATION

Demand-Based Assessment

The total cost of supplementation was calculated for the average days of insufficiency of all commodities for all households. See Table 5. Individual variations in needs, costs, and income are likely to be considerable.

Considerable resources are used to supplement the ration. This is especially true among households for whom the ration lasted the shortest number of days. The supplementation of wheat flour alone, the least costly item in the market contained in the basket, consumed OI 466 for families reporting the greatest shortfall. This sum is equivalent to 71% of the average household income.

⁵ Including support from UN agencies and other institutions.

Table 5: Projected Cost of Supplementation per Household⁶ for Items Included in the Ration (According to the reported days of sufficiency)

Reported days for which ration was insufficient	Cost ⁷ in OIDs ⁸							
	Wheat flour	Rice	Pulses	Sugar	Vegetable oil	Milk	Tea	Total
20-29	466	307	105	165	254	226	104	1,626
10-19	117	77	26	41	63	57	26	407
5-9	47	31	11	17	25	23	10	163
0-4	12	8	3	4	7	6	3	43

Table 6: Average Cost of Supplementation

(For Reported Number of Days Insufficiency for Items in the Ration)

Food Items	Dohuk		Erbil		Sulemaniyah		North	
	Average days Of insufficiency	Supplementation Cost	Average days Of insufficiency	Supplementation Cost	Average days Of insufficiency	Supplementation Cost	Average days Of insufficiency	Supplementation Cost
Wheat Four	3	26	6	58	5	47	5	47
Rice	12	102	11	89	11	89	11	89
Pulses	13	28	18	56	16	42	16	42
Sugar	9	35	8	30	7	25	8	30
Tea	9	22	8	19	6	13	7	16
Milk	6	28	7	34	7	34	7	34
Vegetable	9	54	9	54	7	39	8	46
Total Cost		297		340		289		304

The cost of supplementation for all items included in the ration was on average OI 304. This sum is equivalent to 46% of household income. This varied from 44% in

⁶ An average household is composed of seven members as per the survey result.

⁷ The costs of food items are average costs of these items in the year 2000 calculated from weekly price collected by WFP's observation unit in the three northern governorates.

⁸ The cost is calculated for 2.5 days, 5 days, 10 days, and 20 days only in order to calculate minimum required for each group except for 26-30 days category. For the group insufficiency is considered for 2.5 days (an average for the group)

Sulemaniyah to 52% in Erbil. See Table 6. The higher costs in Erbil were mainly due to lower access to rationed pulses, and therefore the greater need to purchase them outside the Oil for Food Programme ration.

Nutritionally Based Assessment

The sufficiency of the ration from a nutritional, rather than demand, perspective is examined below.

Table 7: Nutrient Available from Ration vs. Estimated Requirements

Nutrient	Contents of the Ration (June/July)	Average Requirement ⁹ (Population weighted)	Deficit/Excess ¹⁰
Food energy (kcal)	2,200	2,250	-50
Protein (g)	51	56-68 ¹¹	-5 to 17
Calcium (mg)	317	550	-233
Iron (mg)	13	22	-9
Iodine (g)	150	150	0
Thiamine (mg)	1.3	0.9	+0.4
Riboflavin (mg)	0.3	1.4	-1.1
Niacin (mg)	2.5	12	-9.5
Vit. A in RE	11	500	-498
Vit. C in mg	1	28	-27

The ration is supposed to provide for sufficient average food energy requirements. When food energy needs are met, other nutrient needs are also assumed to be met if sufficient variety is available. As illustrated in the Table 7, however, the ration is insufficient in most nutrients¹² other than food energy.

WFP recommendations stress a low fat diet aimed at reducing unnecessary food energy due to its contribution to obesity and chronic diseases. Higher fat intake is recommended in situations of emergent food shortage. Given the high current level of calorie consumption, restricted fat intake appears to be appropriate to northern Iraq today.

⁹ Population-weighted average requirements for Vitamin A, B1, B2, B12, C, D, Niacin, Iron, Iodine and Calcium adopted from WFP's Food and Nutrition Handbook. Requirements for Food Energy adopted from the same handbook at average atmospheric temperature of 35 degree Celsius. The requirements are calculated as population-weighted average for the household members collectively; individual requirements differ significantly depending upon activity level, age, sex and physiological condition.

¹⁰ The shortfall is calculated without making any allowance for possible wastage or guests.

¹¹ Calculate to provide 10-12% of the total food energy from protein in line with WHO technical reports.

¹² While there are more than 40 nutrients that are known to be essential for health and growth, the table lists only a few major nutrients as an example to assess the sufficiency.

Table 8: Foods Items Recommended¹³ vs. Availability in the Ration

Food Group	Recommended Quantities in kg¹⁴	Over/Deficit in the Ration
Bread, Cereals and Rice	43	+20
Vegetable	62	-62
Fruit	38	-38
Dairy product: milk, yoghurt	103	-78
Meat, poultry, pulses	38	-34 ¹⁵
Eggs (<i>in number</i>)	105	-105
Fats, oils, and sweets	Sparingly	+9

Table 8 presents recommended food quantities for a seven-person household according to USDA recommendations. Among the items not included in the ration, an average household should get supplements of 62kg vegetables, 38kg fruits, 34kg meat/poultry/pulses, 105 eggs and 78kg dairy products. These items constitute major sources of vitamins and minerals that are insufficient in the Oil for Food Programme ration. The total current cost for these items in the market is OId 1,692. See Table 9. If, however, meat/poultry and eggs were excluded and pulses fulfilled the entire requirement of this group, the cost of supplementation would decrease by a little more than a third, to OId 1076. These values represent, respectively, 2.6 and 1.6 times the average income.

¹³ The quantities are estimated from the United States Department of Agriculture (USDA) Food Guide Pyramid recommended to maintain a healthy life.

¹⁴ Various assumptions have been made to calculate the recommended quantities, including. i) the weight of different items in a group was averaged to calculate quantity required for each group ii) only those items that are commonly eaten in the region have been included in calculating the quantities for each group iii) the weight of uncooked food has been calculated by converting them to equivalent of cooked food (since the recommendation is for cooked food)

¹⁵ Average distributed for the past 47 months, although the planned ration was 10.5kg of pulses.

Table 9: Average Cost per Household to Acquire Recommended Quantities

Food Items	Cost Per kg in OI	Quantity Deficit /HH	Total Cost/HH Req. to Meet the Deficit
Vegetables	3.0	62	187
Fruits	5.1	39	194
Dairy Products	6.0 ¹⁶	78	470
Meat/Poultry/Eggs/Pulses	24.7 ¹⁷	34	841
Pulses (<i>no meat/poultry or eggs</i>)	10.6	21	227
Total cost in OI (<i>with meat/eggs</i>)			1,692
Total Cost in OI (<i>without meat/eggs</i>)			1,076

Nearly all households reported buying additional food items. A significant number of households had additional sources of food, such as self- production or donations from various humanitarian organisations working in the region. Table 10 lists foods available in an average household from all sources. An average household had more than enough wheat flour and rice and nearly enough pulses and dairy products. Sugar, tea and oil levels were less than adequate. As the milk type in the basket does not suit the taste and habit of those interviewed, it was reported to be insufficient for fewer days than if the item had been of a preferred type. This is also reflected in the higher consumption of other dairy product purchased on the local market.

Of the additional quantities available, 74%, 86%, 92% and 91%, respectively, of wheat flour/rice, pulses, sugar and oil were purchased. Foods not purchased were acquired from other sources, including WFP's supplementary feeding project.

There was a large variation in the amount of food reported to be available in households. If the 3% of the households reporting the highest food availability were excluded from analysis, the average quantities of available wheat, rice and pulses would be lower almost by half. See last column of Table 10. Further research is needed to assess the validity of responses from this 3% of households. Only the other 97% of households will be included below in further analyses.

At least 26% of recommended quantities of meat/eggs/pulses/poultry were acquired. Vegetables were supplemented the most, averaging 51% higher than recommended quantities. This may be due to the relatively low cost of vegetables compared with high quality proteins as well as their ready availability from local gardens. Indeed, if households acquired all recommended dietary supplements detailed above, they would cost about an

¹⁶ The price of milk is used (the cheapest among all dairy products and also one of the major component of the diet).

¹⁷ Calculation was based on one serving of pulses and meat each, and approximately ¼serving of egg per day (equivalent to 26kg of meat/poultry/month + 8kg of pulses/month and 105 eggs/month per household)

additional OID 450 not including meat or OID 900 including meat. The actual expenditure of close to OID 1000 provides 650 – 750 in value of recommended commodities, but as it provides mainly the inexpensive goods, it still leaves a considerable deficit of high-cost food commodities.

Table 10: Average Supplementary Requirements¹⁸ and Availability at Household Level, Northern Iraq (Source of supplement: bought/received/loaned)

Food Item (average kg/month)	Dohuk		Erbil		Sulemaniyah		North	
	Req.	Available	Req.	Available	Req.	Available	Req.	Available
Wheat/Rice/Bulgur	21.0	43.1 (278)	27.9	40.2 (322)	24.8	18.2 (44)	24.8	30.2 (183)
Pulses	2.7	5.8 (44)	5.3	6.2 (36)	4.0	1.4 (5)	4.0/21	3.9 (22)
Dairy product	6.1	15.8 (22)	7.4	28.8 (63)	7.4	6.4 (14)	11.6 /78	15.9 (33)
Sugar	6.0	3.3 (10)	5.1	4.4 (9)	4.3	3.8 (9)	5.1	3.9 (10)
Oil	3.8	1.8 (8)	3.8	3.7 (9)	2.7	2.8 (7)	3.2	2.9 (8)
Tea	0.5	0.4 (2)	0.4	0.6 (4)	0.3	0.5 (3)	0.3	0.5 (3)

Figures in parenthesis are standard deviations

Total food available is significantly greater than Oil for Food Programme rations. Items in the ration were supplemented by 34%. Pulses and dairy products were 60% and 53% higher, respectively, while other items were 15-33% higher. Items not included in the ration contributed considerably to the diet. These especially included vegetables and fruits.

Major nutrient contents of available food are presented below in the Table 11. Niacin was the only nutrient present in less than recommended quantities. All other major nutrients averaged higher than recommended levels. Food energy content was 54% above the population-weighted average requirement. This is similar to the average calories available in the pre-sanctions period (1984-1990) in Iraq.

¹⁸ The requirements for those items included in the ration are calculated for the average number of days the households reported the ration to be insufficient for. The quantities in parenthesis for dairy products and pulses are calculated for estimated requirements as per USDA recommendation when meat/poultry/eggs are not included in the diet.

Table 11: Nutrient Content of the Average Diet¹⁹

Nutrient	Contents of Available Food	Average Requirement (population weighted)	Over/Deficit
Food energy (kcal)	3,469 (1045)	2,250	+1,219
Protein (g)	95 (33)	56-68 ²⁰	+39-27
Calcium (g)	1083 (485)	550	+533
Iron (mg)	29 (11)	22	+7
Iodine (micro g)	150 (0)	150	0
Thiamine (mg)	2.4 (1)	0.9	+1.5
Riboflavin (mg)	1.7 (1)	1.4	+0.3
Niacin (mg)	7.1 (5)	12	-4.9
Vit. A in RE	1692 (977)	500	+1192
Vit. C in mg	241 (146)	28	+213

(Figures in the parenthesis are standard deviations)

Table 12: Total Cost for Reported Supplementation

Food Item Average kg/Monthly	Dohuk		Erbil		Sulemaniyah		North	
	Supple.	Cost in OID	Supple.	Cost in OID	Supple.	Cost in OID	Supple.	Cost in OID
Wheat/Rice/Bulgur	19	86	19	86	15	69	17	78
Meat/Chicken	7	169	13	335	7	166	9	227
Eggs (number/mon.)	0	0	13	12	28	25	18	16
Pulses	2	21	3	30	1	12	2	20
Dairy product	14	87	21	126	6	36	13	77
Vegetables	76	229	141	425	72	219	97	294
Fruit	41	211	42	214	41	210	41	212
Sugar	3	15	3	17	3	20	3	18
Oil	1	18	2	35	2	31	2	30
Tea	0	9	0	9	0	13	0	11
Total Cost		845		1289		802		983

¹⁹ It is assumed the total quantities available at household level are used for consumption. Only contribution from the ration and supplements from procurement/loan/receipt were included. Nutrient contributions from vegetables and fruits were calculated as averages of the ten most commonly eaten vegetables and fruits each.

²⁰ Calculated to provide 10-12% of the total food energy from protein in line with WHO technical reports.

Approximately 21% of households have access to land and 17% were actually cultivating it. Some 9% had a backyard garden where they produced vegetables and fruits. These households will be excluded from the analysis of food availability below.

Households supplement other food items to make the diet more complete. On average 75% of the requirements for food items not included in the ration were supplemented from one or more sources.

Table 13: Average Household Expenditure on Food in OID

	Dohuk	Erbil	Sulemaniyah	North
Average HH Expenditure on Food	558 (488)	816 (779)	517 (320)	631 (512)
Average Total HH Expenditure	1,556 (312)	2,160 (538)	1,440 (331)	1,716 (1,799)
Food as a Percent of Total Expenditure	36%	37%	36%	36%
25 th Percentile (expenditure on food)	300	400	300	336
75 th Percentile (expenditure on food)	700	1,000	600	759

(Figures on the parenthesis are standard deviations)

Households reported spending an average 1,716 OID per month. See Table 13. 58% of households reported that expenditure in the last month was not typical. This group reported lower average monthly expenditure at OID 1,236. Some 25% of households spent less than OID 337; another 25% spent more than OID 760.

IV.4. INCOME

Ninety nine percent of households reported a regular source of income. Of this, 46% of households had one member who was regularly employed. See Table 14. An additional 36% of households had a member engaged in casual work. Another 15% of households had members with both regular and casual work. About 3-4% of households had no work at all. Among this last group, the pension was the only source of income for about 2% of households.

Table 14: Income Source of Household

Type of Work	Dohuk	Erbil	Sulemaniyah	North
Percentage of HH having Regular Work	47	37	51	46
Percentage of HH Having Casual Work	35	43	31	36
Percentage of HH Having Both Regular & Casual Work	9	16	17	15
Percentage HH who do not have Regular or Casual Work	9	4	1	3
Percentage of HH receiving pension	14	14	5	9
Percentage HH receiving gift or "Zakat" in past six months	11	12	8	10

Average monthly household income in the three northern governorates was OI 722 for those with regular work and OI 650 for those with casual work. See Table 14. A weighted average of these two groups generates an average income of OI 690 (about USD 38) for those with casual or regular work. On average 9% of households also received a pension. Average income of households only receiving a pension was OI 238. Most of those who worked receive their payment in cash; only 4% receive it in kind.

Table 15: Employment and Average Income of the Household

	Dohuk	Erbil	Sulemaniyah	North ²¹
Avg. number of regular employees per HH	1	1	1	1
Avg. number of casual workers per HH	1	1	1	1
Average income from regular work ²²	757(335)	756 (304)	646 (314)	722 (314)
Average income from casual work ²³	648 (334)	658 (332)	646 (301)	650 (318)
Average income from regular and casual work ²⁴	1,144 (473)	1,096 (552)	884 (439)	1,004 (485)

More than six percent of households had an income lower than OID 200 per month. See Table 15. Another 11% earned between OID 200 – 399. These levels of income were insufficient to purchase sufficient foods to supplement the ration.

Table 16: Income Level Among Households with Only One Income Source

Old Iraqi Dinar (OID)	Dohuk	Erbil	Sulemaniyah	North
< 200	8.4	7.1	5.4	6.5
200 – 399	10.6	8.7	12.3	10.7
400 – 599	18.1	18.2	18.5	18.4
600 – 799	13.4	17.2	18.6	17.2
800 – 999	7.1	7.6	8.8	8.1
> 1000	27.5	23.9	18.6	22.0
Total	85.2	82.8	82.3	83*

*Of the remaining 17%, about 15% have both casual and regular work and about 2% have no source of income (Figures in parenthesis are standard deviations)

The average income of households with both regular and casual work was about OID 1,000. This was 45% higher than households with only regular or casual work. The proportion of households with income from both regular and casual work was highest in

²¹ All figures for the North are population weighted average

²² Among households with regular work only

²³ Among households which have casual work only

²⁴ Among households with both regular and casual work. The average income assumes the average income of those households earning above 1,000 OID to be 1,100. If the average were 1,500 for this group, the average income from regular work, casual work and regular/casual work increases would increase by OID 100 to OID 841, 744 and 1,125 respectively.

Sulemaniyah, but the average income from combined work was still lower by OI 260 than in Dohuk. This suggests that reimbursement was higher in Dohuk. See Table 16.

About 10% of households reported receiving gifts (including remittances from relatives living abroad) or “Zakat” during the six-months prior to the survey, either in cash or in kind. The tradition of giving “Zakat” to the poor has been used as an indicator of vulnerability by previous researchers. However, even though “Zakat” is traditionally levied on the richer members as a means of distribution of wealth, the households receiving “Zakat” may not represent the poorest in the community. “Zakat” is often given to poorer relatives rather than to the unrelated needy.

The questionnaire did not distinguish between the remittance from abroad and “Zakat”. An average household’s income in cash and/or kind from “Zakat” was OI 85 per month. Twenty three percent of households receiving gift/Zakat got OI 1,000 or more in cash. This group’s income is among the top 20% of all households. It is assumed that many of them received funds as remittance from abroad. A small proportion of households (3%), received “Zakat” in kind, with an equivalent cash value of OI 624.

The total cost of supplementation for an average household, if all items were purchased, was calculated at OI 983. This is 42% greater than an average monthly household income. Average expenditure on food accounted for 91% of the total current income. Average household expenditure was higher than the average income; 66% reported borrowing money in the past six months. Reasons for borrowing included buying food (35%), medical costs (28%), business (16%) and other purposes (21%). About 22% of households reported to have sold household assets. These included refrigerators (2.6%), gold (2.4%), carpets (2.3%), TVs (2.2%), furniture (2%), air-coolers (1.5%), and freezers (0.9%). The primary purpose of selling household assets was to buy food (14%), pay for medical care (10%), and buy clothing and shoes (4%).

V. CONCLUSIONS

The results are consistent with and extend most of the findings from the regular observation/monitoring system. The food ration is widely considered to be insufficient as the sole source for food. Almost all families supplement the ration with foods that are grown or purchased. This supplementation strategy is largely successful in providing needed nutrients. The quantity and quality of the diet in an average household considerably exceeds the population-weighted requirements for most major nutrients.

Food is readily available to and generally affordable for most people in northern Iraq. Variations by governorate were minor; the greatest variation was related to a shortfall in the provision of pulses on the ration in Erbil. With few exceptions, food items on the ration are well accepted. Indeed, the population appears to be highly satisfied by these rations. The same items included in the Oil for Food Programme ration were supplemented by more than 30% in market purchases. Items not included in the ration, especially fruits and vegetables, were consumed in large amounts. An average household consumed

sufficient amounts of practically all major nutrients and had more than 50% excess food energy consumption. This level of calorie consumption was similar to the Iraqi average levels prior to sanctions.

Nonetheless, large variations exist in the reported duration of the ration, quantity of supplemental food acquired, quality of overall diet, and percent of income used to acquire additional food. Households reporting a greater need for supplemental foods did, on average, acquire more food. They also had a higher proportion of overweight adults. The situation is quite different for the 20% of the population without funds to acquire adequate supplemental food. These are among the most vulnerable households and those who can be expected to benefit most from targeted food aid like the supplemental feeding programme.

Income is the main determinant of access to supplemental food. The average monthly household income for households that do not grow their own food was OI 690²⁵ (USD 37). The purchase of food consumed 91% of income and represented 37% of total household expenditures.

Variations in income levels were great. Families acquire additional resources from loans, charity, remittances, and selling of household goods. It appears that many people are spending beyond their means to re-establish a pattern of consumption enjoyed in the more affluent past. This pattern of consumption appears to be unsustainable in the long-term and may contribute to impoverishment in the short term.

Further research is needed on patterns of resource generation and utilization to assess the accuracy and sustainability of these household finance dynamics. Information in this survey about sources and amounts of income provides important information about the general living status. Further information on types of employment, levels of familial assets, spending priorities and characteristics of remittance income would provide a fuller picture of people's economic and social status. These topics should be included in future research endeavours.

In the short term, in northern Iraq, there is a continuing need to identify and supply vulnerable households and individuals with supplemental food. In the medium term, there is a need to increase production or otherwise reduce the cost of supplemental foods. In the longer term, there is a need to modify nutritional patterns to reduce excess calorie consumption and decrease dependence on UN-administered rations.

The supplemental food distribution program provides an excellent opportunity to engage in individual and community-oriented nutritional information and education activities to encourage these changes. The program addresses the felt needs of many of the most vulnerable and thus is well received. It is these same vulnerable people who most need nutritional education to improve child-feeding practices and the efficacy of their limited purchasing power.

²⁵ Since the data collection format contained ranges for reporting income, the highest range being OI 1,000 and above, the average was calculated by assuming average of OI 1,100 income for the proportion of households who reported their income to be OI 1,000 and over. If the average for this group is assumed to be OI 1,500, then the average income for 83% of the population increases by 123 OI, i.e. average income will be OI 813.

ANNEX 1 (Source: FAO 1996)

IRAQ PER CAPITA FOOD SUPPLY

YEAR	1964-66	1969-71	1974-76	1979-81	1982-84	1984-86	1987-89	1989-91	1992-94	1994-96
Population (in thousands)	7980	9360	11024	13010	14337	15329	17015	18057	19270	20117
KILOGRAM/YEAR										
Cereals - excl. Beer	144.3	157.1	159.4	196.2	220.0	232.5	237.1	218.0	156.1	139.1
Starchy Roots	5.6	4.3	7.1	8.6	9.3	8.9	8.7	10.2	17.0	17.0
Sweeteners	29.7	33.2	36.0	34.3	33.7	35.6	35.3	25.4	18.3	15.3
Pulses	5.2	4.9	5.2	5.1	5.8	5.7	5.4	4.6	3.0	2.4
Nuts and Oilseeds	2.2	2.0	1.5	1.6	1.4	1.4	1.5	1.7	2.2	2.1
Vegetables	112.6	118.9	96.8	97.0	118.0	130.5	117.0	107.9	105.5	107.1
Fruits - excl. Wine	90.8	98.7	94.2	104.8	124.1	129.0	106.4	99.7	95.7	89.2
Meat	14.3	14.4	13.2	19.5	27.0	28.1	26.6	17.2	7.5	7.3
Eggs	1.8	2.5	3.0	4.7	5.8	6.0	4.6	3.2	2.2	1.8
Fish, Seafood	2.2	2.7	2.4	3.5	1.6	1.4	1.1	0.9	1.2	1.1
Milk - excl. Butter	60.2	58.8	60.4	76.7	78.0	75.8	62.8	46.3	19.9	18.0
Oils and Fats	7.5	7.0	7.1	12.4	15.7	17.8	18.9	14.2	15.0	23.7
Spices	0.2	0.5	0.2	2.0	0.1	0.1	0.1	0.1		
Stimulants	2.4	2.2	2.4	2.7	2.9	3.0	3.1	2.4	1.0	0.8
Alcoholic Beverages	1.2	1.4	2.3	3.8	4.3	4.3	4.3	3.8	3.5	3.9
CALORIES (NUMBER/DAY)										
Grand Total	2137.0	2257.0	2318.0	2828.0	3173.0	3368.0	3376.0	2931.0	2267.0	2262.0
Vegetable Products	1907.0	2032.0	2104.0	2566.0	2879.0	3076.0	3118.0	2744.0	2167.0	2175.0
Animal Products	230.0	226.0	213.0	262.0	294.0	292.0	258.0	187.0	100.0	87.0
Cereals - excl. Beer	1249.0	1346.0	1362.0	1693.0	1896.0	2004.0	2046.0	1883.0	1365.0	1212.0

Year	1964-66	1969-71	1974-76	1979-81	1982-84	1984-86	1987-89	1989-91	1992-94	1994-96
Starchy Roots	10.0	8.0	13.0	17.0	18.0	17.0	17.0	21.0	35.0	35.0
Sweeteners	290.0	323.0	351.0	334.0	329.0	346.0	343.0	248.0	178.0	149.0
Pulses	33.0	30.0	36.0	41.0	50.0	51.0	49.0	40.0	20.0	15.0
Nuts and Oilseeds	15.0	15.0	10.0	11.0	9.0	9.0	10.0	13.0	16.0	15.0
Vegetables	73.0	76.0	60.0	63.0	76.0	85.0	76.0	69.0	65.0	65.0
Fruits - excl. Wine	85.0	88.0	120.0	130.0	144.0	154.0	133.0	141.0	144.0	137.0
Meat	84.0	82.0	72.0	98.0	134.0	138.0	128.0	86.0	39.0	34.0
Eggs	7.0	10.0	12.0	18.0	22.0	23.0	18.0	12.0	8.0	7.0
Fish, Seafood	4.0	5.0	4.0	7.0	3.0	3.0	2.0	2.0	2.0	2.0
Milk - excl. Butter	99.0	96.0	96.0	108.0	106.0	101.0	86.0	66.0	33.0	29.0
Oils and Fats	178.0	166.0	168.0	293.0	371.0	421.0	449.0	333.0	346.0	549.0
Spices	2.0	5.0	2.0	2.0	1.0	1.0	1.0	1.0		
Stimulants	3.0	3.0	3.0	3.0	4.0	4.0	4.0	3.0	2.0	1.0
Alcoholic Beverages	5.0	5.0	8.0	9.0	10.0	10.0	9.0	8.0	8.0	8.0
Miscellaneous							5.0	6.0	3.0	2.0
PROTEIN (GRAMS/DAY)										
Grand Total	57.5	60.5	60.4	74.2	83.7	87.4	85.6	74.9	52.1	47.1
Vegetable Products	44.2	47.0	47.2	56.5	63.7	67.3	67.7	62.5	46.1	41.5
Animal Products	13.3	13.5	13.2	17.6	20.0	20.2	17.9	12.4	6.0	5.5
Cereals - excl. Beer	35.9	38.6	39.0	47.7	53.5	56.4	57.4	53.1	38.0	33.9
Starchy Roots	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.5	0.5
Pulses	2.3	2.2	2.5	2.7	3.3	3.3	3.1	2.6	1.4	1.0
Nuts and Oilseeds	0.3	0.4	0.2	0.3	0.2	0.2	0.3	0.4	0.5	0.5
Vegetables	3.7	3.8	3.1	3.2	3.8	4.3	3.8	3.5	3.4	3.4

Year	1964-66	1969-71	1974-76	1979-81	1982-84	1984-86	1987-89	1989-91	1992-94	1994-96
Fruits - excl. Wine	1.1	1.2	1.4	1.6	1.8	1.9	1.7	1.7	1.7	1.7
Meat	5.6	5.6	5.1	7.4	10.1	10.5	9.9	6.4	2.8	2.7
Eggs	0.5	0.7	0.9	1.4	1.7	1.8	1.3	0.9	0.6	0.5
Fish, Seafood	0.6	0.8	0.7	1.1	0.5	0.4	0.3	0.3	0.4	0.3
Milk - excl. Butter	6.5	6.3	6.5	7.8	7.7	7.5	6.2	4.7	2.2	2.0
Oils and Fats					0.1	0.1	0.1	0.1	0.1	0.2
Spices	0.1	0.2	0.1	0.1						
Stimulants	0.6	0.6	0.7	0.7	0.8	0.8	0.8	0.6	0.3	0.2
Miscellaneous							0.2	0.2	0.1	0.1
FAT (GRAMS/DAY)										
Grand Total	44.1	42.5	41.0	58.5	71.0	77.0	78.5	61.1	55.6	76.7
Vegetable Products	27.2	26.0	25.9	41.1	51.0	57.2	60.9	48.0	48.1	70.3
Animal Products	16.9	16.5	15.1	17.4	20.0	19.8	17.7	13.1	7.5	6.4
Cereals - excl. Beer	7.2	6.9	6.8	8.4	9.3	9.7	9.9	9.7	7.6	6.7
Pulses	1.5	1.5	1.3	0.9	0.7	0.7	0.6	0.6	0.8	0.7
Nuts and Oilseeds	1.4	1.4	1.0	1.0	0.9	0.9	1.0	1.1	1.4	1.4
Vegetables	0.5	0.6	0.5	0.5	0.6	0.6	0.6	0.5	0.5	0.5
Fruits - excl. Wine	0.4	0.4	0.5	0.5	0.6	0.7	0.6	0.6	0.6	0.5
Meat	6.7	6.4	5.5	7.4	10.1	10.3	9.5	6.4	2.9	2.4
Eggs	0.5	0.7	0.8	1.3	1.6	1.7	1.3	0.9	0.6	0.5
Fish, Seafood	0.2	0.2	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.1
Milk - excl. Butter	5.7	5.5	5.3	5.0	5.1	4.7	4.1	3.4	1.9	1.7
Oils and Fats	20.0	18.7	19.0	33.1	41.9	47.6	50.8	37.6	39.1	62.0
Spices	0.1	0.2	0.1	0.1	0.1	0.1				

ANNEX II

ENERGY (Kcal) CONTENT OF THE GENERAL FOOD RATION

PHASE	MONTH	Full MOU	Actual	End-User	
		Food Basket	Food Basket	Availability	
VIII	Jun-00	2,472	2,199	89%	Average (Phase VIII): 2,203 89%
	Jul-00	2,472	2,222	90%	
	Aug-00	2,472	2,199	89%	
	Sep-00	2,472	2,199	89%	
	Oct-00	2,472	2,199	89%	
	Nov-00	2,472	2,199	89%	
IX	Dec-00	2,472	2,471	100%	Average (Phase IX): 2,214 90%
	Jan-01	2,472	2,141	87%	
	Feb-01	2,472	2,157	87%	
	Mar-01	2,472	2,128	86%	
	Apr-01	2,472	2,157	87%	
	May-01	2,472	2,228	90%	
X	Jun-01	2,472	2,251	91%	Average (Phase X): 2,234 90%
	Jul-01	2,472	2,251	91%	
	Aug-01	2,472	2,185	88%	
	Sep-01	2,472	2,203	89%	
	Oct-01	2,472	2,257	91%	
	Nov-01	2,472	2,257	91%	

PROTEIN VALUE (GRAMS) OF THE GENERAL FOOD RATION

PHASE	MONTH	Full MOU	Actual	End-User	
		Food Basket	Food Basket	Availability	
VIII	Jun-00	60.20	48.15	80%	Average (Phase X): 48.41 80.41%
	Jul-00	60.20	49.70	83%	
	Aug-00	60.20	48.15	80%	
	Sep-00	60.20	48.15	80%	
	Oct-00	60.20	48.15	80%	
	Nov-00	60.20	48.15	80%	
IX	Dec-00	60.20	49.42	82%	Average (Phase X): 46.65 77.49%
	Jan-01	60.20	44.27	74%	
	Feb-01	60.20	46.02	76%	
	Mar-01	60.20	44.08	73%	
	Apr-01	60.20	46.02	76%	
	May-01	60.20	50.09	83%	
X	Jun-01	60.20	51.65	86%	Average (Phase X): 50.74 84.29%
	Jul-01	60.20	51.65	86%	
	Aug-01	60.20	47.96	80%	
	Sep-01	60.20	49.12	82%	
	Oct-01	60.20	52.03	86%	
	Nov-01	60.20	52.03	86%	