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Baseline Food Security Analysis in Iraq

WFP IRAQ COUNTRY OFFICE

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Contents

List of abbreviations

ARI	Acute Respiratory Infections
CPA	Coalition Provisional Authority
CSI	Coping Strategies Index
CSO	Central Statistic Office
FIVIMS	Food Insecurity Vulnerability Information Mapping Systems
FAO	Food and Agriculture Organization
GIS	Geographic Information Systems
GOI	Government of Iraq
IDPs	Internally Displaced Population
MOE	Ministry of Education
MOH	Ministry of Health
MOPDC	Ministry of Planning and Development Cooperation
MOT	Ministry of Trade
NDVI	National Data on Vegetation Index
NGO	Non Governmental Organization
NRI	Nutrition Research Institute
OFFP	Oil-for-Food Programme
PDS	Public Distribution System
PCA	Principal Component Analysis
SCR	Security Council Resolution
UN	United Nations
UNDG	United Nation Development Group
UNICEF	United Nations Children's Fund
VAM	Vulnerability Analysis and Mapping
WB	World Bank
WFP	World Food Programme
WHO	World Health Organization

WHO definitions for Malnutrition:

Chronic malnutrition (Stunting) - Gaining insufficient height relative to age.

Acute malnutrition (Wasting) - Insufficient weight relative to height or losing weight.

Executive Summary

Background

WFP has been operating in Iraq for more than a decade. During the early 1990s and following the aftermath of the Gulf War, WFP's emergency operations centered on providing food aid assistance to malnourished children, women, IDPs and other vulnerable groups. By 1995-96, as the negative impact of sanctions began to devastate Iraq's economy, the UN Security Council passed Resolution 986 (SCR986) establishing the Oil for Food Programme (OFFP). WFP's mandate within the OFFP framework was to observe whether food and non-food commodities were efficiently and equitably distributed and used for their intended purpose. By the end of 2002, as evidence mounted that a new war was imminent, WFP and partner UN agencies shifted their efforts towards contingency planning and emergency preparedness activities. In early 2003, WFP launched its largest emergency operation, which involved the delivery into Iraq of 2.1 million metric tons of food over six months and helped avert a major food crisis.

Today, many of the political, social, and economic institutions in place prior to the 2003 war have either been dismantled or are currently being reviewed. One of the most visible institutions included within this review is the Public Distribution System (PDS), which currently provides monthly food rations to all Iraqis. The implications of such reform, however, are enormous. Policymakers involved in this process need to have access to accurate information to support the decision-making process. In this context, WFP in partnership with Iraq's Ministry of Planning and Central Statistics Office and the Ministry of Health's Nutrition Research Institute, launched the Baseline Food Security Study.

Objectives

During the sanctions era, little was known about the food security situation in Iraq. The political environment did not allow for large-scale food security surveys. The baseline analysis of food security for Iraq, based on data collected in the second half of 2003, intends to assess both food security and vulnerability within the context of potential policy reforms of the PDS.

Methodology

Two sets of primary data were collected at community and household levels. Data include estimates of household income and expenditures, food expenditures, household size, characteristics of heads of households, anthropometric measures of childhood malnutrition and coping strategies data describing household behavior when faced with food shortages. The data collected allowed for the relative comparison of the total number of calories accessible to each wealth group.

Data analysis included the utilization of a statistical tool, the Principal Components Analysis (PCA), which was used to identify the interrelationships between key variables such as poverty, malnutrition, PDS dependency and coping strategies. The PCA was followed by a cluster analysis to create groups of districts characterized by similar profiles of the selected variables.

Food availability data was drawn mostly from secondary sources. Food access dimensions were captured through income and expenditure data, while food utilization was depicted through the use of malnutrition indicators (stunting, wasting and underweight). Vulnerability was represented through measures of PDS reliance.

Findings

The PDS represents the single most important variable with regards to food insecurity analysis for Iraq. It is particularly important for food availability and access, and to a lesser extent food utilization. A summary of the findings is presented below:

The combined availability of food from domestic production, the PDS and commercial imports is sufficient to meet the food needs of a large part of the population.

However, food insecurity persists in Iraq. A significant segment of the population faces real difficulties in accessing adequate food and many others are vulnerable because of their high PDS dependency. Without the food ration, many lower-income households would not be able to meet their food requirements.

- In total, approximately 25 percent of the Iraqi population is highly dependent on the PDS.
- Approximately 11 percent of the households in Iraq, roughly 2.6 million people, are extremely poor and food insecure despite the PDS.
- If the PDS were discontinued, an additional 3.6 million people would face a high probability of becoming food insecure.

The Principal Components Analysis allows for the identification of four main groups of districts characterized by different levels of extreme poverty, malnutrition, dependency on the national safety net system and use of food-related coping strategies.

Two groups of districts are of concern with regard to food insecurity:

- A first group of 28 districts with a high level of extreme poverty, but also characterized by high levels of malnutrition, represents roughly 5.8 million people.
- A second cluster of eight districts with a high prevalence of malnutrition (chronic 34.8 percent, wasting 13.8 percent). The population of this group is approximately 1.4 million people.

Food insecurity is largely attributable to the insufficiency of the PDS to provide adequate food for Iraq's poorest households.

- The extreme poor lack sufficient income to supplement these deficiencies through market purchases.
- Low purchasing power is associated with high rates of unemployment, underemployment and illiteracy, particularly in rural areas. Female-headed households are in general more likely to be vulnerable to poverty.

The level of food insecurity is determined not only by access and availability of food, but also its utilization, which is directly related to nutritional outcomes. Data analysis indicates that:

- Acute malnutrition (wasting rates) for children under 5 within the sample is 4.4 percent, underweight 11.5 percent, and chronic malnutrition or stunting is 27.6 percent.
- In 36 districts, the data reveal significantly higher rates of malnutrition compared to the national average. Acute malnutrition is particularly high for 13 of these districts, with wasting rates as high as 13-14 percent.

Policy and Programming

There is a growing consensus that the current policy of PDS universal coverage

should not continue indefinitely. A discussion on Iraq's potential for greater food security, within the context of PDS reforms, is summarized below:

- Food availability is deemed sufficient. PDS reform would imply a shift from state-subsidized imports towards greater reliance on commercial food imports and domestic production. Self-sufficiency through domestic production, however, is unlikely in the short or medium term. The role of private commercial imports is likely to expand, but a number of initiatives would need to be implemented, including, among others, improvement of the infrastructure and the banking system.
- Iraq's food insecurity and vulnerability is primarily attributable to insufficient food access, which is concentrated within the poorest segment of the society. For this group, the PDS ration represents by far the single most important food source in the diet. Social protection mechanisms targeting these groups should be carefully considered in the context of possible PDS reforms.
- Job creation is key to reducing vulnerability to food insecurity. Private and public sector job creation activities, including labor-intensive Public Works Programmes, could serve the dual purpose of improving infrastructure and transferring cash to Iraq's poorest households.
- A household's purchasing power is determined not only by income, but also by market price levels. If the food supply through the PDS diminishes significantly, the price variability may compromise access to food through the markets. The monitoring of market prices would enhance the policymaker's capacity to take timely, remedial actions that would reduce the potential risks of price-related shocks.
- In the short term, Iraq's poorest households will continue to be highly dependant on the PDS. Supply shortfalls impact disproportionately on poorer households given their higher dependency rates. Effective PDS operations require good management and integration of resources and the capacity to respond to inefficiencies as they arise.
- Food utilization is directly linked to the nutritional status of the population, which in Iraq continues to be a significant problem. While chronic malnutrition rose after the war, rates of acute malnutrition appear to have stabilized. Insufficient nutrients and poor infrastructure and services, including, for example, health care, water and sanitation have contributed to food utilization problems. Water quality and poor feeding practices have been identified as major issues. The causes of malnutrition need to be examined more closely.
- High rates of stunting indicate that protein-energy malnutrition remains problematic and malnutrition caused by insufficient micro-nutrient intake needs to be examined and addressed.
- As a means for increasing access to nutrients, the possibility of integrating the PDS food basket with other commodities has been considered. While such an option could result in nutritional gains for beneficiaries, it could also contribute to increased dependency.

Ensuring food security for the most vulnerable in the context of PDS reform

Until the longer term benefits of economic growth and recovery are realized, many of Iraq's poorest households will require additional assistance. Should the PDS be discontinued, the magnitude of food insecurity would increase and thus the need for

ensuring forms of social protection for those segments of the population that are most likely to become food insecure.

Food aid could be used to address food-related causes of malnutrition and at the same time be used to encourage initiatives of awareness aimed at improving healthcare and feeding practices, food consumption habits, hygiene, water and sanitation.

WFP has recently launched a new emergency project, which aims at establishing safety nets targeting those most vulnerable to food insecurity. The project will concentrate on districts where extreme poverty and malnutrition rates were assessed as particularly high.

Capacity Building

The need for national institutions to have a strong food security analysis and monitoring capacity is evident. Food security conditions need to be closely monitored at all levels. The responsibility for either creating new capacity, or for strengthening the existing ones, lies with Iraqi national institutions. Human and institutional resources exist, but need strengthening. A Food Security Monitoring Unit would need to be established to ensure the production and dissemination of accurate information needed to support effective policies and programmes addressing food insecurity.

WFP's project contains a capacity building component whose objective is to enhance food security monitoring and allow for an update of the findings of this report.

Conclusion

Food insecurity persists in Iraq, despite the PDS. Districts with high incidence of extreme poverty and malnutrition are the most vulnerable to food insecurity. Interventions aimed at addressing unemployment and malnutrition, which target households in these areas, should be considered.

Instability hinders reconstruction efforts and economic recovery. Chronic poverty, a lack of job opportunities, inadequate purchasing power and the need for a diversity in diet, are all key factors that contribute to Iraq's food insecurity. Although the complete eradication of food insecurity is not realistic in the short term, effective social protection systems can help in minimizing vulnerability.

Policies designed to enhance food security would need to reflect an accurate understanding of the nature and causes of Iraq's current food insecurity and the unique circumstances that perpetuate it. There is consensus on the need for a shift towards a more targeted and efficient system for providing 'needs-based' social protection.

Given the unique circumstances of Iraq and the continuation of the PDS, food aid could play a relevant role in addressing the needs of the most vulnerable sectors of the population and the food-related causes of malnutrition. In addition to food access and availability issues, adequate attention should be given to food utilization, including care practices (child care, feeding practices, eating habits, nutritional awareness) and other social and environmental dimensions, such as adequate water and sanitation, public health care, hygiene, food safety and food quality.

A coordinated effort involving multiple institutions – including not only Iraqi line ministries, but also donor countries, UN agencies, the World Bank, NGOs, academia and the private sector - would be needed to maximize the efforts put in place by all stakeholders to minimize food insecurity.

Introduction

This report represents a baseline analysis of food security for Iraq using data collected during the second half of 2003. Its purpose is to assess both current food security and vulnerability within the context of potential policy reforms to the food based rationing system known as the Public Distribution System (PDS).

A brief 'overview' follows: section 1 provide a history of WFP's operations in Iraq and explains some of the conditions and events which gave rise to the launching of the survey. Section 2 outlines the study objectives. Section 3 presents the conceptual framework and covers basic food security concepts and definitions. Section 4 addresses data collection, analysis, methodology and tools. Section 5 focuses on the main findings and addresses key questions such as:

- Who are the food insecure?
- How many are they?
- Where do they live?
- Why are they food insecure?
- What is the magnitude of the problem?

Section 6 addresses policy planning and programming implications for reducing food insecurity and vulnerability and highlights Iraq's need for a strong food security analysis and monitoring capacity. Conclusions and a summary of recommendations are presented in section 7, the final section of the report.

1. Background

WFP has been operating in Iraq for more than a decade. Following the 1990 Gulf War, WFP's operations focused on the provision of emergency assistance to malnourished children, women, Internally Displaced Persons (IDPs), and other vulnerable groups. By 1995-96, as the negative impact of sanctions began to devastate Iraq's economy, the UN Security Council passed Resolution 986 (SCR986), which established the Oil for Food Programme (OFFP). Under the terms of the OFFP the Government of Iraq was allowed to utilize oil revenues for the purchase of humanitarian goods, including food items. WFP's mandate within the OFFP framework was to observe whether food and non-food commodities were efficiently and equitably distributed and used for their intended purpose and, in the three northern governorates of Erbil, Dahuk and Sulaymaniyah, to implement food distribution on behalf of the Government of Iraq (GoI). Between 1996 and early 2003, more than one million observations of the food distribution process and the end use of commodities procured by the GoI were carried out.

By the end of 2002, as evidence mounted that a new war was imminent, UN agencies shifted their efforts towards contingency planning and emergency preparedness activities. The population's extreme dependency on food rations distributed through the PDS and the risk that war-related disruptions to the food supply chain could trigger a large scale humanitarian disaster, provided much of the WFP focus for pre-war contingency planning exercises. At the beginning of 2003, WFP began a massive scaling up of existing capacity with a focus on logistics and food aid delivery operations to support the PDS. These activities paved the way for what was to become WFP's largest emergency operation in history. An unprecedented 2.1 million metric tons of food commodities were dispatched to Iraq in only six months.

Other pre-war developments which are not often cited but which undoubtedly contributed much to the avoidance of a food crisis included the GOI decision to distribute advance monthly food rations to all Iraqi households before the war. Most Iraqi families were able to build up a household food buffer stock through the advances, thus mitigating much of the risk associated with potential supply disruptions. As a result, between March and June 2003, the PDS as a national food-based safety net performed arguably well, given that no large-scale food crises were reported during or after the war.

Since the end of the 2003 war, in a climate of violence and uncertainty, the challenging nation building and reconstruction efforts have continued. Many of the political, social and economic institutions associated with the previous regime have either already been dismantled or are currently being reviewed, including the PDS.

The importance of the PDS reform, which would shift from providing a monthly food entitlement to all Iraqis towards a more targeted food distribution, is hardly in doubt. Several factors would have to be considered in the policy debate that is only at its onset, including:

- The existing perception of the PDS among the population: the monthly food distribution symbolizes national social protection and food security and is considered by a large part of the Iraqis as a 'granted' entitlement;
- The heavy load of the PDS (procurement and operational costs) on public expenditures and its implications for budgetary issues;

- The general perception that in the short term, the continuation of the PDS would contribute to social stability, while in the medium-long term the continuation of food distribution to all Iraqis would be counterproductive to the country's broader economic strategies geared towards the creation of a market economy.

As the reform of the food distribution scheme will affect the entire Iraqi population, policy makers need to have access to relevant, reliable and current information to support the decision-making process. Information on social entitlements, food security, vulnerability, nutrition, poverty, markets, and public and private sector capacity, are but a few of the themes that will require adequate coverage.

It is from this forward looking context that WFP in partnership with Iraq's Ministry of Planning and Central Statistics Office (CSO) and the Ministry of Health's Nutrition Research Institute (NRI) launched the baseline food security study. It is the authors' hope that the report will be useful for policy makers, planners, programming staff and the larger civil society community concerned with food security and safety net issues. The aim of the assessment is to present a comprehensive description of the food security, vulnerability and PDS dependency in Iraq.

2. Objectives

Policy and planning issues such as 'how important is the current PDS in terms of ensuring Iraq's food security', 'what is the extent of PDS dependency' and 'how might a reformed PDS system allow for greater targeting efficiency while maintaining social safety net coverage of vulnerable groups' were central questions in terms of study design, analysis and reporting.

More specifically, the two main study objectives are:

- To obtain a more complete understanding of the food security status of the Iraqi population;
- To obtain a better understanding of the vulnerability status of particular groups within Iraq, in the event of a PDS reform.

In addition, the study was designed to shed light on a number of related issues and questions:

- What is the value of the food ration from a community/household perspective?
- How dependant are households on the PDS with regards to food security?
- How does the value of the food ration compare with other household income such as salaries and wages?
- Which groups are likely to continue to need assistance in the event of safety net and PDS reform? (Who, why, how many, where)?
- To what extent might targeted and selective assistance reduce or eliminate food insecurity?
- How best can the existing capacity of national institutions be utilized or strengthened for future food security analysis and monitoring activities?
- What is the best strategy and means for information dissemination and sharing, that will maximize the potential usefulness of the outputs?

The following section describes the conceptual framework used to analyze food security and provides definitions of the terms (food security, vulnerability, etc.) used in the document.

3. Food Security Conceptual Framework: Key Concepts and Definitions

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 (World Food Summit, 1996).

Many factors contribute to determine food security: any attempt to analyze or measure it requires an understanding of the physical, social and economic components of food security and their inter-relationships.

The concept of food security has evolved over time. Whilst originally experts tended to look at 'food availability' (agricultural production, stocks, food imports and population's/countries' food self-sufficiency ratios), by the early 1980's the Nobel Laureate Amartya Sen introduced a more comprehensive definition, which included not only 'food availability', but also entitlements and 'food access'. Food access (i.e. the household's ability to acquire food) includes variables such as income, purchasing power and asset ownership. 'Entitlement' factors refer to an individual's ability to command or control access to food, including social standing, legal rights and societal and kinship relationships that affect income or food transfers via state or community safety nets.

By the 1990's, factors affecting nutritional outcomes such as diet, food diversity, food consumption habits, parenting and care practices and a broad range of other variables commonly referred to as 'food utilization' were incorporated into the other components described above to better describe the food security status of a given population.

More recently, WFP, though the efforts of its Vulnerability Analysis and Mapping Unit (VAM), began working with FAO and other members of the global food security community to better define concepts and representational models, which resulted in the adoption of a definition of food security during the 1996 World Food Summit (see box above). Stakeholders also decided on the creation of an interagency initiative to promote information and mapping systems on food insecurity and vulnerability: the Food Insecurity and Vulnerability Information Mapping Systems (FIVIMS)[1].

The FIVIMS model defines food security primarily in terms of food availability, food access and food utilization. These three components - all interrelated - are defined below:

Food availability: the measure of the food that is and will be, physically available in the relevant vicinity of a population during the given consumption period through a combination of domestic (national) production, stocks and trade;

Food access: the measure of the population's ability to acquire available food. Access can be physical (people's ability to reach food), economic (extent to which people can afford to buy food), or social (based on an individual's social standing);

[1] For more information on FIVIMS see www.fivims.net

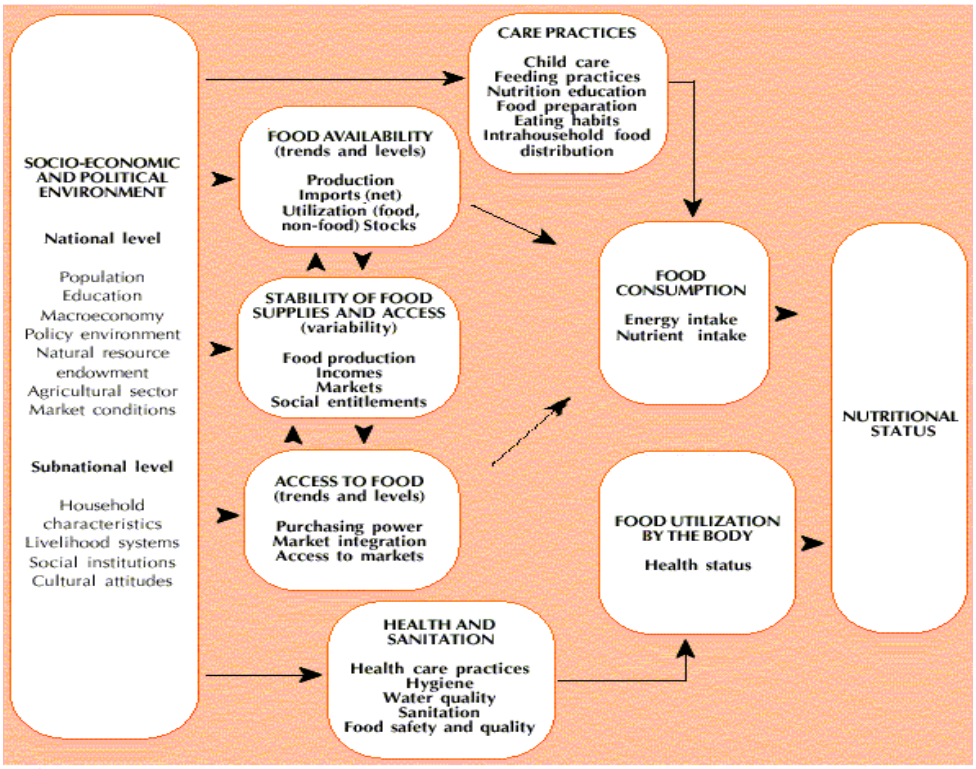
Food Utilization: the measure of whether a population will be able to derive sufficient nutrition during the given consumption period from available and accessible food to meet its dietary needs.

In addition, the FIVIMS model provides the definition for other key concepts such as food insecurity and vulnerability:

Food Insecurity: A situation that exists when people lack secure access to sufficient amounts of safe and nutritious food required 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.

Vulnerability: The presence of factors that place people at risk of becoming food insecure or malnourished, including those factors that affect their ability to cope.

The diagram below depicts the most important components of food security and their interrelationships[2]:



There are several examples in the food security literature on how social entitlements can help or reduce access to food. The PDS - the social entitlement factor - dominates any discussion and analysis with regards to food security and vulnerability to food insecurity.

[2] Guidelines for National Food Insecurity and Vulnerability Information Mapping Systems (FIVIMS): Background and Principles. Committee on World Food Security, 24th session. Rome, 2 - 5 June 1998. FAO. 1998.

For the purpose of this study, vulnerability relates directly to groups who would or might become vulnerable to food insecurity if the ongoing PDS monthly entitlement was either no longer available (or not replaced by an equivalent input) or reduced substantially.

In order to apply the food security conceptual framework described above, the WFP Vulnerability Assessment and Mapping Unit (VAM) uses a combination of proxy and outcome indicators to characterize food availability, access and utilization levels in order to provide decision-makers with key programming information which will be used in WFP operations. In broad terms there are five key questions which characterize a standard WFP/VAM Baseline Food Security and Vulnerability analysis:

- Who are the hungry poor?
- How many are they?
- Where do they live?
- Why are they hungry?
- How can food aid make a difference?

These questions guided the process of designing and carrying out this baseline study.

4. Methodology

Data collection

Primary data were collected through two main sets of activities:

Community Focus group discussions - Field teams carried out a series of discussions with district/community level focus groups in July and August 2003. The activity provided a qualitative and contextual understanding of food security and vulnerability.

Household Sample Survey – The sample survey was conducted at household level by CSO and NRI in December 2003. Primarily quantitative data was collected to better understand the magnitude, severity and geographic distribution of food insecurity and vulnerability.

In addition to the primary data collection activities described above, secondary data from previously published studies and tabular datasets were also used as appropriate.

Focus Group Discussions

By July 2003, the design of data collection instruments and guidelines, the organization and training of field teams and pre-test activities had been carried out. Data collection instruments were drafted first in English and later translated into Arabic. Training sessions covered baseline objectives, food security concepts, best practices and guidelines for data collection, a review of data collection instruments and role play exercises allowing participants to sharpen their communication and interviewing skills.

Immediately following preparation activities, WFP staff in Baghdad, Mosul, Erbil, Hilla and Basrah, together with WFP's NGO partners[3] began data collection activities in the field. The 140 staff involved in data collection carried out over 120 focus group discussions in all 18 governorates (89 districts)[4].

The teams – in most cases originating from the same areas where they carried out data collection activities – were first asked to identify one or two community leaders, who in turn nominated members of the focus groups. Community leaders often were the heads of local mosques or neighborhoods, but also consisted of respected professionals within the community such as doctors or teachers. Participants were chosen according to their ability to represent the various sub-districts (population concentrations) within the district. Those identifying interview participants were asked to consider the urban/rural population distribution within the district; and to choose a mix of participants so as to ensure knowledge of both urban and rural conditions. Guidelines for participant selection also emphasized the need for gender balance. Generally, a focus group consisted of approximately nine participants: five community leaders, two representatives of 'typical' very poor households and two representatives of 'typical' poor households.

[3] CARE Australia in Baghdad, GOAL in Thi-Qar and Muthanna and Save the Children US in Basrah.

[4] Iraq has a total of 103 districts: security conditions and travel restrictions prevented data collection in 14 districts.

Prior to the discussion, team leaders briefed participants on the purpose of the baseline study and the reason for the interviews[5]. Group members were asked to reach a consensus in defining wealth groups (extreme poor, poor, middle and better off) and to estimate the percentage of district households associated with each wealth group. Interviewers facilitated the process by suggesting that expenditures, livelihoods, occupations and asset holdings are generally used in making group distinctions.

The bulk of the data and information captured through focus group discussions centers on wealth groups. Expenditure categories included household expenses (maintenance, bills), actual expenditure on food ration, additional food purchased from the market, education, health, transportation, clothing and other expenses. Income categories included income from salary, labor, self-employment, rental of land, property, or equipments, sale of the food ration, sale of assets, income from gifts, remittances (both from within Iraq and from outside), begging and income earned as credit or as loan repayments. Participants were instructed to treat seasonal income and expenditures, such as income from agricultural production, or seasonal expenses on clothing, in terms of an average monthly estimate. The value of the PDS ration itself was also recorded as an income item (i.e. treated as an income transfer), using the month preceding the interviews (June 2003) as a reference period. Monthly market price data available from WFP's ongoing market price data collection activities were used to express the ration in terms of monetary value. Additional information was also collected including average household size, number of income earners per household by gender and the participant's perceptions regarding possible solutions/interventions needed to improve food security.

Household survey

In July 2003, WFP and the Ministry of Planning's Central Statistics office (CSO)[6] started collaborating on the household survey. The partnership was later expanded to include the Ministry of Health's Nutrition Research Institute (NRI) to facilitate the collection of nutrition related data. Pre-fieldwork preparations included designing of the survey, creating data collection instruments, establishing a sample frame, training, pre-testing and modifying final formats subsequent to the pre-test.

A variety of data types were collected during the household interviews. These included aggregate estimates of household income and expenditures, standard anthropometric measures of childhood malnutrition (stunting, wasting and underweight)[7] and coping strategies data describing the behavior of households

[5] The purpose of the interview was described in simple terms 'to gain a better understanding of the food situation within your community' and participants were given an opportunity to question and clarify their role as participants.

[6] The CSO maintains a large central office in Baghdad and has a strong field presence in all governorates. The CSO has a long and established history as Iraq's major data collection and data management institution in the country. Through partnership with UN Agencies the CSO has designed, implemented and managed numerous surveys related to health, education, housing and economic well being. The CSO has expertise and well developed experience in a variety of specialty areas related to data collection, information management, statistical analysis and reporting.

[7] For anthropometric measurements, analysis using Epi-Info proceeded concurrently. Methods included lists, tabulations, distributions and graphics to determine acceptable levels. Where possible, feedback was given to CSO and NRI for data correction, verifications and explanations about suspect measures or results and their control. Stricter criteria than usually recommended were developed regarding data acceptance. The reference WHO criteria up to –

when faced with food shortages. Additional information was collected on household size and the characteristics of the head of the household (gender, occupation, working status, education level, etc.). The data collection forms can be found in annex 2.

Data from Iraq's most recent census (1997) was used as the basis for creating the survey sample[8]. Data was gathered through a classic cluster sampling approach using an administrative district as the primary unit representing a cluster. The total sample size was calculated as 28,500 households covering the 16 governorates surveyed. For a more detailed description of the sampling and for specifics on sampling parameters (confidence level, design effect, error term, etc.) see annex 3.

WFP carried out a training of trainers for CSO staff based in Baghdad. Participants later repeated a second round of training for governorate level CSO staff. Governorate supervisors in turn coached teams of enumerators within their respective areas. Sessions on survey objectives, basic food security concepts and definitions, how to administer and use the data collection formats, role play exercises between interviewers and interviewees and a review of all data collection and reporting procedures were administered to participants.

A total of 180 field teams (540 staff) - comprised of a CSO data collector, a NRI doctor and a medical assistant - were involved in data collection. CSO supervisors at governorate level assigned at least two teams to each of the 95 districts sampled. By December 2003 data collection had been completed in 16 governorates. Two governorates, Erbil and Dahuk were not involved in the survey, due to the reluctance of local authorities to grant the necessary clearances and technical support for implementing the survey in these areas.

CSO carried out data entry and verification in Baghdad, starting with the 15 center/south governorates (completed in January 2004) and then with Sulaymaniyah (completed in March 2004). Quality control procedures were applied during data entry and validation, including a use of the double entry protocol for a portion of the data as well as random visual comparisons between original hard copy records and the electronic/digital versions. A final round of data checking and validation was performed by the WFP Iraq Country Office's Programme Unit based in Cairo.

Household survey: setbacks to implementation

Following the bombing of the UN headquarters in Baghdad on 19 August 2003, survey implementation was significantly delayed.

At the time of the explosion WFP, NRI and CSO officials were meeting to review the last arrangements for launching the household survey. The bombing and the subsequent relocation of WFP international staff out of Iraq, delayed considerably the finalization of administrative and logistics arrangements.

WFP national staff played a critical role in facilitating the communication among partners and in re-establishing the project momentum. By December 2003 the situation had stabilized, allowing for the data collection and the field work to go forward.

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6 standard deviations (SD) was used for adverse measures for weight and height-for-age. A level of – 3 SD was used for weight-for-height as the cut off measure to indicate those above –3 SD.

[8] Although internal migration has taken place since the census was undertaken, overall changes in the population structure and distribution have been minor in recent years.

Data Analysis

Data originating from the focus groups, the household survey and secondary sources were analysed to obtain a better understanding of three interrelated questions:

- What is the status of food security conditions, taking into account the ongoing PDS ration distributions;
- How important is the ration as a factor or determinant of food security?
- How does PDS dependency vary amongst population groups and what might be the risk and vulnerability implications for future PDS reform initiatives?

The analysis of qualitative data collected through focus group discussions provided an understanding of the food security context. The analysis of the quantitative data collected during the household survey allowed for a quantification of the problem (i.e. estimation of food insecure households). The findings of the two analyses were then combined to provide a more comprehensive understanding of the extent of food insecurity and its underlying causes.

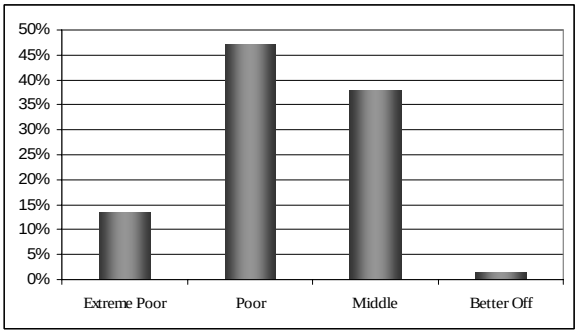
As described in the conceptual framework section, no single indicator can adequately express food security due to the multi-dimensional nature of the problem. The analysis of income and expenditure data, pertaining to wealth groups (extremely poor, poor, middle and better-off) allowed for an initial examination of the questions posed above. Results of both focus groups and household study indicated that one particular group, defined through the focus group discussions as the extreme poor tends to be more prone to food insecurity. It should be noted, however, that although poverty and extreme poverty in particular, are directly related to food insecurity, poverty is not synonymous with food insecurity. Furthermore, the presence of poverty and/or food insecurity does not necessarily indicate the need for a food-aid intervention.

Focus group discussions provided the elements to identify the typical socio-economic features (including the average income and total expenditures) of four population groups to define four main wealth categories: the extreme poor, the poor, the middle class and the better off. Focus groups were also asked to describe the typical use of the income, of the PDS ration and to quantify gifts and charity transfers for each of the four groups. Similarly, the household survey included questions on household income and expenditures during the previous month. Comparison and triangulation of the ranges and geographic distributions in the two datasets enabled the consolidation of typical span of the total expenditures – consistently identified across districts – and the identification of four groups as follows:

Expenditure	Wealth Categories
<= US$ 35	Extreme Poor
US$ 35.1 – 90	Poor
US$ 90.1 – 275	Middle
> US$ 275	Better off

By applying these thresholds, it was possible to categorize the sampled households into the four wealth groups and calculate their prevalence by district. This categorization was subsequently validated through the analysis of demographic and socio-economic variables collected during the household survey.

Figure 1. Distribution of wealth classes in Iraq



For comparative purposes, ranges of kilocalories consumed by each wealth group[9] were estimated from the data collected through the focus groups. A more detailed description of the steps and data processing undertaken to produce these estimates is available in annex 4. This analysis indicates that in general, the extreme poor group is likely to be experiencing calorie shortfalls below the standard of 2,200 kilocalories per person per day threshold. By implication, the extreme poor were identified as the most vulnerable to food insecurity[10].

Vulnerability and social protection issues, within the context of potential PDS reform, were analysed by utilizing data on PDS dependency and household coping strategies. Predicting the effects of policy or entitlement changes (i.e. changes in the size of the food insecure or vulnerable population) is by nature an extremely speculative process. Numerous uncertainties such as the effects on future food prices, economic growth rates and household income, are but a few of the more important unknowns that complicate the analysis. Accordingly, findings regarding the potential impact of such changes should be interpreted with an appropriate level of caution.

To further characterize the vulnerability to food insecurity and investigate its causes, household survey data were analyzed to quantify and identify geographical concentrations of extreme poverty, malnutrition and other indicators utilizing different statistical tools including correlation analysis and Principal Components Analysis (PCA). PCA was particularly useful for exploring interrelated dimensions of food insecurity and vulnerability. More specifically PCA was used to capture the underlying relationships between key variables including poverty, malnutrition, PDS dependency and coping strategies[11]. Access to food was characterized by income and expenditure data, food utilization by malnutrition indicators (prevalence of stunting, wasting and underweight) and vulnerability was represented through PDS

[9] The calculation - based on calories accessible through the ration, market purchases and gifts/transfers not associated with the PDS entitlement - did not include calories from 'own production for own consumption'. Given the highly urbanized nature of the Iraqi population and the fact that even amongst the rural population subsistence agriculture is not very prevalent, such calories are believed to contribute a minor or negligible amount for the large majority of Iraq's non farming households.

[10] The use of extreme poverty as a substitute proxy for food insecurity is not without its' limitations. A considerable number of non-extreme poor households within Iraq will undoubtedly have sufficient incomes for accessing sufficient calories, yet might technically be classified as food insecure because of nutrient deficiencies in their diets. Capturing this dimension of food insecurity would have required fairly detailed household level data on diet diversity, meal frequency, etc. A limited budget and timeframe for data collection in the field are the main reasons why such data was not included in the analysis.

[11] The analysis proceeded systematically by first describing the data using simple statistical means and frequency distributions of main outcomes and covariates: this data was next put through a series of bivariate tabulations, to detect what variables may be influencing the outcome in particular ways. The bivariate relationships were tested using simple statistical procedures such as cross tabulations, means tests, regression, correlations and Analysis of Variance.

dependency data. These variables were used to analyse the food security situation of the selected unit of analysis, in our case the district.

Clustering analysis was then used to group together districts characterized by similar relationships among variables. In other words, Iraq's administrative districts were clustered and described by various profiles ('typologies') capturing the essence of the variables' relationship. These profiles were in turn useful when discussing the implications of the findings on potential policy and programme design matters. Mapping the PCA derived groups of districts was also useful for understanding the geographic and spatial dimensions of existing problems and for considering issues related to future interventions and expected targeting efficiency.

5. Findings

This chapter presents the findings of the survey as well as supplementary information for a more comprehensive understanding of the food security situation in Iraq. In order to identify whether there is a need for food aid interventions and who would require it, the overall analytical process was based on a common objective: the convergence of evidence. Surveyed districts were grouped on the basis of similar nutritional and socio-economic characteristics. However, during the results interpretation, the focus was directed towards those groups of districts characterized by a co-presence of particularly high rates of extreme poverty and prevalence of malnutrition.

A comprehensive description of the wealth classes' characteristics, by group of districts and governorates, as well as specific finding on nutrition, education and socio-economic factors collected through the household survey are illustrated in detail in annexes 5 and 6.

Food security typologies

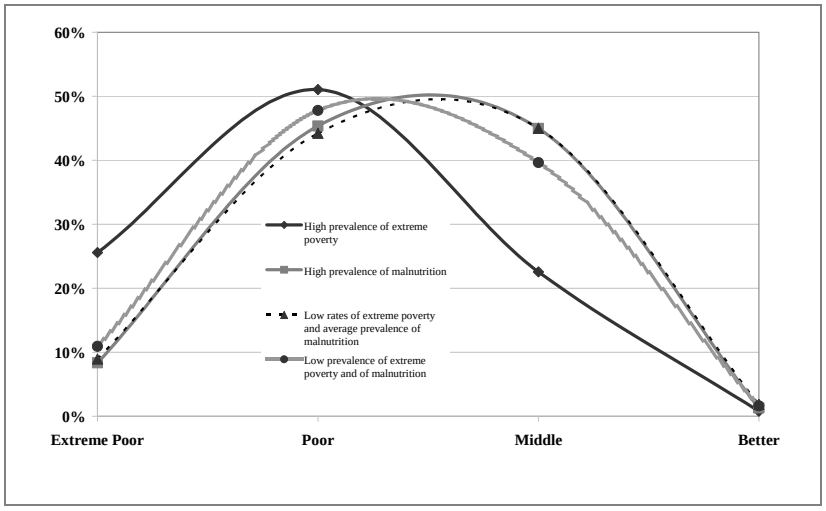
The analytical and clustering processes identified eight stable groups of districts characterized by different levels of extreme poverty, malnutrition, dependency on the national safety net system and use of food-related coping strategies. These eight groups are here described in four main clusters based on the prevalence of **extreme poverty** and **malnutrition**.

Table 1. Characteristics of districts groups

Main features	Specific Indicators	Districts with high prevalence of extreme poverty	Districts with high prevalence of malnutrition	Districts with low prevalence of extreme poverty and average prevalence of malnutrition	Districts with low prevalence of extreme poverty and of malnutrition
	Number of Districts	**28**	**8**	**32**	**27**
Poverty	percent Extreme Poor within Cluster	High	Low	Low	Low
Malnutrition	Stunting	High	High	High	Low
	Underweight	High	High	Moderate	Low
	Wasting	Moderate	High	Low	Low
PDS Market Price Value (PDSV) / Total Income + PDSV	Districts Average	Moderate	Low	Low	High/Low
	Extreme Poor Average	High	Low	Low	High/Low
Average Income USD	Districts Average	Low	High	High	High/Moderate
	Extreme Poor Average	Low	Low	Moderate	High/Moderate
Coping Strategy Index	Coping Strategy	High	High	High	Low/High

The graph below presents the wealth class percentage distribution by group of districts. It clearly indicates that poverty is mostly concentrated in the districts falling within the group described below as 'high prevalence of extreme poverty'.

Figure 2. Poverty concentration by group of districts



Districts with high level of extreme poverty

A first group of 28 of the 95 surveyed districts, mostly rural and with a population of approximately 5.8 million people, is characterized by high levels of extreme poverty (over 20 percent). These households have a high degree of reliance on the PDS, with rates sometimes over 50 percent of their total income being provided by commodities from the PDS. In only a few cases, the average dependency of extreme poor households on the PDS is above the national average and the level of their income is half the average for the district.

Furthermore, the prevalence of chronic malnutrition is higher than the national average with picks as high as 70 percent. Acute malnutrition (wasting) is of great concern in five districts of this group.

Finally, the majority of these households have already adopted some sort of food-based mechanisms to cope with a difficult economic situation (high Coping Strategy Index): families reduce food expenditures to the very minimum, buy food for debt and, to a lesser extent, consume cheaper and low quality food stuff or ensure food for only the employed members of the household.

Within this typology, a sub-group of five districts present a worrisome level of malnutrition, much higher than in the other 23 districts, which would need further investigation.

Table 2. Characteristics of districts pertaining to 'high level of extreme poverty' typology

	# of districts	Malnutrition			Poverty	Ratio PDS value / Total Income		Average Income (US$)		Coping Strategy Index
		Stunting	Underweight	Wasting	Extreme Poor	Average	Extreme Poor	Average	Extreme Poor	
'High level of extreme poverty' typology	23	38.4%	14.7%	4.7%	25.6%	32.6%	44.0%	105.7	54.6	27.2
	5	36.8%	27.4%	13.0%	25.7%	38.4%	52.2%	112.7	56.1	27.8
National Average	95	27.6%	11.5%	4.4%	13%	29.2%	44.4%	126.7	55.0	18.3

Districts with high prevalence of malnutrition

A second group of eight districts – mostly rural (56 percent) - with a population of approximately 1.4 million, is characterized by lower levels of extreme poverty, about eight percent, but high levels of chronic and acute malnutrition (34.8 percent stunting and 13.8 percent wasting). The lower levels of extreme poverty and higher levels of malnutrition could be indicative of poor water and sanitation conditions and related food utilization problems, as opposed to food access problems. Further research is required to determine the exact causes of this situation.

Households in these districts seem to rely less on the PDS. On average, the PDS transfer accounts for 24 percent of the total income. For extreme poor households the PDS transfer is higher with a rate of about 36 percent. These households have low total incomes, on average 52 US dollars, which is 60 percent lower than the average total income in these eight districts.

The low total income and the relatively low contribution of the PDS on that income seem to indicate that the market value of the PDS transfer in these areas is lower than the average. Extreme poor households are also characterized by higher Coping Strategy Indexes.

Table 3. Characteristics of districts pertaining to 'high prevalence of malnutrition' typology

	# of districts	Malnutrition			Poverty	Ratio PDS value / Total Income		Average Income (US$)		Coping Strategy Index
		Stunting	Underweight	Wasting	Extreme Poor	Average	Extreme Poor	Average	Extreme Poor	
'High prevalence of malnutrition' typology	8	34.8%	21.7%	13.8%	8.3%	24.1%	36.4%	134.1	52.0	28.4
National Average	95	27.6%	11.5%	4.4%	13%	29.2%	44.4%	126.7	55.0	18.3

Districts with low rates of extreme poverty and average prevalence of malnutrition

A third group of 32 districts, with a population of 7.7 million, is characterized by low levels of extreme poverty and malnutrition rates similar to the national average. Generally households in these districts are less dependent on the PDS ration. Monthly household incomes are higher than the national average.

A sub-group of 25 districts have an average contribution of the PDS transfer to their total income of 23 percent. Also the PDS contribution to the total income of the extreme poor in this sub-group is only 33 percent. Their total income is slightly higher than the national average (61 US dollars) although 57 percent lower than the average income in the district sub-group. Extreme poor households are characterized by an average CSI of 29.

Conversely, for a sub-group of seven districts reliance on the PDS transfer is much higher for the extreme poor. Fifty-three percent of the household total income comes from PDS, whereas the average PDS transfer for the total population of the seven districts is only 31 percent. The total income of the extreme poor in this sub-group of districts is very low (42 US dollars), which corresponds to one third of the average household total income in these districts. Extreme poor households have a coping strategy index of 25.4, which is not exceptionally high given that they probably are the poorest of the extreme poor.

Table 4. Characteristics of districts pertaining to 'low levels of extreme poverty and malnutrition rates similar to the national average' typology

	# of districts	Malnutrition			Poverty	Ratio PDS value / Total Income		Average Income (US$)		Coping Strategy Index
		Stunting	Underweight	Wasting	Extreme Poor	Average	Extreme Poor	Average	Extreme Poor	
'Low extreme poverty average malnutrition' typology	32	33.1%	13.3%	4.6%	8.9%	24.7%	37.4%	137.7	56.7	28.2
National Average	95	27.6%	11.5%	4.4%	13%	29.2%	44.4%	126.7	55.0	18.3

Districts with low prevalence of extreme poverty and of malnutrition

Twenty-seven districts form a fourth group of mainly urban districts (63 percent) - with a population of 9.5 million, characterized by low and moderate levels of poverty and lower malnutrition rates, with stunting being about 20 percent and wasting 3 percent.

A sub-group group of 14 districts is characterized by contributions from the PDS

similar to the national average. The total income of the extreme poor is 54 US dollars, some 57 percent lower than the average household total income in those 14 districts.

A second sub-group of 12 districts presents a very high PDS dependency rate (46 percent). The value of the ration for extreme poor households within these districts is even higher, representing 65 percent of total household income. Households in these twelve districts have generally a higher total income (167 US dollars) which is also the case for the extreme poor, though their average (73 US dollars) is in any case 56 percent lower than the average for this sub-group of districts.

The high value of transfer from the PDS along with higher levels of total income is an indication that the market value of the PDS transfer is in these districts much higher than in other areas of the countries. This factor could explain why extreme poor households are characterized by very low coping strategy indexes, on average 9.5 only. In fact, some extreme poor households have not yet resorted to adopt food-based coping mechanisms.

To this sub-group of districts we have added one district, Shahrabazar, which is characterized by similar socio-economic features but has also preoccupying levels acute malnutrition, somehow contrasting with other indicators. The nutritional status of children under five years of age in this district will need to be verified.

Table 5. Characteristics of districts pertaining to 'low and moderate levels of poverty and lower malnutrition rates' typology

	# of districts	Malnutrition			Poverty	Ratio PDS value / Total Income		Average Income (US$)		Coping Strategy Index
		Stunting	Underweight	Wasting	Extreme Poor	Average	Extreme Poor	Average	Extreme Poor	
'Low / moder. poverty lower malnutrition' typology	12	21.7%	8.7%	2.9%	9.4%	46.2%	64.7%	167.2	72.9	9.5
	14	20.2%	8.0%	3.0%	11.8%	27.5%	41.8%	126.9	54.1	28.2
	1	-	-	-	17.0%	49.0%	66.0%	153.5	95.5	3.2
National Average	95	27.6%	11.5%	4.4%	13%	29.2%	44.4%	126.7	55.0	18.3

Who are the food insecure?

- Rural populations are poorer and more vulnerable to food insecurity compared to urban populations;
- Female-headed households and women in general are more likely to be vulnerable to poverty and are particularly susceptible to food insecurity;
- Unemployed and unskilled or casual labors are mostly concentrated in extremely poor and poor households;
- Illiterate – mostly concentrated in the extreme poor and poor categories – have less gainful employment opportunities.

Results show that Iraq's extreme poor population is predominantly concentrated in rural areas, as demonstrated in table 6 below. These households have limited assets, including land. Absence of a vibrant market economy, limited employment opportunities and the virtual non-existence of a credit system or insurance services contribute to access problems resulting in relatively high levels of food insecurity.

Table 6. Wealth classes distribution in urban and rural areas

Characteristics	Extreme Poor	Poor	Middle	Better Off
Rural	55.8%	48.6%	39.5%	38.2%
Urban	44.2%	51.4%	60.5%	61.8%

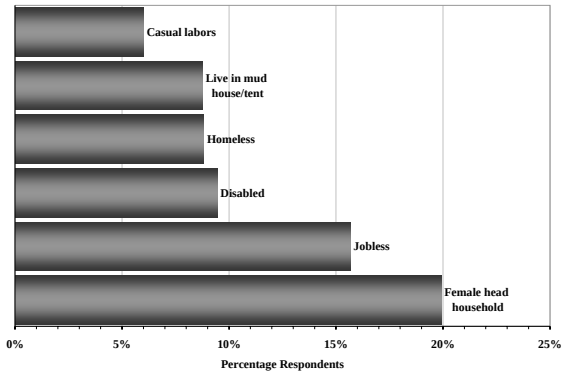
Female-headed households, particularly widows, are prone to extreme poverty and are particularly susceptible to food insecurity. Twenty-eight percent of all female-headed households are extremely poor, while this figure is reduced by more than half (13 percent) for male-headed households.

Table 7. Head of household sex percentage by wealth classes

Head of Household Sex	Extreme Poor	Poor	Middle	Better off
Female HH	27.8%	45.6%	25.5%	1.1%
Male HH	13.4%	47.3%	37.8%	1.5%

Although unemployment rates are generally high in Iraq, the magnitude of the problem is greater in extreme poor households. Over 50 percent of the adults in extreme poor households (16-60 years old) are unemployed and of these 80 percent are women. Focus group data reveals that female-headed households are most frequently perceived as being extreme poor, followed by the jobless, disabled, homeless, people living in mud houses or tents and casual laborers.

Figure 3. Focus group perception: who are the extremely poor?



Consistent with other studies, head of household illiteracy is concentrated amongst the extreme poor. Illiteracy no doubt presents obstacles in terms of employment opportunities and earnings. Low incomes, in turn, have negative consequences in terms of purchasing power. Table 8 below demonstrates

that over 40 percent of adults in extreme poor households are illiterate.

Illiteracy and low levels of education, particularly for the household's main care provider (i.e. mothers), may be also a cause for poor care and feeding practices contributing to high child malnutrition. More than a quarter (27.6 percent) of all children between one and five years of age are chronically malnourished. This statistic increases to 36 percent for children living in extreme poor households.

Table 8. Head of household education

Head of Household Education	Extreme Poor	Poor	Middle	Better
Illiterate	40.1%	29.8%	26.5%	27.3%
Read/Write	15.9%	16.9%	14.8%	16.3%
Primary	26.2%	26.1%	21.3%	17.2%
Secondary	13.9%	20.3%	23.1%	20.9%
University	3.9%	7.0%	14.3%	18.2%

Why are they food insecure?

- Food insecurity is not only related to an incapacity to produce sufficient food, but also to the failure of households to gain access to sufficient food;
- Food insecurity is also due, to a lesser extent, to food utilization problems;
- Insecurity, economic sanctions, droughts and disruption of economic activities are contributing factors to food insecurity;
- PDS rations are insufficient to provide adequate food (depletion of rations, inadequate kilocalories and nutrients and sale of ration commodities to meet other needs);
- Extreme poor households lack the necessary purchasing power to supplement ration deficiencies through market purchases;
- Low food purchasing power is correlated with high rates of unemployment, underemployment and illiteracy, especially in rural areas;
- Death of the head of household and resulting loss in household income, are contributing factors to poverty and food insecurity;
- The state of the country's infrastructure – especially water, sanitation and health care – has had an impact on the nutritional status of the population, especially the most vulnerable.

The causes of food insecurity are best described in the availability, access and utilization sections below. Food availability in Iraq is determined largely by the PDS ration, with domestic production playing a secondary role. Commercial food imports are for the most part negligible.[12] Current food insecurity problems are not related to macro-level food availability shortages. The combined availability of food from domestic production and the PDS is deemed sufficient to cover the needs of all Iraqis, both in terms of calorie and protein availability.[13]

In the period corresponding to data collection, domestic production of cereals was relatively high due to a favorable 2003 harvest. This, coupled with the available imported wheat for the ration, resulted in an excess availability of wheat at the national level.[14]

Food insecurity is largely attributable to the failure of the poorest households to access sufficient food, despite the PDS. Although the PDS ration is designed to provide sufficient nutrients and calories, it is at times insufficient, for various reasons. Discrepancies between planned and actual distributions caused by operational difficulties, often results in households receiving less than the planned rations. In July/August 2003, the PDS provided 2,100 kilocalories, rather than the recommended 2,200 kilocalories per person per day. Even when the monthly ration is distributed in full, food commodities are often depleted in less than a month. It is also common for poorer households to sell part of the ration as a means for generating income used to cover other essential expenditures (medicine, healthcare,

[12] A study of Food grain Markets in Iraq. WB/WFP, Neville Edrisinghe. 2004.
[13] FAO/WFP Crop, Food Supply and Nutrition Assessment Mission Report. FAO. September 2003.
[14] A study of Food grain Markets in Iraq. WB/WFP, Neville Edrisinghe. 2004.

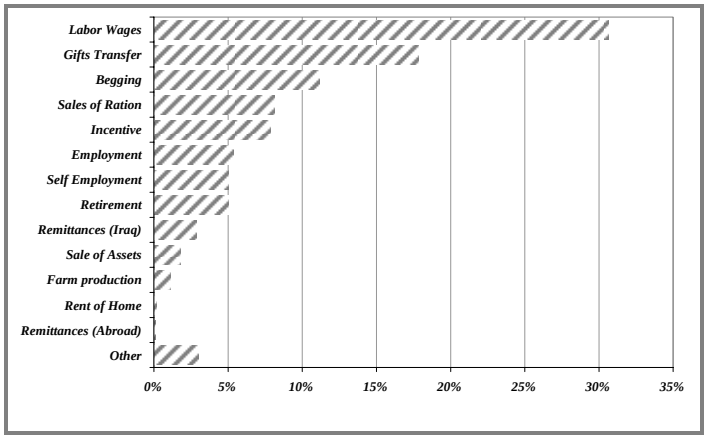
transportation and other needs). The conditions outlined above disproportionately affect the extreme poor, because of their high dependency on the PDS.

The ration is composed of dry food items, which are less subject to spoilage. The absence of fresh food such as fruits and vegetables and the need for consumers to diversify their diets, lead most households to supplement their food needs through market purchases. Almost all households purchase at least some food from the market. The amount and the type of commodities purchased depend predominantly on households' income. Few households can afford to supplement their diet with costly food items such as meat or Iraqi rice, which are more commonly purchased by better off households.

The purchasing power constraints that extreme poor households face are a result of chronic poverty. Focus group interviews indicate that unemployment is regarded as the primary reason for food insecurity. During and following the war in 2003, income-generating activities came to a halt. Many shops and private sector businesses remained closed and numerous public sector employees were not paid during those months. Unemployment rates are high and, in general, economic activity remains stifled. Many consecutive wars in Iraq have led to the increase in widows to fend not only for themselves but also for entire households. 'Death of a household head' was ranked the third most important cause of food insecurity in the focus group discussions. Extremely poor adults are faced with the pervasive problem of attaining sustainable employment because of their low educational levels, lack of skills, medical problems and discrimination. Figure 4 illustrates that the three main sources of income for the extreme poor are casual labor, gifts/transfers and begging.

In addition to the access problems outlined above, Iraq's generally poor healthcare, water and electricity infrastructure have contributed to food utilization problems. Survey results show that acute malnutrition is currently at 4.4 percent, underweight malnutrition at 11.5 percent and that chronic malnourishment has increased to 27.6 percent, approaching the 1996 levels (31.9 percent) reported by UNICEF[15]. The recent war has worsened the status of the already dilapidated infrastructure. A year after the official ending of the war, 140 major water treatment facilities were operating at about 65 percent of pre-war levels. Iraq's water-sanitation system depends heavily upon electricity. In April 2003, the electricity capacity was only 29 percent of pre-conflict levels.[16]

Figure 4. Extreme poor households: sources of income



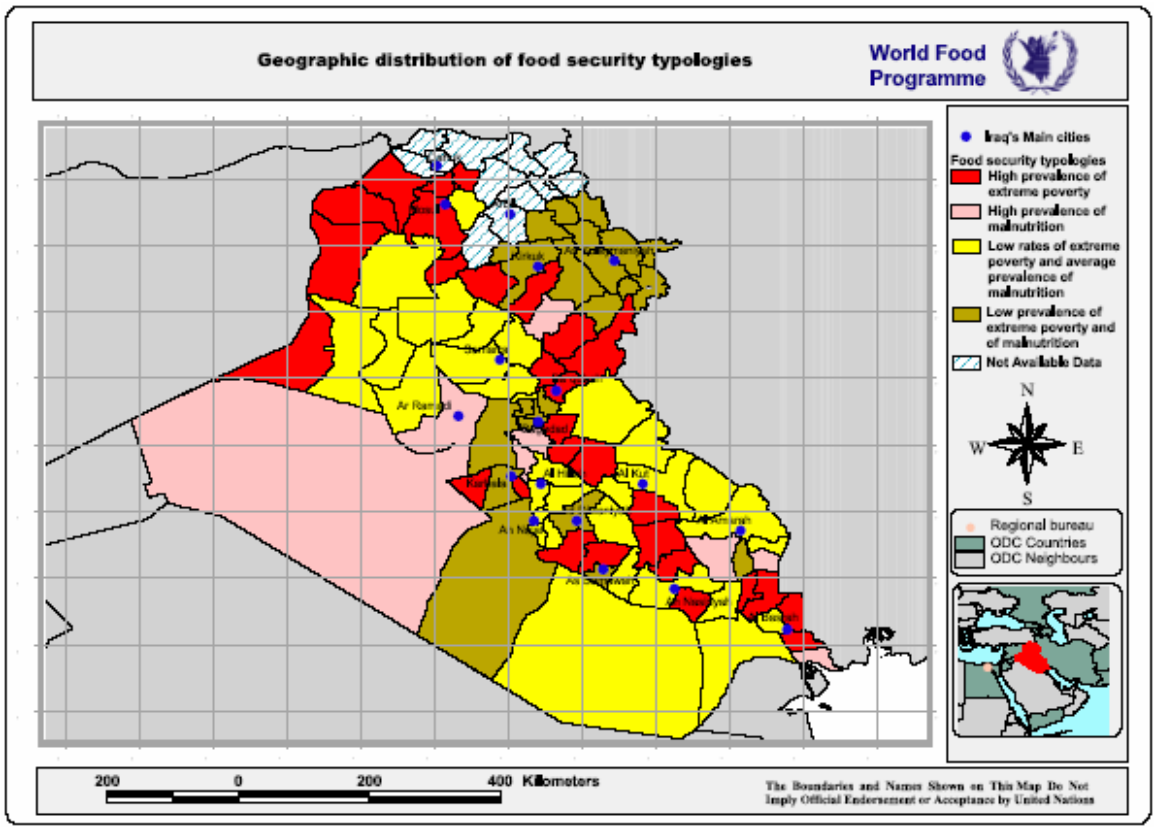
[15] In 1996, chronic malnutrition was found to be 32 percent for children under 5 (The Situation of Children in Iraq. UNICEF. March 2003.). WFP household 2003 data shows that 27.6 percent of children are chronically malnourished.

[16] USAID, 2003.

Geographic distribution of food insecurity

- Extreme poverty is disproportionately concentrated in rural areas: 56 percent of the extreme poor were living in rural areas while the corresponding rate for urban areas is considerably lower (44 percent);
- Approximately 70 percent of Iraq's population is urban. Geographic distribution of the chronically poor is not always associated with the general population distribution.

Food insecurity in Iraq has an important spatial dimension. The map below provides the geographic distribution of food security typologies. District clustering is based on similarities in the underlying relationships between extreme poverty, malnutrition, dependency on the PDS and the use of food-related coping strategies.



Although districts with high prevalence of extreme poverty are scattered throughout the country, many are located near the Syrian border and fall within the governorates of Anbar, Ninewa and, to a lesser extent, Tameem. Similarly, districts belonging to the 'high prevalence of malnutrition' typology are dispersed across Iraq.

The two largest groupings of districts with low rates of extreme poverty and average prevalence of malnutrition are found in the center/north (Anbar, Salah al-Din and Ninewa) and within Iraq's eastern region bordering Iran (Wassit and Missan).

Districts with 'low prevalence of extreme poverty and of malnutrition' are concentrated in the northwestern part of the county, within Sulaymaniyah governorate and in the center and southern part of the country, in Baghdad and

Najaf.

Twenty-eight of the surveyed districts have extreme poverty rates of over 20 percent. Three governorates, Kerbala, Tameem and Wassit include districts even worse off, with extreme poverty rates of over 30 percent. Extreme poverty is disproportionately concentrated in rural areas, 56 percent of the extreme poor are living in rural areas while the corresponding rate for urban areas is considerably lower (44 percent). In contrast, the distribution of the general population is 70 percent urban and 30 percent rural.

Table 9. Wealth groups concentration by group of districts

	Population	Extreme Poor	Poor	Middle	Better off
Percentage (Iraq)		11%	43%	44%	2%
'High prevalence of extreme poverty' typology	5.8 million	46%	27%	15%	12%
'High prevalence of malnutrition' typology	1.4 million	2%	5%	7%	6%
'Low rates of extreme poverty and average prevalence of malnutrition' typology	7.7 million	22%	28%	38%	40%
'Low prevalence of extreme poverty and of malnutrition' typology	9,5 million	30%	40%	40%	42%
*Population projected for January 2004 - Erbil and Dahuk Governorates are not included					

Magnitude of food insecurity

- In total, approximately 25 percent of the Iraqi population is highly dependent on the PDS;
- 11 percent of the population is extremely poor and vulnerable to food insecurity;
- 43 percent of the population is poor. If the PDS were discontinued, roughly one third of households categorized as poor would face a high probability of becoming food insecure.

This study estimates that the food insecure population in Iraq is approximately 2.6 million people, approximately 11 percent of the population. While Baghdad governorate has more than 25 percent of Iraq's population, only 8 percent are extremely poor. At the governorate level, the highest rates of extreme poverty were found in Ninewa (23 percent), Thi-Qar (17 percent) and Kerbala (16 percent).

Table 10. Wealth groups population by governorate

Governorate	Extreme Poor	Poor	Middle	Better off	Total
Anbar	55,022	434,142	735,063	39,074	1,264,092
Babil	114,997	662,943	618,650	25,790	1,424,030
Baghdad	482,004	2,649,716	3,048,273	124,613	6,306,586
Basrah	135,884	613,254	1,114,015	68,939	1,932,069
Diyala	176,475	597,070	456,614	26,572	1,258,150
Kerbala	121,545	310,880	296,518	13,819	743,818
Missan	81,238	397,729	333,355	10,623	825,394
Muthanna	65,946	275,703	203,847	6,838	552,497
Najaf	119,541	349,841	457,758	27,579	955,663
Ninewa	559,545	1,140,647	716,739	25,922	2,442,681
Qadissiya	96,658	433,658	357,984	22,570	911,064
Salah al-Din	48,461	345,410	551,925	22,114	968,322
Sulaymaniyah	106,767	700,442	789,262	47,515	1,644,573
Tameem	108,208	456,704	299,509	7,934	871,412
Thi-Qar	261,562	729,925	490,412	28,919	1,512,728
Wassit	108,498	372,016	333,948	8,192	822,579
Iraq (16 Gov.)	**2,642,349**	**10,470,081**	**10,803,873**	**507,012**	**24,435,658**

Approximately one third of children under the age of 5 surveyed were malnourished and stunted. Thi-Qar governorate has the highest prevalence of stunting at 43 percent, while Sulaymaniyah and Kerbala had the lowest rates at 16 percent and 17 percent, respectively.

6. Policy and Programme issues

The PDS continues to represent by far the single most important source of food in Iraq. Widespread problems in food availability and food access have successfully been avoided in the past and the PDS has played a major role in this regard. Yet despite the PDS, many Iraqis continue to struggle under conditions of extreme poverty, which leads to food insecurity. Poor households barely manage to meet their food requirements and without the PDS ration many would face a high probability of becoming food insecure[17].

Despite the important safety net role that the PDS plays, there is a general and growing consensus that the current *de-facto* policy of universal coverage should not continue indefinitely. Both the structural inefficiencies inherent in a non-targeted approach and the negative impact of such a policy on the economy in general (particularly the agricultural and rural sectors); constitute the main rationale behind the call for a PDS reform.

Successfully addressing PDS reform is critical for achieving greater food security in the future. In addition to institutional issues, successful reform initiatives would need to address the root causes of food insecurity in Iraq. Effective policy and programme design requires a solid understanding of underlying issues, thus knowledge and information are key supporting inputs for any planning operation.

From a food security perspective, the central issue confronting policy makers and planners can best be described through posing a single question: 'what combination of policies and programmes would likely contribute towards achieving greater food security in Iraq'? Addressing this question requires a consideration of the principal factors that determine food security: food availability, access and utilization. A review of current conditions and policies that influence these components can provide insights for future policy and programming options.

Select findings from this study as well as other sources are elaborated below, to enable a more informed and supportive environment for future food security oriented policy and programming of food aid interventions.

Food Availability

As reported in the findings, food insecurity in Iraq is generally not associated with macro-level food availability problems. In the marketing year 2003/04, the PDS and domestic production provided sufficient calories to cater to the needs of the population[18]. Total nutrient availability in-country was also deemed sufficient[19].

Despite a generally favorable availability environment at present the key question for the future remains: 'if the PDS food supply diminishes as an outcome of reform, how might adequate availability levels be maintained or improved'?

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[17] If the ration were no longer to be accessible and not replaced by an alternative substitute form of assistance.

[18] The overall protein availability needs were assessed by FAO/WFP in 2003 at 107 percent of the Recommended Daily Allowance. However the proportion of animal protein to total protein fell below the recommended level of 33 percent. FAO/WFP Crop, Food Supply and Nutrition Assessment Mission Report. FAO. September 2003.

[19] Data and information regarding total nutrient availability is limited, more comprehensive food balance sheet data containing figures for all food types for recent years is needed.

PDS reform implies a fundamental shift in the food supply system, away from reliance on state subsidized imports and towards greater reliance on commercial food imports and domestic production. There is general consensus that a revitalized agricultural sector could significantly expand the share of the national food supply that is produced in-country. However, given the obstacles and difficulties that the domestic sector faces, including a *de-facto* policy of subsidized food imports, self-sufficiency through domestic production will remain unlikely in the medium term.

As highlighted in a recent report, 'there is a substantial gap between Iraq's food production and food needs and it is unlikely that the country could be self sufficient in food in the foreseeable future'[20]. Thus, expanding private sector commercial food imports as a percentage share of the national supply is likely to play a greater role in a post-PDS reform environment.

Even prior to the sanctions era, Iraq's food supply was largely dependant on both public and private sector food imports. Import dependency has prevailed for at least four decades, dating back to the early 1960s[21]. Despite the fact that, during the sanctions era, the PDS operated as a virtual state monopoly over large-scale food imports and marketing, the private sector has guaranteed market availability of food commodities not included in the ration (i.e. Iraqi rice, tomatoes, potatoes, eggs, meat, etc.).

The findings of a recent analysis of market price integration[22] provide some indications about the performance and efficiency of private sector marketing in the past. The study reveals that the correlation between supply and demand (price/availability) for Iraqi rice is higher than for wheat and imported ration-rice. As the correlation increases, the prices become more responsive to market conditions. This finding indicates that private sector food marketing is already performing reasonably well. By inference the findings also imply that if the PDS is reformed, the private sector might well be capable of taking on new responsibilities for marketing major food items. Yet, the PDS distributes every month some 500,000 metric tons of food to the entire population and the challenges to ensure a reliable continuation of the food supply chain are enormous. A comprehensive analysis of the private sector's capacity would be useful to identify which improvement may be needed to ensure a steady food supply to the market.

Before transitioning to a greater role for the private sector, however, investments to improve market infrastructure would be needed. Some such investments have occurred and more are expected in the future. As an example, some farmers - especially in northern Iraq - turn to distant labor markets to earn part of their livelihood, even when they own potentially productive land. This is often because their land is not well situated and high transaction costs impair adequate net returns. Furthermore, inadequate physical access to markets in remote areas forces households to diversify their production in order to satisfy their requirements for dietary diversity. The construction of roads, for example, could well change the equation by reducing marketing and transport costs.

[20] Reconstructing Iraq's agriculture, water resources and food security system FAO/WB/WFP. October 2003. The report was issued as a sector report and served as an input to the UN/World Bank Iraq Joint Needs Assessment report (October 2003).
[21] A study of Food grain Markets in Iraq. WB/WFP, Neville Edrisinghe. 2004.
[22] Ibid.

Iraq's banking and credit services and related legal and regulatory environment is also largely underdeveloped. An upgrading of services would be critical for financing large-scale private sector food imports and marketing operations. A UN/World Bank assessment of the financial sector indicates that 'Iraq's financial system is currently dysfunctional, with little financial intermediation, ineffective institutions and a poorly organized regulatory framework'[23]. However, there have been some important developments during the last year to establish and improve banking and credit services in support of recovery activities. The Trade Bank of Iraq became operational in late 2003 (with support from the US Export/Import Bank) to facilitate reconstruction by providing trade finance services. Although the bank's principal clients are currently public sector institutions, future lending activities could theoretically be extended to support the private sector. By June 2004 the bank had exceeded a Letter of Credit volume of more than one 1 billion US dollars[24].

If PDS reform is to result in less dependence on subsidized food imports, in addition to an expanded role for commercial food imports, domestic production of food would also need to increase. Iraq's agricultural sector and by extension the rural economy, has suffered severe setbacks. The food import subsidies policy through the PDS is restricting the agricultural sector. A 2003 report, commenting on policy issues affecting the sector, noted that 'lopsided food policy premised on subsidized food rationing on a national scale with imported food has destroyed the local grain market with consequent ill-effect on producer prices'[25].

FAO reports a huge decrease in domestic wheat and barley prices since the inception of the OFFP: 'between June 1995 and June 1996 alone, the price of wheat dropped from 172 US dollars to 77 US dollars per metric ton and that of barley from 128 US dollars to 66 US dollars per metric ton'[26]. Farmers, especially in the north, explored cross border trade of domestically produced goods to better markets such as Syria and Iran[27].

Low farm-gate prices and their negative impacts on rural income may have disproportionately affected the northern governorates where agriculture has traditionally been the mainstay of the regional economy. In recent years local surplus production and the combination of low market prices has contributed to a situation whereby grain is accumulated for one to two years before use or sale[28]. FAO has also emphasized the linkage between land underutilization and the dropping in market prices: 'reductions in domestic wheat flour prices since 1996/97 have led to the decrease in wheat cropped areas by 12.8 percent'[29].

While the large majority of the PDS grain supply comes from imported wheat, as under the OFFP arrangements no local procurement of grains was authorized, some of the higher quality domestically produced wheat also contributes to the supply. The

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[23] Needs assessment mission to Iraq. FAO/WB/WFP. August 2003.
[24] Trade Bank of Iraq http://www.tbiraq.com
[25] Reconstructing Iraq's agriculture, water resources and food security system FAO/WB/WFP. October 2003. The report was issued as a sector report and served as an input to the UN/World Bank Iraq Joint Needs Assessment report (October 2003).
[26] FAO/WFP Crop, Food Supply and Nutrition Assessment Mission Report. FAO. September 2003.
[27] Ibid.
[28] Ibid.
[29] Toward Sustainable Agricultural Development in Iraq: The Transition from Relief, Rehabilitation and Reconstruction to Development. FAO. May 2003.

Government of Iraq (GoI) established a system for supporting farmers and the rural economy. A 'Purchase of Last Resort' mechanism, by which - with the support of WFP and FAO - GoI would purchase, at a fixed price, the harvest that farmers could not sell in the private market, ensured in 2003 the purchase of some one million metric tons of locally produced wheat (105 US dollars/metric ton) – used for the PDS - and of 500,000 metric tons of barley (65 US dollars/metric ton) – mostly used for animal feeding. Given that food supply through the PDS is not likely to diminish significantly in the near term, policies and activities that support local procurement of high quality Iraqi wheat at market prices for PDS supply would need to continue in order to stimulate production. This sentiment was echoed in the recommendations of the FAO/WFP 2003 assessment report: 'to the greatest extent possible, the bulk of the PDS food basket content should be acquired through procurement of grains locally from domestic producers'.

In the context of a possible PDS reform, numerous other policies and factors affecting the agricultural sector would also need to be taken into account. This includes reconstruction and rehabilitation of agricultural infrastructure and services, land tenure policies and productivity as well as ensuring availability of fertilizers, seeds and machinery at affordable prices for the producers. An extensive review of the agriculture sector's needs is beyond the scope of this paper. In preparation for the 2003 donor's conference on Iraq's recovery needs, FAO in collaboration with the World Bank and WFP prepared a 'sector paper' addressing many of the issues identified above[30].

Food Access

While the elasticity of demand for food items is unknown, data collected through the focus groups confirmed an expected relationship between food expenditure patterns and wealth class. Middle or better-off households spend considerably more on food in comparison to households categorized as extreme poor or poor.

Iraq's food insecurity and vulnerability are primarily attributable to insufficient food access, which is concentrated within the extreme poor segment of the society. Poor households are also extremely vulnerable to food insecurity. For both groups the PDS ration represents by far the single most important food source in the diet, accounting for roughly 80-90 percent of accessible calories. Social protection and safety net mechanisms targeting these groups should be carefully considered in the context of a possible PDS reform to ensure they have sufficient access to food.

In the short-medium term, Iraq's most vulnerable households will likely remain highly dependant on public assistance with regards to food security. Safety nets would need to be maintained while other means for promoting households' self-reliance are put in place. A portion of additional income could support additional food purchases, which would lead to improvements in household food security.

Focus groups indicated unemployment as one of the key characteristics of extreme poor households and 'job creation' as one of the priority solutions to create a more food secure environment. Community needs identified were also 'PDS continuation', together with 'cash assistance' and 'the need for agricultural projects'.

[30] Reconstructing Iraq's agriculture, water resources and food security system FAO/WB/WFP. October 2003. The report was issued as a sector report and served as an input to the 2003 UN/World Bank Iraq Joint Needs Assessment report.

Private and public sector job creation programmes, such as labor intensive Public Works Programmes (PWP) for improving infrastructure could play an important role in transferring cash to Iraq's poorest households. As highlighted in the UN/World Bank Joint Iraq Needs Assessment (2003), rehabilitation activities for urban and rural infrastructures, including repairs to the agriculture/irrigation and transport sectors, have the potential to create thousands of jobs.

In a recent assessment of Iraq's agriculture, water resources and food security systems, the potentially constructive role of PWP was highlighted: there is a complementarity between PWP and the huge infrastructure rehabilitation needs (e.g. rehabilitation of the irrigation networks, reforestation, etc.), all of which are conducive to labor-intensive techniques. Additional infrastructure (housing, roads, schools, etc.) will be required for displaced agricultural labor and their families seeking employment in urban and industrial areas. If PWP and associated social safety net programmes can be directed towards the creation of assets in the form of physical and social infrastructure, the needs of the transition will be partially resolved[31].

PWP initiatives are already ongoing. In a September 2003 press conference the Minister of Public Works announced a campaign for cleaning, refurbishing and solid waste management activities which planned to initially hire approximately 100,000 unemployed residing in municipalities around the country. Longer term planning called for expanding the program to create as many as 300,000 PWP jobs[32].

Prevailing price levels in the markets affect households' purchasing power. Integration of markets for food or other commodities is key to avoid regional price distortions. A recent World Bank/ WFP paper on food markets in Iraq, noted: 'Food price behavior indicates that markets are reasonably well integrated'[33] even if 'the three northern governorates have been completely separated from the rest of markets with regard to wheat flour and imported rice. In the case of Iraqi rice, the northern governorates are also integrated with the rest of the country although quite minimally compared with the high degree of integration observed in the rest of the areas'. The north's low integration with other markets is likely due to historical factors related to the region's relative political autonomy in recent years. Greater opportunities for exports to neighboring countries might also have influenced prices in the region and contributed to lower integration with other regions.

The study also indicates that the integration of Anbar and Kerbala governorates' markets with the rest of the region is relatively low. In the case of Anbar the sheer size of the governorate, large distances between settlements and export opportunities through Syria and Jordan may be contributing factors. Most of the other regions within the center/south of Iraq show relatively high price/availability correlations suggesting that markets are fairly well integrated.

High PDS dependency, particularly for low-income households, indicates that the impact of market price variation over family budgets is moderate and does not appear to be a major determinant of food access. However, if the food supply

[31] Reconstructing Iraq's agriculture, water resources and food security system FAO/WB/WFP. October 2003.The report was issued as a sector report and served as an input to the 2003 UN/World Bank Iraq Joint Needs Assessment report.

[32] Iraqi Public Works Reconstruction. Press Briefing with both the Iraqi Minister of Public Works and the USAID Senior Reconstruction Advisor. Foreign Press Center Briefing, Washington D.C. 24 September 2003.

[33] A study of Food grain Markets in Iraq. WB/WFP, Neville Edrisinghe. 2004.

through PDS was to diminish significantly, price levels and regional variability would have the potential to become major food access and food security determinants. As such, effective monitoring of market prices would be needed to enhance the policy makers' capacity to take timely, remedial actions in order to mitigate against the potential risks of price-related shocks.

Reliable PDS distribution is critical for the short-medium term, in the absence of longer-term solutions through economic recovery and liberalized markets. As highlighted in the World Bank/WFP markets study 'a breakdown in the food transfer-marketing system is the worst thing that could happen in the transitional situation that Iraq is facing now. Comprehensive short-term and medium-term planning involving complete identification of constraints and bottlenecks and instituting the appropriate legal and regulatory structures (quality controls, consumer protection) is required prior to affecting a transition to liberalized markets, that should ideally be gradual'.

Effective PDS operations require good management and integration of human and material resources and the capacity to respond to bottlenecks and inefficiencies as they arise. **Supply shortfalls - which can result in households receiving less of the planned ration items - impact disproportionately on poorer households given their higher dependency rates.**

The FAO/WFP 2003 Assessment includes some information about household food consumption habits, diet diversity and dependency on various ration items. According to a limited household sample conducted in Baghdad, Kerbala and Basrah governorates: 'Among the ration foods, cereals were the most commonly consumed, followed by vegetable oil, milk and legumes'[34]. Focus group discussions confirm that the extreme poor and the poor consume more wheat as compared with middle and 'better-off' households. This could be attributed to the fact that poor families tend to sell in the market high value commodities (i.e. oil) rather than wheat, while better off households tend to exchange wheat for bread, although the quantities of finished product do not correspond to the wheat flour processed. More information is required for a better understanding of the importance or 'perceived value' of each ration item for low income households.

Food Utilization

As highlighted in the earlier conceptual framework section, food utilization is determined according to: 'whether a population will be able to derive sufficient nutrition during the given consumption period from available and accessible food to meet its dietary needs'.

Food utilization is directly linked to the nutritional status of the population. Factors that could lead to malnutrition include social and environmental variables such as feeding practices, education, eating habits, inadequate food consumption and the individual's health status factors, such as the amount of energy/calories and nutrients that an individual can effectively utilize. Additional health-related factors include health care practices and access to sufficient health care, hygiene, water quality, sanitation and food safety and quality.

[34] FAO/WFP Crop, Food Supply and Nutrition Assessment Mission Report. FAO. September 2003.Thirty clusters were selected according to the population proportionate to size (PPS) method in Shatt al Arab (Basrah), Baghdad and Kerbala. Some 450 randomly selected households were targeted (15 households in each cluster). Sub-samples for 60 households in each area were studied for meal frequency and food diversity practices.

As pointed out in the earlier findings, malnutrition persists in Iraq, with chronic malnutrition being the greatest concern. Stunting was recorded in one out of every four children under five years of age (27.6 percent) within the baseline study sample. Rates are even higher within certain groups of districts with more than one out of every three children chronically malnourished. Acute malnutrition is estimated at just over 4 percent for the sampled population. While chronic malnutrition appears to have risen when compared to the findings of a 2002 MOH/UNICEF survey, rates of acute malnutrition (wasting) are more stable[35].

Identifying the specific causes of malnutrition is beyond the scope of this baseline. Additional research would be needed to have a better understanding of causal factors. Nevertheless, it is widely accepted that Iraq's inadequate water and sanitation services are contributing factors to the poor nutritional status of the population. Improving water and sanitation services has been identified as a recovery and rehabilitation priority for Iraq. The UN/World Bank 2003 Joint Iraq Needs Assessment noted: 'serious environmental and health risks associated with contaminated water supplies, inappropriate handling of solid waste and disposal of sewage threaten to further burden the already severely stressed health system'. Greater access to potable water and a more hygienic environment would not only improve general health conditions but could also contribute significantly to the reduction of malnutrition.

Healthier and more diversified diets could also significantly contribute in reducing malnutrition and improve food security. The perception that as long as PDS ration distributions continue to be in place food security is somehow 'adequate' or non-problematic is extremely risky: Iraq's poorest households experience food shortages despite the monthly ration.

From a national food and nutrient availability perspective, the FAO/WFP 2003 assessment concluded that total energy and nutrient availability in the country was sufficient. However, while macro and national average level availability may be sufficient, this may not be applicable for every individual in Iraq: as highlighted in the high rates of stunting noted above, protein-energy malnutrition is an issue of concern and malnutrition caused by insufficient micro-nutrient intake needs to be examined and addressed.

Although information to accurately assess the prevalence of micro-nutrient deficiencies is not available, earlier surveys suggest that the prevalence of anemia (iron deficiency) and goiter (iodine deficiency) are a matter of concern. The FAO/WFP Crop Food Supply and Nutrition Assessment (2003) report noted that 'the prevalence of anemia in pregnancy increased from 51 percent in 1995 to 60 percent in 1999. As a result the incidence of Low Birth Weight increased from 4.5 percent in 1990 to 23.9 percent in 2002. (…) Iodine deficiency was found among the school children in 1994 as prevalence of goiter being 30-50 percent in the northern parts while it has been 8 to 14 percent elsewhere in the country in 1987' despite the distribution of iodized salt through the PDS ration.

It is well known that many of Iraq's poorer households sell portions of their ration to generate income needed to cover other essential expenditures, such as medicine, healthcare, transportation and other needs but also for supplementing their diets with items not available in the ration, like fresh fruits and vegetables. Such market

[35] UNICEF indicates that 2002 stunting rates for the country were approximately 23 percent, while wasting rates were estimated at 4 percent. The Situation of Children in Iraq. UNICEF. March 2003.

transactions often result in a net calorie loss for consumers. While the main issue continues to be the insufficient purchasing power of the poorest layers of the population, one option that has been considered in order to increase nutrients intake and add flavor and diversity into the diet, is to add diverse food items (i.e. cheese or tomato paste) into the PDS ration. While such an option could result in nutritional gains for beneficiaries, it could also increase ration dependency (and PDS popularity). This option, including the possibility of targeted distribution of some commodities, has a number of policy and financial implications and would need careful analysis prior to implementation.

Inadequate diversity in the diet is not easily remedied through short-term interventions or through 'one size fits all' large public sector programmes[36]. A time frame for influencing dietary intake for an entire population should be measured in years or even decades, due to deeply ingrained cultural and social factors that determine food consumption habits. Programmes that are tailored to local conditions for smaller population groups are often most effective.

Ensuring food security for the most vulnerable in the context of a PDS reform

The PDS represents the largest component of Iraq's *de-facto* national safety net to ensure food security for the entire population. However, the rationale and context that led to the introduction of the PDS are no longer relevant to the longer term strategy for national recovery and development. Current plans emphasize economic growth, a rebalancing of roles and responsibilities between the public and private sectors and greater reliance on markets through trade liberalization. Such developments would eventually set the stage for greater levels of self sufficiency for Iraq's citizens. Until the longer term benefits of economic growth and recovery are realized, many of Iraq's poorest households will require additional assistance.

Through the UN Country Team's Food Security Cluster, WFP, FAO, UNICEF, WHO and the World Bank work closely with Iraq's line ministries, NGOs and major donor countries to support activities aimed at eliminating food insecurity in Iraq. Stakeholders agree on the need for a more targeted food distribution, or its substitution with other forms of assistance through safety nets, including the utilization of various transfer assistance modes. The FAO/WFP Crop Food Supply and Nutrition Assessment Mission (2003) report provides a detailed review of options for safety net implementation and addresses key issues such as 'universal or targeted coverage' and advantages and disadvantages of alternative transfer mechanisms (cash, food, coupons).

As long as the PDS continues in its current form, the possible role of food aid is limited and would need to be concentrated on providing assistance to the most vulnerable. In the event that the PDS is discontinued, the magnitude of food insecurity would increase, thus the need for ensuring forms of social protection for the population that would be likely to become food insecure.

Food aid assistance could be used to address food-related causes of malnutrition, guaranteeing food access, therefore ensuring adequate intake of calories and nutrients through supplementary feeding to those in need, or encouraging initiatives

[36] The exception to this rule might be that national programmes such as wheat flour iron fortification programmes can be quite affective as a public health sector intervention.

aimed at improving care giving and feeding practices, food consumption habits, hygiene, water and sanitation.

Many of these issues can be addressed through education initiatives. Food aid could also be used as an incentive to encourage households to avail themselves of health care facilities where feeding and care practices are taught. Similarly, food aid could be used as an incentive to increase both enrollment and attendance for primary education.

In this context, WFP is currently working with Iraq's Ministries (MOPDC, MOH and MOE) to implement a project which takes into account some of the elements described above to establish safety nets targeting the most vulnerable to food insecurity. The project concentrates in districts where extreme poverty rates and malnutrition rates were assessed as particularly high.

The study identified food insecurity as being a result of several factors, including malnutrition and poverty. Policies aimed at poverty reduction and at addressing non-food related causes of malnutrition are issues that go beyond the scope of this paper.

Need for information gathering and capacity building

Prior to the 2003 war and as a result of policies implemented by the previous regime, little was known about the extent of food insecurity and vulnerability in Iraq. While a number of published sources have touched on these themes, opportunities exist for new studies to fill knowledge and information gaps. The baseline study and other recent research are intended to contribute to a better understanding of Iraq's food security situation, with an aim to develop policies and future interventions.

This study was undertaken in anticipation of a possible PDS policy shift from universal coverage towards a targeted approach. Yet, regardless of new policies and safety net reform, the evidence from the findings is clear: a significant segment of the population faces real difficulties in accessing adequate food and many others are vulnerable because of their high PDS dependency. Without the food ration many lower-income households would not be able to meet their food requirements. Given these conditions and the uncertainties and risks that future reform initiatives would imply, there is a clear need for national institutions to have a strong food security analysis and monitoring capacity. Food security conditions would need to be closely monitored at national, regional and community levels. Such a capacity should be well established prior to implementing broad reaching reforms or entitlement reductions.

The responsibility for either creating new capacity or for strengthening the existing ones lies with Iraqi national institutions, for which human resources and institutional competence exist. Capacities, currently spread across various ministries could be mobilized, structured and enhanced to establish an effective food security analysis and monitoring unit. Such a unit would be able to produce and disseminate accurate information needed to support effective policies and programmes addressing food insecurity.

Given the multiple dimensions of the problem, a new unit would need to be staffed with personnel and expertise from different disciplines (i.e. economics, nutrition, statistics, agriculture, etc.) and would require a strong capacity to collect, manage and analyze large socioeconomic datasets. Although there would be a need for strong collaboration and shared responsibilities across ministries, there would also be a need to establish a single unit in charge of coordinating and performing food

security analysis and monitoring activities.

Considering these requirements and the experience of this study, an ideal institution for housing such a unit could be the Ministry of Planning and Development Cooperation Central Statistics Office (MOPDC/CSO-IT). The CSO has a direct link with all ministries through its 'coordination committee' and within its structure there are offices dealing with agriculture, education, health, construction, national accounts, environment and crime issues. CSO is present in all center/south governorates and its presence at district level is being expanded. Coordination between the central office and the northern governorates, which have, until recently, been operating independently, is being strengthened. Once this process is completed, data collection and analysis at country level will be simplified. Furthermore, CSO has experience in collaborating with other Iraqi institutions and international organizations (i.e. UNDP, WFP, FAO and UNICEF) in terms of designing and implementing numerous surveys covering multiple themes.

Investments in human and material resources for strengthening national capacity would be needed to enhance the capacity of any such 'food security monitoring unit'. External institutions, including UN agencies, governmental aid agencies and NGOs have much to offer to the capacity building process. WFP's emergency project contains a capacity building component to enhance food security monitoring and allow for an update of the findings of this report.

Detailed training needs assessments would be needed before developing training programmes, so as to effectively meet the needs of those being trained. The experiences gathered during the implementation of the baseline study, however, allow for the identification of the following training needs:

- Training programmes for technical staff and managers to enhance conceptual understanding of the components, causes and factors that determine food security and vulnerability and analysis, including transfer of 'best practices' developed by food security analysts;
- Ensure assistance for systems and methodology development, selection of analytical tools and techniques appropriate to the Iraqi context, indicator selection, database development and management;
- Specialized training on the utilization of mapping tools (i.e. Geographic Information Systems, Remote Sensing and cartography).

In addition to training, a number of other initiatives would help to strengthen existing national capacity. These include:

- Sponsored study tours through which Iraqi professionals would have an opportunity to visit and observe well functioning food security analysis units located outside of Iraq;
- Sponsoring qualified individuals for longer term educational opportunities, i.e. through scholarship programmes at learning institutions abroad;
- Support to Market Information Systems, focusing on market price data collection, analysis and dissemination;
- Support for Internet/Web page development activities that will allow Iraqi institutions to promote information access and distribution.

Lastly, financial resources would be needed to purchase equipment such as computer hardware and software tools, with related technical support for operations and maintenance.

7. Conclusions and recommendations

Food insecurity persists in Iraq, despite the fact that virtually the entire population continues to receive a monthly food ration through the Public Distribution System (PDS).

- Although the bulk of Iraq's population is able to acquire sufficient food for an active and healthy life, the same cannot be said with regards to an estimated 11 percent of the population.

The findings of the baseline survey also indicate that:

- In total, approximately 25 percent of the Iraqi population is highly dependent on the PDS. Approximately 2.6 million people are extremely poor and vulnerable to food insecurity. If the PDS were to be discontinued, an additional 3.6 million people would face a high probability of becoming food insecure.

The analytical process identified four groups of districts characterized by different levels of extreme poverty, malnutrition, dependency on the national safety net system and use of food-related coping strategies.

- Two groups of districts, corresponding to a 'high level of extreme poverty' and 'high prevalence of malnutrition' typologies are - for different reasons - the most vulnerable to food insecurity.
- Intervention aimed at addressing unemployment and malnutrition targeting households living in these two groups of districts is recommended.

The causes of Iraq's food insecurity emanate from the country's recent history; three wars were fought over two decades, sanctions were imposed for 13 years and poor leadership and mismanagement at the highest levels have virtually crippled the national economy. Yet, the country ranks second only to Saudi Arabia in terms of oil reserves and as recently as the 1970s, Iraq was regarded as a middle income country. Iraq, a country whose history is tied to 'the birthplace of agriculture' and home to one of the world's first great civilizations (Mesopotamia, made possible through surplus food production), continues to find itself hugely dependant on subsidized food imports.

The current instability hinders reconstruction and other efforts geared towards economic recovery and improvements of basic services such as water, electricity and healthcare. The national economy is expected to undergo large scale restructuring. A rebalancing of public sector institutions vis-à-vis the private sector is expected and economic growth through a more liberalized economy is planned. This growth is expected to lead to job creation, better earning opportunities, increases to personal incomes and significantly less dependency on the state as a provider of basic needs. **But even with economic growth, social protection through a national safety net system targeting the most vulnerable would still be needed.**

Malnutrition, infant mortality and general economic impoverishment reached unprecedented levels during the sanctions era. A strengthened PDS through the OFFP provided social protection when it was needed most. Recently, the PDS played a major role in terms of avoiding a national food crisis. But more than 13 years since the inception of the PDS, much has changed in Iraq. The sanctions and trade embargoes have been lifted, a transitional government is in place, national elections are planned and new investments and rehabilitation activities are underway.

A critical question now facing Iraq's new leaders is 'how can social protection and food security best be enhanced both during the transition period and beyond'? There is general consensus that indefinitely maintaining the policy of universal coverage PDS no longer fits within the country's larger recovery and strategic economic planning. **A more targeted and efficient system for providing 'needs based' social protection is needed.** Indefinitely maintaining the untargeted program is at odds with the current broader vision and goal of a less state-dependant society. PDS financial costs are high: an estimated 2.4 billion US dollars is needed annually. A more equitable and efficient safety net, designed to assist individuals who truly cannot provide for their own food and nutritional needs, would result in considerable cost reductions. Resulting 'savings' could then be earmarked for new human and social capital investments aimed squarely at benefiting the most vulnerable, thereby increasing the probability for greater self-reliance and less state dependency in the future.

New policies and programmes designed to enhance food security, would need to reflect an accurate understanding of the nature and causes of Iraq's current food insecurity and the unique circumstances that perpetuate it.

Sufficient quantities of food are generally available in Iraq. However, part of the population is not able to access sufficient food. It is not uncommon for poorer households to sell part of the ration to generate income to cover other essential expenditures, which results in less food for consumption. Furthermore, although the ration is designed to provide minimum food calorie and energy needs, it does not contain all of the nutrients required for an adequate diet. Households with inadequate purchasing power sell a portion of the ration to generate income to cover other essential expenditures and the need for a more balanced, diverse and nutrient rich diet, often renouncing to part of their daily calories' intake.

There are also periodic discrepancies between the 'planned and the 'distributed' ration. Supply shortfalls can result in households receiving less or not all of the planned ration items. Shortfall impacts fall disproportionately on poorer households given their higher dependency on the PDS.

Chronic poverty, inadequate food and non-food purchasing power, the need for dietary diversity, are all contributing factors to Iraq's food insecurity. **The development of policies aimed at increasing households' income** – through improved employment opportunities - **coupled with adequate attention to the risks of inflation, would result in enhanced food access through the market and result in improved food security.** Such an approach would be consistent with the findings of this baseline survey: focus group discussions indicated that the unemployed, together with female-headed households, are perceived as the most vulnerable and that 'job creation' is the main solution to improve families' food security.

Disparities between urban and rural regions are evident through higher rates of rural unemployment and lower access to essential services. Poor water and sanitation, education, health and transportation services contribute to a more impoverished living environment. Extreme poverty is disproportionately concentrated in rural areas (56 percent). In contrast, the distribution of the general population is approximately 70 percent urban and 30 percent rural.

While additional income is essential for raising food purchasing power, commodity prices could also be expected to increase as incomes rise. **Ensuring well functioning and integrated markets could help to ensure that unusual price**

rises are less likely to occur.

Regional price variability does not appear to be a major factor as a current determinant of food access for households. However, price levels and regional variability could become major food access and food security determinants if the food supply through PDS diminishes significantly. **An effective price monitoring system would provide policy makers with reliable and timely information needed to decide on possible remedial actions.**

PDS reform implies a fundamental shift towards greater reliance on commercial food imports and domestic production. Yet, as self-sufficiency through domestic production is unlikely in the medium term, **consideration should be given to means of expanding private sector commercial food imports when designing a new safety net policy.**

The private sector would need adequate capacity if commercial food imports are to play a more important role as a source for the nation's food supply. Before expanding the role of the private sector, **investments to improve market infrastructure would be needed**. **An upgrading of Iraq's banking and credit services would be critical for financing large-scale private sector food import and marketing operations.**

If PDS reform is to result in lesser dependence on subsidized food imports, in addition to an expanded role for commercial food imports, food supply through domestic production would also need to increase. As food supply through the PDS is not likely to diminish significantly in the short term, policy makers could explore options to improve local procurement of food – especially grains - as a mean for providing production incentives.

In addition to food access and availability issues, **adequate attention should be given to food utilization, including care practices** (child care, feeding practices, eating habits, nutritional awareness, etc.) **as well as other social and environmental dimensions such as adequate water and sanitation, public health care, hygiene, food safety and food quality.**

A coordinated effort involving multiple institutions – including Iraqi line ministries, but also with the contribution of donor countries, UN agencies, the World Bank, NGOs, academia and the private sector - **would be needed to effectively address food utilization issues**.

Recent malnutrition data collected through this and other studies provide some indication on where needs appear to be more acute: 36 districts present significantly higher rates of malnutrition compared to the national average. Acute malnutrition is particularly high for 13 districts, with 13-14 percent wasting rates against a 4.4 percent average. Improved access to water and sanitation services in these areas would not only improve general health conditions but could also contribute significantly to the reduction of malnutrition and food insecurity.

Healthier and more diverse diets could also significantly help in reducing malnutrition. Community level nutrition education and awareness programmes could promote the consumption of diverse and nutrient-rich food types, which are available and accessible to poorer households. Other options such as the introduction of cheese or tomato paste into the PDS ration, which have been considered in the past, could result in nutritional gains for beneficiaries, but also in an increased dependency on the ration. Consideration might be given to a targeted distribution of any additional item. All options would have to be very carefully analyzed in the context of a reform of the PDS and introduction of possible alternative safety nets,

including cash, food and human capital investment through education and skills transfer.

Given the unique circumstances of Iraq and the continuation of the PDS, **food aid could play a relevant role only through addressing the needs of the most vulnerable sectors of the population and food-related causes of malnutrition**.

Other types of intervention would be required to deal with social and environmental causes of malnutrition, including care giving and feeding practices, food consumption habits, hygiene, water and sanitation.

Many of these issues could be addressed through education initiatives. **Food aid could be used as an incentive to encourage increased attendance of households at health care facilities where feeding and care practices are taught and to raise both enrollment and attendance rates for primary education**. In this context, WFP has launched a project which, in collaboration with Iraqi institutions, will concentrate on the implementation of safety nets (supplementary feeding, school feeding) in districts particularly vulnerable to food insecurity identified by the baseline study.

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Annex 2. Questionnaires

Focus Group Data Collection Sheet

Date:	Interviewer:	Recorder:
Governorate:	District:	District Capital:

Participants

	Name	Sub-District Represented	Group Represented	Gender
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				

Section 1

i) Percentage in each wealth class

	Better off	Middle	Poor	Extreme Poor
Percent				

ii) Description/Characteristics of wealth/class breakdowns

Better off Characteristics	Middle Characteristics	Poor Characteristics	Extreme Poor Characteristics
1.	1.	1.	1.
2	2	2	2
3.	3.	3.	3.
4.	4.	4.	4.
5.	5.	5.	5.
6.	6.	6.	6.
7. Avg HH size=	7. Avg HH size=	7. Avg HH size=	7. Avg HH size=

Section 2

Household Monthly Expenditure

Expenditure	Amount in ID			
	Better Off	Middle	Poor	Extreme Poor
Rent/Housing				
Home expenses (water, gas, electricity, fuel, telephone..)				
Food Ration (250 ID)				
Additional Food (beyond 250 ID)				
Education (fees, books, uniforms,…)				
Transportation				
Health Care/Medicine				
Clothing				
Personal care (soap, shampoo..)				
Other expenditures				
Total				

Section 3

Household Monthly Income

Income Source	Amount in ID			
	Better Off	Middle	Poor	Extreme Poor
Record Number of income earners	M= F=	M= F=	M= F=	M= F=
Employment -salary				
Labour wages				
Self-employment earnings				
Earning from Farm/Agri Production				
Earnings from renting home/land/other				
Earnings from sale of part/whole PDS ration				
Retirement Pension				
Incentives				
Remittances – from abroad				
Remittances – form within Iraq				
Gifts/Charity				
Sale of assets				
Begging				
Other				
Credit/Debt Balance				
-Debt				
-Credit				
Sub-Total				
Total				

Section 4

Value of PDS/per person

Commodity	Quantity	Market Price (ID)
Wheat Flour		
Rice		
Sugar		
Vegetable Oil		
Pulses		
Milk		
Infant Formula		
Weaning Cereal		
Tea		
Salt		
Detergent		
Soap		
Total		

Section 5

District's Needs/Solution to Food Insecurity

	District's Needs/Solution
1.	
2.	
3.	
4.	
5.	
6.	
7.	

Section 6

Additional Comments from Assessment Team Members. Please comment on the overall interview process:

Baseline Food Security Assessment
Household Survey Data Collection Form

Form Code ☐

General Data

Date _____Interviewer/Group Name _____

Governorate _____ District _____

Sub-District _____ Urban ☐ Rural ☐

Head of Household Data

Sex: ☐ Male ☐ Female Age: _____

Employment Status:

Full Time ☐ Part Time ☐ Not Working ☐ Pensioner ☐

Occupation: Farming (Self Employed) ☐ Agricultural labour ☐

Non-Skilled labour ☐ Skilled labour ☐

Public servant ☐ Self-employed (Non-Farm) ☐

Other (Indicate) _____

Household Data

Household Size: ---------

Number of household members within each of these age classes:

< 1 year ---------- 1 – 5 years old ---------- 6 – 15 years old ----------

15 – 60 years old ---------- > 60 years old ----------

Of those between 6 – 15 years old:

- How many work to support the family? ----------
- How many currently going to school? ----------
  - Do these children eat before school?: [Yes All / Yes Some / No]
  - At their school is there any "HANUTT"? [Yes ☐ No ☐]

Of those between 15 – 60 years old:

How many work?

- Full time _____ Part time _____ Not Working _____ Pensioner_____

How many of them have an education level of:

- High _____ Middle _____ Primary _____ Not Educated _____

What is your estimate of total household income for the month of August in ID?

What is your estimate of total household expenditure for the month of August in ID?

How much LPG and kerosene did you use previously (Last year) in winter and summer, and how much do you use now?

	Last Winter	Last Summer	Now
LPG *(Bottle/12kg)*			
Kerosene (Liter)			

If you are now using less LPG than you did last year at this time, what fuel are you using instead of LPG to cook with?

If the national grid provides only part or none of your electrical power, how do you obtain electrical power for your home? How much fuel are you using to generate this?

On National Grid (circle yes or no) Yes No

Used for extra power

(a) Nothing used for extra power
(b) Diesel generator, shared with neighbors
(c) Own diesel generator
(d) Gasoline generator

Form Code ☐

Of those between 1 – 5 years old:

No.	Sex	Age	Height	Weight
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

Note: This table should be in a separate page for another group to take measurements.

Consumption Coping Strategy Index (CSI)							
In the past 30 days, if there have been times when you did not have enough food or money to buy food, how often has your household had to:	Relative Frequency					Severity Ranking	Score
	All the time? Every day	Pretty often? 3-6 */week	Once in a while? 1-2 */week	Hardly at all? <1 */ week	Never 0*/week		
1. Turn to the consumption of low quality and cheaper food stuff.							
2. Use bran, corn, and the flour of date seeds as food.							
3. Borrow food or request help from relatives, friends and neighbors.							
4. Buy food by debt.							
5. Consume the seeds which should be kept for the next agricultural season.							
6. Collect herbs and other wild plant and/or Hunt small birds to eat.							
7. Sell some food ration items to buy other food items							
8. Attend religious, death, weddings occasions to eat.							
9. Consume less food within the meals.							
10. Reduce number of daily meals.							
11. Reduce adults' food consumption to secure the need of children for food.							
12. Reduce the expenditure of the family to the least to by food							
13. Skip one day or more than one day without food.							
14. Ensure feeding the employed members of the family rather than those not working.							
15. Encourage some members of the family to beg.							
16. Send some members of the family to live with relatives or with other families.							
17. Searching for food from the groceries or home remains							
TOTAL							

Annex 3. Household Survey Sampling

WFP and CSO decided to utilize the 1997 national census as the starting point for defining the sample for the household survey. It is recognized that changes in the population structure have occurred in the six years between the census and the survey, both in terms of urbanization and general population migration. Yet, building on WFP experience in Iraq in dealing with the PDS – probably the only accurate instrument at this point to register population movements – and considering the unexpectedly limited internal displacement registered during the 2003 conflict, it appears that population movements have been limited.

Data gathered was used to depict the situation of food vulnerability at district level (primary cluster) through a classic cluster sampling approach. The cluster design factorial was set at 95x300 (95 districts, with 300 households in each) to yield 28,500 households across 16 governorates. Four main parameters were set for the calculation of the sample:

- Level of confidence at 95%;
- Design effect to compensate for the use of a cluster sampling method at 1.3%;
- Error term was at 6.5%; and
- Factor to account for attrition and non-response at 1%.

Proportions of the urban and rural population within each district used to determine sample size within each area.

According to the 1997 census the districts were divided into smaller clusters of approximately 20-25 households in urban areas and 15-20 in rural areas. The cluster design factorial was set at 15 households randomly picked and interviewed from each cluster[1].

Number of sampled households and clusters per governorate

Governorate	District No.	Urban		Rural		Total	
		Household	Cluster	Household	Cluster	Household	Cluster
Anbar	7	1,260	84	840	56	2,100	140
Babil	4	495	33	705	47	1,200	80
Baghdad	9	1,965	131	735	49	2,700	180
Basrah	7	1,575	105	525	35	2,100	140
Diyala	5	630	42	870	58	1,500	100
Kerbala	3	435	29	465	31	900	60
Missan	6	885	59	915	61	1,800	120
Muthanna	4	450	30	750	50	1,200	80
Najaf	3	540	36	360	24	900	60
Ninewa	8	885	59	1,515	101	2,400	160
Qadissiya	4	555	37	645	43	1,200	80
Salah Al Din	8	1,050	70	1,350	90	2,400	160
Sulaymaniyah	13	2,505	167	1,395	93	3,900	260
Tameem	4	510	34	690	46	1,200	80
Thi-Qar	5	870	58	630	42	1,500	100
Wassit	5	720	48	780	52	1,500	100
Total	**95**	**15,330**	**1,022**	**13,170**	**878**	**28,500**	**1,900**

[1] The number of sampled household was estimated using the following formula: N = [Z2 . P.(1-P). DF . (NR+1)] / E2; where: N = Required sample size; Z = Confidence level (95%); P = Initial variance of the indicator (0.5 to ensure an adequate sample size); DF = Design effect (1.3%); NR = Non response rate (1%); E = Error term (6.5%).

Annex 4. Daily kilocalories intake calculation

To estimate kilocalorie intake all possible sources of food were considered: PDS food basket, market purchases and gifts. In addition, adjustments were made to account for kilocalories lost from people selling items in the food basket, and for kilocalories lost from exchanging ration wheat for bread directly from bakers.

Ration

In calculating amount of kilocalories consumed, several issues are addressed:

- Parts of the ration is sold;
- Money obtained from the sale is used for either food or non food purchases;
- Some households, particularly the wealthy ones, exchange with bakers ration wheat for ready-made bread. This reduces the amount of kilocalories available for consumption.

To quantify the above behaviors, the following calculation was made:

Kilocalorie available for consumption from ration (A) = Total kilocalorie available in ration (B) – loss of kilocalorie from sale of food items (C) + (D) Kilocalorie gained from buying food with earnings from sale of ration – (E) kilocalories lost from exchanging wheat for bread (if any).

The difference of the two (B)–(C) provides with the total kilocalories consumed from the ration (A).

Considering market purchases and gifts, the total kilocalories intake per person per day results in:

Total kilocalories consumed = Ration kilocalories (A) - kilocalories lost from selling part of the ration + kilocalories gained from buying on the market with money earned from selling part of the ration – kilocalories lest from exchanging wheat for bread) + market purchases + gifts.

Each of these components is described as follows:

Total kilocalories available in Ration (B) - Calculated by translating quantities received by beneficiaries through the monthly ration into kilocalorie for each food item. Focus group data include information on quantities of PDS commodities received in June. Kilocalorie corresponding to each item in the ration was drawn from the WFP Nutritional Handbook.

Loss of kilocalories from sale of food items (C) - PDS monitoring survey data collected during the same period as focus group interviews were used to identify items and quantities sold. Items and quantities were translated into kilocalories per person per day.

Kilocalories gained from buying food with earnings from sale of ration (D) - Kilocalories lost from selling items in the market have been accounted for in (C). However, a portion of the money earned from selling parts of the ration is used to buy food items. To calculate this data the following information was analyzed:

- Amount of cash earned from selling the ration. PDS monitoring data itemizes goods sold (all commodities) as well as the quantities sold for each commodity.
- The price at which retailers purchase commodities from individuals (price below market selling price) was collected during the preparation of the WFP/WB Market Access paper and WFP monthly market prices data collection. Knowing the food

items types and quantities sold and their market value, it was possible to calculate the amount earned. Although information on items and quantities sold is not broken down by wealth class, the key informant interviews provided with indications on amount of wheat and rice sold by each wealth group. It is assumed that all classes would sell similar amounts of all other ration commodities.

- The amount of the money being spent on food is calculated by taking the total amount earned from selling the ration, and applying the ratio of expenditure on food versus non-food items by wealth group gathered through focus group data.
- Knowing the sum being spent on food, it was possible to calculate kilocalories purchased and consumed with a system similar to the one used to calculate kilocalories were from additional food purchases from the market (see Market Purchases below).

Kilocalories lost from exchanging wheat for ready-made bread (E) - Key informant data by governorate by wealth group provide with information on average kilograms of wheat given to baker (2 kilos); average number of pieces of bread received; and type of bread and weight of bread (mainly 2 types of Bread: Samoun 60 grams and Khubaz 80 grams). As the number of pieces of bread received for each kilo of wheat, and the weight in grams of the wheat are known, it was possible to calculate the amount of wheat lost per kilo exchanged. This was then translated into kilocalories loss.

Market Purchases - Kilocalories gained from market purchases were calculated using information on the following:

- Amount spent on additional food by wealth group from focus group data;
- Food items and quantities commonly bought by each wealth group from key informant survey. This includes the top seven most commonly purchased food items and quantities purchased in the market per household/wealth group/governorate. Assessment of the Adequacy of the SCR 986 Food Basket – Northern Governorates, WFP, 2000 was used to compare information;
- Market prices of all ration items, and for selected non-ration items through WFP monthly market prices survey by Governorate and key informants for all commonly purchased food items;
- Kilocalories in each food item purchased from the WFP Nutritional Handbook (ration items) and USDA Nutrient Database (non-ration items).

From the amount spent on food items per household, using market prices, it was possible to calculate the quantities of commonly purchased items, therefore the kilocalories consumed through market purchases.

Gifts - Cash, food or non-food items are commonly exchanged gifts. According to focus group data, 'poor' and 'extreme poor' households receive US$4 and US$7 in gift per month, respectively. It is common for 'better off' families to give away some of the PDS commodities to poorer households. It was assumed that 25% of the value of gifts to poorer groups is represented by food ration items. Accordingly, the corresponding amount of kilocalories was removed from the PDS kilocalories intake for the 'better off' and 'middle' wealth groups.

Annex 5. District-level food security typologies

The survey was undertaken in 1900 localities covering 95 districts and 16 governorates in central, south and north Iraq. Urban areas account for 53.8% of the districts surveyed while 46.2% are rural. Fifteen households per locality were randomly chosen.

Note: wealth classes are classified according to monthly expenditure (cf. page 19): Extreme Poor<= 35 US$; Poor 35.1 – 90 US$; Middle 90.1 – 275 US$; Better off > 275 US$.

Districts with high prevalence of extreme poverty

Family structure by wealth classes

	Extreme Poor	Poor	Middle	Better off
Household	25.6%	51.0%	22.6%	0.8%
Household size	6.4	8.1	9.6	10.3
Female population	52.9%	50.2%	49.6%	48.1%
< 1 year old	3.6%	3.3%	3.2%	2.6%
1 - 5 years old	14.9%	14.3%	12.5%	14.6%
6 - 15 years old	23.6%	26.8%	25.6%	21.8%
16 - 60 years old	49.9%	51.4%	55.4%	58.3%
> 60 years old	8.1%	4.1%	3.4%	2.8%

Working children (6-15) by wealth classes

	Extreme Poor	Poor	Middle	Better off
Children working full time	3.1%	3.1%	3.0%	7.5%
Children full time students	72.7%	75.4%	77.6%	75.9%
Female children working full time	0.5%	0.8%	0.8%	0.0%
Female children full time students	2.1%	2.9%	3.1%	4.4%
Female children working part time	65.2%	67.1%	70.8%	68.9%
Female children working part time	0.4%	0.5%	0.6%	0.0%

Working adults (16-60) by wealth classes

	Extreme Poor	Poor	Middle	Better off
Working adults	37.7%	42.0%	45.1%	42.6%
Working females	15.1%	16.7%	20.7%	20.4%
Adults working full time	21.7%	27.1%	32.2%	26.4%
Female working full time	2.6%	3.0%	9.6%	6.6%
Adults working part time	16.0%	14.9%	12.8%	16.2%
Female working part time	12.4%	13.6%	11.1%	13.8%
Not working adults	59.1%	54.7%	53.0%	55.9%
Not working females	83.5%	82.4%	78.7%	79.6%
Retired adults	3.2%	3.3%	2.0%	1.4%

Education level of adults (16-60) by wealth classes

	Extreme Poor	Poor	Middle	Better off
Illiterate	40.4%	29.9%	22.5%	25.1%
Adults can read and write	18.5%	19.6%	16.4%	17.4%
Primary education	27.1%	28.8%	27.2%	29.1%
Secondary education	11.6%	16.8%	22.8%	17.6%
University	2.3%	5.0%	11.2%	10.8%
Illiterate female	53.1%	42.8%	33.6%	35.7%
Adult females can read and write	19.3%	21.5%	20.2%	19.3%
Adult females - primary education	21.1%	24.8%	24.7%	28.9%
Adult females - secondary education	5.8%	9.0%	14.5%	8.4%
Adult females - university	0.7%	1.9%	7.0%	7.7%

Districts with high prevalence of malnutrition

Family structure by wealth classes

	Extreme Poor	Poor	Middle	Better off
Household	8.4%	45.4%	45.0%	1.3%
Household size	5.5	7.1	9.2	17.9
Female population	54.6%	51.0%	48.9%	49.9%
< 1 year old	4.6%	4.1%	3.3%	4.8%
1 - 5 years old	13.0%	14.6%	12.9%	17.8%
6 - 15 years old	20.4%	26.6%	27.5%	24.6%
16 - 60 years old	51.1%	51.3%	53.7%	49.5%
> 60 years old	10.9%	3.5%	2.6%	3.3%

Working children (6-15) by wealth classes

	Extreme Poor	Poor	Middle	Better off
Children working full time	0.7%	2.4%	2.9%	6.2%
Children full time students	75.2%	76.5%	82.0%	80.3%
Female children working full time	0.9%	0.7%	0.5%	1.1%
Female children full time students	1.3%	2.2%	3.2%	5.8%
Female children working part time	71.0%	66.5%	75.1%	77.7%
Female children working part time	0.0%	0.3%	0.4%	3.8%

Working adults (16-60) by wealth classes

	Extreme Poor	Poor	Middle	Better off
Working adults	43.6%	45.5%	46.1%	52.0%
Working females	16.8%	17.2%	18.1%	25.4%
Adults working full time	25.7%	30.7%	35.6%	37.2%
Female working full time	2.9%	2.1%	5.9%	8.2%
Adults working part time	17.9%	14.8%	10.5%	14.8%
Female working part time	13.9%	15.0%	12.2%	17.2%
Not working adults	54.5%	51.4%	51.9%	46.0%
Not working females	82.5%	81.6%	81.3%	74.6%
Retired adults	1.9%	3.1%	2.0%	2.0%

Education level of adults (16-60) by wealth classes

	Extreme Poor	Poor	Middle	Better off
Illiterate	38.7%	30.6%	21.1%	19.0%
Adults can read and write	28.6%	22.6%	20.8%	19.0%
Primary education	21.2%	26.8%	27.3%	29.6%
Secondary education	10.2%	16.7%	22.9%	18.5%
University	1.4%	3.2%	7.8%	14.0%
Illiterate female	50.8%	44.1%	32.3%	26.0%
Adult females can read and write	29.0%	23.4%	24.6%	22.1%
Adult females - primary education	16.3%	22.4%	26.0%	35.0%
Adult females - secondary education	3.9%	9.1%	13.7%	12.4%
Adult females - university	0.0%	0.9%	3.5%	4.5%

Districts with low rates of extreme poverty and average prevalence of malnutrition

Family structure by wealth classes

	Extreme Poor	Poor	Middle	Better off
Household	8.9%	44.2%	45.0%	1.9%
Household size	5.8	7.5	9.6	12.6
Female population	54.5%	50.7%	49.4%	49.1%
< 1 year old	4.2%	3.5%	3.0%	2.4%
1 - 5 years old	13.8%	14.6%	12.0%	11.6%
6 - 15 years old	21.7%	27.3%	26.2%	21.7%
16 - 60 years old	50.9%	50.4%	54.7%	60.8%
> 60 years old	9.4%	4.2%	4.0%	3.5%

Working children (6-15) by wealth classes

	Extreme Poor	Poor	Middle	Better off
Children working full time	5.4%	8.2%	7.8%	3.8%
Children full time students	69.2%	72.1%	73.3%	77.2%
Female children working full time	1.2%	2.0%	1.9%	0.8%
Female children full time students	4.9%	8.0%	8.3%	4.7%
Female children working part time	62.9%	65.6%	65.9%	67.8%
Female children working part time	0.6%	1.1%	1.2%	0.8%

Working adults (16-60) by wealth classes

	Extreme Poor	Poor	Middle	Better off
Working adults	42.5%	47.0%	49.4%	47.7%
Working females	16.8%	19.2%	23.5%	23.8%
Adults working full time	29.2%	33.1%	36.6%	33.3%
Female working full time	4.1%	4.1%	9.9%	11.0%
Adults working part time	13.3%	13.9%	12.7%	14.4%
Female working part time	12.8%	15.1%	13.6%	12.8%
Not working adults	55.4%	50.1%	48.7%	50.2%
Not working females	82.1%	79.7%	75.9%	75.6%
Retired adults	2.1%	2.9%	1.9%	2.1%

Education level of adults (16-60) by wealth classes

	Extreme Poor	Poor	Middle	Better off
Illiterate	37.1%	29.5%	24.9%	27.3%
Adults can read and write	19.6%	19.1%	16.8%	14.0%
Primary education	26.9%	28.8%	25.3%	22.1%
Secondary education	13.6%	17.4%	22.5%	23.5%
University	2.8%	5.2%	10.4%	13.1%
Illiterate female	46.5%	41.0%	35.8%	39.4%
Adult females can read and write	23.6%	21.4%	18.5%	13.2%
Adult females - primary education	21.6%	24.8%	23.1%	23.3%
Adult females - secondary education	7.6%	10.2%	15.6%	16.5%
Adult females - university	0.6%	2.5%	7.0%	7.7%

Districts with low prevalence of extreme poverty and of malnutrition

Family structure by wealth classes

	Extreme Poor	Poor	Middle	Better off
Household	10.9%	47.8%	39.6%	1.6%
Household size	5.1	6.3	7.7	8.4
Female population	54.4%	50.9%	49.5%	48.9%
< 1 year old	2.9%	3.5%	2.4%	2.3%
1 - 5 years old	12.4%	13.6%	10.6%	8.9%
6 - 15 years old	18.8%	23.2%	24.4%	19.4%
16 - 60 years old	50.2%	54.3%	58.1%	64.6%
> 60 years old	15.7%	5.5%	4.5%	4.8%

Working children (6-15) by wealth classes

	Extreme Poor	Poor	Middle	Better off
Children working full time	4.8%	3.0%	3.7%	2.7%
Children full time students	75.4%	81.1%	84.4%	83.9%
Female children working full time	2.0%	2.2%	2.1%	7.2%
Female children full time students	3.0%	2.5%	4.5%	3.7%
Female children working part time	70.8%	76.9%	79.1%	85.8%
Female children working part time	1.6%	1.8%	2.0%	4.5%

Working adults (16-60) by wealth classes

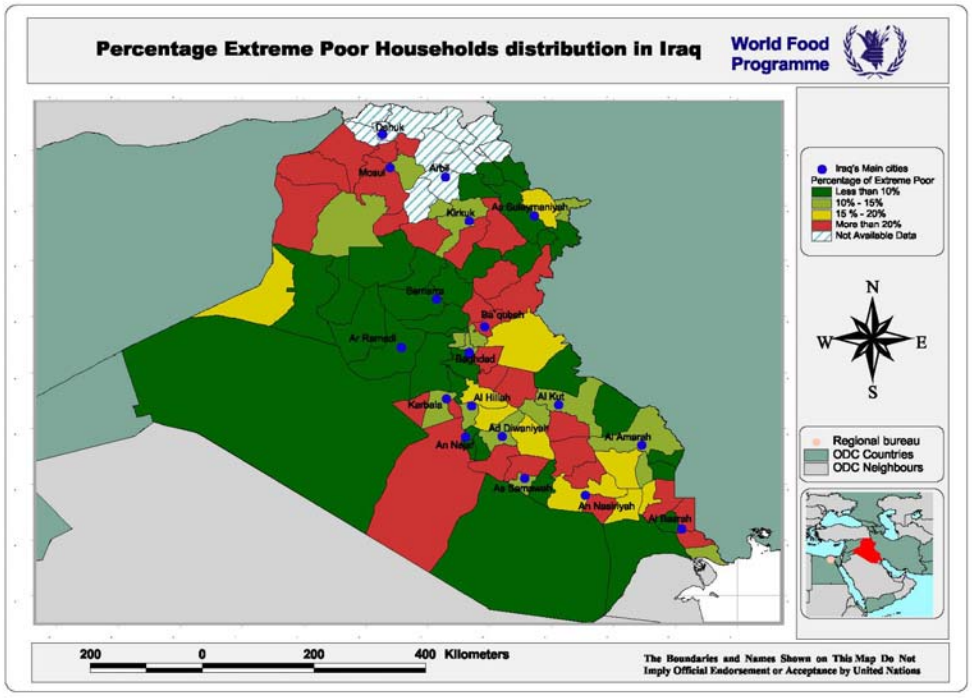
	Extreme Poor	Poor	Middle	Better off
Working adults	42.1%	45.4%	48.1%	52.5%
Working females	15.8%	14.1%	20.2%	32.5%
Adults working full time	29.6%	34.2%	38.7%	42.9%
Female working full time	3.7%	3.5%	11.3%	22.9%
Adults working part time	12.6%	11.2%	9.4%	9.6%
Female working part time	12.1%	10.6%	9.0%	9.6%
Not working adults	55.5%	52.7%	50.3%	46.4%
Not working females	82.7%	85.0%	79.0%	67.1%
Retired adults	2.4%	1.9%	1.6%	1.2%

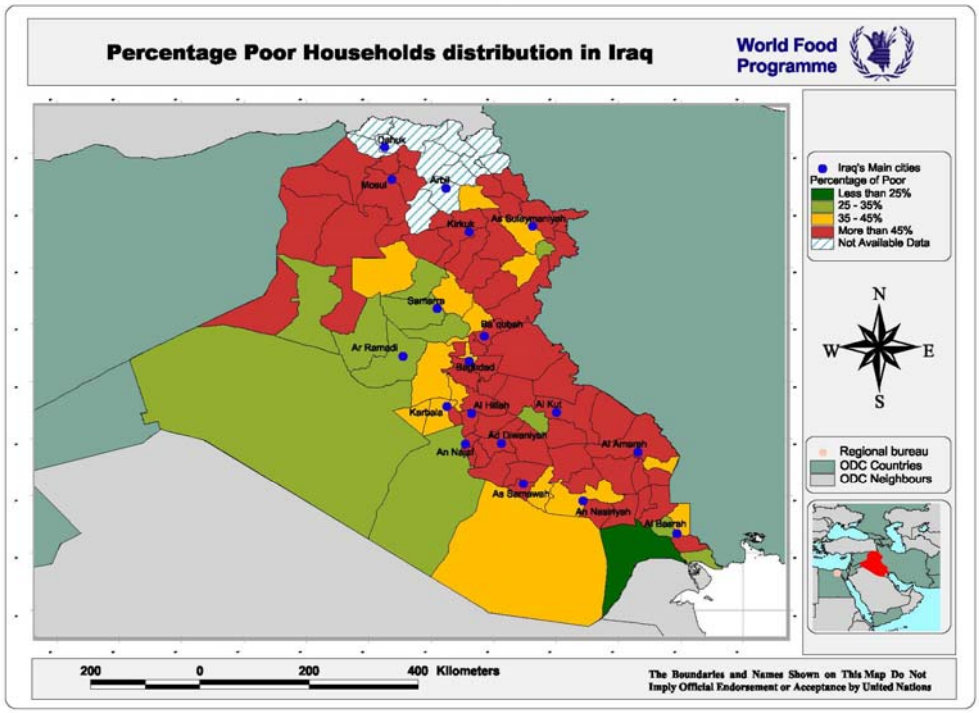
Education level of adults (16-60) by wealth classes

	Extreme Poor	Poor	Middle	Better off
Illiterate	36.1%	30.0%	21.7%	18.4%
Adults can read and write	20.9%	22.0%	17.1%	15.3%
Primary education	25.0%	24.7%	24.8%	19.0%
Secondary education	14.3%	18.2%	23.8%	25.8%
University	3.7%	5.2%	12.7%	21.5%
Illiterate female	46.6%	42.1%	34.0%	29.9%
Adult females can read and write	19.1%	21.3%	17.1%	13.7%
Adult females - primary education	22.2%	21.4%	20.8%	14.2%
Adult females - secondary education	9.8%	12.1%	18.4%	24.3%
Adult females - university	2.3%	3.1%	9.6%	18.0%

Annex 6. Household survey data

Socio-economic data





Working adults (16-60 years old)

Working status of adults within household by governorates

Govern.	Av. # adults per HH	Working		Working full time		Working part time		Not working		% retired
		%	Female Prop.	%	Female Prop.	%	Female Prop.	%	Female Prop.	
Anbar	4.3	46.0%	18.9%	76.6%	5.8%	23.4%	70.3%	51.8%	77.9%	2.2%
Babil	4.0	43.7%	12.7%	83.8%	7.9%	16.2%	36.4%	53.8%	84.5%	2.5%
Baghdad	3.5	44.8%	16.3%	72.9%	8.1%	27.1%	39.3%	52.9%	81.8%	2.3%
Basrah	3.9	45.2%	14.1%	85.3%	8.9%	14.7%	38.6%	52.1%	83.1%	2.7%
Diyala	4.2	42.5%	15.0%	91.6%	10.7%	8.4%	52.9%	55.4%	80.8%	2.1%
Kerbala	3.9	43.2%	13.2%	83.9%	7.6%	16.1%	49.2%	54.4%	83.0%	2.4%
Missan	4.3	38.6%	10.2%	69.3%	4.4%	30.7%	32.5%	58.7%	86.2%	2.8%
Muthanna	4.7	35.7%	8.7%	92.2%	8.0%	7.8%	23.3%	61.2%	80.1%	3.1%
Najaf	4.5	39.1%	8.7%	84.7%	6.5%	15.3%	23.8%	58.2%	82.7%	2.7%
Ninewa	3.7	37.4%	7.9%	79.3%	4.3%	20.7%	24.8%	60.6%	82.0%	2.1%
Qadissiya	4.2	43.5%	11.6%	66.7%	7.4%	33.3%	32.4%	51.9%	84.4%	4.6%
Salah al Din	4.4	44.7%	13.9%	79.3%	11.5%	20.7%	32.8%	52.8%	82.0%	2.5%
Sulayman.	3.4	48.3%	12.8%	81.2%	8.6%	18.8%	37.5%	50.6%	86.9%	1.1%
Tameem	3.9	45.0%	14.0%	79.7%	11.5%	20.3%	20.1%	52.9%	81.6%	2.1%
Thi-Qar	4.2	42.9%	12.7%	77.1%	6.2%	22.9%	51.3%	53.8%	81.1%	3.3%
Wassit	4.3	50.0%	24.7%	78.9%	7.1%	21.1%	82.0%	47.4%	76.6%	2.5%
Iraq (16 gov.)	**3.9**	**43.5%**	**13.9%**	**78.7%**	**7.7%**	**21.3%**	**39.9%**	**54.0%**	**82.2%**	**2.4%**

Working status and type of occupation of the head of household by wealth classes

	Extreme Poor	Poor	Middle	Better off
Head of Household Working Status				
Full Time	45.0%	59.8%	65.0%	55.4%
Part Time	15.2%	11.1%	7.8%	10.6%
Not Working	29.5%	16.3%	13.6%	19.0%
Retired	10.4%	12.8%	13.6%	15.0%
Head of Household Occupation				
Farming Self Employed	15.9%	17.1%	16.4%	14.8%
Agricultural Labor	4.8%	3.2%	1.7%	3.0%
Skilled Labor	3.9%	4.9%	3.7%	2.0%
Non-Skilled Labor	14.4%	10.3%	5.7%	4.9%
Public Servant	5.0%	16.3%	28.6%	21.9%
Self Employed (Non-Farm)	13.7%	16.4%	15.0%	17.2%
Other	2.6%	2.9%	1.9%	2.2%

Head of household working status and occupation by sex

	Male Headed Household	Female Headed Household
Head of Household Working Status		
Full Time	63.9%	12.8%
Part Time	10.8%	7.2%
Not Working	13.2%	60.3%
Retired	12.1%	19.7%
Head of Household Occupation		
Not Working	25.2%	80.0%
Farming Self Employed	17.6%	6.0%
Agricultural Labor	3.0%	1.4%
Skilled Labor	4.6%	0.6%
Non-Skilled Labor	9.8%	1.1%
Public Servant	20.5%	7.0%
Self Employed (Non-Farm)	16.7%	3.0%
Other	2.6%	1.0%

Head of household working status and occupation by urban/rural

	Urban	Rural	Iraq (16 gov.)
Head of Household Working Status			
Full Time	59.6%	59.5%	59.5%
Part Time	8.2%	13.1%	10.5%
Not Working	16.3%	18.3%	17.2%
Retired	16.0%	9.0%	12.8%
Head of Household Occupation			
Not Working	32.1%	27.3%	29.9%
Farming Self Employed	2.8%	32.7%	16.6%
Agricultural Labor	0.7%	5.4%	2.9%
Skilled Labor	6.0%	2.3%	4.2%
Non-Skilled Labor	10.5%	7.5%	9.1%
Public Servant	23.5%	14.4%	19.3%
Self Employed (Non-Farm)	21.6%	8.4%	15.5%
Other	2.9%	2.0%	2.5%

Working status of household adults by head of household sex

Working Status	Male Headed Household		Female Headed Household	
	%	Female	%	Female
Working adults	46.1%	18.3%	37.3%	21.0%
Adults working full time	33.0%	5.5%	25.5%	11.6%
Adults working part time	13.1%	12.9%	11.9%	9.4%
Not working adults	51.9%	81.4%	57.2%	71.4%
Retired adults	2.2%		5.5%	

Working status of household adults by urban/rural

Working status	Urban		Rural		Iraq (16 gov.)	
	%	%	Female	%	Female	Female
Working adults	40.4%	10.7%	51.1%	27.7%	45.3%	18.5%
Adults working full time	33.6%	7.7%	31.0%	3.9%	32.4%	5.9%
Adults working part time	6.8%	3.0%	20.2%	23.7%	13.0%	12.6%
Not working adults	56.9%	88.1%	47.0%	71.8%	52.3%	80.6%
Retired adults	2.9%		1.9%		2.4%	

Working children (6-15 years old)

Working status of children within household by governorates

Governorates	Average # children per HH	Working full time		Working part time		Full Time Students		Other
		%	Female	%	Female	%	Female	
Anbar	2.5	3.7%	51.8%	1.6%	48.0%	81.8%	41.5%	12.9%
Babil	2.2	3.1%	24.1%	0.5%	5.2%	82.0%	42.6%	14.4%
Baghdad	1.8	3.4%	29.5%	0.9%	14.5%	86.1%	44.3%	9.5%
Basrah	1.9	0.7%	3.2%	0.1%	0.0%	85.3%	45.2%	13.9%
Diyala	2.0	2.3%	37.3%	1.1%	15.6%	86.4%	43.7%	10.3%
Kerbala	2.0	1.3%	4.9%	1.4%	29.4%	80.5%	44.1%	16.8%
Missan	2.6	2.4%	31.8%	0.2%	11.0%	79.2%	43.5%	18.2%
Muthanna	2.8	1.8%	43.4%	0.0%	24.5%	67.1%	38.2%	31.1%
Najaf	2.3	2.1%	29.7%	6.4%	12.4%	77.1%	47.7%	14.4%
Ninewa	2.6	2.0%	6.3%	0.0%	7.1%	75.8%	42.4%	22.2%
Qadissiya	2.3	3.3%	10.7%	0.6%	21.4%	76.6%	42.0%	19.5%
Salah al Din	2.6	9.6%	41.5%	0.9%	9.5%	74.9%	41.7%	14.7%
Sulaymaniyah	1.6	3.7%	17.1%	1.9%	10.6%	85.2%	50.2%	9.2%
Tameem	2.0	2.4%	15.3%	1.2%	2.0%	81.5%	45.3%	14.9%
Thi-Qar	2.3	0.7%	9.0%	0.0%	0.0%	76.6%	42.6%	22.8%
Wassit	2.3	6.0%	57.6%	0.0%	6.7%	77.1%	41.0%	17.0%
Iraq (16 gov.)	**2.18**	2.9%	24.0%	0.9%	1.10%	81.5%	43.9%	14.7%

Working status of children by head of household sex

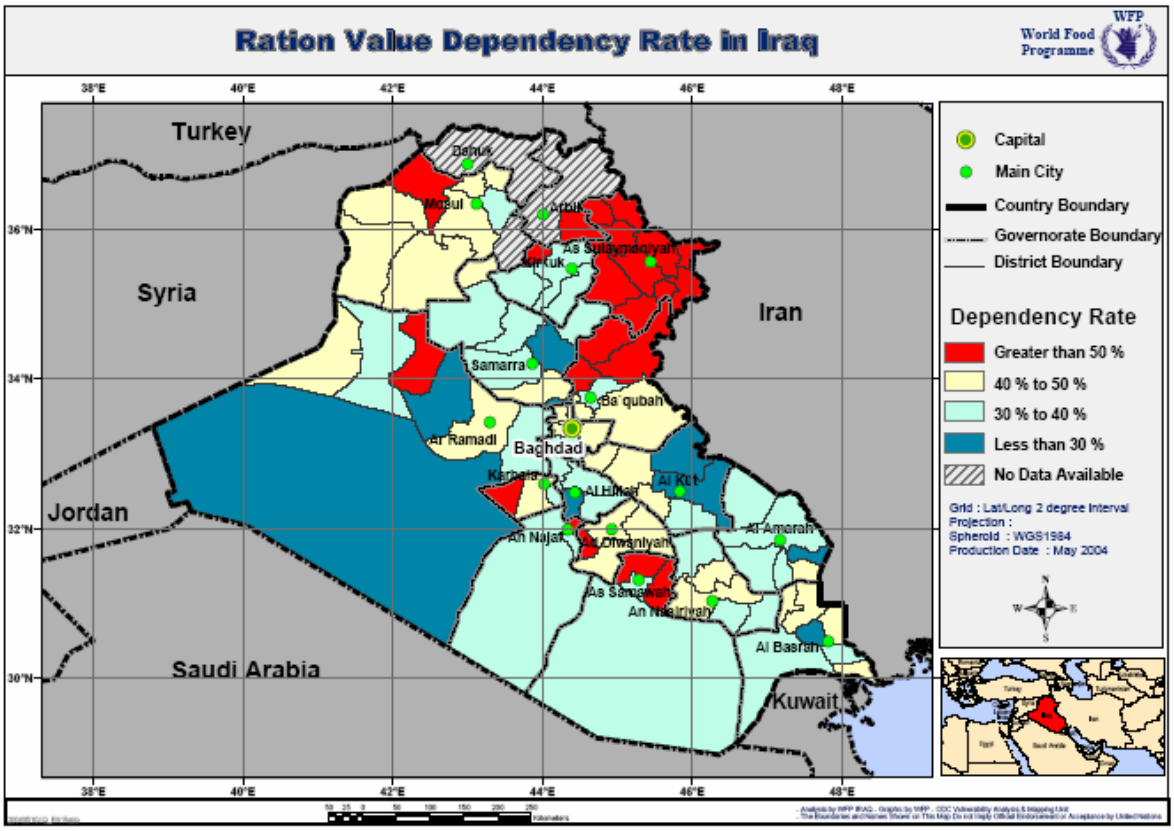
Working status	Male Headed Household		Female Headed Household	
	%	Female	%	Female
Children working full time	4.7%	4.8%	6.5%	5.1%
Children full time students	76.7%	69.9%	73.7%	67.5%
Children working part time	1.5%	1.1%	1.2%	0.5%

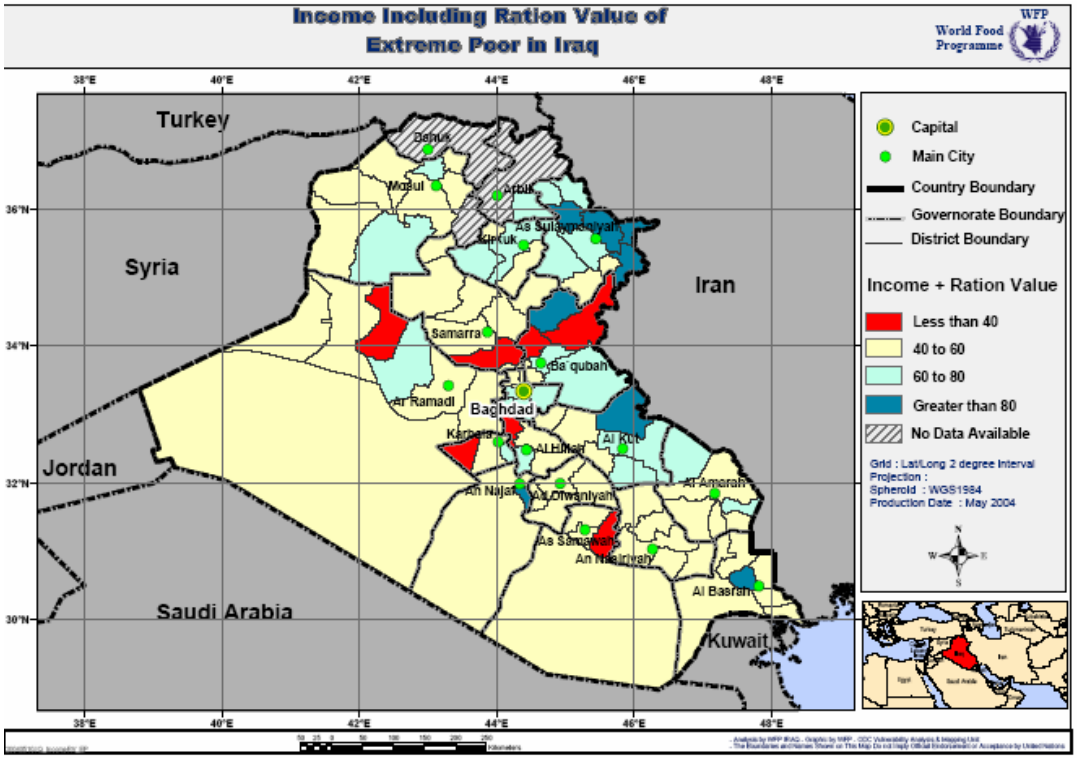
Working status of children by urban/rural

Working status	Urban		Rural		Iraq (16 gov.)	
	%	Female	%	Female	%	Female
Children working full time	1.7%	1.0%	8.0%	8.5%	4.8%	4.8%
Children working part time	1.0%	0.7%	2.1%	1.4%	1.5%	1.1%
Children full time students	86.5%	83.4%	66.1%	56.4%	76.5%	69.8%

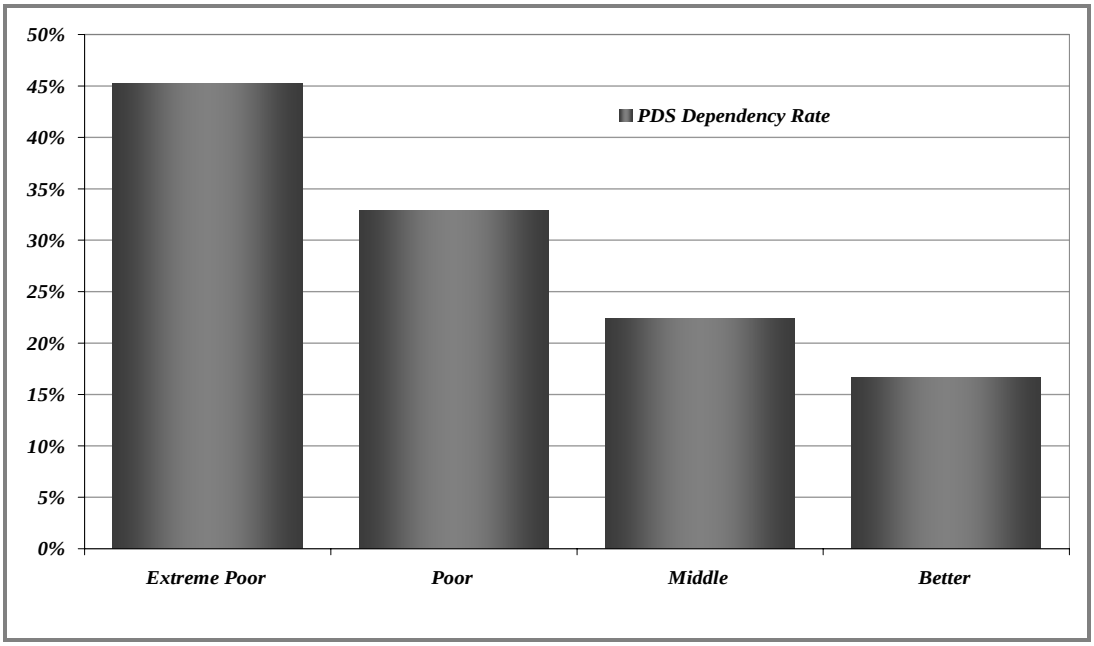
Income and Expenditures

The average market price value of the PDS ration was estimated at $ 23.3 per month in November, 2003 per household for the 'extremely poor' group. During the same month, the average total income in the 'extremely poor' group was assessed at $33 with the average total household expenditure at $ 24.2. Results indicate that the PDS transfer contributes an average of 45% to the 'extreme poor' total income (household cash income plus the market value of the PDS transfer to the household). In addition, the cost of the 2200 calories/household member that the PDS provides members represents more than 70% when compared to the reported household income and 97% to the expenditure for the month of November, 2003.





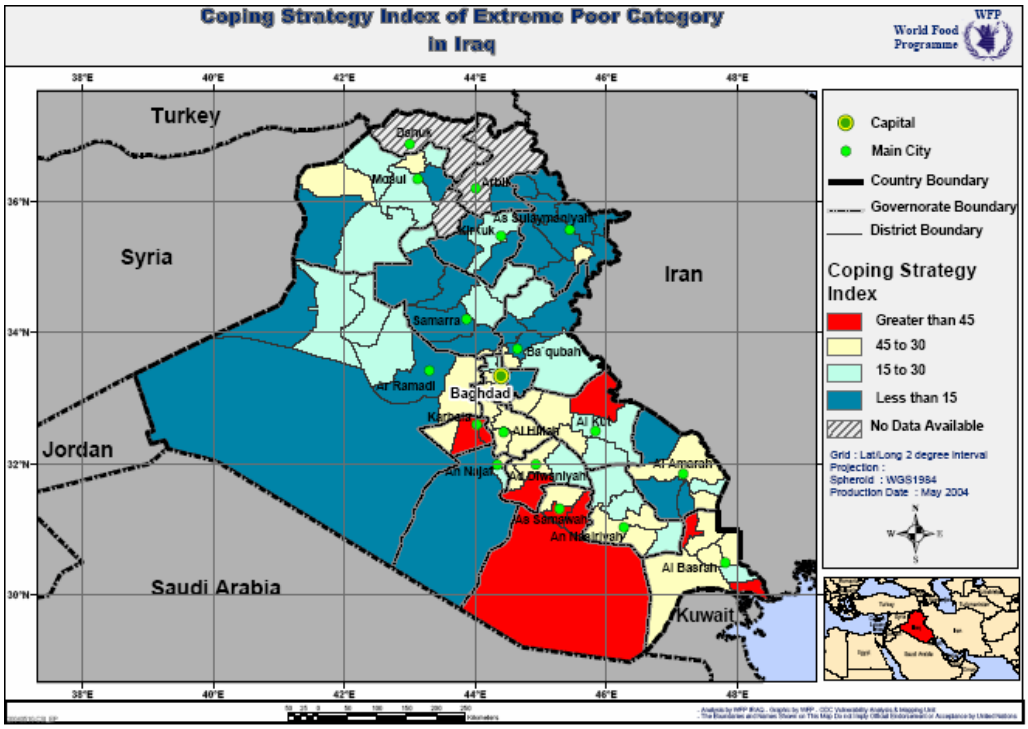
PDS dependency rate by wealth classes



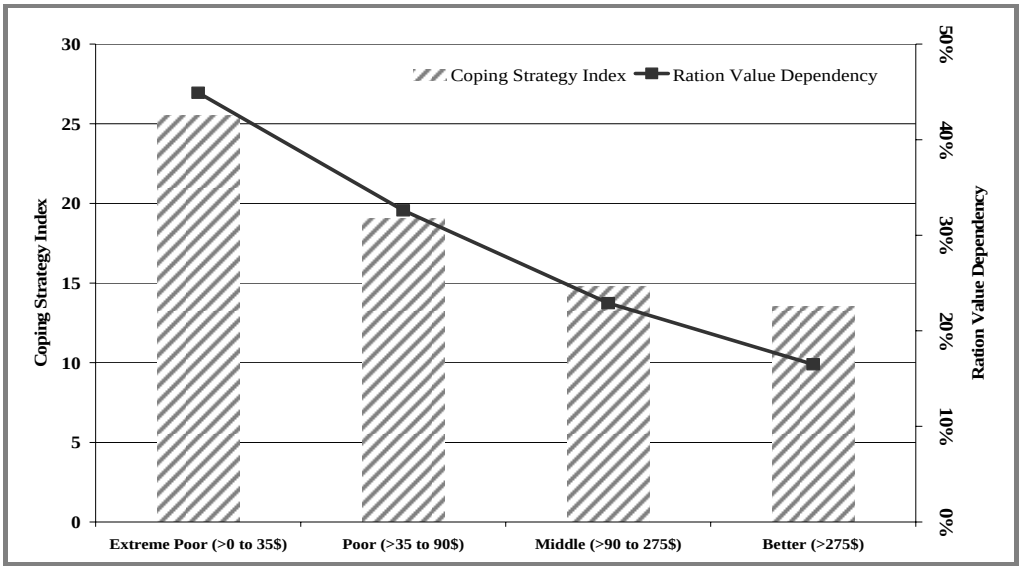
Coping strategies

The food-based Coping Strategies Index (CSI) is an indicator of household food security used to assess other, more complex, indicators of food insecurity. In the household survey, respondents were asked how often they had used specific coping strategies over the past month.

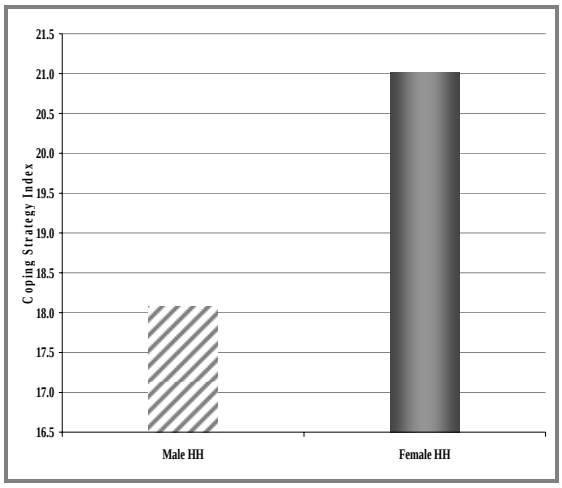
An index was created using the combination of the number of coping strategies adopted and their frequency and severity. The highest the index value, the higher is the vulnerability to food insecurity.



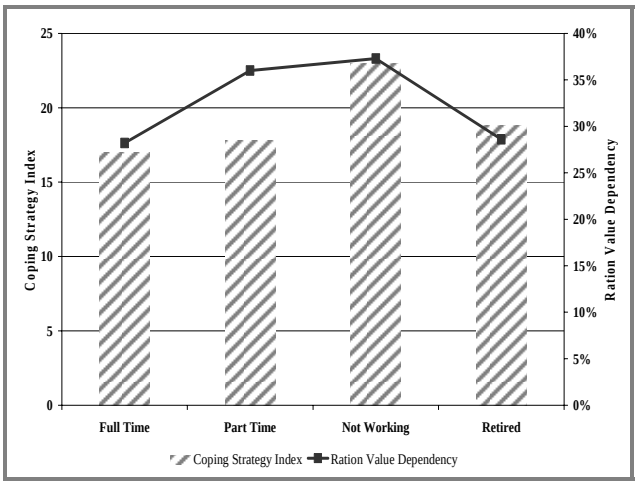
Coping Strategies, PDS dependency and poverty classes



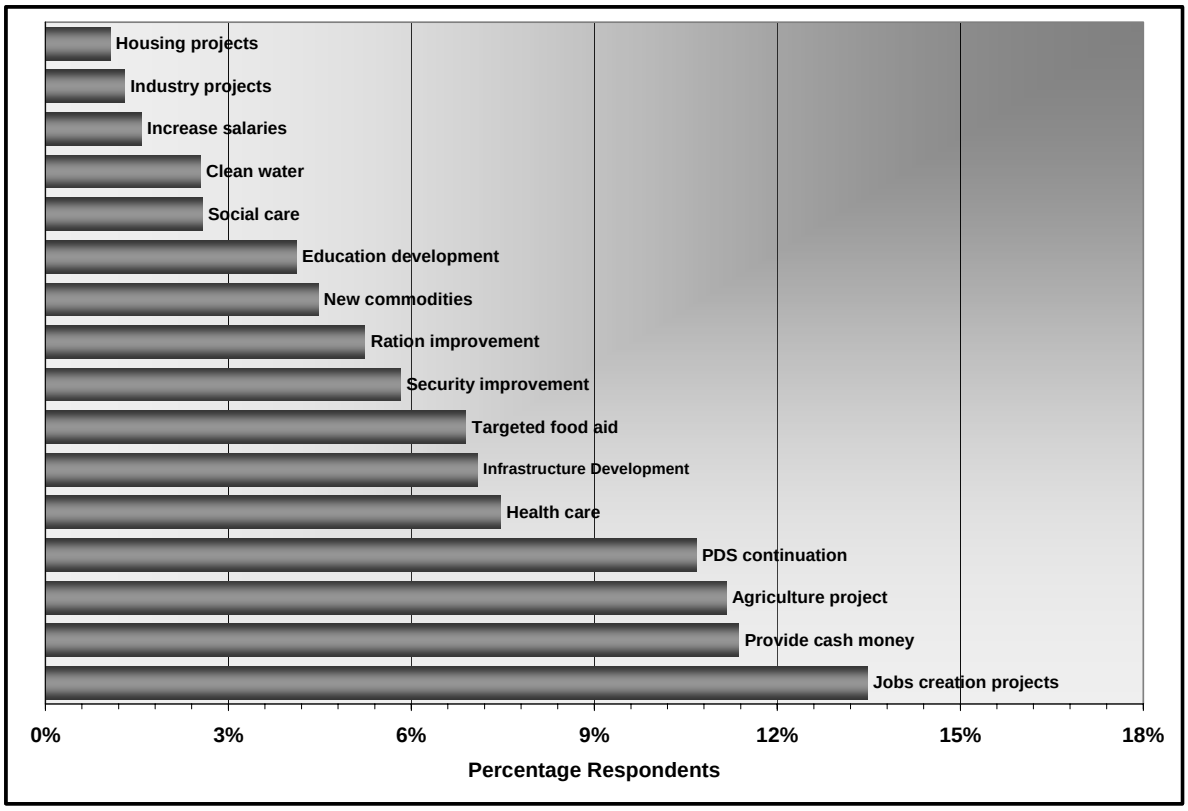
CSI and sex



CSI and working status



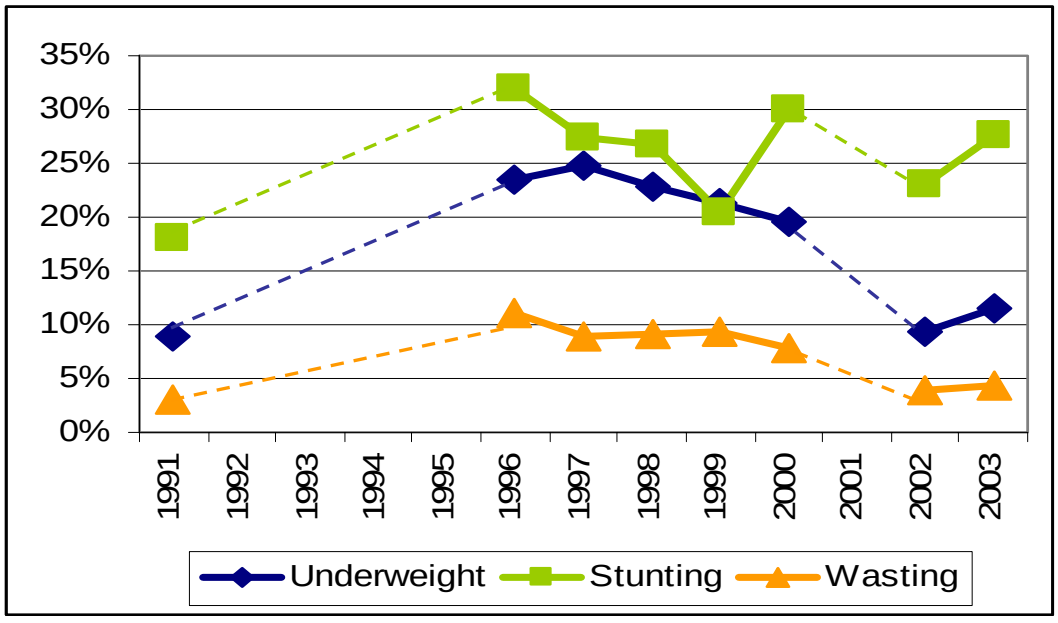
Community perception on how might food insecurity be most effectively reduced/reversed

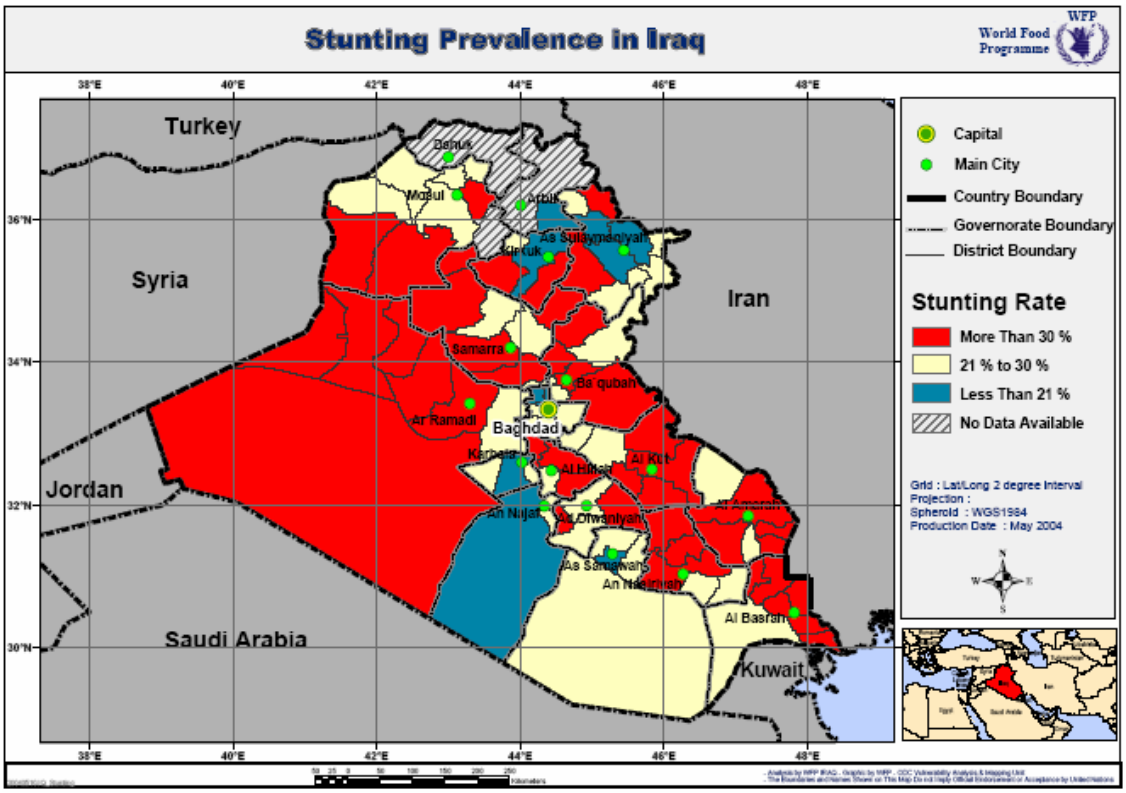


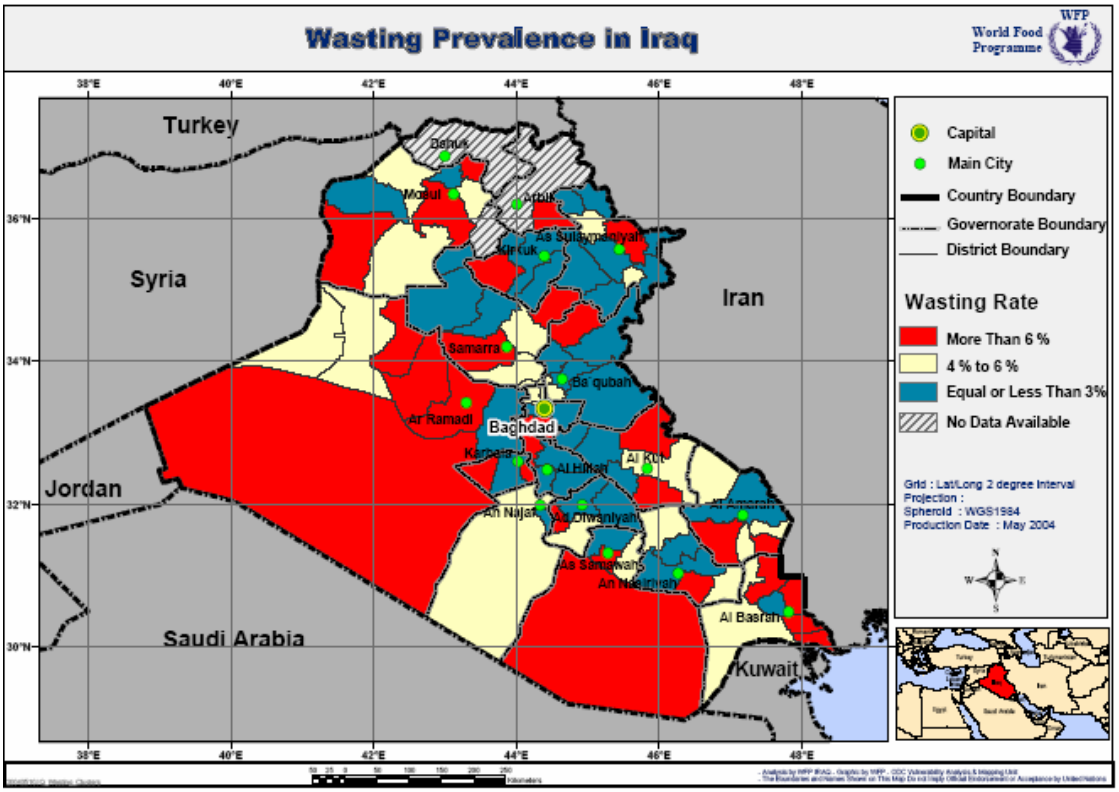
Nutrition

Prevalence of malnutrition studies 1991-2003

Study	Underweight	Stunting	Wasting
Health and welfare in Iraq after the Gulf crisis, International study team (9,034 households) Harvard University, 1991	9.0%	18.0%	3.0%
Multiple Indicator Cluster Sample (MICS-1996), (6,375 households), UNICEF, CSO and MoH, August 1996	23.4%	32.0%	11.0%
Survey of Under Fives for Polio Immunization Days PHCs, UNICEF, April 1997	24.7%	27.5%	8.9%
Survey of Under Fives with Polio Immunization Days at the same PHCs, UNICEF, March 1998	22.8%	26.7%	9.1%
PHCs Based Survey, UNICEF April 1999	21.3%	20.4%	9.3%
Multiple Indicator Cluster Survey 2000 (MICS-2000), (13,430 households), UNICEF, CSO & MoH, 2000	19.5%	30.0%	7.8%
Household Nutrition Status Survey (19,200 households), UNICEF, CSO & MoH:, 2002	9.4%	23.1%	4.0%
Household survey WFP, 2003	11.5%	27.6%	4.4%




Stunting Prevalence in Iraq
World Food Programme
WFP
38°E
40°E
42°E
44°E
46°E
48°E
36°N
34°N
32°N
30°N
Turkey
Syria
Iran
Jordan
Saudi Arabia
Kuwait
Dahuk
Mosul
Arbil
As Sulaymaniyah
Kirkuk
Samarra
Ba'qubah
Ar Ramadi
Baghdad
Karbala
Al Hillah
Al Kut
An Najaf
Al Diwaniyah
As Samawah
An Nasiriyah
Al Basrah
Capital
Main City
Country Boundary
Governorate Boundary
District Boundary
Stunting Rate
More Than 30 %
21 % to 30 %
Less Than 21 %
No Data Available
Grid : Lat/Long 2 degree Interval
Projection :
Spheroid : WGS1984
Production Date : May 2004


Wasting Prevalence in Iraq
World Food Programme
WFP
38°E
40°E
42°E
44°E
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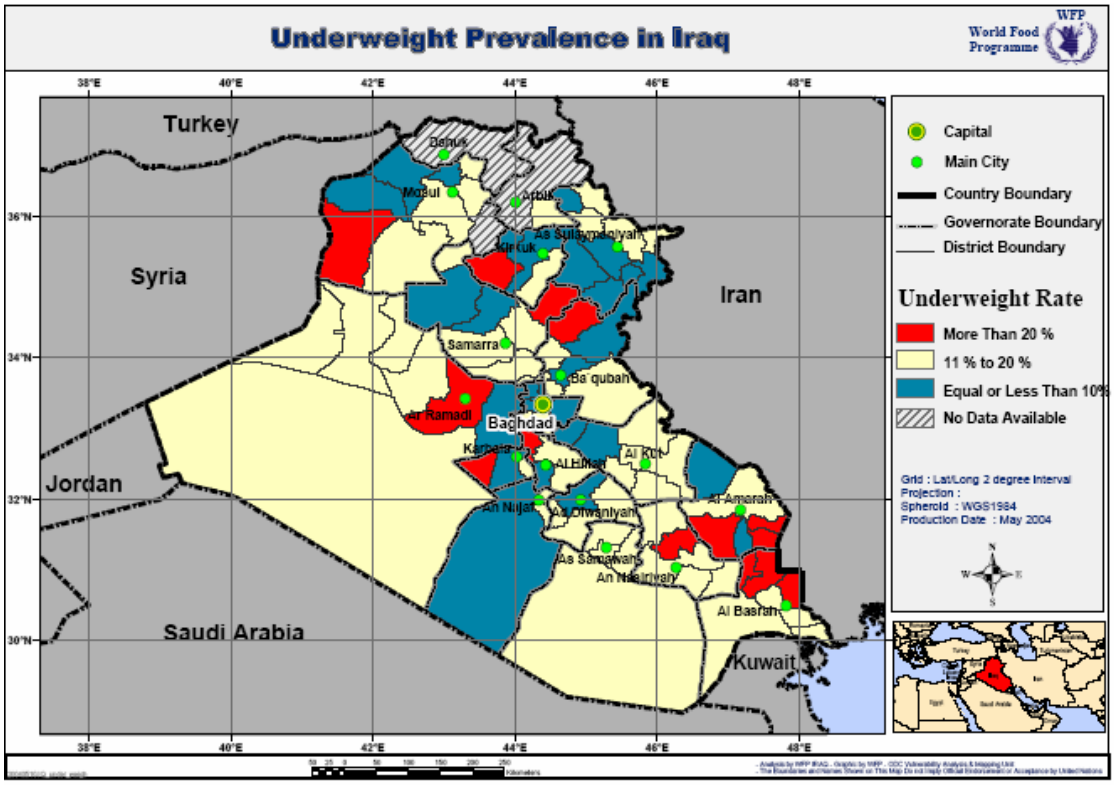
36°N
34°N
32°N
30°N
Turkey
Syria
Iran
Jordan
Saudi Arabia
Kuwait
Dahuk
Mosul
Arbil
As Sulaymaniyah
Kirkuk
Samarra
Ba'qubah
Ar Ramadi
Baghdad
Karbala
Al Hillah
Al Kut
An Najaf
Al Diwaniyah
As Samawah
An Nasiriyah
Al Basrah
Capital
Main City
Country Boundary
Governorate Boundary
District Boundary
Wasting Rate
More Than 6 %
4 % to 6 %
Equal or Less Than 3%
No Data Available
Grid : Lat/Long 2 degree Interval
Projection :
Spheroid : WGS1984
Production Date : May 2004



Estimated number of malnourished children by governorate

Governorate	Under 1 Year	1-5 Year	Stunting	Underweight	Wasting
Anbar	45,613	160,487	53,153	22,785	10,883
Babylon	54,085	192,114	56,893	28,768	6,354
Baghdad	196,634	715,009	142,937	58,431	29,069
Basrah	60,580	238,392	79,164	37,282	13,323
Diyala	39,491	151,552	56,423	17,080	5,056
Kerbala	22,524	82,239	14,730	7,307	2,735
Missan	26,603	112,999	34,921	16,424	6,545
Muthanna	16,510	76,331	17,142	9,491	3,711
Najaf	28,670	117,509	24,123	12,768	4,984
Ninewa	76,238	338,323	99,474	41,540	21,324
Qadissiya	28,464	121,436	36,229	15,190	5,647
Salah al-Din	35,337	128,603	45,084	16,484	5,907
Sulaymaniyah	40,897	196,159	32,267	14,273	6,394
Tameem	21,303	93,863	31,044	14,664	2,755
Thi-Qar	58,856	243,452	105,159	38,009	10,779
Wassit	27,738	105,381	40,446	14,053	4,082
Iraq (16 Gov.)	**779,541**	**3,073,851**	**943,900**	**401,266**	**158,387**

Prevalence of malnutrition by sex of the child

		Moderate	Severe	Total
Stunting	Female	17.8%	14.3%	32.1%
	Male	17.5%	14.3%	31.8%
Underweight	Female	10.9%	3.1%	14.0%
	Male	11.4%	2.9%	14.3%
Wasting	Female	4.0%	1.4%	5.4%
	Male	4.4%	1.6%	6.0%

Prevalence of malnutrition by age group

	Stunting			Underweight			Wasting		
	Moderate	Severe	Total	Moderate	Severe	Total	Moderate	Severe	Total
12 to 23 Months	18.5%	15.0%	33.5%	11.4%	3.2%	14.6%	5.6%	2.4%	8.0%
24 to 35 Months	15.9%	14.5%	30.4%	10.4%	3.4%	13.8%	4.1%	1.3%	5.4%
36 to 47 Months	17.0%	16.3%	33.2%	11.4%	3.6%	15.0%	3.7%	1.3%	5.0%
48 to 59 Months	19.3%	11.5%	30.8%	11.3%	2.1%	13.4%	3.5%	1.1%	4.6%

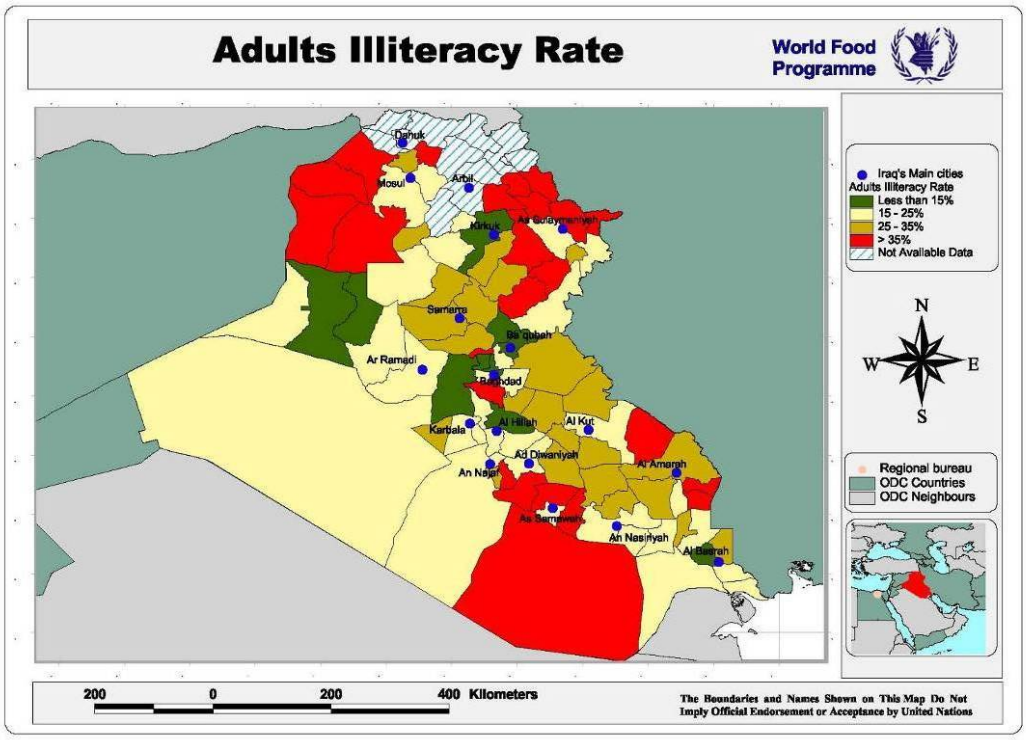
Prevalence of malnutrition by sex of head of household

Measurements	Male HH	Female HH
Stunting (Moderate)	17.6%	18.5%
Stunting (Severe)	14.3%	15.8%
Total Stunting	**31.9%**	**34.3%**
Underweight (Moderate)	11.1%	11.6%
Underweight (Severe)	3.0%	2.9%
Total Underweight	**14.1%**	**14.5%**
Wasting (Moderate)	4.2%	2.9%
Wasting (Severe)	1.5%	1.3%
Total Wasting	**5.7%**	**4.2%**

Malnutrition prevalence in rural and urban areas

Measurements	Urban	Rural	Iraq (16 gov.)
Stunting (Moderate)	15.8%	19.1%	17.6%
Stunting (Severe)	12.0%	16.2%	14.3%
Total Stunting	**27.8%**	**35.3%**	**31.9%**
Underweight (Moderate)	9.6%	12.4%	11.1%
Underweight (Severe)	2.9%	3.2%	3.0%
Total Underweight	**12.5%**	**15.6%**	**14.1%**
Wasting (Moderate)	3.9%	4.4%	4.2%
Wasting (Severe)	1.3%	1.6%	1.5%
Total Wasting	**5.2%**	**6.0%**	**5.7%**

Education



Adults (16-60) education level by head of household sex

Education	Male Headed Household	Female Headed Household
Illiterate	27.8%	36.8%
Read/Write	19.2%	17.3%
Primary	27.0%	22.6%
Secondary	19.1%	16.8%
University	7.1%	6.6%

Head of household education by sex

Education	Male Headed Household	Female Headed Household
Illiterate	25.8%	74.8%
Read/Write	16.6%	9.3%
Primary	25.8%	7.3%
Secondary	21.7%	6.1%
University	10.1%	2.5%

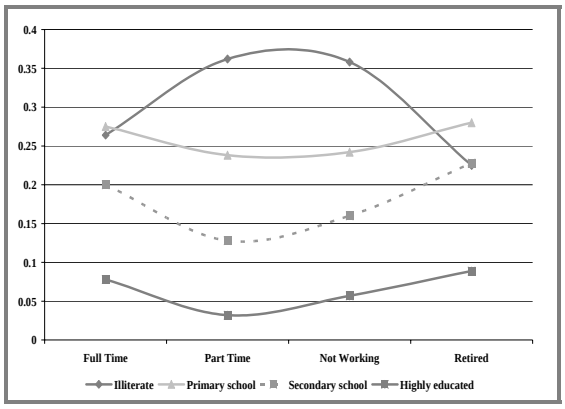
Adults (16-60) Education level by urban/rural

Education	Urban	Rural	Iraq (16 gov.)
Illiterate	18.9%	39.6%	28.5%
Read/Write	17.7%	20.6%	19.0%
Primary	28.0%	25.0%	26.6%
Secondary	25.3%	11.5%	18.9%
University	10.4%	3.3%	7.1%

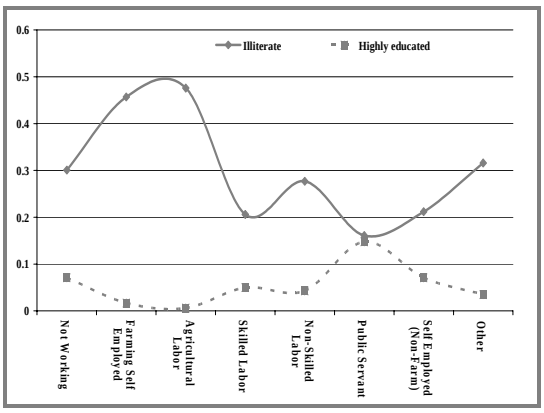
Head of household Education by urban/rural

Education	Urban	Rural	Iraq (16 gov.)
Illiterate	22.6%	38.7%	30.0%
Read/Write	14.4%	17.8%	16.0%
Primary	24.9%	23.4%	24.2%
Secondary	25.2%	14.7%	20.4%
University	12.9%	5.4%	9.4%

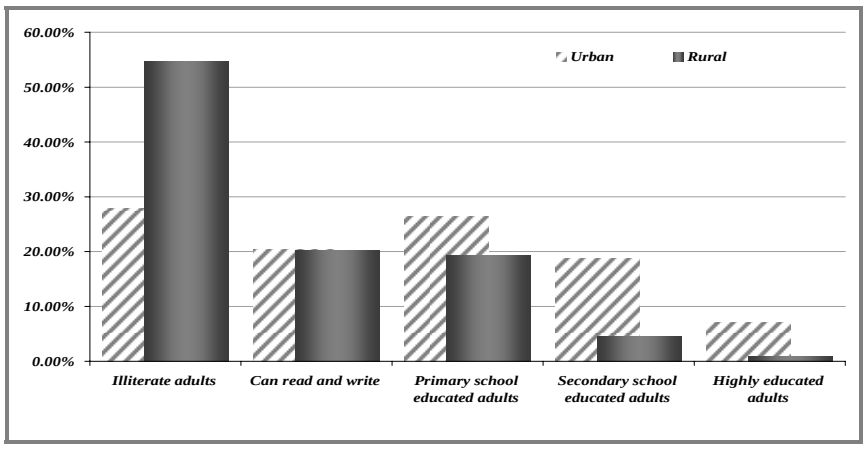
Adults (16-60) working status and education level



Education and head of household occupation



Adult (16-60) females' education level in urban/rural areas

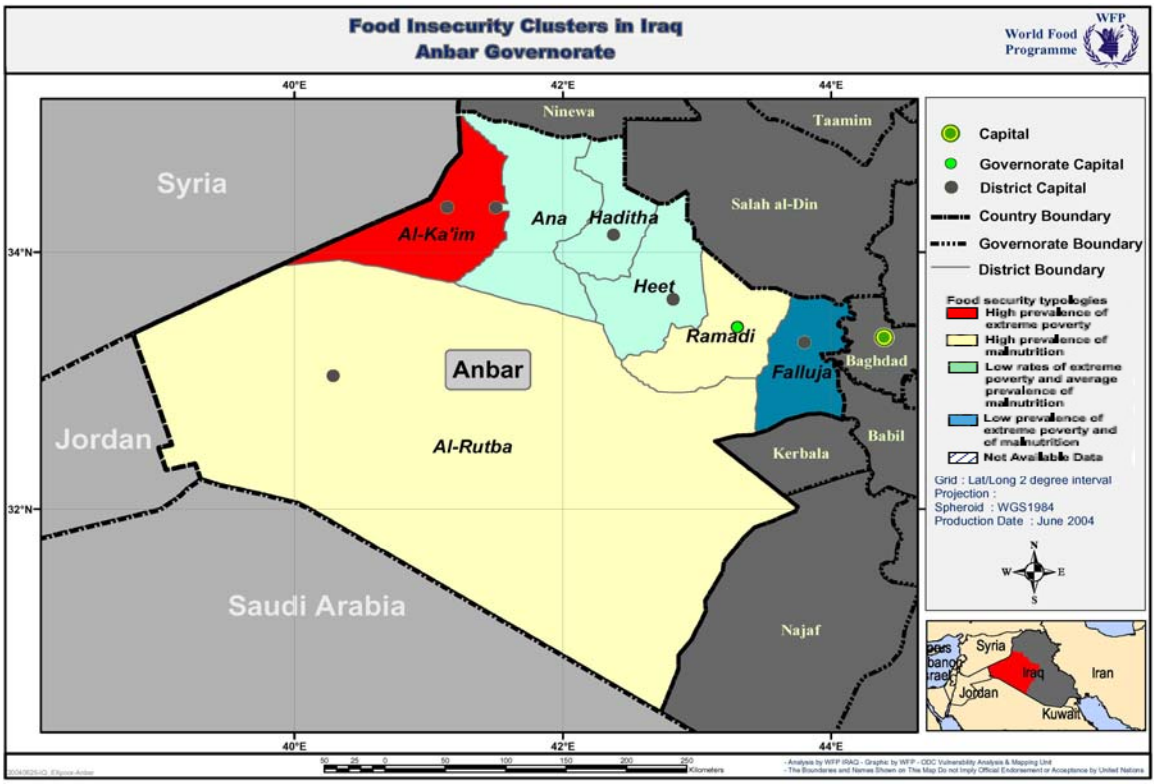


Annex 7. Governorates profile

Data collected during the household survey have been analyzed to generate not only information on the food security situation at district level, but also an analysis of the situation in the 16 surveyed governorates.

Each of the governorate profiles contains information on population data, PDS monthly requirements and value, as well as an analysis of the socio-economic, nutritional and educational situation.

Governorate Profile—Anbar



Geography

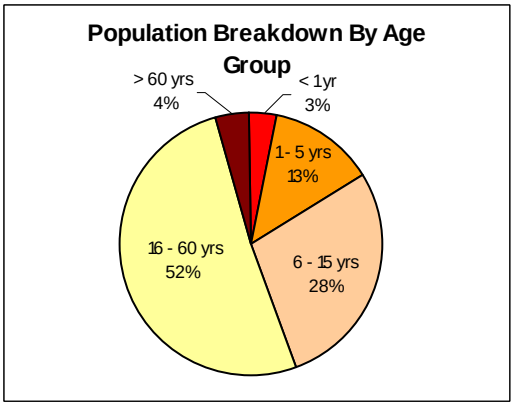
Source: *ESRI Map Data, 2002; **HIC, 2003

Location*	West
Geographic coordinates *	Long – min 30.41/max 35.11; Lat - min 38.8/max 44.16
Total Area*	139,069 sq km
Governorate capital*	Ramadi
Districts Number*	7
District Names*	Al-Ka'im, Ramadi, Ana, Falluja, Haditha, Heet, Al-Rutba
All Weather Roads**	1,714 km
Airports**	15

Population

- **Population and household size by district**

District	Population	Household Size
Al-Ka'im	119,335	8.8
Ana	38,238	7.8
Falluja	437,494	9.3
Haditha	77,928	8.6
Heet	108,746	8.4
Ramadi	456,853	8.9
Al-Rutba	25,498	8.5
Anbar Govern.	**1,264,092**	**8.9**



Note: Where the source is not specified, data is drawn from WFP Baseline Food Security Study, 2004. National average (orange) refers to data collected in 16 out of 18 governorates.

Food Security and PDS

Number of Food Agents: 1,559
Food basket value (Nov.'03): 5.07 US$ (natl. av. 5.0 US$)
Coping Strategy Index (CSI): 15.19
PDS Dependency Ratio: 25.65%

Coping strategy: measures people take when they do not have enough food or money to buy food. High coping strategy indexes indicate adopting food-based mechanisms to cope with difficult economic situation. **PDS dependency ratio:** household reliance on the PDS, or percentage income transfer from the PDS to the total household income.

- **PDS monthly requirement by commodity (mt)** — standard ration 2003 (Source: MoT data, 2003)

Deter-gent	Infant Formula	Milk Pow-der	Vegeta-ble Oil	Pulses	Rice	Salt	Sugar	Tea	Toilet Soap	Wheat Flour	Wean. Cereal
641	157	1,238	1,857	1,857	3,714	186	2,476	248	320	11,142	35

- **Food Storage Capacity** (Source: WFP data, 2003; FAO/WFP Crop Food Supply & Nutrition Assessment, Sept. 2003)

Flour Mills	4
Monthly Milling Capacity	19,800 mt
Grain Silos	1
Grain Storage Capacity	10,000 mt
Annual Wheat Production	43,934 mt
MoT Warehouses	1
Warehouses Storage Capacity	31,000 mt

Socio-economic factors

Wealth classes (Classified according to households' monthly expenditure: Extreme Poor<= 35 US$; Poor 35.1 – 90 US$; Middle 90.1 – 275 US$; Better off > 275 US$)

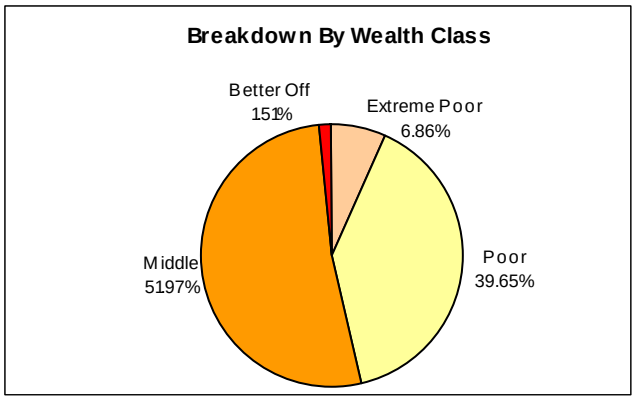
District	Extremely Poor	Poor	Middle	Better Off
Al-Ka'im	17.7%	54.2%	28.1%	0.0%
Ana	4.3%	31.7%	60.0%	4.0%
Falluja	6.4%	42.5%	49.8%	1.3%
Haditha	5.0%	49.7%	44.7%	0.7%
Heet	5.0%	33.3%	59.3%	2.3%
Ramadi	5.7%	33.9%	58.7%	1.7%
Al-Rutba	2.3%	34.0%	59.7%	4.0%
Anbar Govern.	**6.9%**	**39.7%**	**52.0%**	**1.5%**
Iraq (16 gov.)	**13.4%**	**45.2%**	**39.8%**	**1.5%**

- **Working adults** (16-60 years old)

	Anbar	Iraq (16 gov.)
Working Adults	46.0%	43.4%
Full Time	76.6%	78.7%
Part Time	23.4%	21.3%

- **Reported Household Income and Expenditures** (Nov. '03)

	Income HH/Month		Expenditure HH/Month	
	Anbar	**Iraq (16 gov.)**	**Anbar**	**Iraq (16 gov.)**
Urban	117 US$	104.5 US$	111.5 US$	95.2 US$
Rural	100.5 US$	100.2 US$	98.9 US$	87.7 US$



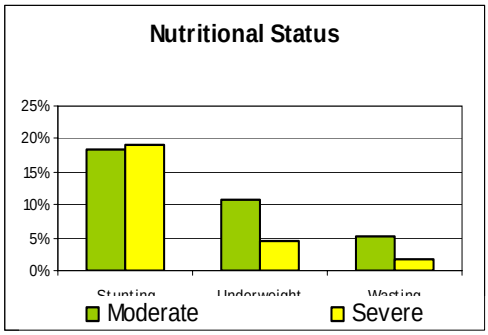
Nutrition

Facilities attending to malnourished children (Source: WHO/WFP/MoH unpublished report)

	No.	Malnourished Children / Facility	
		Anbar	Iraq (16 gov.)
Primary Health Care Centers (PHC)	52	1,189	1,392
Community Child Care Units (CCCU)	221	280	390

- **Nutritional status by district**

District	Stunting	Underweight	Wasting
Al-Ka'im	47.2%	14.0%	4.5%
Ana	37.1%	12.9%	4.5%
Falluja	26.1%	5.2%	1.3%
Haditha	39.9%	18.5%	7.5%
Heet	32.9%	12.7%	9.5%
Ramadi	34.4%	24.4%	13.4%
Al-Rutba	43.8%	20.4%	11.1%
Anbar Govern.	**33.2%**	**15.0%**	**7.3%**
Iraq (16 gov.)	27.6%	11.5%	4.4%



Education

- **Schools** (Source: UNICEF Summary Report on Schools in Iraq, September 2003)

Grade	No. Schools	No. Students	Students / Schools	
			Anbar	Iraq (16 gov.)
Primary (Grade 1-6)	800	340,060	425	326
Intermediate (Grade 7-9)	257	46,382	180	287
Preparatory (Grade 10-12)	128	15,293	119	91

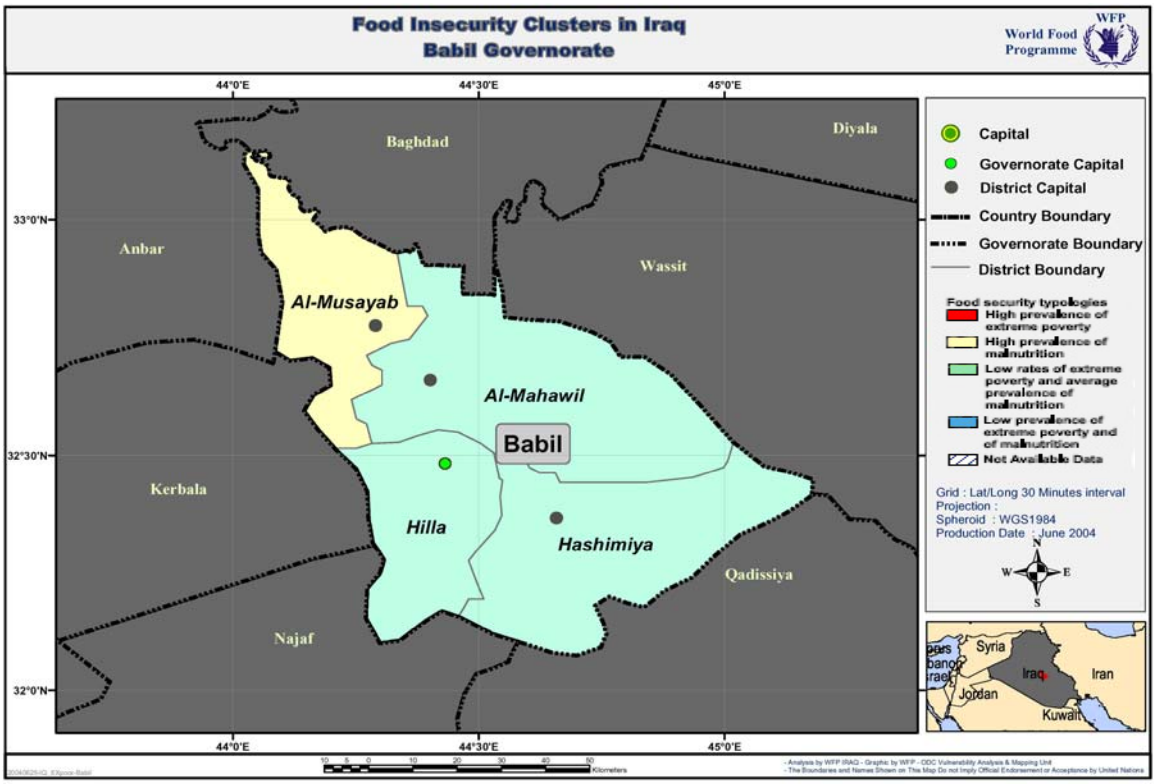
- **Students and Teachers** (Source: UNICEF Summary Report on Schools in Iraq, September 2003)

	Students			Teachers			Students / Teachers	
	Male	Female	Total	Male	Female	Total	Anbar	Iraq (16 gov.)
Primary	184,340	155,720	**340,060**	3,539	11,943	**15,482**	22	20
Intermediate	33,468	12,914	**46,382**	1,793	1,566	**3,359**	14	16
Preparatory	10,834	4,459	**15,293**	1,107	1,146	**2,253**	7	10

- **Literacy —** Male/Female breakdowns are as percent of total

	Male	Female	Anbar	Iraq (16 gov.)
Illiterate	15.7%	84.3%	17.8%	21.0%
Can read and write	35.3%	64.7%	22.5%	16.9%
Primary education	55.2%	44.8%	28.8%	28.0%
Secondary	73.5%	26.5%	23.1%	23.6%
High education	85.4%	14.6%	7.8%	10.5%

Governorate Profile—Babil



Geography

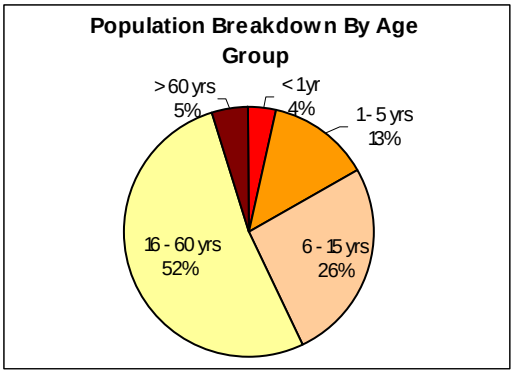
Source: *ESRI Map Data, 2002; **HIC, 2003

Location*	Center
Geographic coordinates*	Long - min 32.07/max 33.19; Lat - min 43.93/max 45.17
Total Area*	5,912 sq km
Districts Number*	4
District Names*	Hashimiya, Al-Mahawil, Al-Musayab, Hilla
All Weather Roads**	286 km
Airports**	2

Population

- **Population and household size by district**

District	Population	Household Size
Hashimiya	282,866	7.7
Al-Mahawil	218,686	8.8
Al-Musayab	287,665	7.9
Hilla	634,813	7.0
Babylon Govern.	**1,424,030**	**7.6**



Note: Where the source is not specified, data is drawn from WFP Baseline Food Security Study, 2004. National average (orange) refers to data collected in 16 out of 18 governorates.

Food Security and PDS

Number of Food Agents: 1,722
Food basket value (Nov.'03): 5.13 US$ (natl. av. 5.0 US$)
Coping Strategy Index (CSI): 22.13
PDS Dependency Ratio: 23.12%

Coping strategy: measures people take when they do not have enough food or money to buy food. High coping strategy indexes indicate adopting food-based mechanisms to cope with difficult economic situation.
PDS dependency ratio: household reliance on the PDS, or percentage income transfer from the PDS to the total household income.

- **PDS monthly requirement by commodity** (mt) — standard ration 2003 (Source: MoT data, 2003)

Deter-gent	Infant Formula	Milk Pow-der	Vegeta-ble Oil	Pulses	Rice	Salt	Sugar	Tea	Toilet Soap	Wheat Flour	Whean. Cereal
722	192	1,390	2,085	2,085	4,171	209	2,781	278	361	12,512	43

- **Food Storage Capacity** (Source: WFP data, 2003; FAO/WFP Crop Food Supply & Nutrition Assessment, Sept. 2003)

Flour Mills	14
Monthly Milling Capacity	29,400 mt
Grain Silos	1
Grain Storage Capacity	75,000 mt
Annual Wheat Production	118,198 mt
MoT Warehouses	1
Warehouses Storage Capacity	35,000 mt

Socio-economic factors

Wealth classes (Classified according to households' monthly expenditure: Extreme Poor< = 35 US$; Poor 35.1 – 90 US$; Middle 90.1 – 275 US$; Better off > 275 US$)

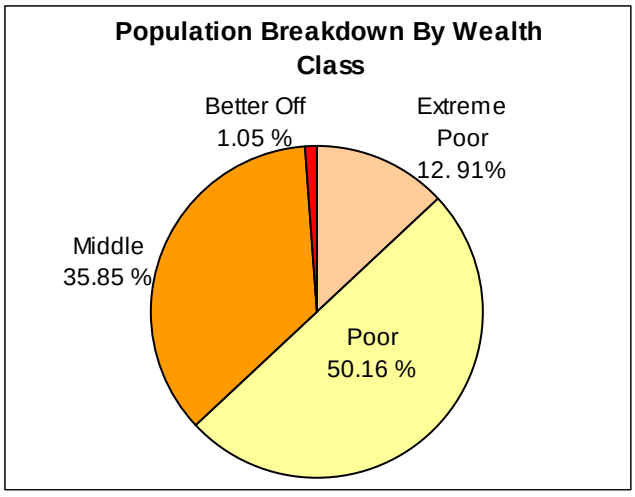
District	Extremely Poor	Poor	Middle	Better off
Hashimiya	17.8%	67.7%	13.8%	0.7%
Al-Mahawil	15.1%	50.8%	33.1%	1.0%
Al-Musayab	6.7%	37.2%	56.0%	0.0%
Hilla	12.8%	48.0%	37.5%	1.7%
Babil Govern.	**12.9%**	**50.2%**	**35.9%**	**1.1%**
Iraq (16 gov.)	**13.4%**	**45.2%**	**39.8%**	**1.5%**

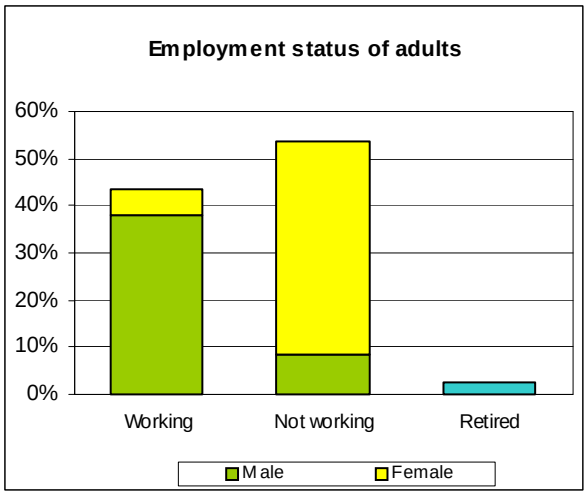
- **Working adults** (16-60 years old)

	Babil	Iraq (16 gov.)
Working Adults	43.5%	43.4%
Full Time	83.8%	78.7%
Part Time	16.2%	21.3%

- **Reported Household Income and Expenditures** (Nov. '03)

	Income HH/Month		Expenditure HH/Month	
	Babil	Iraq (16 gov.)	Babil	Iraq (16 gov.)
Urban	127.5 US$	104.5 US$	95.8 US$	95.2 US$
Rural	99.1 US$	100.2 US$	77.5 US$	87.7 US$





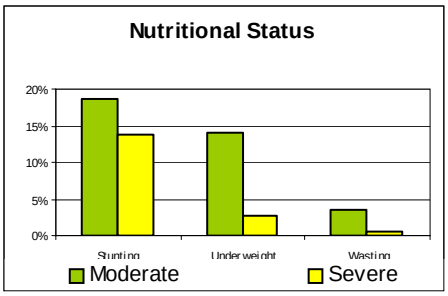
Nutrition

Facilities attending to malnourished children (Source: WHO/WFP/MoH unpublished report)

	No.	Malnourished Children / Facility	
		Babil	Iraq (16 gov.)
Primary Health Care Centers (PHC)	37	1,687	1,392
Community Child Care Units (CCCU)	173	361	390

- **Nutritional status by district**

District	Stunting	Underweight	Wasting
Hashimiya	38.4%	19.5%	3.3%
Al-Mahawil	32.3%	10.7%	1.3%
Al-Musayab	35.0%	27.0%	11.7%
Hilla	22.6%	9.1%	0.4%
Babil Govern.	**29.8%**	**15.1%**	**3.4%**
Iraq (16 gov.)	**27.6%**	**11.5%**	**4.4%**



Education

- **Schools** (Source: UNICEF Summary Report on Schools in Iraq, September 2003)

Grade	No. Schools	No. Students	Students / Schools	
			Babil	Iraq (16 gov.)
Primary (Grade 1-6)	794	235,266	296	326
Intermediate (Grade 7-9)	175	50,188	287	287
Preparatory (Grade 10-12)	85	16,921	199	91

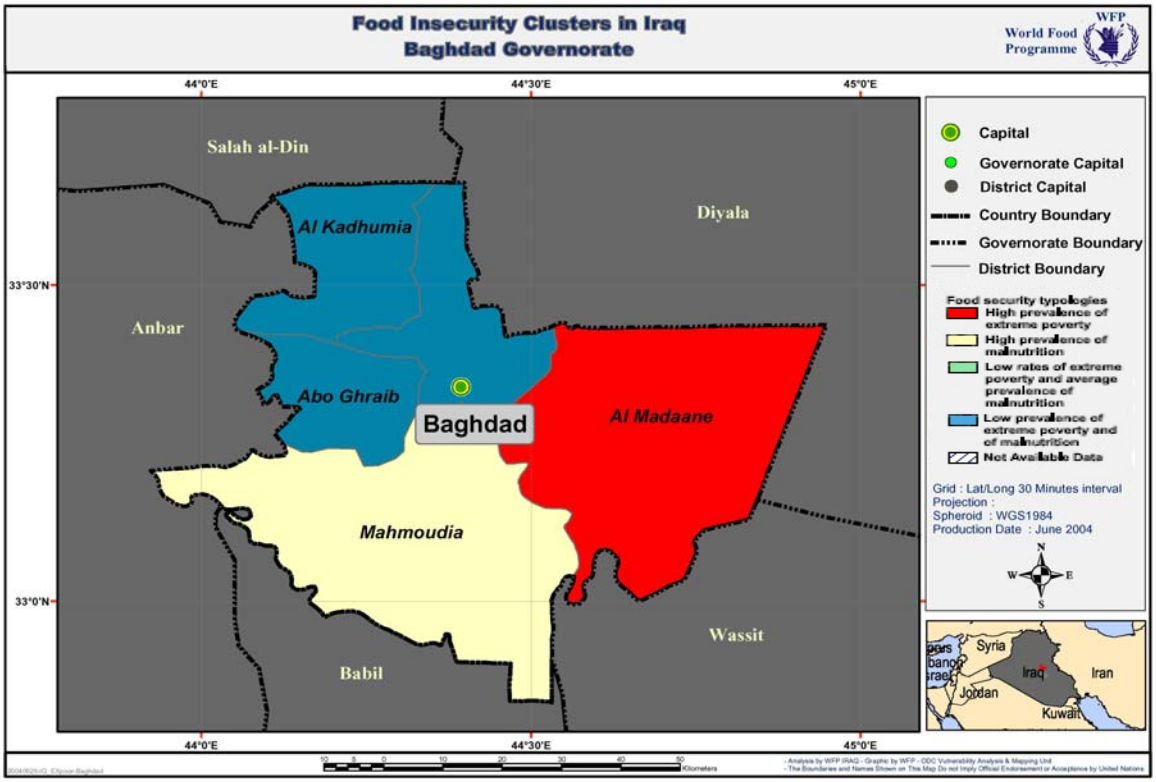
- **Students and Teachers** (Source: UNICEF Summary Report on Schools in Iraq, September 2003)

	Students			Teachers			Students / Teachers	
	Male	Female	Total	Male	Female	Total	Babil	Iraq (16 gov.)
Primary	132,389	102,877	**235,266**	3,479	8,579	**12,058**	20	20
Intermediate	31,438	18,750	**50,188**	2,236	2,791	**5,027**	10	16
Preparatory	9,194	7,727	**16,921**	1,282	1,777	**3,059**	6	10

- **Literacy —** Male/Female breakdowns are as percent of total

	Male	Female	Babil	Iraq (16 gov.)
Illiterate	21.0%	79.0%	16.2%	21.0%
Can read and write	35.9%	64.1%	13.3%	16.9%
Primary education	51.7%	48.3%	39.2%	28.0%
Secondary	70.2%	29.8%	21.1%	23.6%
High education	72.9%	27.1%	10.1%	10.5%

Governorate Profile—Baghdad



Geography

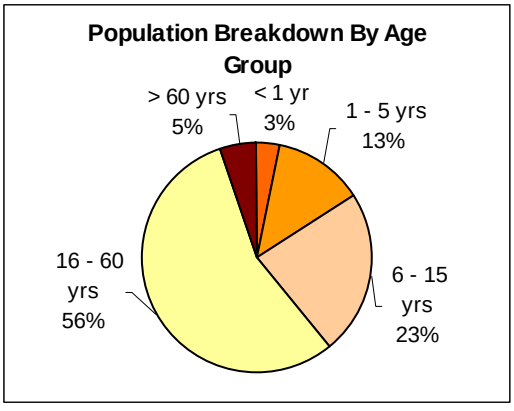
Source: *ESRI Map Data, 2002; **HIC, 2003

Location*	Center
Geographic coordinates *	Long – min 32.83/max 33.65; Lat – min 43.94/max 44.92
Total Area*	4,315 sq km
Governorate capital **	9
Districts Number **	Abo Ghraib, Adhamiya, Al Kadhamia, Karkh, Al Madaane, Al Sader, Tarmia, Mahmoudia, Al Resafa
District Names**	213 km
All Weather Roads**	7
Airports**	7

Population

- **Population and household size by district**

District	Population	Household Size
Abo Ghraib	194,653	7.2
Adhamiya	830,829	5.3
Al Kadhumia	800,028	5.7
Karkh	1,584,008	5.0
Al Madaane	120,748	7.4
Al Sader	1,065,406	6.2
Tarmia	116,017	8.2
Mahmoudia	256,961	8.1
Al Resafa	1,337,936	6.2
Baghdad Govern.	**6,306,586**	**5.9**



Note: Where the source is not specified, data is drawn from WFP Baseline Food Security Study, 2004. National average (orange) refers to data collected in 16 out of 18 governorates.

Food Security and PDS

Number of Food Agents: 9,137
Food basket value (Nov.'03): 6.84 US$ (natl. av. 5.0 US$)
Coping Strategy Index (CSI): 30.02
PDS Dependency Ratio: 30.72%

Coping strategy: measures people take when they do not have enough food or money to buy food. High coping strategy indexes indicate adopting food-based mechanisms to cope with difficult economic situation.
PDS dependency ratio: household reliance on the PDS, or percentage income transfer from the

- **PDS monthly requirement by commodity (mt)** — standard ration 2003 (Source: MoT data, 2003)

Deter-gent	Infant Formula	Milk Pow-der	Vegeta-ble Oil	Pulses	Rice	Salt	Sugar	Tea	Toilet Soap	Wheat Flour	Wean. Cereal
3,138	746	6,069	9,103	9,103	18,207	910	12,138	1,214	1,569	54,620	166

- **Food Storage Capacity** (Source: WFP data, 2003; FAO/WFP Crop Food Supply & Nutrition Assessment, Sept. 2003)

Flour Mills	38
Monthly Milling Capacity	203,550 mt
Grain Silos	8
Grain Storage Capacity	405,000 mt
Annual Wheat Production	83,355 mt
MoT Warehouses	11
Warehouses Storage Capacity	177,200 mt

Socio-economic factors

Wealth classes (Classified according to households' monthly expenditure: Extreme Poor<= 35 US$; Poor 35.1 – 90 US$; Middle 90.1 – 275 US$; Better off > 275 US$)

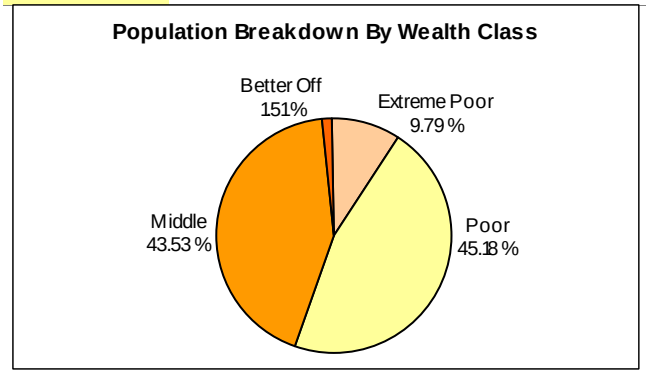
District	Extremely Poor	Poor	Middle	Better Off
Abo Ghraib	5.0%	49.7%	45.0%	0.3%
Adhamiya	12.3%	39.3%	46.3%	2.0%
Al Kadhumia	11.0%	53.3%	35.3%	0.3%
Karkh	10.4%	29.3%	58.6%	1.7%
Al Madaane	27.7%	59.7%	12.7%	0.0%
Al Sader	6.4%	57.2%	35.5%	1.0%
Tarmia	11.0%	39.3%	49.3%	0.3%
Mahmoudia	5.0%	63.7%	30.7%	0.7%
Al Resafa	9.4%	48.2%	39.8%	2.7%
Baghdad Govern.	9.8%	45.2%	43.5%	1.5%
Iraq (16 gov.)	**13.4%**	**45.2%**	**39.8%**	**1.5%**

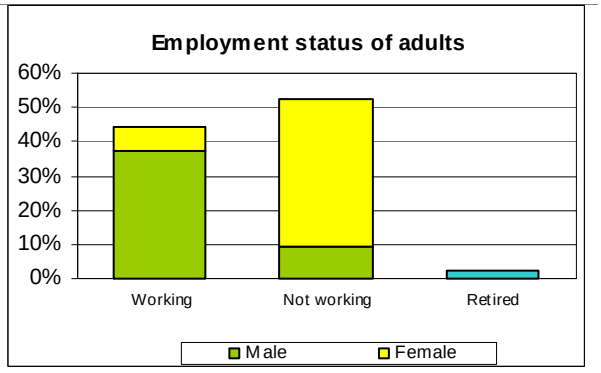
- **Working adults** (16-60 years old)

	Baghdad	Iraq (16 gov.)
Working Adults	44.4%	43.4%
Full Time	72.9%	78.7%
Part Time	27.1%	21.3%

- **Reported Household Income and Expenditures** (Nov. '03)

	Income HH/Month		Expenditure HH/Month	
	Baghdad	Iraq (16 gov.)	Baghdad	Iraq (16 gov.)
Urban	90.7 US$	104.5 US$	88.7 US$	95.2 US$
Rural	103.0 US$	100.2 US$	82.9 US$	87.7 US$





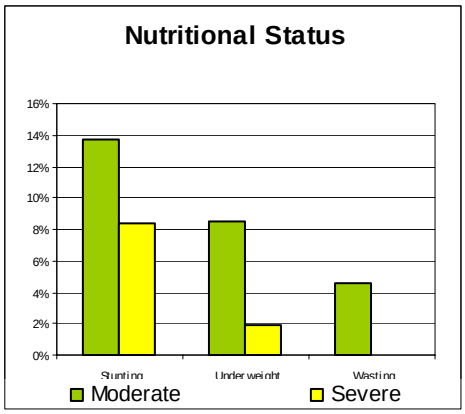
Nutrition

Facilities attending to malnourished children (Source: WHO/WFP/MoH unpublished report)

	No.	Malnourished Children / Facility	
		Baghdad	Iraq (16 gov.)
Primary Health Care Centers (PHC)	127	1,398	1,392
Community Child Care Units (CCCU)	332	535	390

- **Nutritional status by district**

District	Stunting	Underweight	Wasting
Abo Ghraib	27.8%	9.7%	2.0%
Adhamiya	9.3%	6.4%	3.6%
Al Kadhumia	18.8%	7.4%	4.0%
Karkh	31.3%	8.7%	4.4%
Al Madaane	24.6%	10.3%	2.2%
Al Sader	18.8%	7.2%	1.4%
Tarmia	22.0%	9.3%	3.4%
Mahmoudia	27.4%	19.8%	23.9%
Al Resafa	11.5%	6.0%	1.8%
Baghdad Govern.	**19.9%**	**7.9%**	**3.8%**
Iraq (16 gov.)	**27.6%**	**11.5%**	**4.4%**



Education

- **Schools** (Source: UNICEF Summary Report on Schools in Iraq, September 2003)

Grade	No. Schools	No. Students	Students / Schools	
			Baghdad	Iraq (16 gov.)
Primary (Grade 1-6)	1,602	1,003,668	627	326
Intermediate (Grade 7-9)	687	318,480	464	287
Preparatory (Grade 10-12)	2,716	116,222	43	91

- **Students and Teachers** (Source: UNICEF Summary Report on Schools in Iraq, September 2003)

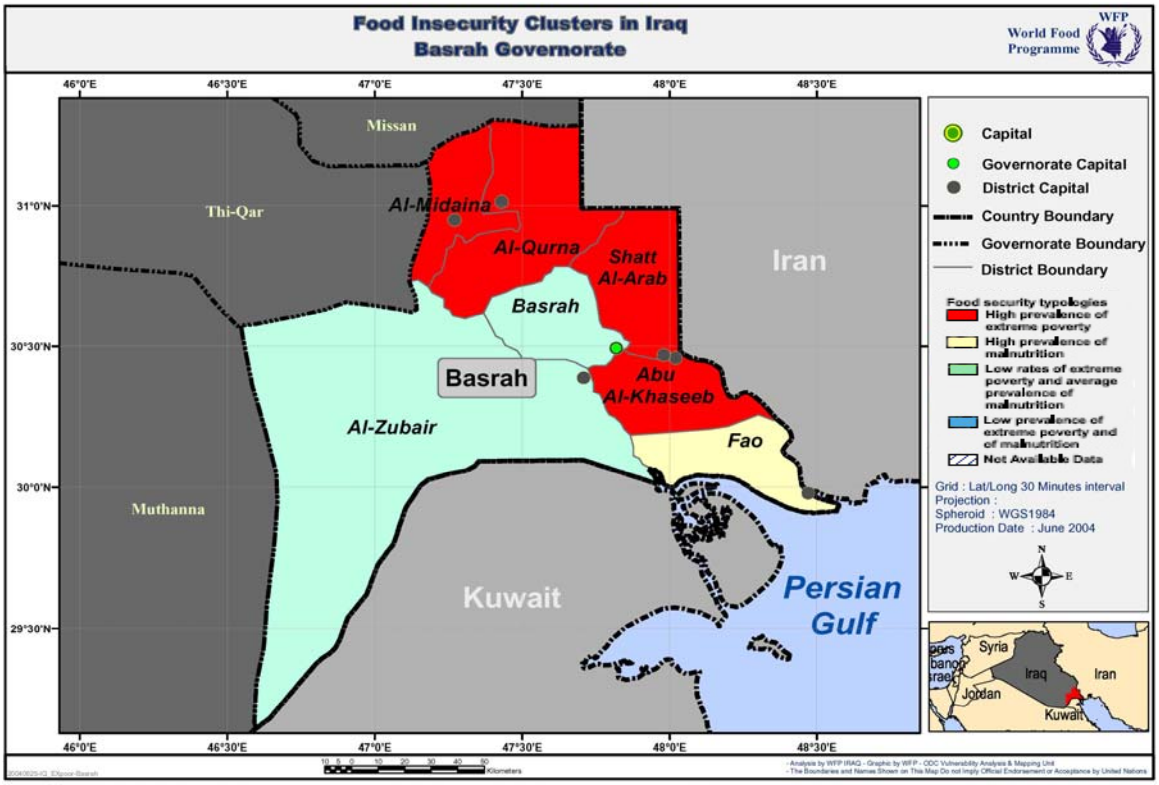
	Students			Teachers			Students / Teachers	
	Male	Female	Total	Male	Female	Total	Baghdad	Iraq (16 gov.)
Primary	538,879	464,789	**1,003,668**	4,348	35,719	**40,067**	25	20
Intermediate	186,452	132,028	**318,480**	3,806	12,578	**16,384**	19	16
Preparatory	56,597	59,625	**116,222**	3,047	7,633	**10,680**	11	10

- **Literacy —** Male/Female breakdowns are as percent of total

	Male	Female	Baghdad	Iraq (16 gov.)
Illiterate	22.1%	77.9%	13.2%	21.0%
Can read and write	43.4%	56.6%	13.1%	16.9%
Primary education	51.7%	48.3%	25.8%	28.0%
Secondary	57.6%	42.4%	31.8%	23.6%
High education	61.3%	38.7%	16.2%	10.5%

Governorate Profile—Basrah

WFP Household Survey, June 2004



Geography

Source: *ESRI Map Data, 2002; **HIC, 2003

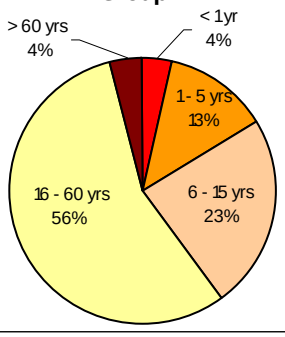
Location*	South east
Geographic coordinates *	Long - min 29.13/max 31.29; Lat – min 46.60/max 48.60
Total Area*	18,050 sq km
Governorate capital **	Basrah
Districts Number **	7
District Names**	Abu Al Khaseeb, Al Midaina, Al Qurna, Al Zubair, Basrah, Fao, Shatt Al-Arab
All Weather Roads**	562 km
Airports**	7

Population

- **Population and household size by district**

District	Population	Household Size
Abu Al Khaseeb	130,311	6.3
Al Midaina	163,234	6.8
Al Qurna	141,188	8.1
Al Zubair	284,878	7.4
Basrah	1,081,227	7.0
Fao	22,276	6.4
Shatt al-Arab	108,956	8.4
Basra Govern.	**1,932,069**	**7.1**

Population Breakdown By Age Group



Note: Where the source is not specified, data is drawn from WFP Baseline Food Security Study, 2004. National average (orange) refers to data collected in 16 out of 18 governorates.

Food Security and PDS

Number of Food Agents: 2,804
Food basket value (Nov.'03): 5.56 US$ (natl. av. 5.0 US$)
Coping Strategy Index (CSI): 36.91
PDS Dependency Ratio: 28.39%

Coping strategy: measures people take when they do not have enough food or money to buy food. High coping strategy indexes indicate adopting food-based mechanisms to cope with difficult economic situation. **PDS dependency ratio:** household reliance on the PDS, or percentage income transfer from the PDS to the total household income.

- **PDS monthly requirement by commodity** (mt) — standard ration 2003 (Source: MoT data, 2003)

Deter-gent	Infant Formula	Milk Pow-der	Vegeta-ble Oil	Pulses	Rice	Salt	Sugar	Tea	Toilet Soap	Wheat Flour	Wean. Cereal
979	254	1,888	2,832	2,832	5,665	283	3,776	378	490	16,994	56

- **Food Storage Capacity** (Source: WFP data, 2003; FAO/WFP Crop Food Supply & Nutrition Assessment, Sept. 2003)

Flour Mills	9
Monthly Milling Capacity	43,650 mt
Grain Silos	2
Grain Storage Capacity	205,000 mt
Annual Wheat Production	17,283 mt
MoT Warehouses	1
Warehouses Storage Capacity	70,000 mt

Socio-economic factors

Wealth classes (Classified according to households' monthly expenditure: Extreme Poor< = 35 US$; Poor 35.1 – 90 US$; Middle 90.1 – 275 US$; Better off > 275 US$)

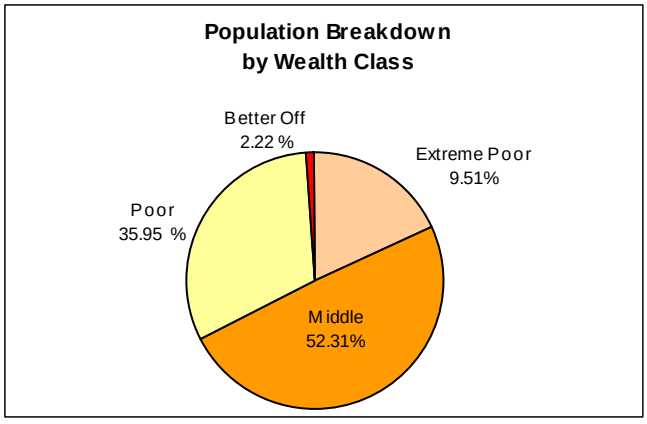
District	Extremely Poor	Poor	Middle	Better Off
Abu Al Khaseeb	20.5%	56.7%	22.8%	0.0%
Al Midaina	18.7%	50.0%	31.0%	0.3%
Al Qurna	23.7%	45.8%	28.4%	2.0%
Al Zubair	6.0%	24.3%	65.0%	4.7%
Basrah	4.7%	32.7%	60.3%	2.3%
Fao	11.7%	32.0%	55.3%	1.0%
Shatt-al Arab	20.7%	40.8%	37.5%	1.0%
Basrah Govern.	9.5%	35.9%	52.3%	2.2%
Iraq (16 gov.)	**13.4%**	**45.2%**	**39.8%**	**1.5%**

- **Working adults** (16-60 years old)

	Basrah	Iraq (16 gov.)
Working Adults	45.1%	43.4%
Full Time	85.3%	78.7%
Part Time	14.7%	21.3%

- **Reported Household Income and Expenditures** (Nov. '03)

	Income HH/Month		Expenditure HH/Month	
	Basrah	**Iraq (16 gov.)**	**Basrah**	**Iraq (16 gov.)**
Urban	107.2 US$	104.49 US$	97.4 US$	**Iraq (16 gov.)**
Rural	96.8 US$	100.18 US$	87.5 US$	87.68 US$



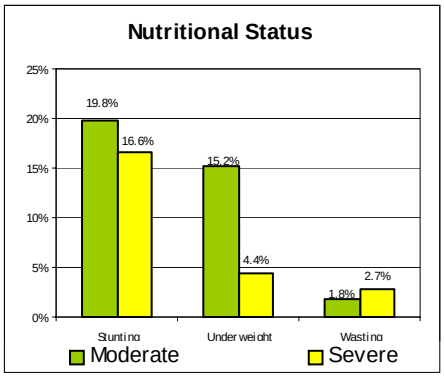
Nutrition

Facilities attending to malnourished children (Source: WHO/WFP/MoH unpublished report)

	No.	Malnourished Children / Facility	
		Basrah	Natl. Aver.
Primary Health Care Centers (PHC)	64	1,437	1,392
Community Child Care Units (CCCU)	292	315	390

- **Nutritional status by district**

District	Stunting	Underweight	Wasting
Abu Al Khaseeb	30.9%	17.0%	9.3%
Al Midaina	57.6%	22.0%	5.6%
Al Qurna	48.5%	27.2%	12.5%
Al Zubair	24.6%	13.1%	5.0%
Basrah	31.3%	12.6%	3.5%
Fao	34.3%	17.3%	11.8%
Shatt al-Arab	32.4%	24.6%	9.8%
Basrah Govern.	**33.9%**	**15.6%**	**5.4%**
Iraq (16 gov.)	**27.6%**	**11.5%**	**4.4%**



Education

- **Schools** (Source: UNICEF Summary Report on Schools in Iraq, September 2003)

Grade	No. Schools	No. Students	Students / Schools	
			Basrah	Iraq (16 gov.)
Primary (Grade 1-6)	570	253,079	444	326
Intermediate (Grade 7-9)	263	62,493	238	287
Preparatory (Grade 10-12)	141	12,361	88	91

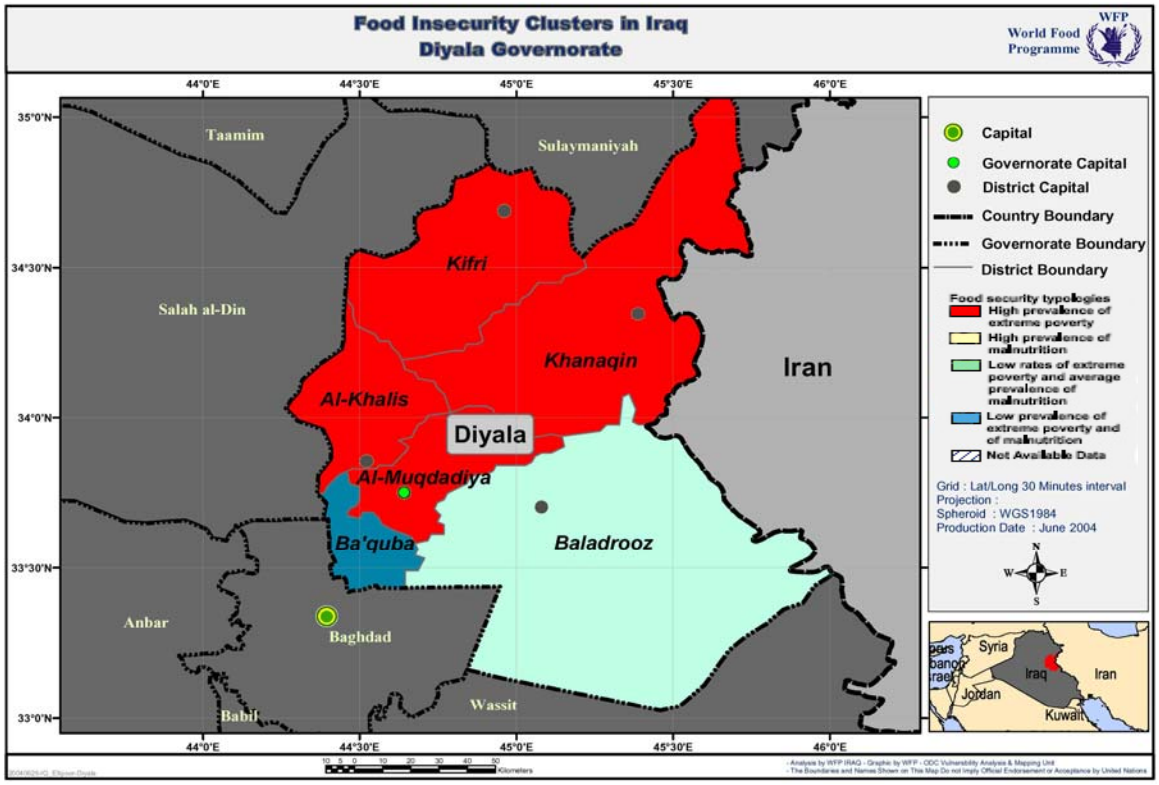
- **Students and Teachers** (Source: UNICEF Summary Report on Schools in Iraq, September 2003)

	Students			Teachers			Ratio Students / Teachers	
	Male	Female	Total	Male	Female	Total	Basrah	Iraq (16 gov.)
Primary	143,948	109,131	**253,079**	2,817	8,207	**11,024**	23	20
Intermediate	39,989	22,504	**62,493**	1,177	2,651	**3,828**	16	16
Preparatory	5,834	6,527	**12,361**	804	1,441	**2,245**	6	10

- **Literacy —** Male/Female breakdowns are as percent of total

	Male	Female	Basrah	Iraq (16 gov.)
Illiterate	24.9%	75.1%	15.1%	21.0%
Can read and write	33.2%	66.8%	18.0%	16.9%
Primary education	55.2%	44.8%	28.1%	28.0%
Secondary	62.4%	37.6%	25.7%	23.6%
High education	70.0%	30.0%	13.0%	10.5%

Governorate Profile—Diyala



Geography

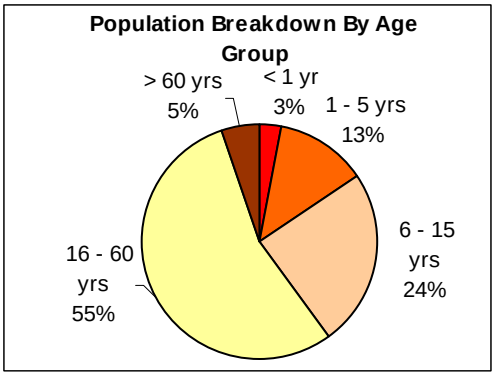
Source: *ESRI Map Data, 2002; **HIC, 2003

Location*	Center East
Geographic coordinates *	Long – min 33.03max 35.08; Lat - min 44.25/max 46.01
Total Area*	19,633 sq km
Governorate capital **	Ba'quba
Districts Number **	6
District Names**	Al-Khalis, Al-Muqdadiya, Ba'quba, Baladrooz, Khanaqin,Kifri
All Weather Roads**	803 km
Airports**	4

Population

- **Population and household size by district**

District	Population	Household Size
Al-Khalis	262,951	7.5
Al-Muqdadiya	204,064	7.9
Ba'quba	480,809	7.8
Baladrooz	102,350	8.8
Khanaqin	164,806	7.0
Kifri	43,170	6.0
Diyala Govern.	**1,258,150**	**7.6**



Note: Where the source is not specified, data is drawn from WFP Baseline Food Security Study, 2004. National average (orange) refers to data collected in 16 out of 18 governorates.

Food Security and PDS

Number of Food Agents: 1,690
Food basket value (Nov.'03): 4.99 US$ (natl. av. 5.0 US$)
Coping Strategy Index (CSI): 20.72
PDS Dependency Ratio: 23.91%

Coping strategy: measures people take when they do not have enough food or money to buy food. High coping strategy indexes indicate adopting food-based mechanisms to cope with difficult economic situation.
PDS dependency ratio: household reliance on the PDS, or percentage income transfer from the

- **PDS monthly requirement by commodity (mt)** — standard ration 2003 (Source: MoT data, 2003)

Deter-gent	Infant Formula	Milk Pow-der	Vegeta-ble Oil	Pulses	Rice	Salt	Sugar	Tea	Toilet Soap	Wheat Flour	Wean. Cereal
638	142	1,236	1,854	1,854	3,708	185	2,472	247	319	11,124	32

- **Food Storage Capacity** (Source: WFP data, 2003; FAO/WFP Crop Food Supply & Nutrition Assessment, Sept. 2003)

Flour Mills	9
Monthly Milling Capacity	29,400 mt
Grain Silos	2
Grain Storage Capacity	200,000 mt
Annual Wheat Production	132,816 mt
MoT Warehouses	1
Warehouses Storage Capacity	42,700 mt

Socio-economic factors

Wealth classes (Classified according to households' monthly expenditure: Extreme Poor<= 35 US$; Poor 35.1 – 90 US$; Middle 90.1 – 275 US$; Better off > 275 US$)

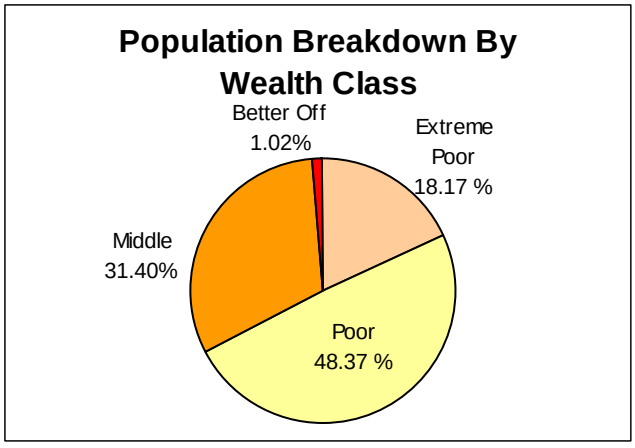
District	Extremely Poor	Poor	Middle	Better Off
Al-Khalis	24.6%	38.4%	36.0%	1.0%
Al-Muqdadiya	22.7%	65.0%	12.3%	0.0%
Ba'quba	12.1%	47.0%	39.9%	1.0%
Baladrooz	15.3%	58.0%	26.3%	0.3%
Khanaqin	22.1%	45.2%	30.1%	2.7%
Kifri	24.4%	50.2%	23.1%	2.3%
Diyala Govern.	**18.4%**	**48.9%**	**31.6%**	**1.0%**
Iraq (16 gov.)	**13.4%**	**45.2%**	**39.8%**	**1.5%**

- **Working adults** (16-60 years old)

	Diyala	Iraq (16 gov.)
Working Adults	41.5%	43.4%
Full Time	91.6%	78.7%
Part Time	8.4%	21.3%

- **Reported Household Income and Expenditures** (Nov. '03)

	Income HH/Month		Expenditure HH/Month	
	Diyala	Iraq (16 gov.)	Diyala	Iraq (16 gov.)
Urban	110.4 US$	104.5 US$	83.6 US$	95.2 US$
Rural	95.6 US$	100.2 US$	71.6 US$	87.7 US$



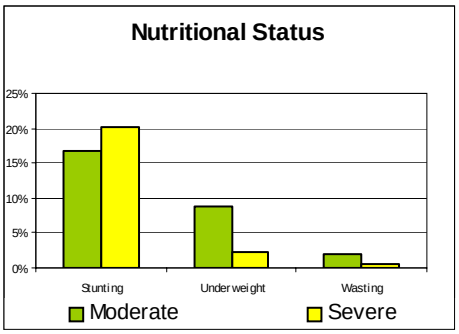
Nutrition

Facilities attending to malnourished children (Source: WHO/WFP/MoH unpublished report)

	No.	Malnourished Children / Facility	
		Diyala	Iraq (16 gov.)
Primary Health Care Centers (PHC)	33	1,778	1,392
Community Child Care Units (CCCU)	96	611	390

- **Nutritional status by district**

District	Stunting	Underweight	Wasting
Al-Khalis	50.0%	13.1%	0.5%
Al-Muqdadiya	51.5%	7.7%	0.5%
Ba'quba	30.2%	10.7%	5.3%
Baladrooz	32.8%	15.4%	2.7%
Khanaqin	25.1%	7.1%	3.4%
Kifri	38.9%	29.2%	13.5%
Diyala Govern.	**37.7%**	**11.2%**	**3.3%**
Iraq (16 gov.)	**27.6%**	**11.5%**	**4.4%**



Education

- **Schools** (Source: UNICEF Summary Report on Schools in Iraq, September 2003)

Grade	No. Schools	No. Students	Students / Schools	
			Diyala	Iraq (16 gov.)
Primary (Grade 1-6)	747	225,083	301	326
Intermediate (Grade 7-9)	245	54,074	221	287
Preparatory (Grade 10-12)	119	16,938	142	91

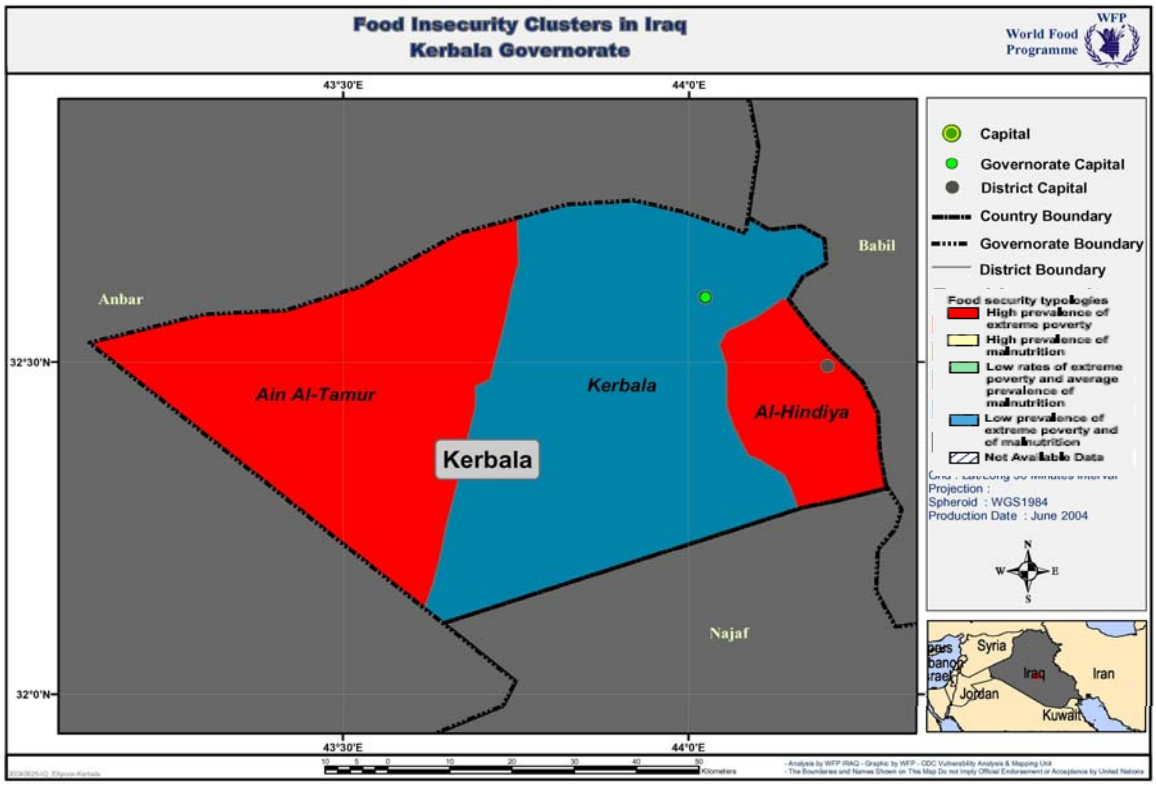
- **Students and Teachers** (Source: UNICEF Summary Report on Schools in Iraq, September 2003)

	Students			Teachers			Students / Teachers	
	Male	Female	Total	Male	Female	Total	Diyala	Iraq (16 gov.)
Primary	126,069	99,014	**225,083**	3,977	8,663	**12,640**	18	20
Intermediate	35,322	18,752	**54,074**	1,806	2,750	**4,556**	12	16
Preparatory	9,611	7,327	**16,938**	1,271	1,542	**2,813**	6	10

- **Literacy —** Male/Female breakdowns are as percent of total

	Male	Female	Diyala	Iraq (16 gov.)
Illiterate	19.0%	81.0%	16.7%	21.0%
Can read and write	34.1%	65.9%	16.4%	16.9%
Primary education	52.0%	48.0%	30.8%	28.0%
Secondary	69.6%	30.4%	25.2%	23.6%
High education	74.4%	25.6%	10.9%	10.5%

Governorate Profile—Kerbala



Geography

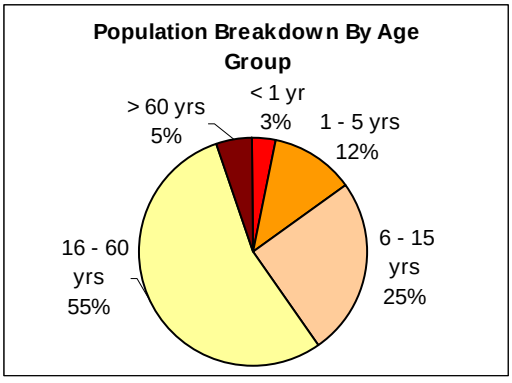
Source: *ESRI Map Data, 2002; **HIC, 2003

Location*	Upper South
Geographic coordinates *	Long min 32.09/max 32.75; Lat – min 43.12/max 44.28
Total Area*	4,563 sq km
Governorate capital **	Kerbala
Districts Number **	3
District Names**	Ain Al-Tamur, Al-Hindiya, Kerbala
All Weather Roads**	126
Airports**	0

Population

- **Population and household size by district**

District	Population	Household Size
Ain Al-Tamur	20,960	6.9
Al-Hindiya	166,147	7.9
Kerbala	556,710	7.2
Kerbala Govern.	**743,818**	**7.4**



Note: Where the source is not specified, data is drawn from WFP Baseline Food Security Study, 2004. National average (orange) refers to data collected in 16 out of 18 governorates.

Food Security and PDS

Number of Food Agents: 919
Food basket value (Nov.'03): 5.21 US$ (natl. av. 5.0 US$)
Coping Strategy Index (CSI): 3.94
PDS Dependency Ratio: 44.24%

Coping strategy: measures people take when they do not have enough food or money to buy food. High coping strategy indexes indicate adopting food-based mechanisms to cope with difficult economic situation.
PDS dependency ratio: household reliance on the PDS, or percentage income transfer from the

- **PDS monthly requirement by commodity (mt)** — standard ration 2003 (Source: MoT data, 2003)

Deter-gent	Infant Formula	Milk Pow-der	Vegeta-ble Oil	Pulses	Rice	Salt	Sugar	Tea	Toilet Soap	Wheat Flour	Wean. Cereal
377	90	729	1,094	1,094	2,188	109	1,458	146	189	6,563	20

- **Food Storage Capacity** (Source: WFP data, 2003; FAO/WFP Crop Food Supply & Nutrition Assessment, Sept. 2003)

Flour Mills	5
Monthly Milling Capacity	13,800 mt
Grain Silos	1
Grain Storage Capacity	10,000 mt
Annual Wheat Production	10,170 mt
MoT Warehouses	1
Warehouses Storage Capacity	19,700

Socio-economic factors

Wealth classes (Classified according to households' monthly expenditure: Extreme Poor<= 35 US$; Poor 35.1 – 90 US$; Middle 90.1 – 275 US$; Better off > 275 US$)

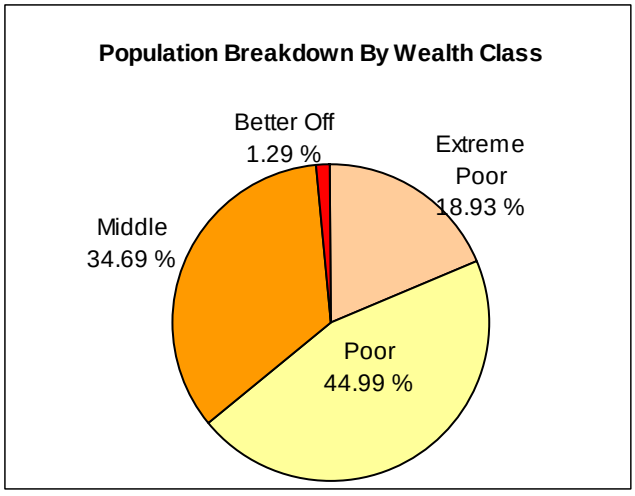
District	Extremely Poor	Poor	Middle	Better Off
Ain Al-Tamur	25.3%	44.7%	29.0%	1.0%
Al-Hindiya	32.3%	49.0%	17.3%	1.3%
Kerbala	14.7%	43.8%	40.1%	1.3%
Kerbala Govern.	**18.9%**	**45.0%**	**34.7%**	**1.3%**
Iraq (16 gov.)	13.4%	45.2%	39.8%	1.5%

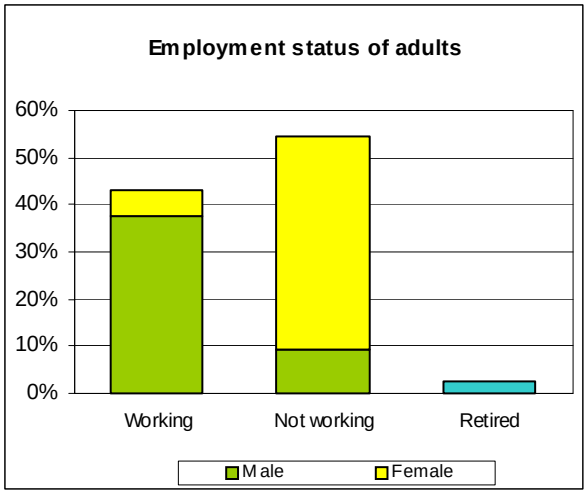
- **Working adults** (16-60 years old)

	Kerbala	Iraq (16 gov.)
Working Adults	43.1%	43.4%
Full Time	83.9%	78.7%
Part Time	16.1%	21.3%

- **Reported Household Income and Expenditures** (Nov. '03)

	Income HH/Month		Expenditure HH/Month	
	Kerbala	Iraq (16 gov.)	Kerbala	Iraq (16 gov.)
Urban	85.2 US$	104.5 US$	81.9 US$	95.2 US$
Rural	82.5 US$	100.2 US$	77.5 US$	87.7 US$





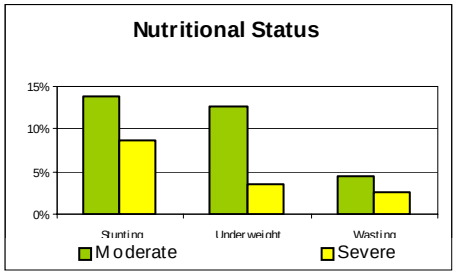
Nutrition

Facilities attending to malnourished children (Source: WHO/WFP/MoH unpublished report)

	No.	Malnourished Children / Facility	
		Kerbala	Iraq (16 gov.)
Primary Health Care Centers (PHC)	22	922	1,392
Community Child Care Units (CCCU)	105	193	390

- **Nutritional status by district**

District	Stunting	Underweight	Wasting
Ain Al-Tamur	24.4%	24.0%	11.8%
Al-Hindiya	28.7%	18.9%	7.4%
Kerbala	14.4%	5.2%	1.7%
Kerbala Govern.	**17.9%**	**8.8%**	**3.3%**
Iraq (16 gov.)	**27.6%**	**11.5%**	**4.4%**



Education

- **Schools** (Source: UNICEF Summary Report on Schools in Iraq, September 2003)

Grade	No. Schools	No. Students	Students / Schools	
			Kerbala	Iraq (16 gov.)
Primary (Grade 1-6)	304	121,332	399	326
Intermediate (Grade 7-9)	97	26,306	271	287
Preparatory (Grade 10-12)	44	7,224	164	91

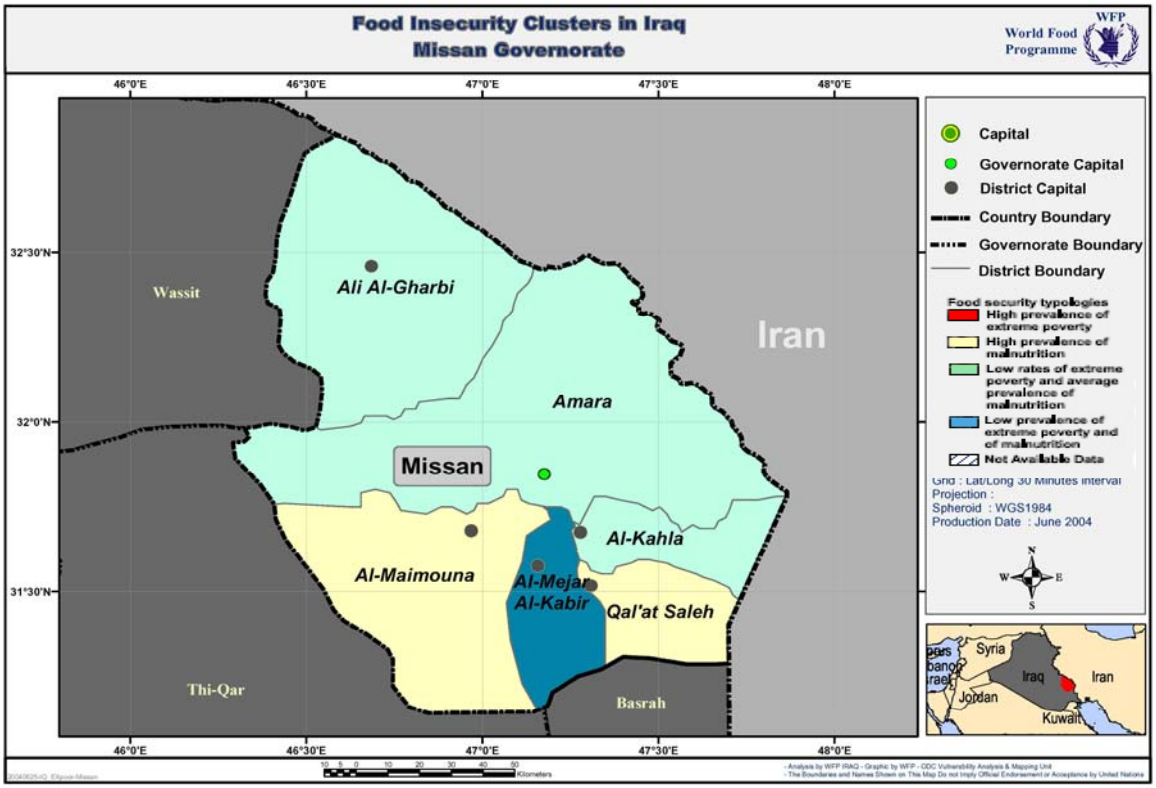
- **Students and Teachers** (Source: UNICEF Summary Report on Schools in Iraq, September 2003)

	Students			Teachers			Students / Teachers	
	Male	Female	Total	Male	Female	Total	Kerbala	Iraq (16 gov.)
Primary	68,694	52,638	**121,332**	1,679	5,090	**6,769**	18	20
Intermediate	16,500	9,806	**26,306**	794	1,350	**2,144**	12	16
Preparatory	3,977	3,247	**7,224**	486	774	**1,260**	6	10

- **Literacy —** Male/Female breakdowns are as percent of total

	Male	Female	Kerbala	Iraq (16 gov.)
Illiterate	19.4%	80.6%	19.8%	21.0%
Can read and write	38.1%	61.9%	17.3%	16.9%
Primary education	51.7%	48.3%	28.7%	28.0%
Secondary	64.0%	36.0%	24.0%	23.6%
High education	69.4%	30.6%	10.2%	10.5%

Governorate Profile—Missan



Geography

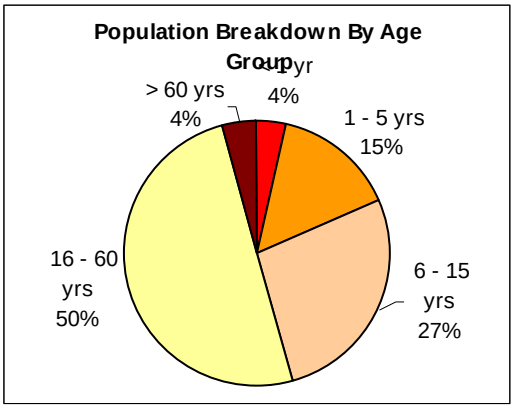
Source: *ESRI Map Data, 2002; **HIC, 2003

Location*	South East
Geographic coordinates *	Long min 31.14/max 32.84; Lat – min 46.29/max 47.87
Total Area*	17,253 sq km
Governorate capital **	Amara
Districts Number **	6
District Names**	Amara, Al-Kahla, Al-Maimouna, Al-Mejar Al-Kabir, Ali Al-Gharbi, Qal'at Saleh
All Weather Roads**	304 km
Airports**	2

Population

- **Population and household size by district**

District	Population	Household Size
Amara	467,258	8.3
Al-Kahla	24,039	9.4
Al-Maimouna	40,325	8.7
Al-Mejar Al-Kabir	121,590	8.5
Ali Al-Gharbi	86,914	8.9
Qal'at Saleh	85,268	9.0
Missan Govern.	**825,394**	**8.5**



Note: Where the source is not specified, data is drawn from WFP Baseline Household Survey, 2004. National average (orange) refers to data collected in 16 out of 18 governorates.

Food Security and PDS

Number of Food Agents: 998
Food basket value (Nov.'03): 4.66 US$ (natl. av. 5.0 US$)
Coping Strategy Index (CSI): 12.62
PDS Dependency Ratio: 27.03%

Coping strategy: measures people take when they do not have enough food or money to buy food. High coping strategy indexes indicate adopting food-based mechanisms to cope with difficult economic situation.
PDS dependency ratio: household reliance on the PDS, or percentage income transfer from the

- **PDS monthly requirement by commodity (mt)** — standard ration 2003 (Source: MoT data, 2003)

Deter-gent	Infant Formula	Milk Pow-der	Vegeta-ble Oil	Pulses	Rice	Salt	Sugar	Tea	Toilet Soap	Wheat Flour	Wean. Cereal
418	105	807	1,211	1,211	2,422	121	1,615	161	209	7,267	23

- **Food Storage Capacity** (Source: WFP data, 2003; FAO/WFP Crop Food Supply & Nutrition Assessment, Sept. 2003)

Flour Mills	4
Monthly Milling Capacity	9,900 mt
Grain Silos	1
Grain Storage Capacity	10,000 mt
Annual Wheat Production	78,500 mt
MoT Warehouses	1
Warehouses Storage Capacity	17,100

Socio-economic factors

Wealth classes (Classified according to households' monthly expenditure: Extreme Poor< = 35 US$; Poor 35.1 – 90 US$; Middle 90.1 – 275 US$; Better off > 275 US$)

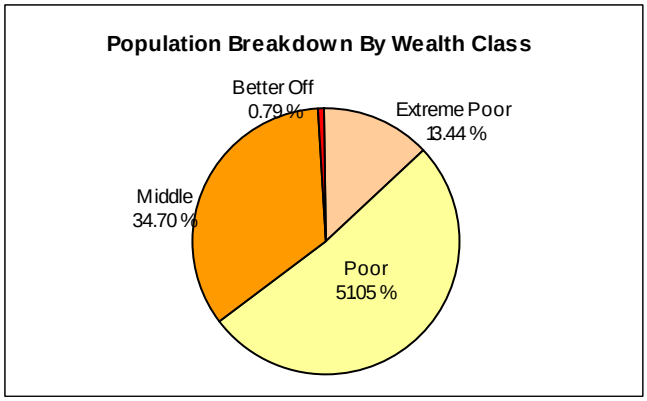
District	Extremely Poor	Poor	Middle	Better Off
Amara	14.6%	49.8%	35.3%	0.3%
Al-Kahla	1.0%	37.7%	61.0%	0.3%
Al-Maimouna	17.4%	51.8%	30.4%	0.3%
Al-Mejar Al-Kabir	12.8%	58.7%	28.5%	0.0%
Ali Al-Gharbi	8.0%	45.2%	39.1%	7.7%
Qal'at Saleh	10.0%	52.8%	35.1%	2.0%
Missan Govern.	**13.4%**	**51.1%**	**34.7%**	**0.8%**
Iraq (16 gov.)	**13.4%**	**45.2%**	**39.8%**	**1.5%**

- **Working adults** (16-60 years old)

	Missan	Iraq (16 gov.)
Working Adults	38.9%	43.4%
Full Time	69.3%	78.7%
Part Time	30.7%	21.3%

- **Reported Household Income and Expenditures** (Nov. '03)

	Income HH/Month		Expenditure HH/Month	
	Missan	Iraq (16 gov.)	Missan	Iraq (16 gov.)
Urban	108.6 US$	104.5 US$	90.9 US$	95.2 US$
Rural	110.0 US$	100.2 US$	95.7 US$	87.7 US$



Note: Where the source is not specified, data is drawn from WFP Baseline Household Survey, 2004. National average (orange) refers to data collected in 16 out of 18 governorates.

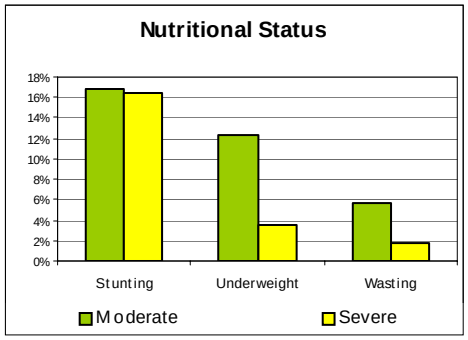
Nutrition

Facilities attending to malnourished children (Source: WHO/WFP/MoH unpublished report)

	No.	Malnourished Children / Facility	
		Missan	Iraq (16 gov.)
Primary Health Care Centers (PHC)	20	2,090	1,392
Community Child Care Units (CCCU)	127	329	390

- **Nutritional status by district**

District	Stunting	Underweight	Wasting
Amara	32.0%	13.2%	2.2%
Al-Kahla	49.3%	22.1%	4.8%
Al-Maimouna	33.8%	20.7%	17.3%
Al-Mejar Al-Kabir	21.3%	8.0%	4.4%
Ali Al-Gharbi	29.8%	7.5%	5.7%
Qal'at Saleh	32.4%	22.8%	11.1%
Missan Govern.	**31.0%**	**14.2%**	**5.3%**
Iraq (16 gov.)	**27.6%**	**11.5%**	**4.4%**



Education

- **Schools** (Source: UNICEF Summary Report on Schools in Iraq, September 2003)

Grade	No. Schools	No. Students	Students / Schools	
			Missan	Iraq (16 gov.)
Primary (Grade 1-6)	365	36,504	100	326
Intermediate (Grade 7-9)	79	20,685	262	287
Preparatory (Grade 10-12)	47	5,621	120	91

- **Students and Teachers** (Source: UNICEF Summary Report on Schools in Iraq, September 2003)

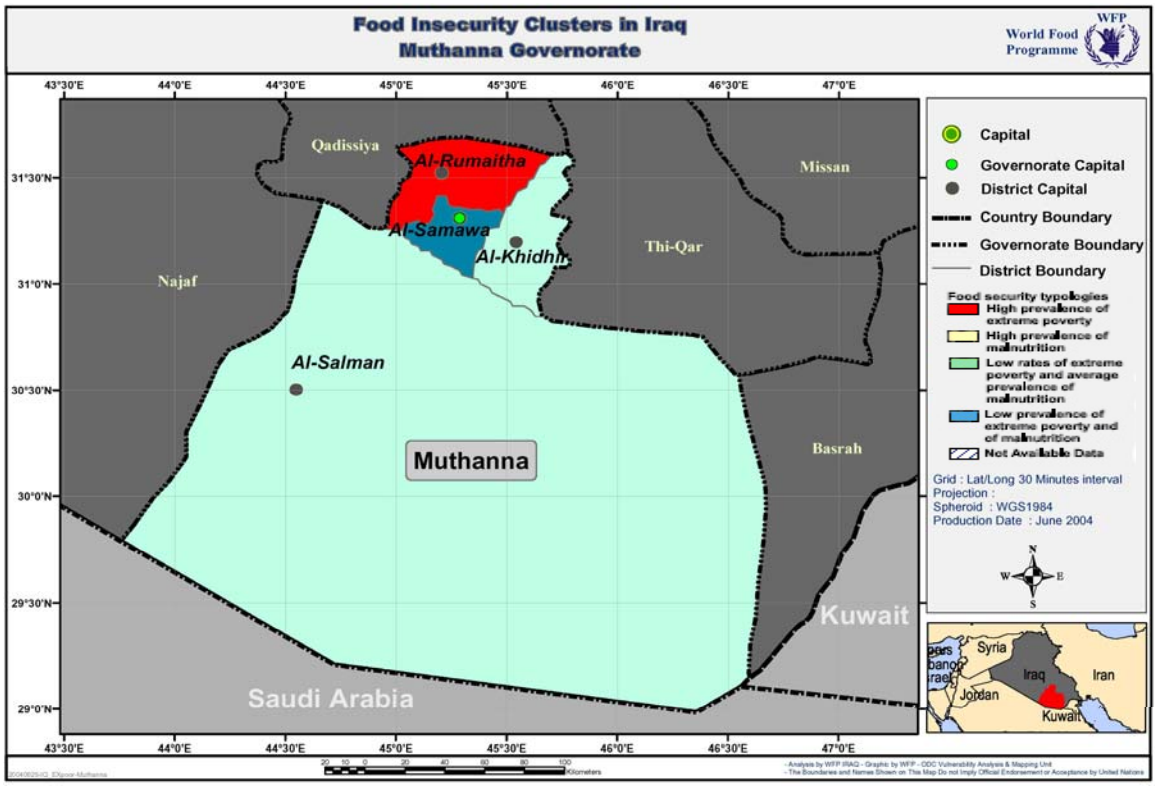
	Students			Teachers			Students / Teachers	
	Male	Female	Total	Male	Female	Total	Missan	Iraq (16 gov.)
Primary	57	36,447	**36,504**	2,101	4,170	**6,271**	6	20
Intermediate	13,421	7,264	**20,685**	636	0	**636**	33	16
Preparatory	2,937	2,684	**5,621**	445	471	**916**	6	10

- **Literacy —** Male/Female breakdowns are as percent of total

	Male	Female	Missan	Iraq (16 gov.)
Illiterate	24.6%	75.4%	28.4%	21.0%
Can read and write	44.7%	55.3%	22.9%	16.9%
Primary education	65.4%	34.6%	24.6%	28.0%
Secondary	80.8%	19.2%	18.3%	23.6%
High education	69.6%	30.4%	5.9%	10.5%

Note: Where the source is not specified, data is drawn from WFP Baseline Household Survey, 2004. National average (orange) refers to data collected in 16 out of 18 governorates.

Governorate Profile—Muthanna



Geography

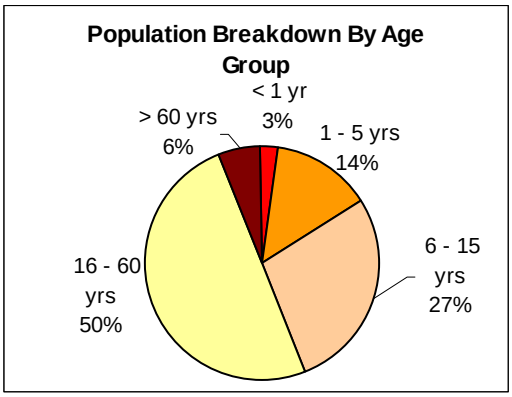
Source: *ESRI Map Data, 2002; **HIC, 2003

Location*	South
Geographic coordinates *	Long min 28.96/max 31.68; Lat – min 43.76/max 46.57
Total Area*	53,454 sq km
Governorate capital **	Al-Samawa
Districts Number **	4
District Names**	Al-Khidhir, Al-Rumaitha, Al-Salman, Al-Samawa
All Weather Roads**	731 km
Airports**	2

Population

- **Population and household size by district**

District	Population	Household Size
Al-Khidhir	70,020	9.8
Al-Rumaitha	218,769	10.3
Al-Salman	6,533	10.6
Al-Samawa	257,176	8.2
Muthanna Govern.	**552,497**	**9.2**



Note: Where the source is not specified, data is drawn from WFP Baseline Food Security Study, 2004. National average (orange) refers to data collected in 16 out of 18 governorates.

Food Security and PDS

Number of Food Agents: 589
Food basket value (Nov.'03): 4.02 US$ (natl. av. 5.0 US$)
Coping Strategy Index (CSI): 23.06
PDS Dependency Ratio: 20.27%

Coping strategy: measures people take when they do not have enough food or money to buy food. High coping strategy indexes indicate adopting food-based mechanisms to cope with difficult economic situation.
PDS dependency ratio: household reliance on the PDS, or percentage income transfer from the

- **PDS monthly requirement by commodity (mt)** — standard ration 2003 (Source: MoT data, 2003)

Deter-gent	Infant Formula	Milk Pow-der	Vegeta-ble Oil	Pulses	Rice	Salt	Sugar	Tea	Toilet Soap	Wheat Flour	Wean. Cereal
280	52	546	818	818	1,637	82	1,091	109	140	4,910	12

- **Food Storage Capacity** (Source: WFP data, 2003; FAO/WFP Crop Food Supply & Nutrition Assessment, Sept. 2003)

Flour Mills	2
Monthly Milling Capacity	6,000 mt
Grain Silos	1
Grain Storage Capacity	10,000 mt
Annual Wheat Production	17,735 mt
MoT Warehouses	1
Warehouses Storage Capacity	17,800

Socio-economic factors

Wealth classes (Classified according to households' monthly expenditure: Extreme Poor<= 35 US$; Poor 35.1 – 90 US$; Middle 90.1 – 275 US$; Better off > 275 US$)

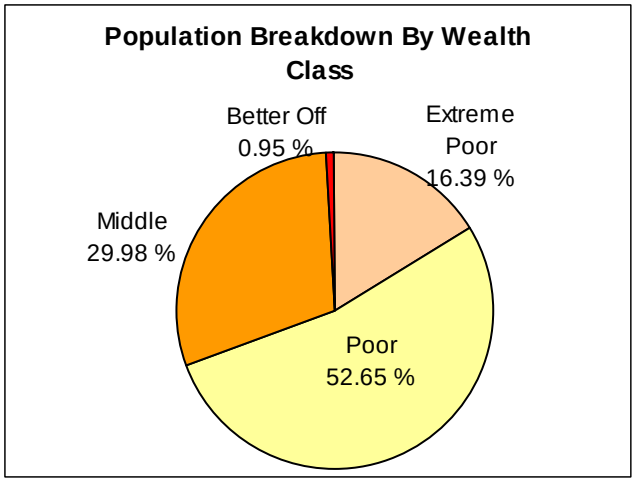
District	Extremely Poor	Poor	Middle	Better Off
Al-Khidhir	3.4%	43.3%	51.7%	1.7%
Al-Rumaitha	23.7%	57.7%	18.3%	0.3%
Al-Salman	5.3%	36.7%	57.3%	0.7%
Al-Samawa	14.0%	51.3%	33.3%	1.3%
Muthanna Govern.	**16.4%**	**52.7%**	**30.0%**	**1.0%**
Iraq (16 gov.)	13.4%	45.2%	39.8%	1.5%

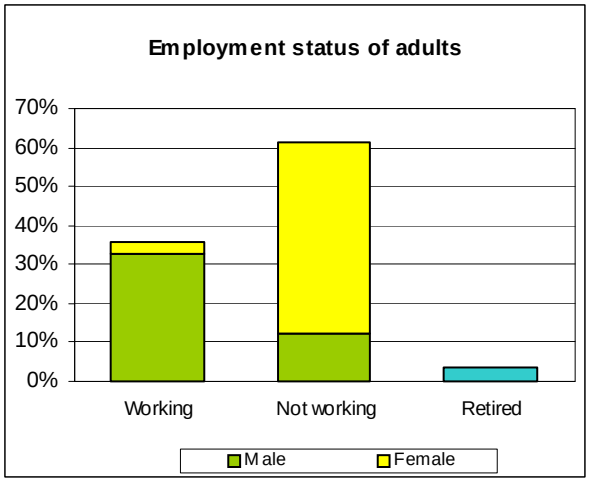
- **Working adults** (16-60 years old)

	Muthanna	Iraq (16 gov.)
Working Adults	35.8%	43.4%
Full Time	92.2%	78.7%
Part Time	7.8%	21.3%

- **Reported Household Income and Expenditures** (Nov. '03)

	Income HH/Month		Expenditure HH/Month	
	Muthanna	Iraq (16 gov.)	Muthanna	Iraq (16 gov.)
Urban	91.5 US$	104.5 US$	96.0 US$	95.2 US$
Rural	78.0 US$	100.2 US$	84.8 US$	87.7 US$





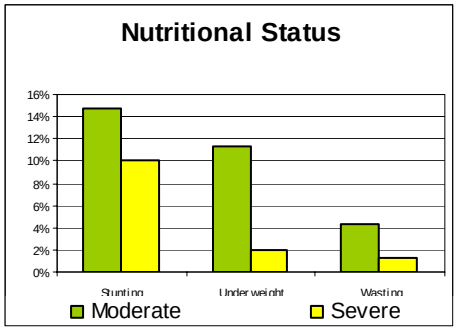
Nutrition

Facilities attending to malnourished children (Source: WHO/WFP/MoH unpublished report)

	No.	Malnourished Children / Facility	
		Muthanna	Iraq (16 gov.)
Primary Health Care Centers (PHC)	29	658	1,392
Community Child Care Units (CCCU)	97	197	390

- **Nutritional status by district**

District	Stunting	Underweight	Wasting
Al-Khidhir	26.3%	15.0%	3.9%
Al-Rumaitha	30.3%	13.3%	2.9%
Al-Salman	25.5%	13.7%	8.0%
Al-Samawa	13.6%	10.8%	7.0%
Muthanna Govern.	**22.0%**	**12.4%**	**5.0%**
Iraq (16 gov.)	27.6%	11.5%	4.4%



Education

- **Schools** (Source: UNICEF Summary Report on Schools in Iraq, September 2003)

Grade	No. Schools	No. Students	Students / Schools	
			Muthanna	Iraq (16 gov.)
Primary (Grade 1-6)	263	72,511	276	326
Intermediate (Grade 7-9)	53	11,535	218	287
Preparatory (Grade 10-12)	27	2,942	109	91

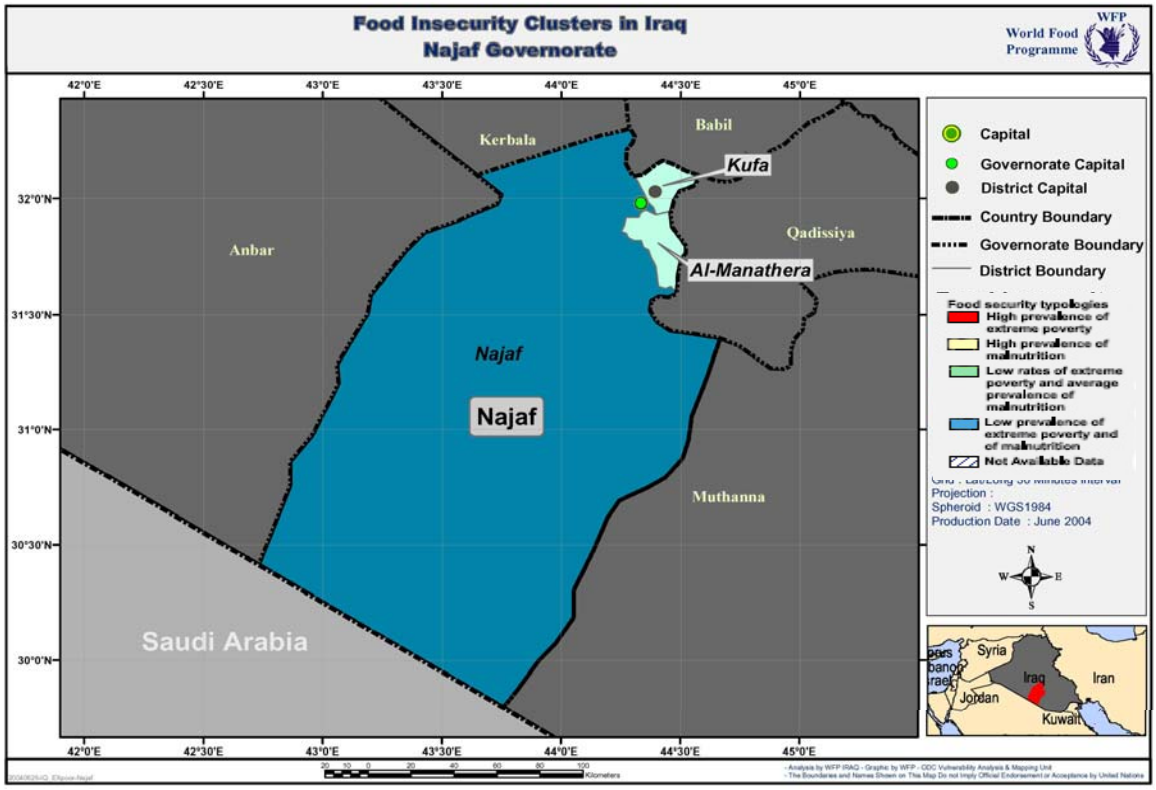
- **Students and Teachers** (Source: UNICEF Summary Report on Schools in Iraq, September 2003)

	Students			Teachers			Students / Teachers	
	Male	Female	Total	Male	Female	Total	Muthanna	Iraq (16 gov.)
Primary	44,290	28,221	**72,511**	676	2,474	**3,150**	23	20
Intermediate	7,539	3,996	**11,535**	205	382	**587**	20	16
Preparatory	1,750	1,192	**2,942**	121	236	**357**	8	10

- **Literacy —** Male/Female breakdowns are as percent of total

	Male	Female	Muthanna	Iraq (16 gov.)
Illiterate	20.6%	79.4%	35.1%	21.0%
Can read and write	50.4%	49.6%	24.4%	16.9%
Primary education	73.2%	26.8%	20.7%	28.0%
Secondary	71.7%	28.3%	14.3%	23.6%
High education	77.4%	22.6%	5.5%	10.5%

Governorate Profile—Najaf



Geography

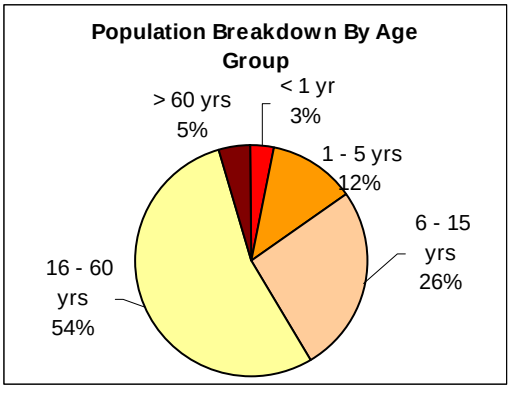
Source: *ESRI Map Data, 2002; **HIC, 2003

Location*	South
Geographic coordinates *	Long min 29.79/max 32.31; Lat – min 42.72/max 44.66
Total Area*	29,377 sq km
Governorate capital **	Najaf
Districts Number **	3
District Names**	Kufa, Al-Manathera, Najaf
All Weather Roads**	166 km
Airports**	3

Population

- **Population and household size by district**

District	Popula-tion	Household Size
Kufa	282,971	8.1
Al-Manathera	136,292	9.8
Najaf	536,400	7.5
Najaf Govern.	**955,663**	**8.0**



Note: Where the source is not specified, data is drawn from WFP Baseline Food Security Study, 2004. National average (orange) refers to data collected in 16 out of 18 governorates.

Food Security and PDS

Number of Food Agents: 968
Food basket value (Nov.'03): 4.37 US$ (natl. av. 5.0 US$)
Coping Strategy Index (CSI): 16.23
PDS Dependency Ratio: 31.03%

Coping strategy: measures people take when they do not have enough food or money to buy food. High coping strategy indexes indicate adopting food-based mechanisms to cope with difficult economic situation.
PDS dependency ratio: household reliance on the PDS, or percentage income transfer from the PDS to the total household income.

- **PDS monthly requirement by commodity (mt)** — standard ration 2003 (Source: MoT data, 2003)

Deter-gent	Infant Formula	Milk Pow-der	Vegeta-ble Oil	Pulses	Rice	Salt	Sugar	Tea	Toilet Soap	Wheat Flour	Wean. Cereal
484	112	938	1,407	1,407	2,814	141	1,876	188	242	8,441	25

- **Food Storage Capacity** (Source: WFP data, 2003; FAO/WFP Crop Food Supply & Nutrition Assessment, Sept. 2003)

Flour Mills	5
Monthly Milling Capacity	18,150 mt
Grain Silos	1
Grain Storage Capacity	45,000 mt
Annual Wheat Production	85,199 mt
MoT Warehouses	1
Warehouses Storage Capacity	32,400 mt

Socio-economic factors

Wealth classes (Classified according to households' monthly expenditure: Extreme Poor<= 35 US$; Poor 35.1 – 90 US$; Middle 90.1 – 275 US$; Better off > 275 US$)

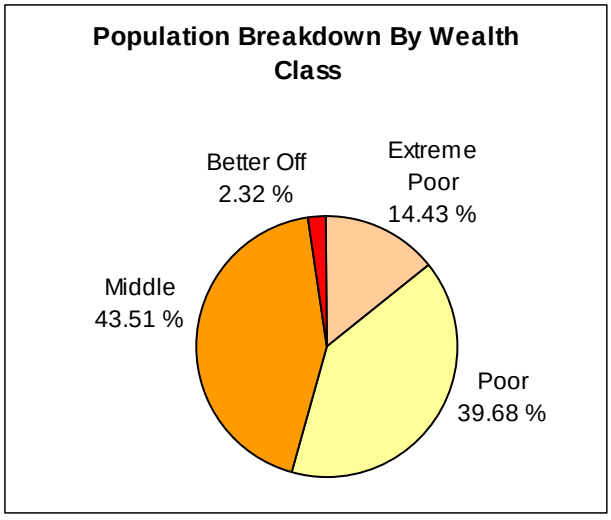
District	Extremely Poor	Poor	Middle	Better Off
Kufa	46.0%	43.6%	1.7%	1.70%
Al-Manathera	49.3%	43.0%	3.7%	3.70%
Najaf	33.9%	43.6%	2.3%	2.30%
Najaf Govern.	**39.7%**	**43.5%**	**2.3%**	**2.32%**
Iraq (16 gov.)	**13.4%**	**45.2%**	**39.8%**	**1.5%**

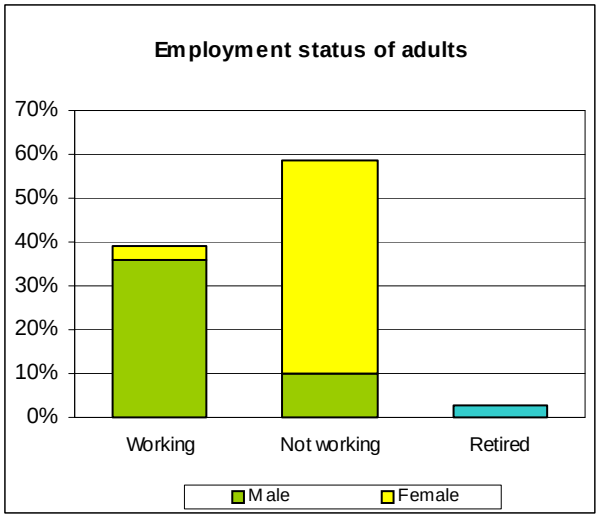
- **Working adults** (16-60 years old)

	Najaf	Iraq (16 gov.)
Working Adults	39.3%	43.4%
Full Time	84.7%	78.7%
Part Time	15.3%	21.3%

- **Reported Household Income and Expenditures** (Nov. '03)

	Income HH/Month		Expenditure HH/Month	
	Najaf	Iraq (16 gov.)	Najaf	Iraq (16 gov.)
Urban	122.6 US$	104.5 US$	109.0 US$	95.2 US$
Rural	106.9 US$	100.2 US$	88.4 US$	87.7 US$





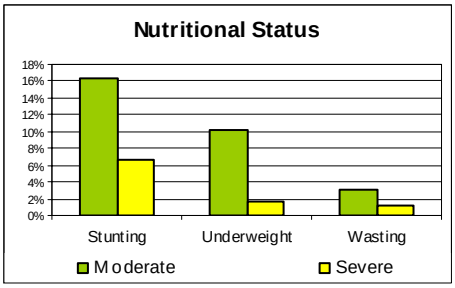
Nutrition

Facilities attending to malnourished children (Source: WHO/WFP/MoH unpublished report)

	No.	Malnourished Children / Facility	
		Najaf	Iraq (16 gov.)
Primary Health Care Centers (PHC)	21	1,278	1,392
Community Child Care Units (CCCU)	114	235	390

- **Nutritional status by district**

District	Stunting	Underweight	Wasting
Kufa	27.1%	15.4%	5.4%
Al-Manathera	24.9%	11.2%	3.0%
Najaf	15.7%	8.2%	3.9%
Najaf Govern.	**20.4%**	**10.8%**	**4.2%**
Iraq (16 gov.)	**27.6%**	**11.5%**	**4.4%**



Education

- **Schools** (Source: UNICEF Summary Report on Schools in Iraq, September 2003)

Grade	No. Schools	No. Students	Students / Schools	
			Najaf	Iraq (16 gov.)
Primary (Grade 1-6)	382	148,702	389	326
Intermediate (Grade 7-9)	112	34,513	308	287
Preparatory (Grade 10-12)	49	10,112	206	91

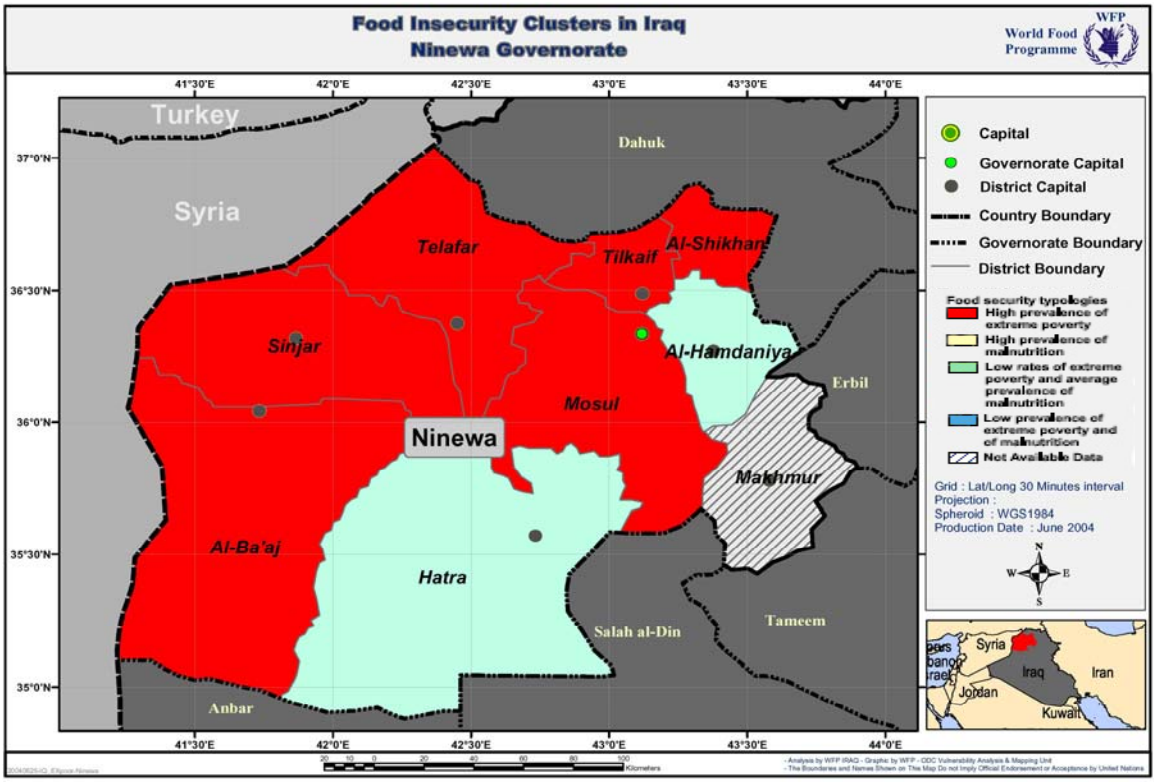
- **Students and Teachers** (Source: UNICEF Summary Report on Schools in Iraq, September 2003)

	Students			Teachers			Students / Teachers	
	Male	Female	Total	Male	Female	Total	Najaf	Iraq (16 gov.)
Primary	81,757	66,945	**148,702**	1,843	5,049	**6,892**	22	20
Intermediate	22,797	11,716	**34,513**	828	1,424	**2,252**	15	16
Preparatory	5,514	4,598	**10,112**	468	718	**1,186**	9	10

- **Literacy —** Male/Female breakdowns are as percent of total

	Male	Female	Najaf	Iraq (16 gov.)
Illiterate	24.8%	75.2%	20.6%	21.0%
Can read and write	39.3%	60.7%	12.2%	16.9%
Primary education	53.2%	46.8%	30.7%	28.0%
Secondary	65.0%	35.0%	24.7%	23.6%
High education	63.7%	36.3%	11.8%	10.5%

Governorate Profile—Ninewa



Geography

Source: *ESRI Map Data, 2002; **HIC, 2003

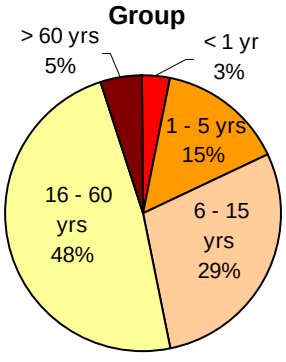
Location*	North West
Geographic coordinates *	Long min 34.88/max 37.03; Lat – min 41.27/max 43.88
Total Area*	37,704 sq km
Governorate capital **	Mosul
Districts Number **	8
District Names**	Al-Shikhan, Al-Ba'aj, Al-Hamdaniya, Hatra, Mosul, Sinjar, Telafar, Tilkaif
All Weather Roads**	1,523 km
Airports**	6

Population

- **Population and household size by district**

District	Population	Household Size
Al-Shikhan	467,258	8.3
Al-Ba'aj	24,039	9.4
Al-Hamdaniya	86,914	8.7
Hatra	121,590	8.5
Mosul	86,914	8.9
Sinjar	85,268	9.0
Telafar	309,182	7.7
Tilkaif	172,274	8.4
Ninewa Govern.	**1,353,439**	**7.6**

Population Breakdown By Age Group



Note: Where the source is not specified, data is drawn from WFP Baseline Food Security Study, 2004. National average (orange) refers to data collected in 16 out of 18 governorates.

Food Security and PDS

Number of Food Agents: 2,898
Food basket value (Nov.'03): 6.50 US$ (natl. av. 5.0 US$)
Coping Strategy Index (CSI): 20.19
PDS Dependency Ratio: 27.23%

Coping strategy: measures people take when they do not have enough food or money to buy food. High coping strategy indexes indicate adopting food-based mechanisms to cope with difficult economic situation. **PDS dependency ratio:** household reliance on the PDS, or percentage income transfer from the PDS to the total household income.

- **PDS monthly requirement by commodity (mt)** — standard ration 2003 (Source: MoT data, 2003)

Deter-gent	Infant Formula	Milk Pow-der	Vegeta-ble Oil	Pulses	Rice	Salt	Sugar	Tea	Toilet Soap	Wheat Flour	Wean. Cereal
1,278	294	2,474	3,711	3,711	7,421	371	4,948	495	639	22,264	65

- **Food Storage Capacity** (Source: WFP data, 2003; FAO/WFP Crop Food Supply & Nutrition Assessment, Sept. 2003)

Flour Mills	21
Monthly Milling Capacity	102,000 mt
Grain Silos	15
Grain Storage Capacity	744,000 mt
Annual Wheat Production	310,710 mt
MoT Warehouses	2
Warehouses Storage Capacity	75,250

Socio-economic factors

Wealth classes (Classified according to households' monthly expenditure: Extreme Poor< = 35 US$; Poor 35.1 – 90 US$; Middle 90.1 – 275 US$; Better off > 275 US$)

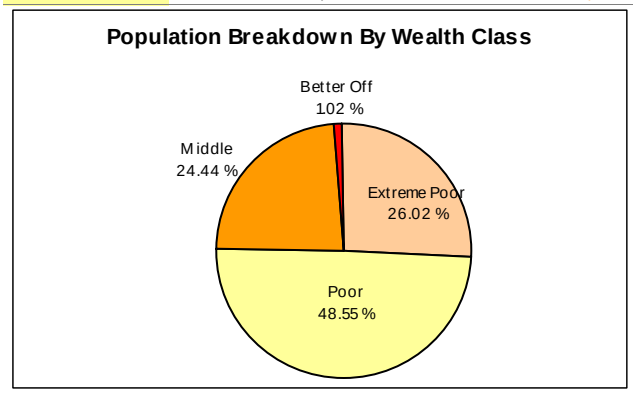
District	Extremely Poor	Poor	Middle	Better Off
Al-Shikhan	28.2%	53.7%	18.1%	0.0%
Al-Ba'aj	34.3%	45.3%	19.0%	1.3%
Al-Hamdaniya	12.7%	56.2%	30.8%	0.3%
Hatra	10.3%	67.3%	21.0%	1.3%
Mosul	25.3%	47.0%	26.3%	1.3%
Sinjar	41.8%	51.2%	7.1%	0.0%
Telafar	24.2%	46.1%	28.6%	1.0%
Tilkaif	28.1%	53.5%	18.1%	0.3%
Ninewa Govern.	**26.0%**	**48.6%**	**24.4%**	**1.0%**
Iraq (16 gov.)	**13.4%**	**45.2%**	**39.8%**	**1.5%**

- **Working adults** (16-60 years old)

	Ninewa	Iraq (16 gov.)
Working Adults	37.4%	43.4%
Full Time	79.3%	78.7%
Part Time	20.7%	21.3%

- **Reported Household Income and Expenditures** (Nov. '03)

	Income HH/Month		Expenditure HH/Month	
	Ninewa	Iraq (16 gov.)	Ninewa	Iraq (16 gov.)
Urban	85.9 US$	104.5 US$	74.2 US$	95.2 US$
Rural	69.0 US$	100.2 US$	60.0 US$	87.7 US$



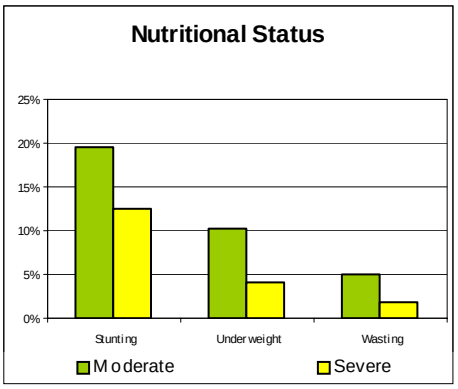
Nutrition

Facilities attending to malnourished children (Source: WHO/WFP/MoH unpublished report)

	No.	Malnourished Children / Facility	
		Ninewa	Iraq (16 gov.)
Primary Health Care Centers (PHC)	78	1,557	1,392
Community Child Care Units (CCCU)	250	486	390

- **Nutritional status by district**

District	Stunting	Underweight	Wasting
Al-Shikhan	29.9%	11.6%	10.3%
Al-Ba'aj	39.9%	32.3%	17.4%
Al-Hamdaniya	35.2%	15.8%	5.9%
Hatra	36.0%	15.2%	5.2%
Mosul	28.5%	12.1%	7.0%
Sinjar	28.4%	9.3%	1.7%
Telafar	27.3%	9.6%	4.3%
Tilkaif	28.9%	7.1%	2.0%
Ninewa Govern.	**29.3%**	**12.2%**	**6.3%**
Iraq (16 gov.)	**27.6%**	**11.5%**	**4.4%**



Education

- **Schools** (Source: UNICEF Summary Report on Schools in Iraq, September 2003)

Grade	No. Schools	No. Students	Students / Schools	
			Ninewa	Iraq (16 gov.)
Primary (Grade 1-6)	1,234	397,994	323	326
Intermediate (Grade 7-9)	265	70,374	266	287
Preparatory (Grade 10-12)	159	26,934	169	91

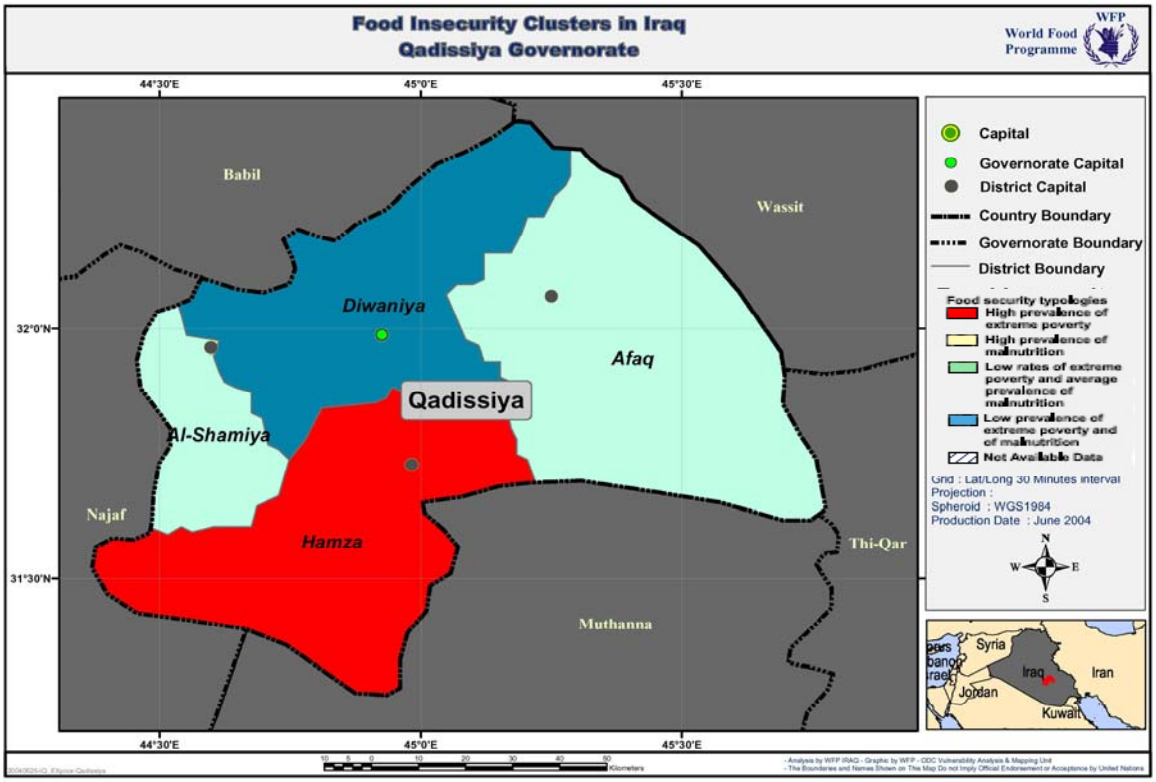
- **Students and Teachers** (Source: UNICEF Summary Report on Schools in Iraq, September 2003)

	Students			Teachers			Students / Teachers	
	Male	Female	Total	Male	Female	Total	Ninewa	Iraq (16 gov.)
Primary	230,475	167,519	**397,994**	3,971	6,647	**10,618**	37	20
Intermediate	46,246	24,128	**70,374**	1,660	1,965	**3,625**	19	16
Preparatory	16,392	10,542	**26,934**	1,358	1,267	**2,625**	10	10

- **Literacy —** Male/Female breakdowns are as percent of total

	Male	Female	Ninewa	Iraq (16 gov.)
Illiterate	15.7%	84.3%	29.4%	21.0%
Can read and write	48.9%	51.1%	17.8%	16.9%
Primary education	62.5%	37.5%	30.6%	28.0%
Secondary	75.7%	24.3%	16.1%	23.6%
High education	79.3%	20.7%	6.1%	10.5%

Governorate Profile—Qadissiya



Geography

Source: *ESRI Map Data, 2002; **HIC, 2003

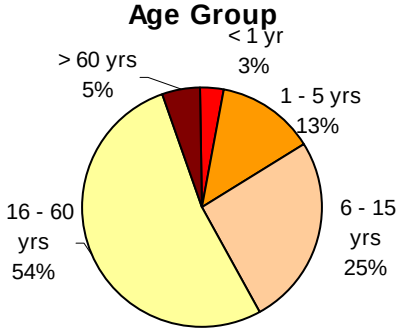
Location*	South
Geographic coordinates *	Long min 31.25/max 32.43; Lat – min 44.38/max 45.77
Total Area*	8,919 sq km
Governorate capital **	Diwaniya
Districts Number **	4
District Names**	Afaq, Diwaniya, Hamza, Al-Shamiya
All Weather Roads**	536 km
Airports**	0

Population

- **Population and household size by district**

District	Population	Household Size
Afaq	113,187	7.7
Diwaniya	453,633	7.8
Hamza	153,851	7.7
Al-Shamiya	190,392	9.4
Qadissiya Govern.	**911,064**	**8.1**

Population Breakdown By Age Group



Note: Where the source is not specified, data is drawn from WFP Baseline Food Security Study, 2004. National average (orange) refers to data collected in 16 out of 18 governorates.

Food Security and PDS

Number of Food Agents: 955
Food basket value (Nov.'03): 5.01 US$ (natl. av. 5.0 US$)
Coping Strategy Index (CSI): 10.86
PDS Dependency Ratio: 32.26%

Coping strategy: measures people take when they do not have enough food or money to buy food. High coping strategy indexes indicate adopting food-based mechanisms to cope with difficult economic situation. **PDS dependency ratio:** household reliance on the PDS, or percentage income transfer from the PDS to the total household income.

- **PDS monthly requirement by commodity (mt)** — standard ration 2003 (Source: MoT data, 2003)

Deter-gent	Infant Formula	Milk Pow-der	Vegeta-ble Oil	Pulses	Rice	Salt	Sugar	Tea	Toilet Soap	Wheat Flour	Wean. Cereal
462	113	892	1,338	1,338	2,677	134	1,784	178	231	8,030	25

- **Food Storage Capacity** (Source: WFP data, 2003; FAO/WFP Crop Food Supply & Nutrition Assessment, Sept. 2003)

Flour Mills	4
Monthly Milling Capacity	30,000 mt
Grain Silos	1
Grain Storage Capacity	15,000 mt
Annual Wheat Production	115,779 mt
MoT Warehouses	1
Warehouses Storage Capacity	18,000 mt

Socio-economic factors

Wealth classes (Classified according to households' monthly expenditure: Extreme Poor<= 35 US$; Poor 35.1 – 90 US$; Middle 90.1 – 275 US$; Better off > 275 US$)

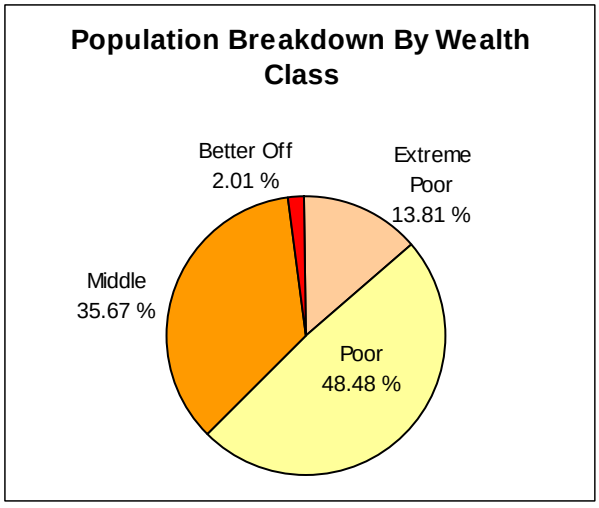
District	Extremely Poor	Poor	Middle	Better Off
Afaq	15.7%	57.5%	25.4%	1.3%
Diwaniya	10.7%	45.3%	41.0%	3.0%
Hamza	26.3%	55.3%	18.3%	0.0%
Al-Shamiya	10.0%	45.2%	43.1%	1.7%
Qadissiya Govern.	**13.8%**	**48.5%**	**35.7%**	**2.0%**
Iraq (16 gov.)	**13.4%**	**45.2%**	**39.8%**	**1.5%**

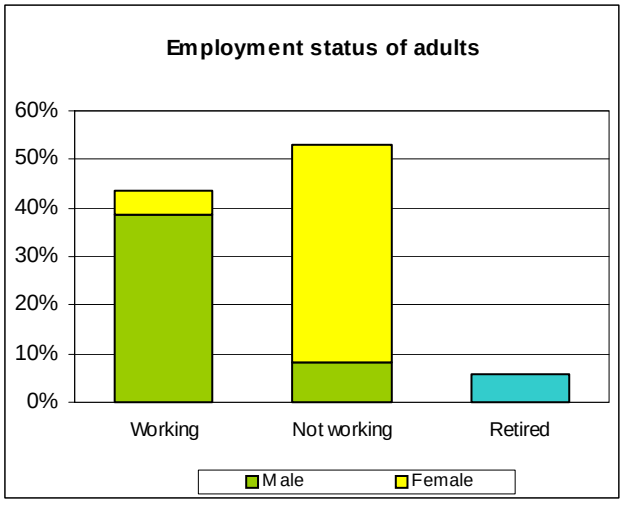
- **Working adults** (16-60 years old)

	Qadissiya	Iraq (16 gov.)
Working Adults	43.5%	43.4%
Full Time	66.7%	78.7%
Part Time	33.3%	21.3%

- **Reported Household Income and Expenditures** (Nov. '03)

	Income HH/Month		Expenditure HH/Month	
	Qadissiya	Iraq (16 gov.)	Qadissiya	Iraq (16 gov.)
Urban	102.4 US$	104.5 US$	95.0 US$	95.2 US$
Rural	79.3 US$	100.2 US$	75.8 US$	87.7 US$





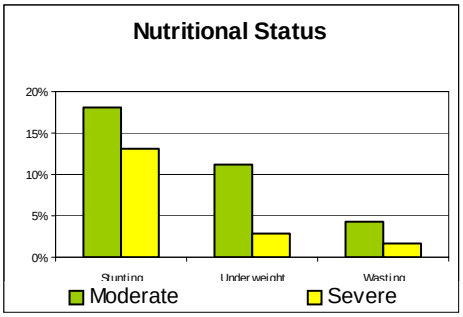
Nutrition

Facilities attending to malnourished children (Source: WHO/WFP/MoH unpublished report)

	No.	Malnourished Children / Facility	
		Qadissiya	Iraq (16 gov.)
Primary Health Care Centers (PHC)	29	1,306	1,392
Community Child Care Units (CCCU)	74	512	390

- **Nutritional status by district**

District	Stunting	Underweight	Wasting
Afaq	38.5%	14.1%	3.0%
Diwaniya	27.9%	9.8%	2.1%
Hamza	27.9%	14.8%	5.7%
Al-Shamiya	31.1%	16.9%	11.5%
Qadissiya Govern.	**29.9%**	**12.6%**	**4.8%**
Iraq (16 gov.)	**27.6%**	**11.5%**	**4.4%**



Education

- **Schools** (Source: UNICEF Summary Report on Schools in Iraq, September 2003)

Grade	No. Schools	No. Students	Students / Schools	
			Qadissiya	Iraq (16 gov.)
Primary (Grade 1-6)	441	123,589	280	326
Intermediate (Grade 7-9)	88	23,992	273	287
Preparatory (Grade 10-12)	49	9,622	196	91

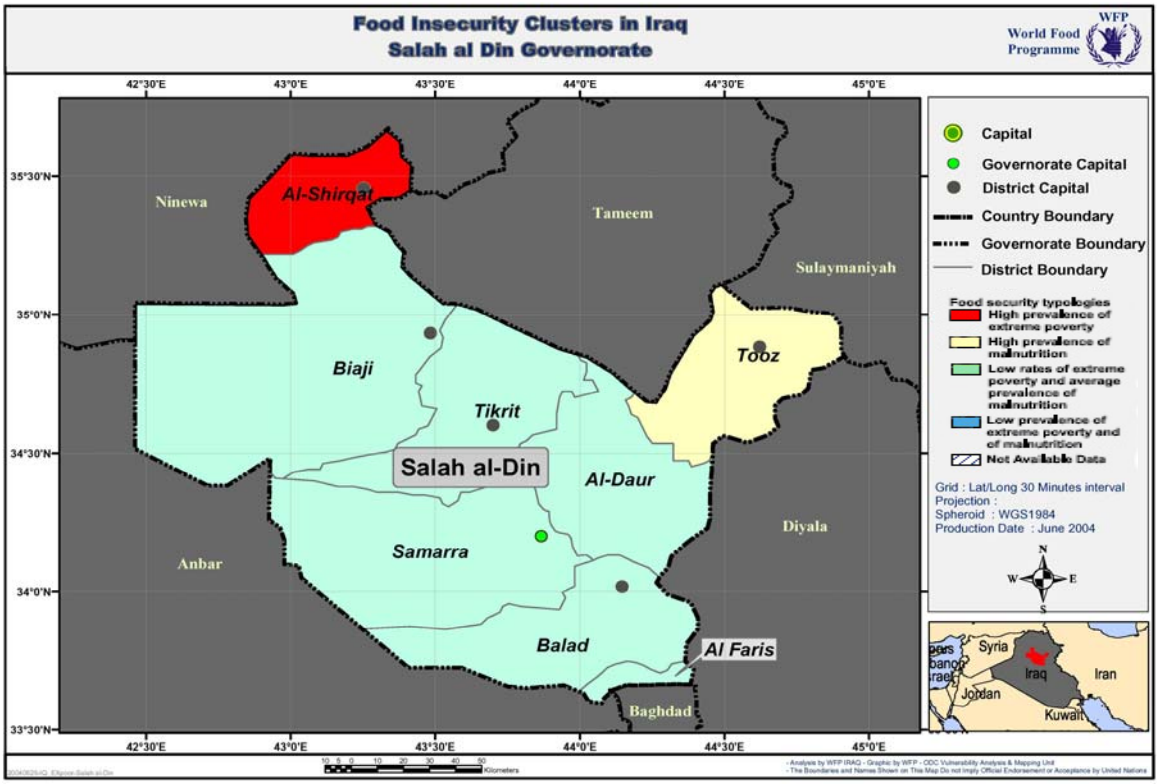
- **Students and Teachers** (Source: UNICEF Summary Report on Schools in Iraq, September 2003)

	Students			Teachers			Students / Teachers	
	Male	Female	Total	Male	Female	Total	Qadissiya	Iraq (16 gov.)
Primary	71,911	51,678	**123,589**	2,778	4,766	**7,544**	16	20
Intermediate	14,639	9,353	**23,992**	737	1,303	**2,040**	12	16
Preparatory	4,966	4,656	**9,622**	568	842	**1,410**	7	10

- **Literacy —** Male/Female breakdowns are as percent of total

	Male	Female	Qadissiya	Iraq (16 gov.)
Illiterate	25.5%	74.5%	30.0%	21.0%
Can read and write	44.8%	55.2%	14.3%	16.9%
Primary education	62.2%	37.8%	27.1%	28.0%
Secondary	64.5%	35.5%	22.1%	23.6%
High education	66.9%	33.1%	6.5%	10.5%

Governorate Profile—Salah al-Din



Geography

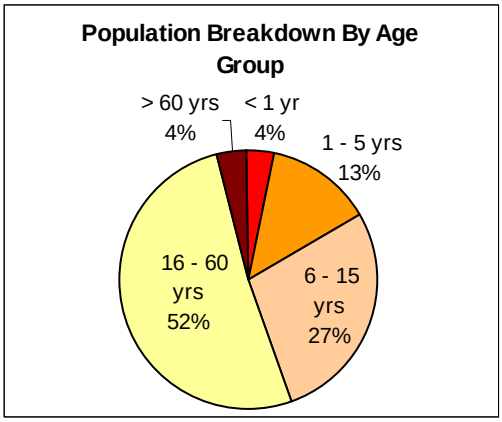
Source: *ESRI Map Data, 2002; **HIC, 2003

Location*	North
Geographic coordinates *	Long min 33.58/max 35.66; Lat – min 42.27/max 44.89
Total Area*	25,247 sq km
Governorate capital **	Tikrit
Districts Number **	8
District Names**	Al-Daur, Al Faris, Al-Shirqat, Balad, Biaji, Samarra, Tikrit, Tooz
All Weather Roads**	646 km
Airports**	7

Population

- **Population and household size by district**

District	Population	Household Size
Al-Daur	48,020	7.8
Al Faris	126,031	9.9
Al-Shirqat	124,898	10.5
Balad	86,108	9.3
Biaji	137,705	9.0
Samarra	193,944	8.8
Tikrit	133,915	9.0
Tooz	157,625	7.3
Salah al-Din Govern.	**1,008,245**	**9.0**



Note: Where the source is not specified, data is drawn from WFP Baseline Food Security Study, 2004. National average (orange) refers to data collected in 16 out of 18 governorates.

Food Security and PDS

Number of Food Agents: 1,281
Food basket value (Nov.'03): 4.14 US$ (natl. av. 5.0 US$)
Coping Strategy Index (CSI): 34.99
PDS Dependency Ratio: 30.72%

Coping strategy: measures people take when they do not have enough food or money to buy food. High coping strategy indexes indicate adopting food-based mechanisms to cope with difficult economic situation.
PDS dependency ratio: household reliance on the PDS, or percentage income transfer from the PDS to the total household income.

- **PDS monthly requirement by commodity (mt)** — standard ration 2003 (Source: MoT data, 2003)

Deter-gent	Infant Formula	Milk Pow-der	Vegeta-ble Oil	Pulses	Rice	Salt	Sugar	Tea	Toilet Soap	Wheat Flour	Wean. Cereal
491	127	947	1,421	1,421	2,842	142	1,895	189	245	8,526	28

- **Food Storage Capacity** (Source: WFP data, 2003; FAO/WFP Crop Food Supply & Nutrition Assessment, Sept. 2003)

Flour Mills	4
Monthly Milling Capacity	14,400 mt
Grain Silos	2
Grain Storage Capacity	55,000 mt
Annual Wheat Production	125,582 mt
MoT Warehouses	1
Warehouses Storage Capacity	23,800

Socio-economic factors

Wealth classes (Classified according to households' monthly expenditure: Extreme Poor< = 35 US$; Poor 35.1 – 90 US$; Middle 90.1 – 275 US$; Better off > 275 US$)

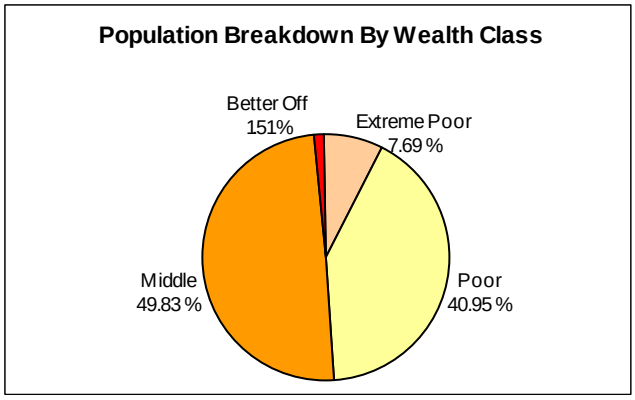
District	Extremely Poor	Poor	Middle	Better Off
Al-Daur	5.1%	36.0%	57.9%	1.0%
Al Faris	7.7%	44.6%	45.6%	2.0%
Al-Shirqat	21.2%	46.5%	31.3%	1.0%
Balad	4.7%	30.0%	63.0%	2.3%
Biaji	6.7%	44.8%	47.5%	1.0%
Samarra	3.7%	32.5%	63.4%	0.3%
Tikrit	4.4%	30.2%	61.1%	4.4%
Tooz	8.0%	57.3%	34.0%	0.7%
Salah al-Din Govern.	**7.7%**	**41.0%**	**49.8%**	**1.5%**
Iraq (16 gov.)	**13.4%**	**45.2%**	**39.8%**	**1.5%**

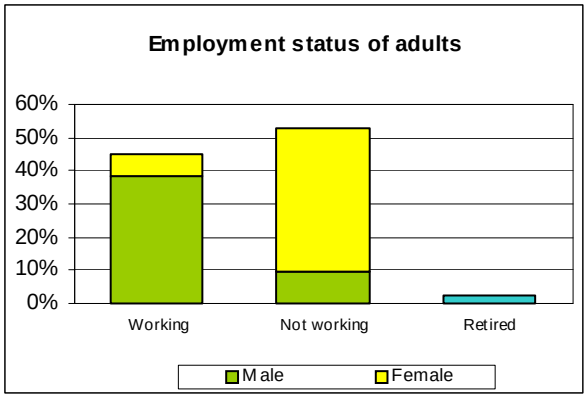
- **Working adults** (16-60 years old)

	Salah al-Din	Iraq (16 gov.)
Working Adults	44.8%	43.4%
Full Time	79.3%	78.7%
Part Time	20.7%	21.3%

- **Reported Household Income and Expenditures** (Nov. '03)

	Income HH/Month		Expenditure HH/Month	
	Salah al-Din	Iraq (16 gov.)	Salah al-Din	Iraq (16 gov.)
Urban	121.3 US$	104.5 US$	104.4 US$	95.2 US$
Rural	114.9 US$	100.2 US$	99.1 US$	87.7 US$





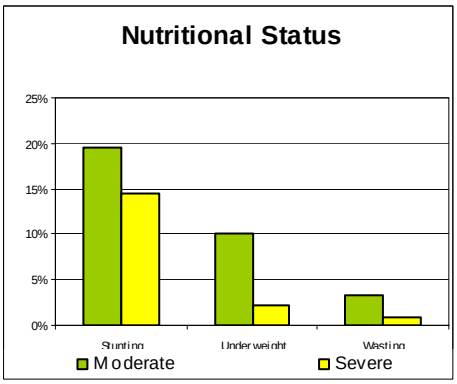
Nutrition

Facilities attending to malnourished children (Source: WHO/WFP/MoH unpublished report)

	No.	Malnourished Children / Facility	
		Salah al-Din	Iraq (16 gov.)
Primary Health Care Centers (PHC)	44	1,016	1,392
Community Child Care Units (CCCU)	88	508	390

- **Nutritional status by district**

District	Stunting	Underweight	Wasting
Al-Daur	22.0%	10.6%	5.3%
Al Faris	28.6%	11.6%	3.5%
Al-Shirqat	41.7%	12.1%	3.0%
Balad	40.2%	15.8%	4.1%
Biaji	30.5%	6.3%	1.3%
Samarra	41.2%	15.4%	6.8%
Tikrit	28.0%	9.2%	3.2%
Tooz	37.0%	21.0%	10.0%
Salah al-Din Govern.	**34.8%**	**13.1%**	**4.9%**
Iraq (16 gov.)	**27.6%**	**11.5%**	**4.4%**



Education

- **Schools** (Source: UNICEF Summary Report on Schools in Iraq, September 2003)

Grade	No. Schools	No. Students	Students / Schools	
			Salah al-Din	Iraq (16 gov.)
Primary (Grade 1-6)	792	179,628	227	326
Intermediate (Grade 7-9)	253	41,280	163	287
Preparatory (Grade 10-12)	139	11,533	83	91

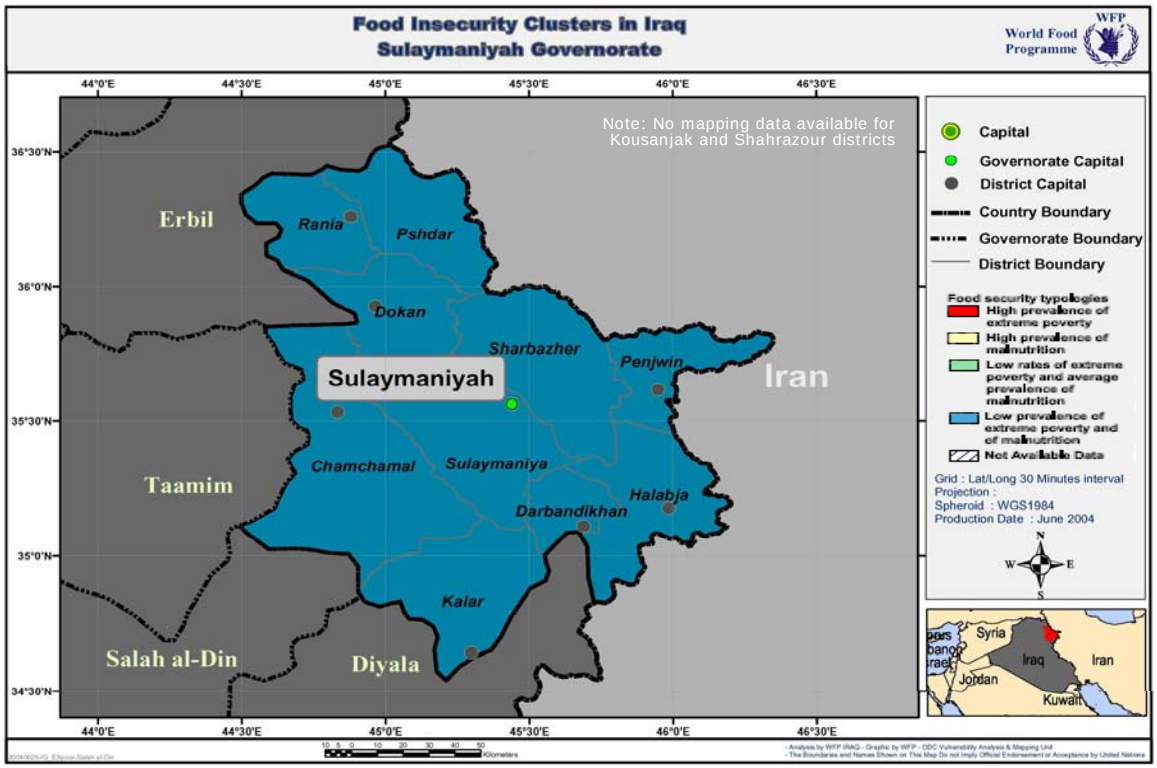
- **Students and Teachers** (Source: UNICEF Summary Report on Schools in Iraq, September 2003)

	Students			Teachers			Students / Teachers	
	Male	Female	Total	Male	Female	Total	Salah al-Din	Iraq (16 gov.)
Primary	75,352	104,276	**179,628**	9,753	6,132	**15,885**	11	20
Intermediate	30,299	10,981	**41,280**	1,172	1,176	**2,348**	18	16
Preparatory	7,480	4,053	**11,533**	809	823	**1,632**	7	10

- **Literacy —** Male/Female breakdowns are as percent of total

	Male	Female	Salah al-Din	Iraq (16 gov.)
Illiterate	19.6%	80.4%	28.6%	21.0%
Can read and write	38.9%	61.1%	17.3%	16.9%
Primary education	55.8%	44.2%	27.6%	28.0%
Secondary	78.4%	21.6%	17.8%	23.6%
High education	79.6%	20.4%	8.7%	10.5%

Governorate Profile—Sulaimaniyah



Geography

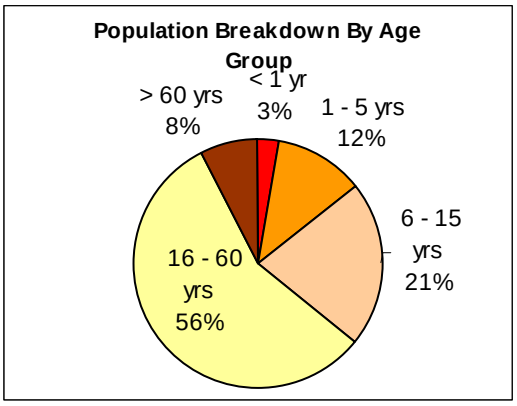
Source: *ESRI Map Data, 2002; **HIC, 2003

Location*	North East
Geographic coordinates *	Long – min 34.52/max 36.51; Lat - min 44.45/max 46.36
Total Area*	18,662 sq km
Governorate capital **	Sulaymaniyah
Districts Number **	12
District Names**	Pshdar, Chamchamal, Darbandikhan, Dokan, Halabja, Kalar, Kousanjak, Penjwin, Rania, Sharbazher, Shahrazour, Sulaymaniya
All Weather Roads**	609 km
Airports**	0

Population

- **Population and household size by district**

District	Population	Household Size
Pshdar	60,966	7.0
Chamchamal	229,682	6.0
Darbandihkan	30,992	5.9
Dokan	55,852	6.4
Halabja	108,560	5.6
Kalar	185,370	5.9
Kousanjak	55,233	5.8
Penjwin	27,887	6.8
Rania	53,300	6.9
Sharbazher	40,339	5.8
Shahrazour	n/a*	6.1
Sulaymaniya	796,392	5.6
Sulaymaniyah Govern.	**1,644,573**	**6.0**



*District recently created due to partition of Halabja. Pop. Figure contained under Halabja district.

Note: Where the source is not specified, data is drawn from WFP Baseline Food Security Study, 2004. National average (orange) refers to data collected in 16 out of 18 governorates.

Food Security and PDS

Number of Food Agents: n/a
Food basket value (Nov.'03): 4.36 US$ (natl. av. 5.0 US$)
Coping Strategy Index (CSI): 17.46
PDS Dependency Ratio: 23.70%

Coping strategy: measures people take when they do not have enough food or money to buy food. High coping strategy indexes indicate adopting food-based mechanisms to cope with difficult economic situation.
PDS dependency ratio: household reliance on the PDS, or percentage income transfer from the PDS to the total household income.

- **PDS monthly requirement by commodity** (mt) — standard ration 2003 (Source: MoT data, 2003)

Deter-gent	Infant Formula	Milk Pow-der	Vegeta-ble Oil	Pulses	Rice	Salt	Sugar	Tea	Toilet Soap	Wheat Flour	Wean. Cereal
806	157	1,566	2,349	2,349	4,698	235	3,132	313	403	14,095	35

- **Food Storage Capacity** (Source: WFP data, 2003; FAO/WFP Crop Food Supply & Nutrition Assessment, Sept. 2003)

Flour Mills	n/a
Monthly Milling Capacity	n/a
Grain Silos	n/a
Grain Storage Capacity	n/a
Annual Wheat Production	225,338 mt
MoT Warehouses	4
Warehouses Storage Capacity	52,000 mt

Socio-economic factors

Wealth classes (Classified according to households' monthly expenditure: Extreme Poor< = 35 US$; Poor 35.1 – 90 US$; Middle 90.1 – 275 US$; Better off > 275 US$)

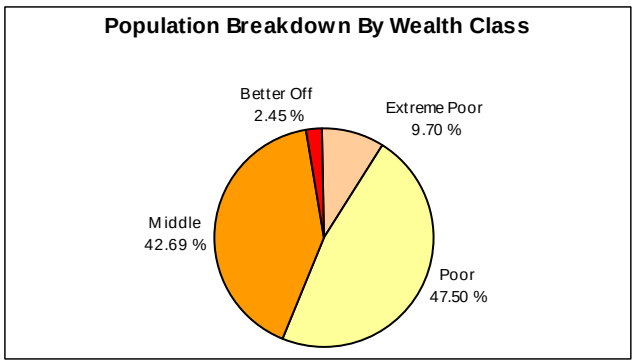
District	Extremely Poor	Poor	Middle	Better Off
Pshdar	7.7%	58.0%	32.0%	2.3%
Chamchamal	22.3%	52.3%	24.0%	1.3%
Darbandihkan	7.0%	30.0%	60.0%	3.0%
Dokan	7.4%	51.8%	39.5%	1.3%
Halabja	7.0%	52.2%	39.8%	1.0%
Kalar	9.3%	36.7%	51.7%	2.3%
Kousanjak	7.0%	41.3%	49.7%	2.0%
Penjwin	13.7%	61.1%	24.6%	0.7%
Rania	9.0%	55.7%	32.7%	2.7%
Sharbazher	17.2%	51.4%	27.7%	3.7%
Shahrazour	8.0%	50.0%	39.7%	2.3%
Sulaymaniya	5.7%	43.7%	47.7%	3.0%
Sulayman. Govern.	**9.1%**	**46.0%**	**42.5%**	**2.4%**
Iraq (16 gov.)	13.4%	45.2%	39.8%	1.5%

- **Working adults** (16-60 years old)

	Sulaymaniyah	Iraq (16 gov.)
Working Adults	48.3%	43.4%
Full Time	81.2%	78.7%
Part Time	18.8%	21.3%

- **Reported Household Income and Expenditures** (Nov. '03)

	Income HH/Month		Expenditure HH/Month	
	Sulaymaniyah	Iraq (16 gov.)	Sulaymaniyah	Iraq (16 gov.)
Urban	105.7 US$	104.5 US$	98.1 US$	95.2 US$
Rural	81.7 US$	100.2 US$	80.7 US$	87.7 US$



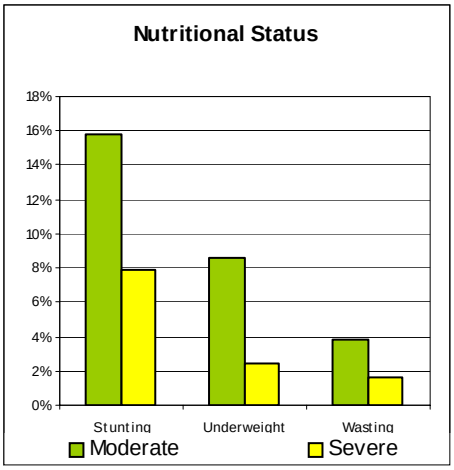
Nutrition

Facilities attending to malnourished children (Source: WHO/WFP/MoH unpublished report)

	No.	Malnourished Children / Facility	
		Sulaymaniyah	Iraq (16 gov.)
Primary Health Care Centers (PHC)	63	715	1,392
Community Child Care Units (CCCU)	203	222	390

- **Nutritional status by district**

District	Stunting	Underweight	Wasting
Pshdar	33.3%	13.2%	2.5%
Chamchamal	33.0%	7.0%	2.8%
Darbandihkan	23.4%	9.7%	4.8%
Dokan	18.1%	12.1%	4.3%
Halabja	22.1%	5.8%	1.3%
Kalar	29.6%	8.6%	1.9%
Kousanjak	19.8%	12.2%	8.1%
Penjwin	23.9%	13.9%	1.9%
Rania	25.3%	5.5%	2.0%
Sharbazher	14.1%	12.8%	28.2%
Shahrazour	15.3%	5.3%	1.1%
Sulaymaniya	5.7%	5.7%	2.5%
Sulaymaniyah Govern.	**16.7%**	**7.2%**	**3.0%**
Iraq (16 gov.)	27.6%	11.5%	4.4%



Education

- **Schools** (Source: UNICEF Summary Report on Schools in Iraq, September 2003)

Grade	No. Schools	No. Students	Students / Schools	
			Sulaymaniyah	Iraq (16 gov.)
Primary (Grade 1-6)	1,720	256,510	149	326
Intermediate (Grade 7-9)	n/a	n/a	n/a	287
Preparatory (Grade 10-12)	700	127,640	182	91

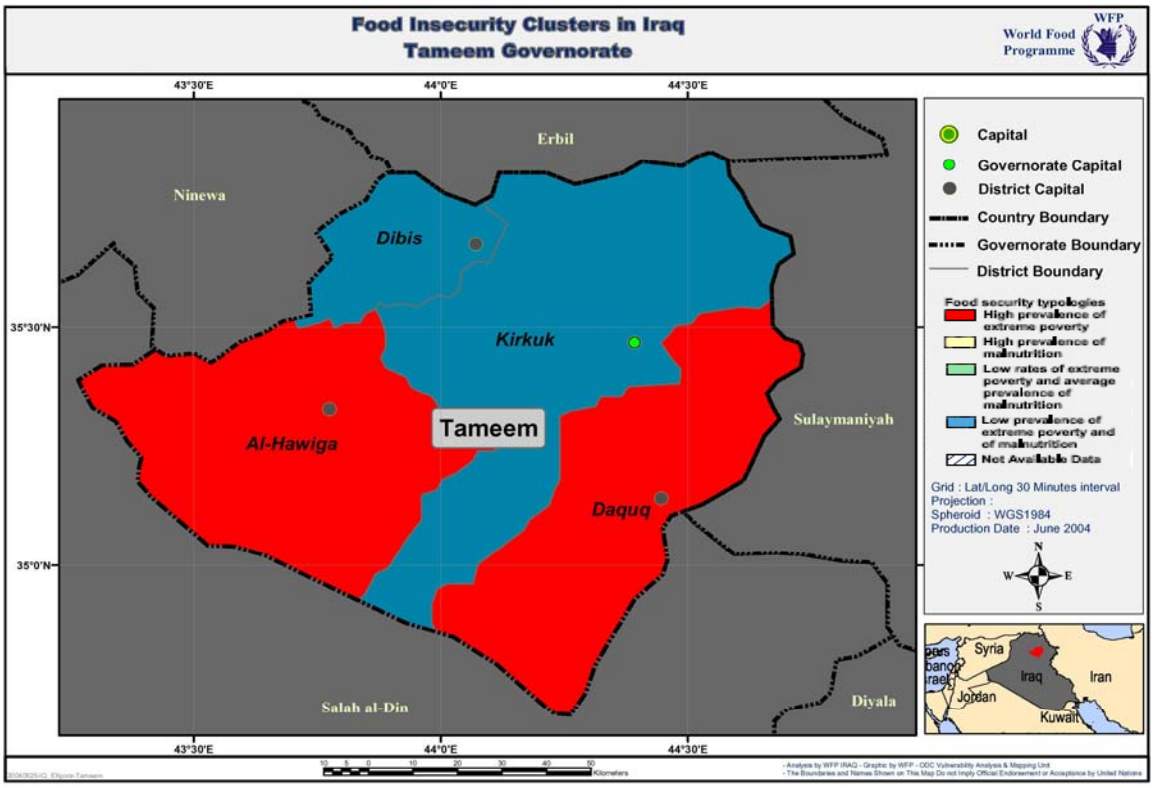
- **Students and Teachers** (Source: UNICEF Summary Report on Schools in Iraq, September 2003)

	Students			Teachers			Students / Teachers	
	Male	Female	Total	Male	Female	Total	Sulayman.	Iraq (16 gov.)
Primary	139,286	117,224	**256,510**	6,049	8,983	**15,032**	17	20
Intermediate	n/a	n/a	**n/a**	n/a	n/a	**n/a**	n/a	16
Preparatory	66,702	60,938	**127,640**	2,596	2,779	**5,375**	24	10

- **Literacy —** Male/Female breakdowns are as percent of total

	Male	Female	Sulaymaniyah	Iraq (16 gov.)
Illiterate	18.9%	81.1%	33.1%	21.0%
Can read and write	59.2%	40.8%	22.7%	16.9%
Primary education	59.2%	40.8%	22.2%	28.0%
Secondary	61.9%	38.1%	15.3%	23.6%
High education	60.5%	39.5%	6.8%	10.5%

Governorate Profile—Tameem



Geography

Source: *ESRI Map Data, 2002; **HIC, 2003

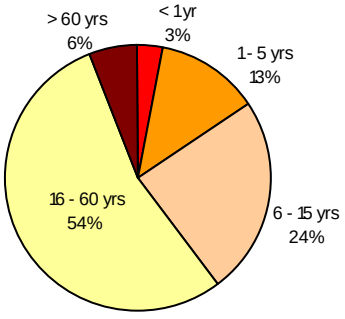
Location*	North
Geographic coordinates *	Long min 34.67/max 35.86; Lat – min 43.26/max 44.72
Total Area*	9,983 sq km
Governorate capital **	Kirkuk
Districts Number **	4
District Names**	Dibis, Daquq, Al-Hawiga, Kirkuk
All Weather Roads**	444 km
Airports**	4

Population

- **Population and household size by district**

District	Population	Household Size
Dibis	35,199	7.6
Daquq	41,347	7.2
Al-Hawiga	155,442	8.5
Kirkuk	639,423	6.1
Tameem Govern.	**871,412**	**6.6**

Population Breakdown By Age Group



Note: Where the source is not specified, data is drawn from WFP Baseline Food Security Study, 2004. National average (orange) refers to data collected in 16 out of 18 governorates.

Food Security and PDS

Number of Food Agents: 1,233
Food basket value (Nov.'03): 6.15 US$ (natl. av. 5.0 US$)
Coping Strategy Index (CSI): 17.41
PDS Dependency Ratio: 33.93%

Coping strategy: measures people take when they do not have enough food or money to buy food. High coping strategy indexes indicate adopting food-based mechanisms to cope with difficult economic situation.
PDS dependency ratio: household reliance on the PDS, or percentage income transfer from the PDS to the total household income.

- **PDS monthly requirement by commodity (mt)** — standard ration 2003 (Source: MoT data, 2003)

Deter-gent	Infant Formula	Milk Pow-der	Vegeta-ble Oil	Pulses	Rice	Salt	Sugar	Tea	Toilet Soap	Wheat Flour	Wean. Cereal
442	99	856	1,284	1,284	2,568	128	1,712	171	221	7,704	22

- **Food Storage Capacity** (Source: WFP data, 2003; FAO/WFP Crop Food Supply & Nutrition Assessment, Sept. 2003)

Flour Mills	8
Monthly Milling Capacity	40,500 mt
Grain Silos	2
Grain Storage Capacity	95,000 mt
Annual Wheat Production	124,376 mt
MoT Warehouses	2
Warehouses Storage Capacity	28,000 mt

Socio-economic factors

Wealth classes (Classified according to households' monthly expenditure: Extreme Poor< = 35 US$; Poor 35.1 – 90 US$; Middle 90.1 – 275 US$; Better off > 275 US$)

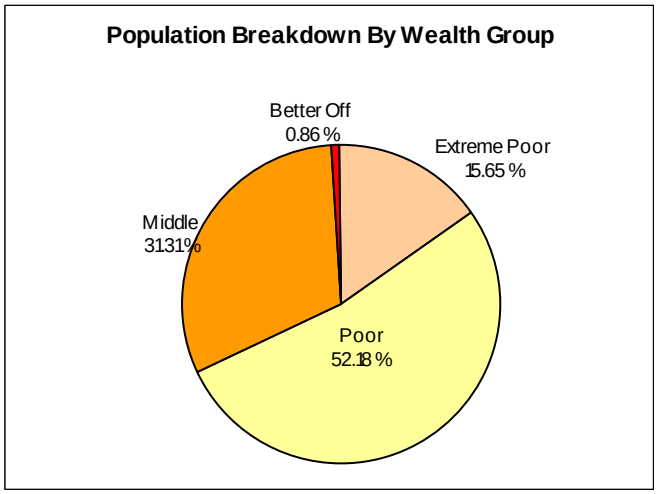
District	Extremely Poor	Poor	Middle	Better Off
Dibis	14.7%	46.0%	39.0%	0.3%
Daquq	33.0%	53.7%	12.7%	0.7%
Al-Hawiga	20.5%	56.0%	21.8%	1.7%
Kirkuk	13.4%	51.5%	34.4%	0.7%
Tameem Govern.	**15.6%**	**52.2%**	**31.3%**	**0.9%**
Iraq (16 gov.)	**13.4%**	**45.2%**	**39.8%**	**1.5%**

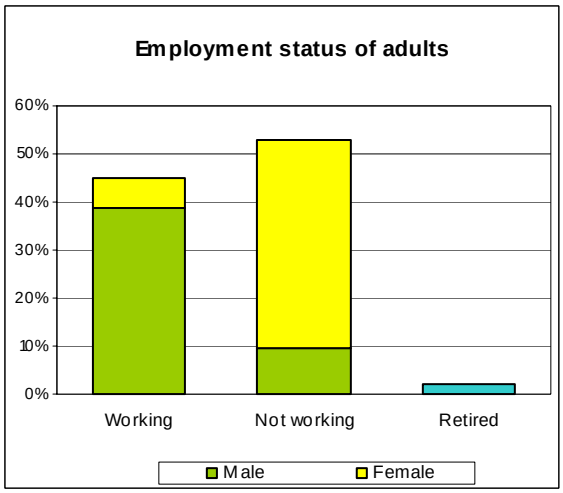
- **Working adults** (16-60 years old)

	Tameem	Iraq (16 gov.)
Working Adults	45.0%	43.4%
Full Time	79.7%	78.7%
Part Time	20.3%	21.3%

- **Reported Household Income and Expenditures** (Nov. '03)

	Income HH/Month		Expenditure HH/Month	
	Tameem	**Iraq (16 gov.)**	**Tameem**	**Iraq (16 gov.)**
Urban	95.2 US$	104.5 US$	82.0 US$	95.2 US$
Rural	78.5 US$	100.2 US$	67.0 US$	87.7 US$





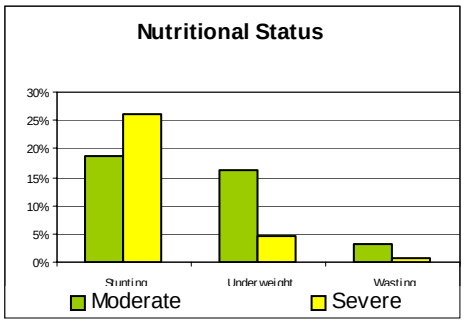
Nutrition

Facilities attending to malnourished children (Source: WHO/WFP/MoH unpublished report)

	No.	Malnourished Children / Facility	
		Tameem	Iraq (16 gov.)
Primary Health Care Centers (PHC)	41	1,220	1,392
Community Child Care Units (CCCU)	79	633	390

- **Nutritional status by district**

District	Stunting	Underweight	Wasting
Dibis	23.6%	10.5%	1.6%
Daquq	50.3%	12.4%	2.7%
Al-Hawiga	74.1%	43.4%	8.1%
Kirkuk	13.6%	3.6%	0.7%
Tameem Govern.	**26.5%**	**11.4%**	**2.2%**
Iraq (16 gov.)	**27.6%**	**11.5%**	**4.4%**



Education

- **Schools** (Source: UNICEF Summary Report on Schools in Iraq, September 2003)

Grade	No. Schools	No. Students	Students / Schools	
			Tameem	Iraq (16 gov.)
Primary (Grade 1-6)	628	136,404	217	326
Intermediate (Grade 7-9)	150	34,003	227	287
Preparatory (Grade 10-12)	75	9,608	128	91

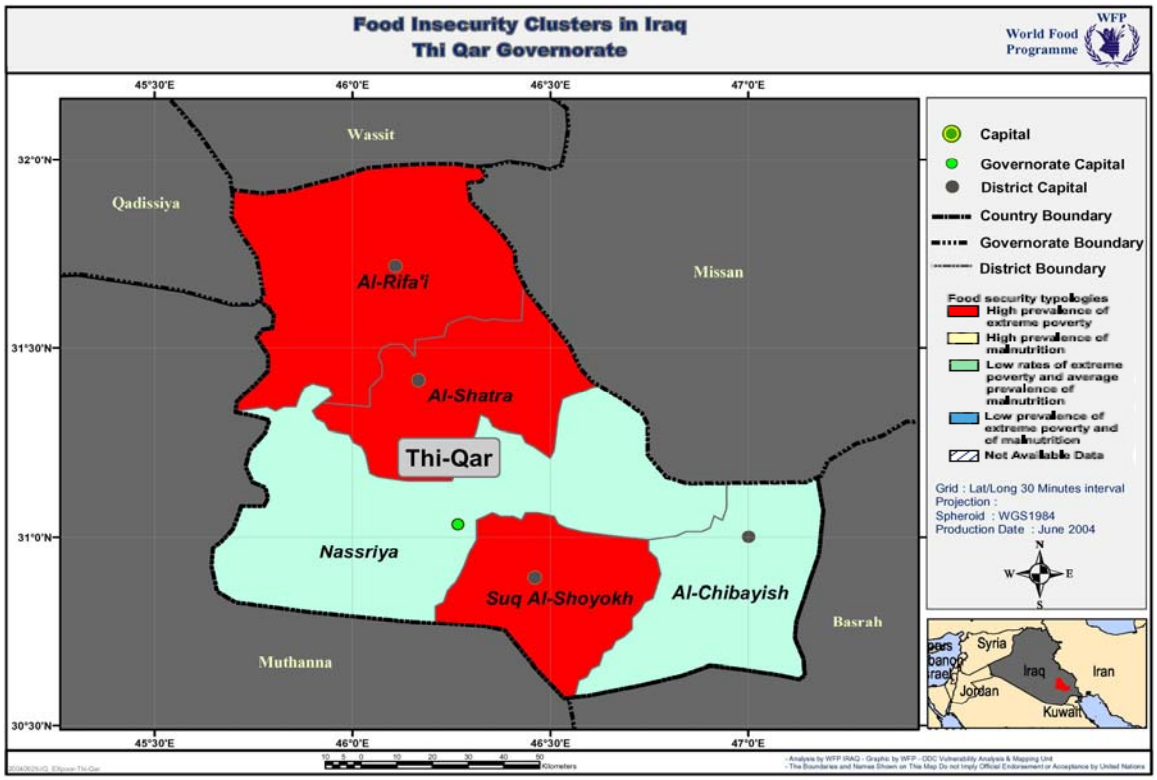
- **Students and Teachers** (Source: UNICEF Summary Report on Schools in Iraq, September 2003)

	Students			Teachers			Students / Teachers	
	Male	Female	Total	Male	Female	Total	Tameem	Iraq (16 gov.)
Primary	76,454	59,950	**136,404**	2,032	4,883	**6,915**	20	20
Intermediate	21,888	12,115	**34,003**	898	1,441	**2,339**	15	16
Preparatory	5,137	4,471	**9,608**	556	946	**1,502**	6	10

- **Literacy —** Male/Female breakdowns are as percent of total

	Male	Female	Tameem	Iraq (16 gov.)
Illiterate	25.7%	74.3%	15.4%	21.0%
Can read and write	33.4%	66.6%	16.2%	16.9%
Primary education	46.3%	53.7%	34.4%	28.0%
Secondary	70.7%	29.3%	21.2%	23.6%
High education	69.4%	30.6%	12.8%	10.5%

Governorate Profile—Thi-Qar



Geography

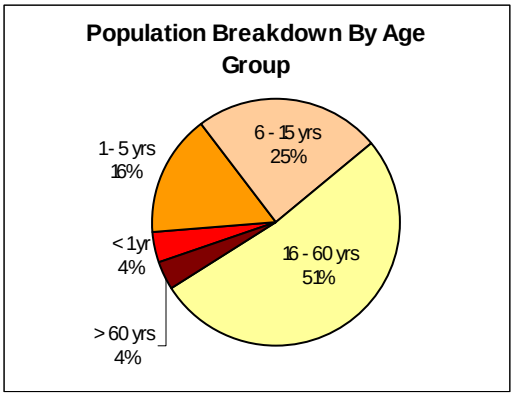
Source: *ESRI Map Data, 2002; **HIC, 2003

Location*	South East
Geographic coordinates *	Long – min 30.56/max 31,99; Lat - min 45.65/max 47.2
Total Area*	13,552 sq km
Governorate capital **	Nassriya
Districts Number **	5
District Names**	Al-Chibayish, Nassriya, Al-Rifa'i, Al-Shatra,Suq Al-Shoyokh
All Weather Roads**	358 km
Airports**	2

Population

- **Population and household size by district**

District	Population	Household Size
Al-Chibayish	70,797	7.3
Nassriya	594,554	8.5
Al-Rifa'i	287,506	7.7
Al-Shatra	323,739	10.2
Suq Al-Shoyokh	236,131	8.6
Thi-Qar Govern.	**1,512,728**	**8.7**



Note: Where the source is not specified, data is drawn from WFP Baseline Food Security Study, 2004. National average (orange) refers to data collected in 16 out of 18 governorates.

Food Security and PDS

Number of Food Agents: 1,645
Food basket value (Nov.'03): 3.29 US$ (natl. av. 5.0 US$)
Coping Strategy Index (CSI): 10.62
PDS Dependency Ratio: 23.69%

Coping strategy: measures people take when they do not have enough food or money to buy food. High coping strategy indexes indicate adopting food-based mechanisms to cope with difficult economic situation.
PDS dependency ratio: household reliance on the PDS, or percentage income transfer from the PDS to the total household income.

- **PDS monthly requirement by commodity** (mt) — standard ration 2003 (Source: MoT data, 2003)

Deter-gent	Infant Formula	Milk Pow-der	Vegeta-ble Oil	Pulses	Rice	Salt	Sugar	Tea	Toilet Soap	Wheat Flour	Wean. Cereal
767	210	1,475	2,213	2,213	4,426	221	2,951	295	383	13,278	47

- **Food Storage Capacity** (Source: WFP data, 2003; FAO/WFP Crop Food Supply & Nutrition Assessment, Sept. 2003)

Flour Mills	5
Monthly Milling Capacity	17,400 mt
Grain Silos	2
Grain Storage Capacity	20,000 mt
Annual Wheat Production	26,786 mt
MoT Warehouses	1
Warehouses Storage Capacity	21,250 mt

Socio-economic factors

Wealth classes (Classified according to households' monthly expenditure: Extreme Poor<= 35 US$; Poor 35.1 – 90 US$; Middle 90.1 – 275 US$; Better off > 275 US$)

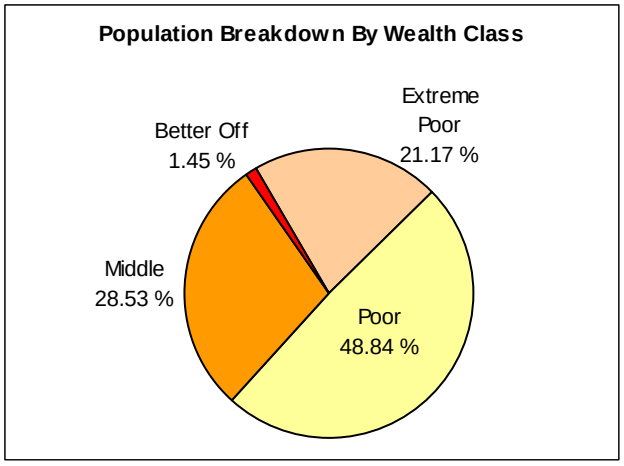
District	Extremely Poor	Poor	Middle	Better Off
Al-Chibayish	19.0%	65.4%	15.6%	0.0%
Nassriya	17.4%	41.3%	38.6%	2.7%
Al-Rifa'i	25.0%	50.7%	23.3%	1.0%
Al-Shatra	23.3%	53.3%	22.7%	0.7%
Suq Al-Shoyokh	23.7%	54.5%	21.4%	0.3%
Thi-Qar Govern.	**21.2%**	**48.8%**	**28.5%**	**1.5%**
Iraq (16 gov.)	13.4%	45.2%	39.8%	1.5%

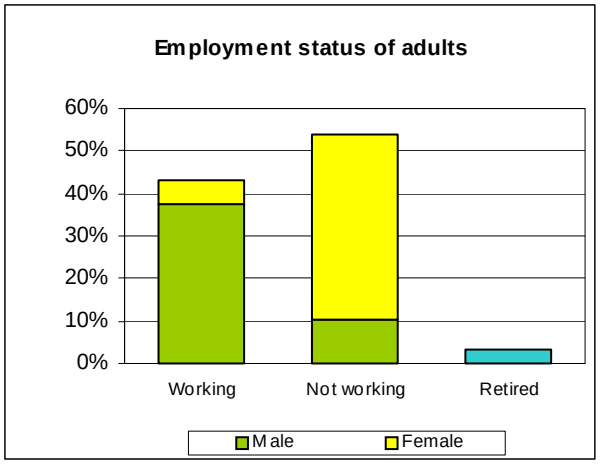
- **Working adults** (16-60 years old)

	Thi-Qar	Iraq (16 gov.)
Working Adults	42.9%	43.4%
Full Time	77.1%	78.7%
Part Time	22.9%	21.3%

- **Reported Household Income and Expenditures** (Nov. '03)

	Income HH/Month		Expenditure HH/Month	
	Thi-Qar	Iraq (16 gov.)	Thi-Qar	Iraq (16 gov.)
Urban	84.8 US$	104.5 US$	76.8 US$	95.2 US$
Rural	64.8 US$	100.2 US$	63.4 US$	87.7 US$





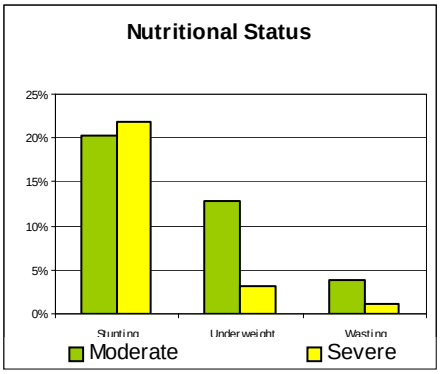
Nutrition

Facilities attending to malnourished children (Source: WHO/WFP/MoH unpublished report)

	No.	Malnourished Children / Facility	
		Thi-Qar	Iraq (16 gov.)
Primary Health Care Centers (PHC)	36	2,934	1,392
Community Child Care Units (CCCU)	199	531	390

- **Nutritional status by district**

District	Stunting	Underweight	Wasting
Al-Chibayish	28.7%	11.8%	4.4%
Nassriya	38.1%	11.8%	2.5%
Al-Rifa'i	33.1%	14.5%	6.1%
Al-Shatra	79.3%	23.4%	2.6%
Suq Al-Shoyokh	23.8%	17.3%	9.8%
Thi-Qar Govern.	**43.3%**	**15.6%**	**4.4%**
Iraq (16 gov.)	27.6%	11.5%	4.4%



Education

- **Schools** (Source: UNICEF Summary Report on Schools in Iraq, September 2003)

Grade	No. Schools	No. Students	Students / Schools	
			Thi-Qar	Iraq (16 gov.)
Primary (Grade 1-6)	742	204,848	276	326
Intermediate (Grade 7-9)	221	51,190	232	287
Preparatory (Grade 10-12)	121	26,966	223	91

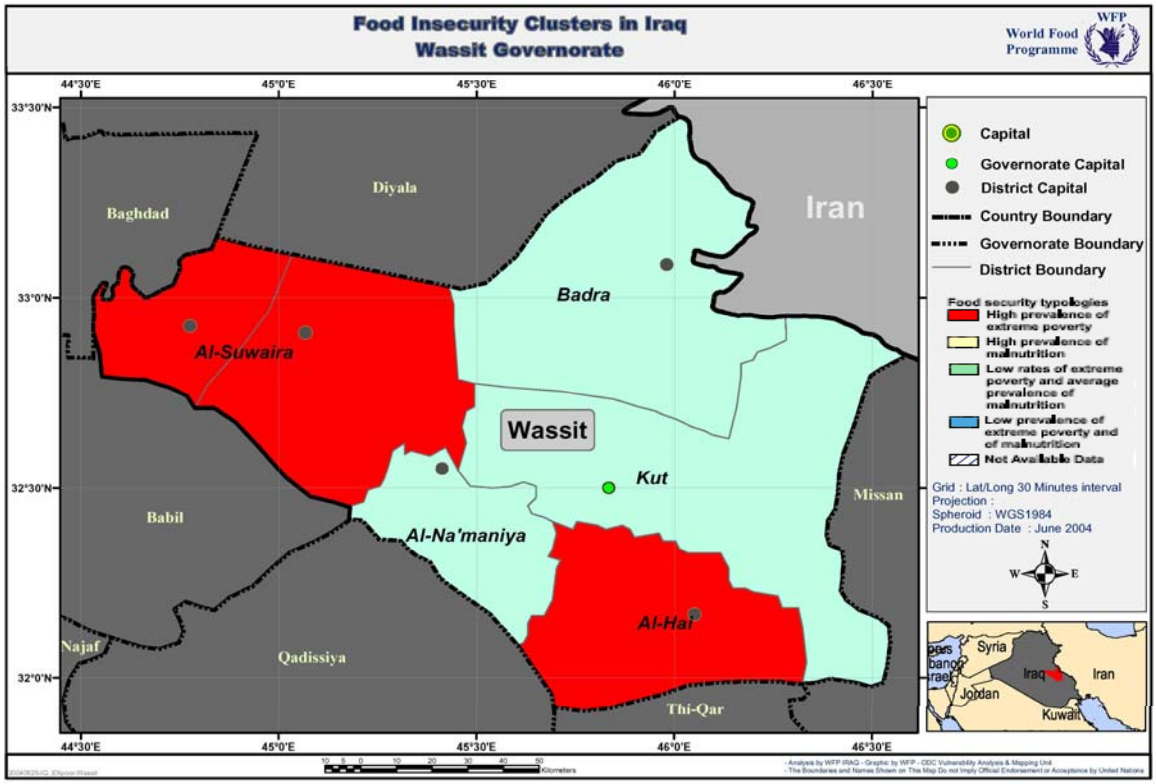
- **Students and Teachers** (Source: UNICEF Summary Report on Schools in Iraq, September 2003)

	Students			Teachers			Students / Teachers	
	Male	Female	Total	Male	Female	Total	Thi-Qar	Iraq (16 gov.)
Primary	124,650	80,198	**204,848**	4,852	7,032	**11,884**	17	20
Intermediate	32,620	18,570	**51,190**	1,743	1,511	**3,254**	16	16
Preparatory	16,092	10,874	**26,966**	1,050	1,073	**2,123**	13	10

- **Literacy —** Male/Female breakdowns are as percent of total

	Male	Female	Thi-Qar	Iraq (16 gov.)
Illiterate	17.3%	82.7%	26.9%	21.0%
Can read and write	39.1%	60.9%	19.5%	16.9%
Primary education	63.8%	36.2%	25.1%	28.0%
Secondary	71.9%	28.1%	21.8%	23.6%
High education	71.4%	28.6%	6.7%	10.5%

Governorate Profile—Wassit



Geography

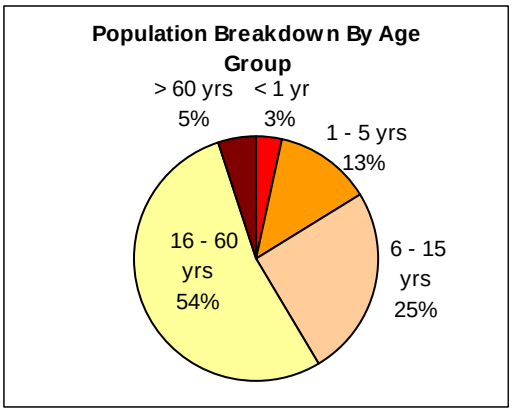
Source: *ESRI Map Data, 2002; **HIC, 2003

Location*	South
Geographic coordinates *	Long min 31.92/max 33.47; Lat – min 44.53/max 46.56
Total Area*	17,291 sq km
Governorate capital **	Kut
Districts Number **	5
District Names**	Al-Hai, Al-Na'maniya, Al-Suwaira, Badra, Kut
All Weather Roads**	487 km
Airports**	4

Population

- **Population and household size by district**

District	Population	Household Size
Al-Hai	139,967	7.8
Al-Na'maniya	110,588	8.1
Al-Suwaira	166,062	10.0
Badra	21,169	7.0
Kut	384,792	8.3
Wassit Govern.	**822,579**	**8.5**



Note: Where the source is not specified, data is drawn from WFP Baseline Food Security Study, 2004. National average (orange) refers to data collected in 16 out of 18 governorates.

Food Security and PDS

Number of Food Agents: 1,337
Food basket value (Nov.'03): 4.73 US$ (natl. av. 5.0 US$)
Coping Strategy Index (CSI): 28.99
PDS Dependency Ratio: 24.54%

Coping strategy: measures people take when they do not have enough food or money to buy food. High coping strategy indexes indicate adopting food-based mechanisms to cope with difficult economic situation. **PDS dependency ratio:** household reliance on the PDS, or percentage income transfer from the PDS to the total household income.

- **PDS monthly requirement by commodity** (mt) — standard ration 2003 (Source: MoT data, 2003)

Deter-gent	Infant Formula	Milk Pow-der	Vegeta-ble Oil	Pulses	Rice	Salt	Sugar	Tea	Toilet Soap	Wheat Flour	Wean. Cereal
476	113	920	1,380	1,380	2,760	138	1,840	184	238	8,281	25

- **Food Storage Capacity** (Source: WFP data, 2003; FAO/WFP Crop Food Supply & Nutrition Assessment, Sept. 2003)

Flour Mills	4
Monthly Milling Capacity	16,800 mt
Grain Silos	2
Grain Storage Capacity	32,000 mt
Annual Wheat Production	310,621 mt
MoT Warehouses	1
Warehouses Storage Capacity	25,000 mt

Socio-economic factors

Wealth classes (Classified according to households' monthly expenditure: Extreme Poor<= 35 US$; Poor 35.1 – 90 US$; Middle 90.1 – 275 US$; Better off > 275 US$)

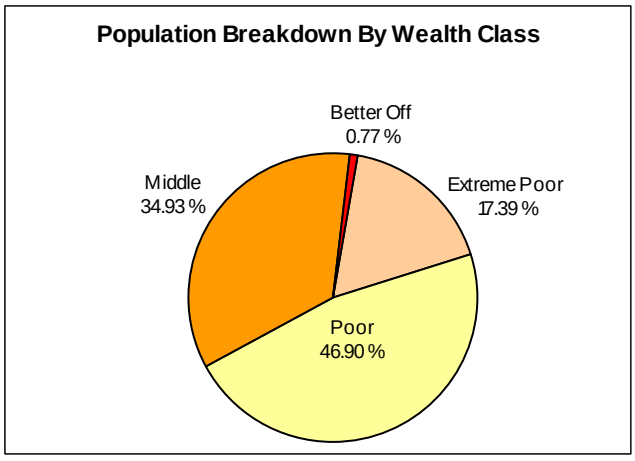
District	Extremely Poor	Poor	Middle	Better Off
Al-Hai	31.0%	53.7%	15.3%	0.0%
Al-Na'maniya	12.4%	29.1%	54.5%	4.0%
Al-Suwaira	26.4%	51.2%	21.4%	1.0%
Badra	4.3%	54.0%	40.3%	1.3%
Kut	10.7%	47.3%	42.0%	0.0%
Wassit Govern.	**17.4%**	**46.9%**	**34.9%**	**0.8%**
Iraq (16 gov.)	13.4%	45.2%	39.8%	1.5%

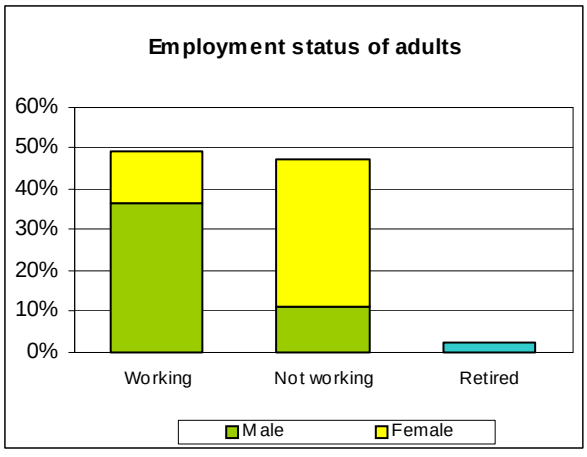
- **Working adults** (16-60 years old)

	Wassit	Iraq (16 gov.)
Working Adults	50.0%	43.4%
Full Time	78.9%	78.7%
Part Time	21.1%	21.3%

- **Reported Household Income and Expenditures** (Nov. '03)

	Income HH/Month		Expenditure HH/Month	
	Wassit	Iraq (16 gov.)	Wassit	Iraq (16 gov.)
Urban	107.7 US$	104.5 US$	91.0 US$	95.2 US$
Rural	101.5 US$	100.2 US$	74.0 US$	87.7 US$





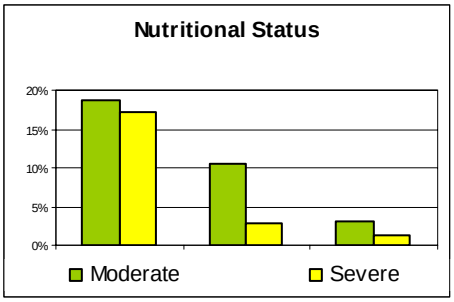
Nutrition

Facilities attending to malnourished children (Source: WHO/WFP/MoH unpublished report)

	No.	Malnourished Children / Facility	
		Wassit	Iraq (16 gov.)
Primary Health Care Centers (PHC)	29	1,516	1,392
Community Child Care Units (CCCU)	136	323	390

- **Nutritional status by district**

District	Stunting	Underweight	Wasting
Al-Hai	38.2%	20.0%	7.4%
Al-Na'maniya	35.8%	16.2%	3.3%
Al-Suwaira	25.0%	8.7%	1.1%
Badra	41.4%	10.6%	9.1%
Kut	45.5%	11.9%	3.6%
Wassit Govern.	**38.7%**	**13.2%**	**3.8%**
Iraq (16 gov.)	**27.6%**	**11.5%**	**4.4%**



Education

- **Schools** (Source: UNICEF Summary Report on Schools in Iraq, September 2003)

Grade	No. Schools	No. Students	Students / Schools	
			Wassit	Iraq (16 gov.)
Primary (Grade 1-6)	742	204,848	276	326
Intermediate (Grade 7-9)	221	51,190	232	287
Preparatory (Grade 10-12)	121	26,966	223	91

- **Students and Teachers** (Source: UNICEF Summary Report on Schools in Iraq, September 2003)

	Students			Teachers			Students / Teachers	
	Male	Female	Total	Male	Female	Total	Wassit	Iraq (16 gov.)
Primary	77,566	52,458	**130,024**	2,693	5,659	**8,352**	16	20
Intermediate	19,412	11,747	**31,159**	850	1,449	**2,299**	14	16
Preparatory	6,044	5,687	**11,731**	676	976	**1,652**	7	10

- **Literacy —** Male/Female breakdowns are as percent of total

	Male	Female	Wassit	Iraq (16 gov.)
Illiterate	23.2%	76.8%	25.0%	21.0%
Can read and write	43.5%	56.5%	18.7%	16.9%
Primary education	55.8%	44.2%	29.9%	28.0%
Secondary	73.3%	26.7%	22.1%	23.6%
High education	70.6%	29.4%	4.3%	10.5%