

## Food Security Zones of Iraq

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At the World Food Summit of 1996, member states of the United Nations committed themselves to eradication of hunger. In 2017 this commitment was reiterated as the Zero Hunger Challenge under the Sustainable Development Goal 2 which aims to end hunger, achieve food security and improved nutrition and promote sustainable agriculture. This is consistent with the mission of the World Food Programme, for which eradication of hunger has long been a priority area.

A first step towards this goal is an information base on food insecurity.

Zoning a country by food security contributes towards a better understanding of the problem. The food security zones of Iraq are based on production of cereals and livestock, population, wealth (ability to purchase food if available) and accessibility. The division takes into consideration the current land use, soils, topography, climate, industrial development (for wealth and income opportunities) and population density. A classification based on empirical evidence, along the four pillars of food security, offers a perspective beyond the traditional ethno-religious classification of Iraq. Districts of a zone bear common issues and common resolutions facilitating area specific policy formulation and programme design.

## **SURPLUS PRODUCTION BARANI AGRICULTURE**

The breadbasket of Iraq. This zone includes the plains of Nainawa where more than 40 percent of Iraq's cereals are produced. Annual wheat production per capita exceeds 400 kilograms. The zone has around 4.8 million people of which 1.5 million are poor. With a population density of medium, it receives medium-high levels of rainfall resulting in surplus food production. The zone includes Mosul city straddling the Tigris river. The zone includes districts of Nainawa, Dohuk and Erbil governorates such as Sinjar and Telefar in the west and Makhmur, Tilkaif, Erbil, Al-Shikhan and Shaqlawa east of the Tigris. Wheat is the main produce though the peri-urban areas of Mosul are known for high quality vegetable production. Wheat and bulgur are the main cereals consumed. Mosul, the second largest city of Iraq, is the source of urban livelihoods for its over two million population.

## **SURPLUS PRODUCTION IRRIGATED AGRICULTURE**

This zone constitutes the main part of the fertile crescent known since antiquity for its agricultural production. The zone has eight million people of which 2.6 million are poor. Irrigated by the twin rivers of Tigris and Euphrates, it has medium density of population and receives medium rainfall. The zone includes the capital Baghdad. It includes districts with fertile irrigated lands of central governorates of Baghdad and Babylon and southern governorates Qadisiya, Thi-qar, Muthanna, Wasit and Maysan. Populations concentrate in the riverine areas where cereals (mainly wheat and rice) and vegetables are grown. Some corn is also produced, mainly in Babylon area. Vegetables grown in this zone allow Iraq to be self-sufficient in vegetable production though certain varieties are imported from neighbouring Iran and Turkey. Annual wheat production in the zone averages around 200 kilograms per capita. In addition to wheat, the zone is the largest producer of rice. Wheat and rice are the main cereals consumed.

## **SUFFICIENT PRODUCTION**

This zone has about 12 million people of which 1.4 million are poor. It covers the whole governorate of Diyala and several districts of Salah al-deen, Baghdad, Kirkuk and Sulaimaniyah. The zone has high population density and medium-low intensity annual rainfall though rivers and agriculture benefit from precipitation on the mountains to the east across the border in Iran. Annual wheat production is around 180 kilograms per capita. Wheat and rice are the main cereals consumed.

## **MOUNTAIN AREA**

This zone covers the snow clad mountains of northern Iraq. It has 2.6 million people of which 75,000 are poor. It includes districts of Dohuk such as Zakho and Al-Amedi bordering Turkey; northern districts of Erbil including Mergasur and Choman and Sulaimaniyah districts such as Khanaqin/S,

Dokan, Halabja and Sharazur. Population density is medium. Receiving the highest rainfall in Iraq, the zone has the most vegetation. The area has extensive forests with high value products such as olives, honey and dry fruits. Wheat and bulgur are the main cereals consumed. Horticulture is predominant across the zone providing minerals in the average diet. Animal husbandry is popular with sheep and goats providing protein and dairy to the diet. Trade across the borders with Turkey and Iran is prevalent.

## **FOOD DEFICIT SEMI-ARID RANGELANDS**

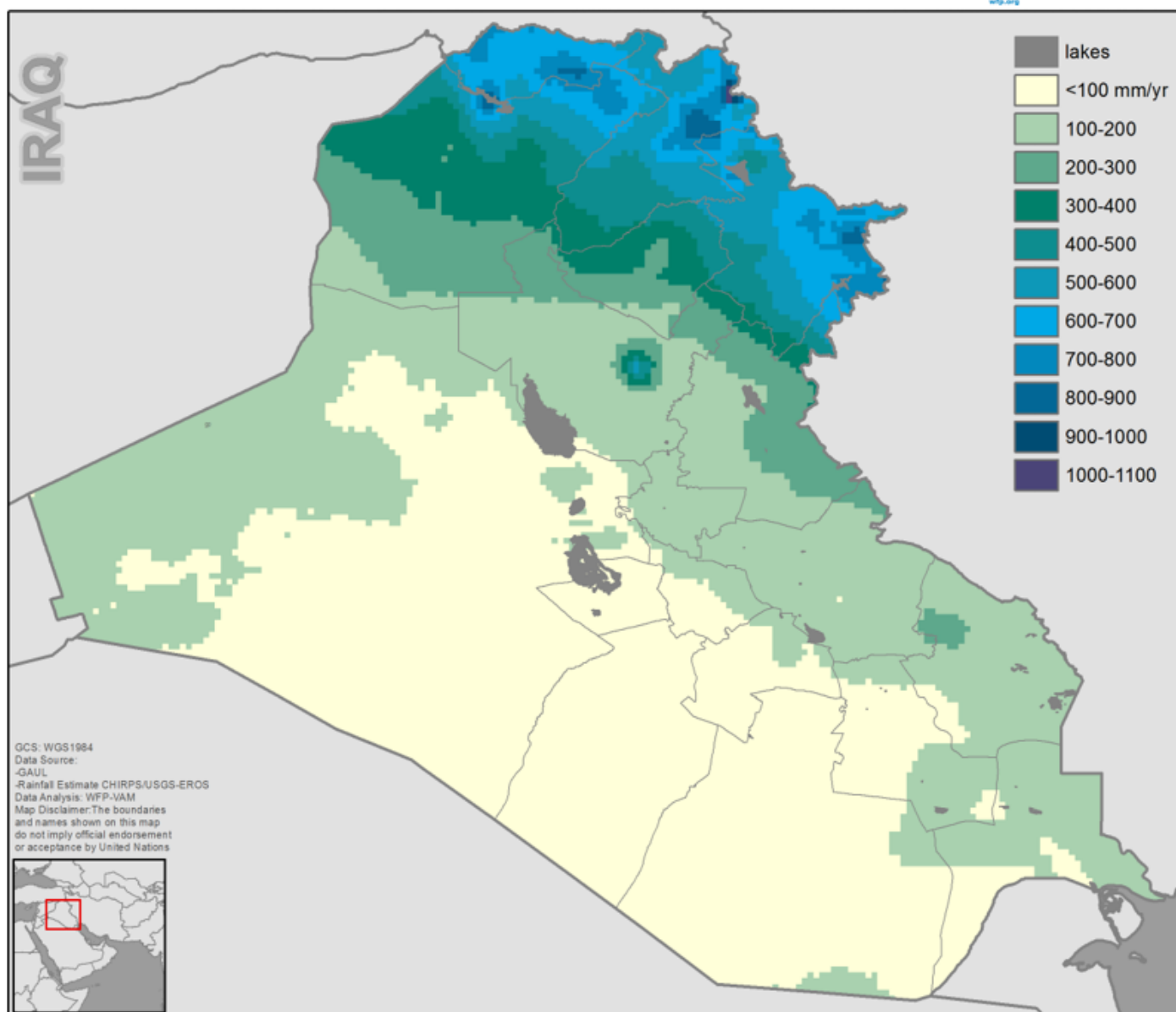
These are the rangelands of Iraq. There are about four million people of which 800,000 are poor. The zone covers most of Anbar governorate and arid districts of Nainawa, Kerbela, Babylon and Salah al-deen. Population density is low. Annual rainfall is low with little prospects of agriculture, though there are pockets of irrigation along the Euphrates river in Haditha, Heet and Ramadi of Anbar governorate. The main source of rural livelihoods is livestock. Protein and dairy from livestock are main components of food consumed in this zone.

## **DROUGHT PRONE DESERT AREA**

This is the desert area of Iraq prone to drought. It receives low rainfall and has low population density. There are only 2.6 million inhabitants (640,000 poor) covering this vast land in the south western parts of Iraq including most of Anbar, Najaf and Muthanna as well as the dry lands of the poor governorates of Wasit and Maysan. Rural life is tough due to intense heat and poor soil quality. The zone includes some of the poorest populations of Iraq. The dry conditions are suitable for date palms making dates an important part of the diets. Camels are prominent in rural areas providing a means for transport and a source for meat and milk..

## **MARSHLANDS AND COASTAL AREAS**

With low rainfall and high density population this zone covers the famous marshlands of Iraq which have recently been classified as World Heritage sites by UNESCO. The zone includes marsh areas of Thi-Qar and Maysan governorates as well as coastal areas of Basrah province. The two rivers Tigris and Euphrates converge at Al-Qurna in Basrah where the fresh river water joins saline sea water of Shatt Al-Arab waterway leading into the Persian gulf. The Basrah districts of Shatt Al-Arab, Fao, Abu Al-Khaseeb and Al-Qurna were renowned for their production of high quality Barhi dates. Draining of the marshlands and cutting of millions of palm trees decades ago affected the production and livelihoods of the almost three million inhabitants (600,000 poor). Tribal disputes over land have also affected production. Lower water levels in the rivers due to upstream dams has resulted in encroachment of sea water inland reducing area available for agriculture. This shift in water regime is resulting in the growth of shrimp farming industry.

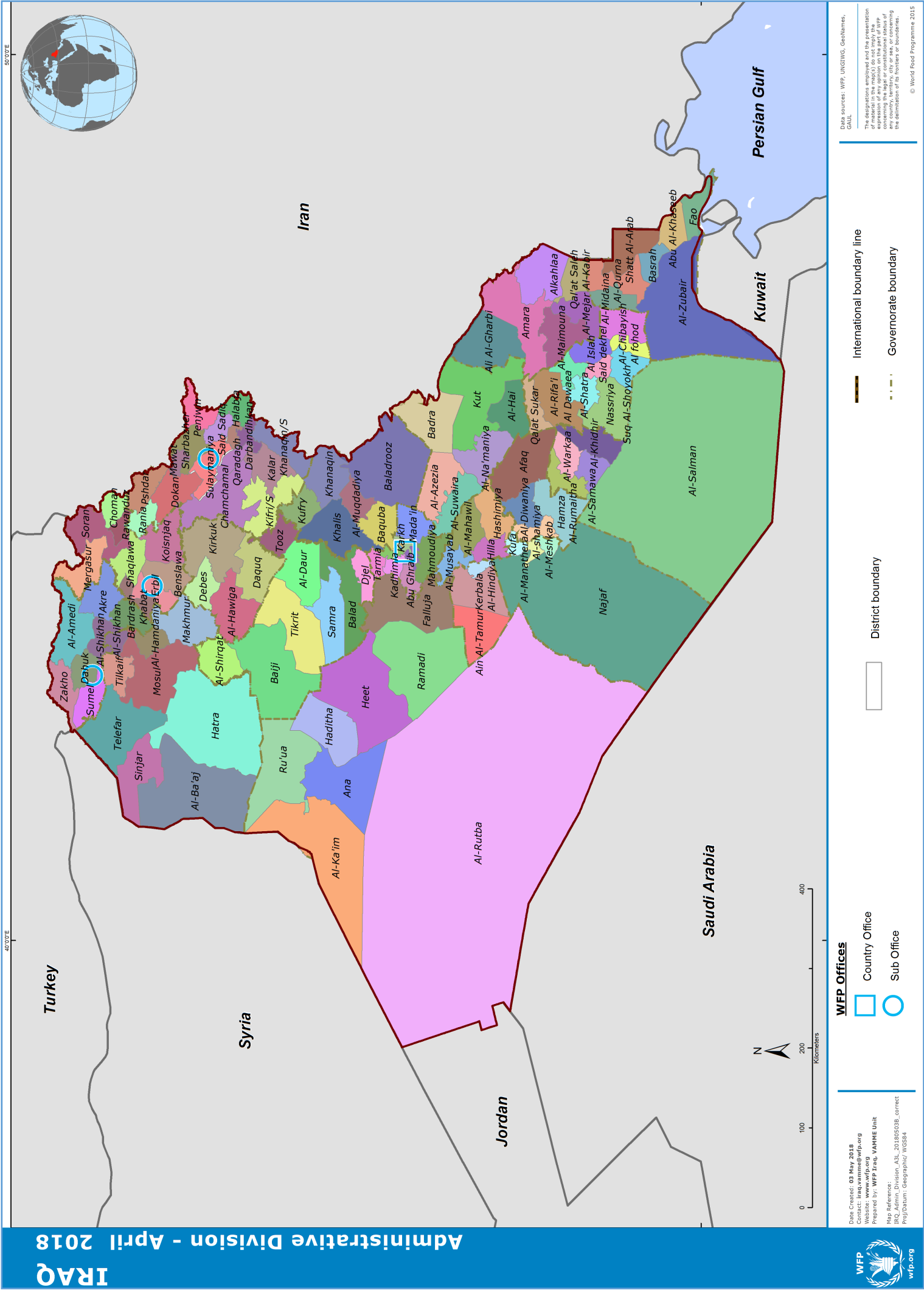


## Data at a Glance

FOOD SECURITY ZONE	POPULATION	AREA hectares	NUMBER OF POOR	UNEMPLOYED percentage	WHEAT PRODUCTION tonnes	CROP AREA hectares	METALLED ROADS km	RAINFALL
Surplus Production Barani Agriculture	5,908,331	3,157,454	1,238,621	8	2,589,773	920,987	4,274	Medium High
Surplus Production Irrigated Agriculture	8,314,315	4,756,724	2,452,819	10	1,727,626	2,341,265	6,114	Medium
Sufficient Production	11,966,281	5,188,963	1,177,790	9	2,198,399	1,704,131	7,253	Medium Low
Mountain Area	2,390,930	2,206,213	103,091	12	699,813	1,130,875	1,188	High
Food Deficit Semi-Arid Rangelands	3,980,863	7,880,092	681,690	4	368,391	297,728	5,622	Low
Drought Prone Desert Area	2,696,214	19,611,081	492,953	12	324,332	272,017	6,244	Low
Marshlands and Coastal Areas	2,493,301	997,802	316,345	8	48,303	546,351	1,417	Low
Grand Total	37,750,235	43,798,329	6,463,308	9	7,956,637	7,213,355	32,111	-

DISTRICT	GOVERNORATE	ZONE	POPULATION	AREA hectares	NUMBER OF POOR	UNEMPLOYED percentage	ILLITERACY percentage	WHEAT PRODUCTION tonnes	CROP AREA hectares	PRODUCTION PER CAPITA	RAINFALL	METALLED ROADS km
ABU AL-KHASEEB	BASRAH	7	222,694	126,446	25,842	3	14	-	30,692	No Data	Low	152
ABU GHRAIB	BAGHDAD	2	321,441	62,053	66,093	3	10	7,122	12,023	22	Medium	462
AFAQ	QADISSIYA	2	178,895	377,370	87,630	14	21	179,347	41,541	1,003	Medium	68
AIN AL-TAMUR	KERBALA	5	28,254	254,705	3,592	14	26	12,049	247	426	Low	103
AKRE	DOHUK	1	175,998	183,427	10,070	9	28	86,202	9,790	490	Medium	105
AL ADHAMIYA	BAGHDAD	3	1,198,282	27,364	134,494	10	10	10,159	54,194	8	Medium Low	318
AL AMEDI	DOHUK	4	113,774	276,345	14,049	22	20	6,420	5,950	56	High	114
AL DAWAEA	THI-QAR	2	88,180	88,054	48,216	2	26	-	210,175	No Data	Medium	-
AL FOHOD	THI-QAR	2	47,290	67,092	21,182	10	15	-	124,660	No Data	Medium	76
AL HASHIMIYA	BABYLON	2	471,600	174,995	73,071	10	22	76,557	22,232	162	Medium	333
AL ISLAH	THI-QAR	2	45,817	109,083	15,110	3	31	-	5,037	No Data	Medium	98
AL RESAFA	BAGHDAD	3	1,803,337	23,931	138,469	7	10	124	47,999	No Data	Medium Low	607
AL SADIR 1	BAGHDAD	3	705,989	2,648	51,353	16	12	107	66,597	No Data	Medium Low	64
AL SADIR 2	BAGHDAD	3	501,756	2,040	69,073	7	21	4	1,076	No Data	Medium Low	63
AL-AZEZIA	WASSIT	2	206,414	251,425	49,882	10	11	138,638	22	672	Medium	328
AL-BA'AI	NINAWA	5	178,102	866,421	80,525	0	25	42,223	928	237	Low	194
AL-CHIBAYISH	THI-QAR	2	54,794	183,741	26,900	1	27	2,669	147,770	49	Medium	106
AL-DAUR	SALAH AL-DIN	3	70,301	268,513	5,112	25	5	36,971	-	526	ML	173
AL-HAI	WASSIT	2	186,432	209,881	40,079	27	23	19,699	20,775	106	Medium	139
AL-HAMDANIYA	NINAWA	1	208,837	84,670	63,484	2	16	164,483	123,414	788	Medium	126
AL-HAWIGA	KIRKUK	3	291,099	269,553	42,985	1	14	-	78,856	No Data	Medium Low	373
AL-HINDIYA	KERBALA	5	259,632	36,191	32,221	9	9	2,936	2,065	11	Low	106
ALI AL-GHARBI	MISSAN	6	52,801	369,420	13,208	9	26	55,295	333	1,047	Low	214
ALKAHLA	MISSAN	6	88,397	296,237	45,086	12	34	12,397	16,428	140	Low	283
AL-KA'IM	ANBAR	5	177,549	993,066	33,589	2	18	40,487	45,265	228	Low	320
AL-KHALUS	DIYALA	3	346,466	313,156	68,354	5	8	171,076	51,304	494	Medium Low	401
AL-KHIDHIR	MUTHANNA	2	110,710	174,810	57,648	20	27	9,026	4,546	82	Medium	65
AL-MAHAWEEL	BABYLON	2	350,514	163,335	44,241	1	14	130,155	105,385	371	Medium	334
AL-MAIMOUNA	MISSAN	2	103,183	223,900	55,081	1	32	101,813	92,794	987	Medium	96
AL-MANATHERA	NAJAF	2	132,287	34,973	23,760	1	25	79,883	125,656	604	Medium	65
AL-MEJAR AL-KABIR	MISSAN	2	158,386	161,135	48,352	3	29	32,634	82,516	206	Medium	106
AL-MESHKAB	NAJAF	2	139,067	43,300	9,879	9	12	-	244,464	No Data	Medium	60
AL-MIDAINA	BASRAH	7	233,217	112,311	28,100	11	17	16,086	109,383	69	Low	41
AL-MUQDADIYA	DIYALA	3	252,099	105,919	49,822	9	9	85,056	144,559	337	Medium Low	184
AL-MUSAYAB	BABYLON	5	389,893	99,937	32,703	8	3	30,126	46,295	77	Low	387
AL-NA'MANIYA	WASSIT	2	170,082	236,888	28,343	4	22	205,165	33,453	1,206	Medium	206
AL-QURNA	BASRAH	7	284,456	195,745	51,874	13	29	8,718	95,270	31	Low	245
AL-RIFA'I	THI-QAR	2	263,298	248,692	106,763	2	16	67,051	117,806	255	Medium	49
AL-RUMAITHA	MUTHANNA	2	339,326	121,992	195,459	10	30	18,329	74,780	54	Medium	108
AL-RUTBA	ANBAR	6	46,635	9,149,380	8,974	2	30	-	75,620	No Data	Low	2,226
AL-SALMAN	MUTHANNA	6	10,959	4,633,236	5,032	25	22	51,357	-	4,686	Low	467
AL-SAMAWA	MUTHANNA	2	345,373	104,514	253,398	12	25	6,978	15,428	20	Medium	186
AL-SHATRA	THI-QAR	2	369,478	105,552	138,995	16	13	50,276	30,204	136	Medium	68
AI-SHEIKHAN	DOHUK	1	101,766	91,585	7,675	2	29	175,326	3,016	1,723	Medium	130
AI-SHEIKHAN	NINAWA	1	43,629	49,907	0	7	34	68,542	141,604	1,571	Medium	76
AL-SHIROAT	SALAH AL-DIN	5	214,994	201,010	35,164	2	13	18,458	5,010	86	Low	294
AL-SUWAIRA	WASSIT	2	238,617	179,319	35,927	2	21	135,863	25,164	569	Medium	330
AL-WARKAA	MUTHANNA	2	-	109,252	65,988	29	36	3,619	119,660	No Data	Medium	83
AL-ZUBAIR	BASRAH	6	508,646	1,076,512	74,334	15	18	829	66,712	2	Low	1,505
AMARA	MISSAN	6	596,089	453,064	143,379	26	18	41,783	2,836	70	Low	524
ANA	ANBAR	5	31,304	524,443	2,479	3	14	16,722	24,410	534	Low	167
BADRA	WASSIT	6	28,679	355,149	8,366	1	21	12,402	38,944	432	Low	115
BAJJI	SALAH AL-DIN	5	219,555	640,687	80,525	0	1	62,829	-	286	Low	569
BALAD	SALAH AL-DIN	3	278,300	291,522	33,552	7	17	30,296	34,943	109	Medium Low	299
BALADRUIZ	DIYALA	3	146,830	672,542	41,703	5	20	193,008	82,796	1,314	Medium Low	135
BAQUBA	DIYALA	3	595,482	169,014	106,318	4	11	102,151	118,697	172	Medium Low	396
BARDRASH	DOHUK	1	137,668	115,542	10,077	16	28	143,901	-	1,045	Medium	124
BASRAH	BASRAH	7	1,430,002	89,002	128,512	14	15	-	-	No Data	Low	507
BENSLAWA	ERBIL	1	222,745	140,157	0	9	22	-	34,886	No Data	Medium	132
CHAMCHAMAL	SULAYMANIYAH	3	169,149	343,991	3,635	10	20	218,795	1,634	1,294	ML	114
CHOMAN	ERBIL	4	31,381	85,374	1,260	14	27	13,470	75,796	429	High	4
DAHUK	DOHUK	1	372,632	101,500	11,850	15	16	23,339	15,799	63	Medium	143
DAQUQ	KIRKUK	3	94,388	257,020	14,392	10	7	37,868	29,502	401	Medium Low	117
DARBANDIHKAN	SULAYMANIYAH	4	50,147	54,750	289	18	17	25,637	95,190	511	High	48
DEBES	KIRKUK	1	70,257	131,653	7,607	1	15	57,096	4,413	813	Medium	184
DIWANIYA	QADISSIYA	2	597,906	135,797	163,024	18	10	35,999	75,079	60	Medium	401
DJEL	SALAH AL-DIN	3	108,581	101,884	21,194	8	17	495,829	25,298	4,566	ML	127
DOKAN	SULAYMANIYAH	4	72,011	181,408	1,471	14	23	93,787	1,928	1,302	High	83
ERBIL	ERBIL	1	952,910	105,485	25,321	15	13	261,581	4,506	275	Medium	267
FALLUJA	ANBAR	5	622,326	500,040	132,797	2	12	67,806	3,635	109	Low	926
FAO	BASRAH	7	42,056	135,698	2,979	2	13	-	239,764	-	Low	195
HADITHA	ANBAR	5	104,830	352,167	11,639	2	8	524	4,999	5	Low	332
HALABJA	SULAYMANIYAH	4	108,520	91,012	546	7	14	61,375	23,604	566	High	10
HAMZA	QADISSIYA	2	232,967	253,685	114,716	3	29	50,939	253,824	219	Medium	171
HATRA	NINAWA	5	58,927	1,028,516	18,450	2	49	22,136	-	376	Low	177
HEET	ANBAR	5	169,244	762,377	26,133	1	17	6,726	19,531	40	Low	295
HILLA	BABYLON	2	833,764	91,251	75,572	10	15	84,366	62,850	101	Medium	414
KADHMIYAH	BAGHDAD	3	893,881	46,593	84,004	12	7	12,889	77,196	14	Medium Low	393
KALAR	SULAYMANIYAH	3	198,816	172,253	1,729	5	21	96,652	22,475	486	Medium Low	83
KARKH	BAGHDAD	3	1,588,277	31,666	38,385	11	5	2,093	159,481	1	Medium Low	826
KERBALA	KERBALA	5	922,682	264,033	109,723	6	17	10,762	143,653	12	Low	497
KHA BAT	ERBIL	1	110,849	74,577	6,974	7	32	106,569	26	961	Medium	91
KHANAQIN	DIYALA	3	230,144	237,743	498	7	12	17,095	135,548	74	Medium Low	348
KHANAQIN/S	SULAYMANIYAH	4	1,660	169,987	39,637	10	23	98,186	1,735	59,148	High	202
KIFRI/S	SULAYMANIYAH	3	54,875	258,189	1,838	5	25	-	104,882	No Data	Medium Low	101
KIRKUK	KIRKUK	3	1,132,719	375,025	60,634	10	9	144,625	3,226	128	Medium	560
KOISNJAQ	ERBIL	1	112,514	204,852	4,339	13	15	171,797	104,460	1,527	Medium	165
KUFA	NAJAF	2	365,113	45,394	28,236	17	17	77,344	33,767	212	Medium	191
KUFRI	DIYALA	3	51,085	134,118	0	7	6	155,562	85,096	3,045	Medium Low	71
KUT	WASSIT	6	537,769	546,113	142,651	12	18	119,340	52,296	222	Low	518
MADA'EN	BAGHDAD	3	457,228	131,731	90,221	16	6	24,209	60,565	53	Medium Low	368
MAHMOUDIYA	BAGHDAD	2	481,200	138,852	80,943	4	11	43,088	210	90	Medium	635
MAKHMOUR	NINAWA	1	207,669	273,424	53,003	1	24	-	181,427	No Data	Medium	240
MAWAT	SULAYMANIYAH	4	9,461	42,361	186	10	28	1,795	13,018	190	High	26
MERGASUR	ERBIL	4	53,137	192,165	2,347	11	31	19,864	66,060	374	High	0
MOSUL	NINAWA	1	1,892,037	448,536	590,179	1	16	242,430	47,543	128	Medium	1,074
NAJAF	NAJAF	6	826,239	2,731,969	51,922	7	17	30,929	18,849	37	Low	394
NASSRIYA	THI-QAR	2	668,075	274,422	153,240	21	14	28,753	134,952	43	Medium	397
PENJWIN	SULAYMANIYAH	4	46,024	114,318	1,832	4	30	4,137	47,974	90	High	12
PSHDAR	SULAYMANIYAH	4	130,193	132,273	2,746	11	24	45,357	53,215	348	High	40
QAL'AT SALEH	MISSAN	2	107,356	120,566	57,683	7	42	14,263	69,413	133	Low	164
QALAT SUKAR	THI-QAR	2	166,095	106,755	46,623	27	32	-	12,899	No Data	Medium	106
QARADAGH	SULAYMANIYAH	3	10,899	69,018	120	4	24	21,612	87,424	1,983	Medium Low	15
RAMADI	ANBAR	5	579,812	777,079	80,8							





# Food, Poverty and Malnutrition in Iraq

Iraq is an oil rich middle income country affected by protracted conflict, massive displacement and disruption of public services. In March 2018, the government estimated the poverty rate to be 22.5 percent. According to the Comprehensive Food Security and Vulnerability Analysis conducted by WFP and the Government of Iraq, while food insecurity is low at 2.1 percent, over 50 percent of the population is vulnerable to food insecurity. A large portion of the population could become food insecure with the onset of a shock such as moderate food price increase. While malnutrition rates are low, obesity, especially in children, is of concern. Stunting is recorded at 16.6 percent and wasting is 7.5 percent though provinces such as Wasit, Thi-Qar, Basrah, Qadisiya and Salah al-deen record higher acute malnutrition. Although agriculture contributes a small portion of the GDP, around five percent, the majority of the poor live in rural areas relying on agriculture for their livelihoods and food security. Efficiency in targeting and delivery of safety nets, reform of trade policies, nutrition awareness education and job creation, especially for youth and women, are key interventions required to improve food security in Iraq.

## Notes

### FOOD SECURITY

According to the definition adopted at the World Food Summit in 1996, **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. Vulnerability refers to the full range of factors that place people at risk of becoming food insecure. The degree of vulnerability for an individual, household or group of persons is determined by their exposure to the risk factors and their ability to cope with or withstand stressful situations.

### POVERTY

The poverty line in Iraq is derived from the cost of basic needs approach. It is defined as the level of food expenditure necessary for minimum caloric intake and non-food expenditure necessary to maintain a minimum acceptable standard of living.

### POPULATION DENSITY

Population density of Iraq is approximately 1.1 persons per hectare. In the zone descriptions, low density areas are those

with less than one person per hectare. Medium density refers to zones with populations between one and two persons per hectare. High density refers to populations in excess of two persons per hectare.

Low	< 1 person per hectare
Medium	1 -2 persons per hectare
High	> 2 persons per hectare

### ANNUAL RAINFALL

The spatial pattern of average annual rainfall in Iraq closely conforms to the topography of the country: annual average rainfall varies from trace amounts in the arid lowland desert regions of the southwest to amounts above 500 mm in the northeast mountainous regions, reaching up to 900 mm around the peaks.

Low	< 125 mm
Medium Low	125 - 250 mm
Medium	250—500 mm
Medium high	500—750 mm
High	> 750 mm

### INFORMATION IS DRAWN FROM :

Iraq Zero Hunger Strategic Review, WFP 2018  
Iraq Comprehensive Food Security and Vulnerability Analysis, WFP 2016  
Iraq Poverty Reduction Strategy, Government of Iraq, 2018  
Global Land Cover, FAO 2013

### FOR MORE INFORMATION CONTACT:

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### FOR ADDITIONAL WFP IRAQ VAMME PRODUCTS:

mVAM Reports:

[http://vam.wfp.org/sites/mvam\\_monitoring/Iraq.html](http://vam.wfp.org/sites/mvam_monitoring/Iraq.html)

Market Bulletins:

[http://vam.wfp.org/CountryPage\\_assessments.aspx?iso3=IRQ](http://vam.wfp.org/CountryPage_assessments.aspx?iso3=IRQ)

Market Assessments:

[http://vam.wfp.org/CountryPage\\_assessments.aspx?iso3=IRQ](http://vam.wfp.org/CountryPage_assessments.aspx?iso3=IRQ)

Vulnerability Assessments:

[http://vam.wfp.org/CountryPage\\_assessments.aspx?iso3=IRQ](http://vam.wfp.org/CountryPage_assessments.aspx?iso3=IRQ)