

World Environment Day 2013

HOW ENVIRONMENTAL DAMAGE CAUSES FOOD INSECURITY IN IRAQ

The 2013 global theme for 2013 World Environment Day is "Think.Eat.Save", a campaign that encourages everyone to take action to minimize food waste, and creates awareness about the environmental impact of food production.

- 1.9 MILLION IRAQIS OR 5.7% OF THE POPULATION ARE FOOD DEPRIVED¹, CONSUMING LESS THAN THE AVERAGE DIETARY ENERGY REQUIREMENTS OF 2,161 KILOCALORIES PER DAY.
- A FURTHER 4 MILLION IRAQIS OR 14% OF THE POPULATION ARE VULNERABLE TO FOOD INSECURITY².

FOOD DEPRIVATION AT DISTRICT LEVEL

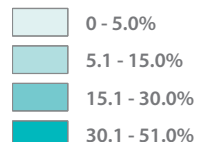
FOOD INSECURITY IN IRAQ

IN IRAQ, FOOD SECURITY IS FRAGILE. IRAQIS CANNOT AFFORD TO WASTE FOOD.

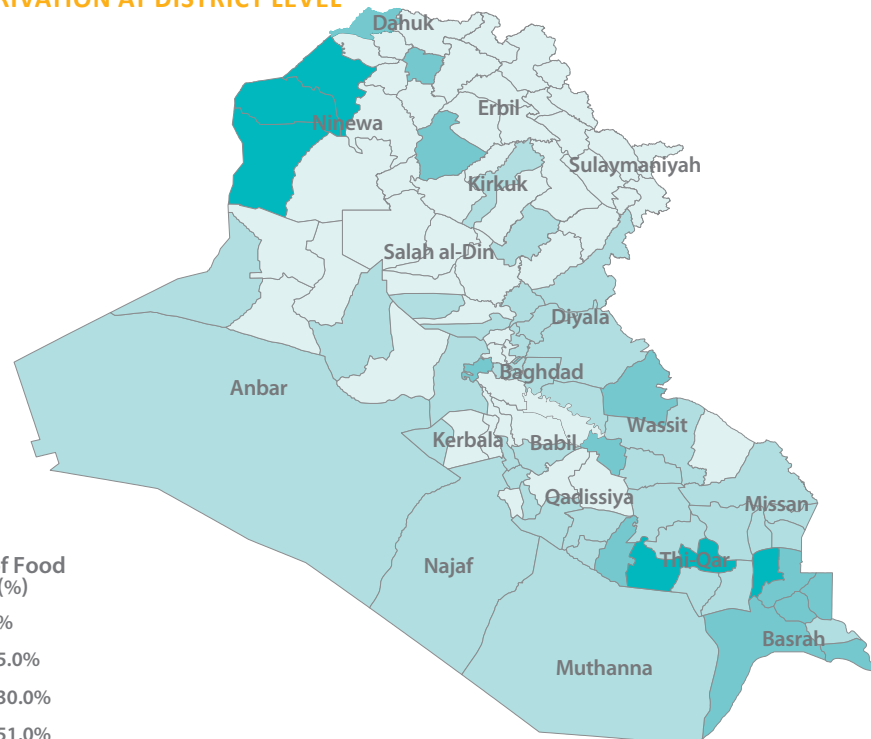
WHAT IS FOOD SECURITY?

Food security exists when all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food which that meets their dietary needs and food preferences for an active and healthy life. (FAO)

Prevalence of Food Deprivation (%)



Source: WFP, 2012.



HEALTH EFFECTS OF FOOD DEPRIVATION

The negative impact of food deprivation on the health of Iraqis is significant. Malnutrition, especially in children, increases the frequency and severity of infectious diseases, affects intellectual and physical development, and increases mortality.

- 8.5% of Iraqi children under five are underweight³.

- 1 in 4 Iraqi children experience stunted physical and intellectual growth due to chronic undernutrition⁴.

CLIMATE CHANGE AND ENVIRONMENTAL DEGRADATION ARE JEOPARDIZING AGRICULTURAL PRODUCTION IN IRAQ.

Agriculture is still the second largest contributor to GDP in Iraq after the oil sector. It is the main source of livelihoods for poor and food insecure people, and the largest source of rural employment. However, Iraqi agriculture has declined over the years.

AGRICULTURAL DECLINE

- Agriculture made up **9%** of GDP in 2002 and only **3.6%** in 2009.

- The value of agricultural exports was USD 78 million in 1985, but had dropped to **USD 68 million by 2008**.

- Until 1996, Iraq cultivated more date palms than any other country in the world. Total date production fluctuated between **500,000** and **600,000 tons/year**. After a significant decrease, exports are now recovering, but production is still only **200,000-300,000 tons/year**⁵.

AT THE SAME TIME, IRAQ IS RELYING MORE AND MORE ON FOOD IMPORTS TO MEET ITS DOMESTIC NEEDS.

- In 1985, the total value of agricultural imports in 1985 was **USD 1.76 billion**. By 2008, this figure had increased to **USD 4.64 billion**.

- The ratio of food imports over food exports increased from **4.9%** in 2004 to **9%** in 2011⁶.

- Iraq imports **3-4 million tons** of wheat per year. Other major food imports include cattle and chicken meat, rice, oils and fats, milk, tea, and sugar.

- About **60% to 70%** of vegetables are supplied by imports from neighbouring countries⁷.

ENVIRONMENTAL FACTORS AFFECTING LOCAL FOOD PRODUCTION DROUGHT AND WATER SCARCITY

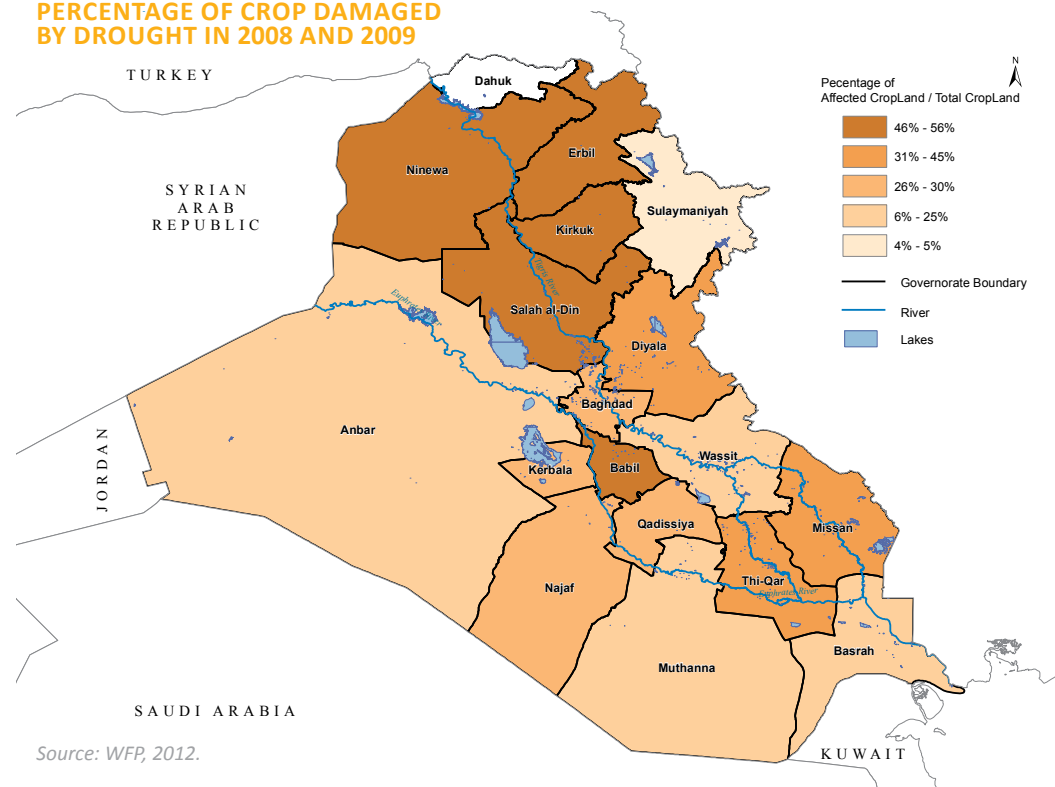
Low precipitation means production losses for rain fed crops. Iraqi crops rely heavily on irrigation, and the agricultural sector consumes **85%** of all of Iraq's water resources.

- In the north of Iraq, cereals are the main crop, relying heavily on rainfall. In central and southern Iraq, crops depend on irrigation from the Tigris and Euphrates river systems.

- The total cultivated wheat area requiring irrigation increased by **33%** between 2000 and 2010.

- In 2008 and 2009, the droughts that affected the country damaged almost **40%** of the cropland, with higher intensity in the northern governorates and reaching to over **50%** in Ninewa and Erbil.

PERCENTAGE OF CROP DAMAGED BY DROUGHT IN 2008 AND 2009



DESERTIFICATION

- According to the Government of Iraq, **92%** of the total area of Iraq is at risk of desertification,⁹ a process that causes relatively dry land to become increasingly arid.

DEFORESTATION

- Significant reductions in vegetation cover occurred all over the country. Between 2009 and 2012, the total area covered by vegetation decreased by **65%** in Diyala, **47%** in Salah Al-Din, and **41%** in Basra.

SAND AND DUST-STORMS

The Euphrates and Tigris basin has been identified as a significant source area for dust-storms in Iraq and across the region. Fallow agricultural lands are considered the main hotspots of dust generation.

- It is likely that within the next 10 years the number of dust-storms will significantly increase, with potentially devastating effects on Iraq's agriculture and food security¹⁰.

- Dust-storms damage crops, cause soil loss and remove organic matter and nutrient rich topsoil particles, thereby reducing agricultural productivity¹¹.

- The erosion of one centimetre of surface soil is estimated to lead to the reduction of agricultural crop production by more than **2%**¹².

UNPREDICTABLE WEATHER

- Climate change also creates unstable climatic conditions.
- In May 2013, nearly **600 families** were displaced by severe flooding, and approximately **75,000 acres** of crops were damaged or destroyed by floodwaters in Missan, Qadissiya, and Wassit Governorates¹³.

LAND DEGRADATION

- **100,000 hectares** are lost on average each year due to land degradation¹⁴.
- Agricultural land dwindled from **23%** of Iraq's total land area in 1993 to **19%** in 2011¹⁵.
- In 2009, Iraq cultivated **31%** less wheat and **49%** less barley than in 2005¹⁶.

IRAQ FACES A GROWING DEMAND FOR FOOD

- The population of Iraq is expected to surpass **42 million** by 2020.
- To maintain the average supply levels of 1998-2008 (213 kg/per year/per person), Iraq will require **9 million tons** of wheat by 2020¹⁷.
- Average wheat productivity is expected to fall by **12.5%** by 2020 as a result of reduced precipitation and rising temperatures¹⁸.

- **40%** of the Iraqi daily dietary consumption is represented by wheat flour and its derivatives¹⁹.
- Import dependency for wheat is expected to surpass **70%** by 2020²⁰ representing a real alarm for food security in the country.

WITH ENVIRONMENTAL FACTORS
CAUSING SO MANY CHALLENGES
FOR FOOD PRODUCTION IN IRAQ,
THE FUTURE OF THE FOOD SUPPLY
IS UNCERTAIN. WITH FURTHER
DETERIORATION OF THE LAND,
WATER SYSTEMS, AND CLIMATE,
IRAQ WILL HAVE TO RELY MORE
AND MORE ON FOOD IMPORTS TO
FEED ITS GROWING POPULATION.

WHAT NEEDS TO BE DONE TO ACHIEVE FOOD SECURITY FOR ALL IRAQIS? HOW IS THE UN HELPING?

Achieving food security calls for an integrated approach. The rehabilitation and development of Iraqi agriculture is a medium/long-term aim. It can only be achieved through coherent, coordinated efforts based on policy improvements and investment projects, including rehabilitation of support services and capacity building.

Policies and interventions to ensure food supply must consider the interconnection between food security, agricultural productivity, sustainable environmental management, and climate change.

The UN supports the Government of Iraq on these policies and interventions through the work of several of its agencies, funds and programmes:

- United Nations Environment Programme (**UNEP**)
- United Nations Development Programme (**UNDP**)
- Food and Agriculture Organization (**FAO**)
- World Food Programme (**WFP**)
- United Nations Educational, Scientific and Cultural Organization (**UNESCO**)
- United Nations Children's Fund (**UNICEF**)

ADDRESSING FOOD SECURITY

Meeting the immediate needs of the most vulnerable

- More than **60%** of the population depends on Iraq's Public Distribution System (**PDS**) as its main source of food. The PDS needs to be reformed to reduce the related market distortions and to increase efficiency by targeting only the population in need.

- **WFP** supports the Ministry of Labour and Social Affairs to reform social safety nets for vulnerable groups and is supporting the Ministry of Education to design and implement a national school meals programme.

- **UNICEF**, **WHO**, **WFP**, and **FAO** have supported the Ministry of Health to develop Iraq's first National Nutrition Strategy, which aims to significantly reduce malnutrition rates among children, among other nutrition issues.

COMBATING CLIMATE CHANGE

Improving environmental management at the national level

- **UNEP** and **UNDP** are supporting the preparation of the Iraqi National Communication (**INC**) report to the **UN** Framework Convention on Climate Change (**UNFCCC**) in compliance with member states' convention based periodic obligation.

- **UNDP** and **UNEP** also support the Ministry of Environment in the implementation of the National Environmental Strategy and Action Plan (**NESAP**) that will serve as the blue print for sustainable development in Iraq.

- **UNEP** also supports the National Biodiversity Strategy and Action Plan (**NBSAP**), and the National Programme to Phase Out Ozone Depleting Substances.

IMPROVING WATER MANAGEMENT

Implementing best practices and strengthening government institutions

- **UNESCO** is conducting an Advanced Survey of Hydro-Geological Resources, including assessment of national groundwater resources, identification of potential for water allocation for agriculture and irrigation, and capacity development in the intricate surveying, mapping, and analysis skills required for good water management.

- **UNICEF** has produced an Environmental Survey on Water, Sanitation and Municipal Services in Iraq and is conducting a Comprehensive Study on Water Demand Management Plan for Iraq.

- **UNDP** is also undertaking the Decision Support System that assists relevant Government institutions to make better informed water resource management decisions at national and international levels.

REDUCING DROUGHT RISK

Mapping past drought patterns and state of preparedness

- **UNDP** and **UNESCO** are undertaking the Drought Risk Management (**DRM**) project to assess the root causes of drought, identify priority areas for drought-related disaster risk reduction, and explore issues such as availability of irrigation water, soil potentials, impact of heat stress, increasing aridity, erosion, salinization, and the extent of desertification.

- The **DRM** project will also produce a best practice-based methodological toolbox to support in defining action plans and cross-sector coordination efforts.

- **UNEP** is also supporting the National Action Programme to Combat Desertification (**NAP**) under the United Nations Convention to Combat Desertification (**UNCCD**).

STOPPING SAND AND DUST-STORMS

Planting green belts, restoring vegetation cover

- **UNEP**, **FAO**, and the **UN's** Priority Working Group on Environment are supporting the National Programme to Combat Sand and Dust-Storms in Iraq. In 2012, the Prime Minister set up a high level national commission to coordinate and advance efforts to combat sand and dust-storms.

- Sand and dust-storms are a trans-boundary phenomenon, and the need for regional cooperation remains paramount. For this reason, **UNEP** has also started working on a strategy for the region.

BOOSTING AGRICULTURAL PRODUCTIVITY

Promoting sustainable and responsible farming practices

- **FAO** is working on developing the productivity of small ruminants, namely sheep and goats, and to improve the livelihood of small breeders through a dedicated programme. **FAO** is also working on developing fisheries and aquaculture in the Kurdistan Region.

PREPARING A DISASTER RISK MANAGEMENT STRATEGY

Using meteorological data, forecasts, and early warning systems effectively

- **UNDP** and its Bureau for Crisis Prevention and Recovery are collaborating to strengthen the institutional capacities for Disaster Risk Management. The project covers both mitigation and adaptation through legal and institutional strengthening at national, governorate, and local levels.

ENDNOTES

¹ WFP, FOOD SECURITY, LIVING CONDITIONS AND SOCIAL TRANSFERS IN IRAQ, 2012.

² IBID.

³ UNICEF, MULTIPLE INDICATOR CLUSTER SURVEYS 2011 (MICS4) IRAQ - MONITORING THE SITUATION OF WOMEN AND CHILDREN, 2011.

⁴ IBID.

⁵ FAO-WORLD BANK IRAQ AGRICULTURAL SECTOR NOTE, 2012

⁶ CENTRAL BANK OF IRAQ, ANNUAL BULLETIN 2004, 2011.

⁷ FAO-WORLD BANK IRAQ AGRICULTURAL SECTOR NOTE, 2012

⁸ CENTRAL STATISTICAL OFFICE AVAILABLE AT WWW.COSIT.GOV.IT

⁹ COSIT, ECOLOGICAL STATISTICAL REPORT OF IRAQ, 2009.

¹⁰ JAPU, SAND AND DUST-STORM FACT SHEET, 2013.

¹¹ IBID

¹² MOHD AL ODAT, ECOLOGICAL SYSTEM AND POLLUTION, KING ABDULLAH CITY FOR SCIENCE AND TECHNOLOGY, AL RIADH.

¹³ JAPU, MAPPING FLOODED AREAS IN SOUTHERN GOVERNORATES OF IRAQ, 2013.

¹⁴ IAU CLIMATE CHANGE IN IRAQ, JUNE 2012.

¹⁵ WORLD BANK INDICATORS, WWW.WORLDBANK.ORG

¹⁶ FAO-WORLD BANK IRAQ AGRICULTURAL SECTOR NOTE, 2012

¹⁷ WFP, FOOD SECURITY, LIVING CONDITIONS AND SOCIAL TRANSFERS IN IRAQ, 2012

¹⁸ IBID.

¹⁹ IBID.

²⁰ IBID.