

## Facts and Figures

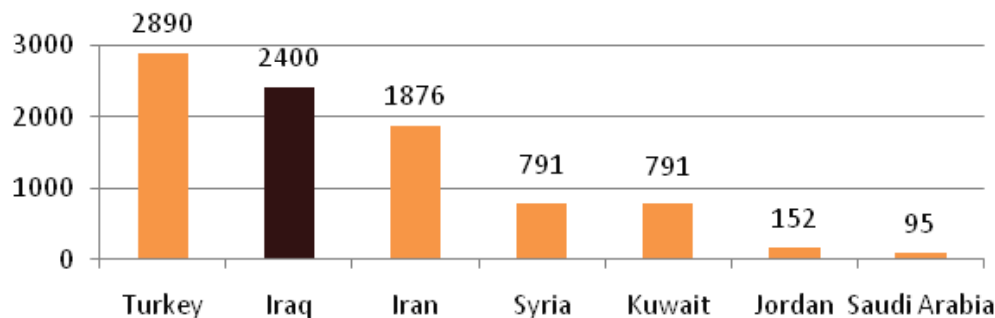
Three decades of war, armed conflict, sanctions and neglect of infrastructure – combined with limited environmental awareness – have undermined Iraq's water resource management system. Improvements in management of the country's water resources will have a profound effect on Iraq's efforts to reduce poverty and hunger (Millennium Development Goal1), reduce child mortality (MDG 4) and ensure environmental sustainability (MDG 7).

Iraq faces difficulties in meeting the target of 91% of households using a safe drinking water supply by 2015.<sup>1</sup> Currently 20% of households in Iraq use an unsafe drinking water source<sup>2</sup> and a further 16% report that they have daily problems with supply.<sup>3</sup> Leaking sewage pipes and septic tanks contaminate the drinking water network with wastewater.<sup>4</sup> 80% of Iraqis, do not treat their water before drinking.<sup>5</sup>

## Quantity\*

Current estimates of water available for Iraq are 2,400 m<sup>3</sup> per person per year. With the

## Water availability (m<sup>3</sup> per capita)

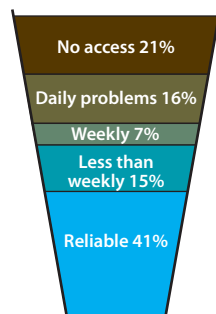


Source: Ministry of Water Resources Iraq 2010

exception of Turkey, Iraqis have more water available to them than their neighbours.<sup>6</sup>

## Access to safe drinking water sources

Reservoirs, lakes and rivers are diminished to critical levels and water levels in the Tigris and Euphrates Rivers, Iraq's primary sources of surface water have fallen to less than a third of normal capacity. More people are relying on groundwater; although these are showing signs of decline.<sup>7</sup>



Source: UNICEF/COSIT/KRSO/ MOH Multiple Indicator Cluster Survey 2006

Management of aquifers and their recharge have been minimal, impacting the level and quality of groundwater supplies.

Iraq relies on precipitation falling outside its borders for more than half of its water,

making it vulnerable to climate change and storage projects in Turkey, Syria and Iran.<sup>8</sup>

## Average Discharge of Water to Iraq (billion m<sup>3</sup>)

	2009	2025 (est.)
Tigris	49.20	9.16
Euphrates	19.34	8.45

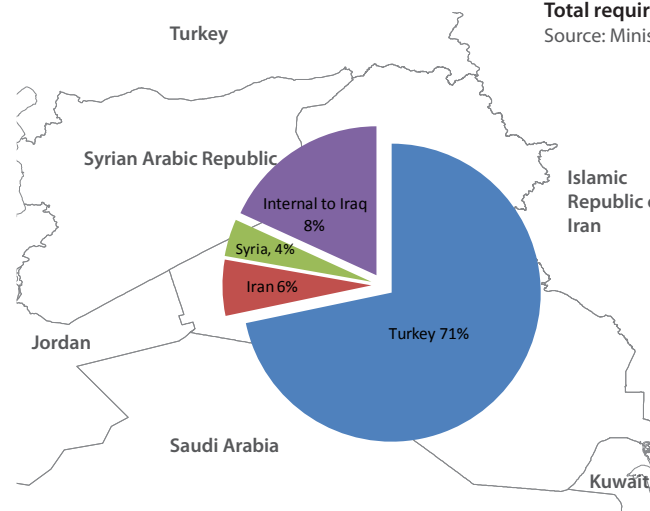
Source: Ministry of Water Resources Iraq 2010

## Quality

Quality of water used for drinking and agriculture is poor, violating Iraq National Standards and WHO guidelines.<sup>9</sup>

Much of the groundwater along the developed central plain is unusable due to high salinity and pollution. Moreover, 8% of the rural population use saline shallow village wells as a main drinking source.<sup>10</sup>

## Water Supply by Country



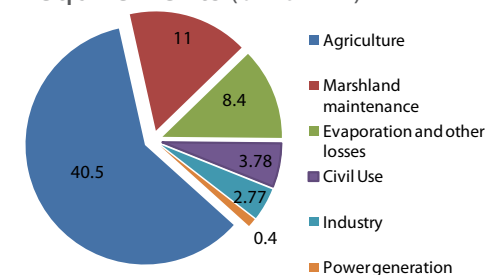
Source: Ministry of Water Resources Iraq 2010

In the first six months of 2010, there were over 360,000 diarrhoea cases, a result of polluted drinking water and poor hygiene practices.<sup>11</sup>

## Competition over Resources\*

Agriculture accounts for the vast majority of water consumption in Iraq, withdrawing 92% of total freshwater for irrigation and food production.<sup>12</sup>

## 2015 forecast for water requirements (billion m<sup>3</sup>)



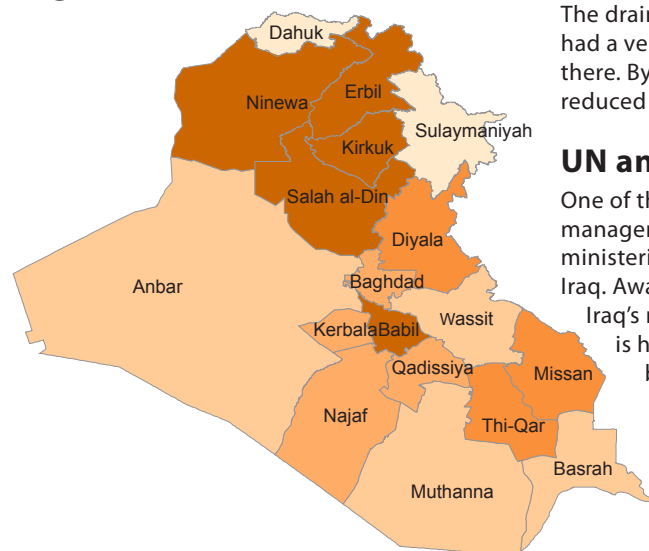
Total required: 66.85 billion cubic meters  
Source: Ministry of Water Resources Iraq 2010

Demographic growth will impact water supply. Iraq's population tripled to 30 million between 1970 and 2007 putting further strains on access to water resources. Planned storage and agricultural development upstream will lead to an average annual downstream shortage of 18 km<sup>3</sup>/year for irrigated agriculture and 26 km<sup>3</sup>/year for the Iraqi Marshlands from 2007-2040. The Tigris and Euphrates Rivers might be depleted by 2040.<sup>13</sup>

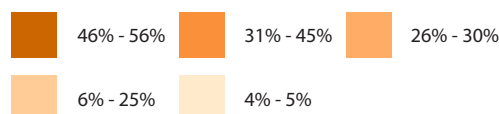
## Drought

While in 2009 more rain was received than in 2008, the situation is still critical with rainfall 50% below average.<sup>14</sup> Between 2007-2009, almost 40% of cropland throughout Iraq but particularly in the north, experienced reduced crop coverage<sup>15</sup> and livestock was decimated.

## Drought and Impact on Agriculture



Affected Cropland / Percentage of Cropland



Source: FAO, IAU (2009)

## The Marshlands

The Marshlands are the largest wetlands in southwest Asia and are recognized as one of the world's most exceptional ecosystems. Historically, the Marshes contributed to the broader human welfare of the population of southern Iraq through the provision of freshwater and livelihood for almost half a million Iraqis.

The draining of the wetlands in the 1980s had a very negative impact on people living there. By 2002, the Marshlands had been reduced to only 10% of their original size.<sup>16</sup>

## UN and Government Response

One of the principal challenges in water management is the coordination of diverging ministerial and regional interests within Iraq. Awareness of the degradation of Iraq's natural resources and ecosystems is high among Iraqi decision makers, but concrete actions at the local and national levels remain uncoordinated and limited. The UN is supporting the Government of Iraq and other partners in implementing 121 water projects.

FAO is supporting the Ministry of Water Resources and the Governorate of Erbil in the rehabilitation infrastructure to enhance water supply and drainage across eight governorates, to improve in food security and rural livelihoods.

UNESCO launched a scientific survey of Iraq's groundwater to improve government capacity to address water scarcity. The

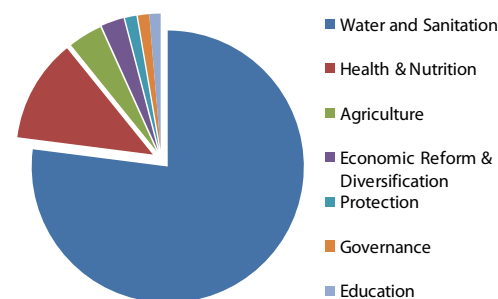
"The Marshlands had been reduced to 10% of their original size."

project will provide data on groundwater to address shortages in the worst affected areas, improve planning of agriculture projects and enable sustainable management of Iraq's underground aquifers.

WHO and UNICEF work with the Kurdistan Regional Government in Sulaymaniyah to enhance the quantity and quality of water delivered to underserved residential areas, particularly in the city of Sulaymaniyah and Sarchinar district.

Through the Public Sector Modernization Programme UN HABITAT and UNICEF will support the Government of Iraq efforts at modernizing and reforming its public sector with focusing on water and sanitation. Support to be provided will include a functional review of the sector, new modern service delivery models and a road map for the modernization of the sector.

## Number of water projects by sector (2008-2010)



Total number of projects: 121

Source: Who Does What Where (3W) database, IAU.

## Endnotes

- 1 UNCT, Government of Iraq, The Millennium Development Goals in Iraq 2010
  - 2 Unsafe sources of drinking water include: surface water, carts with a tank or drum, tanker trucks, unprotected springs, unprotected wells. UNICEF/COSIT/KRSO/MoH Multiple Indicator Cluster Survey 2006
  - 3 UNICEF/COSIT/KRSO/MoH Multiple Indicator Cluster Survey 2006
  - 4 UN Common Country Assessment Iraq 2009
  - 5 World Bank/COSIT/KRSO IHSES 2007
  - 6 FAO 2010
  - 7 Government of Iraq Ministry of Water Resources
  - 8 FAO, AQUASTAT 2009
  - 9 State of Disaster Risk Reduction in Iraq, The Earl Goodyear 2009
  - 10 World Bank/COSIT/KRSO IHSES 2007
  - 11 WHO, Weekly Situation Report on Influenza like Illness, Diarrhoea and Cholera in Iraq, 2010
  - 12 Water Resources Institute. Inefficient use of water in 2005 resulted in farmers achieving only 20% of potential production in rain-fed crops. United Nations World Water Development Report 3 2009
  - 13 Dr. Jon Martin Trondalen, "An Independent Technical Study: The Euphrates River and the Tigris River Water Resources Management," in Water and Peace for the People - Possible Solutions to Water Disputes in The Middle East (Geneva: CESAR Foundation) 2006
  - 14 Disaster Risk Reduction Strategies and Risk Management Practices: Critical Elements for Adaptation to Climate Change. The Informal Taskforce on climate change of the Inter-Agency Standing Committee and The International Strategy for Disaster Reduction 2008
  - 15 Source: FAO, IAU 2009
  - 16 Canada-Iraq Marshlands Initiative, Managing for Change: The Present and Future State of the Marshes of Southern Iraq 2010
- \* Analysis in the "Quantity" section is provided by UNESCO and WHO
- \* Analysis in the "Competition over Resources" section is provided by UNESCO