

Key statistics	
GDP per capita (US\$) ^a	788
Population (million) ^a	32
Funding	\$m
2009–10 actual	1.59
2010–11 budget allocation	3.45
2011–12 budget estimate	1.82

^a data from 2009 & 2010 <<http://unstats.un.org/unsd/demographic/products/socind/>>



A meeting on management of salinisation processes in agriculture, the focus of ACIAR research in Iraq

MEDIUM-TERM STRATEGY

Recovery of the agricultural sector is a key priority for the Iraq Government and is supported by AusAID and ACIAR. Iraqi scientists have had limited access to international developments in the agricultural sector for over two decades. Consistent with other support provided by the Australian Government, the ACIAR-managed and AusAID-funded projects are intended to facilitate the development of modern and sustainable agricultural production and marketing systems in Iraq. There are two broad focuses of the program in Iraq: improved management of field crops and identification of improved salinity management in irrigated lands.

In Iraq, pressures to abandon cereal–fallow rotations have exacerbated soil degradation and nutrient depletion to the extent that established cropping systems are in serious decline. The introduction of sustainable tillage will play a key role in restoring these systems, and spillover benefits are also expected beyond Iraq. The project has been shaped by the relevance of Australian expertise to Iraqi conditions, but constrained by the inaccessibility of Iraq to Australian scientists. It focuses on the enhancement of barley, wheat and grain legume production under dryland conditions in northern Iraq through the introduction and evaluation of appropriate modern varieties; and on the adaptation of improved management practices, including tillage, fertiliser and weed control techniques. Achieving sustainable increase in domestic production is now a national imperative.

Significant yield improvements are being observed, given that current yields of these crops are only about one-third of those under similar conditions in developed countries. Iraq's agricultural sector represents a vital component of its economy as it is the largest employer (25% of the labour force) and the second-largest industry after oil (as a contribution to GDP).

The 2-million-hectare central-southern irrigated zone that produces vegetables, fruit and cereals is under increased pressure from salinity, which has long been identified as a major threat to agriculture in Iraq. Implementation of past policies aimed at improving irrigation and drainage practices has been hampered since the early 1980s because of political tensions with neighbouring countries. This has been compounded by increasing levels of salinity in irrigation water from both the Euphrates and Tigris rivers due to changed water regimes. These changes are the result of upstream damming of the rivers and subsidiaries in Syria, Turkey and Iran, but climate change and variability have also recently affected river flows. Consequently, Iraq's extensive irrigation infrastructure has been degraded and soil salinity has spread across much of the irrigated zone. According to FAO, it is estimated that approximately 75% of this region is moderately saline and another 25% has levels of salinity that prevent farming.

Much work is currently being undertaken within Iraq to explore production gains from saline agronomy. However, it is recognised that this farm-scale work must be complemented with work on the basin and irrigation-district scales to provide a scope of the size of the problem. Broad strategic policy options can then be implemented to ensure that farm-scale change is made and a sustainable future assured.

These issues are particularly relevant within the Australian experience as they mirror the issues that confronted managers in the Murray–Darling Basin in the late 1960s through to the mid 1980s (following the droughts of 1967 and 1983). The actions taken by Australian bureaucrats and researchers at policy and strategic levels, as well as farming system changes at the local level, are particularly relevant to the Iraqi situation. ACIAR's proposed 2-year scoping project in Iraq focuses on understanding salinisation processes, water management and the use of moderately saline soil for agricultural production.

2011–12 RESEARCH PRIORITIES AND PROJECTS

CIM/2008/027 (*multilateral, ICARDA*) Development of conservation cropping systems in the drylands of northern Iraq

Improved crop germplasm is being adopted in a system marked by rapid uptake of zero-tillage by Iraqi farmers. This agronomic advance is being underpinned by stimulating innovation among small manufacturers of machinery in the region.

LWR/2009/034 (*multilateral, ICARDA*) Salinity in central and southern Iraq

The project will assess the distribution of salt in land and water at a range of scales, and develop methods for salinity control and improved agricultural productivity.

Principal regional coordinator

Dr John Dixon

Key program managers

Dr Paul Fox, Crop Improvement and Management
Dr Andrew Noble, Land and Water Resources

Country manager

Dr Kuhu Chatterjee

KEY PERFORMANCE INDICATORS (2011–12)

- A critical mass of farmers using modified tillage methods to sustain the soil base reached
- Initial characterisation of salinisation processes in central Iraq achieved