Republic of Iraq

Country strategy note

Main report and appendices
Republic of Iraq
Country strategy note

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Currency equivalents

<table>
<thead>
<tr>
<th>Currency Unit</th>
<th>=</th>
<th>Iraqi Dinar</th>
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<tbody>
<tr>
<td>US$1.0</td>
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Weights and measures

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<tr>
<td>1 kilogram</td>
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<td>1 000 kg</td>
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<td>2.204 lb.</td>
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<tr>
<td>1 kilometre (km)</td>
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<tr>
<td>1 metre</td>
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<tr>
<td>1 square metre</td>
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<td>10.76 square feet</td>
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<tr>
<td>1 acre</td>
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<tr>
<td>1 hectare</td>
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</tr>
<tr>
<td>1 dunum</td>
<td>=</td>
<td>0.25 ha</td>
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# Abbreviations and acronyms

<table>
<thead>
<tr>
<th>Abbreviation</th>
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<tbody>
<tr>
<td>ASAP</td>
<td>Adaptation for smallholder Agriculture Program</td>
</tr>
<tr>
<td>CFSVA</td>
<td>Comprehensive Food Security Vulnerability Analysis</td>
</tr>
<tr>
<td>COSOP</td>
<td>Country Strategic Opportunities Program</td>
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<tr>
<td>CSN</td>
<td>Country Strategy Note</td>
</tr>
<tr>
<td>EB</td>
<td>Executive Board</td>
</tr>
<tr>
<td>FAO</td>
<td>Food and Agriculture Organization</td>
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<tr>
<td>FAOSTAT</td>
<td>Food and Agriculture Organization Corporate Statistical Database</td>
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<tr>
<td>FFS</td>
<td>Farmer Field Schools</td>
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<tr>
<td>GCF</td>
<td>Green Climate Fund</td>
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<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
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<tr>
<td>GEF</td>
<td>Global Environment Facility</td>
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<tr>
<td>GNI</td>
<td>Gross National Income</td>
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<tr>
<td>HDI</td>
<td>Human Development Index</td>
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<tr>
<td>ICARDA</td>
<td>International Center for Agricultural Research in the Dry Areas</td>
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<tr>
<td>IDP</td>
<td>Internally Displaced Persons</td>
</tr>
<tr>
<td>IFAD</td>
<td>International Fund for Agricultural Development</td>
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<tr>
<td>IKR</td>
<td>Iraqi Kurdistan</td>
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<tr>
<td>INDC</td>
<td>Intended National Determined Contribution</td>
</tr>
<tr>
<td>IPM</td>
<td>Integrated Pest Management</td>
</tr>
<tr>
<td>ISIL</td>
<td>Islamic State in Iraq and the Levant</td>
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<tr>
<td>IUCN</td>
<td>International Union for Conservation of Nature</td>
</tr>
<tr>
<td>JICA</td>
<td>Japan International Cooperation Agency</td>
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<tr>
<td>LWP</td>
<td>Livestock Water Productivity</td>
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<tr>
<td>MoA</td>
<td>Memorandum of Agreement</td>
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<tr>
<td>NDP</td>
<td>National Development Plan</td>
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<tr>
<td>NEN</td>
<td>Near East, North Africa and Europe Division</td>
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<tr>
<td>PPP</td>
<td>Purchasing Power Price</td>
</tr>
<tr>
<td>PDS</td>
<td>Public Distribution System</td>
</tr>
<tr>
<td>RB-COSOP</td>
<td>Result Based-Country Strategic Opportunities Program</td>
</tr>
<tr>
<td>SARP</td>
<td>Smallholder Agriculture Revitalization Project</td>
</tr>
<tr>
<td>SDG</td>
<td>Sustainable Development Goals</td>
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<tr>
<td>SME</td>
<td>Small to Medium Enterprise</td>
</tr>
<tr>
<td>SO</td>
<td>Strategic Objectives</td>
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<tr>
<td>UNDP</td>
<td>United Nation Development Programme</td>
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<tr>
<td>UNFCCC</td>
<td>United Nations Framework Convention on Climate Change</td>
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<tr>
<td>UNICEF</td>
<td>United Nations Children’s Fund</td>
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<tr>
<td>UNIDO</td>
<td>United Nation Industrial Development Organization</td>
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<tr>
<td>UNSDCF</td>
<td>United Nations Sustainable Development Cooperation Framework</td>
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<tr>
<td>USAID</td>
<td>United States Agency for International Development</td>
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<tr>
<td>WB</td>
<td>World Bank</td>
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<tr>
<td>WFP</td>
<td>World Food Programme</td>
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Map of IFAD-funded operations in the country

REPUBLIC OF IRAQ

SMALLHOLDER AGRICULTURE REVITALIZATION PROJECT (SARP)

The designations employed and the presentation of the material in this map do not imply the expression of any opinion whatsoever on the part of IFAD concerning the delimitation of the frontiers or boundaries, or the authorities thereof.

Map compiled by IFAD  06-01-2017
I. Country diagnosis

Economic Context

1. Iraq is an oil-rich upper middle – income country with a total area of 437,072 km2 and a population of 40.2 million in 20201 growing at 2.3% per year. Iraq is in a fragile situation. The drop in oil prices and COVID-19 pandemic are placing unprecedented strain on its economy. Faced with this multifaceted crisis, growth contracted by 10.9% in 2020; Iraq’s worst annual performance since 2003. According to the World Bank, the outlook for Iraq will depend on global oil markets, the capacity of the Iraqi healthcare system to respond to COVID-19, and its economic reform process. If conditions ease, growth is projected to gradually revive from 2.0 to 7.3% in 2021–2022, with the non-oil economy projected to bounce back to an average of 4%. In the absence of public wage bill and pension reforms, the fiscal deficit is projected to remain sizeable, averaging 12% of GDP in 2021–2022 amidst a modest recovery in oil prices. Consequently, Iraq’s debt-to-GDP ratio is projected to remain elevated in 2020 it was estimated at 81.15%. Projections suggest that poverty could increase by 7 to 14 percentage points, meaning that 2.7 to 5.5 million more Iraqis could become poor due to the COVID-19 pandemic, in addition to the existing 6.9 million poor, pre-COVID.

Agriculture, Water and Irrigation Context

2. Since the 1980s, wars, internal conflicts, international isolation and embargos have contributed to the deterioration of Iraqi agriculture. The agricultural sector currently employs nearly 15% of the active labour force mainly in the rural areas. The Iraqi National Development Plan (NDP) (2018-2022) identifies agriculture as one of the key sectors to accelerate non-oil growth, increase income and improve its distribution and address gender inequality. The NDP is targeting the agriculture sector to grow by 8.4%, proposing a set of actions to enhance agriculture productivity including investments in social and economic infrastructure, land reclamation, promotion of modern irrigation systems etc.

3. Agricultural production in Iraq is characterized by rainfed and irrigated farming systems. Most of the country’s irrigated agriculture is found in the central and southern governorates and is dependent on the Tigris and Euphrates rivers for most of its water source. Sources of irrigating water are mainly from (i) rivers and tributaries (ii) rainfall and (iii) groundwater. Tigris and Euphrates are the main water resources in Iraq and account for 98% of the Iraqi surface water. Increased water scarcity, particularly for irrigation is a key economic and environmental challenge in Iraq. The agriculture sector is the main consumer of water with up to 85% of the total volumes. Major irrigated crops in Iraq are wheat, barley, rice, dates, cotton, vegetables, fruits, legumes, and alfalfa. In central and southern Iraq, mixed farming systems are predominant. Dates are a major cash and food crop with fruit trees (particularly citrus) intercropped in date palm orchards. Animal husbandry is extensively practiced, inland fisheries and backyard poultry are valuable as a source of protein and income for the rural population. Rainfed agriculture is practiced more in the northern governorates significantly producing wheat and barley. Both winter crops account for one-third of cereal production. Other cereal crops grown in Iraq are corn and rice. Livestock production is an important component of the sector in both rainfed and irrigated systems, and fisheries are prominent along rivers2.

4. Most farmers in Iraq are smallholders and practice both rainfed and irrigated farming as well as animal husbandry. The size of land holdings has become very small and sometimes economically non-viable. Two land tenures prevail in the Iraqi agricultural sector: 1) private owned land (64%), and 2) leased land (32%), while there is some 4% of the land operated under other forms3. In the rural areas of

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the four poorest governorates (Al-Muthanna, Al- Qadisiya, Missan Maysan and Thi Qar), small-scale farmers with a holding size ranging from 2.5 to 7.5 ha account for 35% of total number of farmers (for irrigated lands less than 4 ha). Medium-sized farmers account for 34% with a holding size ranging between 7.6 ha and 12.5 ha. Further, extension services for technology transfer are weak, particularly for small producers. There are considerable food losses due to lack of post-harvest facilities. Iraq has mixed production systems, with Ninevah being pre-dominantly rainfed farming and some supplemental irrigation, whereas other governorates have both irrigated and rainfed farming systems.

5. Agriculture, including fish farming and livestock, accounts for 76% of total water use. On-farm surface irrigation system is the dominant practice and accounts for 95% of irrigated areas. Over 75% of irrigated land is affected by salinity. The water share per person per year is expected to decline from 1,829 m³ in 2015 to 932 m³ in 2065, representing the real water shortage Iraq will face in the future.

6. Major constraints facing agricultural development in Iraq include: (i) water scarcity, soil salinity, and low on-farm water use and irrigation efficiency; (ii) rising temperatures and reduced rainfall as a result of rapid climate change; (iii) limited access of smallholder farmers to remunerative market prices and weak competitiveness with imported food commodities; (iv) high input prices – seed, fertilizers, pesticides, drugs and vaccines, fuel and farm machinery; (v) low productivity and increased yield gap and (vi) lack of access to usable and affordable financial products and services, and to extension service by smallholder farmers.

7. The government of Iraq (GoI) plans to revive the agriculture sector to serve as a key pillar of a more diversified, private sector-led economy. Agriculture production, food processing and related services including logistics, finance, manufacturing and technology have large potential to expand and create jobs. Iraqi agriculture could be revived to serve as a pillar of a more diversified and private sector-led economy. Also, Iraq’s agriculture value chains have not been subject to the same level of government control or governance challenges as those of other commodities. As it rebuilds itself, Iraq’s agrifood sector can develop new ways of working, building on both its historical experiences and modern technologies to maximize its competitive potential. Unlike other countries, Iraq is yet to develop its e-agriculture/digital agriculture strategy roadmap. Digital transformation could be one of the major thrust areas to revive and sustain the agricultural development in the country.

8. The country is facing major challenges in securing durable livelihoods for the internally displaced and returned people (IDPs) due partly to the large-scale destruction caused by the conflict. In the agricultural sector, specifically, the total damage is estimated at US$2.1 billion and losses at US$1.4 billion. These together with pre-existing constraints are making the prospects of revitalizing agriculture in conflict-affected areas very challenging. This is a major problem as the agricultural sector is the largest source of employment for rural population, particularly for women whose participation in agricultural labor market increased from 30% in 1980 to 53% in 2015. The conflict with ISIL has lowered Iraq’s agricultural productive capacity by 40% and increased dependence on food imports.

9. The poor performance of the agricultural sector compounded with the lack of employment perspectives have driven smallholder farmers from rural areas and farming to look for alternative livelihood options in cities. This is particularly acute for the returnees farming households. There is a tendency of declining dependence on agriculture as a durable livelihood source for returned farmers. Major reasons for the slow return to agriculture include losses of farm assets and damage of housing, lack of access to productive inputs (seeds, animals, feed or farm equipment, problems of accessing their land, and little or no access to irrigation related to the destruction and damage caused by the ISIL’s crisis.

8 Ibid, 5
Covid-19 pandemic and Rural poverty

10. The first case of COVID-19 in Iraq was recorded on February 24, 2020. As of 4 May 2021 there were 609,000 cases and 15,566 deaths, respectively. Amid the pandemic, Iraq has faced a significantly worsened economic context. The relatively positive macroeconomic climate of 2019 has given way to the ‘twin shocks’ of 2020. These entail a rapid and significant fall in oil prices affecting Iraq’s key industry and export, and COVID-19 related restrictions on social and economic activities that negatively impacted rest of the economy. The poverty rate in the conflict most affected areas is over 40 percent. IDPs have also experienced severe welfare constraints through loss of jobs and livelihoods. Overall the rural poverty rate was double that of urban poverty. Poverty tends to be concentrated in selected governorates, with the highest poverty level in Wasit, Muthanna, Babylon, Diyala and Anbar. The unemployment rate in Iraq (2016, NDP) was estimated at 11.5 and 8.8% for urban and rural areas respectively. In 2020, the unemployment rate reached 13.74%10. Unemployment among Internally Displaced Persons (IDPs) was estimated at 27%11.

11. COVID-19 Impact on Poverty and Vulnerability in Iraq is devastating. Projections by the World Bank and the UNICEF12 suggest that in the ‘most likely’ scenario, poverty increases by 11.7% to make the poverty rate 31.7% in 2020 compared to 20.0% in 2017-2018. This translates to 4.5 million additional poor as a result of the crises, adding to the 6.9 million already living in poverty before the crises. COVID-19 pandemic has also slowed development and heightened food insecurity. With the poverty rate reaching 31.7 percent in 2020, Iraq ranks 123 of 189 countries in the 2020 Human Development Index13. Nearly, 42% of the population suffers from deprivation in more than one dimension of the vulnerability index (education, health, living conditions and financial security), which makes them more vulnerable to disease and to the increase of severe deprivation as a result of the crisis and the accompanying disruption in social services and exposure to shocks. The highest levels of vulnerability are in governorates of north and south, 46.4% and 45.3%, respectively, followed by the governorates of the center, 39.9%, and the governorates of Kurdistan region, 33.8%14.

12. Iraq is one of the country’s worst hit by COVID-19 in the Middle East. This is partially attributed to the country’s limited response capacity and challenges in enforcing public health measures such as physical distancing, movement restrictions and the use of masks. Small and medium enterprises experienced an average reduction in production of 61% as of April 2020 among food-related industries as result of COVID-19 containment measures15.

Environment and climate change

13. Iraq is facing a serious water shortage problem, which is expected to be more severe in the future where the supply is predicted to decrease from 43 billion cubic meters (BCM) in 2015 to 17.61 BCM in 2025, while current demand is estimated at 66.8 to 77 BCM (Al-Ansari, 2013; Ewaid, et. Al., 2019). The country is highly dependent on shared water resources; approximately 75 % of the country’s water resources originate outside the country, while no well-established river basin agreements exist16. The World Bank highlighted several developmental challenges to water resources sector (World Bank, 2018), including (i) the sector’s legal and institutional framework is complex with overlapping responsibilities; (ii) Iraq’s groundwater governance is still perceived as an individual property and is exploited without consideration to its sustainability, leading to its depletion; (iii) access to irrigation water services and drainage is under pressure; and (iv) salinity is a major threat17. Water shortage and drought have become a cause of displacement in Iraq.

12 UNDP (2020) impact of covid-19 on the Iraqi economy
13 WFP Iraq Country Brief, June 2021, posted on 29 July 2021
14 unicef and World Bank. Assessment of COVID-19 Impact on Poverty and Vulnerability in Iraq, July 2020
15 IOM, 2020, IMPACT OF COVID-19 ON SMALL AND MEDIUM-SIZED ENTERPRISES IN IRAQ
14. Since the 1980’s, there has been a deterioration of the environment as a result of the impact of wars and conflict. Moreover, the lack of equipment, inappropriate farming practices, salinity and an increasing population have caused widespread land degradation. Climate change is considered a development concern of high priority in Iraq. Intended National Determined Contribution (INDC) was adopted by Iraq in 2015\(^{18}\). The goal of the INDC is to reduce gas emissions by about 14% between 2020-2035. As for mitigation measures among the water and agriculture sectors, the INDC has prioritised enhancing forest management systems, reducing deforestation and investing in reforestation/afforestation; improving land use management practices; enhancing rice cultivation techniques; and rationalising the use of fertilisers. Concerning adaptation measures among the water and agriculture sector, the INDC priorities include (i) increasing water-use efficiency of irrigation systems; (ii) investing in new wastewater treatment plants; (iii) conducting research on the sustainability of the use of groundwater; (iv) establishing small dams in areas where water storage for drinking, agriculture and livestock is cost-effective; (v) reusing drainage water in planting green belts to combat desertification and restoring deteriorated wetlands; (vi) introducing heat-resistant and drought-tolerant crop varieties; (vii) establishing an early warning system for drought and flood events; and (viii) investing in better breeds of livestock with higher productivity.

15. Drought in northern parts of the country in 2020-2021 season affected rainfed areas of the country. Consequently, Iraq experienced widespread crop failure in Ninewa Governorate and halved production in Kurdistan Region of Iraq. Decreased cereal production expected to cause loss of income, increased feed prices for livestock producers and increased import requirements for Public Distribution System (PDS)\(^{19}\).

**Food and Nutrition Security**

16. The nutrition status of both the rural and urban population is increasingly dependent on the subsidised “food basket” provided by the Iraqi Public Distribution System (PDS) which is an essential policy measure to ensure food security and avoid possible malnutrition. According to a recent UNDP report\(^{20}\), there are not yet clear indications of major food insecurity. The Government has exempted farmers and other agriculture supply chain actors from movement restrictions, thus safeguarding food production. Food prices for basic commodities have stabilized following price increases in March and April, a spike associated with consumer hoarding practices at the onset of movement restrictions and curfews. Currently, the main concerns relate to price variations noted among governorates and across commodities, which could affect the purchasing power of the most vulnerable groups. If the COVID-19 crisis continues, consumer hoarding of food products may restart at a much higher pace, particularly if this is also driven by a general lack of confidence in the Iraqi dinar and the subsequent decision to invest in goods, including necessary food products. Recent data found that 93 % of surveyed households had acceptable food consumption scores. Of these, 14 % resorted to negative coping strategies, with the majority relying on less expensive foods. Around 2 million households reported challenges in accessing markets due to travel restrictions. Limited movement combined with the closure of shops, businesses and services, including financial institutions and government offices, resulted in layoffs and lost income, while raising concerns among people of increasingly not being able to meet basic food needs.

17. The prevalence of undernourishment in total population (%) increased from 23.8% (6.4 million) in 2004-06 to 37.5% in 2018-20 (14.7 million). Likewise, prevalence of obesity in the adult population (18 years and older) increased from 28.0% in 2012 to 30.4% in 2016. Whereas, the prevalence of wasting in children (under 5 years of age) reached 3% in 2020. The prevalence of overweight in children (under 5 years of age) declined slightly, from 9.2% in 2012 to 9.0% in 2020. Same trend experienced with the percentage of anaemia among women of reproductive age (15-49), which decreased from 29.8% in 2012 to 28.6% in 2019. Similarly, the prevalence of stunting in children (under 5 years of age) declined from

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\(^{18}\) INDC_Iraq_2015

\(^{19}\) FAO GIEWS (global information and early warning system on food and agriculture) Update. The Republic of Iraq Drought in northern parts of the country. 11 June 2021.


\(^{20}\) file:///C:/Users/a.abdouli/Desktop/UNDP_IQ_Impact_of_the_Oil_Crisis_and_COVID_19_on_Iraq_Fragility.pdf
19.2% in 2012 to 11.6% in 2020\textsuperscript{21}. Conflict is the primary reason for hunger in Iraq and the region. In 2018, 2.5 million people are food insecure and in need of assistance in Iraq\textsuperscript{22}.

**Gender and Youth**

18. In 2019, the proportion of Iraqi male and female population is almost equal (50.6 and 49.4% respectively) with a growth rate of 2.28\textsuperscript{23}. The population below 24 years represents 60% of the population followed by the section of 25-54 years (33.9%). This indicates a potential large work force in the society, which is expected to increase with the current growth rate.

19. Poverty, a shortage of girls’ enrolment in school in rural areas, insecurity, traditions and cultural practices, such as the early marriage of girls, are among many factors that limit women empowerment and employment opportunities. About 72% of men are economically active compared to 13% of women. Women generally have lower working hours, more underemployment and less paid work.

20. The 2018 female HDI value for Iraq is 0.587 compared to 0.744 for males, resulting in a gender development index (GDI) value of 0.789, placing it into Group 5 of UNDP scale. Iraq has a gender inequality index (GII) value of 0.540, ranking it 131 out of 162 countries in the 2018 index. In Iraq, 25.2 percent of parliamentary seats are held by women, and 39.5 % of adult women have reached at least a secondary level of education compared to 56.5 % of their male counterparts\textsuperscript{24}.

**Fragility Situation**

21. Iraq is a fragile context with respect to the five dimensions of fragility (economic, environment, political, societal, and security). As for the severity of fragility, it is ranked with severe fragility in economic, societal and security dimensions, and high fragility in environmental and political dimensions. The COVID-19 is likely to increase the five dimensions of fragility in Iraq\textsuperscript{25}. The country is included in the World Bank list of countries with medium intensity conflict situation\textsuperscript{26}. The two key indicators used by IFAD to define fragile solutions in a country namely (i) institutional capacity and (ii) conflict are not only present in the country as a whole but the negative consequences of these factors have permeated even those regions in the south where there is no active conflict situation. Iraq is at a crossroads. Almost two decades after the 2003 war, the country remains caught in a fragility trap, facing increasing political instability, growing social unrest, and a deepening state-citizen divide. Amid a multitude of crises (including an oil price shock, the COVID-19 pandemic, and recent protests) as well as a culmination of poor economic policies, a lack of reforms, and an inability to tackle corruption, Iraq has had its worst annual gross domestic product (GDP) growth performance in 2020 since 2003. The overall rural sector performance is at a low level. Iraq's fragility has affected its capacity to deal with rural development significantly, reducing institutional capacity and service delivery.

**Digital Agriculture drivers**

22. There is evidence that digital technologies, supported by appropriate policies, can raise on-farm productivity, increase resource use efficiency (e.g. water, energy, fertilizers, and pesticides), and build climate resilience through targeted fertilizer application and precision irrigation. E-government can improve the transparency and efficiency of public services by digitizing land tenure mapping and registration, subsidy distribution, weather forecasting, and water resource management. E-extension services can help overcome constraints of traditional extension and provide cost-effective ways of


\textsuperscript{23} Worldpopulationreview.com/countries/Iraq-population.


\textsuperscript{25} UNDP. IMPACT OF THE OIL CRISIS AND COVID-19 ON IRAQ’S FRAGILITY. August 2020

\textsuperscript{26} https://www.worldbank.org/en/topic/fragilityconflictviolence/brief/harmonized-list-of-fragile-situations
reaching more farmers at lower costs. Access to information can also promote the inclusion of marginalized rural producers in markets.

II. Rationale and Time Frame

History of Engagement

23. Before 2016, IFAD supported Iraq through a grant financed regional agriculture research project implemented by ICARDA. The implementation of that grant in South Mosul faced major constraints because of the deteriorating security situation. It has however managed to successfully train farmers, staff members from other development projects, technical staff, extension staff, decision makers, and local administration staff, on community-based development approaches. The project also promoted the production of feed blocks from agro-industrial by-products as a simple and reliable source of animal feed. After 2003, IFAD provided several bilateral grants to support the development of rural livelihoods and enhancing the productive and adaptive capacity of smallholder farmers. These include: (a) Bio-pesticides & organic fertilizer for improved smallholder livelihoods. This grant greatly benefited poor farmers in central and southern parts of the country. (b) Improving the Food Security and Climate Change Adaptability of Livestock Producers using the Rainfed Barley-based System in Iraq and Jordan. This project focused on the application of a holistic package to improve sheep flocks’ reproductive performance in project sites in Nineawa governorate.

24. Before 2016, Iraq did not benefit from IFAD lending. However, Iraq benefitted from IFAD regional grant window for agriculture research. Before the war, Iraq was a donor that used to contribute to the different IFAD replenishments and, as a consequence of the war, it accumulated unpaid replenishment. An agreement between the Iraq Government and IFAD on the settlement of outstanding contributions, of approximately USD $46 million, was approved by the Executive Board in April 2016 and signed in July 2016. Iraq paid up an amount of USD $4 million in 2017. This settlement opened the door for IFAD lending to Iraq. The Smallholder Agriculture Revitalization Project (SARP/BRAC) is the first and only on-going project since its approval in September 2017 and entered into force in June 2018. The grant provided by the adaptation fund (AF) was to implement a sub-project entitled “Building Resilience of the Agriculture Sector to Climate Change in Iraq” (BRAC). BRAC is completely blended with SARP but to be implemented by the Ministry of Health and Environment (MoHE).

Rationale for IFAD engagement in Iraq

25. Iraq is striving to transition from conflict and stabilization to sustainable development. The Government recognizes the need to address structural challenges and adopt a holistic approach to ensure the success of sustainable reconstruction and rehabilitation. It envisages a renewed social contract, based on strengthening citizen-state trust, social cohesion, private sector-led growth and focus on sustainable development. Iraq is committed to the 2030 Agenda for Sustainable Development. The Iraq Vision 2030, the National Development Plan (NDP), 2018-2022, the Reconstruction and Development Framework (RDF), 2018-2027, and the Poverty Reduction Strategy (PRS), 2018-2022, are mostly anchored in the Sustainable Development Goals.

26. Based on the current situation in the governorates affected by ISIL and the above economic, agriculture and rural poverty context, the rationale for IFAD engagement in Iraq would be to support the government in achieving its priorities aiming at improving rural economy and reducing impoverishment of marginalised small scale farmers and livestock producers and re-establishing livelihoods and improving their resilience to climate change. The key to agriculture revitalisation priorities would be to increase the agricultural and livestock productivity and post-harvest processing and market access, leading to increased incomes of smallholder farmers, rural women and youth, while at the same time improving the efficiency of natural resource management and resilience to climate change.

27. Should the Government of Iraq confirm its intention to borrow from IFAD BRAM resources, the focus of a new intervention would be on the poorest agricultural governorates and those affected by ISIL, where conflict has now decreased. Building on IFAD’s comparative advantage and experiences in
designing interventions for fragile contexts in NEN Region (Syria, Yemen) and IFAD’s previous and ongoing engagement with Iraq, a new program will consider the following areas of intervention: (a) restoration of agriculture and livelihoods of farming communities in conflict-affected governorates, with special focus on returnees’ smallholder farmers. This would include reconstruction of farm assets and infrastructure; (b) supporting smallholders across the country to adopt sustainable practices for improved income and building resilience; (c) strengthening agri-food SMEs by providing technical and financial support as well as improved access to markets; and (d) Scaling up climate resilience technologies and innovations to enhance the role of agriculture as a durable source of rural livelihoods.

Lessons learnt

28. An important lesson learned from IFAD interventions as well as other donors support is the implications of fragility on project management and attaining development objectives. Future IFAD financed projects should be kept intentionally simple and flexible to accommodate the weak institutional structures in a fragile country context. The strong focus of futures projects should be on rehabilitation of livelihoods and building capacities of local institutions.

29. In fragile, conflict prone situations, community-driven development (CDD) approaches contribute to reconstitute much needed social capital and to re-build trust within and between rural population groups. Implementation arrangements that feature this type of decision-making mechanism lead to increased transparency, stronger accountability and they ultimately play a vital role in terms of the longer-term empowerment of rural citizens.

30. In the crop and livestock sectors emphasis has to be on both production and post-harvest processing and marketing activities. Projects focused only on enhancing production and ignoring the capacity of the farmer to undertake post-harvest and marketing activities have failed to sustainably enhance incomes of smallholder farmers, rural women and youth.

31. Recognizing the risk mitigation strategies of small farmers and designing to encourage their participation: Small-scale farmers are willing to adopt improved production technologies, but they need to see results first. Given smallholder farmers are risk averse, incentives to pay for the first year the cost of incremental inputs and services of the new technologies, are essential for higher adoption rates.

32. Digital transformation of Iraq agriculture might help in resource efficiency and improved climate resilience, youth employment, access to knowledge, trade, financial inclusion, improved traceability and food safety, and improved public services. In fragile and conflict regions, digital innovations will pave ways to address the problems of smallholder farming. There is a lack of suitable entry points into agriculture in fragile countries, which is characterised by informality, limited organisation and mechanisation of production, and insufficient targeting of growth. IFAD can drive digital transformation towards a vibrant agriculture and food system in Iraq.

33. Capacity building and training in the management of donor-funded projects is key for the effective use of any investments in reaching out to the rural poor, particularly in post-conflict situations.

34. In order to avoid slow project start up under multiple implementing agencies (such as MOA and MOHE) arrangements, a clear division of labour and flow of funds have to be established right from project onset.

Need for a Country Strategy Note

35. A Country Strategy Note (CSN) was approved for Iraq in February 2017 to cover the period 2016-2018. The CSN was considered as an interim step to capture the key strategic approach needed to tackle rural poverty in the country, and was elaborated as a result of extensive consultations with the GoI and the key stakeholders operating in the country (including development partners, in particular the WFP and FAO). The CSN was extended to December 2019. Considering the need to have a valid strategic basis for IFAD interventions in the country and to set a base for a potential pipeline under IFAD 12 cycle, the current new CSN would cover the period 2022-2023.
III. Strategic Objectives

36. The goal of the CSN is to contribute to the reduction of poverty, food insecurity, vulnerability, and youth unemployment and building resilience in rural communities. Particular attention will be paid to the gender, youth, nutrition, and climate change aspects, consistent with IFAD12 mainstreaming priorities. The CSN has the following two interlinked Strategic Objectives (SOs).

37. **SO1: Strengthen the resilience of vulnerable rural populations and their production systems to climate change food and nutrition insecurity.** The expected outcomes of SO1 are: (i) rural households diversify livelihoods and adopt improved and sustainable technologies (including natural resource management) that increase productivity and ensure resilience to climate change; (ii) increased use of improved irrigation techniques; (iii) promotion of conservation agriculture in crop-livestock rainfed systems, diversified and organic food production including drought resistant varieties where relevant; (iv) strengthened capacity of farmers’ associations through skill and knowledge transfer on climate smart agriculture approaches, technologies; (v) restore agriculture and livelihoods of farming communities in conflict-affected governorates through reconstruction of farm assets and infrastructure and provision of productive inputs; and (vi) driving the digital transformation in modernising the NR management, productive capacities, market access, financial inclusion and better extension advisory services for benefiting smallholders and women. On the policy engagement front, IFAD’s current portfolio in Iraq already includes developing a climate change adaptation strategy for the agriculture sector; building the skills of relevant governmental staff on climate change adaptation and risk reduction; and delivering a Training of Trainers (ToT) programme on climate-resilient agronomic systems and technologies targeting public administration staff dealing with mainstreaming climate change (CC) adaptation into environmental, agriculture, and water issues.

38. **SO1 is aligned with the SDGs:** No poverty (SDG 1), Zero Hunger (SDG 2), Good Health and Well-being (SDG3), Gender Equality (SDG 5), Climate Change (SDG13), NDP 2018-2022 for Iraq and the Intended National Determined Contributions (INDCs) – Iraq.

39. **SO2: Improve the performance of crop and livestock production systems and agribusiness through financial inclusion and strengthened value chains and off-farm SMEs.** The expected outcomes of SO2 are: (i) improved and affordable financial and non-financial services are available for smallholders; (ii) linkages to input and output markets are enhanced; (iii) organization of stakeholders in FOs is enhanced; (iv) viable SMEs and jobs are promoted; and competitiveness increased along the value-chains of selected commodities.

40. **SO2 is aligned with SDGs 1, 2, 5 and 8, MoA Strategic Plan 2015-2025 and NDP 2018-2022.** The targeted beneficiaries of the SO2 will be economically active smallholders’ farmers and livestock owners, who are able to invest in on and off farm economic activities and market surplus production/ goods and services, with a focus on vulnerable social groups including women headed households, agricultural cooperatives and young entrepreneurs.

41. **The two CSN SOs are aligned with the National Development Plan (NDP), 2018-2022, the Reconstruction and Development Framework (RDF), 2018-2027, and the Poverty Reduction Strategy (PRS), 2018-2022.**

42. **They are also aligned with IFAD Strategic Framework (2016-2025), Fragility Strategy, Targeting and gender strategy, Private Sector Development and Partnership Strategy.** The IFAD12 mainstreaming themes will be addressed as follows: (i) CC measures will be embedded into investment programme design with clear focus on adaptation, being the first and overriding priority of Iraq’s climate actions as major part of its NDC; (ii) Women and youth will be priority under across all activities, with 50 and 30 percent of programme support, respectively. Gender and youth mainstreaming action plans will be developed during the programme design phase; (iii) nutrition will be mainstreamed by selecting nutrition-sensitive crops for value chain development and adding value to crop and livestock products.

43. **The Two CSN SOs are aligned with the United Nations Sustainable Development Cooperation Framework, 2020-2024, (UNSDCF), and its four pathways: (a) strengthened stabilization; (b) diversified pro-poor economic growth for sustainable livelihoods; (c) improved governance with accountable
institutions that protect the rights of vulnerable groups and pave the way for citizen-state trust; and (d) decreased fragility to climate change.

IV. Planned IFAD engagement

44. The engagement with Iraq and the development of the country programme is aligned with and builds on the fragile situations strategy. Through this engagement, IFAD displays its commitment to work in the most fragile and complex environments. The Smallholder Agriculture Revitalization Project (SARP) is IFAD’s first operation in Iraq. It is a six-year investment project with a total IFAD financing of approximately USD 31.84 million. The agreement became effective in June 2018. Conditions for the first disbursement are being met.

45. In IFAD11, Iraq was allocated an allocation of USD 25.0 million under PBAS but it was not used. Being a UMIC, Iraq is not eligible to access PBAS resources in IFAD12. The near-term engagement with the Government of Iraq under IFAD12 would be under BRAM framework, pending compliance with all country eligibility criteria. Should the Government confirm its willingness to borrow from IFAD12 allocation cycle, the proposed pipeline project would be scaling up SARP current scope to cover additional areas in the northern governorates of Iraq. SARP-II (including BRAC) would assist in increasing the competitiveness of agriculture, preventing post-harvest losses and removing marketing bottlenecks through farmer organizations building on achievements and lessons learned under the ongoing SARP project. SARP-II/BRAC-II would have the same objectives, scope and activities as SARP/BRAC but would target rural people in the ISIL affected governorates.

46. Additionally, IFAD is engaged with the World Bank, WFP and FAO in food security monitoring and analysis. The quartet is producing food security reports that engage the government, general public, and development partners on the challenges to food security and the agri-food sector in Iraq. IFAD is also engaged with the quartet in the policy dialogue around the challenges to food security and the policy and investment environment.

Potential partnership

47. IFAD will strengthen potential cooperation and partnerships with other UN entities and with other development partners active in the country. IFAD will continue to be a member of the Priority Working Group (PWG) #4 of the UNSDCF in Iraq together with UNDP, UNEP and FAO. IFAD will continue its participation in the donor group on the agriculture sector in Iraq, led by the Dutch Embassy and FAO. In particular, IFAD will join the World Bank, FAO and WFP in taking the lead to establish a framework platform for supporting the government in planning and execution of the developmental programs and interventions in the agriculture sector. Other partners could include UNDP, EU, JICA, IsDB. Moreover, and building on SARP/BRAC leveraging potential, IFAD will work with national partners to identify and access climate financing opportunities, including the GEF, the GCF, the Adaptation Fund, and ASAP.+

Implementation

48. Building on the experience of SARP, IFAD will work closely with the Ministry of Agriculture, Ministry of Environment, local communities, local authorities, and actors for the successful implementation of the proposed programme(s). New arrangements would be made for strengthening IFAD’s field presence to closely monitor the implementation of the programme and monitor its progress. These would include, among others, the hiring of local field officers with relevant technical expertise and skills to help the national teams in the timely planning and implementation of the projects. IFAD will be flexible in designing a context-specific implementation arrangement in line with the specific conditions (and their evolution) in the programme sites.
Monitoring and evaluation

49. Project/s under this CSN will undertake its/their own monitoring and evaluation arrangements through specially dedicated teams which are an integral part of the project implementation structure. Each project will undertake a baseline and end-line survey to track impact as well as annual outcome survey. Quarterly or Annual reports will be produced to provide an assessment of project performance. IFAD will assess how to increasingly use digital technology to collect and track data to develop a more accurate and effective system for monitoring and evaluation. Lessons learned so far from the experience of SARP will be reflected in the M&E system.

Communication and Knowledge management

50. The communications and knowledge management strategy for Iraq will be carefully crafted to balance the competing requirements of working remotely in a fragile environment and at the same time use the opportunity for proper communication and visibility of the IFAD programme in the country. IFAD will organize events to share learning about the impact of targeted investments in agriculture and rural development in fragile states based on experience in Iraq. IFAD will establish a mechanism for on-going discussion and engagement with the Government to keep them informed of the performance of the country programme and use their good offices for facilitation and coordination on the ground. The quarterly reports of the M&E system about the progress of the projects implementation will be shared with the government officials to closely work with them on solving any emerging constraints and ensure the provision of policy support. A knowledge depository system needs to be developed for Iraq to carefully capture knowledge products, document lessons learned experience of working in such fragile context and advise on sharing and scaling up approaches of knowledge products. FAO expertise in developing knowledge products will be leveraged.

Supervision

51. The project under this CSN will be directly supervised by IFAD. However, in the fragile context in Iraq, flexible approaches will be applied for supervision and implementation support. Specific procedures will be developed for the employment of field presence officer and recruitment of local Third Party Monitors to assist with the field work and organize IFAD remote missions to undertake virtual supervision. These needs to be flexible for changes/modifications in responding to any emerging challenges. Supervision activities will be conducted from and in Cairo as well as in Iraq when security conditions allow for IFAD staff in-country presence. Some interim arrangements would be made to benefit from experienced local experts in the implementation supervision and provision of technical backstopping to the national teams. IFAD will be responsible from the implementation of annual supervision missions, either directly or through third party contracting.

Financial Management

52. Strong financial and operational support systems will be necessary to enable IFAD funded projects to deliver the desired development interventions. IFAD FMD will liaise with concerned government authorities to establish sound procedures for flow of funds, the submission of withdrawal applications, financial approvals, reporting and audit arrangements. Projects will engage a reputable private audit firm with field presence to undertake the annual external audits.

Procurement

53. Procurement in Iraq faces major challenges including, moderate rating of public procurement monitoring and access to procurement information; risks of mismanagement caused by heavy bureaucracy, use of several procurement committees, unnecessarily and disproportionately procedural procurement system and lack of consistency in the application of the regulations across the country. Iraq maintains a poor ranking in Transparency International’s Corruption Perception Index with a score of 20
in 2020 (160/179), the risks of corruption are very high and there is an ineffective complaints management system despite the presence of an independent authority for integrity (The Iraqi Commission of Integrity). In view of these difficulties, it is imperative that IFAD projects in Iraq cover, in the design and the resulting Financing Agreements, a simplification of the procurement procedures aligning them to IFAD’s procedures, streamlining the roles of the various committees, and clarifying the respective roles of the stakeholders. Projects will need to elaborate procurement manuals to cover for any inconsistencies with IFAD’s Guidelines and Handbook and to highlight the adoption of IFAD’s Debrief and Protest mechanism. IFAD’s policies on combating corruption, harassment and money laundering will need to be complied with and integrated- along with respective reporting hotlines- into all bidding documents.

V. Risk Management Framework

54. Iraq is a nation that is experiencing significant and interconnected political, economic, environmental and security challenges. The effects of climate change, increasing temperature, reduced precipitation, increasing water scarcity and salinization, and increasing prevalence of sand and dust storms will exacerbate these challenges and have serious implications for Iraq’s future.

55. Iraq is the 83rd most vulnerable country and the 16th least ready country. Vulnerability measures the exposure, sensitivity, and ability to cope with climate related hazards by accounting for the overall status of food, water, environment, health, and infrastructure within a country. Readiness measures a country’s ability to leverage investments and convert them to adaptation actions by looking at the country’s economic, governance and social readiness. Globally, relative to other countries its current vulnerabilities are manageable but improvements in readiness will help it better adapt to future challenges.

56. In a region with widespread conflict and with Iraq’s own history, this risk remains high and its impact, if realised, could be catastrophic. IFAD has few and only marginal mitigation measures at its disposal, but clearly providing job opportunities and increased resilience and incomes to the rural poor can make a contribution to defuse tensions. More specific risk and mitigation responses can be found in appendix 3.

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27 Iraq’s Initial National Communication to the UNFCCC (INC) (2017). Prepared by the Ministry of Health and Environment with the financial and technical support of UNDP, GEF, and UNEP. Available at http:// unfccc.int/national_reports/non-annex_i_natcom/items/10124.php
Appendix 1: Previous Country Strategy Note

Country Strategy Note (CSN)
Date: 20 December 2016
Country: Republic of Iraq

I. Country diagnosis

Economic context

1. Iraq is an oil-rich upper middle-income country in the NEN region with a population of 36.4 million growing at 3.2% per year and of which 33% are rural. The per capita gross national income (GNI) amounted to USD 9 820 in 2015 corresponding to a purchasing power price (PPP) of USD 15 340. The agriculture sector accounts for 8.6% of Gross Domestic Product (GDP) including the oil sector and 32% without the oil sector. Economic growth has averaged 7.1 percent per year over the past five years, and it is projected to grow at 7.2 percent in 2016 and at around 5 percent in the next few years. This is driven by the projected ramp-up in oil production, increase in oil-related FDI, structural reforms and implementation of the IMF program. However, conflict, and excessive dependence on oil pose significant challenges to Iraq’s socio-economic development. Iraq was ranked 121 out of 187 countries in the 2014 Human Development Index. Unemployment rate is 11% nationally (7% of males and 13% of females). 653,000 people are unemployed, of which 496,000 are male and 157,000 are female. Youth (15-24 years) unemployment is high at 18% (27% of females and 17% of males).²

2. The national economy faces complex challenges including a high population growth, food deficit, growing numbers of internally displaced people, security, weak governance, increasing scarcity and deteriorating quality of water resources and negative effects of climate change. Despite these challenges, the country has great potential for development. In fact, the Iraqi National Development Plan (NDP) lays out ambitious targets for the period from 2013 to 2017 and aims to (i) diversify the economy and accelerate growth in promising sectors such as industry, energy and agriculture; (ii) make income generation and poverty reduction a central goal for national development; and (iii) strengthen the capacities of women and youth to contribute to the labor market and society. The NDP identifies agriculture as one of the key sectors to accelerate non-oil growth, increase income distribution and gender equality. The above strategic directions of NDP are forward looking and will remain pertinent beyond the 2017 horizon.

3. Iraq is among the countries with the most fragile situations. The latter countries have been identified by the recent IFAD strategy for engagement with fragile situations as those warranting more flexible, fragility-sensitive programming and implementation modalities. For Iraq, fragility is mainly stemming from weak institutional capacities and structures for good governance. Volatile and transboundary security with associated risks are not very conducive to private sector investment for reconstruction, inclusive economic growth and job creation.

Agriculture context and constraints

4. Iraq’s agricultural sector represents a small, but vital component of Iraq’s economy. The general stagnation in agricultural productivity which has been a characteristic of Iraq’s agriculture over the last years, has steadily increased dependence on imports to meet domestic food needs and has made Iraq a major importer of agricultural products. Total value of agricultural imports was USD 1.76 billion in 1985 and USD 4.64 billion in 2008. As a result, Iraq is heavily dependent on imported food – particularly, but by no means only, wheat – to satisfy local demand.

5. Agriculture is mostly practiced on small farming units. Small-scale farmers account for 35% of all farmers, with a holding size ranging from 2.5 to 7.5 ha with subsistent cereals crops accounting for 58 per cent of cultivated area; while medium size farmers account for 34 per cent with a holding size ranging between 7.6 and 12.5 ha. Crop production is the major source of income for the majority (75 percent) of farmers in Iraq, while the rest depend on livestock or mixed crop and livestock enterprises. Agriculture is practiced from North to South in eight agro-ecological zones (ACZs). The main agriculture production systems are the irrigated-based system in the Center and South and the rainfed-based system predominantly in the North. In the rainfed areas, the system is cereals/small ruminant based. Input use and productivity are low and influenced by crop rotations, with continuous mono-cropping of cereals or cereal-fallow rotation. In the irrigated farming systems of Central and Southern Iraq, in addition to cereals, winter and summer vegetables, corn and rice are grown as well as date palm as a cash crop along with other fruits.

6. Within cereals, the average rainfed wheat yield is 1.0 ton per ha against a potential of 2.5 ton. The average irrigated wheat yield is 2.6 tons per ha against a potential of 4.5 tons. The reasons for the low productivity for crops and livestock are: (i) use of traditional and low yielding productions technologies; (ii) lack of enabling agriculture input and output price policy - The prices of seeds, fertilizers, pesticides, veterinary drugs and agriculture machinery and equipment are very high for local producers without incentives to compete with heavily subsidized imported food items available in the local market; (iii) weak agriculture extension services for technology transfer particularly to small producers; (iv) limited access to rural finance and particularly affordable investment loans; and (v) diminishing water availability, increasing water salinity, decreasing soil fertility, low irrigation efficiency, rising temperature and reduced rainfall. Other challenges relevant to smallholder agriculture development are (a) weak producers organisations; (b) limited backward and forward linkages with agricultural producers, for input supply and post-harvest processing and marketing; and (c) limited access of small producers to credit.

Agriculture Land, water resources and irrigation infrastructure

7. Total agriculture area of variable quality and potential amounts to 11 million ha, of which 6 million are actually cultivated on a yearly basis with 2.5 million ha under rainfed in the north and 3.5 million ha under irrigation. About 0.3 million ha are irrigated from surface water and 5.0 million from underground water resources. Over 75% of irrigated land is affected by salinity. Agriculture, including fish farming and livestock, accounts for 76% of total water use. On-farm surface irrigation system accounts for 95% Conveyance and on farm water use efficiency is low ranging from 35% to 40%.
8. Increasing water scarcity and reduced irrigation water availability are dominant economic and environmental challenges in Iraq. Current water use for all purposes far exceeds supplies. The average yearly inflow of the Euphrates declined from 30.44 billion m³ for the period 1933-1971 to 12.75 billion m³ (42%) for the period 2008-11. For the Tigris, the inflow declined from 49.22 billion m³ for the period 1933-98 to 33.11 billion m³ (67%) for the period 1999-2011. The decline in the inflow is due to over exploitation, climate change and the Ataturk Dam in Turkey. The annual share of renewable fresh water resources per capita in Iraq declined from 4 587 m³ in 1964 to 998 m³ in 2014. The quality of irrigation water is deteriorating in terms of salinity and chemical contaminants.

9. Irrigation infrastructure includes: (i) a wide range of dams and water reservoirs with a cumulative capacity of 70 billion m³; (ii) 45 000 km of water conveyance network and 85 000 km of drainage canals; and (iii) 38 000 pumping and control stations for irrigation and drainage. However, much of the irrigation infrastructure is in a state of disrepair as a result of poor maintenance and particularly the lack of cleaning of drainage canals.

**Climate change**

10. Located in an arid and semi-arid environment, Iraq is prone to severe impact of climate change on already scarce water resources and fragile systems. According to the current global median projections from the Inter-Governmental Panel on Climate Change (IPCC) in Iraq, climate change would translate in higher temperatures, lower rainfall with uneven spatial and temporal distribution, higher frequency and severity of droughts and sand storms, and emerging new pests and diseases. This will exacerbate the impoverishment of the rural poor, their migration to urban cities, and reduction of food security at the household level.

**Nutrition**

11. Given the current low crop and livestock productivity, agriculture is no longer the major source of livelihood for smallholder farmers. The nutrition status of both rural and urban population is increasingly dependent on the heavily subsidized “food basket” provided by the Iraqi Public Distribution system (TDS) which is an essential policy measure to ensure food security and avoid possible malnutrition. However, the subsidized food rationing on a national scale with imported food has had a negative impact on the local grain market with consequent depressing effects on producer prices and on agriculture sector investment.

**Potential for agriculture development**

12. There is a large scope for assisting smallholder farmers to increase their productivity, in both rainfed and irrigated agriculture, but there are several issues for which information needs to be generated. The information gaps that could be addressed partially as part of the design of future investment projects include: characterization of livelihood systems, famers’ community dynamics and social cohesion, assessment of climate vulnerability, review of key value chains, as well as analysis of relevant policies and institutions. The past work and documentation and strategies by FAO, the World Bank and other partners provide a good baseline for IFAD to build on. IFAD is also undertaking several preparatory studies to generate additional information, including a study on “Policy and Institutional Gaps and Needs”; as well as a very detailed climate vulnerability assessment in collaboration with WFP.
13. The ongoing national agriculture development programs of the Ministry of Agriculture embody relevant approaches for productivity increases and include promising pilot initiatives for on farm technology testing, validation and adoption, aiming at the efficient use of natural resources and adaptation to climate change, both for rainfed and for irrigated agriculture.

14. For rainfed agriculture, the approaches include: introduction of drought and disease tolerant high yielding cereals varieties; conservation farming; rangeland improvement; performing animal husbandry practices. For irrigated agriculture, the specific approaches include: increased intensification per ha; incentives favoring cash crops including date palm; introduction of salt tolerant irrigated crops; promotion of productivity enhancing technological packages; increased water use efficiency and optimum return per unit of water. For both rainfed and irrigation, the supportive instruments being introduced are: use of a land suitability map for the selection of crops according to respective agro-ecological zones; promotion of IPM practices; development of an effective network of an early warning system particularly for the monitoring and mitigation of climate change risks.

Rural poverty context

15. In 2012, rural poverty rate stood at 31%, nearly the double of the urban poverty one (15%). About 54% of the labor force is rural. The average rural household size is 9.25 persons. Rural poverty in Iraq is a direct consequence of the rapid 3% population growth, internal conflict and insecurity, as well as climate change resulting in increasing water scarcity and accelerated desertification in the country. The combined effects resulted in reduced prospects for viable rainfed and irrigated agricultural and livestock production, and increasing lack of sustainable income-generating opportunities for rural communities.

16. At the regional level, out of the 18 governorates in Iraq, the poverty ratio ranged from 35% to 52% for the five poorest governorates, from 11% and 26% for nine governorates and from 2% to 10% for the remaining four governorates. In the rural areas of the poorest governorates, small-scale farmers and livestock producers are the most marginalised households with unemployed young men and women as the most vulnerable.

Youth and Gender

17. In a country where young people constitute a high percentage of the population, their success or failure will have a clear impact on society en masse. The number of Iraq’s children and youth is increasing at an unprecedented rate. In 2010, Iraq had 5.1 million children and 6 million young people. These numbers are expected to run as high as 6.7 million and 9.6 million respectively in 2025, and 8.9 million and 14.9 million respectively in 2050.

18. Poverty, a shortage of girls’ schools in rural areas, insecurity, and traditions and cultural practices such as the early marriage of girls, among other factors, limit women empowerment opportunities. The gender gap in economic activities is very wide; 72 percent of men are economically active compared to 13 percent of women. Women generally have lower working hours, more underemployment, and less paid work.
II. Rationale and time frame

History of engagement

19. To date, Iraq has not benefitted from IFAD lending due to its arrears for contribution to the Fund resources. However, Iraq has benefitted from IFAD regional grant window for agriculture research. An agreement has been recently signed between IFAD and the Republic of Iraq for contribution arrears settlement. This positive development opened the door for IFAD lending to Iraq.

Need for a Country strategy Note

20. Against the rural poverty context described above and the resulting impoverishment of the rural population, as well as IFAD’s lack of sufficient in-country experience upon which to develop a fully-fledged COSOP, a Country Strategy Note (CSN) has been prepared to provide an interim strategic direction for IFAD engagement. The CSN has been informed by an intensive 3 days Iraq/IFAD consultative meeting in Amman from 18 to 20 October 2016. Iraqi participants included senior decisions makers from the Ministries of Agriculture, Water Resources, Science and Technology, the Kurdistan region, governorates and Universities. Participants from active development partners and international research centres in Iraq including FAO, UNIDO, ICARDA, IUCN and the Italian Government also formed part of the consultation process. The CSN is intended to set out a shared agenda for IFAD current 2016-18 PBAS funding cycle, after which an RB-COSOP will be prepared and submitted to IFAD Executive Board.

Rationale for IFAD engagement in Iraq

21. Against the above economic, agriculture and rural poverty contexts, the rationale for IFAD engagement in Iraq would be to support the government priorities and associated on-going national agriculture revitalisation programs aiming at reversing the declining rural economy and impoverishment trend of marginalised small scale farmers and livestock producers. The key to agriculture revitalisation would be to increase the productivity and incomes of smallholder farmers derived from strategic crops and livestock, while at the same time improving the efficiency of natural resource management and resilience to climate change. In terms of geographical targeting, IFAD will be focusing on the poorest Governorates, 4 of which are in the South and one in the North.

III. Strategic objectives

22. The overall objective of the country programme is to reduce vulnerability and increase income of poor rural communities in Iraq. The future investment project in Iraq is expected to respond to the two following Strategic Objectives that are in line with the Iraqi National Development Plan:

23. **SO1: Enhance the resilience to climate change of smallholder crop and livestock production systems – through multi-benefit production approaches**: IFAD will promote (for both rainfed and irrigated agriculture) approaches for sustainable management of natural resources; enhance productivity through the introduction of crop and livestock production practices that built resilience to climate change; identify strategic commodities relevant to food security; and improve the income of vulnerable rural poor. Adaptation to climate change will be fostered through ‘multi-benefit’ production approaches and
practices such as conservation farming, crop and livestock integration, drought resistance and heat tolerant high yielding cereal and legume varieties, as well as on-farm water saving practices. This objective will support strengthening of farmer’s capacities and foster institutional strengthening and enabling policies.

24. **SO2: Enhance the productivity and profitability of small-scale crop and livestock producers through access to financial services, technologies and remunerative markets.** Through a demand driven approach, IFAD engagement will address critical impediments that will generate investment in agricultural productivity. Rural financial services will be looked at and tailored after further analysis and assessment. Access to technology will be fostered through enhanced capacity of extension staff and farmers, including for processing and reduction of post-harvest losses. Access to remunerative producer prices would be achieved through helping farmers to access markets and improving their efficiency.

25. IFAD’s work in Iraq and the pursue Strategic Objectives will contribute significantly to Agenda 2030, particularly to Sustainable Development Goals (SDGs) 1, 8, 10 and 13 related to No Poverty, Decent Work and Economic Growth, Reduced Inequality and Climate Action.

26. Moreover, for the implementation of the above strategic objectives and the associated programme in IFAD 10 engagement with Iraq, IFAD will look for opportunities for partnerships with relevant partners currently active in the country, including: (i) the World Bank in the improvement of irrigation and drainage services in targeted areas; (ii) FAO in policy development, food security and safety, seed multiplication and distribution, and animal health; (iii) USAID in agriculture policy and private sector development; (iv) ICARDA in the development, validation and dissemination of production technology packages for cereals, small ruminants and date palm; (v) UNIDO in post-harvest income diversification; and (vi) the Italian Cooperation in salinity issues and date palm value chain. Further partnerships will also be identified and developed.

**Future Pipeline**

27. The near-term engagement with the Government of Iraq would through a six-year investment project with a total IFAD financing of about of USD 18.19 million, of which USD 16.19 million would be financed from an IFAD loan on ordinary term to finance a first project, as well as an IFAD small grant to support capacity building and facilitate project implementation. This will be complemented by a USD 2 million grant from the Adaptation for Smallholder Agriculture Programme (ASAP) to decrease vulnerability of the agricultural sector to climate change. Co-financing from other sources, from Government and from beneficiaries will be sought. Additional grant co-financing will be pursued from Refugees, Migrants, Forced Displacement and Rural Stability (FARMS) to help the country face the influx of internally displaced people (at least 4 million of Iraqi people were displaced as a result of internal conflicts).

**Lessons learnt**

28. The following are lessons learnt from IFAD financed regional research grants that included Iraq, as well as from interventions of other partners working on agriculture in Iraq.
• Small-scale farmers are willing to adopt improved production technologies, but they need to see results first. Given small scale farmers are risk averse, incentives to pay for the first year the cost of incremental inputs and services embodied in the new technologies, are essential to help taking risk.

• On-farm adaptive research complemented by a network of demonstrations at farmer’s field composed of a lead farmer and several satellite farmers, and/or a network of farmer field schools (FFS) are effective platforms for quick dissemination of technologies. During this process, knowledge is shared and interactions among farmers produce a long-term effect.

• The sustainability of impact generated by IFAD investment projects beyond the completion date require government commitment to continue funding technology transfer activities and beneficiaries’ ownership to operate and maintain the collective assets created by the project.

## IV. Risk management framework

<table>
<thead>
<tr>
<th>Risk</th>
<th>Rating</th>
<th>Mitigation measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delays in loan effectiveness, staffing and timely project start up and disbursement</td>
<td>High</td>
<td>Use IFAD grant to train concerned actors, facilitate start-up, and investigate the possibility of starting with “Year Zero” to prepare the grounds for implementation</td>
</tr>
<tr>
<td>Threat to security in performing field work</td>
<td>Medium to high</td>
<td>Start in secure areas, use local contractors and service providers, close contact with local authorities. Use the support of established partners (WB, FAO, ICARDA, UNDP, …)</td>
</tr>
<tr>
<td>Increased weather variability related to climate change</td>
<td>Medium</td>
<td>Shift to drought tolerant crops, efficient irrigation practices and early warning systems</td>
</tr>
<tr>
<td>Low adoption rate of technology by farmers</td>
<td>Medium</td>
<td>Establish a dense network of demonstration plots, improve incentives and conduct farmer training on the various components of technology packages</td>
</tr>
<tr>
<td>Pressure from influx of internally displaced people to project area, placing increasing demand on food, natural resources and services</td>
<td>High</td>
<td>IFAD will be fundraiser for additional resources through the facility for Refugees, Migrants, Forced Displacement and Rural Stability (FARMS) to include activities that reduce vulnerability of host communities and displaced people</td>
</tr>
</tbody>
</table>
Appendix 2: Risk management framework.

57. Iraq is a fragile context with high to severe ranking in economic, environmental, political, societal, and security dimensions. These are major sources of risks with implications for the implementation of the project. Regardless of these sources of risks, IFAD has been able to implement development projects in similar fragile contexts in the region (Syria and Yemen). In addition, the project will benefit from the experience and lessons learned of the SARP project (on-going) in Iraq.

<table>
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<tr>
<th>Risk</th>
<th>Risk Rating</th>
<th>Mitigation Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government unwillingness to borrow</td>
<td>High</td>
<td>Continued dialog with the government, particularly the Ministry of Agriculture and the Ministry of Planning.</td>
</tr>
<tr>
<td>Political/governance – risk of political instability and weakened institutions as well as security fragility</td>
<td>High-severe</td>
<td>(i) Closely engage with UNCT to monitor political developments and benefit from lessons learned by development partners operating within the country. (ii) Start in secure areas and continue communications and exchange with authorities. (iii) invest in building the capacity of local institutions in the sites of the project implementation.</td>
</tr>
<tr>
<td>Climate/environment risks may affect project’s implementation</td>
<td>Medium-High</td>
<td>Enhance the adaptive and productive capacity of smallholder farmers to build their resilience to climate and environmental shocks through: (i) promote climate-resilient technologies and CA; (ii) shift to drought and heat tolerant crops; (iii) use of efficient irrigation practices (iv) diversified livelihood strategies; (v) encourage storage of farmer’s own seeds with needed quality and standards against drought seasons; and (vi) use of digital applications for improved monitoring, awareness and preparedness.</td>
</tr>
<tr>
<td>Delays in loan approval and effectiveness</td>
<td>High</td>
<td>(i) Close communications and consultations with the GOI, particularly with the recipient line Ministry on the timely approval of the loan; (ii) IFAD proactive role in training concerned actors and facilitate start up; and (iii) investigate the possibility of starting with year zero to prepare the grounds implementation.</td>
</tr>
<tr>
<td>Low capacity and adaptability of service providers to the introduced technologies</td>
<td>Medium</td>
<td>(i) Conduct regular training, on the farm training and field days; (ii) use of TA as required having knowledge in similar situations. Make use of SSTC facilities; (iii) upgrade the skills of services providers on the introduced technologies</td>
</tr>
<tr>
<td>Limited capacity of small holders to adopt climate resilient technologies</td>
<td>High</td>
<td>Intensify training and TA to smallholder farmers. Invest in community-based organizations’ capacity building and enabling environment. Adopt digital solutions to support extension services. Make use of SSTC facilities. Explore the establishment of farmers field schools and innovation platforms. Invest in skills upgrading and training of extension staff and other services delivery systems.</td>
</tr>
<tr>
<td>COVID-19 – increase in outbreak levels leading to further restrictive measures</td>
<td>High</td>
<td>Prioritize livelihood interventions and value chain market linkages</td>
</tr>
<tr>
<td>Lack of digital infrastructure and mobile connectivity in rural areas. Lack of capacity of stakeholder organizations in harnessing and strategizing the digital tools.</td>
<td>Moderate</td>
<td>Build digital solutions that work in low connectivity conditions, based on the actual needs. Build the digital capacities of stakeholder organizations while working closely with them in IFAD projects. Forge partnerships with new digital players and private sector engagement.</td>
</tr>
</tbody>
</table>
Appendix 3: Social, environmental & climate assessment

Introduction

58. This SECAP background study aims to provide an updated overview on the country's main social, environmental and climate challenges in order to help plan how new investments will align with IFAD 11 commitments on gender, youth, nutrition and climate change. It also takes into consideration IFAD’s contribution to Iraq's Indented Nationally Determined Contribution (INDC) through the on-going portfolio.

Socio-cultural context

59. Population: The total population in Iraq in 2018 was 38.4 million of which 50.6% is male and 49.4% is female. The country's population growth rate was 2.32% in 2018. Life expectancy has been increasing since the 1960s and is now at 70.04 years. Rural population has declined from 57.1% in 1960 to 29.5% in 2018.

60. Crisis Situation: As the humanitarian crisis due to conflict with the Islamic State in Iraq and the Levant (ISIL) enters its fifth year, Iraq continues to face immense challenges. There are 6.7 million people in need of humanitarian assistance. Almost 2 million people remain displaced, over half of whom have been displaced for more than three years. Around 71% of displaced people reside outside of camps, mostly within the Kurdistan Region of Iraq and Nineva governorate. The 2 million IDPs are relatively evenly split between being displaced within their governorates of origin (49%) and in other governorates (51%). Access to employment or livelihood opportunities continues to be the top concern of IDPs while half of displaced people cited difficulty of accessing food as one of their main issues.

61. Poverty: The most recent figure for national poverty is 22.5% in 2014. However, the poverty rate goes up to 41.2% in areas affected by ISIL conflict. On the other hand, the multidimensional poverty headcount ratio dropped from 6.8% in 2014 to 3.3% in 2017/18. Increase in school enrolment, expansion of drinking water provision and sewage disposal services have contributed to the fall in multidimensional poverty.

62. Gender: Iraq ratified the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) in 1986, but has yet to ratify the Optional Protocol on violence against women. In 2018, Iraq ranked 147th out of 149 countries in the world on the global gender gap index of the World Economic Forum which takes into account political, economic, cultural, social and security factors that Iraq is undergoing. Literacy rate among adult women was at 37.9% in 2013 and women constitute only 14.5% of the total labour force. ILO estimates unemployment among female labour force in 2018 to be around 12.3% which is significantly higher than male's unemployment estimated at 7.2%. However, in terms of political participation, women occupied 25.5% of seats in the Iraqi parliament in 2018 compared to 7.6% in 2002. It is worth mentioning that the rise and rule of the Islamic State in Iraq and the Levant (ISIL) from 2014 to 2017 over significant territories of Iraq led to women suffering from direct as well as indirect violence and restrictions. ISIL has subjected women, girls, men and boys to various forms of sexual violence, such as rape and sexual enslavement, physical and psychological violence and trafficking. Women and girls have suffered from the impact of armed conflict increasing their vulnerability and impairing their access to basic humanitarian services. Currently, An estimated 13% of all IDP and returnee households are headed by females and they are at heightened risk of gender-based violence.

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63. **Youth**: Iraq is one of the most youthful countries in the world; nearly 58.71 percent of the population are under 24 years old. Youth literacy fell dramatically from 84.8% in 2000 to 52.3% in 2013. While national estimates show that unemployment rate was 13% in 2013, unemployment among youth-aged between 15 and 24- in was at 25.6%. The share of youth not in education, employment or training was at 40.6% in 2012. As a result of the recent conflict with ISIL, around 91% of youth in West Mosul lost three or more years of school, while 85% do not participate in local initiatives, and some 80% of youth between 18 and 25 are currently unemployed.

64. **Nutrition**: Iraq is currently off course in terms of combating malnutrition. In 2011, 31% of women at reproductive age suffered from anemia. Moreover, 4% of children under 5 suffered from severe wasting, 7% from wasting, 13% were born with a low birth weight while 12% were overweight at birth. In 2013, 14% of children between 6 and 59 months suffered from vitamin A deficiency. In 2014, 58% of the population was overweight and 24% was obese. In addition, 44% of the population was suffering from high blood cholesterol, 40% suffered from high blood pressure and 13% suffered from high blood glucose. In terms of the humanitarian situation, the people in need of food and livelihoods assistance is estimated at 2.4 million for 2019, with majority of needs concentrated in Diyala, Ninewa, Dahuk, Anbar and Erbil governorates.

**Environment and climate context, trends and implications**

**Main Environmental Issues**

65. **Water Resources**: The total renewable water resources in Iraq were estimated at 75.61 billion m$^3$ annually. Water scarcity is increasing and this can be mainly attributed to population increase, economic growth, climate change, and low water inputs from upstream countries. Agricultural needs are estimated at 51 billion m$^3$ to irrigate 11,300 km$^2$. There is increased water loss due to evaporation from rivers, dams and tanks estimated at 8 billion m$^3$ in addition to water needs to recover the Marshlands shall also be taken into consideration. Iraq is very dependent on the surface water- Tigris and Euphrates Rivers- crossing its borders from neighbouring countries and 63% of irrigation water comes from the Tigris basin, 35% from the Euphrates basin and 2% from the Shatt Al-Arab basin. The water level of both the Tigris and the Euphrates rivers has fallen by more than 60% over the last 20 years partially as a result of upstream water use and damming. All basin countries (Iran, Iraq, Syria and Turkey) have developed large-scale projects, most often unilaterally without consultation with the other riparian countries. Iraq could eventually fall below the water poverty line, which has been defined as less than 1000 m$^3$ per year per person. Water pollution results from the lack of wastewater treatment plants, which affects the quality of water discharged into rivers without proper treatment. Other contaminating factors that increase environmental deterioration include random unlicensed industries which produce and discharge untreated water directly into rivers, animal and veterinary activities, popular electroplating plants, car washes, etc. Furthermore, there is a poor control over such industrial activities, poor enforcement of applicable laws that aim to alleviate the negative impact of discharged untreated water, and inadequate implementation of closed cycle and water reuse policies. It is also worth mentioning that

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42 FAO (2012). Agriculture Sector Note- Iraq.
the recent conflict with ISIL has caused damages to water infrastructure estimated at USD 600 million and increased water pollution issues in some areas due to oil spills and toxic waste.  

66. **Land Resources:** The cultivated area (arable land and area under permanent crops) was around 6,010,000 hectares in 2005 representing 13.7% of the country’s total area. Deserts constitute approximately 42% of the total area of Iraq. A large percentage of lands exhibit desertification factors such as soil erosion, sand and semi-sand dunes, salinization, waterlogging and natural vegetation deterioration. Desertification is partly due to climatic conditions as 90% of areas in Iraq have dry climate with temperatures hitting 56°C in the long and dry summer, increased evaporation, decreased rainfall rates to around 150 mm in most areas, prevailing type of wind and natural characteristics of soil. This is in addition to human activities such as cutting of natural vegetation, overgrazing, lack of proper systems for irrigation and drainage, lack of effective systems to preserve green spaces, urban sprawl, and unsustainable use of natural resources. The land between the Euphrates and Tigris (Mesopotamia) is the most fertile region in Iraq and comprises about 25% of Iraq’s surface area. However, the wetlands which covered between 15,000 and 20,000 km² in the 1970s covered less than 760 km² by 2000. The most serious threat to wetlands in Iraq has been the drainage and diversion of water supplies for agriculture, the oil exploration and use for production purposes, and for military purposes since the 1980s. Although around 20% of the original 15,000 km² marsh area was re-flooded by March 2004 caused the marshland’s area to increase from 760 km² in 2002 to 3980 km² in 2005, the environmental conditions of the re-flooded marshes were different from prior to drainage and thought to be unsustainable.  

67. **Biodiversity:** Natural biodiversity has deteriorated and decreased in terms of kind and density as a result of wars and implementing many projects on agricultural lands. Dividing and fragmenting agricultural lands have had a significant impact on decreasing green spaces as natural habitats of different living organisms. Furthermore, drying the Marshlands has directly affected migrating birds. Deterioration of biodiversity can be attributed to a number of factors including overhunting; high salinity in lakes and rivers; ecological pollution of different kinds and sources like wastewater, air pollution, plant wastes and thermal pollution from power plants; bringing new and exotic types of fish and animals has caused competition between different species for the already limited food and shelter.  

68. **Air Quality:** The deterioration of air quality in Iraq has negatively affected the environmental and health conditions leading mainly to increased chronic respiratory diseases and allergies. This deterioration is caused by significant increase in the number of vehicles with old vehicles constituting the larger percentage; shortage of national electric power generation due to obsolete stations leading to an increase in the use of domestic generators that contribute to pollution; weak garbage collection capacity that causes some citizens to incinerate waste; over-cutting of trees and forest areas in general and palms in particular to cover citizen needs of fuel thus decreasing green spaces; and sabotage and fires affecting oil and derivative pipelines.  

69. **Marine Pollution:** The total area of Iraq’s regional water in the Arab Gulf is 900 km² of coastal water. Currently, it contains high levels of nitrogen which attracts fish, especially during the mating season. It is also the passageway for migrating fish from the Gulf into Iraqi waters entering Shatt al-Arab, Khor al-Zubair and the marshlands where natural food is abundant. The deterioration of the coastal environment and seawater in Iraq can be attributed to a number of reasons including oil pollution which is due to oil supply, loading, unloading, transport and shipping as well as naval mines; and discharge of ballast water from oil tankers and commercial ships into the Gulf contributes to transferring alien species

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52 Ibid.
to the area. Different factors have contributed to increasing salinity in Shatt al-Arab to very high concentrations as some readings exceed 30,000 ppm.

70. **Waste and Oil Pollution**: Iraq suffers from a weak waste management system and the costs of poor waste management are estimated at 0.14% of GDP. These issues were exacerbated by the IDPs situation in many parts of the country. Pollution issues were made much worse by the impact of conflict especially in northern Iraq. Millions of tonnes of rubble and debris were generated by the intense fighting that took place in Iraqi cities during the recent conflict with ISIL. Rubble is often mixed with unexploded ordnance, household, industrial or medical waste, adding an extra health and environmental risk dimension to remediation efforts and safe disposal measures. The cost of transporting the 10 million tonnes of debris produced in Mosul alone is estimated at USD 250 million. In addition, ISIL deliberately poisoned lakes, rivers and streams with oil products and toxic waste. The increase of artisanal oil refining in many areas caused environmental contamination from the toxic waste products generated by the burning of crude oil.

**Main Climate Change Hazards**

71. **Temperature Increase**: The mean annual temperature for Iraq between 1901 and 2016 is 21.5°C. Historical data show that mean annual temperatures have risen across Iraq since the 1950’s at a rate of 0.7°C per century. Between 1971-2009, temperature has increased for all cities in Iraq with Diwaniya having the highest increase followed by Al-Rutba while Mosul and Baghdad having the least increase for the period 1941-2009. In terms of projections, mean annual temperature will rise by up to 2.7°C in 2050 under RCP 8.5 scenario. The total annual hot days of temperature above 35°C will rise by 21.5 days in 2050 under RCP 8.5 scenario.

72. **Decline in Precipitation**: The mean annual precipitation for Iraq between 1901 and 2016 is 193.5mm. All cities in Iraq experienced decline in rainfall with Mosul having the highest decline (1939-2009) except for Nasiria (1941-2009) and Al-Rutba (1941-2002) which have increased. The number of rainy days also declined for the whole of Iraq (1941-2009) except for Al-Rutba area (1971-2002). In terms of projections, the mean annual precipitation will fall by -0.7mm in 2050 under RCP 8.5 scenario. The greatest reduction in monthly temperature would be 17% and will occur during December-February. However, rainfall intensity is projected to increase.

73. **Extreme Events**: Iraq will face increased frequency and intensity in extreme weather events due to climate change. Dust storms in Iraq are normally caused by strong winds that carry large amounts of sand across long distances. Iraq experiences two types of dust storms: haboobs and shamals. Haboobs are sudden and tend to be high speed, short-lived events, while shamals are slower but can last for days. In recent years, the frequency and intensity of dust storms have increased due to lower soil moisture. In addition, droughts are expected to increase in frequency and severity as we move towards the end of the century. River flow fluctuations coupled with decline in rainfall are expected to cause prolonged drought periods. Tigris and Euphrates fluctuations are also expected to intensify flood occurrences.

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55 Ibid.
58 Ministry of Health and Environment (2016). Revised Initial National Communication to the UNFCCC.
60 Ibid.
61 Ibid.
63 Ibid.
Climate Change Impacts

74. **Decline in water availability**: Climate change is expected to reduce snow water by 100 mm and thus the drainage of upper Tigris and Euphrates. It is expected that a 7% decline in rainfall would cause an 11% reduction in the drainage of Euphrates. On average, a 10-25% decrease in surface flow of upper river basins of Tigris and Euphrates is expected by 2070. In addition, the predicted decline in rainfall would also decrease groundwater levels especially in desert areas64.

75. **Lower agricultural and livestock productivity**: The increased frequency of drought will cause a decline in Iraq’s water resources and thus the cultivated areas depending on irrigation. This will also be exacerbated by the increase in water demand of crops (between 2.79% and 17.17% increase in water demand for wheat) as a result of the rising temperature which means an eventual decline in crop production and potential impact on food security. Rain-fed agriculture is vulnerable to the decline in rainfall, delayed rainfall at the beginning of the season and insufficient rain at the end of the season. The decline in rainfall and the increased drought will also cause a depletion in the vegetation of natural rangelands and will have a direct negative impact on the nutrition and health of livestock. Climate change is also expected to cause a decline in the cultivated land areas of fodder, increase spread of diseases among animals and decrease their productivity due to heat stress65.

76. **Biodiversity deterioration**: Climate change is expected to negatively impact the diverse ecosystem in Iraq. Marshlands are the most vulnerable to climate change followed by steppe and coastal areas with mountain areas being the lease vulnerable. Climate change is also expected to affect the existence of some species especially those dependent on rain and wetlands66.

77. **Increase in diseases**: The increased frequency and severity of drought, dust storms and environmental degradation could impact the health of Iraqi people through increasing mortality rates, diseases transmitted by water and food and communicable diseases such as cholera, malaria and typhoid. Moreover, non-communicable diseases such as allergy, asthma, heart attacks and malnutrition diseases are also expected to increase67.

Climate Change Adaptation and Mitigation

*Adaptation priorities for water and agriculture sectors include*68:

- Setting up a programme for effective management of dams (especially Mosul dam rehabilitation) and reservoirs supported by a remote monitoring system.
- Establishing small dams in areas where water storage for drinking, agriculture and livestock is cost-effective
- Adopting sustainable agricultural practices through promoting covered and hydroponic agriculture.
- Introducing new patterns of crop cultivation on the basis of water availability and promoting alternative crops that consume less water.
- Establishing water user associations to better manage water resources.
- Investing in oasis projects mainly relying on groundwater through planting trees and increasing green rangeland.
- Expansion of soil stabilization projects to reduce the impacts of creeping sand dunes.

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64 Ministry of Health and Environment (2016). Revised Initial National Communication to the UNFCCC.
65 Ministry of Health and Environment (2016). Revised Initial National Communication to the UNFCCC.
66 Ibid.
67 Ibid.
68 Adapted from the Revised Initial National Communication and the INDC.
• Applying integrated pest management techniques and introducing disease-resistant plant varieties.
• Restoring green vegetation in pastoral lands and improving their management.
• Establishing meteorological stations in agriculture areas as part of an early warning system for drought and flood events.
• Supporting efforts to the recovery of the marshland area and contributing to its environmental rehabilitation and improved water security.
• Increasing the water-use efficiency of irrigation systems and using modern techniques such as drip and sprinkler systems.
• Introducing heat-resistant and drought-tolerant crop varieties (especially for wheat).
• Supporting research efforts regarding the use of saline water (e.g. drainage water) in agriculture.
• Applying flood water harvesting techniques and sustainable use of groundwater in desert areas.
• Increasing the number of wastewater treatment plants and returning the treated water into the river streams.
• Reusing drainage water in planting green belts to combat desertification and restoring deteriorated wetlands.
• Enhancing rain-fed agriculture management through supplementary irrigation.
• Improving the efficiency of water networks to reduce wasted water and installing water meters to monitor consumption.
• Using desalination techniques in areas where water is of high salt concentration.
• Enhancing the monitoring of groundwater use and executing measures to avoid unsustainable extraction.
• Applying Integrated Water Resources Management (IWRM) and establishing a "Water Systems Planning Model" for simulating water resources.
• Building national capacities on climate change and hydrological modelling.
• Continuing the development of the national system for surface and groundwater hydrological monitoring.
• Raising the awareness of citizens on rationalizing water use through various media campaigns.
• Reviewing legal, administrative and financial frameworks of the water and agriculture sectors and accelerating the completion of the Water Resources and Land Use 2035 Strategy.
• Exerting more efforts to coordinate with neighbouring countries through high-level committees regarding the management of transboundary water resources.
Mitigation priorities in land and agriculture sectors include:

- Enhancing forest management systems, reducing deforestation and investing in reforestation/afforestation.
- Introducing enhanced species of forest trees that would increase the biomass for more efficient carbon sequestration.
- Utilizing remote sensing technologies to identify areas that absorb greenhouse gas emissions and developing spatial maps to monitor land-use change.
- Improving agricultural land management techniques to increase carbon sequestration in the soil.
- Rationalizing the use of Nitrogen fertilizers.
- Enhancing manure management to reduce methane emissions.
- The public sector can (a) deploy remote sensing using evapotranspiration for groundwater monitoring, (b) use IoT technology for irrigation, and (c) use advanced remote sensing of soil moisture and soil surface temperature. Through e-Extension services, the public sector can advocate for improving irrigation and fertilizer application. Even though modern technologies can improve water use efficiency and productivity, they need to go hand in hand with policies which will restrict environmental rebound effect. Private sector can be engaged in new entry points through digital start up ecosystem, automated weather advisory services, scaling the local innovations with investments etc.

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69 Adapted from the Revised Initial National Communication and the INDC.
**INDC Analysis**

<table>
<thead>
<tr>
<th>INDC programmes relevant to IFAD mandate</th>
<th>IFAD contributions to the national NDC targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enhancing forest management systems, reducing deforestation and investing in reforestation/afforestation.</td>
<td>X</td>
</tr>
<tr>
<td>Enhancing land use management practices.</td>
<td>X</td>
</tr>
<tr>
<td>Enhancing rice cultivation techniques and rationalizing the use of fertilizers to reduce CH₄ emissions.</td>
<td>X</td>
</tr>
<tr>
<td>Rationalizing the use of Nitrogen fertilizers to reduce N₂O emissions.</td>
<td>X</td>
</tr>
<tr>
<td>Enhancing the quality of agricultural crops produced.</td>
<td>SARP project is building capacities of farmers and training them to adopt climate resilient approaches and technologies that would enhance crop and livestock production.</td>
</tr>
<tr>
<td>Setting up a programme for effective management of dams (especially Mosul dam rehabilitation) and reservoirs supported by a remote monitoring system.</td>
<td>X</td>
</tr>
<tr>
<td>Increasing the water-use efficiency of irrigation systems and using modern techniques such as drip and sprinkler systems.</td>
<td>SARP project is currently rehabilitating irrigation networks through water-efficient irrigation systems for a total area of 8130 hectares.</td>
</tr>
<tr>
<td>Increasing the number of wastewater treatment plants.</td>
<td>X</td>
</tr>
<tr>
<td>Improving the efficiency of water networks to reduce wasted water and installing water meters to monitor consumption.</td>
<td>The irrigation networks that are being rehabilitated under the SARP project shall reduce the wasted water for the targeted 8130 hectares.</td>
</tr>
<tr>
<td>Enhancing the monitoring process of water quality.</td>
<td>X</td>
</tr>
<tr>
<td>Conducting research on the sustainability of the use of groundwater and groundwater recharging.</td>
<td>X</td>
</tr>
<tr>
<td>Establishing small dams in areas where water storage for drinking, agriculture and livestock is cost-effective.</td>
<td>X</td>
</tr>
<tr>
<td>Reusing drainage water in planting green belts to combat desertification and restoring deteriorated wetlands.</td>
<td>X</td>
</tr>
<tr>
<td>Applying integrated pest management techniques and introducing disease-resistant plant varieties.</td>
<td>SARP project is training farmers on organic farming techniques and the use of Integrated Pest Management.</td>
</tr>
<tr>
<td>Introducing heat-resistant and drought-tolerant crop varieties.</td>
<td>The SARP project is promoting crop varieties which are low water demanding, and resistant to drought, high temperatures, pests, and soil salinity. Drought-resistant rice is being experimented under the SARP project.</td>
</tr>
<tr>
<td>Establishing meteorological stations in agriculture areas as part of an early warning system for drought and flood events.</td>
<td>Through Adaptation Fund financing under SARP project, IFAD is assisting the Agro Meteorological Monitoring Network in developing an early warning systems for farmers focusing on extreme weather events.</td>
</tr>
<tr>
<td>Enhancing rain-fed agriculture management through supplementary irrigation.</td>
<td>X</td>
</tr>
<tr>
<td>Improving vegetation and groundwater wells in rangelands for better livestock productivity.</td>
<td>X</td>
</tr>
<tr>
<td>Investing in better breeds of livestock with higher productivity.</td>
<td>Through SARP project, IFAD is promoting livestock breeds that are climate-adapted, disease-resistant and highly productive.</td>
</tr>
</tbody>
</table>

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## Procurement Risk Matrix – IRAQ Pillar A

### INHERENT RISK RATING 2.40

<table>
<thead>
<tr>
<th>Description of Risk Feature</th>
<th>Rating</th>
<th>Assessment Basis</th>
<th>Remarks</th>
<th>Recommendation / Mitigation</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>Country procurement law, regulations and manual exist</td>
<td>3</td>
<td>They all exist, 2 only two exist, 1 only one exist or none</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b</td>
<td>Existence of Standard Bidding Documents for Goods, Works and Services</td>
<td>3</td>
<td>All exist, 2 only for NCB &amp; ICB, none for Shopping, 1 none exists</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c</td>
<td>Procurement Monitoring</td>
<td>2</td>
<td>Use PEFA Framework, see worksheet for details</td>
<td>PEFA 2017 rating of C</td>
<td></td>
</tr>
<tr>
<td>d</td>
<td>Procurement Methods</td>
<td>3</td>
<td>Use PEFA Framework, see worksheet for details</td>
<td>PEFA 2017 rating of B</td>
<td></td>
</tr>
<tr>
<td>e</td>
<td>Public access to procurement information</td>
<td>2</td>
<td>Use PEFA Framework, see worksheet for details</td>
<td>PEFA 2017 rating of C</td>
<td></td>
</tr>
</tbody>
</table>

### NET RISK RATING 2.40

<table>
<thead>
<tr>
<th>Description of Risk Feature</th>
<th>Rating</th>
<th>Assessment Basis</th>
<th>Remarks</th>
<th>Recommendation / Mitigation</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>Accountability and Transparency</td>
<td>2.20</td>
<td>Use PEFA Framework, see worksheet for details</td>
<td>PEFA 2017 rating of C</td>
<td></td>
</tr>
<tr>
<td>b</td>
<td>Country Corruption Perception Index score</td>
<td>1</td>
<td>The score is published on Transparency.org. 0 to 29 = 1, 30 to 60 = 2, 61 to 80 = 3</td>
<td>CPI SCORE OF 20/100 IN 2019</td>
<td></td>
</tr>
<tr>
<td>c</td>
<td>2-tiered system to handle complaints</td>
<td>2</td>
<td>As stated, 2 only a single level system, 1 no system</td>
<td>There is an ineffective complaints management system; despite the presence of an independent authority for integrity; an administrative court to handle complaints was cancelled in 2013 via Law 16; appeals are now addressed by normal courts. In practice, bid protests are either directed to the contracting authority itself or to the Ministry of Planning in absence of a centralized and independent complaints management entity.</td>
<td></td>
</tr>
<tr>
<td>d</td>
<td>Existence of a debarment system</td>
<td>3</td>
<td>Full existence, 2 existence of independent anti-corruption agency; 1 existence of an office within a government ministry/agency that carries out some/all of these functions, 1 does not exist</td>
<td>Regulations 2014 (1-4-10)</td>
<td></td>
</tr>
<tr>
<td>e</td>
<td>Existence of an independent and competent local authority responsible for investigating corruption allegations</td>
<td>3</td>
<td>Full existence of independent anti-corruption agency; 2 existence of an office within a government ministry/agency that carries out some/all of these functions, 1 does not exist</td>
<td>The Iraq Commission of Integrity: <a href="http://nazaha.iq/en_news2.asp?page_namper=e2">http://nazaha.iq/en_news2.asp?page_namper=e2</a></td>
<td></td>
</tr>
</tbody>
</table>