



المركز الدولي للزراعة الملحية
INTERNATIONAL CENTER FOR BIOSALINE AGRICULTURE



World Food
Programme



Government
of Canada

Project Summary

Fostering Resilience in Iraq through Sustainable Water Management and Climate Smart Agriculture

Project Duration: Three years

Budget: 5 Million Canadian Dollars



The Global Affairs Canada (GAC) funded a three-year project to support Iraq. The Project aims to improve the Government of Iraq's ability to develop and apply evidence-based planning to manage and sustain Iraq's water resources better. Specifically, it seeks to:

- Promote more efficient and equitable distribution of the limited water resources at the national level to support agriculture and other essential needs.
- Strengthen inclusive community-led decision-making related to water management by strengthening local governance structures.
- Promote climate-smart agriculture and build national capacities to facilitate its integration into cropping systems and enhance the resilience of agricultural production.

The Project also includes innovative components that explore nature-based solutions for mitigating salinity problems and piloting hydroponic technologies in Iraq.

ICBA will partner with the **World Food Programme (WFP)** to implement this project. WFP will be responsible for delivering activities that will help strengthen and revitalize **Water User Associations (WUAs)** so that they are empowered to actively participate in the governance and management of local water resources

The expected outcomes

- a. Strengthened multisectoral and transparent water governance at the national level, aligning water use efficiency with socio-economic goals, human rights considerations, and environmental sustainability.
- b. Strengthened gender-responsive and participatory locally led water management practices within selected sub-basins of Iraq, considering marginalized and vulnerable people, including women and girls.
- c. Enhanced adoption of gender-responsive climate-smart agriculture solutions at three pilot sites, Considering persons in vulnerable situations, including women and girls.

Reach

The Project would benefit 180 technical staff members from government agencies and 600 farmers, extension workers, and input suppliers. Women will participate in all capacity development activities. The Iraqi population will benefit indirectly from the Project, which will include improved access to clean and safe water, increased availability of locally grown food, and enhanced income prospects for farmers and workers in related industries.

Technical staff from the Ministry of Water Resources, the Ministry of Environment, and the Ministry of Agriculture will receive specialized hands-on training and benefit from various other capacity-building and knowledge-exchange opportunities. Around 60 young experts will participate in such capacity development initiatives each year, totaling 180. Women will be trained to the extent possible.

Outcomes and related project activities

The ultimate outcome of the project is to achieve strengthened water and food security at the national level, driving economic growth and reduction in poverty, social disparities, and gender inequalities. While the intermediate outcomes include the following:

Intermediate Outcome 1100: Strengthened multisectoral and transparent water governance at the national level, aligning water use efficiency with socio-economic goals, human rights considerations, and environmental sustainability.

Activities include:

1. Developing and delivering training to Ministry of Water Resources staff on models, tools, and concepts related to effective water management.
2. Collecting national data on hydrology, water and soil resources, agriculture, and food security made available during recent years.

3. Developing a well-calibrated and verified hydrological and hydrodynamic Soil and Water Assessment model.
4. Developing an integrated seasonal winter and summer irrigation plan.
5. Updating a climate vulnerability analysis framework, consolidating and building upon existing frameworks, and vulnerability of soil and water to salinity.
6. Supporting socio-economic human rights and environmental considerations into the national water management plan, presenting scenarios and management options.
7. Assessing environmental damage due to agricultural practices and developing plans to reduce the discharge of farm contaminants into water sources.
8. Sharing information generated by the Project with the public.



Intermediate Outcome 1200: Strengthened participatory and locally led water management practices within Iraq sub-basins, which consider marginalized and vulnerable people, including women and girls. Activities include:

1. Training and capacity building for existing Water User Associations based on tailored revitalization programs.
2. Conducting community mapping exercises to understand local water sources, usage patterns, and infrastructure to inform water management plans developed by Water User Associations.

3. Developing participatory sustainable water management plans based on the community mapping exercise.
4. Supporting the implementation of community-led and shared water conservation initiatives, including establishing three pilot sites within communal lands to showcase soilless farming techniques (e.g., solar-powered hydroponics).

Intermediate Outcome 1300: Enhanced adoption of climate-smart agriculture solutions at three pilot sites, which consider marginalized and vulnerable people, including women and girls. Activities include:

1. Training of trainers, Farmer Field Schools, and Field Days to build the capacity of farmers and extension workers on climate-smart agriculture practices.
2. Establishing three best practice hubs for piloting demonstrations of stress-resilient cropping systems.
3. Establishing local quality seed production for stress-resilient crops through the seed multiplication of suitable varieties/genotypes.
4. Organizing events to raise awareness and support for climate-smart agriculture.

Gender equality

The project plan engages women and men as active participants in project activities and decision-making, acknowledging their contributions to water and food security and striving for equitable outcomes. This can involve providing women with tailored training and resources to participate in agricultural activities, ensuring access to clean water, and promoting their roles in leadership positions. By promoting gender equality, the project can create a more inclusive and socially just impact, fostering greater economic and social empowerment for women and men while benefiting the broader community. The project will address the defined impacts of climate change and how they disproportionately affect women, who face greater challenges in accessing water and nutritious food, while climate-induced water scarcity significantly increases the unpaid care work they must undertake. Additionally, the social analysis will focus on the patriarchal social norms that marginalize them from decision-making despite their unique roles in the management and utilization of natural resources, including water. The social analysis will analyze the impact of women's land ownership, as they often do not receive their inheritance and are seven times more likely to be unaware of ownership and inheritance rules than their male counterparts. This exacerbates women's unequal access to resources and benefits and further deepens gender inequalities. The project

focal point on gender equality supported by international gender equality specialists will collect relevant gender-disaggregated data and conduct in-depth analysis. Three gender equality outcomes are expected:

Intermediate outcomes:

1. Strengthened participatory and locally led water management practices within Iraq sub-basins, which consider marginalized and vulnerable people, including women and girls.
2. Enhanced adoption of climate-smart agriculture solutions at three pilot sites with active participation of targeted marginalized and vulnerable groups, especially women and girls.

Immediate outcomes:

1. Targeted vulnerable communities and local government departments have the necessary infrastructure, tools, and skills for adopting and scaling out climate-smart agriculture solutions.

Human rights

The ICBA team will adopt a human rights approach in water resources management to uphold the fundamental rights of individuals involved in water and food security access. This approach aligns with international human rights principles, ensuring the project has a foundation of dignity, equality, and non-discrimination. It emphasizes the right to clean and safe water as a fundamental human right. It seeks to make water resources and food security accessible to all, particularly the marginalized or vulnerable. It promotes transparency, accountability, and participation, allowing affected individuals to have a say in decisions that impact them.

Environmental sustainability

The project activities are designed to ensure environmental sustainability without causing any harm to the natural environment and its resources. This will involve implementing practices that responsibly utilize water and other natural resources to meet present needs without compromising the needs of future generations. These practices include water management strategies that reduce losses, minimize pollution, and protect ecosystems. Introducing water use efficiency and climate-smart agricultural practices will increase farm production per unit of water used and minimize the effect of irrigating with brackish water. Crop rotation and leaching of soil, in addition to agricultural practices, are some of the measures that will be taken to reduce the environmental impact of using brackish water in the three pilot sites. The project will strive to enhance the resilience and health of local ecosystems while addressing food and water security challenges. Ultimately, the

commitment to environmental sustainability will ensure that the benefits achieved in water and food security are durable and do not come at the cost of further environmental degradation, safeguarding the country's long-term well-being.

The project will implement a set of complementary activities that will lead to a diverse range of positive outcomes. The project will enhance the institutional inter-ministerial technical staff's skills in applying water management models, helping to make related decisions more informed. The revitalization of Water User Associations (WUAs) will result in transformative outcomes in local water resource governance at the sub-basin level. Efficient seasonal irrigation and water allocation plans and promoting climate-smart agriculture approaches will increase local crop production, strengthening household, regional, and national food security. Equitable impact scenarios illustrate how water management can positively affect livelihoods, social stability, and gender equality. Through adopting a human rights-based approach and integrating gender equality and environmental sustainability across all pertinent activities, the project is committed to delivering fair and equal advantages for women and

men while safeguarding natural resources against the adverse impacts of climate change. Ultimately, by empowering marginalized and vulnerable groups through equitable access to resources, increasing agricultural productivity, and creating new economic opportunities through forward and backward linkages, these interventions will lead to elevated food and water security and, consequently, poverty reduction across Iraq.

Geographic scope of the project

The multisectoral water governance component will be conducted nationally, covering the whole country. The hydrological and hydrodynamic models will be set up in the twenty sub-basins of Iraq. The seasonal winter and summer irrigation plan will be developed for these twenty sub-basins. Locally led water management practices revitalizing WUAs and adopting climate-smart agriculture solutions components will be conducted at three pilot sites in

- 1) Al Muthana Governorate in Al Furat (Euphrates) sub-basin.
- 2) Dhi-Qar Governorate, Mesopotamia sub-basin.
- 3) Al Basrah Governorate, Karoon sub-basin.

The following map provide more details about these pilot sites.

