



Food and Agriculture
Organization of the
United Nations

Evaluation of the project
“Restoring the
Water Supply for
Food Production
and Livelihoods in
Post-conflict Areas in Iraq”



**Project Evaluation Series
52/2024**

Evaluation of the project “Restoring the Water Supply for Food Production and Livelihoods in Post-conflict Areas in Iraq”

Project code: GCP/IRQ/071/EC

Required citation:

FAO. 2024. *Evaluation of the project "Restoring the Water Supply for Food Production and Livelihoods in Post-conflict Areas in Iraq" – Project code: GCP/IRQ/071/EC*. Project Evaluation Series, No. 52/2024. Rome. <https://doi.org/10.4060/cd3808en>

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Abstract

This report evaluates the project “Restoring the Water Supply for Food Production and Livelihoods in Post-conflict Areas in Iraq”. The project was funded by the European Union's Regional Trust Fund in Response to the Syrian Crisis, also known by the Arabic term *Madad*, which translates to sustaining or reinforcing. The fund was established in 2014.

The project was implemented by the Food and Agriculture Organization of the United Nations (FAO) from 2018 to 2022 in the Nineveh Governorate. It aimed to improve food security and livelihoods through the rehabilitation of water infrastructure and mine clearance in collaboration with the Iraqi Government. The evaluation's methodology included desk reviews, key informant interviews (KIIs), focus group discussions (FGDs) and virtual interviews. Further, the evaluation assessed the project's relevance, efficiency, effectiveness, sustainability and inclusiveness.

Key findings indicate that the project aligned well with the targeted communities' needs of returnees and remainees. It also aligned with broader government and FAO objectives for sustainable land and water management, especially FAO's resilience goal and Sustainable Development Goal 6. Despite the COVID-19 pandemic and security challenges, community participation and national partnerships enhanced project ownership and facilitated success.

Overall, the project provided a solid foundation for future interventions in post-conflict recovery and sustainable development. However, ongoing monitoring and adjustments are essential to achieve its full potential. The evaluation noted that the project's long-term impact and sustainability would depend on the operational status of the water systems. This is because water has yet to flow in the rehabilitated canals of Phase II and Phase III .

The report concludes with recommendations to enhance sustainability and operational efficiency through collaboration with the Ministry of Water Resources by developing detailed maintenance plans, integrating extension services and expanding modern irrigation technologies. Also highlighted is the importance of promoting long-term resilience programming in crisis contexts through expert consultations with donors like the European Union and the World Bank. Additionally, a gender-transformative approach is recommended to address sociocultural barriers. This can be supported by a comprehensive gender strategy and measurable progress indicators. Finally, conducting impact assessments of rehabilitated water infrastructure is urged to evaluate water flow adequacy, irrigation functionality and agricultural productivity. This ensures tangible community benefits and alignment with the project's goals.

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Acknowledgements

The FAO Office of Evaluation would like to thank all those who contributed to this evaluation. The evaluation was conducted by two independent consultants, Amjad Hussein AL-Attar, AMJAD (team leader) and Ahmed Wasman (team member). Arwa Khalid (FAO Office of Evaluation, Evaluation Officer) provided overall guidance and support, and Sima El Najjar (FAO Office of Evaluation, Evaluation Specialist) managed the evaluation.

The Evaluation Team would like to thank Salah El Hajj Hassan (FAO Representative and Budget Holder) and Veronica Quattrola (Deputy FAO Representative, FAO team member and Lead Technical Officer) for facilitating the evaluation process, providing the necessary documentation for data collection and contributing to the overall assessment of the project's performance.

Finally, the Evaluation Team would like to thank the following: many other stakeholders, including targeted communities in the Nineveh Governorate; Iraqi Government officers from the Ministry of Agriculture and the Ministry of Water Resources; contractors; national and international non-governmental organizations (NGOs); and colleagues at the FAO Regional Office for the Near East and North Africa and FAO headquarters. Their contributions were critical to the team's work and made this evaluation possible.

Abbreviations

CFW	cash for work
FAO	Food and Agriculture Organization of the United Nations
FGD	focus group discussion
IDP	internally displaced person
IED	improvised explosive device
ISIL	Islamic State of Iraq and the Levant
KII	key informant interview
LOA	letter of agreement
MAG	Mines Advisory Group
NGO	non-governmental organization
TOC	theory of change
UNDP	United Nations Development Programme
UXO	unexploded explosive ordnance

Executive summary

Introduction

1. This report presents the final evaluation of the project “Restoring the Water Supply for Food Production and Livelihoods in Post-conflict Areas in Iraq”. The project was funded by the European Union’s Regional Trust Fund in Response to the Syrian Crisis. Established in 2014, this fund is also known by the Arabic term, *Madad*, which means sustaining or reinforcing. FAO implemented the project from May 2018 to December 2022. The project aimed to improve food security, enhance nutrition and reduce poverty for rural populations in Iraq’s Nineveh Governorate by rehabilitating the North Al-Jazeera irrigation project, benefiting over 210 000 people. Key activities included mine clearance, cash for work (CFW) initiatives like home gardening and the restoration of critical agricultural infrastructure. This aligned with FAO’s 2014–2021 and 2022–2031 strategic objectives (FAO, 2019; 2021), and Iraq’s national development priorities.

Findings

2. The evaluation found the project highly relevant to the needs of farmers from returnee and remainee communities that had been affected by conflict. The project addressed urgent priorities that had been identified in FAO Iraq’s damage and loss assessment (FAO, 2016). Activities such as the CFW for infrastructure rehabilitation and engagement with returnees and remainees were strategically selected to address food security, restore livelihoods and build resilience. Collaboration with stakeholders, including national partners and local communities, was pivotal to the project’s success. This fostered ownership and reinforced FAO’s strategic objectives.
3. A gender-sensitive approach was also integrated into the design. This enhanced the participation of women across various activities, but cultural constraints limited their full participation. Home gardening for women instead of the CFW initiative was offered as an alternative option. In any case, the CFW offered immediate relief to those facing chronic poverty, food insecurity and unemployment, while fostering possible long-term stability for greater food production capacity.
4. The project’s efficiency was generally high. Resources were allocated for infrastructure rehabilitation activities, both in terms of budget distribution at the design stage and expenditures during implementation. The allocation of funds to different activities was sound, and the ability for staff to monitor expenditures and act in a timely manner was notably high during implementation.
5. The COVID-19 pandemic posed significant challenges to the project. It was difficult to complete procurement processes and for the Iraqi Government to import essential items, such as spare parts for repairing pumps. FAO managed these challenges swiftly by adopting flexible procurement process. At the same time, it adhered to rules and regulations. FAO liaised in a timely way with the government to facilitate the access of purchased items, as well as with the donor to approve three no-cost extensions. Despite unforeseen disruptions, this ensured the completion of all planned activities and the disbursement of the entire budget.
6. The evaluation revealed that notable progress was achieved in rehabilitating the main water conveyance and distribution system for both Phase II and Phase III. Farmers expressed optimism about the project’s potential to support agricultural recovery. However, those targeted for Phase II and Phase III have yet to benefit as the canals remain non-operational. Infrastructure rehabilitation, mine cleaning, the CFW, home gardens and canal rehabilitation are anticipated to boost agricultural productivity and livelihoods once fully functional. However, delays, including

the installation of spare pump parts, affected progress. This was partly due to procurement challenges from the COVID-19 pandemic. While the full impact has yet to be assessed, the completion of the remaining activities is expected to enhance water distribution and support the recovery of farming in the area.

7. The project actively supported the involvement of returnee and remainee communities from diverse ethnic backgrounds, as well as key stakeholders such as the Ministry of Agriculture and the Ministry of Water Resources at both the government and district levels, in the design and implementation processes. Inclusive and functional coordination mechanisms were established to ensure the participation of various stakeholder groups, including non-governmental organizations (NGOs) and contractors. Women were specifically encouraged to engage in project activities. However, evidence of their involvement in decision-making was primarily limited to home gardening. This collaborative approach motivated communities to reclaim land, which then fostered economic stability and agricultural revival. While the restoration of irrigated land shows promising potential for long-term benefits, the absence of a clear exit strategy and the need for continued government support for infrastructure maintenance remain critical to ensuring sustained impact.

Conclusions

8. The evaluation concluded that the project was well designed and highly relevant to the needs of the remainee and returnee communities that had been internally displaced. The project was also relevant to the local authorities in the Nineveh Governorate. This set a precedent for resilience programming in the area. FAO's 2016 needs assessment, complemented by a rapid assessment to identify target communities, provided a solid foundation for a participatory and inclusive approach. This process enabled meaningful engagement with the affected populations and ensured that the interventions addressed their most pressing needs.
9. The design also responded to: i) the priorities of the government as part of the overall national scheme to rehabilitate and upgrade the large-scale water irrigation infrastructure; and ii) FAO's previous and current strategic objectives.
10. Building resilience requires a deep understanding of people's adaptive capacities and decision-making processes, which was only achievable through participatory consultations. These consultations were essential to the design of relevant interventions and were a core strength of the project. They contributed to both its immediate success and its potential for lasting impact.
11. The project's implementation was affected by serious delays due to external factors related to the COVID-19 pandemic, security instability and lengthy official approvals to proceed with the demining activities. However, FAO demonstrated flexibility in dealing with the COVID-19 pandemic. Indeed, procurement was facilitated through liaison with the responsible units at FAO headquarters to adopt strategies that were flexible and effective in dealing with the circumstances. Additionally, FAO coordinated with the authorities to facilitate movement and operations in the target areas. At the same time, FAO ensured full adherence to the protective measures and recommendations of the health authorities.
12. Greater consideration of an exit strategy should be sought. This needs to provide the foundation for sustainability at a community level. There should also be alternative funding partners. Overall, institutional capacity development needs to ensure resilience and sustainability.
13. The programme's participatory approach fostered a high level of ownership among the targeted communities. This enhanced the relevance and sustainability potential of its activities. The project

delivered immediate results, while contributing to long-term recovery. It did so by addressing critical needs through targeted interventions: resettlement support; irrigation system restoration; and the CFW for agricultural production. This comprehensive strategy positioned communities to build on the project's achievements, which created a pathway towards sustainable growth and resilience in the Nineveh Governorate.

14. FAO and the Ministry of Water Resources recognize the project's success and confirmed its allocation of financial resources to sustain services, infrastructure and periodic maintenance. However, there was a need for a clear plan on water release timing in the rehabilitated canals to not only test the infrastructure but also demonstrate that the farmers from the returnee and remainee communities would fully benefit from the 2022/23 winter season. This should be the minimum requirement for a productive partnership given the complex context.
15. The participation of women and equal opportunity for different people from all ethnic backgrounds in the project's activities demonstrated significant efforts towards inclusive participation. However, it was clear that the project did not sufficiently promote the role of women in decision-making, nor did it challenge the status quo of their role in society. FAO missed an opportunity to foster greater awareness and encourage dialogue around expanding women's roles in society while respecting cultural values and traditions.

Recommendations

Recommendation 1. FAO should continue collaborating with the Ministry of Water Resources on key actions to ensure sustainability and operational efficiency of the project. Focus on developing a detailed maintenance plan that can be implemented by staff from the Ministry of Water Resources. This should include regular inspections, scheduled repairs and necessary upgrades to maintain high operating efficiency. Integrate extension services for farmers to focus on water use efficiency. Build farmer capacity among beneficiaries based on lessons learned. Efforts should focus on expanding the adoption of modern irrigation technologies and facilitating access to the Technical Cooperation Programme and other funding modalities like South–South and triangular cooperation.

Recommendation 2. FAO should assemble a team with strong technical expertise in resilience, including gender and vulnerability assessments, policy formulation, water management and irrigation, and fundraising. The latter should involve high-level consultations with donors like the European Union and the World Bank. Focus on promoting long-term planning for protracted crisis contexts like Iraq, emphasizing the need to shift from short-term resilience responses to sustainable, long-term resilience programming.

Recommendation 3. FAO should adopt a gender-transformative approach to resilience programming that challenges existing sociocultural dynamics in the agriculture sector. This needs to be supported by a FAO gender strategy in Iraq. It should also be done alongside a gender analysis to identify challenges, opportunities and specific needs within the agriculture sector. Create a context-specific gender strategy. Emphasize gender equality in resilience programming and ensure the inclusion of measurable goals and indicators to track progress in promoting gender equity and transforming sociocultural dynamics.

Recommendation 4. FAO should conduct an impact assessment of the rehabilitated water infrastructure at least six months after it becomes operational. Aligning this with the winter cropping season allows for evaluating key aspects such as water flow adequacy, the functionality of rehabilitated structures and overall irrigation performance. The winter season's focus on staple crops like barley and wheat provides an economic and practical timeframe. This enables a comprehensive assessment of the project's impact

on beneficiaries and the effectiveness of the infrastructure. Indicator examples to measure such impact include:

- i. volume of water flowing through rehabilitated canals (litres per second) to assess the adequacy of the water supply and the functionality of the infrastructure;
- ii. area of farmland irrigated (hectares) to reflect the project's impact on agricultural productivity and food security;
- iii. percentage of fully operational rehabilitated structures (for example, canals, pipes and bridges) to validate whether the infrastructure meets the project goals and supports irrigation needs;
- iv. crop yield per hectare for staple crops (for example, barley and wheat) to demonstrate how restored irrigation supports food production during the winter season; and
- v. percentage of households that report increased agricultural income, linking infrastructure performance to tangible benefits for the community and aligning with the project goal of livelihoods restoration.

1. Introduction

1. This final evaluation was conducted during the project's final implementation stage with the dual purpose of accountability and learning.
 - i. Accountability: the evaluation assessed the project's results and their value relevant to target beneficiaries, national needs and priorities. In doing so, the evaluation assessed the relevance, efficiency, effectiveness and sustainability of the results of returnee and remainee communities.
 - ii. Learning: the evaluation also documented important lessons for potential scaling up, replication or follow up in Iraq and other countries with a protracted crisis context. They may use similar approaches for resilience programming that are achieved through target beneficiaries, tools and programme design elements.

1.1 Purpose of the evaluation

2. Based on the terms of reference, the purpose of this independent final evaluation was to assess the contribution by the Food and Agriculture Organization of the United Nations (FAO) in improving food security and livelihoods (see Annex 1). It identified key lessons learned and recommendations that will inform future, similar projects.
3. The evaluation involved an assessment, in a systematic and impartial manner, of the project's activities and results. It assessed the extent to which the project had attained its results by following a theory-based approach that retrospectively identified results and changes that took place. It also captured positive and negative, and intended and unintended results to inform how project implementation evolved within its timeframe.

1.2 Intended users

4. The main audience and intended users of this evaluation are: FAO Representation in Iraq; the Ministry of Water Resources; and the European Union (funding donor). The evaluation is a tool for internal learning.
5. Secondary users include: contractors who implemented the rehabilitation of canals and mine clearance; the FAO Office of Emergencies and Resilience for future, similar implementation initiatives; and other donors, organizations and institutions interested in supporting or implementing similar projects.

1.3 Scope and objectives of the evaluation

6. The scope of the evaluation assessed the relevance, efficiency, effectiveness, sustainability and inclusiveness of the project. It also assessed organizational capacity and partnerships to deliver the services as expected. The evaluation covered the Nineveh Governorate – or Ninewa as per many Iraqi documents. Here, ten out of 26 villages were selected for assessment. These villages had benefitted from the project's activities from 2018 to 2022. The Evaluation Team further refined the evaluation questions during the evaluation process. These are presented in their final formulation in this report.
7. The final evaluation covered the following two objectives linked to five key areas:

- i. rehabilitation of damaged community irrigation infrastructure in crisis-affected areas in Iraq; and
 - ii. cash for work (CFW) emergency income for canal cleaning activities.
8. More specifically, the evaluation covered the following five key interventions:
- i. mine action;
 - ii. rehabilitation of damaged canals through the CFW activities;
 - iii. repair of bridges, canal linings and water control systems;
 - iv. repair of Phase II and Phase III pumping stations; and
 - v. spare parts and replacement of the elevating canals, sprayers and pumps.
9. The evaluation was guided by seven main questions (see Table 1).

Table 1. Evaluation questions

Criteria	Question
Relevance	<i>EQ 1: How was FAO's project: i) relevant to the needs of the country and the most vulnerable; and ii) in line with FAO's strategic objectives?</i> <i>EQ 2: To what extent was the project design and its implementation appropriate in achieving the intended objectives?</i>
Efficiency	<i>EQ 3: How did organizational and operational capacity facilitate or constrain FAO's work on this project?</i>
Effectiveness	<i>EQ 4: What results did the project achieve?</i>
Sustainability	<i>EQ 5: How did the project ensure sustainability at the community and institutional level?</i>
Inclusiveness	<i>EQ 6: How did the project's design and implementation mainstream a gender approach?</i>
Lesson learned	<i>EQ 7: What are the lessons learned?</i>

Source: Authors' own elaboration.

10. The terms of reference (see Annex 1) for this evaluation included a list of evaluation questions. These related to five evaluation criteria and formulated lessons learned. As part of the inception report, the Evaluation Team developed an evaluation matrix (see Appendix 2) that explains how each evaluation question was answered, its indicators and its sources of verification.

1.4 Methodology

11. The evaluation methodology involved a desk review, key informant interviews (KIIs), focus group discussions (FGDs) and direct observation. Additionally, an analysis workshop was conducted to validate the findings.
12. The evaluation adhered to the United Nations Evaluation Group's Norms and Standards for Evaluation (UNEG, 2016) and aligned with the FAO Office of Evaluation manual and methodological guidelines (FAO, 2022). A consultative and transparent approach was adopted. This engaged internal stakeholders such as personnel at FAO Iraq, the FAO Regional Office for the Near East and North Africa and FAO headquarters. Further, this engaged external stakeholders from the targeted communities (returnees and remainees), the Ministry of Water Resources,

contractors, engineering companies and farmers' unions. Evidence triangulation supported the validation, analysis and formulation of conclusions and recommendations.

13. The Evaluation Team consisted of a lead consultant on food security and livelihoods, a national consultant with expertise in irrigation and an evaluation specialist from the FAO Office of Evaluation. The consultants had no previous involvement in the project's design, implementation or support, which ensured objectivity. The Evaluation Team brought experience in food security and resilience programming, irrigation and capacity development.
14. The Evaluation Team collected data in September 2022¹ using the following qualitative methods.
 - i. Desk review and analysis: this involved monitoring and reporting reports, as well as the mid-term review findings. Additional reports from FAO and other United Nations agencies in Iraq were used, which covered the monitoring and evaluation activities. National strategic documents and relevant reports from other organizations were also included, along with supplementary information gathered through the KIIs.
 - ii. KIIs: a total of 30 stakeholders were interviewed. This involved representatives from FAO Iraq, the FAO Regional Office for the Near East and North Africa, FAO headquarters, the European Union (as donor), local government ministries, the European Commission, and non-governmental organizations (NGOs) (see Appendix 3). The interviews were conducted through Microsoft Teams and guided by the evaluation questions. Simple interview protocols and checklists were prepared for each stakeholder group. All interviews were documented against key questions in the evaluation matrix. These interviews were based on the evaluation questions to complete missing information, check validity and quality, and cross-validate the findings (see Annex 1).
 - iii. FGDs: the Evaluation Team conducted five FGDs with programme beneficiaries from the villages of Tal Talab, Khalis Deib, Algana, Ayn Alfaras, Shahnoon, Almshirfa, Atagh and Huysia, which are located in the Rabia Subdistrict. Each group had from 15 to 20 farmers. These discussions provided the Evaluation Team with direct insights from programme participants and a deeper understanding of the changes that the programme had brought to their lives.
 - iv. The FGDs were held in neutral locations. They were disaggregated by gender, with separate sessions for women and men. This disaggregation was achieved for all of the FGDs. In all but one case, the FGDs were organized around specific programme activities, such as the rehabilitation of canals or the distribution of spare parts. The FGDs included farmers and households that received assistance through initiatives like the CFW.
 - v. Notably, women beneficiaries also highlighted the impact of home gardening during these discussions
 - vi. Field visits to the rehabilitated sites: the visited sites included the main pumping station in Tal Alhawa; four of the 11 reconstructed bridges (Tal Alhawa, Almshirafa, Alnassar and Khrab Al-Tebin); and five of the 21 repaired water control gates (Alfarhainia, Tal Alhawa, Tal Talab, Almshirafa and Alnassar).
 - vii. Internal debriefing discussion: this covered the preliminary findings and the next steps for the evaluation process, which was organized by the evaluation manager.

¹ The final evaluation started in April 2022. During the months of April and May 2022, the Evaluation Team worked on the inception report (planning and preparation phase). During the months of June, July and August, the evaluation was put on hold so that the remaining activities could be implemented following a no-cost extension that had been approved by the donor at the beginning of the evaluation. The Evaluation Team then resumed its work with the data collection phase in September 2022.

15. In the analysis and reporting phase, data from desk reviews, interviews, FGDs and field visits were organized according to evaluation criteria and questions, informing qualitative data analysis.
16. Initial findings, conclusions and recommendations were validated. An informal validation meeting was held with the project team to review the initial findings (for example, a desk review, a theory of change [TOC] review and interviews) and agree upon key recommendations for the project's second phase. This was followed by an official presentation of findings, conclusions and recommendations to the project steering committee in early 2023. The meeting provided additional opportunities for input and validation.

1.5 Limitations

17. A few limitations were encountered during this evaluation.
 - i. The COVID-19 pandemic and travel restrictions: this was mitigated by conducting some interviews remotely.
 - ii. Reduced statistical robustness: this was mitigated by cross-referenced qualitative data with documentation and similar project reports, as well as the cautious use of anecdotal evidence to support the conclusions.
 - iii. Limited FGD representation: this was mitigated by the KIIs from diverse stakeholders. Where possible, the FGDs were held in accessible locations with balanced gender participation.
18. Limited time for data collection reduced the depth of fieldwork, particularly for direct observations and stakeholder feedback. This was mitigated by prioritizing in-depth interviews, documenting observations and validating findings through an analysis workshop with data triangulation.
19. Despite limitations, the desk review and data triangulation process were prioritized to enhance reliability. Given the lack of statistical robustness, qualitative data were cross-referenced with available documentation and similar project reports. Further, anecdotal evidence from the available reports was incorporated to support the conclusions.

1.6 Structure of the report

20. Following this introduction, Section 2 presents the project's background, context and TOC. Section 3 presents the main findings for each evaluation question. The conclusions and recommendations follow in Section 4. The appendices include a list of people interviewed and the evaluation matrix.

2. Background and context of the project

2.1 General context of the project

21. The crisis in Iraq is largely due to the 2014 invasion and occupation by the Islamic State of Iraq and the Levant (ISIL), especially in the Tigris-Euphrates water basin. This invasion led to widespread displacement, economic disruption and threats to agricultural production and food security.
22. The conflict not only displaced families but also led to the direct destruction of critical water and agricultural infrastructure, including rivers, canals, dams and desalination plants. According to FAO, approximately 4.4 million people needed food security assistance (FAO, 2016). This population included internally displaced persons (IDPs), and remainee and returnee communities in the affected areas during the conflict.
23. The agriculture sector and agriculture-based livelihoods faced severe constraints across the value chain. This affected production, as well as post-harvest handling, processing and marketing. The conflict interrupted crop cycles and inflicted physical damage to agricultural land and assets. The influx of returnees placed additional strain on the communities that remained, exacerbating food insecurity and resource scarcity.
24. Around 50 percent of the cultivable land in Iraq depends on rainwater. This means that crop farming and animal breeding are among the main sources of income for most of the households in the country's rural areas. Faced with food insecurity, many families adopted various coping mechanisms like reducing meals. They emphasized the urgent need for cash, income generation opportunities and agricultural rehabilitation.
25. The importance of water resources in Iraq cannot be overstated. In 1991, the Iraqi Government launched the North Al-Jazeera irrigation project to introduce a new irrigation system from the Tigris River and supplement traditional water-fed irrigation systems. This large-scale initiative was designed to irrigate approximately 70 000 ha using linear move sprinkler systems with water pumped from the Mosul Dam, formerly the Saddam Dam. The infrastructure provided water to 240 000 dunums of farmland, supporting rural livelihoods and agricultural productivity in the region. The Nineveh Governorate has played a historic role as the breadbasket of Iraq. The region produces fruits and vegetables in the spring and autumn, and wheat and barley in the winter during the rainfed season. Together with the Salahadin Governorate, the Nineveh Governorate produces over one-third of Iraq's annual wheat and barley (Ibidem).
26. The Nineveh Governorate is one of Iraq's most ethnically diverse regions. It is home to a complex mix of Sunni Arabs, Kurds, Yezidis, Assyrians and Turkmen. Each ethnic and religious group occupies distinct areas, with significant concentrations in specific districts. For example, the Yezidis are predominantly found in Sinjar. The Kurds and the Assyrians have a presence in Akre and Sheikhan, which has been administered by the Kurdish Regional Government since 1991. Diversity brings a rich cultural tapestry. However, this also creates unique challenges for governance and security – particularly in the wake of the ISIL conflict. In fact, the ISIL conflict caused significant displacement, trauma and an urgent need for stability. Historical grievances, sociopolitical affiliations and external influences compound these challenges. Such a situation requires delicate, nuanced governance that addresses the needs of each group.
27. Managing such a complex ethnic landscape has proven difficult. The overlapping jurisdictions of federal and regional authorities, the presence of various armed groups like the Popular

Mobilization Forces, the Kurdistan Workers' Party and local militias, and the influence of neighbouring countries further complicate governance. Coordinating these groups, which often have conflicting agendas, has led to instability – especially in security and resource management. For example, the Popular Mobilization Forces guard checkpoints in order to protect against ISIL infiltration. However, their presence has reportedly led to illicit activities and tension with the local communities. The presence of the Kurdistan Workers' Party-affiliated groups, particularly in Sinjar, has added to the complexity. Here, Turkish military interventions destabilize the region. This multifaceted ethnic and security context requires carefully balanced policies that promote both peace and trust among communities.

28. The ISIL conflict devastated the irrigation system. There was extensive damage to pumps, canals and control systems. This limited the system's capacity and deprived communities of essential water resources. Many residents were displaced to the Syrian Arab Republic. Those who remained could no longer benefit from the irrigation system due to the limited capacity of pumps and the damage sustained by the irrigation canals. Displaced Iraqi populations that began returning to the Nineveh Governorate found themselves in vulnerable conditions. Damaged infrastructure meant shortages in the irrigation water supply. This placed significant strain on ailing irrigation schemes, which had already been operating at limited capacity. The increased demand for water and agricultural resources has exacerbated these shortages. This makes it challenging to meet the needs of both the returnee and remainee communities.
29. The project's damaged infrastructure negatively impacted the farmers that had stayed. This negatively affected their income, which ultimately led to the migration of many people from the region to other places.
30. The impact of this loss on agriculture, livelihoods and irrigation systems was recognized. In 2016, FAO and the Directorate of Agriculture, local community leaders, non-state actors and community-based organizations conducted a damage and loss assessment to determine the scope of repairs needed for restoring the system's functionality and to support the recovery of the agriculture sector. It covered the Nineveh Governorate among other governorates in Iraq. This assessment revealed the following:
 - i. canals damaged by ISIL and sections filled with debris that may contain undetonated improvised explosive devices (IEDs) (project document);
 - ii. 11 blown-up bridges that may contain undetonated IEDs;
 - iii. 800 destroyed sections of elevated irrigation canals; and
 - iv. a damaged main distribution pumping station, with the second and third parts of the project's pumping stations badly damaged or destroyed.
31. FAO Iraq's 2016 assessment led to analysing the overall importance of restoring agricultural activities and livelihoods across these areas. It also examined how this is critical for the country as a whole, considering the importance of farming and the existence of the largest irrigation scheme in Iraq. The invasion of these governorates by ISIL mainly occurred from June to August 2014.
32. FAO Iraq's 2016 assessment recommended a number of actions that were integral in supporting the agriculture sector and livelihoods.
 - i. Restore crop production:
 - provide direct support in the form of seeds, fertilizers and pesticides
 - enhance land and machinery access to restore crop production

- provide temporary irrigation measures like digging wells
 - support measures to restore market access
 - ii. Restore livestock production:
 - provide animals to support restocking, especially sheep and poultry
 - provide emergency veterinary services, including medicine
 - supply chicken feed directly
 - improve safety and access to pastures
 - iii. Revitalize fish production in the Nineveh Governorate
 - rehabilitate fish ponds
 - supply fish feed and medicine directly
 - iv. Stabilize livelihoods
 - support the CFW schemes
 - rebuild small businesses and microbusinesses through grants, affordable loans and market access measures
33. FAO Iraq's 2016 assessment was used as a basis for determining the targeted group in the Nineveh Governorate. The United Nations Development Programme (UNDP) and European Commission project design was based on the information collected by this assessment.
34. In 2016, FAO was provided assistance from the UNDP's Funding Facility for Immediate Stabilization. This helped to rehabilitate Phase I of the North Al-Jazeera irrigation project. However, further funding was needed to ensure the completion of all the work needed for its restoration.
35. The North Al-Jazeera irrigation project is the only source of irrigation. This means that the rehabilitation of its infrastructure will significantly expand irrigated lands, promote production and enhance livelihoods. Nonetheless, Iraq's reduced share of the Tigris River and minimal rainfall for two years has created a low water reserve in the Mosul Dam Lake. This situation could impact future water flow and pumping capacity if rainfall levels continue to be minimal in the basin.

2.2 Description of the objectives and components

36. The project was designed to tackle challenges in the Nineveh Governorate. The objective aimed at increasing the resilience of farmers' livelihoods in crisis-affected, liberated areas through the rehabilitation of damaged infrastructure.
37. The project design included five key components to achieve the expected results.
- i. Mine action: ensure the safety of returnees to newly liberated areas. This involved an awareness campaign on the clearance of landmines and unexploded explosive ordnance (UXO) from hazardous land for the safe delivery of assistance. This was done in collaboration with the Mines Advisory Group (MAG), which implemented mine clearance for the project under their allocated funding.
 - ii. Rehabilitate the damaged canals: the CFW activities aimed to clean and remove debris from the canals and rehabilitate them. At the same time, this involved providing income for

the most affected and vulnerable community members in the target areas – especially women in a culturally appropriate manner.

- iii. Repair bridges, canal linings and water control systems.
- iv. Repair Phase II and Phase III pumping stations (complementing the UNDP project focused on Phase I repairs).
- v. Spare parts and replacement to the travelling irrigators and pumps: inspect damaged travelling irrigators and pumps. As required, the broken and damaged parts are to be replaced. The replacement parts will be procured and installed to return the irrigators back to working order.

38. The expected results of the project involved the following aspects.

- i. Impact: rehabilitate and safeguard agricultural production infrastructure through the CFW component, which will increase resilience and mitigate the impact of future shocks.
- ii. Outcome: improved food security and livelihoods; increased income; rehabilitation of damaged community infrastructure; and 30 000 vulnerable households (180 000) in the crisis-affected, liberated areas in Iraq supported by the CFW activities. The latter encourages the integration and participation of women and other marginalized groups in the area to benefit the community – not just the individual.
- iii. Output 1: income generation activities provided to vulnerable community members, infrastructures improved and productive assets rehabilitated.
 - Output 1.1. Improved income levels of returnees and remainees.
 - Output 1.2. Increased employment opportunities for 1 250 vulnerable households through the CFW, as well as home gardening for some of the female-headed households.
 - Output 1.3. Rehabilitated agriculture and water infrastructure and assets in targeted areas.
 - Output 1.4. Strengthened livelihoods of farmers, including women, through labour-intensive schemes.

2.3 Implementation modality

39. FAO's implementation plan was designed to include these mechanisms of monitoring, transparent beneficiary selection and reporting. Initially, FAO Iraq had planned to oversee the interventions directly, with field officers designated to supervise both the operational and technical aspects at the local level. The following were integral in implementing activities across the villages and districts: local technical teams, chaired by directors from the Department of Agriculture and composed of key stakeholders; the Ministry of Agriculture, as the official counter partner; FAO; the Ministry of Water Resources, as the key implementer; Mercy Hands for Humanitarian Aid; and community representatives. For beneficiary selection, FAO outlined a clear, criteria-based process involving village committees to ensure transparency. Door-to-door assessments were also planned to examine household vulnerabilities. This aimed to target the most vulnerable households effectively.

40. The reporting structure was laid out to keep donors informed about the project's progress. FAO planned to submit an inception report with a detailed work plan within two months. This was to be followed by quarterly progress reports with disaggregated data on gender and youth, a mid-

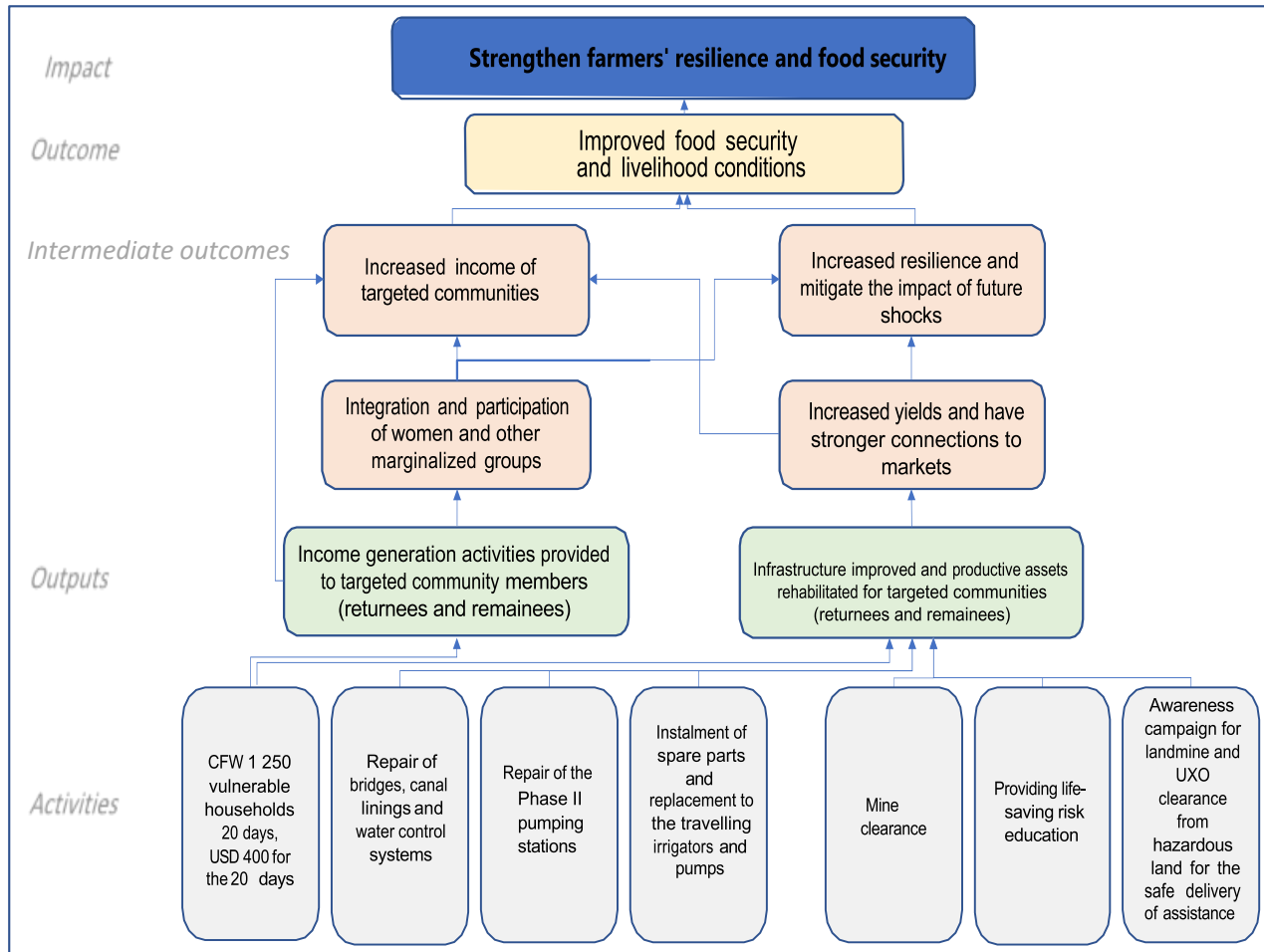
term report after six months and a final report within three months of project completion. Field visit reports would supplement these.

41. A monitoring system was also planned to track project performance, allowing for adjustments as needed. FAO Iraq, regional technical officers and field monitoring officers were expected to support ongoing monitoring. Letter of agreement (LOA) arrangements with the implementing partners would formalize monitoring and evaluation as a core function.

2.4 Theory of change

42. FAO Iraq developed a logical framework as part of the project document. This provided the logic and description of how and why change is expected to happen in the project's context (see Figure 1).
43. The vision of the TOC for the project was to support resilience, improve livelihoods and strengthen food security. To achieve this vision, the project focused on: i) rehabilitating and improving irrigation systems for stable water access; ii) enhancing rural infrastructure to increase farmers' market connections; iii) implementing the CFW activities to support immediate food access and generate income for vulnerable communities; and iv) integrating demining activities to ensure the safe return of displaced individuals to their lands and risk education for those in previously hazardous areas.
44. The TOC was essential in defining the evaluation's objectives and questions.

Figure 1. The project's theory of change



Source: Authors' own elaboration.

3. Findings

45. In this section, the findings are presented according to the key evaluation question.

3.1 Relevance

EQ 1: How was FAO's project relevant to the needs of the country and the most vulnerable? Did it align with FAO's strategic objectives?

Finding 1. The project closely aligned with the needs of the region, the country and the government, as agriculture and livestock serve as the primary livelihood for most of the population. Since the North Al-Jazeera irrigation project represents the sole source of irrigation, rehabilitating its infrastructure will significantly expand irrigated lands, promote production and enhance the livelihoods of community members.

46. The North Al-Jazeera irrigation project's infrastructure was established prior to this intervention. It aimed to serve the surrounding communities, many of whom had either fled to the Syrian Arab Republic or remained during the ISIL invasion. The services were fully operational before the infrastructure became dilapidated. FAO Iraq's 2016 assessment revealed that two pumping stations, 11 bridges, 21 control gates, 237 linear sprinklers and two canals were needed for restoration.
47. An immediate response to this assessment was a project initiated by FAO and the UNDP-supported rehabilitation of the first part of the canals. Work referred to as Phase I resulted in water flowing in a section of the irrigation canals (United Nations Iraq, 2021). An increase in returnees who had fled to the Syrian Arab Republic generated greater interest among them to participate in the 2022/23 agricultural season. FAO approached the European Commission and received funding to rehabilitate the remaining canals, bridges and repair water pumps. This is referred to as Phase II and Phase III.
48. Stakeholder feedback informed the Evaluation Team that FAO Iraq's 2016 assessment was useful in identifying the extent of the damage. It also provided a clear indication of interest among the targeted communities, including returnees and remainees, as well the need to rebuild the irrigation canals and clear mines.
49. The European Union, as donor, provided a confirmation. Therefore, the FAO team carried out a number of consultations with: targeted communities; local committees; the Ministry of Agriculture, as the official country partner of FAO Iraq; the Ministry of Water Resources; MAG; and the Directorate for Mine Action. These consultations could further determine the targeted communities, which allowed for agreeing upon the activities and designing the intervention.
50. A review of the project design indicated that stakeholder participation was prominent. In fact, the participatory element was referenced with details on targeting, stakeholder consultation and engagement, and implementation arrangements.
51. The KIIs and the FGDs were carried out by the Evaluation Team. The beneficiaries confirmed that FAO had engaged in and promoted a participatory process. For example, FAO held these rounds of consultations and continued to the final stage of the project. Furthermore, two involved coordination: i) a central coordination committee, including FAO, the Ministry of Agriculture, the Ministry of Water Resources, key directorate representatives and farmers' unions; and ii) local technical teams, led by Directors from the Department of Agriculture and relevant stakeholders.

This depended on the activity and the targeted group (returnees or remainees) to ensure project facilitation, address issues and oversee beneficiary selection with community involvement.

52. With a link to these coordination groups, established by FAO, the project provided an opportunity for women to be members of the consultation groups. Women were part of the farmers' union, from which 50 female-headed households were selected for the CFW and the home gardening activities.
53. The project design provided an opportunity to engage with the targeted communities prior to implementation. This encouraged them to continuously express their needs and participate in the established coordination bodies. This continuous engagement and call for participation relied heavily on the willingness, trust and sense of ownership of the targeted communities. Indeed, these communities practice farming to fulfil their roles and plant a seed for continuity.
54. The desk review with stakeholder feedback served as supporting analysis for the participatory approach that was promoted by the project. This ensured effectiveness, sustainability and community ownership. Feedback from the KIIs and the FGDs with the local authorities interviewed during the evaluation confirmed their satisfaction with the canal rehabilitation activities. They indicated that the project not only assisted in rehabilitating and maintaining local infrastructure and creating community and public productive assets but also helped the most vulnerable deal with various shocks. The latter was achieved by increasing their income and participating in labour-intensive activities. This involved 1 250 households, including 241 female-headed households. In fact, this aimed to create temporary jobs and employment opportunities at the community level. In addition to the rehabilitation of 84.6 km of irrigation canals, 2 600 m² of canal lining and the provision of 150 irrigation spare parts, the canals became ready to receive water. This created a great opportunity for both returnee and remainee farmers to participate in the 2022/23 farming season.
55. A review of the Iraqi Government's national development plans indicated its commitment to achieving the Sustainable Development Goals, specifically Sustainable Development Goal 6: ensure availability and sustainable management of water and sanitation for all. The Iraqi Government made substantial progress on all four integrated water resource management dimensions between 2017 and 2020, and moved from low to medium-low (ESCWA and UNEP-DHI, 2021).
56. The Evaluation Team found the project to be highly relevant. It aligned with national needs and the government's priorities. In particular, the project aligned with the Iraqi Government's programmes and activities that focus on sustainable land, water and drought management. This promoted greater agricultural investment, which was clearly linked to the 2018–2022 Iraqi National Development Plan (Ministry of Planning of the Republic of Iraq, 2018).
57. The project was part of the overall national scheme to rehabilitate and upgrade the large-scale water irrigation infrastructures. The country is currently facing a serious water shortage. With this challenge, the Iraqi Government, through the Ministry of Water Resources, is keen on supplying water for irrigation purposes to cultivated lands only. This evaluation found that the project had aligned with FAO's strategic objectives. It contributed to FAO's Strategic Objective 5: increase the resilience of livelihoods to threats and

"The project was extremely necessary to improve agricultural production in the region, as well as improve food security in Iraq."

Ministry of Agriculture

crises. The project did so by increasing the resilience of farmers' livelihoods in crisis-affected, liberated areas through the rehabilitation of the damaged infrastructure. It also contributed to Sustainable Development Goal 6.

58. The project aligned with FAO's focus on humanitarian resilience through immediate support provided by the CFW activities, as well as the longer-term activities of rehabilitating the irrigation infrastructure. The latter intended to provide a functional irrigation system for both returnee and remainee farmers. This project aligned well with the 2018–2022 Country Programming Framework, which focused on the following priority areas:
- i. Priority Area A: resilience and restoration of agricultural livelihoods in regained areas of Iraq.
 - ii. Priority Area B: restoration of degraded agricultural land and higher productivity of water resources in agriculture.
 - iii. Priority Area C: increased sustainable smallholder agricultural productivity for improved food security and nutrition.
59. The COVID-19 pandemic had a negative effect on implementation timing. This resulted in serious delays due to lockdowns and the protective measures imposed by the government. Nevertheless, this provided project management and stakeholders with the time to revisit various activities and ensure that the implementation plans were sound and achievable. It also offered a valuable opportunity to reflect on the initial coordination mechanisms that had been established during the design phase, as well as assess their functionality and reach under unprecedented conditions. During this period, the FAO team intensified efforts in online communication and outreach to different stakeholders, fostering a sense of connection and positive relationships.
60. Despite this situation, it had positive results in highlighting the following aspects:
- i. National potential and capabilities were realized. This involved vast areas of arable land and the availability of irrigation water to produce agricultural crops. Capabilities were utilized to boost local production capacities in dealing with disasters in order to ensure food security.
 - ii. Improving the level of coordination between the government and international organizations to deal with such disasters was important. The COVID-19 pandemic was new to Iraqi society, and the farmers were not alone in confronting it. Rather, the government consulted international organizations to benefit from their experiences in confronting and dealing with such disasters and minimizing their impact.
 - iii. Synergies and cooperation between the government and farmers were also key.

EQ 2: To what extent were the project design and its implementation appropriate in achieving the intended objectives?

Finding 2. The design of the project was appropriate and sound as it responded to the identified needs of the targeted population in the project area.

61. FAO conducted several assessments prior to and during project design and implementation. This included comprehensive agriculture damage and loss needs, agricultural needs and the impact of the COVID-19 pandemic on gender equality assessments.
62. The country analysis provided a context for understanding the intervention area and helped to validate and inform the design of the project's activities. The analysis covered several dimensions,

including: i) problem analysis and challenges; ii) food systems; iii) livelihoods; and iv) natural resources.

63. The context analysis identified key drivers, such: as i) community-level groups, customs, practices, and gender roles; ii) the socioeconomic context and economic inclusion; and iii) the management of and access to resources, as well as local environmental considerations. Importantly, the analysis highlighted women's roles in the agriculture sector, protection concerns and the situation of the returnees and remainees.
64. These factors were reflected in the project design, particularly in the rehabilitation of the damaged irrigation infrastructure. Improved water access for agricultural livelihoods encouraged the return of those who had been displaced, that is, those who were considered IDPs in the Syrian Arab Republic. FAO's 2016 assessment highlighted severe disruptions to crop production, irrigation systems and market access, with an estimated 70 percent of cultivated areas damaged or destroyed in the Nineveh Governorate. The ISIL invasion led to lost harvests, displacement and looted storage facilities, which then caused significant income losses. Irrigation infrastructure was in urgent need of repair, as damaged equipment and restricted land access due to the IEDs hindered crop recovery. Pest infestations proliferated without government support for the essential inputs. This further decreased productivity.
65. The report projected that the livestock and aquaculture sectors also suffered greatly. Livestock losses reached up to 80 percent in sheep and 90 percent in poultry. At the same time, fishery production declined by about 75 percent. Farmers faced high costs to replace equipment and lacked access to veterinary services and fish feed. The crisis reduced agricultural employment and income by more than 50 percent, leaving many families food insecure and dependent on negative coping strategies. Effective recovery required immediate support for cash assistance, input provision and equipment replacement, alongside a comprehensive long-term approach to rebuilding Iraq's agricultural livelihoods.
66. FAO, the World Food Programme, and Cooperative for Assistance and Relief Everywhere conducted a rapid gender analysis in 2021 (FAO and WFP, 2022). This stressed the significant impact of the COVID-19 pandemic on gender inequalities and food security, especially for vulnerable groups. The study found that the pandemic had worsened social and economic barriers for women, limiting their access to resources and increasing their caregiving burdens. This analysis, based on surveys and interviews with diverse groups – including female-headed households, IDPs and returnees – provided a foundation for creating targeted interventions that strengthen resilience. Key recommendations included creating temporary employment opportunities and economic relief through stimulus packages and cash transfers with a focus on women's needs. Advocacy for an anti-domestic violence law was essential in addressing the rise in gender-based violence. The issuance of special permits for daily labourers and farm workers during curfews was also found to be important in securing livelihoods. These measures aimed to reduce negative coping strategies and support Iraq's most affected communities.
67. The Evaluation Team found that the project provided a special opportunity at the right time in addressing the immediate needs of the affected population. It focused on rehabilitating damaged irrigation infrastructure and introduced the CFW initiative to benefit the targeted population. This approach built on the historic North Al-Jazeera irrigation project in the Nineveh Governorate in order to address urgent and short-term needs. At the same time, this approach sought to achieve long-term goals. A key project result was the rehabilitation of irrigation infrastructure. The Evaluation Team praised this outcome, noting that it helped to revive the deteriorated irrigation system that had suffered due to prolonged conflict and financial constraints.

68. The project design adapted to the changing context of Iraq. Indeed, it targeted returnee and remainee communities. In other words, it was relevant to the needs of the targeted communities.
69. The project was highly relevant and timely. This was reflected in the 2016 and 2017 needs assessments. In fact, this relevancy and timeliness is based on the impact of the ISIL conflict on Iraq's agriculture sector. This includes the destruction of the water systems, irrigation facilities and other infrastructure. The project addressed a major gap in agricultural production and its effects on livelihoods by focusing on the rehabilitation of the irrigation system.
70. The project design incorporated gender considerations to address the needs of women, particularly those who had become heads of households due to the ISIL conflict. During the inception phase, FAO and the implementing partners coordinated with the local authorities to conduct a rapid assessment of irrigation schemes. It also aimed to identify labour-intensive CFW activities that were sensitive to gender and people with disabilities. The project included home-based gardening activities, recognizing that cultural norms often limit women's ability to work outside the home. This allowed 241 women to earn an income to support their families. This coordination and consultation facilitated a design that aligned with community customs. This supported women's participation in a culturally acceptable way. Additionally, through discussions with groups like the Donor Coordination Group for Agriculture and Water Resources, the project aimed to foster a more supportive environment for gender inclusion and resilience.

Finding 3. Adopting a participatory approach was a strong and positive feature of the project. This was done by engaging national partners and local communities during the design and implementation of the project, which contributed to achieving better results.

71. Evidence from FAO's 2016 assessment underscored the importance of timely engagement with vulnerable groups and wider communities in the Nineveh Governorate. The Evaluation Team also found that the project design benefited from another assessment on the impact of gender, which FAO conducted in 2021.
72. FAO utilized this assessment to identify vulnerable groups, which included demographic and economic vulnerability indicators. Vulnerable people among the returnee and remainee communities were categorized by criteria that were based on agricultural needs.
73. During the inception phase, FAO led a team in consultation with the Department of Agriculture, local community leaders, non-state actors and community-based organizations to identify potential beneficiaries. FAO and the Ministry of Agriculture jointly endorsed the final list of beneficiaries. This ensured that the selections met a set of agreed upon criteria.

Box 1. Selection criteria of vulnerable groups

The implementing partner will identify and select beneficiaries/workers to be involved in the CFW activities based on the following criteria.

- Male and female residents of the most affected target villages can be selected if they are able and willing to do physical work at the set wages.
- Households with no other sources of income or any form of assistance can be selected for a daily wage – whether unskilled or semi-skilled labour.
- Female-headed households can be selected, considering social and cultural sensitivities.
- People with disabilities will be included in an appropriate manner based on their physical potential.
- No household should register more than one beneficiary/worker unless all households in need have been given a chance and provided an opportunity.
- Only registered members can receive or collect the cash/wages for work days. The household can replace its members for certain work days if the registered beneficiary/worker is unavailable to go to work on any particular day.
- People under 18 years of age cannot be registered as workers.

74. These teams played a central role in selecting beneficiaries according to the set criteria and collaborated closely with community representatives to ensure inclusive decision-making. The selection process included door-to-door assessments conducted by village and camp management committees to confirm household vulnerability levels.
75. During implementation, the coordination groups established a number of secure distribution points for tool distribution. FAO partners² were responsible for safe storage and logistics management. Beneficiaries were notified in advance to collect their tools and distribution forms. Key information, including beneficiary details and quantities, were received. These forms were endorsed by the agricultural authority, the implementing partners and FAO, ensuring accountability and a clear audit trail.
76. For monitoring, FAO maintained a rigorous reporting structure. Regular updates were provided to the donor. This included an inception report, quarterly progress reports, a mid-term report and a terminal report. Whenever possible, data were disaggregated by gender and youth to monitor inclusivity. Additionally, field visits and continuous feedback from FAO field officers further ensured that the process met the project's objectives and adhered to accountability standards.
77. On building capacity for effective implementation, FAO provided training to partner staff on proposal writing, monitoring, financial management and the beneficiary identification process. This ensured a consistent and high-quality assessment approach. By strengthening partner capacity, the project fostered a well-informed and skilled team that was capable of conducting thorough beneficiary assessments and managing the selection process effectively.
78. FAO applied a conflict-sensitive approach and the do no harm principle. It recognized the complex ethnic composition of areas like Rabia and the potential for post-conflict social tensions. The do no harm principle avoided unintended harm. This approach respected local dynamics, particularly in areas with diverse groups of Sunni Muslims, Kurds and Yezidis. This fostered positive interethnic relationships and maintained social cohesion.
79. The Evaluation Team found evidence of community-based targeting that had been integrated as a participatory method. This enabled vulnerable individuals to contribute to the design process. Feedback from the KIIs and the FGDs confirmed strong evidence on the use of building local ownership. This added to the efforts to enhance participation.
80. FAO adopted a joint working approach with: the Ministry of Water Resources; local communities; the district and subdistrict levels; the Mayor of Mosul District; the Head of the Rabia Subdistrict; the Head of the Rabia Municipal Council; and farmers. Regular meetings oversaw project implementation. These meetings discussed rehabilitation needs for irrigation canals and water control, and ensured adherence to technical specifications. Their involvement facilitated contractor activities and addressed challenges, especially in obtaining official approval and permission to import materials for bridge construction. This provided an exchange of ideas and an open discussion about the implementation of activities.
81. Feedback from the KIIs and the FGDs informed the Evaluation Team that this joint work with local leadership contributed to building the capacity of local actors, such as local authorities, local communities and the CFW beneficiaries. In particular, this occurred in different areas during canal rehabilitation and the repair of water pumps. Women and farmers' union were included.

² This involved: the Tareek Al-Tebr Company; the Soor Al-Ibdaa Company for General Contracts Ltd.; the Al-Mahara Engineering Company for General Trading and Contracting Ltd.; AsiaHawala; and Mercy Hands for Humanitarian Aid.

82. Further, 1 250 vulnerable households were selected to benefit from the CFW interventions. This was community based and established both a dialogue and networks.
83. Remainee and returnee communities were involved in the decision-making process during the project's design and implementation phases. For example, FAO Iraq and the project beneficiaries agreed upon the need to rehabilitate the irrigation canal and the parts to rehabilitate. They also agreed upon the need to improve water management and reduce losses through the maintenance of sprinkler irrigation systems for farmers. This included the application of large-scale modern irrigation systems within the North Al-Jazeera irrigation project.
84. Local communities engaged in the implementation of activities through the project's CFW component. Meetings were conducted to mobilize communities and identify beneficiaries. This facilitated setting up village committees in consultation with communities at the village level for smooth implementation of the CFW initiative. During these meetings, activities, beneficiary selection criteria, project objectives, daily wage rates, duration and frequency, and modes of payment were well explained. The engagement of local communities resulted in a greater feeling of ownership and commitment towards the project.
- *"To bring different stakeholders under one umbrella was really challenging, but FAO succeeded in doing that."*
FAO Representative
85. This participatory approach helped in creating community ownership of the project. Feedback from the FGDs, project progress reports and the KIIs provided convincing evidence on the project's role in building local ownership. This was achieved by enhancing local leadership, strengthening the capacity of local actors like local authorities, community members and the CFW beneficiaries, and promoting inclusive, participatory processes like canal rehabilitation. The project also emphasized involving women in water management and encouraged their participation in project activities. Special attention was placed on ensuring that women benefited from the CFW interventions, even when some could not engage in traditional CFW roles. The project's initial target was 1 250 households. Out of this number, an initial 241 were supposed to be women or female-headed households.
86. Feedback from stakeholders indicated that support had covered 1 250 households, including 1 009 male-headed households that received CFW to clean canals. The 241 female-headed households could not resume canal cleaning due to culture, as it was considered work for men. In consultation with the local community and the Mayor of the Rabia Subdistrict, an appropriate CFW activity was identified for women. This involved land preparation for home gardening. Each female-headed household cultivated 50 m² of land near their homes to grow vegetables such as radish, chard, tomato, okra and onion, which were consumed daily. The estimated production of vegetables per household was from 300 to 400 kg during the 2019/20 season, with a value of USD 150 per household.
87. These flexible structures allowed for better targeting and effective consultations on CFW implementation with the local authorities. This reinforced the project's commitment to local engagement.

3.2 Efficiency

EQ 3: How did organizational and operational capacity and arrangements facilitate or constrain FAO's work on the project?

Finding 4. The project's implementation mechanisms were efficient and significantly contributed to achieving the desired results. This was due to high levels of coordination between FAO and its partners, including the Ministry of Water Resources, the Ministry of Agriculture, the local authorities and the local communities. Regardless, the project was affected by the COVID-19 pandemic.

88. The Evaluation Team's review of the project's budget allocation across various activities and staffing lines revealed a balanced distribution of funds for the overall design. However, due to evolving project needs, particularly those impacted by the COVID-19 pandemic restrictions, two budget revisions and no-cost extensions were required to align the resources accurately with the on-the-ground requirements.
89. Despite these challenges, including restricted movement and delays in procurement caused by the pandemic, FAO Iraq achieved full budget absorption. It utilized 100 percent of the allocated funds from 2017 to 2022. Project staff exerted the careful and adaptive planning and monitoring of activities, and accelerated spending where feasible to ensure complete budget utilization by project closure.
90. As an example of adaptive planning in response to the needs of a key partner, the Ministry of Agriculture, FAO reallocated USD 48 000 to address disinfectant and sanitizer shortages during the COVID-19 pandemic. This reallocation enabled FAO to procure and distribute personal protective equipment, including masks, gloves and hand sanitizer, to support the Ministry of Agriculture extension officers and mitigate virus transmission risks within the agriculture sector.
91. One implementation mechanism included the regular monitoring of activities conducted by FAO staff at both the country and field offices. They worked in close collaboration with local technical teams from the Ministry of Agriculture, the Ministry of Water Resources and community representatives. This coordinated approach not only facilitated the efficient flow of inputs but also enabled the early detection of potential challenges, allowing all parties to work together to address issues promptly. For example, the swift resolution of challenges in a distribution area illustrates the effectiveness of this mechanism. Another example of adaptive planning under the CFW initiative was the adjustment of activities to accommodate women's needs. Instead of canal cleaning, women were offered home gardening activities. This provided a practical and culturally appropriate alternative.
92. Establishing storage centres at the village level is another example of building trust and close coordination with partners, such as Mercy Hands for Humanitarian Aid and the Ministry of Agriculture. This fostered efficient teamwork and strengthened cooperation for future projects. Early engagement with local communities, gathering their feedback and forming committees like those in Rabia were vital in ensuring alignment with community needs and promoting a sense of ownership. Minor delays due to the COVID-19 pandemic restrictions were mitigated by three no-cost extensions approved by the European Union. This allowed FAO to complete all project components successfully.
93. Establishing storage centres for inputs at the village level not only built community trust but also ensured the careful monitoring of supplies from vendors. It also enabled timely delivery by FAO's team through field-level monitoring.

94. There was also close coordination between FAO and its partners: Ministry of Agriculture; Ministry of Water Resources; Tareek Al-Tebr Company; Soor Al-Ibdaa Company for General Contracts Ltd.; Al-Mahara Engineering Company for General Trading and Contracting Ltd.; AsiaHawala;³ and Mercy Hands for Humanitarian Aid. The LOA arrangements resulted in mutual trust. This aspect was utilized efficiently to address challenges and strategize to overcome them.
- “Recently, the level of coordination improved by developing a higher framework. The Ministry of Agriculture played a major role as a key partner involved in project initiation and implementation.”*
- Ministry of Agriculture
-
95. Mercy Hands for Humanitarian Aid, a regional NGO, was granted an LOA and completed the activities within the agreed timeframe and allocated funding. This trust had a positive effect in shaping the current and future relationship between the governmental bodies and FAO. Indeed, this enhanced cooperation.
96. The level of interaction with local communities and the beneficiaries, such as engaging them in the early stages of the project, receiving their feedback and views on the rehabilitation process, and explaining the project’s objectives to them was instrumental in ensuring successful project implementation and achieving the objectives. This created a sense of ownership and commitment.
- “My farm is located within Zone F, and if any part of the canal within this zone needs maintenance, I will do the necessary maintenance for it directly and at my own expense.”*
- Beneficiary
-
97. Feedback from the FGDs confirmed that forming local community committees, such as that in Rabia, involved beneficiaries and local authorities. This was crucial in identifying needs and agreeing upon rehabilitation plans and schedules. Regular meetings and visits made it possible to address challenges and obstacles, allowing for collaborative solutions to overcome them.
- “Partnership is not just an agreement on paper but a practice.”*
- FAO project team
-

Finding 5. FAO initiated collaborative partnerships that engaged the main stakeholder groups: the Iraqi Government, through the Ministry of Agriculture and the Ministry of Water Resources; private engineering companies, such as contractors; and local communities.

98. FAO had established LOA arrangements with all implementing partners. This involved NGOs that implemented the CFW component: Human Appeal; Mercy Hands for Humanitarian Aid; and private engineering companies like contractors. The LOA arrangements set the scope of work and

³ AsiaHawala has partnered with over 15 international and national NGOs, as well as the government. Its partners include: United Nations Children’s Fund; Office of the United Nations High Commissioner for Refugees; World Food Programme; International Committee of the Red Cross; REACH; Service Civil International; Mercy Hands for Humanitarian Aid; Polish Humanitarian Action; Medair; ZOA; Critical Needs Support Foundation; International Rescue Committee; Islamic Relief Worldwide; Norwegian Refugee Council; Relief Organization Iraq; Iraq’s Ministry of Displacement and Migration; and many others.

the expected results. The project utilized the experience and knowledge of the local authorities and other partners. This enhanced the feeling of ownership and responsibility towards the project.

99. The project received technical support from the cash-based transfer coordination team at FAO headquarters during the drafting of the financial service provider memorandum of understanding with AsiaHawala. This mobile money service was provided by AsiaHawala. It was used to transfer cash in order to compensate beneficiaries for the CFW activities that they had done at USD 20 per day, for a maximum of 20 work days per beneficiary. It operated in a very simple manner by providing targeted households with SIM cards that had full service functionalities. Also, an AsiaHawala wallet was opened with user identification details.
100. For a total amount of USD 482 920, the project covered the most vulnerable beneficiaries who complied with the beneficiary selection criteria. This involved an average monthly income of IQD 190 000 (USD 162). As a result, silt and debris were removed from 84.6 km of the main irrigation canals, and they became ready for water to flow through. This was alongside repaired equipment and facilities: pumping station; canal lining; and water control. Temporary employment opportunities were provided to 1 250 beneficiaries (241 women).
101. Challenges faced during implementation were addressed jointly and collaboratively through regular meetings and consultations among FAO, the Ministry of Agriculture and the Ministry of Water Resources. Appropriate solutions were also discussed in a participatory manner.
102. The participation of local communities, civil society organizations and government bodies in implementation was appropriate and necessary to achieve the project's results. The participation of all parties was complementary, and facilitated the implementation process and its success. Local communities were involved in identifying their needs, agreeing on rehabilitation plans and schedules, and providing labour for contractors. A key FAO partner, MAG,⁴ was responsible for demining the area and providing a safe working environment for workers. Feedback from the KIIs and the FGDs confirmed close coordination between FAO and its country and field offices and the Ministry of Water Resources at the governorate, directorate and local community level. This overcame implementation challenges. In fact, regular meetings, consultations and joint field visits aided the process. In 2018, a rapid assessment for the targeted irrigation project was conducted to identify labour-intensive schemes and the CFW initiatives. This involved women's access to the CFW component in some villages by creating home gardening activities. Also, AsiaHawala facilitated the targeting of communities so that they could receive financial support.

Finding 6. Project implementation witnessed some delays and did not proceed as planned. The project started in May 2018. According to the project document and the work plan, the project was supposed to be completed within two years, by April 2020. However, external factors delayed the project. As a result, it was extended three times and finally completed in June 2022.

103. The rehabilitation of the irrigation system included various activities: main pump maintenance; electricity maintenance; canal cleaning; concrete lining restoration of broken canals; water gate maintenance; and bridge reconstruction. Therefore, FAO chose different implementation mechanisms to commensurate with the nature of work and the selection of companies specialized

⁴ The MAG is a global humanitarian and advocacy organization that finds, removes and destroys landmines, cluster munitions and unexploded bombs from places affected by conflict. It also provides education programmes, particularly for children, so that people can live, work and play as safely as possible until the land is cleared. The MAG works in communities to reduce the risk of armed violence through weapons and ammunition management programmes that keep guns and munitions safe and secure. Since 1989, MAG has helped over 20 million people in 70 countries rebuild their lives and livelihoods after war.

in maintaining the required areas. They were selected based on their previous experience in executing such projects.

104. There were internal and external reasons that led to the delay of the project.
- i. Demining the irrigation canals and the areas around the damaged bridges that had been assigned to MAG took longer than anticipated. This was due to security procedures and approvals from the governmental authorities, that is, the Directorate for Mine Action. This led to significant delays in cleaning irrigation canals for the North Al-Jazeera irrigation project through the CFW component and the construction of bridges (four months).
 - ii. The Iraqi Government prevented access to the high-risk project area due to war remnants, such as mines and explosive devices. Obtaining permission to access these areas took a long time.
 - iii. The project area was considered a newly liberated area. Access to such areas during implementation was difficult and required approvals from different government agencies, such as the army, the police and the popular mobilization forces. Moreover, the entry of equipment into these areas required lengthy and difficult approval processes.
 - iv. The COVID-19 pandemic had a negative impact on implementation. The lockdown and mobility restrictions in the country delayed the project, especially in terms of demining areas. Border closures led to significant delays in obtaining required equipment imports from abroad.
 - v. Iraq lacked some essential materials for building bridges. These materials were not even available in the neighbouring countries. This led to a design change in the bridges to match materials that could be manufactured in the region, which were imported from Türkiye. This lengthy process required approval from various government agencies, such as the Ministry of Water Resources and customs. The COVID-19 pandemic and the related travel and transport restrictions led to changes in the price of materials and their availability. To address these constraints, a no-cost extension was requested, reviewed and approved by the European Union. The original closing date of 30 April 2020 was extended until 30 April 2021. Another second no-cost extension was approved until 31 December 2021 to successfully complete the rehabilitation of the pumping station, the procurement of spare parts for the linear irrigation system, the reconstruction of the remaining four bridges, and the cleaning of the irrigation canal from silt and rubble. A third no-cost extension was approved, until 30 June 2022, to complete the remaining project activities.

3.3 Effectiveness

EQ 4: What results did the project achieve?

Finding 7. The planned activities were partially completed. Rehabilitation of the main water conveyance and distribution system of both Phase II and Phase III were successfully achieved. However, delays occurred in the implementation of some activities that have yet to be completed in the coming months.

105. At the time of the evaluation, the project team provided an updated summary of the results during the mission's visit to the North Al-Jazeera irrigation project in the Rabia Subdistrict.
- i. There were 1 250 vulnerable households that had been identified and provided with 20 days of employment at a rate of USD 20 per day. Male beneficiaries engaged in cleaning

the main irrigation canals, while female beneficiaries (241) engaged in backyard gardening.

- ii. Project sites were cleared from mines, and MAG completed the non-technical survey with the Directorate for Mine Action.
 - iii. The MAG provided a mine awareness training and campaign to beneficiaries, and gave life-saving risk education near the damaged canals. This ensured the safety of returnees, especially those who might not have been aware of mines in the area. The training was available to all targeted groups in the newly liberated areas.
 - iv. There were 136 risk education sessions for 2 733 individuals (503 men, 315 women, 1 315 boys and 600 girls).
 - v. There were 84.6 km of the water irrigation canal cleaned completely from silt and debris. It became ready for water flow.
 - vi. Twenty-one damaged water gates along the irrigation canal were completely rehabilitated.
 - vii. Seven destroyed bridges were completely reconstructed and handed over to the Directorate of Water Resources. It is now used by residents in the area.
 - viii. The mechanical and electrical damaged parts of the Tel Al-Hawa pumping station were rehabilitated during Phase II and Phase III.
 - ix. Seventeen damaged power transmissions were reinstalled and rewired to connect the pumping station to the national electrical grid.
 - x. All damaged canal lining, at a total area of 2 600 m², was maintained along the irrigation canal.
 - xi. The siphon structure on the main irrigation canal in the village of Tal Al-Talab (Rabia) was rehabilitated.
 - xii. The Phase I pumping station on the Mosul Dam Lake was rehabilitated.
 - xiii. All civil works for the damaged parts of the pumping station were maintained.
 - xiv. The spare parts for 150 sprinkler irrigators were procured. However, they had not been distributed to the farmers when the evaluation was conducted. As a result, the Evaluation Team could not meet with the targeted farmers. This delay was because the international company that had supplied the spare parts did not send the specialized staff to install them nor train farmers on how to use them.
106. Based on the project's results framework and interviews with the Ministry of Water Resources, the baseline for Phase II and Phase III had no water supply. This was due to damaged pumping stations and supply infrastructure, as reflected in the 2016 FAO assessment. It is expected that water will reach 83 percent of the total project area, and the irrigation canal will restore its full capacity to irrigate 280 000 dunums when Phase II of the project, which covers 100 000 dunums, will be fully operational.
107. It was clear that a large percentage of the population from the targeted villages completely depended on this project to earn a living either directly or indirectly. Therefore, the importance of preserving the North Al-Jazeera irrigation project and its infrastructure deepened among the local communities.

Finding 8. Farmers expressed their satisfaction with the project, its importance in returning the area to what it had been and the potential change it. Nevertheless, farmers targeted for Phase II and Phase III of

the project had not noticed any change because the project was not operational, and no water flowed in the canal.

108. It was too early for the Evaluation Team to assess change due to the timing of the evaluation. As stated, the Evaluation Team assessed results at the output level by focusing on: 1) income generation activities for vulnerable communities; and 2) rehabilitated infrastructure and productive assets alongside awareness raising to safeguard lives from mines.
109. The main canals at Phase II and Phase III were rehabilitated. This involved pumping stations, water gates and bridges to improve the equitable distribution of water. This would lead to irrigation efficiency through reduced water waste and leaks, accelerated water flow and ensured access to all farmers. This would also reduce the burden of canal maintenance on farmers.
110. The CFW component was efficient in creating temporary job opportunities for a period of six months. Through this, each worker, male or female, received USD 400. FAO, through the CFW component, supported vulnerable families who needed money for daily needs, including food, clothing, heat and transport.
111. Through the FGDs, the beneficiaries highlighted the importance of designating a competent team and staff members from the Ministry of Water Resources to monitor and control water distribution to farmers. This would also involve water access to all farms, especially those located in the last parts of the canal. Beneficiaries of Phase I complained that staff from the Ministry of Water Resources had lacked experience in managing the distribution process of water. This resulted in an unequal distribution of water among farmers.

Finding 9. The project's impacts had yet to be realized at the time of this evaluation. This prevented the Evaluation Team from assessing them. However, significant results at the output level were achieved throughout the project. These might lead to long-term impact.

112. The beneficiaries could not witness the benefits from the outputs, as the canal part of Phase II was not yet operational. The project had not been operational due to a low water level in the Mosul Dam Lake. This resulted from Iraq's low share of the Tigris River and the lack of rainfall for two years. Moreover, a new agricultural plan for the 2022/23 planting season detailing crop types and corresponding irrigation requirements had yet to be approved by the Ministry of Agriculture in coordination with the Ministry of Water Resources. This plan was expected to be launched in early November 2022. Once implemented, it would help to confirm whether the water flow in the rehabilitated system would be fully functional and reach all targeted farming populations for the 2022/23 season.
113. The project's achievements, as assessed by the Evaluation Team, include the following.
 - i. The project will contribute to the re-inclusion of 500 000 dunums in the agriculture plan of the Ministry of Agriculture. These cultivated lands will benefit from the supplementary irrigation secured by the project.
 - ii. Based on Phase I, the Ministry of Agriculture reviewed its agricultural policy to increase the irrigated agricultural land. The Ministry of Agriculture has also discussed the concept of changing the cropping pattern to introduce potato cultivation in the region.
 - iii. As a result of water scarcity and Iraq's decreased water supply from the Tigris-Euphrates to nearly half, the KIIs with the Ministry of Water Resources demonstrated that it was keen to provide water for cultivated lands only. As a result of this project, the Nineveh Governorate was included in the water plan of the Ministry of Water Resources.

- iv. The Ministry of Water Resources requested FAO's help to modernize the irrigation systems. This would enhance irrigation efficiency and reduce water losses, that is, water accounting, and improve productivity.
 - v. In response to the request from the Ministry of Water Resources, FAO signed a new agreement in August 2022. This aimed to introduce innovative tools for monitoring water productivity in Iraq. FAO and the Ministry of Water Resources launched a remote sensing initiative to monitor water productivity as part of FAO's global initiative known as the Water Productivity Open-access Portal (FAO, n.d).⁵ This involved Phase II and was funded by the Ministry of Foreign Affairs of the Kingdom of the Netherlands. The objective was to monitor water productivity through data that came from open-access remote sensing. It aimed to support the country in developing its capacity to monitor and improve water and land productivity in agriculture, both rainfed and irrigated. This would help the country respond to the challenges posed by dwindling freshwater resources and address the need to sustain agricultural production to ensure food security in the face of climate change.
114. The project had positive effects at the community level. This resulted in positive changes that affected the community and the region as a whole.
- i. The project restored life back to normal and the previous community structure. It achieved community peace, the quality of relationships, trust and a sense of belonging between returnee and remainee communities. This is essential in rebuilding fractured social ties, promoting peaceful coexistence, and fostering resilience among communities affected by violence and displacement. The Evaluation Team observed that people from different ethnic, religious and cultural backgrounds interacted, shared resources and collaborated on common goals such as restoring livelihoods and ensuring water flow in the canals for planting and income generation. This process was supported by engaging local communities in consultations about the project design and involving them in various activities, all while respecting their cultural practices like shared agricultural work. These activities provided opportunities to rebuild trust and foster mutual respect, creating a more united and resilient community focused on recovery.
 - ii. The rehabilitation of bridges facilitated the movement of farmers and improved access to their lands. This reflected positively on their morale. It also facilitated the marketing of crops to other regions, as the Nineveh Governorate is considered a major centre for supplying different regions with agricultural crops.
 - iii. The project enhanced agrifood industries in the region and integration between agriculture and industry. Farmers supplied factories with potatoes for manufacturing after changing their cropping pattern and cultivating new crops.
 - iv. The cultivation of fodder in the region will lead to the enhancement of livestock and related activities such as the manufacturing of dairy products. This will reflect positively on strengthening the local capacities in the region and the country in terms of achieving food security and self-sufficiency.

⁵ The Water Productivity Open-access Portal aims to assist partner countries in developing their capacity to monitor and improve water and land productivity in agriculture, both rainfed and irrigated. It responds to the challenges posed by dwindling freshwater resources and the need to sustain agricultural production to ensure food security in the face of a changing climate (FAO, n.d.).

Finding 10. The project's timeline did not allow for a full assessment of its impact. It is reasonable to suggest that the rehabilitation of Phase II and Phase III could potentially increase the likelihood of long-term benefits for beneficiaries by enhancing water flow in the canals.

115. Based on the achievement of Phase I, where the water is available, and additional feedback from the Ministry of Agriculture, it is highly expected that the project will increase the cultivated area by 80 percent for Phase II and Phase III. This will be done through the provision of supplementary irrigation, which will then lead to an increase in farmers' production of wheat from 300 to 1000 kg per dunum. This increase in production will enhance the regional and national capabilities to achieve food security.
116. The Ministry of Agriculture and the project team anticipate that, with the future flow of water, the targeted communities will be able to restore their agricultural cycles. Currently, however, the situation remains challenging: without water, planting is not possible. It is also anticipated that farmers might change the cropping pattern in the area as a result of the improved irrigation system, as at Phase I. This change in the cropping pattern will reflect positively on increasing the farmers' income and improving their living standards as these crops are cash crops.
117. The KIIs from both the Ministry of Agriculture and the Ministry of Water Resources revealed that this positive change in the region will be reflected in other regions in the Nineveh Governorate. It will also affect the economy of the region and have an impact on its prosperity in terms of job creation and improved security and stability.
118. It is highly expected that more job opportunities will be created with more cultivated land as the main economic activity. This will reduce the high unemployment rates that prevail in the region due to crises.
119. The project will lead to more irrigated land and the production of wheat, cereals and other crops. The cultivation of wheat and cereals will reduce the cost of livestock breeding, which will then increase the income of livestock breeders in the region.

3.4 Sustainability

EQ 5: How did the project ensure sustainability at the community and institutional level?

Finding 11. The project improved governance functions in the agriculture and water sector through capacity development, policy and financing.

120. The project contributed significantly to building the national and institutional capacities of the Ministry of Agriculture, the Ministry of Water Resources, engineering companies, NGOs and local communities. The project provided ten staff members from the Ministry of Water Resources with high quality skills. In particular, this involved electrical and mechanical engineers in operating the pumping stations. The KIIs confirmed that the provided knowledge was useful and offered valuable skills that could be implemented for future, similar projects. Specifically, working on this project provided engineers with skills related to the programmable logical controller⁶ on how to operate, manage and control the irrigation process through automated and self-governing irrigation systems. In addition, mine awareness trainings were provided with 136 risk education sessions for 2 733 individuals (503 men, 315 women, 1 315 boys and 600 girls).

⁶ Programmable logical controllers are digital computers used for the automation of electromechanical processes. They have a processor, some form of keyboard and screen, analog or digital input ports, and the capacity to command a number of electric devices through relays. They used to be expensive and limited in capacity. The dramatic development of programmable logical controllers and their rather affordable price has made it possible to use them as a stand-alone irrigation controller.

121. The project involved a team from the Ministry of Agriculture in training courses on modern irrigation methods and techniques to conserve water resources so that they can transfer the knowledge gained to the farmers. Moreover, agricultural engineers from the Ministry of Agriculture were trained to use alternative energy sources in irrigation instead of traditional energy sources. This will reflect positively on farmers through reduced production costs. Feedback from the FGDs in different villages confirmed that staff from the Ministry of Agriculture provided a number of awareness raising sessions on how to operate, manage and maintain these aspects.
122. Private companies contracted by FAO to execute the canal rehabilitation and build bridges gained a unique experience in implementing the project activities on such a large scale. This built their capacities in dealing with challenges, addressing problems and setting solutions that can be applied to similar projects in the future.
123. The Iraqi Government showed a high level of commitment to sustain the project. This was evident through financial commitments from the Ministry of Water Resources to sustain the services and infrastructure initiated by the project. Needed amounts were allocated for periodic maintenance, because it was considered strategic in the country and the region. This significantly impacted food security in Iraq.
124. The project's philosophy relied on employing people from the local communities. Positively, this created a sense of project ownership for them. In fact, the local residents worked to guard the equipment, realizing that this project was theirs.
125. The KIIIs with the Ministry of Agriculture and the Ministry of Water and Resources, as well as the FGDs with beneficiaries, concluded that operating Phase II of the project will increase the irrigated and cultivated lands in the region. This will then increase job opportunities for the local communities and returnees. Prosperity in the region will also encourage the return of the remaining IDPs.
126. The FGDs made it clear that farmers realized the difference before and after the project. According to them, less than 25 percent of the land had been cultivated and depended on rainfall only. Productivity was very low and did not exceed 300 kg per dunum. This decreased farmers' income. In fact, 75 percent of farmers in the area became unemployed during two years of low precipitation. This had a very negative impact on the owners of livestock. The area converted from an agricultural area to a semi-desert area during those years. The price of animal feed increased, which led to the migration of many animal owners.

3.5 Inclusiveness

EQ 6: How has the project's design and implementation mainstreamed gender and inclusiveness?

Finding 12. The project design was inclusive. It prioritized vulnerable groups, including women. The proposed monitoring and evaluation plan ensured that quantitative indicators were disaggregated by gender. Given the diversity of ethnic communities within the target areas, the project's targeting approach was comprehensive, covering all groups.

127. The Iraqi constitution and labour laws offer strong protections against discrimination. They aim for social justice, equality and decent work opportunities for all citizens, irrespective of gender, race or economic status. Despite these legal frameworks, Iraq faces substantial vertical and horizontal inequalities. These are exacerbated by conflict and displacement. Nearly 40 percent of the population is concentrated in three governorates. Limited rural services and opportunities

drive significant urban-rural disparities. Gender inequality remains high. Globally, Iraq ranks low in gender equality – especially in labour market opportunities and empowerment (ILO, 2024).

128. Considering Iraq's context, especially in the Nineveh Governorate with its diverse ethnic mix and many returnees, several key factors influenced this project: i) community dynamics, customs and gender roles; ii) socioeconomic challenges and economic inclusion; and iii) access to resources and environmental factors. Women's role in agriculture remains limited due to a lack of infrastructure and basic services. Against this background, the project design – particularly its focus on irrigation – shows a commitment to inclusivity. This aims to address both community diversity and the specific barriers that women face in the agriculture sector.
129. The project's results framework and reports from the implementing partners explicitly included gender-disaggregated indicators.
130. The project took into account the area's prevailing customs, traditions, social norms and culture, especially those related to women's work. Through the CFW component of the project, women who were not able to join the activity were supported and provided with cash payments to implement home gardening activities. This is because the social norms in the area did not allow women to work outside their homes.
131. The project design, through the CFW component to fund the rehabilitation of damaged community assets, created immediate job opportunities for both remainees and the most vulnerable returnees. Most of these returnees did not have work or a source of income. The project helped those returnees secure some of their basic needs. Cash payments empowered the beneficiaries to buy food or other necessities for immediate use. Further, 1 250 workers (241 of which were women) were employed through the CFW component.
132. FAO's priority during this project was to ensure the protection of workers. The project design contracted MAG to create a safe working environment by clearing contamination. This involved the clearance of improvised landmines and conventional UXO. Risk education was also provided to beneficiaries to keep them safe. This targeted 2 733 individuals (503 men, 315 women, 1 315 boys and 600 girls).

Finding 13. Although limited by cultural constraints, the inclusion of women in implementation was core to the project.

133. Poverty remains a constraint on growth and a serious challenge for many – especially women. Iraq already has the highest poverty rate of all upper-middle-income countries. Women and girls in Iraq have limited access to housing, land and poverty rights. Female heads of household often experience obstacles when they try to prove the legality of their occupation of land. They are still subject to discriminatory traditional and cultural norms, which exclude them from their inheritance of land (United Nations Iraq, 2022).
134. Many women lost their husbands during the ISIL occupation. These women became heads of their household where they took on the responsibility of caring for their families.
135. The main cultural barrier faced by the project was a low acceptance level of women working alongside men. Both were not allowed to work together in the same place. This problem was overcome by allocating places where women could work separate from men.
136. As underscored, the project design ensured equal opportunities for women to participate. Women were a key target group, with female-headed households comprising approximately 19.3 percent

of the 1 250 vulnerable households reached. The project addressed women's needs and empowered them through the CFW component. Specifically, home gardening activities helped them obtain a source of income so that they could secure the basic needs of the family.

137. The Evaluation Team highlighted that each female-headed household cultivated 50 m² of land near their homes. They grew vegetables that were consumed daily, such as radish, chard, tomato, okra, and onion. The Ministry of Agriculture estimated that the production of vegetables per household was from 300 to 400 kg during the 2019/20 season, with an estimated value of USD 150 for each household.
138. The Iraqi Government, through the Minister of Agriculture, acknowledged and appreciated the activities of the project – especially those related to women.

4. Conclusions and recommendations

4.1 Conclusions

139. The evaluation concluded the following.

Conclusion 1. The project was well designed and highly relevant to the needs of remainee communities, returnee communities, which had been displaced to the Syrian Arab Republic, and the relevant local authorities in the Nineveh Governorate. This set a precedent for resilience programming in the area. FAO's 2016 assessment, complemented by a rapid assessment to identify target communities, provided a solid foundation for a participatory and inclusive approach. This process enabled meaningful engagement with the affected populations and ensured that the interventions addressed their most pressing needs.

140. The design also responded to: i) the priorities of the government being part of the overall national scheme to rehabilitate and upgrade the large-scale water irrigation infrastructure; and ii) FAO's strategic previous and current strategic objectives.

141. Building resilience requires a deep understanding of people's adaptive capacities and decision-making processes, which is achievable only through participatory consultations. These consultations were essential to the design of relevant interventions and were a core strength of the programme, contributing to both its immediate success and its potential for lasting impact.

Conclusion 2. Project implementation was affected by serious delays due to external factors related to the COVID-19 pandemic, security instability and lengthy official approvals to proceed with demining activities. However, FAO demonstrated flexibility in dealing with the pandemic, and procurement was facilitated through liaison with the responsible units at FAO headquarters to adopt strategies that were flexible and effective in dealing with the circumstances. Additionally, FAO coordinated with the authorities to facilitate movement and operations in the target areas. At the same time, FAO ensured full adherence to the protective measures and recommendations of the health authorities.

Conclusion 3. Greater consideration of an exit strategy that lays the foundation for sustainability at the community level is required. Alternative funding partners should be sought for institutional capacity development in resilience to ensure sustainability.

142. The project's participatory approach fostered a high level of ownership among targeted communities. This enhanced the relevance and potential for the sustainability of its activities. By addressing critical needs through targeted interventions, such as support for resettlement, irrigation system restoration and the CFW to support agricultural production, the project delivered immediate results while contributing to a foundation for long-term recovery. This comprehensive strategy positions communities to build on the project's achievements, creating a pathway towards sustainable growth and resilience in the Nineveh Governorate.

143. FAO and the Ministry of Water Resources recognize the project's success and confirmed its allocation of financial resources to sustain services, infrastructure and periodic maintenance. However, there was a need for a clear plan on the timing of this budget disbursement. There was also a need for a plan on water release in the rehabilitated canals to not only test the infrastructure but realize, with evidence, that farmers would fully benefit from the 2022/23 winter season. Given the complex situation, this should be the minimum requirement for a productive partnership.

Conclusion 4. The participation of women in project activities demonstrated significant efforts towards inclusive participation. However, it was clear that the project had not sufficiently promoted women's role in decision-making, nor had it challenged the status quo perceptions of women's role in society. FAO

missed an opportunity to foster greater awareness and encourage dialogue around expanding women's roles in society, while respecting cultural values and traditions.

4.2 Recommendations

Recommendation 1. FAO should collaborate with the Ministry of Water Resources on key actions to ensure sustainability and operational efficiency.

- i. Develop a detailed maintenance plan that can be implemented by personnel from the Ministry of Water Resources. This includes regular inspections, scheduled repairs and necessary upgrades to maintain high operating efficiency.
- ii. Integrate extension services for farmers to focus on water use efficiency, as well as capacity building for farmer beneficiaries.
- iii. Building on lessons learned, efforts should focus on expanding the adoption of modern irrigation technologies.
- iv. Access the Technical Cooperative Programme and other funding modalities such as South-South and triangular cooperation.

Recommendation 2. FAO should assemble a team with strong technical expertise in resilience (gender and vulnerability assessments), policy formulation, water management and irrigation, and fundraising to engage in high-level consultations with the European Union, the World Bank and other relevant donors. Focus on promoting long-term planning for protracted crisis contexts like Iraq, emphasizing the need to shift from short-term resilience responses to sustainable, long-term resilience programming.

Recommendation 3. FAO should adopt a gender-transformative approach to resilience programming that challenges existing sociocultural dynamics in the agriculture sector. This needs to be supported by a FAO gender strategy in Iraq.

- i. Conduct a gender analysis to identify challenges, opportunities and specific needs within the agriculture sector.
- ii. Create a context-specific gender strategy, emphasizing gender equality in resilience programming.
- iii. Include measurable goals and indicators to track progress in promoting gender equity and transforming sociocultural dynamics.

Recommendation 4. FAO should conduct an impact assessment of the rehabilitated water infrastructure at least six months after it becomes operational. Aligning this with the winter cropping season will allow for evaluating key aspects such as water flow adequacy, the functionality of rehabilitated structures and overall irrigation performance. The winter season's focus on staple crops like barley and wheat provides an economic and practical timeframe. This enables a comprehensive assessment of the project's impact on beneficiaries and the effectiveness of the infrastructure. Indicator examples to measure such impact include:

- i. volume of water flowing through rehabilitated canals (litres per second) to assess the adequacy of the water supply and the functionality of the infrastructure;
- ii. area of farmland irrigated (hectares) to reflect the project's impact on agricultural productivity and food security;
- iii. percentage of fully operational rehabilitated structures (for example, canals, pipes and bridges) to validate whether the infrastructure meets project goals and supports irrigation needs;
- iv. crop yield per hectare for staple crops (for example, barley and wheat) to demonstrate how restored irrigation supports food production during the winter season; and

- v. percentage of households reporting increased agricultural income, linking infrastructure performance to tangible benefits for the community and aligning with the project goal of livelihoods restoration.

5. Lessons learned

144. Strengthen partnerships through close coordination: close coordination between FAO and its partners fosters team spirit, mutual trust and a cooperative environment. This trust enhances current and future relationships with government bodies. It also supports effective collaboration to address challenges that arise and develops strategies to overcome them. Overcome security and accessibility constraints: operating in conflict-affected areas posed logistical and security challenges due to multiple checkpoints and security clearances. Establishing strong coordination mechanisms with government and security agencies navigated these constraints. This enabled timely project implementation and effective monitoring.
145. Inclusive community engagement: establishing committees that include local communities, authorities and beneficiaries, and holding regular meetings and site visits, is essential to proactively address challenges. This inclusive approach ensures that diverse perspectives are considered in problem-solving, which leads to more resilient and community-driven solutions.
146. Adapting to external challenges and crisis conditions: the COVID-19 pandemic brought significant challenges, including delays in construction, equipment procurement and transportation. To mitigate these issues, there was coordination with the local authorities to facilitate movement and operations. At the same time, strict adherence to health measures proved essential in minimizing disruptions.
147. For resilience building projects within upper middle-income countries that face challenges in irrigated water management, it is critical to adopt a participatory and integrated approach that aligns with local socioeconomic contexts and environmental realities. Strengthening institutional frameworks, fostering community ownership and introducing adaptive technologies can significantly enhance the sustainability and impact of irrigation systems. However, projects must also account for underlying issues such as water governance, equitable access and capacity gaps among stakeholders to ensure long-term effectiveness and resilience.

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Appendix 1. People interviewed

Last name	First name	Position	Type of interview	Date
Aldin Salah	Waseem Saad	Resident Engineer	Online FGD	04-Sep
Ali	Farooq	National Agriculturist	Online FGD	04-Sep
Al-Taee	Ahmad	Bridges Resident Engineer	Online FGD	04-Sep
Dhahir	Jasim Mahmood	Executive Director, Soor Al-Ibdaa Company	KII	11-Sep
Dhanun	Younes	Chief Engineer	KII	05-Sep
El Haj Hassan	Salah	FAO Representative	Online KII	01-Sep
Fadel	Qusay Mohamed	Directorate of Water Resources, Mosul	KII	05-Sep
Faurès	Jean Marc	Regional Coordinator, Evaluation Focal Point, FAO Regional Office for the Near East and North Africa	Online KII	01-Sep
Hashem Hussain	Hadi	Ministry of Agriculture Representative	Online KII	01-Sep
Hassan	Haider	Chief Executive Officer, Albilad Alhurra Company	KII	06-Sep
Khalaf	Jassim Mohammed	North Al-Jazeera Irrigation Directorate	KII	06-Sep
Khamis	Nakd	Project Manager	Online FGD	04-Sep
Marschall	Janik	Cooperation Assistant, International Aid	KII	12-Sep
Muhammad	Raed Yahya	Head of the Pumping Stations Department, Nineveh Governorate, Directorate of Water Resources	KII	05-Sep
Nazirov	Alisher	Monitoring and Evaluation Officer	Online FGD	04-Sep
Quattrota	Veronica	Deputy FAO Representative	Online KII	01-Sep
Shaw	Katie	MAG Programme Manager	KII	04-Sep
Sinno	Tarek Khalil	Commercial Director, Tareek Al-Tebr Company	KII	11-Sep
		Mercy Hands for Humanitarian Aid Relations Officer	KII	05-Sep
Villages				
Albu Mard and Shafaq Villages (From 15 to 20) farmers (men, women)			FGD	08-Sep
Alganah and Rajam Hassan Villages (From 15 to 20) farmers (men, women)			FGD	11-Sep
Kharbat Tibin and Ayn Al-Faris Villages (From 15 to 20) farmers (men, women)			FGD	07-Sep
Tall Talab and Tall Samir Villages (From 15 to 20) farmers (men, women)			FGD	08-Sep
Tall Wardan and Garsur Villages (From 15 to 20) farmers (men, women)			FGD	07-Sep

Appendix 2. Evaluation matrix

Evaluation questions in the terms of reference	Subquestions	Evaluative criteria and/or indicators	Data sources	Data collection instruments
Project design and implementation approach				
<p><i>EQ 1: To what extent was the design phase of the project and its implementation structure appropriate and helped to achieve the intended objectives? [Project design and implementation approach]</i></p>	<ol style="list-style-type: none"> 1. Has there been consultation and agreement with the competent public authorities throughout the identification, formulation and implementation of the project? 2. Are the project implementation modalities appropriate? 3. Was the context, problem, needs and priorities well analysed while designing the project? 	<ul style="list-style-type: none"> • Evidence of consultation with the competent public authorities during the design phase • Analysis of indicators (if specific, measurable, achievable, relevant and time-bound) and baselines/targets, and testing the TOC logic and assumptions • Assessment of the targeting criteria used to identify the beneficiaries/evidence of integrating the most vulnerable people into the targeting criteria • Assessment of the level of appropriateness of the choice of activities to beneficiaries' needs • Evidence of context, problem, needs and priorities analysis 	<ul style="list-style-type: none"> – Project document – National policies – Sectors (agriculture and water) strategies – KIIs 	<ul style="list-style-type: none"> – Desk review of secondary information – Semi-structured interviews with key informants
Relevance				
<p><i>EQ 2: How was FAO's project relevant to the needs of the country and the most vulnerable? Did it align with FAO's strategic objectives?</i></p>	<ol style="list-style-type: none"> 1. To what extent was the project's intended objectives relevant to the needs of the targeted area and the most vulnerable? 2. To what extent was the project in line with priorities set by the government bodies? 3. To what extent was the project in line with FAO's strategic objectives? 4. How has the project adapted to the onset of the COVID-19 pandemic? What lessons can be drawn for agriculture and food security programmes that aim to alleviate the 	<ul style="list-style-type: none"> • Analysis of how the project priorities were identified • Level of appropriateness of the project's objectives given the country situation, needs and problems identified • Evidence of coherence and complementarity between the project's activities and the Iraqi Government's stated goals and other programmes on food security and agriculture • Evidence of alignment between the project and FAO's strategic objectives • Extent to which the project takes into account/addresses the identified needs of the target beneficiaries 	<ul style="list-style-type: none"> – National policies and strategies – International reports published by international organizations – Sectors (agriculture and water) strategies – FAO Country Programming Framework – Project progress reports – KIIs 	<ul style="list-style-type: none"> – Desk review of secondary information – Semi-structured interview with key informants

Evaluation questions in the terms of reference	Subquestions	Evaluative criteria and/or indicators	Data sources	Data collection instruments
	negative impacts of the pandemic?	<ul style="list-style-type: none"> Analysis of measures taken during the project's implementation as a result of the COVID-19 pandemic 	<ul style="list-style-type: none"> Non-governmental organization reports (for the CFW component) 	
Effectiveness				
<i>EQ 3: What results did the project achieve?</i>	<ol style="list-style-type: none"> Were all planned activities being carried out, and are they all necessary and sufficient to achieve the intended results? To what extent were the intended results being achieved? Were there any lessons, failures or lost opportunities? What were the positive and negative, and intended and unintended (internal or external) results of the project that have either facilitated or constrained FAO's work on this initiative? What lessons learned and good practices derived from the implementation of the project? 	<ul style="list-style-type: none"> Evidence of output achievements Evidence of the likelihood that the intended results/outcomes are to be achieved Documentation of lessons learned Evidence of the immediate positive effects on the beneficiaries' livelihood conditions Evidence of the likelihood that the unintended results/outcomes are to be achieved Evidence of lessons learned and good practices 	<ul style="list-style-type: none"> Project progress reports Contractor progress reports Non-governmental organization reports (for the CFW component) Baseline and endline surveys (for the CFW component) KII Project's beneficiaries 	<ul style="list-style-type: none"> Desk review of secondary information Semi-structured interview with key informants FGDs with project beneficiaries
Efficiency				
<i>EQ 4: How did organizational and operational capacity facilitate or constrain FAO's work on this project?</i>	<ol style="list-style-type: none"> Were the chosen implementation mechanisms (including the choice of implementation modalities, entities and contractual arrangements) conducive for achieving the expected results? Has the project met the expected deadlines in the design and implementation? What external and/or internal factors influenced any delays? 	<ul style="list-style-type: none"> Revision of the project document Structure analysis and implementation plans Availability of annual reports and monitoring and evaluation reports Revision of the project progress reports and workplans Analysis of the way the information/recommendations from monitoring were used to improve 	<ul style="list-style-type: none"> Project progress reports Contractor progress reports KIIs Non-governmental organization reports (for the CFW component) 	<ul style="list-style-type: none"> Desk review of secondary information Semi-structured interview with key informants

Evaluation questions in the terms of reference	Subquestions	Evaluative criteria and/or indicators	Data sources	Data collection instruments
		management		
<i>EQ 5: To what extent did FAO engage in appropriate partnerships to achieve better results?</i>	1. To what extent has FAO's partnerships (civil society organizations, United Nations agencies and government bodies) to implement this project been appropriate and effective in achieving the intended results?	<ul style="list-style-type: none"> Evidence of partnerships with organization active in areas relevant to the project Coordination mechanisms with development partners are defined, regular, on schedule and effective 	<ul style="list-style-type: none"> Meeting minutes with partners KIIs 	<ul style="list-style-type: none"> Semi-structured interviews with key informants
Impact				
<i>EQ 6: To what extent did the project have a long-term impact on the most vulnerable?</i>	<ol style="list-style-type: none"> What long-term expected impacts of the project have been achieved or are expected to be achieved? What changes have occurred in the food security and livelihoods of the communities in the targeted areas? What are the intended and unintended, positive and negative, and macro and micro effects? Did the beneficiaries (men and women) utilize the project output to create the intended change? Did the country develop/change a policy as a result of project implementation? 	<ul style="list-style-type: none"> Evidence of the likelihood that medium- to long-term effects on the beneficiaries' livelihood conditions are to happen Evidence of the changes on food security and livelihoods of the beneficiaries Evidence of the likelihood that the intended and unintended, positive and negative, and macro and micro results/outcomes are to be achieved Evidence of the equity of project outputs utilization among women and men Evidence of integrating lessons learned and good practices Evidence of adopting, developing and/or changing a national policy as a result of the project Evidence of the project's influence in national policy processes 	<ul style="list-style-type: none"> Project progress reports Contractor progress reports KIIs Project beneficiaries 	<ul style="list-style-type: none"> Desk review of secondary information Semi-structured interviews with key informants FGDs with project beneficiaries
Viability and sustainability				
<i>EQ : How did the project ensure sustainability at the community and institutional level?</i>	<ol style="list-style-type: none"> How likely are the achieved changes sustainable? What factors enhanced the sustainability of benefits or may inhibit sustainability? To what extent have FAO interventions 	<ul style="list-style-type: none"> Type and effects of enabling and limiting factors on achieving sustainable results Evidence of durable solutions for IDPs and returnees Evidence of continuation of the project's 	<ul style="list-style-type: none"> Project progress reports Contractor progress reports KIIs 	<ul style="list-style-type: none"> Desk review of secondary information Semi-structured interviews with key

Evaluation questions in the terms of reference	Subquestions	Evaluative criteria and/or indicators	Data sources	Data collection instruments
	<p>contributed to durable solutions for returnees?</p> <p>3. To what extent did FAO's project contribute to improving an enabling environment (strengthening of systems, institutions, capacities and policies) to support future development or humanitarian programmes?</p> <p>4. What was the level of involvement and ownership by the authorities, partners and beneficiaries?</p> <p>5. Are people and institutions aware of their responsibilities? Have they developed or do they have the skills to ensure the flow of benefits?</p> <p>6. To what extent has an exit strategy been developed and applied ensuring the continuation of positive effects, including capacity considerations? Is it designed to sustain the impact of the programme?</p>	<p>activities and benefits without further FAO support</p> <ul style="list-style-type: none"> • Mapping of national authorities involved in the project • Level of involvement of various government and other stakeholders in project development and implementation • Evidence of institutional changes • Evidence of the project's influence in strengthening national and subnational capacity for the formulation of sound agriculture and water sector development plans • Evidence of developing an exit strategy 	<ul style="list-style-type: none"> – Project beneficiaries 	<p>informants</p> <ul style="list-style-type: none"> – FGDs with project beneficiaries
Inclusiveness				
<p><i>EQ 8. How has the project's design and implementation mainstreamed gender and incorporated the leave no one behind approach?</i></p>	<p>1. How did the project contribute to addressing gender equality considerations, human rights and the needs of vulnerable groups (minorities, people with disabilities and forcibly displaced people)? What were the barriers faced?</p> <p>2. How was the project designed and adapted to take into consideration the</p>	<ul style="list-style-type: none"> • Evidence of addressing and mainstreaming gender, human rights and disability dimensions into the project's design, implementation and monitoring • Evidence of reported barriers • Inclusion of gender mainstreaming indication in the project outputs, policies, strategic plans and contextual analysis • Evidence of conducting baseline and endline 	<ul style="list-style-type: none"> – Project progress reports – Non-governmental organization reports (for the CFW component) – Baseline and endline surveys (for the CFW component) 	<ul style="list-style-type: none"> – Desk review of secondary information – Semi-structured interview with key informants – FGDs with project beneficiaries

Appendix 2. Evaluation matrix

Evaluation questions in the terms of reference	Subquestions	Evaluative criteria and/or indicators	Data sources	Data collection instruments
	<p>needs and priorities of the forcibly displaced? Were the needs of host communities also taken into consideration?</p> <p>3. To what extent have protection measures been mainstreamed into in the design and during implementation?</p>	<p>surveys for the CFW component</p> <ul style="list-style-type: none"> • Evidence of addressing the needs the IDPs, refugees, returnees and host community beneficiaries • Evidence of mainstreaming protection measures into the project’s design and implementation 	<ul style="list-style-type: none"> – KIIs – Project beneficiaries 	

Appendix 3. Stakeholder analysis

Key stakeholders	What role related to the intervention/evaluand?	How will they use the evaluation?	What might they gain or lose from the evaluation?	How and when they should be involved in the evaluation
<i>Active stakeholders with the authority to make decisions related to the evaluand</i>				
FAO management				
Salah El Hajj Hassan	FAO Representative in Iraq	<ul style="list-style-type: none"> – Scaling up the project – Future funding priorities and project assessment criteria – Inform the planning process for future interventions 	<ul style="list-style-type: none"> – Better understanding of the appropriateness of the intervention design for the Iraqi context – Gain knowledge on the effective tools that enhance the resilience of the beneficiaries – Document lessons learned and enhance the feedback mechanism – Assess the expected results and outcomes in terms of improving the level of the beneficiaries' income and enhancing their resilience – Know the implications of the intervention on policies and strategies in the agriculture and water sectors 	<p><u>(Semi-structured interviews)</u></p> <p>Throughout the evaluation process and from its earliest stages</p> <p>Answer questions, subquestions and provide any additional information and advice related to the methodological approach at their corresponding level of accountability.</p>
Veronica Quattrola	Deputy FAO Representative in Iraq			
Nakd Khamis	Project Manager			
Ministry of Water and Resource				
Qusay Mohamed Fadel	Director of the Nineveh Governorate, Directorate of Water Resources	<ul style="list-style-type: none"> – Scaling up the project – Future funding priorities and project assessment criteria 	<ul style="list-style-type: none"> – Better understanding of the appropriateness of the intervention design for the Iraqi context – Gain knowledge of the effective tools that enhance the resilience of beneficiaries – Document lessons learned and enhance the feedback mechanism – Assess the expected results and outcomes in terms of improving the level of the beneficiaries' income and enhancing their resilience – Know the implications of the intervention on policies and strategies in the agriculture and water sectors 	<p><u>(Semi-structured interviews)</u></p> <p>Throughout the evaluation process and from its earliest stages</p> <p>Answer questions, subquestions and provide any additional information and advice related to the methodological approach at their corresponding level of accountability.</p>
Raed Yahya Muhammad	Head of the Pumping Stations Department, Nineveh Governorate, Directorate of Water Resources	<ul style="list-style-type: none"> – Inform the planning process for future interventions – Improve water sector-related policies and strategies 		
Younes Dhanun Younes	Chief Engineer			
European Union (funding donor)				
Janik Marschall	Cooperation Assistant, International Aid	<ul style="list-style-type: none"> – Scaling up the project – Future funding priorities and project assessment criteria 	<ul style="list-style-type: none"> – Gain knowledge of the effective tools that enhance the resilience of the beneficiaries 	<p><u>(Semi-structured interviews)</u></p> <p>During the evaluation process</p>

Key stakeholders	What role related to the intervention/evaluand?	How will they use the evaluation?	What might they gain or lose from the evaluation?	How and when they should be involved in the evaluation
		<ul style="list-style-type: none"> – Inform the planning process for future interventions – Prioritization of the assistance provided 	<ul style="list-style-type: none"> – Critical findings might influence future funding decisions – Greater transparency and integrity from independent assessments – Document lessons learned and enhance the feedback mechanism – Direct future interventions 	Provide insights based on the questions and subquestions, and any additional information and advice related to the project's effectiveness, efficiency and sustainability.
<i>Active stakeholders with direct responsibility for the evaluand</i>				
FAO project personnel				
Sami Bilal	FAO Technical Officer	<ul style="list-style-type: none"> – Ex-post follow-up – Corrective actions if needed – Inform future programming 	<ul style="list-style-type: none"> – Monitoring and evaluation plan enhancement – Document lessons learned and enhance the feedback mechanism 	<u>(Semi-structured interviews)</u> During the evaluation process Provide insights based on the questions and subquestions, and any additional information and advice related to the project's effectiveness, efficiency and sustainability.
Farooq Ali	National Agriculturist			
Ahmad Al-Taee	Bridges Resident Engineer			
Waseem SaadAldin Salah	Resident Engineer			
Alisher Nazirov	Monitoring and Evaluation Officer			
Ministry of Water and Resources				
Amjad Nofal Majeed	Maintenance Team	<ul style="list-style-type: none"> – Ex-post follow-up – Corrective actions if needed – Inform future programming 	<ul style="list-style-type: none"> – Monitoring and evaluation plan enhancement – Document lessons learned and enhance the feedback mechanism – Direct future interventions (reprioritization) 	<u>(Semi-structured interviews)</u> During the evaluation process Provide insights based on the questions and subquestions, and any additional information and advice related to the project's effectiveness, efficiency and sustainability.
Ahmed Salem Kurdi	Representative, Northern Electric Power Transmission Company			
Jassim Mohammed Khalaf	Director, North Al-Jazeera Irrigation Project			
<i>Stakeholders at the grassroots level who directly or indirectly benefit from the intervention</i>				
Beneficiaries				
Farmers	Direct beneficiaries	<ul style="list-style-type: none"> – There is a need to agree with the FAO team on the main messages to be communicated to them as a result of the evaluation. 	<ul style="list-style-type: none"> – None 	<u>(FGDs)</u> During the evaluation process to collect their feedback on project implementation and its effectiveness. Additionally, to understand the potential and expected changes on

Key stakeholders	What role related to the intervention/evaluand?	How will they use the evaluation?	What might they gain or lose from the evaluation?	How and when they should be involved in the evaluation
		– For accountability and feedback		their lives as a result of the intervention
CFW participants	Direct beneficiaries	– There is a need to agree with the FAO team on the main messages to be communicated to them as a result of the evaluation. – For accountability and feedback	– None	(Review baseline and endline surveys, and possibly the FGDs) During the evaluation process to validate and collect information on the benefits of the CFW component
<i>Stakeholders at the grassroots level who do not benefit from the intervention</i>				
Contractors				
Tarek Khalil Sinno	Commercial Director, Tareek Al-Tebr Company	– Build on the experience they gained through the execution of the intervention activities. – For future similar intervention	– Better knowledge and understanding of what went wrong and what went well based on the nature of the intervention components – Integrate lessons learned	(Semi-structured interviews) During the evaluation process Provide insights based on the questions and subquestions, and any additional information and advice related to the project's effectiveness, efficiency and sustainability.
Haider Hassan	Chief Executive Officer, Albilad Alhurra Company			
Saveen Muhammad	Mamisa Company			
Husein Saleh Elyas	Albelad AlMutahida Company			
Jasim Mahmood Dhahir	Soor Al-Ibdaa Company			

Annex

Annex 1. Terms of reference

http://www.fao.org/3/cd3808en/GCP_IRQ_071_EC_Annex_1.pdf

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Food and Agriculture Organization of the United Nations
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