



Student Competition in Evaluation

4rd Round, 29. 4. 2021

Case study

Evaluation of the project

„Re-use of treated wastewater for agricultural irrigation in Southern Gaza Strip“

The Request for Proposals in this document was developed for the Student Competition in Evaluation for educational purposes.

It does not entail any commitment on the part of the Czech Evaluation Society (CES), or any other subject mentioned in the case study.

We thank Marie Körner for graciously agreeing to let us use the project as a case study for the Competition.

1 Introduction

Your consulting company has been invited to respond to the Request for Proposals that follows. Contracting authority needs to obtain objectively substantiated and consistent conclusions that can be used in the decision making on the future direction in Southern Gaza Strip in the treated wastewater sector. The purpose of this bidding process is to obtain competitive offers for service of Conducting An Overall Final Project Evaluation For The EU Funded Project Of “Re-Use Of Treated Wastewater For Agricultural Irrigation In Southern Gaza Strip”. The project was implemented by international NGO Oxfam.



Your proposal should demonstrate your understanding of the assignment, i.e. understanding of the project and the requested evaluation services. Specifically, the proposals should include your elaboration of the project intervention logic, proposed methodological approach and an evaluation matrix including all key evaluation questions and corresponding indicators. You are also required to consider potential methodological challenges of your proposed solution and propose a strategy to mitigate these challenges. You should also provide a brief description of how your team has demonstrated at least three Formal Standards of Conducting Evaluations in developing its proposal. Section 3 identify the proposal requirements in more detail.

The Evaluation Steering Committee will assess your proposal using the criteria identified in section 3.4. The team that developed the best proposal will be declared the winner of the 2021 Student Competition in Evaluation.

1.1 Rules

1. The team’s designated contact person will receive an e-mail from Competition organizers with the Competition case at 9.00 am of the competition day.
2. Teams can begin work on the case immediately upon receipt of the document from the contact person.
- 3. Submissions must be emailed back to Competition organizers at hejkrlik@czecheval.cz as one PDF file by 3.30 pm latest on the Competition day.**
4. Coaches must not communicate with their teams during the competition (once the case document has been received by the team contact person until the submission of the proposal).
5. Judges must not be able to identify team members. **Throughout their proposals, teams should refer to themselves only by an imaginative, non-revealing code name, such as “Best Consultants”, and must not identify the university or city where the team is located.**
6. Name your submission proposal with the name of your team, e.g. Best Consultants.pdf

7. Judges may take up to one month to assess proposals and select the best submission. All teams will receive feedback from 3 professional evaluators - judges.

1.2 Questions or problems

In case you have any urgent questions or experience technical issues on the day of the competition, please email hejkrlik@czecheval.cz, or call +420 736 119 545. However, be advised that Competition organizers will not provide any further information on the evaluated project than is not already stated in the Request for Proposals.

2 Brief project description

Project Title:	Re-use of treated wastewater for agricultural irrigation in Southern Gaza Strip
Donor:	European Union
Implementation:	OXFAM
Partners:	Palestinian Environmental Friends - PEF Palestinian Agricultural Relief Committee - PARC
Location:	Gaza Strip
Activity:	Final Project Evaluation
Duration of the projects:	1st April 2017-31st March 2020

3 Requests for evaluation

This assignment is to propose design of the overall evaluation of the project in Gaza Strip focusing on the impact of the treated and monitored wastewater reuse system on people lives in targeted locations, the impact on the agriculture lands irrigated by the TWW as well as the changes of governance and legalization of the TWW. The evaluation must also ensure gender mainstreaming and accountability towards targeted women and men, European Commission as donor, and partners relationship and capacity development.

Furthermore, the evaluation should explore learning aspects for all stakeholders by identification of key lessons learned, challenges, problem solving, and contextual adaptation.

This evaluation is expected to assess and document post intervention situation after the project end in terms of: Relevance, Effectiveness, Efficiency, impact, and Sustainability of this program, based on the project result chain and context of Gaza Strip. It is expected that the evaluation will enable OXFAM to review program performance against planned outputs and outcomes, identify program achievements, challenges, opportunities, and document lessons learnt and recommendations to guide the overall management and implementation of the future interventions. The final evaluation should be able to provide evidence-based results and avoid any speculation and/or personal perceptions. It is mandatory to explain both positive or negative identified findings and to what extent these findings are accurate and representing the whole targeted group or specific percentage.

The successes/best practices can be also documented through stories of changes “Success Stories” focusing on positive changes in women farmers lives.

It is expected that the team will follow the Formal Standards of Conducting Evaluations and Evaluator’s Code of Ethics of the Czech Evaluation Society.

The evaluation methodology shall be comprehensive, innovative and identify both existing and possibly new qualitative and/or quantitative data to answer the evaluation questions. The evaluation can follow two evaluation approaches:

- Theory-Based Approach: to evaluate the project result chain to draw conclusions about whether and how the intervention contributed to observed results. Theory-based approach is complement and can be used with other evaluation methods.
- Process-Based Approach: Process approach is simply a way of looking at all project activities and thinking of them as sets of inputs and outputs.

It is expected that the consultant company will assess the quality of the project's logical model and if necessary to update or develop more realistic logic based upon on the conducted interventions and the evaluation results.

3.1 Details of the evaluation proposal

The evaluation will be conducted in line with the principles set out by the Development Assistance Committee (DAC) of the OECD with reference to project relevance, efficiency, effectiveness, impact and sustainability.

Particular attention will be paid to:

- Relevance; appropriateness of the intervention in meeting the needs of the target beneficiaries and the relevance of the interventions to government policies
- Effectiveness of the project main outputs and outcomes
- Efficiency
 - The timeliness in implementing the project and the synergy among the stakeholders in meeting the objectives of the project
 - The cost efficiency of the produced TWW and comparison with other water resources alternatives in the Gaza strip
- Sustainability
 - Sustainability of each implemented activities
 - Innovativeness and replicability of the selected approach
- Cross cutting principles:
 - Gender
 - Environment
- To extract significant success stories/ stories of change guided by the project partner staff and document it.
- To identify and document key lessons learnt and good practices
- Providing short-term and long-term recommendations for the future interventions.
- Capture change beyond what the project has anticipated by focusing on the wider systems and identifying unexpected impacts.

OXFAM is highly expecting the consultant company to engage team and partners during planning, implementation, and analysis, and interpretation of primary, secondary, qualitative, and quantitative data. Consultant company should propose proper tools and templates for data entry, analysis, and reporting.

3.2 Evaluation proposal content

The submitted proposal should include at least following sections:

- Intervention logic of the project, including verified interconnectedness of activities and goals, assumptions and risks of the intervention, and identification of potentially missing elements of intervention logic.
- Description of evaluation approach (including proposed methods).
- Evaluation matrix, including a list of key evaluation questions, 1-3 outcome indicators for each question and supposed data resources. It must be clear which indicator is linked to which question.
- Proposal of at least three questions to one of proposed methods where it is relevant (e.g. three questions for individual interviews).
- Identified risks of proposed methodological approach and proposal of strategies how to mitigate or eliminate these risks.
- Brief description of application of at least 3 selected Formal Standards of Conducting Evaluations of the Czech Evaluation Society¹.

Budget for conducting evaluation is not required.

3.3 Formal requirements

The proposal must meet following formal requirements:

- The proposal should not exceed 12 pages, where the title page, table of contents and cover letter are not included. The text exceeding 12 pages will not be assessed.
- Text should be typed in standard A4 format (21x29.7 cm) with 25 mm margins on both sides, using minimum size of letters 11 in text and 10 for the text in tables.
- The proposal should be submitted in Czech or in English.

3.4 Assessment criteria

The assessment of submitted proposals will be based following criteria:

Criterion	Weight
Understanding of requirements: Understanding of the project and needs of evaluation of the contracting authority	5%

¹ https://czecheval.cz/dokumenty/ces_formalni_standardy_evaluaci_short_en.pdf

Intervention logic: Comprehensibility, complexity and appropriateness of intervention logic	15%
Evaluation matrix: Formulation of appropriate and understandable evaluation questions and appropriate and practical outcome indicators	25%
Evaluation design and methods: Appropriate elaboration (and rationale for) the evaluation design, data collection and analysis plan, quality of proposed tools to data collection, including demonstration questions	25%
Risks and mitigation approach: An assessment of challenges and how these will be addressed	10%
Innovations: Innovative ideas or detailed practical suggestions	5%
Standards: proven understanding of selected Formal Standards of Conducting Evaluations and their appropriate application in the proposal	5%
Proposal: Quality of the proposal (writing and presentation)	10%
Total	100%

4 Project description

4.1 Context of the project

The Gaza Strip is a semi-arid area that is totally reliant on groundwater as a fresh water resource. The groundwater within the Gaza Strip is contained in a shallow sandy coastal aquifer, extending eastward and southward. In the Gaza Strip, the current abstraction from the aquifer far exceeds the natural recharge; where, the natural recharge has been estimated at 55-60 MCM/ year, while the current abstraction has been estimated at 183 MCM per year (PWA, 2013).

As a result of this in-equilibrium between abstraction and natural recharge, the groundwater quality has dramatically deteriorated. The water level has declined during the last few years to about 10-15 meters below sea level and that led to a damage in the aquifer through the invasion of the seawater to large parts of the aquifer (seawater intrusion) as well as upward leakage of the underneath saline brackish water. Such phenomena have significantly increased the salinity of the groundwater to an unacceptable limit, where more than 82% of the pumped water exceeds WHO drinking limit (250mg/l) in terms of chloride (Cl) concentration (PWA, 2017).

In addition to the groundwater salinity, the aquifer of the Gaza Strip suffers from high Nitrate pollution levels resulted from the infiltration of sewage into water resources, and the over application of Nitrate fertilizers. Currently, about 89% of the wells utilized for domestic water in the Gaza Strip contain more Nitrates than the WHO-recommended drinking limit (50 mg/l) (PWA, 2017).

Overall, when combining the problems of salinity and Nitrate pollution, it is concluded that more than 96% of the groundwater of the aquifer of the Gaza Strip exceeds the WHO standards in terms of quality (PWA 2017).

Within this context, the Palestinian Water Authority (PWA), as a main regulator for water sector in the Gaza Strip, has developed its own strategy. This strategy considers a range of potential options for the water supply to the Gaza Strip in the future. Out of these options, the reuse of Treated Waste Water (TWW) to enhance the water availability for agricultural purposes, the transfer of distinct type of water from West Bank/ Israel and the introduction of seawater desalination.

In response to the increasing water crisis in the Gaza Strip, The Sustainable Water Integrated Management programme (SWIM) phase II project, funded by European Union, has been implemented in the southern Gaza Strip by Oxfam, in partnership with the Palestinian Agricultural Relief Committee (PARC) and Palestinian Environmental Friends (PEF) between April 1st, 2017 and March 31st 2020.

The title of this project is “Construction of a wastewater post treatment plant and its associated carrier pipelines in North Mawasi Rafah”. This project goes in line with the strategic objectives of the Palestinian Water Authority (PWA) in relation to the utilization of wastewater, as an alternative resource, in irrigation. This practice, wastewater reuse, will decrease the pressure on the aquifer and will contribute to the decreasing the deterioration in the groundwater quality over the coming years.

The main goal of the SWIM II project is to contribute to more sustainable water and agricultural practices in Palestine through reducing land-based sources of marine pollution, with the specific objective to strengthen integrated water resource management in the Gaza strip through innovative environmental and agricultural solutions in southern Gaza (Rafah and Khan Younis Governorates).

This project is a part of a national project, that comprises three post treatment plants. Here, it is worthy to mention that PECDAR (local institution), with a funding from JICA is currently constructing the second post treatment plant and UAWC is planning to construct the third plant.

By the establishment of the three plants, 11,000 cubic meters of tertiary treated wastewater will be pumped to irrigate farms within Rafah Governorate. It is expected that the whole population of Rafah Governorate will benefit from the project (estimate: 213,144 individuals).

In terms of Oxfam intervention, through SWIM II project, The action is implemented by Oxfam and its partners PEF and PARC, with full support and coordination from the Palestinian Water Authority (PWA) and Ministry of Agriculture (MOA). Meanwhile, Oxfam formalized a project steering committee at the beginning of the action including all relevant stakeholders who are managing, supporting, implementing, or provide financial resources for the Treated Waste Water Reuse (TWWR) in the Gaza Strip. The project Steering Committee included the following Organizations: The Coastal Municipal Water Utility (CMWU), UNDP, Palestinian Economic Council for Development and Reconstruction (PECDAR), the Ministry of Agriculture (MoA), Ministry of Health (MoH), Palestinian Water Authority (PWA), and the Environmental Quality Authority (EQA).

This coordination body aimed to have regular coordination, consultation, and providing technical advices and supervision on all the treated waste water reuse process at the main treatment plant in Rafah.

The following “Project Scope” Section provides more elaboration about the project theory of change and Oxfam specific intervention details.

4.2 Project scope and intervention details

The target area of this project is North Mawasi Rafah. The selection of this target area was based on different factors. The main factor was the recommendations of PWA to target Al Mawasi Area with TWW reuse projects. Other major factors for selecting North Mawasi Rafah were:

- The agricultural nature of Mawasi Rafah and the high need for irrigation water resources there.
- High levels of groundwater salinity. Due to its agricultural nature and proximity to the seashore, Mawasi Rafah can be classified as number one victim to seawater intrusion and groundwater quality deterioration accordingly. Currently, the groundwater salinity levels at Mawasi Rafah can peak as high as 10,000 mg TDS per liter (according to the local community).
- The recommendations of MOA.
- The proximity of Mawasi Rafah to the TWW source.

Mawasi Rafah area is a rural area, located at the western part of Rafah City, with the Mediterranean Sea to the west, the Egyptian borders to the south and Mawasi Khanyounes to the north. The area of Mawasi Rafah stretches on 4,000 donums divided by Al Bahar Street to 1,200 donums in the southern side and 2,800 dunams in the northern side. Mawasi Rafah is inhabited with 5,000 people working mainly in agriculture and sea fishing.

4.2.1 Overall Objective

To contribute to more sustainable water and agricultural practices in the Gaza strip through reducing land-based sources of marine pollution.

4.2.2 Specific Objective under this action

To strengthen integrated water resource management in the Gaza strip through innovative environmental and agricultural solutions in southern Gaza (Rafah).

To achieve the Specific Objective of this action, Oxfam and partners, PEF and PARC, constructed post treatment wastewater plant to improve the quality of 3600 m³/day (1/3 of the total quantity produced per day) of treated wastewater through Rafah central wastewater treatment plant, to ensure that it is within WHO and PWA standards for wastewater reuse.

Furthermore, farmers and the Rafah Wastewater Treatment Plant (WWTP) operational team have been trained on safe and sustainable approaches for the treatment and reuse of wastewater.

The project also focused on increasing farmer's knowledge and awareness, as well as the targeted communities, on wastewater reuse, in order to enhance their acceptance and willingness to use treated wastewater for productive purposes.

To ensure long term sustainability of the project, Oxfam worked collaboratively with PWA, Ministry of Agriculture (MOA), Ministry of Health (MOH) and other relevant stakeholders to support the establishment and implementation of a legal framework and quality monitoring system for the reuse of treated wastewater for agricultural purposes adopted and applied by the relevant authorities.

By the end of the project, up to 213,124 inhabitants, 49% of them are females in Rafah governorates supposed to benefit from this action and have increased their knowledge on wastewater reuse and its utilization in agricultural irrigation. The proposed action will support and benefit directly total beneficiaries of 753 individuals (49% female and 51% males) including farmers and their families, livestock farmers, community committees and all stakeholders' organizations.

4.2.3 Project Outputs and Activities

- **Output 1: 200 dunums of productive agricultural land have been irrigated by reuse of TWW through an innovative and sustainable waste water treatment and irrigation system**

Activity 1.1 – Communities mobilization, gender analysis research, and selection of targeted agricultural lands and farmers

Activity 1.2 - Conduct engineering assessment and designs of construction work.

Activity 1.3 - Construction of Irrigation System/Networks for 200 Donums of Agricultural Lands

Activity 1.4 - Technical assessment of the WWTP and drawing up of engineering designs

Activity 1.5 - Construction of the WWTP and further treatment processes to improve the treated wastewater effluent quality to meet the requirements.

Activity 1.6 - Carry out capacity building and training of targeted farmers, on the practical aspects and applications of waste water reuse handling for irrigation

Activity 1.7 - Carry out capacity building and training of TWWP operators, engineers and specialists on the practical aspects and applications of the post-treatment filtration process

- **Output 2: Wastewater re-use management has been institutionalized**

Activity 2.1 - Development of a legal framework for treated waste water re-use management and monitoring, to be endorsed by PWA as sector regulator

Activity 2.2 - Exploration of possible women's leadership role in water financing mechanisms

- **Output 3: A monitoring and verification system for the full treatment and reuse cycle**

Activity 3.1 - Establishment of a monitoring and verification system for the treatment and reuse cycle

- **Output 4: A replicable model for TWW re-use for agricultural irrigation has been developed**

Activity 4.1 - Joint learning with stakeholders across Gaza and West Bank on relevant issues of WW re-use for agriculture

Activity 4.2 – Participation in SWIM and Horizon 2020 for joint learning

- **Output 5: Acceptance of using TWW for agriculture irrigation among farmers and consumers**

Activity 5.1 - Conduct workshops and meetings with farmers to raise their awareness on reuse of TWW in irrigation

Activity 5.2 - Carry out public awareness sessions and focus groups on the importance of wastewater reuse.