



## Reuse of treated wastewater for agriculture irrigation in Southern part of Gaza Strip

Poor water quality and high-water demand in the Gaza Strip is increasingly leading to water scarcity, as highlighted by the Palestinian Water Authority (PWA) (Water Resources Status Report, 2015). Currently, there is an estimated annual cumulative deficit of water of about 80 - 100 MCM/year. More than 43% of the available groundwater, which is the only water resource, is being severely exploited for agricultural irrigation, while the remaining is used for domestic water supply and industry. The groundwater quality is rapidly deteriorating and is contaminated with a high salinity level of chloride concentrations, exceeding the 1000 mg/l standard according to the Food and Agriculture Organization's (FAO) standards for agricultural irrigation. The PWA's recent water report reveals that there is a rapid and massive decline in the level of groundwater below the mean sea water level (MSL), causing seawater intrusion. The water measurements demonstrate that there is a large cone depression in Rafah governorate of about -19 m below MSL, considered as the maximum water level decline in the Gaza strip. According to the Palestinian Ministry of Agriculture (MoA), the total cultivated area in the Gaza Strip has increased from 189 thousand dunams in 2012 to 201 thousand dunams in 2014, with water consumption for crops at 92.7 MCM annually, while the remaining 2.6 MCM is used for livestock.

This agricultural demand is outstripping the water supply, which will have long-term deleterious effects and requires immediate and urgent solutions. Farmers have adopted a wide range of coping and adaptation strategies, some of which have burdened them financially and decreased their profits, including the purchase of tank water from private water vendors at high and unaffordable costs that amount to 2 - 2.5 NIS per cubic. The assessment of wastewater treatment plants (WWTP) in the southern areas of the Gaza Strip (Khan Younis and Rafah) shows that upgrading of Rafah WWTP is required to reach the treatment requirements defined for reuse of wastewater.

To address these issues, Oxfam together with its local partners, PARC and PEF, have partially implemented the planned Reuse of Treated Wastewater for Agriculture Irrigation in Southern Part of the Gaza Strip activities for year one despite some implementation and contextual challenges. Oxfam and its local partners implemented the Action, beginning in April 2017, to contribute to more sustainable water and agriculture practices in Gaza Strip through reducing land-based sources of marine pollution by the end of the Action (**Overall Objective**). The **specific objective** of the Action is to strengthen integrated water resources management in the Gaza Strip through innovative environmental and agricultural solutions in Southern Gaza by March 2020. In year one, 1700 direct beneficiaries (45 % females and 55% males) of the planned 213,144 beneficiaries were reached including women, small-scale farmers, local committees and community members. By the end of the Action, 200 dunums of land will be irrigated by TWW across the Rafah Governorate, specifically in Al Mawasi area.



The post treatment plant that will be implemented in Year 2 of this Action is a part of a national project. Reuse of Treated Waste Water for Agricultural Irrigation in Southern Gaza Strip, this includes two additional post treatment plants to be completed by PECNDAR, in partnership with JICA, and will pump the water for irrigation in the western area of Al Mawasi. UNDP will be responsible to establish a unique solar energy system to provide energy the three post treatment plants with electricity in full coordination with the MoA, CMWU, PWA, PECNDAR and Oxfam.

This Communication Plan is intended to serve as an Annex to the Annual Interim Year 1 Report submitted to the EU on 31 May 2018. As well as it will be submitted separately to the EU communication and information office in Jerusalem.

This plan is prepared in order to organize the implementation of communication and visibility activities of the project, as well as to keep the EU office informed and aligned with the intended activities. The plan is expected to commence in June 2018 until the end of March 2020 (the end of the project). The target audience of the activities will be the beneficiary population of Rafah and the entire population of Gaza Strip, moreover, the EU public will be targeted to be informed about the water issues in Gaza and the support that EU provide. This plan is providing more specific and stand-alone activities for communication and visibility to communicate the role of EU and Oxfam in this project and in the WASH sector in general; however, all standard and field visibility exercise are taken for granted. The implementation of the activities will be based on both branding and visibility guidelines of Oxfam and EU, moreover, a process of dual sign-off by Oxfam and will be followed to avoid any conflict or poor implementation.