Milan Pact Awards 2025	JERICHO						
Country	Palestine						
Population	37,859						
Title of practice	Renewed Water for Sustainable Agriculture						
Subtitle	Jericho's model for Food and Water Security						
MUFPP Recommended Action	26. Improve (waste) water management and reuse in agriculture and food production through policies and programmes using participatory approaches. – FOOD PRODUCTION						
Starting year	2012 Ending year (if any)			2024	☐already submitted in the past		
Actors and	Municipal	Other	NGOs	Research	Private	International	Other
stakeholders'	departme nts	public institutio	CSOs	centres	sectors	organizations	
involvement	1	ns 3	1		15	2	1
Budget	Total budget: € 40,000,000. Funded by grants from JICA (€ 30,000,000) and USAID (€ 10,000,000). Jericho Municipality covers all operational costs (approximatively € 15,000 per month), which are recovered through fees and water bills, ensuring long-term sustainability.						
Brief description	Facing critical water scarcity threatening its vital agricultural sector, Jericho Municipality champions the sustainable reuse of treated wastewater. This practice, leveraging our advanced Wastewater Treatment Plant (supported by key partners like JICA), addresses the urgent need for irrigation water and mitigates environmental pollution from effluent. Our role as municipality is pivotal: overseeing treatment optimization, developing a dedicated water distribution network to farmlands, and leading comprehensive farmer training on safe, efficient irrigation (e.g., drip methods). The practice's objectives are clear: substantially increase water availability for agriculture, boost crop yields, enhance farmer livelihoods, reduce groundwater extraction, and foster a cleaner environment, ultimately bolstering Jericho's food security. Beneficiaries include hundreds of local farmers gaining consistent, affordable water access, and the entire community benefiting from increased food supply and improved public health. Key lessons learned highlight the critical importance of strong inter-agency coordination, continuous farmer engagement and education for successful adoption, and public awareness campaigns. Our outcomes demonstrate significantly increased agricultural productivity, reduced reliance on scarce freshwater, and a healthier ecosystem, serving as a replicable circular economy model for resilient food systems in arid regions.						
initovation	urbanization and extreme water scarcity. It is a first-of-its-kind innovation in the region, uniquely integrating cutting-edge sustainable technologies. The core innovation lies in the large-scale, high-quality reuse of treated municipal wastewater for agriculture, directly addressing our severe water deficit. This transforms wastewater from a waste product into a vital resource for food production. Crucially, the entire Wastewater Treatment Plant is powered by a 2-megawatt solar energy system. This makes the operation remarkably sustainable, significantly reducing our carbon footprint and operational costs, a unique feat for such a facility in the region. Furthermore, we achieve exceptionally high-quality treated water, specifically tailored for the sensitive and economically vital date palm sector. This ensures the sustainable growth of one of our key agricultural exports, guaranteeing long-term food security and economic stability for farmers, which is pivotal for mitigating social inequalities and ensuring nutritious food access. This comprehensive circular approach, combining renewable energy with resource recovery for a specific, high-value food chain, sets a new standard for resilient and environmentally responsible food systems in arid zones. It directly combats environmental impact and enhances local food production amidst global instabilities.						

Impact

Our wastewater reuse practice delivers significant, multi-faceted impacts, fostering long-term food system resilience in Jericho.

- Socially: By providing a consistent water supply for agriculture, it strengthens the date sector, sustaining approximately 6,000 jobs. This empowers women (40% of workforce in packaging/sorting), promoting inclusion, gender equity, improving livelihoods, and enhancing community stability.
- Economically: Supplying approximately 3,500 cubic meters/day of high-quality treated water (with capacity to increase) directly revitalizes agri-food. This enhances date production and market access for SMEs, significantly boosting incomes and resilience. Thriving farms also foster agritourism, creating additional revenue through farm visits and local product sales, diversifying the economy.
- Environmentally: This sustainable water source supports the crucial ~16.5 km² green belt, combating desertification and improving air quality. Date palms absorb ~95,700 tons CO2 equivalent annually, resulting in a net reduction of around 92,400 93,225 tons of CO2eq per year after subtracting operational emissions. Sustainable soil management and Integrated Pest Management (IPM) reduce erosion and pesticide use, incrementally improving biodiversity. Our practice concretely contributes to MUFPP goals by optimizing resource use and building a climate-resilient food system.

Inclusion

The wastewater reuse practice embodies a holistic approach, fundamentally driven by Jericho's community demand to preserve its historical identity amidst escalating challenges. Its design and implementation demonstrate multi-level governance and broad stakeholder inclusion.

International agencies like JICA and USAID provided crucial support, alongside vital engagement from Palestinian governmental bodies, including the Palestinian Water Authority and the Ministry of Agriculture. Local Palestinian universities contributed through essential soil testing, ensuring scientific rigor. Capacity building was central, with Japanese teams rigorously training municipal staff who now skilfully operate the plant.

This territorial inclusion extends city-wide, enhancing food security and environmental quality for all residents. The project serves as a replicable model for other cities and regions facing similar water scarcity issues. Furthermore, it actively promotes social inclusion: by sustaining agricultural livelihoods, it directly empowers youth and women, and protects vulnerable populations from poverty and pollution, ensuring equitable access to a healthier, more productive environment. This unique cross-sectoral integration of water, agriculture, and environment fosters sustainable urban development and offers a strategic solution to resource scarcity. It is a cornerstone for Jericho's future, and a role model for the entire region in building resilient and sustainable food systems.