

INNOVATIVE MEANS TO PROTECT
WATER RESOURCES IN THE
MEDITERRANEAN COASTAL AREAS
THROUGH RE-INJECTION OF
TREATED WATER

PRESS RELEASE

IMPROWARE STAKEHOLDERS MEETING & ACTIVITIES

IMPROWARE organized the first workshop with its project partner EEAA (Egyptian Environmental Affairs Agency) for the government/ public stakeholders as a first visibility action of the project activities that kick started in Egypt in December 2013. The objective of the workshop is to promote IMPROWARE communication plan in Egypt with a specific focus on the Nubaria pilot area. The workshop represented the opportunity for stakeholders to discuss about the project objectives, state of SWIM in Egypt and further understanding of the activities that will take place in Nubaria as well as the expected results of the main actions to implement in the project communication strategy.

IMPROWARE (www.improware.eu) is part of the Sustainable Water Integrated Management Programme (SWIM), a Regional Technical Assistance Programme launched by the European Commission to contribute to the extensive dissemination and effective implementation of sustainable water management policies and practices in the Southern Mediterranean Region.

IMPROWARE ultimate goal is to promote innovation and best practices for protecting water resources in Mediterranean coastal areas through re-injection of treated water.

Public stakeholders, private sector actors, NGOs and representatives of the scientific community will be involved in future IMPROWARE workshops and activities in Egypt.

The pilot site of the project in Egypt is the New Nubaria city in Beheira governorate, where the waste water treatment plant will be entirely renovated as well as other activities in the area:

- Re-designing the WWTP and increasing its capacity as well as implementing the new design
- Improve the efficiency of the WWTP and the quality of the out coming treated water
- Hydro-geological characterization of aquifers using geophysical methods
- Awareness campaign on the importance of proper water management and the socioeconomic impact of using treated water.

More info – Eng Ghada Darwish - IMPROWARE National Communication Expert

IMPROWARE PROJECT INFO

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As one of SWIM five demonstration projects, IMPROWARE pursues the following objectives in Egypt and Tunisia:

- ➔ identifying the existing and forthcoming threats to water resources;
- ➔ identifying best practices and solutions to tackle the water scarcity problem;
- ➔ adopting a more appropriate water consumption and water use model;
- ➔ designing and implementing sustainable water management policies at national level and within the ENPI Mediterranean region, in harmony with EU policies and with other international initiatives and agreements.

IMPROWARE is a demonstration project **promoting innovation and best practices on water protection** in Mediterranean coastal areas **through re-injection of treated water**.

Objectives

The project **overall aim** is [to demonstrate and promote environmentally sustainable water management policies and practices in Egypt and Tunisia, challenging the deterioration of aquifers caused by saltwater intrusion due to over-exploitation and climate change](#). This will ultimately support the agricultural and economic activities of the local rural communities in the demonstration sites.

The **specific objectives** of the demonstration activities are:

- ➔ To enhance the recharge of coastal aquifers by injecting treated wastewater of appropriate quality levels achieved via treatment plants, including constructed wetlands;
- ➔ To contrast the overexploitation of potable groundwater and increase water availability for local communities, addressing the saltwater intrusion;
- ➔ To disseminate the practices and lessons learnt during the project in the Egypt and Tunisia, using extensively a full participatory approach aiming to a wide stakeholders engagement.

Expected results

The demonstration activities are expected:

- ➔ To develop cost-effective, environmental-friendly, easily-replicable methodologies to treat waste water and reuse for aquifers' recharge as "pilot" models in Egypt and Tunisia;
- ➔ To promote the transfer of Know-how to other ENPI countries;
- ➔ To build-up institutional and technical capacities at sub-regional and regional levels;
- ➔ To increase regional co-operation in the area of sustainable and integrated water management.

IMPROWARE ultimately contributes to the empowerment of decision-makers and society at large in the Mediterranean in:

- ➔ tackling increasing demand for water resources;
- ➔ adapting to climate changes;
- ➔ acting against desertification.

WP5 – Participation, Capacity Building, Dissemination

Objectives

- ➔ To strengthen participatory approaches and communication strategies among the key stakeholders in order to promote innovative approaches to water resources protection;
- ➔ To encourage multi stakeholders dialogue, to identify needs and engage stakeholders to achieve IMPROWARE goals;
- ➔ To develop a participatory communication strategy that responds to the needs of stakeholders, including agricultural resources and the extension of services on communication for development in Egypt and Tunisia;
- ➔ To raise awareness on the project and its benefits through a local media campaign;
- ➔ To draw the attention of policy decision makers and stakeholders in the Partner Countries on the existence of new, innovative solutions to tackle water scarcity issues.

Activities

- ➔ Stakeholders Identification and Analysis;
- ➔ Implementation of Participatory Process;
- ➔ Multimedia Campaign;
- ➔ Communication Strategy;
- ➔ Dissemination within the ENPI Mediterranean Region.

Pilot area: Nobariya, Egypt

The Nobariya site is located in a desert area in the north of Egypt, where the groundwater is affected by a moderate salinization and there is a strong need of water availability for the agricultural use. Currently the local WWTP treats a flowrate of 6,800 m³/day and it is expected to treat up to an amount of 20,000 m³/day in the next two years, 32,000 m³/day by 2017 and 50,000 m³/day by 2030.



The implementation of a 8 km long canal (drain) is in progress (it will be eventually approved and the built with the Egyptian governmental financing in 3 months) connecting the WWTP outlet to the mainstream of water from the Nile (15km) used for irrigation purposes. The latter flows into a natural calcareous pond that functions as temporary water stock. In order to increase the quality of the treated wastewater before its merging with the Nile water, the project idea is to build-up a tertiary treatment step, realized through a CW.

The Wadi el-Natron humid zones are located about 25 km to the south. This zone is characterized by a moderate salinization and the possibility of increasing water availability for irrigation and aquifer recharge is of primary importance.

The Partnership



MINISTERO DELL'AMBIENTE
E DELLA TUTELA DEL TERRITORIO E DEL MARE

countries represent an important building block for dialogue among diverse cultures in the frame work of the common goal of sustainable development.



EEAA – Egyptian Environmental Affairs Agency (Egypt) Project partner responsible for the realization, management, monitoring of the Egyptian demonstration site, and dissemination of results. EEAA was established according to the Law 4/1994 for the Protection of the Environment. The principal functions of the Agency include the formulating environmental policies, preparing projects on the protection and promotion of the environment and undertaking pilot projects, promoting environmental relations between Egypt and other States.



ONAS – Office National de l'Assainissement (Tunisia) Project partner responsible for the realization, management, monitoring of the Tunisian demonstration site, and dissemination of results. ONAS was established by law in 1974, and was entrusted with the mission of management of the sanitation sector. ONAS is a public institution, of an industrial and commercial character, enjoys civil status and financial autonomy and is placed under the authority of the Ministry of Environment and Sustainable Development. Its actions include sanitation master plans and studies cities and

governorates.



CUEIM – Consorzio Universitario di Economia Industriale e Manageriale (Italy) Project Partner responsible for WP4 – Artificial wetland as secondary/tertiary treatment stage of waste-waters. CUEIM is a non-profit organization with a worldwide open network based on Italian and Foreign Universities, Public Institutions. Its main activities have focused on International projects in the sectors of energy, water quality and waste management, supporting the cooperation agreements signed by IMELS with institutions from other countries.



CURSA – Consorzio Universitario per la Ricerca Socioeconomica e per l'Ambiente (Italy) Project partner responsible for for WP2 – Technical survey; primary/secondary treatment stages and aquifer recharge by treated waters. CURSA is a consortium among the Universities of Molise, Tuscia and Ferrara (Italy), along with the no profit association IDRA (Institute for Research on the Environment) with the aim of carried out studies, research and training in socio-economic matters and the environment; the scientific advances and innovation; National and International

joint initiatives.



AAH – University of Aarhus (Denmark) Project partner responsible for WP3 – Hydro-geological characterization of aquifers at Nobaria using geophysical methods. AAH is one of the most important center of earth studies. The Hydro-Geophysical Group of the Department of Earth Sciences, since 1999, has served as the National knowledge centre for geophysical methods in the Danish National ground water mapping program. The group has developed several novel geophysical instruments both ground based and airborne and data processing and inversion algorithms.