



POSEIDON PROJECT

MESSINGAS SOSwater

DECENTRALIZED DRINKING WATER SYSTEM

REIMEX GROUP
ENTERPRISE NETWORK



MESSINGAS *SOSwater*



DRINKING WATER PURIFICATION AND DISTRIBUTION SYSTEM

Automated complex for drinking water provision
in critical and emergency situations

THE TASK

UN - SUSTAINABLE DEVELOPMENT GOAL 6

Ensure availability and sustainable management of water and sanitation for all

The **global ocean** is the source of life on Earth
The **availability** of the global ocean **decreases** every year

POSEIDON project wants to ease **drinking water** availability for disadvantaged populations

MESSINGAS SOSwater technology was born as an innovative **water purification** system to develop and augment drinking water supplies availability and distribution



THE PROJECT

WHAT

- ❖ Wastewater sanitation and production of drinking water
- ❖ Solid and contaminated waste disposal
- ❖ Power and heat generation (cogeneration)

WHY

- ❑ To guarantee availability of water sources for human use in chronic and emergency uncomfortable situations
- ❑ To give solutions to turn mixed urban bio-waste into sustainable source of pure water and bio-energy

HOW

- Use of our proprietary multifunctional plant technology called **MESSINGAS**



THE TECHNICAL SOLUTION

The technical characteristics of our plants allow to treat wastewater of quite different nature and dilution level, turning them for immediate human use. The modular and plug-in concept facilitates to adapt to different situations and user volume, normally small, isolated or disadvantaged communities.

Our technology involves the use and treatment of contaminated waste streams, solid municipal waste (SMW), organic waste, waste water, from urban, rural and industrial sources, contributing to reduce the sanitary and pollution hazard in the area of intervention.

The process generates power and heat for auto-consumption and can support local network distribution as well, providing immediate improvement of basic quality of life.

No hazardous effluents, no dangerous exhausts, low temperatures regime and absence of pressure in the complex make the exploitation of the equipment safe.



BASIC CONCEPT



collecting and selecting tank



exhaust emissions
EC2010/75/EU



heat



power



MESSINGAS SOSwater



drinking water

FEEDSTOCKS



BIOMASS WASTE



MUNICIPAL WASTEWATER



UNSORTED WASTE



CONTAMINATED WASTEWATER



FOOD WASTE

MAIN APPLICATIONS

The capability to process any kind of wastewater of different origin, characteristics and pollution level, makes our system suitable for use in very critical situations, like, but not limited to:

- ❑ **Developing countries/regions**
- ❑ **Remote/isolated communities**
- ❑ **Natural disaster scenarios**
- ❑ **Humanitarian emergency situations**



TARGET REGIONS CRITICAL ISSUES



CENTRAL and SUB-SAHARIAN AFRICA

- ✓ **Surface water sources highly polluted**
- ✓ **Lack of access to clean drinking water**
- ✓ **Roughly 25% of population suffers from water stress**
- ✓ **Many small scattered communities**
- ✓ **Contamination, drought, or disruption in distribution**

SOUTH EAST ASIA

- ✓ **Widespread use of open sewers**
- ✓ **140 million people lack access to safe drinking water**
- ✓ **Rapid urbanization threatens water security**
- ✓ **Suffering from severe repetitive flooding**
- ✓ **Marine and surface water pollution affecting agriculture**



MAIN FEATURES

- **SOSwater MODULAR DESIGN** concept and plug-in installation philosophy to fit individual requirement
- **SOSwater** variable **LAYOUT** to accommodate **EVERY SIZE** and type of installation: **MOBILE** units, **TEMPORARY** set up, **CONTAINERIZED** applications, etc.
- **QUICK REACTION TIME** in **EMERGENCY** and **EXTREME** situations
- **SOSwater** can treat **ALL TYPE** of liquid and solid waste
- **SOSwater** no **NEED** external energy supply but **WASTE FEEDSTOCK**
- **HIGH LEVEL OF SAFETY** – low temperature, no pressure, no chemical hazard, no bad smell, no dangerous exhaust



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