

Morocco: Hydraulic challenges and European partnership

7000 hectares of cultivated fields surrounding Moroccan towns are irrigated with untreated waste water and out of 72 waste water treatment stations in the country, only half are actually operational. This situation was disclosed thanks to MEDAWARE, one of the five projects benefiting Morocco under the European regional programme MEDA WATER for local water management. On the other hand, at the experimental station in Zmamra, more than one experiment shows that Morocco is conscious of the challenges for the future.

By Nadia ben Sellam

Photos: Morino Mustafa

Out of 72 waste-water treatment stations in Morocco, only half are actually operational. Only 8% of the 600 million m³ of waste water produced annually are treated

Eljadida - In the old days, the waste water from Sidi Bennour, a town of 40,000 inhabitants, flowed some 70 km towards Eljadida (200 km south of Rabat), but it seems to have deserted its usual winding course for quite some time. You would have to move back up the stream bed for one-third of the distance to find a trickle where there used to be a stream. But the same Oued continues to collect almost 400 m³ of waste water every day.

So where does the water go, since it no longer reaches its former destination? The answer is to be found with the farmers cultivating more than 150 hectares of fields along the banks – apparently it lies in the rich green prosperous, but highly suspicious crops!

Challenges for Morocco's hydraulic identity

"There are 7000 hectares of cultivated fields surrounding Moroccan towns that are irrigated with untreated waste water, in the absence of any law on the subject", deplores Omar Sbeihi, professor at Chouaib Doukkali University in Eljadida and local coordinator of MEDAWARE, one of the five projects benefiting Morocco under the European regional programme MEDA WATER for local water management (2003-2008).

It is true that persistent drought forced farmers to use untreated waste water, but it is also true that a not too scrupulous attitude based on profit prevails, and whatever the case, danger is present, threatening health and ecology, since unhealthy practices are a common factor in the country's hydraulic identity.

▲ According to the most recent World Bank report, Morocco is among the 10 countries threatened by an acute hydraulic crisis at the 2050 horizon.



The experimental station at Zmamra, a station for composting mud produced by waste water treatment



For the first time, too, developing multi-criteria software has become possible to help public authorities design technologies for treating urban waste water

Mohamed Khribech, head of the experimental station at Zmamra



project, does a quick operation on his PC to show how easy it is to get more than one plan and solution free of charge using this software, whereas it would be costly in time and money to refer the problem to an engineering and design bureau.



The river Oum ERabeê shows signs of drought.

We are trying to popularize these techniques with the farmers and to urge them regularly to see the positive aspects", assures Mr. Khribech, who is confident about the future

Out of 72 wastewater treatment stations in Morocco, only half are actually operational. Only 8% of the 600 million m3 of waste water produced annually are treated. The truth of the situation was disclosed by MEDAWARE and is allegedly due to a budget deficit affecting the management, maintenance and possible adaptation of imported technology in the ecological and social sectors.

MEDAWARE (1.8 million Euros) is a current illustration of the efforts made to correct this very preoccupying situation. For the first time, too, developing multi-criteria software has become possible to help public authorities design technologies for treating urban waste water in view of the envisaged re-use.

From the back seat of the car, Mohamed Montadar, Professor at Chouaib Doukkali University in Eljadida, the second local coordinator of the

On the road to the blue revolution

On the way to Khmis Zmamra, halfway between El Jadida and Sidi-Bennour, looking for indirect results of the success of « MEDAWARE », sprinklers fed from the Oum ERabeê River water the densely sown beet fields in this agricultural area (Doukkala). Farmers seem unconcerned about climate change and persistent water shortages that put Morocco among the 10 countries threatened by an acute hydraulic crisis on the 2050 Horizon according to the latest report of the World Bank.

At the Zmamra experimental station, a pilot unit in Morocco financed by the EU under the "LIFE Third countries" programme, a station for composting mud produced by the treatment of waste water has made the most of the MEDA programme. According to M. Sbeihi, this is an original experiment at in-



Professors Omar Sbeihi and Mohamed Montadar, from Chouaib Doukkali University in Eljadida, local coordinators of the Medaware Project

ternational level that "assembles all of the stages and techniques for composting in a single place, simultaneously and rapidly".

Mr. Abdelkrim Assouli, who heads the office that monitors agricultural development in Zmamra, says that the "cost of production of this high-quality organic fertilizer is invaluable, because it accompanies the growth of plants, while preserving water and soil".

Compared to countries in MENA, Morocco is a forerunner in the field of water legislation, the creation of a ministerial department and of public and advisory insti-



◀ The industrial zone polluting Bouregreg River in Rabat

► *Oued of urban waste water from the town of Sidi-Bennour – barely a trickle of water, because it is massively used to irrigate fields along the banks.*



tutions to manage water, but the policy is still meek. The people employed for this management seem to have a mediocre notion of their responsibilities.

Recent years have, however, seen the beginning of shifts in behaviour. Particularly through the launch of the "National Water Plan" in 2000, as well as the announ-

cement at the end of April 2008 of the "Green Morocco Plan" which is meant to be an agricultural policy based on saving water and protecting resources. This is the major challenge that must be met in the future by Moroccan agriculture which is exhausting more than 80% of Morocco's hydraulic resources. Between these two dates, many projects and activities have been set up that have gained acceptance by all the concerned parties.

At the experimental station in Zmamra, more than one experiment shows that Morocco is aware of the challenges for the future. Mohamed Khribech, the head of the station, points at a reser-

voir of water covered with plastic fabric to make it watertight. Pipes for trickle irrigation run through the middle of the experimental fields with signs indicating the use of new fertilizer. "We are trying to popularize these techniques with the farmers and to urge them regularly to see the positive aspects", assures Mr. Khribech, who is confident about the future. Despite setbacks and postponements, Morocco is currently on the right path to revolutionize its hydraulic identity. Its open attitude towards successful international experiments in the field of water, particularly those of the EU, is a real lever for its sustainable development. ■

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Name: MEDA WATER

Budget: € 40 million (MEDA)

Duration: 2003-2008

Participating Mediterranean Partner Countries: Algeria, Egypt, Israel, Jordan, Lebanon, Morocco, Palestinian Authority, Syria, Tunisia, Turkey

This programme attempts to define the means to reinforce regional cooperation, to make proposals to rationalize planning and management of water resources, and to contribute to the creation of new water resources by means of reinforcing institutional capacities and training, exchange of information and know-how and transfer of know-how and technology..

MEDAWARE is one of the projects in the MEDAWATER Programme.

Website: www.medawater-rmsu.org



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