



SWIM- Sustain Water MED: Network of Demonstration Activities for Sustainable Integrated Wastewater Treatment and Reuse in the Mediterranean

Evaluation results for SWIM Regional Training Course on Decentralized Wastewater Treatment and Reuse

24th-28th 2013

Background

The concept of ecological sanitation (ecosan) presents a sustainable approach to sanitation which values sanitized human waste and wastewater as a resource. The ecosan approach enables a hygienically safe, economical and closed-loop system to apply wastewater and human waste to irrigate and fertilize or to condition soil for agricultural purposes or for biogas production. In doing so, ecosan provides a venue to reduce health risks related to sanitation, prevent the contamination of surface and groundwater and valorize the high content of nutrients found within waste. Technologies that fall under the ecosan approach are especially interesting in rural, peri-urban areas where sewer systems are weak or absent or where water supply is not adequate.

Access and quality of sanitation systems vary across the MENA region. A common issue facing all partner countries of the SWIM Sustain Water MED project (to different degrees) is the insufficient application of adequate sanitation systems in rural areas. In order to accompany its ecosan interventions in Morocco and in order to start a regional knowledge exchange system between partner countries, the project conducted a regional training course on ecosan and rainwater management from the 24th-28th of June 2013 in Rabat, Morocco.

Training objectives and content:

The training course aimed to equip policy-makers related to sanitation issues with relevant background information and practical know-how in order to assess the feasibility and implementation possibilities for ecosan systems in their countries.

The course therefore provided a theoretical and practical overview of:

- Construction and installation considerations of ecological sanitation technologies.
- Principles and technologies of rainwater harvesting, stormwater management and ecological management of rivers.
- Promote the reuse of treated wastewater and excreta for energy production and agricultural practices.



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Course structure / content / methodology:

The course covered a period of 5 full working days. The training methodology included lecture-style teachings, practical exercises, group discussions and a site visit. All material used during the training (notably presentations) is available on the project’s website: <http://swim-sustain-water.eu>.

In order to encourage regional networking and knowledge exchange, participants from each country presented the current situation and future plans relating to sanitation systems in their countries, describing also their expectations of the training.

Participants’ evaluation results:

- A value is given to each evaluation option, as listed below:
- Very Good = 3 , Moderate = 2 , Unsatisfactory = 1

The following table shows the evaluation results:

Evaluation of the general seminar:	average	%
Seminar organization	3	100
Distributed educational material	2.72	91
Relevance of seminar lectures	2.90	97
Hospitality and events	2.86	95
Overall impression	2.95	98
Evaluation of the contents of the lectures from day 1		
Country situations	2.72	91
SWIM SWM	2.81	94
Pilot project in Dayet Ifrah (ECOSAN) and in Ait Idir (Rainwater management)	2.77	92
National Programme of Rural Sanitation in Morocco	2.72	91
ECOSAN: principals, technology and examples	2.77	92
Evaluation of the contents of the lectures from day 2		
Constructed Wetlands	2.8	93
Biogas Digesters	2.76	92



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Rainwater management (3 lectures)	2.57	86
Evaluation of the contents of the lectures from day 3		
UDDT	2.71	91
Valorization of sanitary by-products	2.71	90
Evaluation of site visits		
Dayet Ifrah	2.75	92
National Office of Water and Electricity: Wastewater Treatment Plant	2.75	86
Evaluation of the relevance of seminar content for your work		
Will the acquired knowledge help you with your work?	2.66	87
Will you apply the acquired knowledge to your work?	2.42	81
TOTAL		92%

Participants' satisfaction of the training lies at 92% and is thus very high. The evaluation score speaks for the quality and efficiency with which lectures were given. The lowest evaluation score of 81% is observed with the question whether participants can apply the acquired knowledge in their work. This can be explained by looking at the participants' answers to the question: **Will you apply the acquired knowledge to your work?** Some participants explain that the overall awareness level of effected populations in their countries is too low for replication others point to the large number of authorities that need to be involved before moving to actions. For more indications to the participants' overall satisfaction, please refer to their summarized, translated or sometimes directly quoted comments:

(Unless marked as original quotes, the answers are summarized and translated).

- The training content (the concepts and models) is very useful to convince decision-makers to apply the introduced technologies and approaches in rural/remote populations. I will therefore propose some of these technologies to policy-makers in my country or introduce these recommendations in my work.
 - The demonstration field was very interesting. The results allow for the elaboration of sound standards and norms.



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- Given the water scarcity in our countries, these technologies are especially pertinent.
- The technologies are very useful in securing groundwater quality, protect the environment and improve the daily lives of rural populations.
- “It was an excellent training, combining theoretical and practical knowledge.” (translated from French)
- “The pedagogical approach used in introduced GIZ projects, gave me a lot of creative ideas for awareness-raising measures. Also, the data base and communication material can be used in the information system of the ACC project, which is implemented with the support of GIZ.” (translated from French)
- “I wish to be integrated into the pilot project at Ait Idir village.” (translated from French)
- One should also study the possibility of adapting these technologies for urban zones.
- In my opinion, it is necessary to create organizations for the management of rainwater and sanitation in rural areas.
- Biogas is interesting in rural areas because the generated energy is indispensable for everyday life. Constructed wetlands are a good experience which should be further explored.
- “The acceptance of the population for this kind of treatment is very low in Jordan.”
- “I think the entire SWIM project can be replicated at local level, especially given its importance in the everyday life of the population. The project and their results have to be disseminated in cooperation with decision-makers and relevant authorities. In general, one should try to convince policy-makers to adopt a directive to integrate this kind of project.” (translated from French)
- “I would like to thank the GIZ team (especially Mr. Ghali) for the good organization of the training.”
- “If possible, could you transmit a message to ONEP (...) to avoid saying that their station is the biggest in the world. This is not true.”
- The exchange between participants should optimize the effectiveness of our new technologies.
 - The exchange of information between participants was very useful.
- “I will try to study the possibility of applying this knowledge at the rural areas where it is not feasible to serve them with the sewer network, but this needs to be approved by different organization like the ministry of water and irrigation, water authority of Jordan and Ministry of Environment.”
- “During these lectures, the international standards where not mentioned as a main issue for using the wastewater for irrigation.”



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- “Suggestion: study more than one alternative adapted to different cultures, climates” (translated from Arabic)
- Hotel and restaurant conditions were not very satisfactory.
- The translation was not always accurate.



Agence du Bassin Hydrologique
du Souda Messa et du Draa

