

ABSTRACT

According to the World Bank, "The greatest challenge in the water and sanitation sector over the next two decades will be the implementation of low cost sewage treatment that will at the same time permit selective reuse of treated effluents for agricultural and industrial purposes" (Looker, 1998). The main objective of this work is to investigate obstacles and incentives of applying anaerobic technologies for sewage treatment in the Mediterranean Region as a low cost and core of sustainable treatment schemes.

The research methodology was based on distributing two forms of questionnaires, one for wastewater sector professionals and the other for donors, via e mail, fax and web based networks or by personal contact with several academic, technical and managerial people in several Mediterranean countries or countries with Mediterranean climate (Palestine, Jordan, Greece, Italy, Turkey, Spain and Morocco).

The results revealed that the major concern of applying anaerobic wastewater treatment technologies in the Mediterranean Region is not research, design or construction, but rather the experience in operation. Due to the lack of experience and so confidence in the anaerobic systems, practice engineers do not want to take the risk of trying. According to the questionnaire results, the majority of professionals (54.3%) believe that the communities do not play an important role in wastewater treatment technology selection and the majority of professionals (52.9%) and donors (83.3%) said that the academic establishments have no role in the decision making of selecting wastewater treatment technologies and treatment options.

The results revealed that the role of aid agencies and donors in the selection of wastewater treatment technologies can be almost equally described as recommendation (35.3%), imposition (29.4%) and participation (26.5%). This indicates that donors do not all have the same policy. Also, 50% of the interviewed donors said that they choose technologies in which the engineers in their countries are familiar with.

Applying anaerobic wastewater treatment technologies as pre treatment with other aerobic technologies are the most reliable and sustainable wastewater treatment technologies and so from the technical and economical point of view should be included in the wastewater treatment schemes. As a general conclusion, the most important parameter to be taken into account during selection of wastewater treatment technologies is the operational cost, since 100% of both interviewed professionals and donors agreed about this point. Therefore, it is recommended to train physical planners, decision makers, engineers, social scientists, representatives of non-governmental organization and target groups on anaerobic wastewater treatment aspects. In addition, it is recommended to distribute carefully the roles of all of the related stakeholders in technology selection process, all in his/ her position and abilities.