

PARTNER PROFILE FORM

OFFER AS PARTNER

Reference:

INSTITUTION	
Institution name:	University of Murcia
Institution address:	Campus Universitario de Espinardo. 30100 Espinardo (Murcia).
Department/faculty/institute:	Universitary Water and Environment Institute (in Spanish: INUAMA)
Institution Web Page:	http://inuama.inf.um.es/
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Call identifier:	Med Programme 2nd call for proposals
Deadline:	13/03/2009
Project title:	Hydrological modelling of landfills in semiarid areas
Abstract (up to 250 words):	<p>The Universitary Water and Environment Institute (spanish: INUAMA) is looking for partners in University Institutes or Departments of Civil, Environmental and Health Engineering, for a research project on leachate evaluation from landfills.</p> <p>The basic idea is to validate the model HELP (Hydrologic Evaluation of Landfill Performance) in semiarid areas to find out the balance of leachate in a landfill because, so far in Europe has only been done in Germany and northern Spain. If so, this model could be exported to other countries with similar climatic conditions. The aim is to quantify the inputs, outputs and water flow through the filling of landfill.</p> <p>The first step would be the experimental determination of variables to feed HELP. The next step would be modelling, after which the results would be compared with real data, observing the progress of the simulation. To reduce the impact caused by the leachate (the result of waste moisture plus infiltration and percolation from rainfall) the recirculation of the leachate is produced through the filling waste, previously treated in an anaerobic digester, resulting in increased the speed of settlements (more than double). This will result in larger settlements in shorter periods, increasing the landfill service life by the volume recovered. Among the advantages of recirculation is the progressive decrease in the leachate volume because the reduction of pollutant load by increasing the biological activity, the highest generation of biogas and increased mineralization of the waste. This will combat the two pollutants, reducing the leachate volume and improving biogas production marketing.</p>