

Projet FP7 – ORION

Nom du projet	Organic waste management by a small-scale Innovative automated system of anaerobic digestion – ORION
Call	SME-2011-2
Type de projet	Research form SME
Rôle de la HES-SO	Participant
Chercheur impliqué	Jean-Bernard Michel (HEIG-VD)
Participants	Daithi O'Murchu Marine Research Station Ltd (Ireland) – Coordinateur ; University of Manchester (United Kingdom) ; Murphy's Irish Seafood Ltd (Ireland) ; Tuerkiye suet et gida sanayicileri ve uereticileri birligi dernegi (Turkey) ; Validex sarl (France) ; Fastnet Mussels Ltd (Ireland) ; Helvacizade Gida Ve Ihtiyac Maddeleri Sanayi Ve Ticaret As (Turkey) ; European Biomass Industry Association (Belgium) ; Association nationale des industries alimentaires (France) ; Haute école spécialisée de Suisse occidentale (Switzerland) ; CSEM Centre suisse d'électronique et de microtechnique SA (Switzerland) ; Cand-Landi SA (Switzerland) ; Maisonneuve Sas (France) ; Oilean Mara Teoranta (Ireland) ; Institut de recerca i tecnologia agroalimentaries (Spain) ; International Federation of Green Region Associations (Switzerland) ; University of Glamorgan (United Kingdom) ; ADS Sustainable Development Consulting SL (Spain) ; Eurexcel Membership Projects Ltd (United Kingdom) ; ETA - Energia, Trasporti, Agricoltura Srl (Italy).
Budget global	3.875 millions euro / financement UE : 2.978 millions euro
Durée	36 mois, début le 1.8.2012
Résumé	<p>Restaurants, hotels, markets, fisheries and other small to medium size agro-food industries have to manage 239 million tonnes of organic waste in Europe per year. The specific management of such waste, with respect to the legislative regulations of EU, involves costly treatment for SMEs and potential hygiene issues on site. ORION aims at allowing a vast majority of SMEs to manage their organic waste by themselves in order to decrease their treatment costs (storage, transport, landfill or incineration) and increase on-site hygiene conditions. Wastes will be also valorised as biomass to produce energy and increase SME autonomy and profitability. ORION main objectives consist of:</p> <ul style="list-style-type: none"> - Developing for the first time anaerobic digestion machine at the SME scale (1 m³ to 50 m³) that will combine effectiveness for a large range of organic wastes and reduced capital and operating costs. - Developing advanced control tools and sensors to reach an optimum reliability. - Increasing know-how on the impact of nanostructured surfaces on bacterial growth and increase waste throughput in the digester. - Developing a dissemination and training strategy in order to address a vast community of SMEs and offer them a personalized service. - Contributing to the implementation of EU policies on waste management and renewable energies production. <p>A maximum autonomy, adaptability and reliability are targeted. The</p>

digester is expected to be very cost-effective for users. ORION partnership is composed of European and National IAG representing the targeted sectors: fishery/aquaculture, hotel-restaurants, small agro-food industries and a Core Group of representative SME partners involved in the pilot design ND testing with various waste qualities and quantities. They will rely on a interdisciplinary group of research centres in order to achieve the technical goals of the project.

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