

**ZEROWASTE UPDATE:** an electronic newsletter with information concerning the ZEROWASTE project and general information about waste management, disseminated to stakeholders, policy-makers, local, regional, national authorities all over Europe.

What is ZEROWASTE? The project Zero Waste, Low Cost aims at developing an integrated Zero-waste management system for Municipalities that is based on the principles of re-use, recycling and reduce of waste that ends up in landfills and dumps (<http://www.med-zero-waste.eu/>).

For a full list of partners: <http://www.med-zero-waste.eu/partnership.html>

### News from

[France](#)

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[Greece](#)

[Spain and Catalonia](#)

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## SPAIN and CATALONIA

### The quality of home composting in Catalonia

Researchers from the Composting Research Group of *Universitat Autònoma de Barcelona*, with the financial support of the European Interreg Project “Low-cost Zero-waste” have carried out a preliminary study on the quality of several samples obtained from home composters located in different Catalan municipalities. Results are conclusive about the high quality of the home compost samples. Especially interesting is the low presence of heavy metals, the absence of pathogens and a high level of maturity (determined using the germination index) and stability (determined with the dynamic respiration index). When comparing home compost samples with industrial compost produced in several composting plants of Catalonia, home compost showed better properties in practically all the parameters analysed. Further studies are on the way to explore the agronomical properties of home compost in large scale crop tests.

On December 13 the UAB and IRTA team’s presented preliminary results of the field trial of home compost within the framework of the **XV day of Horticulture** held in the town of Santa Susanna (Barcelona). At the conference issues were addressed related to fruit commercialization and application of organic fertilizers. The number of attendees was more than 120 of which 75 were interested in the Zero Waste project results. Please visit [www.sostenipra.cat](http://www.sostenipra.cat) for more information.



## Carbon capture and biogas upgrading technologies

The article entitled "Life Cycle Assessment of Biogas Upgrading Technologies" is going to be published in the Waste Management journal. This article evaluates the overall environmental impact of 8 technologies that upgrade landfill biogas, removing the CO<sub>2</sub>, so that it can be used as a substitute for natural gas. Special focus was placed on three technologies: High Pressure Water Scrubbing (HPWS) and two novel technologies that use an industrial waste in order to not only remove CO<sub>2</sub> but also to store it through carbon mineralization. The two novel technologies are Alkaline with Regeneration (AwR) and Bottom Ash for Biogas Upgrading (BABIU). It was found that the BABIU process overall has the lowest impact in comparison to not only the other two technologies but as well with 5 others that are currently on the market.

Life Cycle Assessment of Biogas Upgrading Technologies Authors: Katherine Starra, Xavier Gabarrella, Gara Villalba, Laura Talens, and Lidia Lombardi. Journal: Waste Management.

## GREECE – EFXINI POLI

### The European Week for Waste Reduction in the Municipality of Acharnes



The Municipality of Acharnes has organized a series of events within the framework of the European Week for Waste Reduction (19-27/11/2011). The events were the following:

- 🇪🇺 *“Reducing our waste. Solutions and perspectives”*
- 🇪🇺 *Re-use / Recycling Day*
- 🇪🇺 *“Sustainable Waste Management: opportunities and potentials”*

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## EcoFestival 2011

Efxini Poli and the Ecological Recycling Society participated in the EcoFestival 2011, in the suburbs of Athens, from 25 to 28 of November 2011, one of the biggest fair about ecology, biological and traditional products, with a kiosk dedicated to Zero Waste Project. In addition, a parallel event took place on Saturday 26 November with theme “Municipalities towards Zero Waste”, with a presentation of the project and a presentation of Home Composting process.



## **GREECE – AUT**

### **1<sup>st</sup> International Conference on Integrated Urban Solid Waste Management, 2011**

The International Conference was held in Pisa, Italy on June 14<sup>th</sup>/15<sup>th</sup> 2011 organized by the Sant'Anna School of Advanced Studies, Pisa, Italy. The main objective of the conference was to analyse and discuss the best available practices in urban waste management not only in Italy, but also in other European countries. The target groups of the conference were operators of the waste management sector, public administrations as well as the scientific community.

In general, the Conference aimed at giving an overview on the best practices in planning and management of the whole chain of urban waste management including the management of the fractions resulting from the separate waste collection.

### **3<sup>rd</sup> International Conference on Environmental Management, Engineering, Planning and Economics (CEMEPE 2011) & SECOTOX Conference**

The Third International Conference on Environmental Management, Engineering, Planning and Economics (CEMEPE 2011) and to the SECOTOX Conference was held in Skiathos island, Greece, from June 19 to 24, 2011. The conference was organized by the Department of Planning and Regional Development, University of Thessaly, the Department of Mechanical Engineering, Aristotle University of Thessaloniki and the Society of Ecotoxicology and Environmental Safety (SECOTOX), in collaboration with the Sector of Industrial Management and Operations Research, School of Mechanical Engineering, National Technical University of Athens, the Food Technology Department, Technological Educational Institute of Thessaloniki and the Technical Chamber of Greece.

The conference was designed to encourage the exchange of ideas and knowledge between diverse groups of the scientific community concerned by current issues in environmental science, engineering, and management.

### **1st International Conference on “Waste Management in Developing Countries and Transient Economies**

The 1st International Conference on “Waste Management in Developing Countries and Transient Economies” was organized in Mauritius, Africa, in the frame of the project “Collaborative curriculum Development on Waste management in Africa and the Pacific region” (CODWAP) which is a project of the ACP-EU Cooperation Programme in Higher Education (EDULINK), a programme of the ACP Group of States, with the financial assistance of the European Union. The 1st International Conference on Waste Management in Developing Countries and Transient Economies was held from 5-8 September 2011.

Poster papers were presented in session during the 4 days duration of the conference. This conference was a major

event bringing together eminent experts, scientists, researchers, policy and decision makers in waste management from several countries namely the United States of America, France, Germany, Greece, Madagascar, Cyprus, Slovenia, Romania, Nigeria, Australia, Italy Papua New Guinea, Sierra Leone and Lithuania. The goals of this conference are simple, but bold: to disseminate the latest research findings, conclusions and action plans and policies on waste management issues; and in parallel foster active discussions on research and development together with policy issues relevant to waste management.



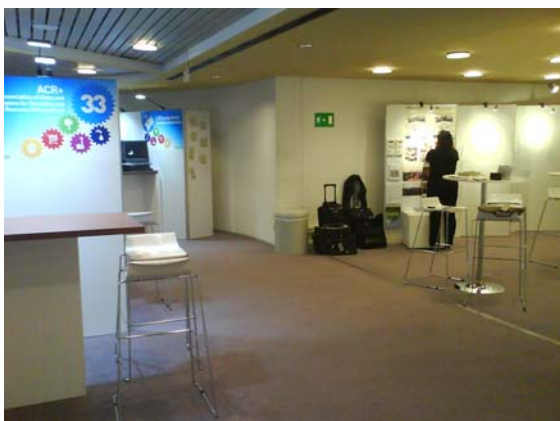
## Project: ROADTIRE

ROADTIRE coordinator (Aristotle University of Thessaloniki) participated in Green Week, which took place in Brussels in the period 24-27 May, 2011, presenting the ROADTIRE project.

Together with the Green Week sessions and workshops, took place in Brussels, there was an exhibition with 50 stands about green business solutions, NGO activities, local and regional authorities, European and international bodies, etc. A dedicated LIFE area showcased 8 LIFE Environment projects, with ROADTIRE selected to be one of them. This exhibition was part of the overall Green Week event which was active during the entire 24-27/5 week in Brussels.

AUT together with UTH, organized the Hellenic 2011 ROADTIRE international Conference (20/06/2011); all partners had unanimously agreed to organize this as a nested event (“**Sustainable Production and Consumption ROADTIRE /Life+09 Project ENV/GR/304**”) within the third International Conference on Environmental Management, Engineering, Planning and Economics (CEMEPE 2011) & SECOTOX Conference, which was held in June 2011 (19-24), in Skiathos, Greece.

Participation by AUT-LHTEE to the “**ACR+ International Seminar on the Interpretation of Life Cycle Thinking in the Waste Management Hierarchy**” which was held in Brussels on 5<sup>th</sup> and 6<sup>th</sup> of July 2011 with a presentation on ROADTIRE project.





## GREECE- Ecological Recycling Society

### Market Promotion and Development of Eco-Processes for Waste Oils and Petroleum Residues - MARE

MARE is an eco-innovative project implemented by CYCLON HELLAS SA (an industrial and commercial company) and ECOLOGICAL RECYCLING SOCIETY (a non governmental organization) supported by European Union's Competitiveness and Innovation Framework Programme – Eco-innovation 2010 initiative. MARE project is 42% funded under the Competitiveness and Innovation Programme of the European Union.

MARE project will develop an eco-innovative process for material recovery from waste oils and petroleum residues based on thin-film evaporation, a technique that has not been used up to present for the material recovery of waste oils and petroleum residues. The new processing unit will be erected in the existing CYCLON's used lube oil re-refinery. During the project duration, 2.000 tons of waste oils and petroleum residues (which is 1% of the estimated quantity of the total amount of wastes oils and petroleum residue production in Greece) will be processed annually and separated into fuel, petroleum residue and water.

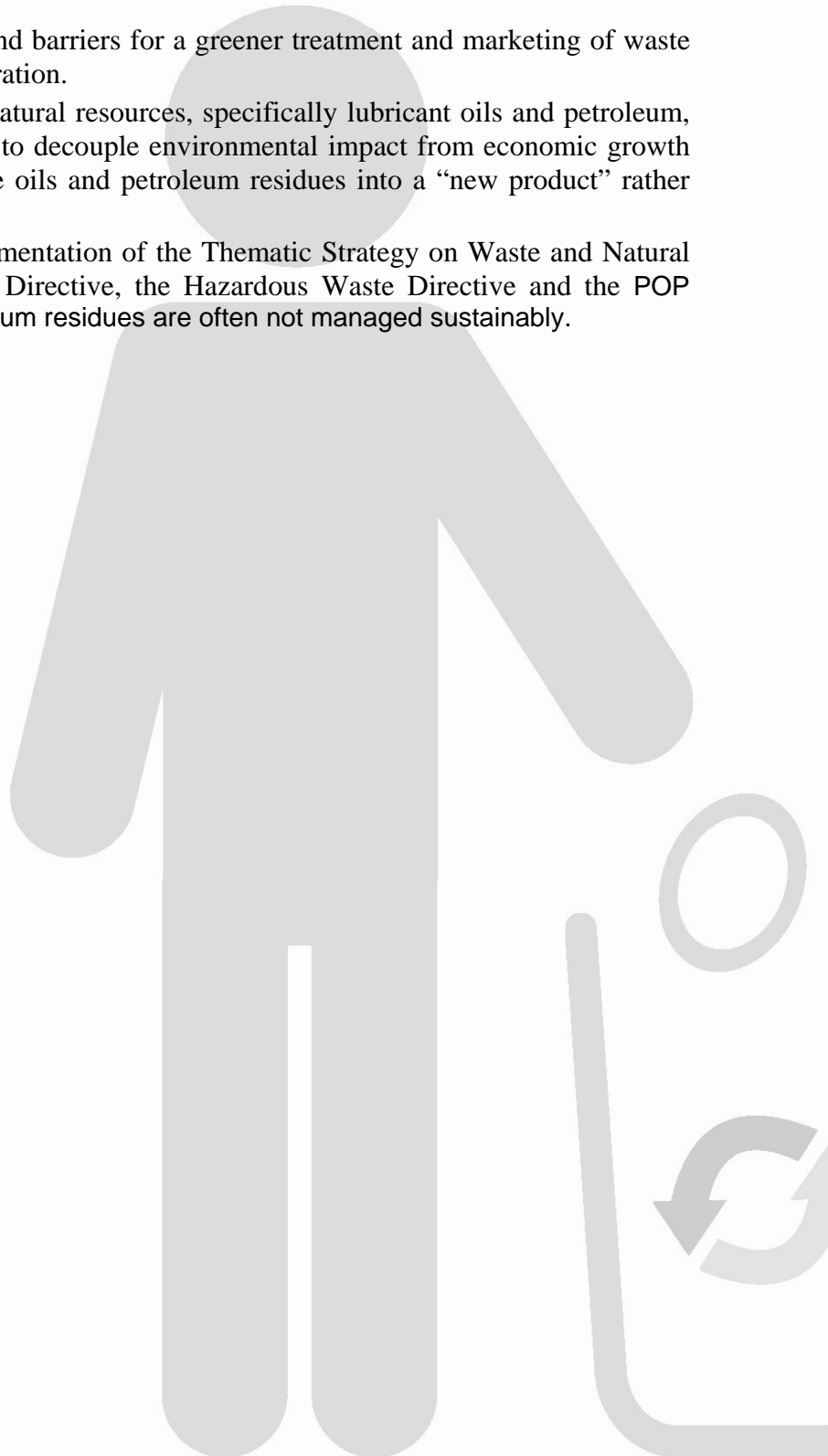
### More specifically the annual amount of 2.000 tons of waste oils and petroleum residues will be separated to:

- 400 tons of fuel like vacuum gas oil (20%), free of solids and sludge that will be supplied to crude oil refineries for further processing. Due to its high quality, the recovered fuel will not require sewer processing.
- 1.200 tons of residual heavy fuel oil (60%), free of water and fuel that will be mixed with the residue of used lube oil re-refining process. This residue will be used as asphalt extender (IPPC, BREF on best available techniques for the waste treatment industries).
- 400 tons of water (20%) that will be fed to existing CYCLON Waste Water Treatment Plant for advanced biological treatment as it may contain organic matter (oil, antifreeze, diluters and emulsions).

## Objectives

### **The specific objectives of MARE project are:**

- To promote an innovative, greener technique for the recovery of materials from waste oil and petroleum residues by evaporation.
- To minimize the market obstacles and barriers for a greener treatment and marketing of waste oil and petroleum residues by evaporation.
- To promote the sustainable use of natural resources, specifically lubricant oils and petroleum, with a life-cycle approach, in order to decouple environmental impact from economic growth by regenerating and recycling waste oils and petroleum residues into a “new product” rather than extracting further resources.
- To contribute to the effective implementation of the Thematic Strategy on Waste and Natural Resources; new Waste Framework Directive, the Hazardous Waste Directive and the POP Regulation as waste oils and petroleum residues are often not managed sustainably.



# ZeroWaste



Project co-financed by the European Regional Development Fund

