**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-zerowaste.eu/).

For a full list of partners: http://www.med-zerowaste.eu/partnership.html

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**Spain and Catalonia**

Within the European funded project PROSUITE, the UAB led a workshop in Brussels on February 3, 2011 to assess the recyclability of electronic waste coming from mobiles. One of the tasks of PROSUITE is to deliver sustainability estimates for 4 new technology case studies among them multifunctional mobile devices (MMP). The results of this first assessment together with other aspects related to the life cycle of MMP were discusses in a workshop organized by ICTA- Universitat Autònoma de Barcelona on February, 3 in Brussels. The workshop counted on 17 participants which include universities (ICTA- Universitat Autònoma de Barcelona, Radboud University and University of Utrecht), mobile phone manufacturers (Apple, Hewlett Packard, Nokia, SonyEricsson and Sony Computers), recycling companies (Umicore), research institutes (SYKE) and environmental consulting companies (Pre Consultant). For more information, please check the PROSUITE website [www.prosuite.org](http://www.prosuite.org) under the news section.
UAB organized the National Workshop Zero Waste as part of Zero Waste project funded by European Community

The Welcome session was done by Dr Josep Enric Llebot, Secretary of Environment and Sustainability of the Catalan Government, and the Director of the Catalan Waste Agency (ARC), Mr Josep Maria Tost. Dr Llebot briefly explained the current policy of the catalan government after it changed recently, while Mr Tost introduced the new way of the agency. The closure session was in charge of Mr Jesús Huertas, the Director General of Environmental Quality of the Spanish Environment Ministry, with the conference ‘The future of the waste management in Spain’ and focused in the new spanish Waste Law.

Photos made by Mr Jordi Parejo.

Municipal waste management experts met on Thursday, 10th February, with the aim to work in an integrated management system of "zero waste" that minimizes the use of landfills and maximize resources. The conference, organized by the research group SosteniPrA and GICOM (UAB) held in the Hall of the Department of Planning and Sustainability of the Catalan Government (Barcelona). The workshop has been attended by more 130 people.

Throughout the conference discussed strategies and experiences in prevention and waste management. The present plans for the prevention of Waste Agency of Catalonia; studied the case of plastic bags in large stores and the use of compostable bags; experiences were displayed in the selective collection of the Barcelona Provincial Council and the councils of Argentona and Tiana, the management of organic matter for the Catalan Waste Agency and in the Metropolitan Programme; explained new technologies applied to the management of organic and integrated systems for managing packaging, among many other topics.
The national workshop is part of the activities of the European Low Cost - Zero Waste Municipality (Low-cost Zero-Waste) project which involves two research groups of UAB: SosteniPrA (Sustainability and Environmental Prevention, Institute of Environmental Science and Technology) and GICOM (Group Composting Research, Department of Chemical Engineering). The project aims to develop an integrated management system of "zero waste" in order to maximize resources and energy, and reduce the amount of waste that end up in landfills around diverting them for reuse, and to include in recycling programs. One of the most important objectives is to develop a general operating procedure for implementation of alternative waste management systems and an interactive tool to support decision making.

Speakers were from: municipalities: Conxi Ramons (Argentona), Núria Balcells (Cervera, La Segarra), Olga Llobet (Tiana), Joan Miquel Trullols (Entitat Metropolitana del Medi Ambient); Catalan Government and its agencies: Josep Enric Llebot, Maria José Sarrias; Josep Maria Tost, Pilar Chivas, Teresa Guerrero, Alfred Vara (Agència de Residus de Catalunya,); provincial administration: Enric Coll, Ferran Vallespinós; Spanish Ministry, Jesús Huertas; private companies: Dr Jordi Oliver (Inèdit), David Poudevida (Bon Preu , supermarket), Lluis Otero (HERA holding), Marta Ball-Llosers (Terregada); NGOs: Anna Peña, Mercè Girona, Domingo Jiménez Bertran; associations (municipalities): Patricia Martin (D2D association), Enric Ibañez (Ecoembes), Salvador Rueda; and the University: Xavier Gabarrell, Jesús Rives, Xavier Font, Adriana Artola, Júlia Martinez, Joan Rieradevall.

The speakers’ presentations are available on this website: http://www.sostenipra.cat/Zero_waste_Workshop/index.htm
ITALY
MEID – Mediterranean Eco Industrial Development: hypothesis of realization of eco-industrial park

The territory of Ragusa is putting a lot of effort into the European territorial cooperation. The MED program has engaged its Authorities in several projects. One is the project MEID with the Industrial Development Area of Ragusa as partner. The official web page is http://www.medmeid.eu/.

M.E.I.D. – Mediterranean Eco Industrial development aims at realizing the Mediterranean Eco Industrial Development model to facilitate and to enable planning, building and governing sustainable Industrial Areas (IAs). The MEID project goals to enhance capacities and decision tools of Competent Authorities to integrate environmental friendly solutions into the Regional and Interregional Development Strategies related to Industrial Policy. The European and Mediterranean SMEs will be the first beneficiaries of MEID, in terms of fostering in eco-innovation, competitiveness and transnational cooperation. ASI - the Consortium for the industrial development area of Ragusa - is partner of this project with the Lead Partner ENEA - Italian National Agency for New Technologies, Energy and Sustainable Economic Development - and Fencia Fondation from Padova, both from Italy, Labein Fondation and Intraeco Fondation from Spain, Aristotles University and Efzini Poli from Greece, Skema Business School from France, Temi Zammit Fondation from Malta e BSC Zenica-Doboj from Bosnia Hercegovina.

The origin of an industrial area, according to the model of sustainable development, will have positive repercussions not only for the use of innovative technologies, but also for new synergies and partnerships between the business entities, citizens and local authorities.

The Industrial Area of Ragusa covers an area of 7,164,200 square meters. The main area about 65% is dedicated to industrial firms development, craft and trade cover respectively about 3% each one, while the remaining 29 % is for services and green space.

In the meantime the new industrial area planning in Ragusa, a survey has been developed to discover the concept of “Ecoparks”; the experts shared the following idea: an eco-industrial park is “an industrial system designed to exchange energy and materials, which minimizes the use of energy and raw materials, reduce waste generation and develop relationships within it economically, environmentally and socially sustainable.”

Furthermore, a definition of eco-industrial park was proposed by U.S. President's Council on Sustainable Development in 1996: according to this definition, an eco-industrial park is “a community of companies that cooperate with each other and with the local community to efficiently share resources (information, materials, energy, infrastructure and natural environment), with the objective to pursue economic efficiency, environmental quality and equitable development of human resources in companies and in the local community”.

Some existing examples have been provided:
• A network of companies within a region that uses a number of products rather than discarding them as waste (Styrian recycling network, Austria);

• Business Combinations involved in recycling and recovery of raw materials from waste (London Remade Eco-Industrial Sites, United Kingdom, Green Park, United Kingdom);

• A set of companies that use environmental technologies or that produce green products. Often in these parks takes place a demonstration of innovative technologies and environmental education, research and development (ECOS du Pays de Thau, France; Oko Park Hartberg, Austria, Stockholm Environmental Science Park, Sweden; Sunflower Farm Ecological Technology Centres, Poland);

• A mixed area commercial, industrial, residential where companies seek to strengthen their cooperation through the exchange of energy, water and waste.

The eco-industrial parks must be designed to allow a phased development and each step of the project must be financially worthwhile. In all cases, in fact, the most important factor is the economic success. For the expected goal is necessary to clarify a fundamental concept: the development of an eco-park is a long-term process and, consequently, the immediate results are unlikely.

In some cases, the lack of initial success, led to the premature abandonment of the program.

The MEID project fits perfectly into this vision by integrating technical aspects with those of communication and involvement of key actors related to the industrial areas.

The territory of Ragusa will be involved throughout the lifetime of the project: from the elaboration of the MEID model and precise instructions for industrial eco-friendly building, to the pilot implementation on the area of Ragusa, proposing a project executive for the expansion of Ragusa’s primary agglomeration area, in close synergy with the territory and the Sicilian Region.

**Word Water Day: March 22nd, 2011**

*“Water for Cities”: an exposition to reflect through the imagines.*

Svi.Med. NPO - Center for the Sustainable Development in the Euro-Mediterranean Area - has organized this year again an event for the Word Water Day by means of Facebook: a dedicate profile has been created for the event “Giornata Mondiale dell’Acqua Duemilaundici” and a virtual exhibition of pictures settled up thanks to the help of the 1200 friends found through Facebook. The event, officially registered into the WWD11 web site [www.wordwaterday.org](http://www.wordwaterday.org), had a great participation by people who shared information and pictures to testimony their interest into the tackled issue. The World Water Day is an initiative that grew out of the 1992 United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro. The United Nations General Assembly designated March 22th of each year as the World Day for Water.
The territory of Ragusa has been involved by means of a good communication campaign that involved media and distributing into the schools some leaflets describing the importance of the Word Water Day and the initiative organized by Svi.Med.

A photos exhibition has been held in a bookshop showing about 20 pictures posted by people trough Facebook or mailed. The initiative supported the objective of Svi.Med. to reflect about the water related issues. In particular this year the day was dedicated to the water stress concerning the development of cities – Water for cities. The enlargement of cities and the demographic increment is producing more and more problems managing water resources (both in quality and quantity) and to the other side many communities already have problems to reach a good quality of water as primary needs for their life. An issue, highlighted by many experts, concerned the waste, which if bad managed will damage the quality of the main resources of water.

Some reflections highlighted by the Word Water Day’s web site follow:

“This is the first time in human history that most of the world’s population lives in cities: 3.3 billion people...and the urban landscape continues to grow.

38% of the growth is represented by expanding slums, while the city populations are increasing faster than city infrastructure can adapt.

The objective of World Water Day 2011 is to focus international attention on the impact of rapid urban population growth, industrialization and uncertainties caused by climate change, conflicts and natural disasters on urban water systems.

This year theme, “Water for cities: responding to the urban challenge”, aims to spotlight and encourage governments, organizations, communities, and individuals to actively engage in addressing the challenges of urban water management.”

On Facebook everyone can join “Giornata mondiale dell’acqua duemilaundici” published by Svi.Med. and everyone can watch the pictures or through the website www.svimed.eu

ITALIAN WORKSHOP “ZERO WASTE: MANAGEMENT REDUCTION STRATEGIES”.

From left to right: Mr. Alessio Ciacci - Alderman for the Environment of the Municipality of Capannori, Eng. Giovanni Iacono - President of Svi.Me. NPO, Mr. Salvatore Occhipinti – Alderman of the Environment of the Municipality of Ragusa.

Dr. Emanuele Burgin - President of the Italian Agenda 21 Coordination.
Last January 27th has been held in Ragusa Ibla, Italy - within the Project "Low Cost Zero Waste Municipality" - the National Workshop. The workshop has been attended by citizens, technicians and students. The main objective of the Workshop has been to create awareness for the importance of waste reduction and recovering as resources. Several speakers have been involved into the workshop to release their experiences: they were experts at international level about several waste management related issues, from administration, communication and research activities. They showed Italian scenario on waste management, such as:

- **Emanuele Burgin**, President of the National Agenda 21 Coordination and Alderman for the Environmental Department of the Province of Bologna, who spoke on "The importance of communication and networks" and showed a video of great impact as good example of the importance of communication. He also presented to the public the “waste 21 network” and Italian working group composed by Italian local public authorities to cooperate and exchange experience in waste management issues.

- **Alessio Ciacci**, Alderman for the Environmental Department of Capannori Municipality (Tuscany), the first Italian Municipality adopting the European Zero Waste Strategy. He presented "The experience of Capannori Municipality towards Zero Waste" and he explains the strategy actions to involve citizens.

- **Raphael Rossi**, representing ESPER, the Italian Agency for Waste Sustainability Planning. He had a speech about "Synergies between waste reduction's approaches to and optimal waste recycling" with some Italian and European best practices as cases studies.

- **Roberto Cavallo**, President of "AICA - International Association of Environmental Communication” and member of "ACR + Association of Cities and Regions for Recycling and Sustainable Resource Management" presented the theme "Waste prevention and citizen involvement to reduce costs and improve the quality of recycling." A question discussed during the Workshop was the role of citizens and the strategy to involve them for waste reduction. Furthermore a picture of the Sicilian situation has been proposed by other regional experts:

- **Federico Vagliasindi** Professor of the University of Catania and President gave a report on "Problems and perspectives of integrated waste management"; focusing on new waste management plan in Sicily and the facilities of ATOs, the Regional Authorities in charge of the waste management. He has been nominated as member of the regional group committed to set up the new plan for managing waste in the island.

- **Patrizia Lo Sciuto**, represented the Italian Zero Waste Association, presented the "Guidelines for a possible pathway to Zero Waste in Sicily".

- **Fabio Ferreri**, Director of ATO Ragusa highlighted the technical issues related to waste treatment, such as "Anaerobic digestion, pyrolysis: new frontiers in the treatment of waste within the integrated management".

The workshop has also addressed the debate to the **home composting related issues**, with the exposition of the experience of the students of of the Industrial and Technical Secondary School of Ragusa (IT IS). The professor Regazzo presented the...
composting process at chemical level, helping people to understand what means “composting”, how do it and what's the great importance. Objective of the speech was “Home composting: an opportunity which must not be throw."

The whole working session has been broadcasted live streaming. All the workshop materials, the speeches and the video of the conference is available on line: http://www.comune.ragusa.gov.it/cultura/archivi/eventi.html?docs=11&i=22457, and they will be soon available on the “Zero Waste” project web site: www.med-zerowaste.eu

GREECE – EFXINI POLI

Efxini Poli has organized an International workshop within the framework of the project Zero Waste, with theme: MEDITERRANEAN COOPERATION FOR THE APPLICATION OF SYSTEMS OF SUSTAINABLE MUNICIPAL WASTE MANAGEMENT

The workshop took place within the premises of the 4TH INTERNATIONAL EXHIBITION “ECOTEC” ENVIRONMENTAL TECHNOLOGIES & PHOTOVOLTAIC SYSTEMS (07-10 April 2011), at the Exhibition Centre Expo Athens, in the Region of Attica, in Greece.

The speakers were representatives of public authorities, research centres, universities from Greece, Italy, Slovenia and Spain. About 70 participants attended the workshop, including representatives of the Project Partnership.

GREECE – AUT

Info Day: Planning for a Low-Cost Zero Waste municipality-The strategic priorities of the municipality of Preveza

The Info Day took place in Preveza, Greece at May 19-20, 2010. During the meeting, an elaborated zero waste roadmap for the municipality of Preveza was presented by the Associate Professor of the Aristotle University of Thessaloniki Mr. Avraam Karagiannidis. The roadmap consisted of a set of 14 individual actions and interventions which are designed to reduce the amounts of municipal residual wastes by 50% up to the year 2030. Mr. Karagiannidis presented also the Zero Waste project to the participants-citizens of the municipality of Preveza.
National Workshop: Minimization of municipal solid waste: Challenges, constraints and perspectives

The National Workshop was held in the frame of Zero Waste project in the School of Engineering of the Aristotle University of Thessaloniki on Thursday 13th January 2011. The workshop organized by the Laboratory of Heat Transfer and Environmental Engineering and focused on the implementation of measures for rational waste management in municipalities, while its subject was ‘Minimization of Municipal Solid Waste: Challenges, Constraints and Perspectives’.

The forum attended about 80 participants coming from local authorities, the community sector, educational institutions, as well as technical and consultancy companies working in the waste management field. All the participants in the meeting received informational material about Zero Waste project. The presentations were related to the project of Zero Waste, the current situation concerning MSW management in Greece and the implementation of rational waste management systems.
1st forum of Sustainable Industrial Areas management in the frame of MEID project

The main aim of the workshop was the presentation of the project’s (www.medmeid.eu) objective and targets, the release of an appropriate structured questionnaire and the determination of the potential recipients at a national/regional level in order to achieve sustainability in three sections: i) environment, ii) community and iii) economy. The forum was held on Friday 14th January in Thessaloniki organised by the Laboratory of General and Inorganic Chemical Technology (LGICT) and the Laboratory of Heat Transfer and Environmental Engineering from the Aristotle University of Thessaloniki.

Project: ROADTIRE

The ROADTIRE project, co-funded by LIFE+, aims to demonstrate an innovated use for recycled rubber from End Of Life (EOL)-tires in road construction. This will ultimately foster and facilitate a new and wider market for EOL-tires in construction applications, an achievement which will also help reducing the amount of collected of EOL-tires being stockpiled or sent for uses with a higher carbon footprint.

The pilot application is expected to successfully demonstrate improved performance towards skid resistance, fatigue cracking, resistance to rutting, longer pavement life and reduced noise level when compared to conventional roads. In
this way, both engineering and tire-recycling companies will be encouraged to further adopt and develop this use for rubber and avoid other less environmentally friendly alternatives. ROADTIRE should also facilitate and lead to concrete proposals for modifications in existing regulations and standards for public works involving road manufacturing and maintenance.

“The utilization of end-of-life (EOL) tires in road construction: perspectives and current situation in Greece” was the subject of the 1st Forum meeting held on the 26th of January, 2011 at the Technical Chamber of Greece, branch of Lamia. The forum was organized by 2 Laboratories of Aristotle University of Thessaloniki: (a) Heat Transfer and Environmental Engineering (Department of Mechanical Engineering), (b) Building Materials (Department of Civil Engineering), Decentralised Administration of Thessaly - Sterea Ellada and University of Thessaly.

Meeting and training mission in Freetown, Sierra Leone, Africa

The meeting was organised in the frame of CODWAP project (COllaborative curriculum Development on Waste management in Africa and the Pacific region) and took place in the facilities of the University of Sierra Leone (project partner). CODWAP future activities and organisational issues were discussed and important decisions regarding the project activities were made. The regular meeting included two full-days meeting but numerous further bilateral and multilateral informal meetings of individual partners took place before its official start.

An info day followed the days after the meeting which included site visits in waste management facilities in Freetown, Sierra Leone and meetings with the manager of the Freetown Waste Management Company and the mayor of the city of Freetown. The day after that a workshop on “Waste management perspectives in Developing Countries: The case of Sierra Leone” was organised and participants from educational facilities and waste management responsible stakeholders and the project partners concluded in important conclusions regarding the needs and constrain of the country.
Info Day: Reducing the amount of the generated waste-Existing Solutions and suggestions. Home composting implementation

Aristotle University of Thessaloniki (AUTH) with the cooperation of Efxini Poli organized the Info Day in the municipality of Nea Propontida located in Central Macedonia, Greece at February 21, 2011. At first, Mrs Sofia Skarveli representing Efxini Poli presented the project of Zero Waste to the audience (about 80 participants). Mr. Avraam Karagiannidis from AUTH took the floor and presented the master plan for developing a zero-waste municipality. Finally, the Environmental Consultant and researcher in the Laboratory of Heat Transfer and Environmental Engineering at AUTH, Mr Christos Karkanias informed the participants about the pilot application of home composting and its characteristics providing a set of guidelines for implementing it in their houses. The pilot application of home composting included the distribution of a number of relative bins to the citizens, that had indicated their interest in receiving them, by the municipality of Nea Propontida that covered the whole cost. A visit both to the closed landfill of Nea Propontida and the waste water treatment plant took place before the initiation of the Info Day.

4th Environmental Conference of Macedonia

The 4th Environmental Conference takes place every 3 years in Macedonia, Greece aiming at giving the opportunity to scientists working on several environmental subjects to present their work. The multiple sections include between others, solid waste management, waste water treatment and environmental management. The conference took place in Thessaloniki between 18 and 20 March 2011. The Laboratory of Heat Transfer and Environmental Engineering of the Aristotle University of Thessaloniki participated in the conference and presented the master plan for a zero-waste municipality.

GREECE- Ecological Recycling Society

5th Forum on the implementation of the PAYT project in Greece - Fair charges of municipal waste collection and management fees.

In the framework of the LIFE 07 ENV/GR000271 project, Ecological Recycling Society (ERS) organized the 5th Forum on the implementation of the PAYT project in Greece, entitled “Fair Charges of Municipal Waste Collection and Management Fees”. The Forum was held in Athens in Nea Smyrni municipality on the 22nd of March 2011. Representatives of town councils (Elefsina, Nea Smyrni, Voula, Peiraias), representatives of all the project stakeholders, as well as civilians and municipal consultants participated in it.

Filippos Kyrkitsos, the ERS president welcomed all the attendants and representatives of Elefsina and Nea Smyrni municipalities saluted. The speakers presented specific aspects of the project as “Pay as You Throw Systems”, “Development of PAYT Systems in Greece, Estonia and Cyprous” “Experience from the implementation of PAYT Systems in Europe and USA”, “Legislative and Economic Data, that influence the PAYT implementation in Greece”, “National poll results of public opinion in relation with the implementation of PAYT systems”, “Two tiered charging
system in the framework of PAYT” and “Multicriteria data for the selection of appropriate PAYT system in Greek municipalities”. After the presentations the attendants had the chance to ask questions and ask for clarifications. Later on a round table discussion took place. All participants of the forum discussed about important issues as the status quo of waste management in Greece, the type of bins that suit in Greek municipalities, the incentives that should be given to the civilians, the weaknesses of Greek municipalities in waste management, the benefits of the PAYT systems implementation, the legislation transformation, the importance of home composting implementation in parallel to PAYT systems etc.

**Greenwaste composting in Trikala, Greece**

Small but steady steps are made towards sustainable green waste management in the countryside of Greece. Ecological Recycling Society was invited to participate in a public meeting, which was organised by the municipality of Trikala and Mr. Palatzas Kostas. He is the owner of a composting plant which is currently doing its first steps. The company is offering a greenwaste collection service and is active in at least four municipalities, including Trikala. During the meeting, the benefits of composting vs. landfilling greenwaste were presented. Examples from other European countries were shown, so as to familiarize the attendants with other successful practices, such as home composting, door to door collection systems, food waste municipal composting, pay-as-you-throw systems etc. The interest of the participants was high, but the common conclusion was that the municipalities in Greece need to take firm action towards sustainable waste management. Time is of vital importance and great quantities of biowaste still need to be diverted from landfill.
SLOVENIA

Slovenia’s Association of Ecological Movements, Ministry of environment and spatial planning, University of Maribor; Faculty of mechanical engineering and Scientific research centre Bistra Ptuj organized at 17 and 18 February an expert consultation on the topic of zero waste management and waste energy utilization. An expert consultation was held in Moravske Toplice, attended by 150 participants, including many environmental company managers, mayors, representatives of the Government of the Republic of Slovenia, experts from the faculties, representatives of NGOs, etc. Experts presented 28 topics, which concluded topics of complete system of waste treatment, zero waste management and thermic waste treatment. At the end of the expert consultation some important decisions and conclusions have been taken and given to the public consultation. These decisions and conclusions provide guidance for waste management in Slovenia.