



LIFE+



# **Environment Policy & Governance and Information & Communications**

## Projects 2007



EUROPEAN  
COMMISSION



environment

## Index of Environment Policy & Governance and Information & Communications projects selected in 2007

Location	Project number	Title of project
<b>Introduction to LIFE+ Environment Policy &amp; Governance 2007</b>		
<b>AUSTRIA</b>	LIFE07 ENV/A/000003 CMA+	PM10 reduction by the application of liquid Calcium-Magnesium Acetate (CMA) in the Austrian and Italian cities Klagenfurt, Bruneck and Lienz
	LIFE07 ENV/A/000004 EnBa	A Concept for the Sustainable use of Demolition Waste based on the EU Thematic Strategy on the Prevention and Recycling of Waste
<b>BELGIUM</b>	LIFE07 ENV/B/000022 BACad	Using full scale bioaugmentation for cost-efficient remediation of a large CAH groundwater contamination
	LIFE07 ENV/B/000037 MénaVal+	Production of substitution fuel from municipal waste and industrial energy recovery
	LIFE07 ENV/B/000038 WALPHY	Design of a decision tool for hydromorphological restoration of water bodies in Walloon Region
	LIFE07 ENV/B/000041 WEEELABEX	WEEE LABEL OF EXCELLENCE. European Standards for Treatment and Recycling of E&E Waste and for Monitoring the Processing Companies
<b>CYPRUS</b>	LIFE07 ENV/CY/000081 R.E.P.T.	Environmental Policy Support Tool for Recycling in Islands
<b>DENMARK</b>	LIFE07 ENV/DK/000102 From Roof to Road	From Roof to Road - Innovative recycling of bitumen felt roofing material
<b>ESTONIA</b>	LIFE07 ENV/EE/000122 BaltActHaz	Baltic actions for reduction of pollution of the Baltic Sea from priority hazardous substances
<b>FINLAND</b>	LIFE07 ENV/FIN/000133 SNOWCARBO	Monitoring and assessment of carbon balance related phenomena in Finland and northern Eurasia
	LIFE07 ENV/FIN/000138 CHAMP	Climate Change Response through Managing Urban Europe-27 Platform
	LIFE07 ENV/FIN/000141 VACCIA	Vulnerability assessment of ecosystem services for climate change impacts and adaptation
	LIFE07 ENV/FIN/000145 Julia 2030	Mitigation of and Adaptation to the Climate Change in the Helsinki Metropolitan Area - From Strategy to Implementation
<b>FRANCE</b>	LIFE07 ENV/F/000173 SEMEAU	Application of the Water Framework Directive through the implementation of an expert system providing a total modelling of a water mass
	LIFE07 ENV/F/000176 DECIBELL	Conception and qualification by UIC of an LL composite material to substitute cast iron brake shoes on existing wagons, to decrease noise (potential of 600000 wagons impacted)
	LIFE07 ENV/F/000178 GREEN PELLETS	Best sustainable life-cycle fittings for mixed herbaceous solid biofuels for heating to reduce GHG emissions
	LIFE07 ENV/F/000179 HotOxyGlass	Validation of environment friendly flat glass production using an innovative hot oxygen combustion technique

Location	Project number	Title of project
GERMANY	LIFE07 ENV/D/000218 FutMon	Further Development and Implementation of an EU-level Forest Monitoring System
	LIFE07 ENV/D/000222 PROGRASS	Securing the Conservation of Natura Grassland Habitats with a Distributed Bioenergy Production
	LIFE07 ENV/D/000224 Capital of Biodiversity	Promoting the Protection of Natura and Biodiversity in Urban Areas: Award European Capital of Nature and Biodiversity
	LIFE07 ENV/D/000229 ECOSMA	Ecological Certification of Products from Sustainable Marine Aquaculture
	LIFE07 ENV/D/000240 Best4VarioUse	Best practices and Technologies to Develop Green Wastes and Residues as Raw Materials for Variants of Utilization
GREECE	LIFE07 ENV/GR/000265 RECYCLING SYMPRAXIS	Public-Private Partnerships to optimise waste prevention, recovery and recycling systems in mass tourism destinations
	LIFE07 ENV/GR/000266 EcoPest	Strategic plan for the adaptation and application of the principles for the sustainable use of pesticides in a vulnerable ecosystem
	LIFE07 ENV/GR/000271 HEC PAYT	The Development of Pay as You Throw Systems in Greece, Estonia and Cyprus
	LIFE07 ENV/GR/000278 Soil Sustainability(So.S)	Soil Sustainable Management in a Mediterranean River basin based on the European Soil Thematic Strategy
	LIFE07 ENV/GR/000280 PRODOSOL	Strategies to improve and protect soil quality from the disposal of olive mills' wastes in the Mediterranean region
	LIFE07 ENV/GR/000282 CLIM-LOCAL2020	Developing Local Plans for Climate Mitigation by 2020
ITALY	LIFE07 ENV/IT/000357 LACRe	Local Alliance for Climate Responsibility
	LIFE07 ENV/IT/000361 NOVEDI	No Vetro in Discarica: demonstrating innovative technologies for integral recovery of glass rejects actually landfilled
	LIFE07 ENV/IT/000388 CARBOMARK	Improvement of policies toward local voluntary carbon markets for climate change mitigation
	LIFE07 ENV/IT/000412 GREEN FOOTPRINT	Demonstrating the introduction of novel renewable Polyurethane materials for high quality, top design and sustainable shoes
	LIFE07 ENV/IT/000421 RE-WASTE	Recovery, recycling, resource. Valorisation of olive mill effluents by recovering high added value bio-products
	LIFE07 ENV/IT/000434 MHyBus	Methane and Hydrogen blend for public city transport bus: technical demonstrative application and strategic policy measures
	LIFE07 ENV/IT/000439 PURIFAST	Advanced Purification Of Industrial And Mixed Wastewater By Combined Membrane Filtration And Sonochemical Technologies
	LIFE07 ENV/IT/000451 LAKS	Local Accountability for Kyoto Goals
	LIFE07 ENV/IT/000474 ARIEL	Advanced Recycling Implementations to Elide Landfilling

Location	Project number	Title of project
<b>ITALY</b>	LIFE07 ENV/IT/000475 TRUST	Tool for regional-scale assessment of ground-water storage improvement in adaptation to climate change (TRUST)
	LIFE07 ENV/IT/000497 SALT	Sustainable management of the Esino river basin to prevent saline intrusion in the coastal aquifer in consideration of climate change
	LIFE07 ENV/IT/000515 E.C.C.E.L.S.A.	Environmental Compliance based on Cluster Experiences and Local SME-oriented Approaches
	LIFE07 ENV/IT/000516 SUSTGREENHOUSE	The sustainable Greenhouse: demonstrative action for zero emission intensive greenhouse agriculture
<b>LATVIA</b>	LIFE07 ENV/LV/000981 POLPROP-NATURA	Proposals for environmental policy and governance based on demonstration of environmental, social and economic benefits from tourism in the Slitere national park - A NATURA 2000 territory
<b>LUXEMBOURG</b>	LIFE07 ENV/L/000540 M <sup>3</sup>	Application of integrative modelling and monitoring approaches for river basin management evaluation
<b>POLAND</b>	LIFE07 ENV/PL/000605 Lake recult. in Gniezno	Recultivation of Jelonek and Winiary lakes in Gniezno by inactivation of phosphorus in bottom sediments
<b>PORTUGAL</b>	LIFE07 ENV/P/000625 BATinLoko	Environmental performance indicators and their relation with economic factors in textile BAT implementation
	LIFE07 ENV/P/000639 ELECTROVALUE	Electric and electronic eco-assembly alternatives for the valorisation of the end-of-life products in the recycling market
<b>ROMANIA</b>	LIFE07 ENV/RO/000686 BALKWASTE	Waste Network for sustainable solid waste management planning and promotion of integrated decision tools in the Balkan Region
	LIFE07 ENV/RO/000690 ECOREG	Application of industrial ecosystems principles to regional development - Ecoreg
<b>SLOVENIA</b>	LIFE07 ENV/SLO/000710 UNISASH	Resource efficient Universal Window Sash
	LIFE07 ENV/SLO/000725 INCOME	Improved management of contaminated aquifers by integration of source tracking, monitoring tools and decision strategies
<b>SPAIN</b>	LIFE07 ENV/E/000787 Recyship	Pilot Project for the Dismantling and Decontamination of End-Of-Life Ships (Recyship)
	LIFE07 ENV/E/000788 Cowtoplant	Bio-treatment of cow wastes to produce bio-stimulants for plants
	LIFE07 ENV/E/000794 Legiotex	Legionellosis: risk reduction to public health from environmental sources using biotechnology in the textile sector
	LIFE07 ENV/E/000802 WGF-PP	Demonstration of a process to recycle glass fibre waste, placed on rubbish dump, producing polypropylene composites
	LIFE07 ENV/E/000805 EDEA	Efficient Development of Eco-Architecture: Methods and Technologies for Public Social Housing Building in Extremadura

Location	Project number	Title of project
SPAIN	LIFE07 ENV/E/000814 3R-FISH	Integral management model of recovery and recycling of the proper solid waste from the fishing and port activities
	LIFE07 ENV/E/000820 INTEGRAL-B	Demonstration of a multi-feedstock sustainable biodiesel production scheme integrating an on-site by-products energy valorisation system
	LIFE07 ENV/E/000824 LIFE+BOSCOS	Sustainable Forest Management of Menorca in a context of climate change
	LIFE07 ENV/E/000826 AQUA-PLANN PROJECT	Integrated water resources management and their application to local planning of the SCI Abegondo-Cecebre. AQUA-PLANN project
	LIFE07 ENV/E/000829 BIOGRID	Biogas Injection into natural gas grid and use as vehicle fuel by upgrading it with a novel CO <sub>2</sub> capture and storage technology
	LIFE07 ENV/E/000836 BATsGPAH	Developing a best practices e-tool for reducing VOCs emissions in the European printing SMEs industry according to BATs
	LIFE07 ENV/E/000842 WEEE-NET	Project to demonstrate an innovative ICT platform as support tool to implement Community Policy for the sustainable management of e-waste
	LIFE07 ENV/E/000845 WATER CHANGE	Medium and long term water resources modelling as a tool for planning and global change adaptation. Application to the Llobregat Basin.
LIFE07 ENV/E/000847 BIOCELL	Energy self-sustaining and environmental footprint reduction on wastewater treatment plants via fuel cells	
SWEDEN	LIFE0 ENV/S/000904 glass fiber	Recycling of waste glass fiber reinforced plastic with microwave pyrolysis
	LIFE07 ENV/S/000908 GreenClimeAdapt	Green tools for urban climate adaptation
	LIFE07 ENV/S/000911 FEATHERS	Feathers in Europa are THE resources for slaughterhouse
	LIFE07 ENV/S/000912 TOSCA	Towards sustainable value chains through a common approach for company strategic work and daily operations
	LIFE07 ENV/S/000913 SUNRISE	Innovative technology for low-cost production of photovoltaic solar cells
THE NETHERLANDS	LIFE07 ENV/NL/000576 PHARMAFILTER	PHARMAFILTER, an innovative waste and waste water management concept for hospitals
UNITED KINGDOM	LIFE07 ENV/UK/000936 GRACC	Green roofs against climate change. To establish a UK green roof code to support climate change mitigation and adaptation
	LIFE07 ENV/UK/000943 PISCES	Partnerships Involving Stakeholders in the Celtic Sea Eco-System

Location	Project number	Title of project
<b>Introduction to LIFE+ Information &amp; Communications 2007</b>		
<b>FINLAND</b>	LIFE07 INF/FIN/000152 CCCRP	Climate Change Community Response Portal
<b>FRANCE</b>	LIFE07 INF/F/000185 EWWR	European Week of Waste Reduction
<b>ITALY</b>	LIFE07 INF/IT/000410 GPPinfoNET	GPPinfoNET - The Green Public Procurement Information Network
	LIFE07 INF/IT/000438 Olèico+	European awareness raising campaign for an environmentally sustainable olive mill waste management
	LIFE07 INF/IT/000487 R.A.C.E.S.	Raising Awareness on climate change and energy savings for teachers, families and stakeholders
<b>MALTA</b>	LIFE07 INF/MT/000554 STOP-TRAPPING-MALTA	Changing cultural attitudes to trapping in order to facilitate implementation of the Birds Directive in Malta
<b>SPAIN</b>	LIFE07 INF/E/000852 Changing the change	LIFE+campaign 'Changing the change'. The Galician agriculture and forest sector facing climate change
	LIFE07 INF/E/000865 SEDUCCION AMBIENTAL	Awareness-raising campaign on the values of l'Albufera Nature Park, a Natura 2000 Network Site
<b>SWEDEN</b>	LIFE07 INF/S/000901 COM-U	Communicating environmental actions to children and youth
<b>UNITED KINGDOM</b>	LIFE07 INF/UK/000932 RENEW	Regional Environmental Networks for Energy & Water
	LIFE07 INF/UK/000950 Eco-Animation	Eco-Animation: a cutting edge cartoon to raise awareness on climate change and sustainable use of natural resources among European children



# LIFE+ Environment Policy & Governance 2007: Commission funds 72 innovation projects in 19 countries with €82 million

The European Commission has approved funding for 72 new environmental innovation projects in 19 countries under the LIFE+ Environment Policy & Governance programme 2007. These projects will demonstrate new methods and techniques for dealing with a wide diversity of Europe's environmental problems. The projects are led by 'beneficiaries', or project promoters, based in Austria, Belgium, Cyprus, Denmark, Estonia, Finland, France, Germany, Greece, Italy, Latvia, Luxembourg, the Netherlands, Poland, Romania, Slovenia, Spain, Sweden and the United Kingdom. They represent a total investment of €185 million, of which the EU will provide some €82 million.

### LIFE+ Environment Policy & Governance in 2007

The Environment Policy & Governance strand of LIFE+ supports pilot projects that contribute to the development of innovative policy ideas, technologies, methods and instruments. Of the 325 proposals received, the Commission selected 72 projects for funding from a wide range of public and private sector organisations. The winning projects, situated in 19 Member States, represent a total investment of €185 million of which the EU will provide €82 million.

Projects targeting waste and natural resources (28 projects) account for the largest share of EU funding (approximately €25 million). Climate change is the second most targeted priority area with 21 projects (approximately €23 million). A further 23 projects deal with various issues including water, urban environment, soil, noise, forests, chemicals, air and environment and health.

### Background

LIFE is the EU's financial instrument supporting environmental and nature conservation projects throughout the EU and in certain non-EU countries. Since 1992, LIFE has co-financed some 2 750 projects, contributing approximately €1.35 billion to the protection of the environment. LIFE+ is the new European

financial instrument for the environment with a total budget of €2143 billion for the period 2007-2013. During this period, the Commission will launch one call for LIFE+ project proposals per year.

LIFE+ Environment Policy & Governance is one of three thematic components under the LIFE programme. The other two components, LIFE+ Nature & Biodiversity and LIFE+ Information & Communications, focus respectively on improving the conservation status of endangered species and habitats and on disseminating information and raising the profile of environmental issues or providing training and awareness-raising for the prevention of forest fires.

More information on each LIFE+ project is available at: <http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=home.home&cfid=656029&cftoken=cab1cf8091752717-4430206A-E1CB-E45B-8C0A15178EBFFE27>

It is also possible to contact the relevant national authorities:

<http://ec.europa.eu/environment/life/contact/nationalcontact/index.htm>

# Changing cultural attitudes to trapping in order to facilitate implementation of the Birds Directive in Malta

## Project background

When it joined the European Union in 2004, Malta secured a derogation from the Birds Directive (79/409/EEC), under which trapping of some wild songbirds continued to be permitted for a transition period. This period came to an end on 31 December 2008. The trapping activity caused great damage to populations of songbirds arriving on the island, but there has been only limited awareness of this on the island. The limited awareness of the issues became evident during an earlier project (LIFE06 NAT MT 000097), which dealt with conservation of the shearwater (*Puffinus yelkouan*) in Malta.

## Project objectives

The key project objectives are:

- To raise awareness among trappers and among the general public about the ending of the transition period for trapping activities and about the damage to wild bird populations done by trapping;
- To extend the awareness-raising activities to a media campaign, including conference organisation and brochure/film production;
- To promote a change in attitude among people towards these issues.

Expected results:

- At least 70% of the Maltese population to be aware of the relevant issues by the end of the project;
- The awareness-raising activities should reach the following proportions of relevant stakeholder groups: 80% of public authority decision-makers and 60% of children and young people;
- Some 90% of trappers to be aware of the law on trapping of wild songbirds, and 70% to respect the law by the project end;
- Law enforcement authorities to be more aware of biodiversity issues, thus helping them to carry out their work more effectively;
- There should be a more rapid implementation of the Birds Directive in Malta, and a measurable decrease in deliberate trapping.

LIFE07 INF/MT/000554  
STOP-TRAPPING-MALTA



### Beneficiary:

#### Type of beneficiary

NGO-Foundation

#### Name of beneficiary

BirdLife Malta

#### Postal Address

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Fax N/A

Email [Geoffrey.Saliba@birdlifemalta.org](mailto:Geoffrey.Saliba@birdlifemalta.org)

#### Name of contact person

Geoffrey Saliba

### Duration of project:

30 months (01/01/2009 – 30/06/2011)

### Total budget in euro:

315,794

### EC contribution in euro with %:

157,897 (50.00%)



# PM10 reduction by the application of liquid Calcium-Magnesium Acetate (CMA) in the Austrian and Italian cities Klagenfurt, Bruneck and Lienz

## Project background

Numerous studies have confirmed the correlation between the concentration of Particulate Matter (PM) with respiratory disease, heart/circulation disorders and premature deaths. It is not only fine and ultrafine particles – found in PM2.5 - but also the coarse fraction – found in PM10 – that causes negative health effects. This project focuses on reducing PM10 in polluted zones of the Austrian city of Klagenfurt, the Austrian town of Lienz, and the Italian town of Bruneck.

PM10 consists mainly of re-suspended particles from sources such as traffic, domestic burning, construction sites and unpaved roads. Road cleaning measures have produced only limited improvements in the amount of particulate matter re-suspended in the air.

The limit for PM10 particles of  $50\mu\text{g}/\text{m}^3$  - as defined by the European directive 1999/39/EG - is exceeded on more than 80 days per year in Klagenfurt and 50 days in each of Lienz and Bruneck. The limits are particularly difficult to meet in many urban areas during the cold months from September to March.

The project intends to look at using Calcium-Magnesium Acetate (CMA) as a dust-binder. CMA is currently used as a de-icing agent for road surfaces and is an environmentally friendly alternative to chlorides. While CMA is fully biodegradable, non-corrosive and harmless to plants, soil or aquifers it is not widely used due its higher cost.

## Project objectives

The CMA+ project aims to improve the air quality in the three target municipalities by reducing PM10 re-suspension through use of liquid CMA as a dust-binder on roads, construction sites and unpaved roads. Around roads, the project's target is to reduce re-suspension by up to 30% and PM10 levels in the ambient air by up to 10% (related to the annual mean). Around construction sites or unpaved roads the project aims to reduce PM10 levels by up to 50%.

A major task of the project will be to overcome any traffic safety issues on roads emerging from the use of CMA. If tyre grip on the road is reduced after surface treatment, the project will define and implement

LIFE07 ENV/A/000003

CMA+



### Beneficiary:

#### Type of beneficiary

Local authority

#### Name of beneficiary

City of Klagenfurt

#### Postal Address

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AUSTRIA  
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Email wolfgang.hafner@klagenfurt.at

#### Name of contact person

Wolfgang Hafner

### Duration of project:

45 months (01/01/2009 - 30/09/2012)

### Total budget in euro:

2,720,033

### EC contribution in euro with %:

1,344,966 (50.00%)

### Generic Theme:

Reduction of emission of air pollutants

measures to compensate for this situation. Further studies will also be carried out on emerging factors generating re-suspended particles on various types of road and construction sites.

The project will work to replace chlorides as a de-icing agent for roads with the environmentally-friendly CMA-solution in the targeted urban areas. A cost-benefit analysis of the use of CMA will be carried out, along with a specific life-cycle comparison with the use of chlorides.

The beneficiary plans to publish an instruction manual to encourage the use of CMA as a dust binder and de-icing agent in other cities and municipalities in Europe. This will raise acceptance and encourage implementation of the innovative use of liquid CMA.

# A Concept for the Sustainable use of Demolition Waste based on the EU Thematic Strategy on the Prevention and Recycling of Waste

## Project background

Some 6.6 million tonnes of construction waste are disposed of in landfills in Austria each year, not including excavation waste. This construction waste poses significant risks through the hazardous substances it contains. Yet, it is possible to make better use of this material.

However, at present, little is known about the real composition of these demolition wastes. Furthermore, there is a lack of precise understanding about how closely actual waste handling adheres to current waste legislation. This situation is not just typical for Austria, but for all other European countries as well.

There is a need for knowledge to accurately estimate the likely impact of this waste on the natural environment, as well as to identify the potential for introducing recycling or waste prevention measures.

## Project objectives

The ultimate aim of the EnBa project is to encourage the sustainable use of demolition waste and reduce the quantities being sent to landfill. Waste streams from working construction sites will be measured by the project, from which practical actions to improve waste management will be drawn.

By reducing pollution from the construction industry and increasing the positive use of the waste, the project seeks to contribute to the actual implementation of the European thematic strategy "waste prevention and recycling," which promotes sustainable use of resources.

The project intends to carry out a series of specific actions:

- Study the demolition of several residential buildings, measuring the waste fractions and analysing the substance flows therein;
- Demonstrate from these practical examples the fundamental requirements for the EU's strategy on prevention and recycling of demolition waste;
- Demonstrate the effects of re-use and recycling measures on the potential use (and risks of) construction waste;
- Develop a concept and initiate concrete implementing steps for the sustainable use of demolition waste.

LIFE07 ENV/A/000004

EnBa



## Beneficiary:

### Type of beneficiary

Research institution

### Name of beneficiary

Ressourcen Management Agentur

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AUSTRIA

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Email office@rma.at

### Name of contact person

Johann Daxbeck

## Duration of project:

36 months (01/01/2009 - 31/12/2011)

## Total budget in euro:

709,945

## EC contribution in euro with %:

354,973 (50.00%)

## Generic Theme:

General: Waste management

# Using full scale bioaugmentation for cost-efficient remediation of a large CAH groundwater contamination

## Project background

Numerous European companies - from metal processing to dry cleaners - generate significant amounts of groundwater contamination with chlorinated aliphatic hydrocarbons (CAHs). CAHs are volatile organo-chlorine C<sub>1</sub> and C<sub>2</sub> compounds that are toxic and carcinogenic. Since they degrade slowly, they form large groundwater plumes that are very difficult to remedy.

Traditional remediation techniques - such as pump and treat - are often inadequate, time-consuming, expensive, and put a heavy burden on the environment through excessive water usage, secondary wastes, high energy use, and so on. Anaerobic dechlorination by soil microorganisms is a promising remediation approach for CAH plumes if conditions are favourable or can be engineered to become favourable. Recent pilot-scale research indicates that it is possible to introduce the microorganisms necessary to create favourable conditions in contaminated subsoil by simple groundwater transfer.

Using this bio-augmentation (BA) technology in the laboratory has enabled bioremediation in 50% of the cases in which it was not previously possible. However, the technique has never been used in Europe for a full-scale application.

## Project objectives

The main objective of the BACad project is to demonstrate the feasibility and cost-effectiveness of full-scale bioaugmentation (BA) for the remediation of a significant CAH groundwater contamination at the project's location, the Punch Metals site. CAH groundwater contamination at the site is estimated at 500 000 m<sup>3</sup> and this contamination has migrated about 1 km off-site, underneath a forest, reaching a depth of 50 m. The beneficiary aims to remediate this groundwater contamination by CAHs in a cost efficient and environmentally sound way, while keeping the impact on the ecosystem as low as possible. While feasibility tests at lab-scale have indicated that the conditions for engineered bioremediation are not optimal (i.e., injection of an organic substrate induces only partial dechlorination), the introduction of suitable bacteria through BA however could induce full dechlorination.

This BA technique aims to directly tackle the contamination of groundwater by CAHs. The project aims to reduce the off-site contamination by 50% after five years and 80% after 10 years.

LIFE07 ENV/B/000022

BACad



## Beneficiary:

### Type of beneficiary

Small and medium sized enterprise

### Name of beneficiary

Punch Metals

### Postal Address

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Fax +32 34331309  
Email Jos.verlinden@punchgraphix.com

### Name of contact person

Jos Verlinden

## Duration of project:

60 months (01/01/2009 – 31/12/2013)

## Total budget in euro:

1,495,041

## EC contribution in euro with %:

633,819 (46.58%)

## Generic Theme:

Diffuse and dispersed sources of pollution

Other expected results include improved environmental performance compared with traditional remediation techniques:

- 70% less electricity use;
- 50% less water consumption;
- A reduction of waste streams by 60%;
- 50% cost savings; and
- 35% time savings.

A key sub-objective is to develop a methodology to transfer the bacteria in the field from already inoculated injection wells to new injection wells. This would avoid the costs of growing the bacteria in a laboratory or purchasing new batches each time.

The beneficiary will disseminate the results to key target groups to encourage further treatment of groundwater contaminated with CAH. These include contaminating companies, the remediation industry, research institutes and policy makers. It is anticipated that the results of the project may be used to remediate other CAH contaminated sites using full scale bioaugmentation in Europe.

# Production of substitution fuel from municipal waste and industrial energy recovery

## Project background

The volume of solid waste collected by municipalities is continually increasing, and is linked to economic trends and demographic changes. Sustainable waste management systems require waste prevention and reuse, as well as materials and thermal recycling (incineration).

Typically, the energy value is extracted from waste through either using it as a fuel in cement manufacturing, or burning municipal waste in dedicated incinerators with energy recovery. In both cases, the quality of the fuel required is low.

## Project objectives

The project's aim is to develop a new scheme for optimising the value of energy derived from municipal waste. For this, the quality of the waste-as-fuel needs to be improved, meaning that there are higher demands on the waste treatment system.

Specifically, the MénaVal+ project will produce a high-quality substitution fuel (refuse-derived fuel - RDF) from municipal waste, and implement a new industrial energy recovery scheme using high-enthalpy heat. The project will:

- Produce a fuel of high-quality compared with the waste usually used in incinerators. The new fuel will meet the specifications of the new scheme to be put in place. To facilitate this, a mechanical-biological treatment (MBT) municipal waste plant will be optimised and provided with new equipment;
- Develop a new recovery scheme (eg. high-enthalpy heat) taking into account the characteristics of the fuel. Different recovery schemes will be considered and evaluated, an agreement will be made with an industrial partner, the relevant permits will be obtained and the energy recovery unit will be built.

At the project's end, some 30 000 tonnes/yr of substitution fuel is expected to be produced, which will be of higher quality than the fuels produced using existing recovery schemes (incinerators). The project will help the beneficiary to improve the waste management service it delivers to municipalities, and will help reduce the volume of waste sent to landfill sites; the maximum valorisation of the residual stream of collected municipal waste is expected to reduce the weight of disposed waste by more than 50%.

LIFE07 ENV/B/000037

MénaVal+



## Beneficiary:

### Type of beneficiary

Local authority

### Name of beneficiary

Intercommunale pour le développement économique durable du Luxembourg belge scrl

### Postal Address

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### Name of contact person

Joseph Chaplier

## Duration of project:

60 months (01/01/2009 – 31/12/2013)

## Total budget in euro:

8,249,054

## EC contribution in euro with %:

999,527 (50.00%)

## Generic Theme:

Municipal waste (including household and commercial)

# Design of a decision tool for hydromorphological restoration of water bodies in Walloon Region

## Project background

The Water Framework Directive (WFD) requires EU Member States to put in place measures that will return their surface waters to 'good ecological status'. For rivers, this means restoring the river's structure and physical dynamics. In particular, this may mean reversing alterations that have taken place to the flow of the river (and thus its discharge and sedimentation); to its general form and appearance; and to the biotopes or habitats alongside it.

Thus, implementation of the WFD requires a hydromorphological approach – in other words, improving the hydrological condition of a river (water flow) and its morphological condition, or shape. Currently, stakeholders carry out hydromorphological works, such as dam removal or watercourse section re-meandering, without precisely knowing the consequences. Often, only very short-term monitoring is carried out as a means of providing feedback, although modifying and manipulating these ecosystems requires expert knowledge of watercourse dynamic mechanisms.

Hydromorphological quality improvements can be measured by changes in physical or chemical parameters of the environment, and by changes in the composition and structure of plant and animal communities that depend on the aquatic environment. Work needs to be done to identify and then follow the methodologies (including natural processes) that can ensure that any improvements carried out are sustainable. This must be done while taking into account the impacts of climate change, such as increased flood frequency and intensity.

## Project objectives

The WALPHY project will develop a structured approach to the improvement of the hydromorphological quality of the River Meuse basin upstream of Andenne, near Namur. The aim will be for the pilot area to achieve 'good ecological status' as required by the WFD.

The specific objectives will be to:

- Develop a methodology for assessing the hydromorphological quality of river restoration projects;

LIFE07 ENV/B/000038  
WALPHY



### Beneficiary:

#### Type of beneficiary

Regional authority

#### Name of beneficiary

Service Public de Wallonie

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BELGIUM

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#### Name of contact person

Francis Lambot

### Duration of project:

60 months (01/01/2009 – 31/12/2013)

### Total budget in euro:

2,861,641

### EC contribution in euro with %:

919,161 (48.72%)

### Generic Theme:

Water management at the scale of the river basin

- Carry out restoration works on a significant scale on some of the water bodies in the part of the river basin under study. These restoration works will be based on longitudinal continuity and transverse continuity (area of freedom);
- Monitor the restored river system and its ecological status at the intervention site and for the water body as a whole;
- Develop technical guidance (decision-making tools) for stakeholders in the context of the WFD;
- Promote the tools and recommendations developed by the project to authorities, stakeholders, and the public.



## WEEE LABEL OF EXCELLENCE.

# European Standards for Treatment and Recycling of E&E Waste and for Monitoring the Processing Companies

### Project background

Directive 2002/96/EC of the European Parliament and Council on waste electrical and electronic equipment (WEEE) – hereafter “the Directive” – outlines the responsibilities for the collection, recycling and recovery of WEEE in all 27 Member States. The Directive has been transposed into national legislation in virtually all Member States.

Consumers and producers of electric and electronic equipment have to pay in different ways for the management of WEEE. However, they do this often without being aware of the performance of the services they are paying for. This is partly because WEEE collection and recycling has increasingly become a cross-border business, carried out in large, specialised plants. It is also because recycling technologies undergo such rapid development, particularly as new types of equipment such as LCD (liquid crystal displays) and PV (photovoltaics) demand new treatment solutions.

WEEE-processing companies must be discouraged from gaining a competitive advantage by implementing cheaper technologies that give weaker environmental performance. To best avoid this, it is necessary to both harmonise treatment and recycling standards to allow for uniform comparison, monitoring and reporting and to further develop the expertise, tools and capacity of parties auditing WEEE-processing companies.

### Project objectives

The WEEELABEX project, which will be implemented by the WEEE Forum, aims to develop a common and harmonized set of standards for processing e-waste in an environmentally safe manner and in compliance with EU legislation. The aim is to create a “WEEE label of excellence” for environmental standards of a superior level throughout the whole recycling process of all e-waste processing companies.

The set of standards will cover all stages of the process through collection, storage, transportation and mechanical treatment (including special treatment of output mixtures). It will include technical specifications; document and reporting obligations; and organisational and management requirements.

The label will be awarded by a newly created Certification Office based on validated, audited and certified

LIFE07 ENV/B/000041

WEEELABEX



### Beneficiary:

#### Type of beneficiary

Professional organisation

#### Name of beneficiary

Waste of Electrical and Electronic Equipment Forum

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#### Name of contact person

Pascal Leroy

### Duration of project:

48 months (01/01/2009 – 31/12/2012)

### Total budget in euro:

1,064,600

### EC contribution in euro with %:

532,300 (50.00%)

### Generic Theme:

Waste from Electrical and Electronical Equipment (WEEE)

manuals and detailed reporting specifications. One of the sub-objectives of the project is to agree and roll out an efficient, transparent and harmonised auditing and reporting concept amongst the WEEE Forum members.

The project aims to certify some 30 companies in various countries and systems. To achieve this, a pool of approximately 20-30 auditors, familiar with WEEE processing technologies, will be trained in the standards. The beneficiary plans to support its aims with a dedicated, transnational communication and awareness-raising campaign, including the organisation of “Excellence Days”.

It is anticipated that the WEEE Forum standard will eventually be implemented by all member systems and become part of contracts with WEEE-processing companies.



# Environmental Policy Support Tool for Recycling in Islands

## Project background

Small island countries dedicate a greater proportion of their financial and human resources to the provision of basic infrastructure and services (such as waste management). They also rely more on outside aid and on exports of waste for recycling, with accompanying transport-related costs and environmental impacts. Cyprus and Malta were the first small island states to join the European Union, and have had to implement EU environmental legislation. Waste management is a particularly problematic area, and implementation in Cyprus and Malta of EU legislation on packaging waste and waste electronic and electrical equipment (WEEE) has led to the identification of many problems related to waste management, recycling and recovery. Waste recycling targets present a particular problem because the relatively limited volumes of waste may make either waste exports or the implementation of recycling schemes economically or environmentally unfeasible. There is thus a need to identify the problems small islands face in managing their waste, especially regarding packaging waste and WEEE.

## Project objectives

The "R.E.P.T- Recycling Environmental Policy Tool" project aims to:

- Produce a spatial and temporal inventory of the waste produced for each participating country (Cyprus, Malta, Greece and France) and each waste stream (glass, metals, plastics and paper; and cooling equipment, cathode-ray tube screens and fluorescent lamps);
- Compare the current recovery and recycling practices and policies in each participating country with the requirements of the relevant EU Directives, and examine the current waste legislation frameworks in each participating country;
- Carry out cost-benefit analyses for the recycling of the aforementioned waste streams in order to assess the technical and financial cost effectiveness of the current practices in each participating country;
- Identify through constraint analysis the main economic and environmental obstacles faced by the participating countries when implementing cost effective and sustainable recycling practices;
- Facilitate the implementation of the Packaging & Packaging Waste and WEEE Directives by developing a decision-support tool (DST) that will allow national authorities to calculate the environmental and financial cost of different ways of implementing the Directives;

LIFE07 ENV/CY/000081  
R.E.P.T.



### Beneficiary:

#### Type of beneficiary

National authority

#### Name of beneficiary

Ministry of Interior

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#### Name of contact person

Constantinos Papamichael

### Duration of project:

24 months (01/01/2009 – 31/12/2010)

### Total budget in euro:

878,272

### EC contribution in euro with %:

433,636 (50.00%)

### Generic Theme:

General: Waste management

- Demonstrate the technical feasibility and financial viability of methods and technologies that can, through DST implementation, enhance environmental performance in the waste recovery and recycling sectors in the participant countries for the selected waste streams;
- Identify promising environmental approaches or best available techniques for waste recovery and recycling in small island states, and identify the obstacles to their implementation;
- Disseminate information and good practices to competent authorities and other organizations involved in recycling in small island states (the DST will be distributed on CD-ROM, along with a user manual and on-line backup). Dissemination work will also target the general public and industry;
- Support the member states' competent authorities in better designing and implementing recycling policies in accordance with the EU Directives.

# From Roof to Road - Innovative recycling of bitumen felt roofing material

## Project background

Europe produces some 1.8 million tonnes/yr of bituminous roofing waste, of which 25 000 tonnes/yr comes from Denmark. The bitumen content in felt roofing material is 40-50% compared with 5-7 % in road asphalt. Recycled roofing bitumen has the potential to replace some 5-10 % of virgin bitumen used for road construction in Denmark.

## Project objectives

The objective of the "Roof Recycling" project is to demonstrate that recycling bitumen felt roofing material (bituminous membranes) is an economical and environmentally viable alternative to the existing European practice of landfill and incineration of this type of waste.

Expected results of the project are:

- The demonstration of a new system for the recycling of bitumen felt roofing material by collecting and processing at least 1 000 tonnes of material, which will subsequently be used in road construction;
- The documentation of the economical and environmental viability of the new recycling design and process. The results will be communicated in a best practice handbook. The goals of the new system are: the recycling of 80% of roofing waste (which until now has been sent to landfill/incineration); the substitution of at least 10% of virgin bitumen in road asphalt mix with the recycled material (with no or minimal extra transport work compared with landfill of tear-off roofs and use of virgin bitumen and aggregates); and the elimination of the negative impact on the environment and working conditions from collection, sorting, storage and processing.

LIFE07 ENV/DK/000102  
From Roof to Road



## Beneficiary:

### Type of beneficiary

Large enterprise

### Name of beneficiary

Karsten Rasmussen Holding Thisted A/S

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### Name of contact person

Niels Andreae

## Duration of project:

24 months (01/01/2009 – 31/12/2010)

## Total budget in euro:

2,068,442

## EC contribution in euro with %:

1,002,547 (49.80%)

## Generic Theme:

Industrial waste (including manufacturing)

# Baltic actions for reduction of pollution of the Baltic Sea from priority hazardous substances

## Project background

Economic activities have released a wide range of chemical substances into the natural environment. Some of these substances stay in the environment for a very long time because of their persistence. If they are also bio-accumulative, they accumulate via the food chain. If toxic, they can exert harmful effects on all manner of living organisms – plants, animals and humans.

The best solution to the problem of chemicals in the aquatic environment would be to stop emissions of the target substances into the water by regulatory measures.

Such an approach is laid down as a policy goal of the EU in its Water Framework Directive and related Directives, such as the Directive on Integrated Pollution Prevention and Control, the Directive on Pollution caused by certain dangerous substances discharged into the aquatic environment and its upcoming Marine Directive supporting the Marine Strategy. It is also the goal of several international agreements, including the HELCOM/OSPAR Stockholm convention.

## Project objectives

The overall goal of the BaltActHaz project is to support the Baltic countries in taking joint action towards implementation of the EU Water Framework Directive (WFD), the Integrated Pollution Prevention and Control (IPPC) Directive, the Marine Directive (MD) and the new HELCOM Baltic Sea Action Plan with regard to reduction of hazardous substances.

The project will investigate current levels of priority substances – including those identified by the WFD and HELCOM – in industrial processes, wastewater, sewage water, surface water and sediments. It will also propose relevant monitoring measures for the future.

It will work to build up capacity amongst stakeholders regarding the EU Regulation on chemicals and their safe use (REACH) by providing training and systematically generating and disseminating information related to the environmental hazardousness of substances and conditions of safe use.

The project will work with certain enterprises to help them improve their management of chemicals. It will

LIFE07 ENV/EE/000122

BaltActHaz



## Beneficiary:

### Type of beneficiary

NGO-Foundation

### Name of beneficiary

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### Name of contact person

Kitty Kislenko

## Duration of project:

36 months (01/01/2009 – 31/12/2011)

## Total budget in euro:

1,715,632

## EC contribution in euro with %:

851,816 (50.00%)

## Generic Theme:

Waste water treatment

support them in detection and use of chemicals as well as in substituting certain substances and elaborating both investment strategies and potential applications for investment support. It will furthermore work to improve the quality of (IPPC and non-IPPC) permits with regard to hazardous substances in enterprises and to use the permits as a tool for efficient enforcement of existing legislation on their management.

The project will promote dialogue between authorities, industry, science and NGOs on improving management of hazardous substances and facilitate the network of Baltic stakeholders on new legislative developments and trans-boundary cooperation with international experts. It will support awareness-raising of the general public on these issues.

# Monitoring and assessment of carbon balance related phenomena in Finland and northern Eurasia

## Project background

Current knowledge is limited about the size and scope of boreal forests as sources of carbon dioxide, and as carbon sinks. Work has been done to understand single locations, but estimates for large regions are very imprecise. Regional and global level information is limited because the distributed ground-based point-wise observations do not cover enough locations. This handicaps climate forecasting and hampers the evaluation of the anthropogenic influence on climate change, contributing to high uncertainty about the location and magnitude of carbon sinks. The mapping of carbon sinks is a major issue for current (Kyoto Protocol) and possible future international climate treaties.

One aspect of carbon sink mapping is observation of spatial variability and long-term trends in the distribution of snow cover, and related climate patterns. These data feed into climate change prediction models, which forecast changes in the spatial and temporal distribution of snow in boreal and Arctic terrestrial regions. Changes in seasonal snow cover lead to changes in the carbon dioxide balance because snow cover directly affects carbon dioxide production (respiration) and the increase in forest and other vegetation (the magnitude of carbon sinks).

## Project objectives

The project priorities are:

1. To map accurately the net carbon balance of the boreal forest zone in order to assess the true extent of carbon sinks and sources of carbon dioxide. These data will inform climate policymaking and future climate treaties;
2. To develop and demonstrate methodologies that will allow the anthropogenic influence on CO<sub>2</sub> levels to be separated from natural background CO<sub>2</sub> levels. These data will inform the development of new legislation on CO<sub>2</sub>;
3. To provide information about what the future data requirements will be for continental-scale carbon balance mapping and monitoring (focusing on northern regions). Data might be produced in situ, or might relate to land cover, or be generated by modelling or Earth observation.

The expected results of the project will be maps showing the carbon storage potential of terrestrial vegetation, soil respiration, and the net carbon balance across

LIFE07 ENV/FIN/000133  
SNOWCARBO



### Beneficiary:

#### Type of beneficiary

Development agency

#### Name of beneficiary

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#### Name of contact person

Jouni Pulliainen

### Duration of project:

48 months (01/01/2009 – 31/12/2012)

### Total budget in euro:

2,155,627

### EC contribution in euro with %:

1,046,759 (49.09%)

### Generic Theme:

Reduction of emission of greenhouse gases

different land-use and cover classes. These carbon balance assessment maps will cover a 10-year period (2001-2010) and will cover at high spatial resolution the Sodankyla-Pallas region of northern Finland. The EU Baltic states will also be mapped to a medium resolution level.

The project will also produce a carbon-balance calculator for public use; will demonstrate how natural background CO<sub>2</sub> can be identified separately from anthropogenic influences; will provide a new approach to combining existing Earth observation information with in situ data so that the net carbon balance can be mapped and monitored in the boreal forest zone; will demonstrate the importance of land cover information for mapping and monitoring of the net carbon balance; and will define what is needed in terms of Eurasian land cover information for future net carbon balance mapping and monitoring.

# Climate Change Response through Managing Urban Europe-27 Platform

## Project background

Europeans are starting to experience the tangible impacts of global warming first hand, for example through heat waves, floods, storms and forest fires. The European Union currently has a target of limiting global warming to no more than two degrees Celsius above the pre-industrial global temperature. EU policy is based on the findings of the Intergovernmental Panel on Climate Change (IPCC), and on findings relating to the economic costs of climate change as analysed in reports such as the Stern Review.

Within the scope of their responsibility and through citizen involvement, local and regional authorities are well placed to fight climate change by, developing and implementing integrated climate strategies. Doing this effectively requires a highly integrated approach. However, few local and sub-regional authorities have sufficiently integrated structures in place. The EU's Thematic Strategy on the Urban Environment (TSUE) states that integrated environmental management can meet the needs of local and regional authorities, but that its implementation requires extensive training and capacity-building.

## Project objectives

- To establish an Integrated Management Systems (IMS) competence development package to enable the local level to contribute to EU environmental and climate change commitments;
- To create national hubs that through IMS implementation will support local and sub-regional authorities in their efforts to contribute to greenhouse gas emission reductions;
- To build awareness of IMS as an effective instrument for national authorities, EMAS (Eco-Management and Audit Scheme) competent bodies, EMAS auditors, sub-regional and local authorities, and people working to tackle climate change;
- To demonstrate low-carbon footprint project management and to launch an IMS network and thus secure the continuation of the processes started by the project.

The expected results of the project are as follows:

- Some 16-40 local and sub-regional authorities will directly contribute to fulfilling the EU's Kyoto Protocol commitments, and to the post-Kyoto framework, through IMS training. This will involve completion of baseline reviews, and establishment of strategic pro-

LIFE07 ENV/FIN/000138  
CHAMP



### Beneficiary:

#### Type of beneficiary

Local authority

#### Name of beneficiary

Union of the Baltic Cities (UBC),  
Commission of Environment Secretariat  
c/o City of Turku

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#### Name of contact person

Björn Grönholm

### Duration of project:

36 months (01/01/2009 – 31/12/2011)

### Total budget in euro:

2,033,033

### EC contribution in euro with %:

1,014,841 (50.00%)

### Generic Theme:

Urban design - Quality of life - Transport planning

- grammes and action plans, and of organisational structures for climate change mitigation and adaptation;
- Implementation of current EU environment regulations at the local and sub-regional level will be improved in at least four countries, with increased support and encouragement from the national level;
- National IMS training hubs will be established in Finland, Germany, Hungary, and Italy, with the accompanying implementation of 'train-the-trainers' programmes. This programme will be made ready for transfer to other EU countries, and to non-EU states;
- An EU-wide IMS competence network will be established;
- There will be further standardisation of IMS through the training of auditors in EU countries and beyond, in particular on the implementation of EMAS into the strategic plans of local and sub-regional authorities;
- Creation of an electronic platform to support the wider use of IMS for climate change adaptation and mitigation.



# Vulnerability assessment of ecosystem services for climate change impacts and adaptation

## Project background

Climate change provides a major challenge for the sustainable management of key ecosystem goods and services, including biodiversity, forests, water and agricultural production. Despite increasing efforts to reduce the emission of greenhouse gases, results from global circulation models show that major changes in the current climate cannot be avoided.

Sector-specific adaptation measures are therefore needed. These adaptation measures have to be based on the understanding of (i) the likelihood of change, (ii) vulnerability of the specific sectors to the predicted change, and (iii) knowledge about the local-scale possibilities for adaptation.

There is a need to develop a methodology and tools for connecting the global/regional scale climate-change scenarios to the local/regional scale where realistic adaptation measures are planned and conducted. Authorities and stakeholders acting at the different levels need to have such information – provided in a format suitable for decision making – to understand and plan the necessary adaptation measures.

## Project objectives

The VACCIA project aims to derive realistic climate change scenarios for specific sites to enable impact and vulnerability assessments and suggest the most appropriate adaptation measures.

It intends to calibrate and demonstrate the use of Global Monitoring for Environment and Security (GMES) satellite-data services for assessing climate change impacts and providing maps and databases for adaptation studies. Climate change-sensitive land cover information – including snowfall and phenology – will be used in the analysis. GIS-based platforms and computer programs will be developed for effective modelling.

On the basis of the site-specific information database, results from the modelling tools and expertise of the partner (FinLTSER environmental network) vulnerability and impact assessments will be made on the main ecosystem resources faced with climate change.

The project team will work with local/regional administrations and stakeholders to make an inventory of

LIFE07 ENV/FIN/000141  
VACCIA



### Beneficiary:

#### Type of beneficiary

Research institution

#### Name of beneficiary

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#### Name of contact person

Martin Forsius

### Duration of project:

36 months (01/01/2009 – 31/12/2011)

### Total budget in euro:

3,121,573

### EC contribution in euro with %:

1,546,538 (49.98%)

### Generic Theme:

Other area – Land use development and planning

possible appropriate adaptation measures to respond to the identified threats. The assessments will also be used to define critical environmental impact thresholds – taking into account predicted climate change and possibilities for adaptation – to inform specific policy targets and measures.

As well as disseminating its findings to relevant parties, the project expects to contribute to the development of existing and planned international climate change networks and to the development of European policies for climate change adaptation, including the Green Paper and Second European Climate Change Programme.



# Mitigation of and Adaptation to the Climate Change in the Helsinki Metropolitan Area - From Strategy to Implementation

## Project background

Directly and indirectly, through their activities and the services they provide, municipal authorities produce significant greenhouse gas emissions. In principle, municipalities can change their working practices and methods of delivering services to reduce emissions, and can provide good practice advice based on these experiences.

## Project objectives

The "Julia 2003" project will implement and demonstrate new methods, procedures and tools, and will develop existing methods, procedures and tools as part of a strategy to contribute to the reduction of greenhouse gas emissions from the Helsinki metropolitan area. The project actions will concentrate on public procurement, use of public premises, transport, and waste management.

The project will develop scenarios for regional adaptations to climate change and information on predictions of the regional effects of climate change. It is anticipated that such information will be used in the planning and development of municipal buildings and infrastructure. The project will result in the development of a long-term regional strategy for adaptation to climate change in the Helsinki Metropolitan area that builds on measures defined in the Helsinki Metropolitan Area Climate Strategy for 2030.

A key result of the project will be demonstrating and verifying the positive impact that CO<sub>2</sub> calculators, which were developed for municipal administration personnel in particular, and, more generally, for city residents – play in mitigating climate change in a municipal area.

Expected results of the project include:

- 5% lower CO<sub>2</sub> emissions for public procurement (when compared with previous similar purchases);
- 8% lower CO<sub>2</sub> emissions from electricity consumption on public premises; and
- 28% lower CO<sub>2</sub> emissions from transport in 2030.

Project activities include raising the awareness of different stakeholders of the need to mitigate and adapt to climate change in the Helsinki Metropolitan Area.

LIFE07 ENV/FIN/000145

Julia 2030



## Beneficiary:

### Type of beneficiary

Local authority

### Name of beneficiary

The Helsinki Metropolitan Area Council

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### Name of contact person

Silja Huuhtanen

## Duration of project:

48 months (01/01/2009 – 31/12/2012)

## Total budget in euro:

2,146,230

## EC contribution in euro with %:

1,073,115 (50.00%)

## Generic Theme:

Urban design - Quality of life - Transport planning

# Application of the Water Framework Directive through the implementation of an expert system providing a total modelling of a water mass

## Project background

The objectives of the Water Framework Directive represent a major challenge for Member States that have to define integrated management plans, as well as devise programmes for achieving “good water status”, defined by the directive.

To prevent further degradation and improve quality, the programme of measures should: implement appropriate monitoring tools in order to identify diffuse pollution and anticipate negative changes, as well as carry out concrete actions for improving land-use practices.

## Project objectives

The SEMEAU project aims to build a tool for effectively protecting surface water and groundwater located in hilly or mountainous regions (representing one-third of Europe’s area). The water resource originating from these areas is often of very good quality, although vulnerable to land use practices.

The main objective of the project is to elaborate, test and disseminate a complete modelling method for a body of water. It will provide end users with a useful tool to:

- Anticipate threats such as turbidity, as well as contamination from nitrates, phosphates, hydrocarbons and pesticides;
- Model the impact of actions (foreseen in the programme);
- Assess the efficiency of measures taken by analysing model results.

LIFE07 ENV/F/000173  
SEMEAU



## Beneficiary:

### Type of beneficiary

International enterprise

### Name of beneficiary

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### Name of contact person

Jean-Christophe Bligny

## Duration of project:

48 months (01/01/2009 – 31/12/2012)

## Total budget in euro:

1,341,400

## EC contribution in euro with %:

670,700 (50.00%)

## Generic Theme:

Water supply – Water quality – Ground water protection

## Conception and qualification by UIC of an LL composite material to substitute cast iron brake shoes on existing wagons, to decrease noise (potential of 600000 wagons impacted)

### Project background

In 2006, a Commission Decision 2006/66/EC was adopted setting out the technical specifications for inter-operability relating to the "rolling stock-noise" of the trans-European conventional rail system. This decision aimed to reduce noise due to rail traffic. In 2007, the Commission furthermore launched a communication campaign entitled "Rail noise abatement measures addressing the existing fleet".

Currently, some 600 000 freight cars run night and day through Europe. Rolling noise is currently measured by railway operators or regional authorities in those freight corridors most subject to noise nuisances.

### Project objectives

The main objectives of the DECIBELL project are to:

- Conduct a technical assessment by 2012 of an innovative substitute brakeshoe. This assessment is to be carried out by the International Union of Railways (UIC);
- Demonstrate the safety and economic performance, as well as the noise reduction effectiveness, of the brake substitute by equipping a fleet of some 100 freight cars.
- Reduce noise by a factor of 2 to 4 compared with current levels; and
- Decrease the carbon footprint of Europe's freight sector by supporting a shift from road to rail traffic.

The project will result in the creation of rolling noise maps for each Member State.

LIFE07 ENV/F/000176  
DECIBELL



### Beneficiary:

#### Type of beneficiary

International enterprise

#### Name of beneficiary

Faiveley Transport SA

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#### Name of contact person

Loïc Lelièvre

### Duration of project:

47 months (05/01/2009 – 14/12/2012)

### Total budget in euro:

4,209,587

### EC contribution in euro with %:

1,848,468 (46.13%)

### Generic Theme:

Air quality management and noise abatement

# Best sustainable life-cycle fittings for mixed herbaceous solid biofuels for heating to reduce GHG emissions

## Project background

The EU is committed to reducing emissions of greenhouse gases. It has proposed an ambitious target of achieving a threefold increase in the share of renewable energy resources by 2020 from 7% to 20%. More specifically, the European Commission's White Paper for Community Strategy and Action Plan aims to double the share of renewable energies in gross domestic energy consumption across the EU with a target of 12% by 2010.

The heating/cooling sector represents 49% of EU energy demand. Most of this thermal energy is produced burning fossil fuels. In 2004, renewable sources such as biomass, solar and geothermal energy provided 8.4% of total heat consumption.

## Project objectives

The main objective of the Green Pellets (miscanthus, fescue, switchgrass) project is to demonstrate that new dedicated energy herbaceous crops for solid biomass constitute an effective, sustainable and eco-friendly bio-energy source for heating. This source of energy should contribute to reducing significantly, in the near future, greenhouse gas emissions in western France.

In practical terms, the project plans to test pilot heating systems and different experimental herbaceous solid biofuels with a view to demonstrating the environmental benefits of the bio-energy (e.g., clean combustion). The project aims to convince more than 20 different industrial plants, municipalities and individuals to use solid biofuels in their boilers. This would allow for the substitution of some 2 000 tonnes/yr of fuel and the reduction of emissions by 5 500-6 000 tonnes CO<sub>2</sub>/yr. It is expected that this new technology could in future prevent the emission of 80 000 tonnes of CO<sub>2</sub> and substitute for some 26 500 tonnes of fossil fuel.

LIFE07 ENV/F/000178  
GREEN PELLETS



## Beneficiary:

### Type of beneficiary

Development agency

### Name of beneficiary

Association d'Initiatives Locales pour l'Énergie et l'Environnement

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### Name of contact person

Aurélie Leplus

## Duration of project:

36 months (01/01/2009 – 31/12/2011)

## Total budget in euro:

1,305,795

## EC contribution in euro with %:

646,648 (50.00%)

## Generic Theme:

Reduction of emission of greenhouse gases

# Validation of environment friendly flat glass production using an innovative hot oxygen combustion technique

## Project background

Glass is a key element in many industries. In 2006, the world market for flat glass was estimated at 42 million tonnes, which is equivalent to 4.2 billion m<sup>2</sup> of glass with a thickness of 4 mm. In Western Europe, the average consumption is 18 kg/person/yr.

The production of glass requires high levels of energy and entails the emission of significant pollutants, particularly sulphur oxides (SO<sub>x</sub>) and nitrogen oxides (NO<sub>x</sub>). The reaction of water with these gases in the atmosphere produces acid rain.

To tackle the negative impact of these pollutants, the European Commission has set the target of reducing sulphur dioxide (SO<sub>2</sub>) and NO<sub>x</sub> emissions by 82% and 60% respectively by 2020 compared with levels in 2000. An energy-related target is to reduce greenhouse gas (GHG) emissions by 8% by 2012 compared with 1990 levels, moving towards the independent firm commitment to achieve at least a 20% reduction of GHG emissions by 2020.

The EU economy and society at large will have to adapt to successfully achieve these targets and help tackle climate change issues.

## Project objectives

The HotOxyGlass project aims to demonstrate a new clean technology for the glass industry, thus proving that the environmental impact of the flat glass industrial production process can be reduced while ensuring that both the quality and quantity of glass produced are at least equal to those of existing techniques.

The project intends to replace the use of air as an oxidizer in the combustion phase of the production process with pure oxygen. To reduce the amount of oxygen to be bought, the project will also experiment with pre-heating the reactants – fuel and oxygen – to very high temperatures before starting the process. It aims to demonstrate the technical feasibility of this process in production conditions.

Energy reduction will be targeted by testing the use of natural gas and oil as fuels, and by maximising the re-use of heat generated thanks to the use of a closed loop.

LIFE07 ENV/F/000179

HotOxyGlass



## Beneficiary:

### Type of beneficiary

International enterprise

### Name of beneficiary

AGC France S.A.S

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FRANCE

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### Name of contact person

Jean-Pierre Deprez

## Duration of project:

18 months (01/01/2009 – 30/06/2010)

## Total budget in euro:

7,057,343

## EC contribution in euro with %:

3,439,905 (50.00%)

## Generic Theme:

Clean technologies

The beneficiary will fully assess the environmental impact of this innovative industrial process. The project's target is to reduce energy consumption by 25%, carbon dioxide emissions by 15%, nitrous oxides by 83% and sulphur oxides by 34.5%. The resulting environmental benefits will be widely disseminated, e.g. through articles and leaflets, at international conferences and meetings.

# Further Development and Implementation of an EU-level Forest Monitoring System

## Project background

Forests cover about 30% of Europe. They have high natural value with regards to biodiversity, carbon sequestration, and soil and water protection and also provide important economic goods and services.

Unfortunately, climate change, air pollution and changes in land use are threatening the health, stability and sustainability of these forests. The conservation of these natural resources is of growing global concern.

The threats posed to forests demonstrate complex relationships of cause and effect. The direct and indirect impact of human activities merge with natural biotic and abiotic stressors such as drought, storms, snow, insects, fungi, and fire to influence the structure, composition and functioning of forests.

Sound political decisions to protect Europe's forests therefore need to be based on accurate and complete qualitative and quantitative information. This requires a considerable research effort in the area of forestry and forest products both at the ecosystem level and also on the large scale. A Community scheme called Forest Focus worked to provide such information in the period 2003-6.

## Project objectives

The FutMon project aims – through 38 partners from 24 EU Member States – to create a pan-European forest monitoring system that can serve as a basis for the provision of policy-relevant information on forests in the European Union as required under international obligations and key action 8 of the EU's Forest Action Plan. It thus seeks to continue and improve the coordinated activities of "Forest Focus".

Specific objectives of the project are to collect quantitative and qualitative forest data related to issues such as climate change, air pollution, biodiversity, and forest condition. It will carry out scientific analysis of data and publish thematic reports, with the aim of providing the information needed for sustainable forest management planning.

The project hopes to provide more comprehensive, more reliable and better interpretable forest data – at

LIFE07 ENV/D/000218

FutMon



### Beneficiary:

#### Type of beneficiary

Research institution

#### Name of beneficiary

Johann Heinrich von Thünen Institut

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#### Name of contact person

Martin Lorenz

### Duration of project:

24 months (01/01/2009 - 30/12/2010)

### Total budget in euro:

34,443,390

### EC contribution in euro with %:

16,139,278 (50.00%)

### Generic Theme:

Forest management - Soil and landscape protection - Desertification prevention

the large scale and at the level of individual forest ecosystems – related to the improved pan-European Indicators for Sustainable Forest Management. It also plans to make harmonised and validated data available in formats permitting effortless integration into the European Forest Data Centre (EFDAC) for use by authorised third parties.

The project seeks to build capacity for coordinated and harmonised forest monitoring. It aims to provide updated descriptions of stringent procedures on data quality assurance and control for field assessments, laboratory analyses and data validation. The new monitoring system should serve as a network to other forest monitoring programmes and as a basis for other scientific analyses of the monitoring data.



# Securing the Conservation of Natura Grassland Habitats with a Distributed Bioenergy Production

## Project background

The University of Kassel developed a technological and process-orientated approach (PROGRASS) to producing bio-energy (electricity and solid fuel) from mature grasslands (protected Natura 2000 habitats). The technology is thought to be especially suitable for extensive grasslands, which usually produce only "difficult substrates". However, the promising method has not yet been scaled-up to a working plant.

## Project objectives

PROGRASS has the following specific objectives:

- Protection of Natura 2000 reserves;
- Securing a livelihood for small farmers in retreated areas;
- Saving/compensating costs for the conservation of grassland biotopes;
- Increasing awareness and acceptance of sustainable management of these biotopes;
- Transfer of the PROGRASS approach.

A long-term overall objective of the project is the construction of full-scale PROGRASS energy units all over Europe to facilitate biomass and biogas productions from abandoned protected sites (to be achieved after the project end date).

Within the LIFE project duration PROGRASS aims to:

- Prove its feasibility in extensive grasslands in European Natura 2000 habitats;
- Demonstrate its function as a sustainable combination of nature protection and socioeconomic development for disadvantaged, marginal rural regions;
- Establish a professional and enduring European PROGRASS network.

Expected results:

- Bio-energy production in abandoned Natura 2000 grassland habitats in each project region;
- Mobile demonstration units to tour three European countries;
- Standardised methods for transforming formerly unsuitable raw materials into fuels for energy recovery;
- Ten demonstration plots in every region;
- Studies on systems engineering, substance and energy flows and models of fuel production;

LIFE07 ENV/D/000222  
PROGRASS



## Beneficiary:

### Type of beneficiary

University

### Name of beneficiary

University of Kassel

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Phone +49 5542 981334  
Fax +49 5542 981342  
Email mwach@uni-kassel.de

### Name of contact person

Michael Wachendorf

## Duration of project:

42 months (01/01/2009 - 30/06/2012)

## Total budget in euro:

3,230,969

## EC contribution in euro with %:

1,614,380 (49.97%)

## Generic Theme:

Eco-friendly products - Eco-design - Green financial products

- A study on the effects: socio-economic, soil and atmosphere (CO<sub>2</sub>);
- Dissemination including multilingual training units and conferences;
- A web platform with interactive services;
- Growth of the European PROGRASS network as a professional, legal body.

# Promoting the Protection of Natura and Biodiversity in Urban Areas: Award European Capital of Nature and Biodiversity

## Project background

In all EU Member States, land urbanization and the construction of infrastructure is directly linked with loss of biodiversity. Local governments have a key role to play since their day-to-day planning decisions have a direct impact on the environment and natural resources.

It is therefore imperative that biodiversity considerations are integrated into urban planning, urban development and management of urban natural resources. The protection of natural and anthropogenic green spaces within urban areas is not only of vital importance for the conservation of biodiversity, but also for the mitigation of negative impacts of climate change in cities.

Existing initiatives have unfortunately not generated significant improvements. While legally requested (management) responsibilities regarding nature protection for local authorities are increasing, for example, very few local authorities are in legal compliance.

One problem is that only a few local authorities have the know-how to deal with the complex nature and biodiversity-protection issues. There are initiatives in various EU countries to motivate municipalities to be more active, but until now there is no exchange and collaboration and therefore no use of synergies.

## Project objectives

The project aims to build the capacity of local authorities to protect nature and biodiversity in urban areas and to support and motivate new initiatives in this field by promoting "Capital of Nature and Biodiversity" competitions. It is hoped that the awards will encourage local authorities to take concrete measures for the protection of nature and biodiversity and to raise awareness on good practices.

A 'train the trainer' programme covering EU and national policies and legislation, indicators, positive examples, structure and organisation of competitions, and communication will train 12 people so that they are able to run national competitions.

National concepts for the annual award will be devised for five countries, covering some 450 cities and municipalities: 150 each in Germany and Spain; and 50 each in Hungary, Slovakia and Poland. Systems to monitor biodiversity projects at the local level will be

LIFE07 ENV/D/000224  
Capital of Biodiversity



### Beneficiary:

#### Type of beneficiary

NGO-Foundation

#### Name of beneficiary

Deutsche Umwelthilfe

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#### Name of contact person

Uwe Friedel

### Duration of project:

36 months (02/01/2009 – 31/12/2011)

### Total budget in euro:

1,695,832

### EC contribution in euro with %:

844,065 (49.89%)

### Generic Theme:

Urban design - Quality of life - Transport planning

developed in these countries that will be transferable to other EU Member States.

The implementation of these awards in 2010 and 2011 will provide a lesson for other EU countries and enable the development of the concept of a European award. It will also enable the publication of a Monitoring report on biodiversity in urban areas with concrete measures for the protection of nature and biodiversity.

As well as wide dissemination of information on the competitions and biodiversity protection – including positive examples – to more than 10 000 municipalities and the public, the project expects to conduct 36 workshops for local authorities, attracting over 500 participants. It is hoped that the 'European Capital of Nature and Biodiversity' award will continue long after the end of the project.

# Ecological Certification of Products from Sustainable Marine Aquaculture

## Project background

Marine living resources are presently over-exploited. The increasing demand for sea products from the growing world population results in unsustainable production and harvesting methods that impose a severe threat to natural species and habitats.

Aquaculture, however, has the potential to meet this demand. Aquaculture is the farming of freshwater and saltwater organisms including molluscs, crustaceans and aquatic plants. It involves the cultivation of aquatic populations under controlled and sustainable conditions. "Mariculture" refers to aquaculture practiced in marine environments.

Unfortunately, existing aquaculture is often not environmentally friendly and not integrated with specific local environmental requirements. Praxis-oriented eco-standards are not yet fully established.

The potential of extractive marine aquaculture as an instrument for improving the marine environment has not been sufficiently explored or developed. "Mariculture" could, for example be used to decrease nutrient and organic loading in near-shore waters (thereby addressing de-eutrophication). It has particular potential in restricted sea areas such as the Baltic Sea. The use of endemic species in cultivation systems furthermore provides habitat for the local biocenosis and in turn increases recruitment potential (e.g., for the recolonisation of natural populations).

## Project objectives

The ECOSMA project seeks to increase the production and marketing of ecological mariculture products by implementing a practical process for ecological certification of products from sustainable marine aquaculture. By doing so the project is anticipated to relieve stress on the marine environment and improve the water quality in the Baltic Sea.

More specifically, the project intends to create a 'Who's Who' of German mariculture and a regional committee on sustainable mariculture, leading to a draft White Paper on sustainable mariculture. It will furthermore draft guidelines for site selection of mariculture and water quality aimed at producers and a supporting Code of Practice for producers, certifiers

LIFE07 ENV/D/000229  
ECOSMA



### Beneficiary:

#### Type of beneficiary

Small and medium sized enterprise

#### Name of beneficiary

Coastal research and Management GbR

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#### Name of contact person

Levent Piker

### Duration of project:

36 months (01/01/2009 – 31/12/2011)

### Total budget in euro:

828,144

### EC contribution in euro with %:

414,072 (50.00%)

### Generic Theme:

Sensitive area management (coastal, protected)

and salespeople, including detailed criteria for best practice examples. Training and knowledge transfer to ecological certification control bodies is foreseen.

The project activities seek to harmonise the environmental and economic development of coastal regions on the Baltic Sea as requested by the European Commission's 6th Environmental Action Programme, the EU Marine Strategy Directive and recommendations of the Baltic Marine Environment Protection Commission.

Criteria for success will depend on how the project's findings will be communicated to and utilized by the different ecological, environmental and economic stakeholders. To further raise awareness of sustainable mariculture, expert seminars and public events will be organized; brochures, posters and press releases will be published, and a film produced.

# Best practices and Technologies to Develop Green Wastes and Residues as Raw Materials for Variants of Utilization

## Project background

Biomass offers important advantages over other renewable energy sources. In particular, it can produce peak performance relatively quickly and the raw material can be stored until it is needed. Moreover, a multitude of technical methods can be used to recover energy from biomass. Within the category of solid biomass, wood biomass deserves special emphasis because of its neutral CO<sub>2</sub> balance.

This project focuses on tapping biomass potentials from agricultural and forestry wastes and residues. It seeks to devise utilization and logistics concepts for hitherto undeveloped ligneous or woody biomass residues from agriculture - fruit growing - forestry and landscape conservation.

The project is a follow-up to and seeks to build on the activities of Perspective 2007-2013 under the Biomass Utilization theme in the Interreg IIIc programme. This identified opportunities in the regions of Saxony-Anhalt, Valencia and the North Great Plain and transferred know-how between the regions. Its approach was to increase European value added and applicability throughout Europe.

## Project objectives

The ultimate object of the Best4VarioUse project is to tangibly increase the proportion of biomass residues used as raw material for energy generation.

It plans to work towards this through the testing, demonstration and transfer of technologies and methods to process woody wastes and residues from landscape conservation, agriculture and forestry. It aims to produce raw materials for energy and material utilization chains, which were previously classified as waste.

Results of the project will include:

- Development and testing of a tool to determine the potential of biomass residues from agriculture and forestry;
- Presentation of realistic opportunities for using unused biomass as raw material;
- Identification of appropriate available technologies to develop unused biomass residues;
- Development and testing of four prototypes;

LIFE07 ENV/D/000240

Best4VarioUse



## Beneficiary:

### Type of beneficiary

Research institution

### Name of beneficiary

Fraunhofer-Gesellschaft zur Förderung der angewandten Forschung e.V.

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### Name of contact person

Ina Ehrhardt

## Duration of project:

36 months (01/01/2009 – 31/12/2011)

## Total budget in euro:

3,971,415

## EC contribution in euro with %:

1,792,844 (46.33%)

## Generic Theme:

Agricultural waste

- Determination of ecological-economic best practices in the overall context of the supply process, including harvest, storage and transport;
- Development of a reference system for integrated logistics concepts for regional and trans-regional biomass material flows.

To encourage the use of the identified biomass potential, particularly amongst forest owners, the project will hold workshops, publish findings and create networks to transfer knowledge. It also intends to present specific sustainable refinancing options to preserve designated protected areas in Europe.

A particular action will be to empower and train 24 individuals with disabilities or other social disadvantages to recover scrap wood and energy wood from forests in an environmentally friendly way.

# Public-Private Partnerships to optimise waste prevention, recovery and recycling systems in mass tourism destinations

## Project background

Halkidiki is a popular summer tourist destination that faces growing environmental pressure. Waste prevention, recovery and recycling become even more challenging during the peak summer season. Waste management is therefore a priority, but local authorities lack the necessary resources to build, maintain and improve appropriate infrastructure for this task.

Local authorities are struggling to cope with the relevant developments, either technological or related to their policy and socio-economic environment. As a result, they are turning to the private sector and/or national waste management systems to (partly) out-source waste management and recycling operations.

## Project objectives

The main aim of the RECYCLING SYMPRAXIS project is to study, develop and implement at a pilot level advanced waste prevention recovery and recycling schemes driven by local/regional, incentive-based public-private partnerships (PPP).

The pilots will prepare the ground for large-scale implementation, which will be operated by PPPs. Expected results of the project are:

- Development, and pilot implementation in three municipalities, of three potentially effective scenarios of PPP schemes for waste PRR covering one or more of the targeted types of waste (municipal, paper, plastic, glass, organic, WEEE, C&DW);
- Awareness-raising among enterprises of the local tourist industry regarding waste prevention and recycling. Some 100 companies are expected to participate in the pilot activities and 200 representative types of business (hotels, restaurants, bars/cafes, tour operators) in the dissemination events;
- A 20% increase in the recycling of packaging waste and organic waste;
- Introduction of a process for systematic management of special types of waste (WEEE, C&DW); recycling of 10 tonnes of WEEE and around 100 tonnes of C&DW;
- Provision of a set of guidelines (strategic plan) for the establishment of sustainable operation of integrated PPP scheme(s) at the local level.

LIFE07 ENV/GR/000265  
RECYCLING SYMPRAXIS



## Beneficiary:

### Type of beneficiary

Development agency

### Name of beneficiary

Development Association of Local Authorities of Halkidiki S.A.

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Email livadiotis@anetxa.gr

### Name of contact person

Tassos Livadiotis

## Duration of project:

36 months (01/01/2009 – 31/12/2011)

## Total budget in euro:

1,273,110

## EC contribution in euro with %:

621,855 (50.00%)

## Generic Theme:

General: Waste management.



# Strategic plan for the adaptation and application of the principles for the sustainable use of pesticides in a vulnerable ecosystem

## Project background

A pesticide is any substance used to kill a pest. The reality is that nearly all sprayed insecticides and herbicides affect living organisms beyond their target species. The scope of their effect is increased when they are directly applied to water systems (for example to kill algae), when they run off from fields, or when they drift when sprayed.

This LIFE project looks at the use of pesticides in the Viotikos Kifisos basin, one of the most productive basins in Greece with intensified agricultural activities. Pesticides are a particular concern here, since the area has a high groundwater potential and its proximity to Attika has made it a source of emergency water reserves for the Yliki lake, which supplies drinking water to the Greater Athens Area.

## Project objectives

The EcoPest project will develop and implement a low-input agricultural crop-management system for hazard and risk minimisation. It will particularly focus on water protection and target reductions in the use of pesticides.

The project will map and conduct targeted environmental monitoring of the project area. It will identify sources of pollution and pest occurrence and compile data on the levels of pollutants and other priority substances for drinking water quality standards.

It will adapt and apply new tools and appropriate risk indicators for assessing the impact and risks surrounding agricultural activities in the study area, particularly around the use of pesticides. The project team will look at hazards to aquatic systems as well as other non-target organisms and promote the use of safer alternatives to pesticides and ways of restricting pesticide drift, including through training of farmers and other stakeholders.

The project targets the development of a National Certification Scheme for spraying equipment and accessories and for the distributors and professional users of pesticides. It is hoped that the use of pesticide in the study area will be reduced by 30% in 2.5 years, decreasing surface and groundwater contamination and the total area under unacceptable risk.

LIFE07 ENV/GR/000266  
EcoPest



## Beneficiary:

### Type of beneficiary

Research institution

### Name of beneficiary

Benaki Phytopathological Institute

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### Name of contact person

Kiki Machera

## Duration of project:

30 months (01/01/2009 – 30/06/2011)

## Total budget in euro:

1,645,154

## EC contribution in euro with %:

822,577 (50.00%)

## Generic Theme:

Risk assessment – Pollution control

The beneficiary plans for the project deliverables to be incorporated into national environmental policy and legislation and in the official National Standards of Crop Management. The results will be disseminated with regards to EU environmental policy and the thematic strategy for the sustainable use of pesticides.



# The Development of Pay as You Throw Systems in Greece, Estonia and Cyprus

## Project background

Increasing waste production and the increasingly hazardous nature of waste have led to waste management becoming one of the largest industries in the world. The growth in waste production has also led to high waste management costs. The 'polluter-pays principle', the 'precautionary principle' and the 'producer responsibility principle' (OECD) have prompted the incorporation of pricing mechanisms in waste management systems, with the aim of reducing the environmental impacts of waste streams and of promoting equity and fairness among citizens.

The European Commission's thematic strategy on waste prevention and recycling recognises that waste management systems with user fees ("Pay As You Throw" – PAYT) could lead to a recycling-minded society and facilitate the achievement of relevant EU Directives' targets. PAYT municipal waste services constitute a very important component of several waste management systems in Europe. Several promising applications and innovative schemes are already in use.

## Project objectives

The HEC PAYT project seeks to develop PAYT systems in Greece, Estonia and Cyprus. By demonstrating PAYT on a pilot scale in 600 households in a Greek municipality (Elefsina), the project seeks to evaluate the existing pricing mechanism and determine a best PAYT model for Estonia and Cyprus.

Expected results of the project include:

- The definition and implementation of a methodology regarding the most effective PAYT mechanisms for Greece, Estonia and Cyprus;
- The pilot application of PAYT in around 600 households in Elefsina;
- The application of PAYT in these households resulting in: the diversion of at least 20% of waste from landfill sites; recycling of 20% of packaging waste; alternative management of 4 kg of WEEE per person; and composting of 20% of discarded organic waste;
- The creation of a forum with the participation of representatives from at least 10 major stakeholders.
- A public awareness and dissemination campaign.

LIFE07 ENV/GR/000271  
HEC PAYT



## Beneficiary:

### Type of beneficiary

Local authority

### Name of beneficiary

Municipality of Elefsina

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### Name of contact person

Aggeliki Anastasiou

## Duration of project:

30 months (05/01/2009 – 04/07/2011)

## Total budget in euro:

1,357,953

## EC contribution in euro with %:

658,251 (50.00%)

## Generic Theme:

General: Waste management

# Soil Sustainable Management in a Mediterranean River basin based on the European Soil Thematic Strategy

## Project background

Soil is a fundamental environmental element performing vital ecological, social and economic services for European citizens. However, soil is subjected to serious degradation threats, as recognised by the EU Soil Protection Strategy. The major threats identified so far are soil erosion; decline in inorganic matter content; loss of soil biodiversity; soil contamination; salinisation; soil compaction; soil sealing; and major hydro-geological events such as floods and landslides.

## Project objectives

Following the EU's Soil strategy, the Soil Sustainability (SoS) project will promote sustainable soil management in Greece at basin level. It foresees the drawing up of a Soil Action Plan using innovative management tools and the implementation of pilot projects.

The project aims to target improvements in soil management, the quality of the environment, safety of citizens and economic activities, human health, competitiveness and quality of products at the local and European levels.

It will demonstrate sustainable soil management in the Anthemountas river basin, which covers 320 km<sup>2</sup> in the Central Macedonian region of Greece. Through the exploitation of environmentally friendly soil management methods, the project will show that both environmental and economic benefits can be reached.

The beneficiary will work with local authorities and scientists to develop their capacity and skills in soil management based on European methodologies and know-how in soil management.

Specific targets will be to confront soil degradation of agricultural lands, combat soil erosion of sub-mountainous and mountainous areas, and prevent and control soil contamination and sealing in areas subject to intensive spatial planning. An integrated methodology will be developed for the registration, assessment, remediation and monitoring of contaminated lands.

The SoS project will also promote awareness of soil value and degradation threats among the local society and key stakeholders and also promote the need for sustainable action.

LIFE07 ENV/GR/000278  
Soil Sustainability(So.S)



## Beneficiary:

### Type of beneficiary

Development agency

### Name of beneficiary

Development Agency of Eastern Thessaloniki S.A.

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### Name of contact person

Socratis Famellos

## Duration of project:

42 months (01/01/2009 – 30/06/2012)

## Total budget in euro:

1,572,745

## EC contribution in euro with %:

771,872 (50.00%)

## Generic Theme:

Water management at the scale of the river basin

# Strategies to improve and protect soil quality from the disposal of olive mills' wastes in the Mediterranean region

## Project background

The olive oil extraction industry is important for the Mediterranean region. Spain, Italy and Greece are the largest olive oil producers in the world. In the Mediterranean, most of the olive oil mills (OOM) are small domestic enterprises scattered around the country, with owners that are not well informed on the environmental risks of this activity or on the available alternative waste treatment solutions. They are often unwilling to bear extra costs for such alternatives.

The physical/chemical characteristics and the polyphenolic content of OOM effluents pose serious threats to the environment. There is a need to identify and study potentially contaminated sites, document them in special national registries (of contaminated sites) and suggest and implement integrated technologies and practices that aim to recover the quality of affected systems, while simultaneously gaining the acceptance and confidence of stakeholders and local communities. The application of soil protection/remedial methods could lead to soil remediation and/or to development and restoration of its functions.

## Project objectives

The PROSODOL project seeks to protect soil and water quality from olive oil mills' wastes in the Mediterranean region with the aim of contributing to the sustainable development of the olive oil producing industry. The project's main objectives are:

- The development and dissemination of innovative, environmentally friendly, low-cost technologies for the protection of soil and water pollution from olive oil mill wastes;
- The establishment of an info-library / knowledge-base system to assess the environmental impact of olive oil mill wastes on Mediterranean regions;
- The promotion of the implementation of a Soil Thematic Strategy in areas close to olive oil mills;
- The design, implementation and support of a monitoring system for the assessment of the quality of soil and water directly or indirectly affected by olive oil mill activities;
- The identification of potentially safest uses in the agricultural sector of olive oil mill wastes and their potential contribution to agricultural production.

LIFE07 ENV/GR/000280  
PROSODOL



### Beneficiary:

#### Type of beneficiary

Professional organisation

#### Name of beneficiary

National Agricultural Research Foundation

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Email mdoula@otenet.gr

#### Name of contact person

Maria Doula

### Duration of project:

48 months (01/01/2009 – 31/12/2012)

### Total budget in euro:

1,664,986

### EC contribution in euro with %:

802,936 (50.00%)

### Generic Theme:

Industrial waste (including manufacturing)

The project will produce an integrated management plan that will include effective technologies (soil protection/remedial technology, pre-treatment of wastes, small-scale composting) and actions to ensure soil quality, biodiversity preservation, as well as the protection of water bodies in affected and non-affected areas. An integrated strategy – to improve and protect soil and water quality from the disposal of olive oil mill wastes suitable for the entire Mediterranean region – will also be developed.

# Developing Local Plans for Climate Mitigation by 2020

## Project background

Greece is among those EU Member States where greenhouse gas (GHG) emissions are increasing (by approximately 25% from 1990) and projections show an increase of 42% by 2015 in the 'business as usual' scenario. As a result, Greece will face severe difficulties in its efforts to achieve ambitious reduction targets within the framework of the Community's targets (reduce EU emissions of greenhouse gases by at least 20% by 2020 compared with 1990). Apart from actions related to large industrial emitters – which are at present covered to a large extent by the Emissions Trading Directive – further efforts will inevitably be targeted at the large number of small emitters.

Since local authorities are closest to citizens and can often deal more effectively with regional particularities than central administrations, a major challenge towards sustainable development and climate change mitigation is to stimulate the local potential for GHG emissions reductions through a set of systematic, well-designed and well-monitored activities.

## Project objectives

The CLIM-LOCAL2020 project will implement climate change mitigation actions at the local level in the Volos municipality to reduce greenhouse gas (GHG) emissions. Specific objectives of the project are to:

- Develop a systematic approach and appropriate tools to enable local authorities to substantially reduce GHG emissions in their region (with the aim being to contribute to keeping the global temperature increase below the 2°C threshold in order to achieve the ultimate objective of UNFCCC's Article 2);
- Develop appropriate monitoring and assessment activities related to GHG emissions reduction at local level (which can serve as a guide to other interested municipalities in Greece and the rest of the EU);
- Clearly identify the interface between local authorities and central administrations with respect to climate change mitigation and the main barriers faced at local level when taking measures to reduce GHG emissions;
- Promote awareness, provide training and disseminate information on climate change and its mitigation, necessary for the active participation of citizens

LIFE07 ENV/GR/000282  
CLIM-LOCAL2020



### Beneficiary:

#### Type of beneficiary

Local authority

#### Name of beneficiary

Municipality of Volos

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Email mayor@volos-city.gr

#### Name of contact person

Alexandros Voulgaris

### Duration of project:

36 months (01/01/2009 – 31/12/2011)

### Total budget in euro:

2,777,891

### EC contribution in euro with %:

1,086,542 (49.88%)

### Generic Theme:

Reduction of emission of greenhouse gases

- and local stakeholders in any mitigation effort;
- Initiate GHG emission reductions at local level within a 10-15 year horizon and with the active participation of citizens.

The results of the project will include procedures and practical tools for achieving large GHG emissions reductions at the local level, which could serve as a prototype for the implementation (after necessary adjustments) by other local authorities.

# Local Alliance for Climate Responsibility

## Project background

Global warming is a dramatic reality, and its negative impact on the process of sustainable development has been widely recognised, including by the EU Gothenburg Conference.

To address this challenge, the European Commission has set targets for the reduction of greenhouse gas (GHG) emissions. In particular, the EU adopted an Energy strategy based on cutting by 20% GHG emissions by 2020. It also has the medium-term objective of reducing GHG emissions by 8% by 2012 compared with 1990 levels.

This project is based in two Italian provinces: Livorno is a province in the Tuscany region of Italy with an area of 1 218 km<sup>2</sup>, made up of 20 communes and having a total population of 326 444 in 2001. Ferrara is a province in the Emilia-Romagna region of Italy with an area of 2 632 km<sup>2</sup>, made up of 26 communes and having a total population of 349 774 in 2005.

## Project objectives

The goal of the LACRe project is to contribute, in an innovative way, to the achievement of EU targets in the field of GHG reduction. It aims to do this by introducing better environmental governance based on broader stakeholder involvement, blending public and private actors in new types of partnership that can produce the best results.

The project will run in the two specific local situations of the provinces of Livorno and Ferrara. It will work to engage the local community – and particularly the industrial sector – in the battle against global warming.

It will spread and demonstrate innovative policy approaches, methods and tools through the elaboration of a Climate Alliance Action Plan agreed in partnership with local actors. This will set out interventions in fields such as energy efficiency in buildings, productive processes, logistic efficiency, and life-cycle impact of products and services.

The Plans will set specific agreed commitments in terms of CO<sub>2</sub> equivalent reduction. The beneficiary expects that the local communities will, during the

LIFE07 ENV/IT/000357

LACRe



### Beneficiary:

#### Type of beneficiary

Local authority

#### Name of beneficiary

Provincia di Livorno

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Email t.paperi@provincia.livorno.it

#### Name of contact person

Giovanna Rossi

### Duration of project:

24 months (01/01/2009 – 31/12/2010)

### Total budget in euro:

593,992

### EC contribution in euro with %:

296,996 (50.00%)

### Generic Theme:

Reduction of emission of greenhouse gases

project, decrease by measurable terms their levels of GHG emissions.

The project will monitor and identify positive and negative outcomes, including setbacks to local applications. This will provide useful information for future improvements to the strategies adopted and the structure of partnerships and cooperation to make it more effective. Final guidelines will be published and disseminated in Italy and abroad.



# No Vetro in Discarica: demonstrating innovative technologies for integral recovery of glass rejects actually landfilled

## Project background

Glass-based cellular insulation materials were introduced in the USA in the 1930s and patented in the 1950s. The glass foams were produced from primary materials and used for creating panels for thermal insulation of civil buildings.

However, this technology was soon abandoned for polymeric materials, which were seen to be less expensive, more efficient and easier to use.

Glass recycling has become quite common and the European public is familiar with the recycling of glass jars and bottles. However, there is a significant amount of waste 'special' glass that cannot be recycled in the glass container industry or in the ceramic industry, because of its particular chemical compositions. This is mostly glass that comes from different sources, from typical household waste to consumables.

In the North of Italy alone, this amounts to some 80 000 tonnes/yr. This special glass is currently landfilled and the amount of waste is only expected to increase in the coming years.

## Project objectives

The NOVEDI project intends to demonstrate the feasibility of using waste 'special' glass to make insulation material and thus reduce the amount of this glass sent to landfill to zero.

The glass to be worked on will come from sources other than cities' glass collection systems. These sources include television screens; screens from the automobile industry; glass from the cutting and polishing industry; photovoltaic panels; textile glass fibres; lamps; solar panels; artistic glass; and mosaics.

The project will implement new technologies to produce glass-based insulating materials using glass from these sources. It aims to produce – and demonstrate the economic viability of – insulation materials with high performance in thermal insulation and mechanical strength, and which are also fireproof and environmentally friendly.

Subsequent objectives are to construct a civic building made of light concrete based on glass foam as a dem-

LIFE07 ENV/IT/000361  
NOVEDI



## Beneficiary:

### Type of beneficiary

Small and medium sized enterprise

### Name of beneficiary

SASIL S.p.A.

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### Name of contact person

Lodovico Ramon

## Duration of project:

30 months (01/01/2009 – 30/06/2011)

## Total budget in euro:

2,938,826

## EC contribution in euro with %:

1,322,538 (50.00%)

## Generic Theme:

Industrial waste (including manufacturing)

onstration of the material's potential and to successfully introduce the glass-based insulation panels from 'unrecyclable' glass waste onto the market.

The final aim of the project is to raise awareness and understanding within the construction sector and amongst citizens about the possibilities of using eco-compatible construction materials, such as those derived from recycled glass.

# Improvement of policies toward local voluntary carbon markets for climate change mitigation

## Project background

Recent data arising from the application of the Kyoto Protocol (KP) demonstrate that the strategies adopted until now have not sufficiently checked or reversed the increased concentrations of greenhouse gases (GHG) in the atmosphere – in particular CO<sub>2</sub> – and their effects on climate change.

Amongst the many tools to challenge climate change, there is recognition that forests can trap large amounts of atmospheric carbon and therefore act as a low-cost and natural mitigation strategy. In the second KP application period, starting from 2012, a forest can be called a carbon 'sink' and be allowed to generate credits for meeting country carbon reduction targets.

Yet, the implementation of this approach is not totally clear. In order to stimulate this strategy, it will be useful to set up local initiatives that will let forest owners and managers adopt management strategies aimed at carbon sinking and involve, on a voluntary basis, those companies that are not yet involved in the KP mechanism.

## Project objectives

The overall goal of the LIFE CARBOMARK project is to promote voluntary local carbon markets as an instrument for strengthening EU policies related to the Kyoto Protocol and implementation of the "EU Forest Action Plan" under the Sixth Environment Action Programme. This shall be achieved by setting up a model of a local market for carbon credits useful to reduce and compensate GHG emissions, and testing its efficiency by involving on a voluntary basis subjects currently not directly considered, such as SMEs excluded by the ETS directive, and forest owners.

Specific objectives are to:

- Consolidate the knowledge base for supporting EU policy and legislation related to voluntary local carbon markets (trading carbon quotas) as a tool for reducing GHG emissions within the KP framework;
- Facilitate the implementation of strategies for mitigating GHG at local and regional level that are coherent with Community environmental policies;
- Establish the legislative and technical background necessary to support and improve the dissemina-

LIFE07 ENV/IT/000388  
CARBOMARK



### Beneficiary:

#### Type of beneficiary

Regional authority

#### Name of beneficiary

Veneto Region Department for Forests and Mountain Economy

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#### Name of contact person

Maurizio Dissegna

### Duration of project:

36 months (01/01/2009 – 31/12/2011)

### Total budget in euro:

1,088,028

### EC contribution in euro with %:

544,014 (50.00%)

### Generic Theme:

Reduction of emission of greenhouse gases

tion of regional carbon markets at national and European level;

- Recognize the role of sustainable soil management strategies as a temporary but important measure for absorbing CO<sub>2</sub> from the atmosphere;
- Involve SMEs in contributing to the survival of the forest economy, also in more marginal lands;
- Improve the consciousness of stakeholders, particularly forest owners and SMEs, about the need to adopt initiatives for the mitigation of GHG emissions into the atmosphere.

The project targets an eventual facilitation of further EU legislation related to the post-2012 Kyoto strategy, with a view to reducing GHG in the atmosphere substantially by 2020.

# Demonstrating the introduction of novel renewable Polyurethane materials for high quality, top design and sustainable shoes

## Project background

Important challenges for the chemical industry relate to the scarcity and high price of petroleum-based resources. These challenges call for a viable alternative to the commonly employed but environmentally unfriendly materials such as 100% fossil-derived polyurethanes (PU).

High quality PU systems, with a substantial content of renewable resources, have not yet been developed to market scale for demanding products such as shoes. This is largely due to technical difficulties surrounding the poor physical properties and bad odour typically associated with use of bio-based raw materials. There are also problems with getting adequate R&D resources into this field.

However, research and development results at Dow Chemical led to a patented process to produce Natural (soy) Oil Polyols (NOPs) suitable for manufacturing higher quality elastomers and microcellular elastomers, such as those employed in footwear applications. On this basis, Dow Italia developed a novel prototype polyurethane system with a high content of NOPs that seems suitable for more demanding products such as shoes, furniture, construction materials and car parts.

## Project objectives

The aim of the Green Footprint project is to demonstrate the production and introduction to the market of a new, high quality bio-based polyurethane (PU) system suitable for footwear applications. It plans to showcase the environmental impact and European potential of introducing the new PU material, as well as the replication potential for the wider chemical industry and related sectors.

Specific objectives include:

- To demonstrate the technical and economical viability of integrating 20-25% of renewable bio-based Natural Oil Polyols (NOPs) at pilot and at pre-industrial scale;
- To demonstrate the capability of novel NOPs to reach substantially higher quality bio-based PU while increasing the share of renewables;
- To demonstrate a potential 20-25% reduction in fossil resource usage for specific footwear products;
- To disseminate the project results to the wider European chemical and footwear industry.

LIFE07 ENV/IT/000412  
GREEN FOOTPRINT



### Beneficiary:

#### Type of beneficiary

Large enterprise

#### Name of beneficiary

DOW Italia S.r.l. Socio unico

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#### Name of contact person

Fabio Cataldi

### Duration of project:

36 months (01/01/2009 – 31/12/2011)

### Total budget in euro:

1,046,447

### EC contribution in euro with %:

496,100 (50.00%)

### Generic Theme:

Clean technologies

## Recovery, recycling, resource.

# Valorisation of olive mill effluents by recovering high added value bio-products

### Project background

Olive oil production generates huge quantities of waste that may have great environmental impact because of their high phytotoxicity, toxicity against aquatic organisms and suppression of soil microorganisms.

Olive mill wastewater (OMWW) is composed of the olive fruit vegetation water, water used for washing and treating, and a portion of the olive pulp and residual oil. The polluting load of OMWW is caused by its high chemical oxygen demand (COD), biochemical oxygen demand (BOD5), low pH, high concentration in recalcitrant compounds such as lignin and tannins, and long-chain fatty acids. Phenolic compounds, abundant in OMWW, are mainly responsible for its phytotoxicity and difficult biological degradation.

The current lack of appropriate alternative technologies makes the uncontrolled disposal of OMWW a serious environmental problem all around the Mediterranean area. Feasible solutions, both from technical and economical points of view, are not yet available. There is an urgent need for guidelines to manage these wastes through technologies able to minimise their environmental impact and to lead to a sustainable use of resources.

### Project objectives

The RE-WASTE project aims to demonstrate that olive mill wastewater (OMWW) can be a valuable source of the alternative energy biogas, whilst respecting existing environmental laws and generating a profit.

It plans to develop and implement a demonstration plant to run an innovative and clean technology to treat and valorise olive mill effluents. It will show that OMWW do not need to be seen as a polluting agro-industrial residue, but can be treated in an economically viable way.

One of the aims of the project is the extraction of OMWW natural compounds using biological activity. It will explore potential uses of these high-added value natural extracts in, e.g. the food, pharmaceutical, cosmetic and animal feed industries. The process will also recover substantial volumes of water, which can be reused in the productive process.

LIFE07 ENV/IT/000421  
RE-WASTE



### Beneficiary:

#### Type of beneficiary

Large enterprise

#### Name of beneficiary

Industria Olearia Biagio Mataluni s.r.l.

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#### Name of contact person

Elena De Marco

### Duration of project:

36 months (01/01/2009 – 31/12/2011)

### Total budget in euro:

1,546,500

### EC contribution in euro with %:

773,250 (50.00%)

### Generic Theme:

Agricultural waste

RE-WASTE will disseminate its technical, environmental and economic results among olive oil industry operators and public bodies in Italy and the rest of Europe to ensure that industry operators have the awareness and know-how to apply the developed technology.

Finally, it will evaluate the possibility of using the developed technology to treat other agro-industrial wastes in order to eliminate their polluting load and recover from them high-added-value biomolecules.

# Methane and Hydrogen blend for public city transport bus: technical demonstrative application and strategic policy measures

## Project background

The transport sector is a critical one in Europe. According to the Regional Environmental Protection Agency (ARPA), transport in the Emilia Romagna Region is responsible for 90% of total CO emission, 46% of NO<sub>x</sub>, 41% of primary PM<sub>10</sub>, and 42% of total non-methane volatile organic compounds (NMVOC). More specifically, CO<sub>2</sub> emissions from the road transport sector in this region are the second highest in Italy, representing 30% of total regional emissions.

A hydro-methane gas blend for transportation has proven to give very positive performance both from an environmental and energy perspective. A recent study carried out by ENEA for the Emilia-Romagna Regional Government reports that a mix of 15% hydrogen and 85% natural gas significantly reduces CO<sub>2</sub> and atmospheric pollutants emissions. Moreover at these percentages, the overall energy balance of the system – including hydrogen production through a steam reforming process – compares favourably with the same vehicle fuelled with natural gas.

## Project objectives

The MHyBus project aims to reduce the environmental impact of the public city passenger transport sector (in terms of CO<sub>2</sub> and air pollutants emissions) through the use of a gaseous fuel blend of up to 20% hydrogen and 80% natural gas (in short “hydro-methane”). The project seeks to implement the first prototype hydro-methane bus and to support the spread of this technology through regional policy measures. It will increase awareness in the Emilia-Romagna region on climate change and air quality topics through the active demonstration of the vehicle prototype.

Expected results of the project are:

- The optimization of the percentage composition of the hydro-methane blend (of up to 20% hydrogen and 80% natural gas);
- Verification of the functioning of the prototype fuel supply system and its components;
- The development of a public transport city bus prototype able to use hydro-methane (developed from an existing bus fuelled by natural gas);
- Development of a standardized procedure for the prototype bus (which may be used to transform the entire bus fleet);

LIFE07 ENV/IT/000434

MHyBus



## Beneficiary:

### Type of beneficiary

Regional authority

### Name of beneficiary

Regione Emilia-Romagna

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### Name of contact person

Paolo Ferrecchi

## Duration of project:

36 months (01/01/2009 – 31/12/2011)

## Total budget in euro:

1,253,159

## EC contribution in euro with %:

589,079 (50.00%)

## Generic Theme:

Urban design - Quality of life - Transport planning

- Experimental results that are a valuable and important reference for the diffusion of the hydrogen technology in the transport sector (e.g. acting as a starting point for the improvement of air quality and the fight against climate change);
- Regional technical guidelines for the conversion of the natural gas fuelled buses currently in circulation to hydro-methane fuelled buses.



# Advanced Purification Of Industrial And Mixed Wastewater By Combined Membrane Filtration And Sonochemical Technologies

## Project background

To reduce the pressure on and safeguard the quality of freshwater supplies for drinking water uses, there is a need to develop and demonstrate innovative technologies for wastewater re-use. This is in line with the objectives of the Environmental Technologies Action Plan (ETAP).

These issues particularly concern wet industries. The textile industry is one example: Textile companies are large users of water, since 0.2-0.5 m<sup>3</sup> is typically needed to produce 1 kg of finished product. Textile production tends to be concentrated in clusters and many of the textile districts, including Prato in Italy, are located in southern Member States that are facing longer and more frequent periods of drought. These municipalities therefore need to take steps to conserve water.

## Project objectives

The PURIFAST project aims to demonstrate the technical and economic feasibility of an advanced wastewater treatment system based on ultrafiltration and an innovative Advanced Oxidation Process (AOP). The application of this system will allow the ultimate objective to be met of preserving the natural water resources in the European Union in terms of both quality and quantity.

The project will build pre-industrial-scale prototypes of the advanced purification system – using sonochemical treatment – and test them on textile wastewater from a representative industry and on effluent from an industrial and municipal wastewater treatment plant. It will reduce the toxicity of the purified effluents compared with other AOP technologies and enable the reuse of the water in the textile production processes, with a consequent reduction in freshwater consumption.

The beneficiary will work to enlarge and optimise the application of the ultrafiltration processes. It will apply an innovative control system based on neural nets and compare two different technologies (Inge's membrane technology and Polymem's hollow-fibre membrane technology). Work will define the optimal configuration for different target effluents, allowing the technology to be spread among the public and private sectors.

LIFE07 ENV/IT/000439  
PURIFAST



## Beneficiary:

### Type of beneficiary

Research institution

### Name of beneficiary

Next Technology Tecnotessile Società Nazionale

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### Name of contact person

Enrico Venturini

## Duration of project:

36 months (01/01/2009 – 31/12/2011)

## Total budget in euro:

2,234,335

## EC contribution in euro with %:

1,106,917 (50.00%)

## Generic Theme:

Waste water treatment

The results of the project are expected to be highly transferable to other textile districts in the EU and other industrial districts, such as those of the leather and pulp industry; they will be disseminated accordingly. They will also enable the definition of long-term, socially and economically viable performance targets for wastewater purification and re-use in wet industries.

# Local Accountability for Kyoto

## Goals

### Project background

The last Assessment Report by the Intergovernmental Panel on Climate Change (IPCC) reported that the Earth's average surface temperature has risen by 0.76 °C since 1850. Most of the warming over the last 50 years is now agreed to have been caused by human activities.

The impacts deriving from this situation seriously impair the process of sustainable development established by the EU Conference in Gothenburg. To respond to this challenge, the European Commission set strict targets for the reduction of greenhouse gases (GHG). In 2007 the EU adopted an energy policy for Europe, going beyond the Kyoto targets.

The 2007 EU Green paper "Adapting to climate change in Europe – options for EU action" clearly demonstrates how adaptation actions have become an unavoidable and indispensable complement to mitigation actions. In order to reach the national targets, all levels of society must participate, starting from the individual citizen.

In this sense, the role played by local authorities is essential, since they are the key intermediary between the local community, which is one of the sources of air pollution, and central government, which undertakes the environmental commitments.

### Project objectives

The main project objective is to demonstrate that Local Authorities (LAs) can contribute to the achievement of national and EU environmental goals by creating specific local accountability and management systems, and mitigation and adaptation actions for GHG reduction. This represents a 'glocal' approach: combining the global and the local to best effect.

The project will work to enhance knowledge, skills and awareness at the political level of the potential of local action to contribute to the fight against climate change. A process of developing local responsibility will be started, through the definition of targets and the implementation of a monitoring, reporting and evaluation system.

In this context, the LAKS project aims to support four cities to commit themselves on a long-term basis to

LIFE07 ENV/IT/000451

LAKS



#### Beneficiary:

##### Type of beneficiary

Local authority

##### Name of beneficiary

Comune di Reggio Emilia

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##### Name of contact person

Patrizia Catellani

#### Duration of project:

34 months (01/01/2009 – 31/10/2011)

#### Total budget in euro:

1,304,758

#### EC contribution in euro with %:

652,379 (50.00%)

#### Generic Theme:

Integrated environment management

significantly reduce greenhouse emissions, including the increase of the local authorities' capacity of planning, managing and reporting their commitments.

Stakeholder dialogue will be encouraged and strengthened throughout the project, given the need for a shared commitment on and cooperation around reducing GHG emissions. The project will thus facilitate the definition of local adaptation actions to decrease the risks posed by climate change to ecosystems and local communities.

Thus, through the development of new environmental governance tools and technologies to mitigate global climate change, and by spreading knowledge and best practice within the EU territory, the project aims to contribute to the achievement of European GHG reduction targets at a local level.

# Advanced Recycling Implementations to Elide Landfilling

## Project background

Disposal to landfill should always be the last resort, when waste cannot be processed further up the hierarchy. Nevertheless, currently at least 14 000 tonnes/yr of potentially recoverable material is landfilled in the basin served by the project partners. These landfilled materials are typically the dry fraction of undifferentiated – unseparated – municipal waste that remains after treatments to remove the organic – humid – fraction.

Current undifferentiated urban solid-waste-treatment plants are generally limited to pre-processing waste to allow further fully automated treatment and separation of the organic and dry fractions. The organic fraction is stabilised and then used as landfill cover layer. The dry fraction is used for energy production – as Refuse Derived Fuel (RDF) – after refinement or sent to landfill. Current processes do not focus on materials recovery, with the exception of metals; iron is removed through the industrial process of deferrization.

The technology exists for recovering non-ferrous materials from this fraction. However, there is little experience of these treatment lines and systems still need be integrated taking into account end-use requirements.

## Project objectives

The overall project objective is to demonstrate the availability of viable solutions for routinely recovering materials from the dry fraction of undifferentiated – unseparated – urban solid waste. It aims to streamline the recycling of a recoverable quota of materials from municipal waste treatment processes and thus avoid landfilling.

Specific objectives for achieving this goal are to:

- Set-up and run a demonstration site for a year, showing the viability of recovering 1 000 tonnes of materials from some 15 000 tonnes of the dry fraction of undifferentiated urban solid waste;
- Foster industrial end-use markets for recovered materials – especially local/regional short chains – by demonstrating that end-use requirements can be met and by devising suitable contractual models;
- Use the knowledge gained to produce a model that links waste-input patterns, end-use requirements and market channels in a support tool that can be used to make decisions on adapting processes or technologies for material recovery;

LIFE07 ENV/IT/000474

ARIEL



### Beneficiary:

#### Type of beneficiary

Public enterprise

#### Name of beneficiary

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#### Name of contact person

Paolo Regini

### Duration of project:

36 months (07/01/2009 – 30/12/2011)

### Total budget in euro:

2,156,874

### EC contribution in euro with %:

1,076,187 (50.00%)

### Generic Theme:

Municipal waste (including household and commercial)

- Mainstream further reduction of landfilling in local and regional programming;
- Prepare full-scale implementation of the project's process after LIFE.

The project targets the inclusion of the process in regional waste management plans and the investment decision to develop a full-scale process capable of treating the dry fraction coming from 477 000 tonnes/yr of unseparated waste, generating more than 14 000 tonnes/yr of recovered material for industrial use.

Supplementary objectives are that two letters of intent be signed with end users for providing them recovery materials; key actors and stakeholders actively participate in the project; and the project's results are disseminated to 1 000 policymakers and 100 000 citizens.

# Tool for regional-scale assessment of groundwater storage improvement in adaptation to climate change (TRUST)

## Project background

The degradation of groundwater, both from the quantity and quality perspectives, is a common problem in many parts of Europe and around the world. Major threats come from human actions – such as unsustainable use of resources and inappropriate land-use policies – and the impact of natural events, particularly in the context of climate change.

From factors such as these, the Veneto and Friuli Plain in north-east Italy has experienced slow but progressive decline of the water table for the past 30-40 years. This negative trend is bound to worsen with climate changes that predict increased drought intensities and frequencies. This presents the need to limit water use and put in place adaptation measures to protect natural resources against drought and water scarcity.

River basin management plans lay down policies and measures for optimisation of water use; hydro-geological and flood defence; protection of water bodies; and regulation of water rights in a basin as a whole. In this context, the River Basin Authority must ensure the sustainability of water extraction from surface and groundwater to maintain the hydrological balance.

## Project objectives

The primary goal of the TRUST project is to take adaptation measures in the Veneto and Friuli Plain to tackle the adverse impacts of future climate change on groundwater quality and quantity.

TRUST will demonstrate innovative actions aimed at halting and reversing the progressive decline of the water table in the plain. It will specifically seek to reverse the phenomena of the lowering of the water table in the Upper Plain and desiccation of numerous wetlands and depressurisation of aquifers in the Medium Plain.

The TRUST project intends to incorporate climate change predictions into river basin management and identify adaptation measures to mitigate the impacts of drought and water scarcity. A key adaptation measure will be artificial aquifer recharge using excess surface waters, for example from floods.

LIFE07 ENV/IT/000475  
TRUST



### Beneficiary:

#### Type of beneficiary

Regional authority

#### Name of beneficiary

Autorità di bacino dei fiumi Isonzo, Tagliamento, Livenza, Piave, Brenta-Bacchiglione

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#### Name of contact person

Alfredo Caielli

### Duration of project:

36 months (01/01/2009 – 31/12/2012)

### Total budget in euro:

1,838,380

### EC contribution in euro with %:

898,380 (48.87%)

### Generic Theme:

Water management at the scale of the river basin

The project will build the capacity of the beneficiary to define the objectives and measures for adaptation in the Veneto and Friuli Upper Plain and to coordinate the macro-actions for artificial aquifer recharge at river-basin level and amongst the various stakeholders.

It aims to examine all aspects connected to the development of river basin governance and focus on the set-up of a group of stakeholders concerned with the management and use of the groundwater resources in the project area. In this way, the project will support the overall aims and objectives of European water policy, defined in the Water Framework Directive, Floods Directive and the European Policy on Water Scarcity and Droughts.

# Sustainable management of the Esino river basin to prevent saline intrusion in the coastal aquifer in consideration of climate change

## Project background

The Esino river catchment is located in the central area of the Italian Marche Region. Its environmental condition is poor as a result of intensive agricultural and industrial activities and uncontrolled pollution loads from untreated discharge and combined sewer overflows.

It is also located in a region that has been declared a nationally relevant Area at High Risk of Environmental Crisis. This is because of the coexistence of high density settlements, highly hazardous plants and internationally significant infrastructures.

Several wells used for public water supply and for agricultural and industrial activities are located in the lower Esino river valley. However, these wells face high risk of contamination. The inadequate management of urban and agricultural pollution and the unsustainable and uncoordinated use of water resources are leading to adverse environmental consequences, including seawater intrusion in the lower Esino river aquifer. Climate change promises to exacerbate these threats by reducing natural aquifer recharge and raising sea levels.

## Project objectives

The overall objective of the SALT project is to contribute to the efficient use of groundwater resources in the lower Esino river valley and thus their protection from saltwater intrusion.

The project aims to analyze the trends of saltwater intrusion into the Esino River and related aquifer and their effects. It will also simulate future scenarios of salt intrusion in the project area (through use of remote sensing, GIS, and river and aquifer models) to assess its likely impact considering the potential effects of climate change.

The team will subsequently define remediation actions to prevent salt intrusion increase and develop a tool to evaluate the impact of different management options on the quality and quantity of the aquifer.

Finally, the project will disseminate information on the proposed solutions to address saltwater intrusion

LIFE07 ENV/IT/000497  
SALT



### Beneficiary:

#### Type of beneficiary

Mixt enterprise

#### Name of beneficiary

Multiservizi SpA

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#### Name of contact person

Patrizio Ciotti

### Duration of project:

36 months (01/01/2009 – 30/12/2011)

### Total budget in euro:

1,447,112

### EC contribution in euro with %:

705,434 (48.75%)

### Generic Theme:

Water management at the scale of the river basin

and encourage their use in other coastal aquifers in the Marche Region and elsewhere in Italy and Europe.

The project is acting to support the EU policy objectives of encouraging resource efficiency through more sustainable water consumption patterns as set out in the Sixth Environment Action Programme and the Water Framework Directive.



# Environmental Compliance based on Cluster Experiences and Local SME-oriented Approaches

## Project background

Small and medium-sized enterprises (SMEs) make up a large part of Europe's economy, representing some 99% of all enterprises and 57% of economic value added. SMEs therefore have a significant impact on the environment and a primary role to play in shifting the European economy to more sustainable production and consumption patterns.

As broad industrial sectors move towards cleaner production processes to respond, amongst other things to climate change imperatives, it is crucial that SMEs are not left behind. SMEs face different and sometimes greater challenges than larger companies and have to deal with particular challenges – especially concerning expertise and economies of scale – when tackling environmental impacts and complying with environmental legislation. Cluster approaches offer a potential means of improving the environmental performance of a group of SMEs in a meaningful way. This approach brings various organisations with shared characteristics together to work on a specific topic. It enables better exchange and coordination towards shared goals without affecting the independence of the individual organisations.

## Project objectives

The ECCELSA project aims to make the cluster approach a widely applicable method for improving the environmental performance of SMEs and strengthening local and territorial environmental governance.

The project proposes to raise environmental awareness and performance of SMEs by developing the "cluster" approach of Environmental Management Systems. Specifically, the project will develop a database of cluster approach experiences and a methodology and guidelines for a specific cluster approach to improve SME environmental performance. In order to help ensure a high level of consensus, the project's target is to have at least 80% of consulted stakeholders approve the methodology, which will then be used within different kinds of groups of SMEs. The approach will include work on identifying: the legal and regulatory requirements relevant to each cluster; opportunities for simplification in environmental administrative and control procedures for SMEs; the most significant environmental challenges; operational tools and environmental technologies available to SMEs operating in the clusters; and key performance indicators (KPI). Training will be provided.

LIFE07 ENV/IT/000515  
E.C.C.E.L.S.A.



### Beneficiary:

#### Type of beneficiary

University

#### Name of beneficiary

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#### Name of contact person

Marco Frey

### Duration of project:

36 months (01/01/2009 – 31/12/2011)

### Total budget in euro:

1,597,748

### EC contribution in euro with %:

798,874 (50.00%)

### Generic Theme:

Integrated environment management

This methodology will be tested on at least seven clusters with local pilot groups established for their governance. Each cluster will implement at least five actions to improve environmental performance and the project will measure their impact. It will also look at any beneficial side-effects around the development of synergies, cooperation, cost-effectiveness, competitiveness and social cohesion between institutional, social and economic actors.

Based on the implementation of the project's methodology, the project will provide policymakers, at European and national levels, with a guideline on how to use the cluster approach effectively and how to fully integrate it in future environmental policies. The creation of local Pilot Groups and the involvement of regional governments will help guarantee the continuity of the processes.

# The sustainable Greenhouse: demonstrative action for zero emission intensive greenhouse agriculture

## Project background

In the near future, climate change will force the implementation of adaptation and mitigation strategies in many sectors of human activity.

Greenhouse agriculture offers a potential solution. Growing crops in such a protected environment will enable more adaptation to the predicted abrupt weather phenomena and a mitigation of the negative effects of winds, drought and excessive rainfall.

Another advantage of greenhouse horticulture with respect to open field cultivation is that the cultivation could be performed with continuous cycles independent of seasons and natural soil conditions. This helps to bypass the problem of 'competition for soil' between energy crops and food crops.

However, traditional greenhouse agriculture has been very environmentally unfriendly. The major problems are that it has generally required a lot of chemicals, high energy and water input (which are directly and indirectly connected to greenhouse gas emissions) and has produced polluting effluents.

## Project objectives

The overall purpose of the SUSTGREENHOUS project is to demonstrate that a new model of greenhouse horticulture can provide a sustainable future for intensive horticulture that will support local economies whilst reducing negative impacts on the environment.

The project aims to demonstrate an environmentally friendly, sustainable greenhouse model compatible with nature protection. A "Living Greenhouse" will be created, utilising totally nature-friendly technologies towards reducing emissions. The project will develop and demonstrate specific technologies to reduce water input and energy consumption that will enable greenhouse agriculture to be undertaken without causing ecological problems. It will show that such agriculture can be compatible with nature protection and can be carried out in natural parks and reserves without problems.

It will specifically show that the innovative technologies will mean that greenhouse agriculture will produce fewer direct and indirect greenhouse gases emissions,

LIFE07 ENV/IT/000516  
SUSTGREENHOUSE



## Beneficiary:

### Type of beneficiary

Regional authority

### Name of beneficiary

Agenzia Regionale per lo Sviluppo e l'Innovazione dell'Agricoltura del Lazio (ARSIAL)

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### Name of contact person

Giuseppe Izzo

## Duration of project:

36 months (01/02/2009 – 31/01/2012)

## Total budget in euro:

920,565

## EC contribution in euro with %:

440,283 (50.00%)

## Generic Theme:

Clean technologies

consume less water and emit fewer polluting nutrients and chemicals into the soil and the air. Expected results of the project include a reduction of CO<sub>2</sub> by 10% and of effluent discharge by 20% compared with traditional greenhouse agriculture.

The project will also help farmers and students to understand the complex links and relations that represent the dynamic exchange between air, water and soil in the greenhouse structure, including through the development of online monitoring tools, awareness raising and training activities. This will particularly focus on the carbon cycle, with the purpose of providing better awareness of the responsibilities that agriculture operators have in reducing the global carbon footprint.

## Proposals for environmental policy and governance based on demonstration of environmental, social and economic benefits from tourism in the Slitere national park - A NATURA 2000 territory

### Project background

Since 1992, World Tourism Organisation (WTO) reports have repeatedly stressed that nature and protected natural areas are one of the main attractions and reasons for choosing a holiday destination. In Europe, a growing number of individual travellers name the natural environment as the main travel motivation.

There are therefore clear links between the European tourism sector and the Natura 2000 network of sites and the habitats and species they contain. Nevertheless, the Natura 2000 network is still not well recognized by tourists. They lack awareness of why the network was formed, the accessibility of the Natura 2000 sites and the relevant behaviour in these sites to protect the natural environment. The increasing load on many of these sites is threatening their natural values.

There is a critical need to monitor and coordinate tourism development and incorporate the results into relevant policy planning documents and action plans. This is especially relevant in the Baltic countries and Eastern Europe as a whole, also due to the recent region's rapid economic growth. This economic growth has been outstripping nature and environment awareness. Protection policies and their implementation are still relatively new in this region that further challenging the protection of nature under growing tourism pressure.

### Project objectives

The overall objective of the POLPROP-NATURA project is to demonstrate a sustainable tourism-management model for a Natura 2000 site. This model should ensure the introduction and implementation of sustainability principles towards achieving both tourism development and nature protection objectives.

The project will develop a sustainable tourism-management model for the Natura 2000 site of the Slitere National Park. This will be based on new sustainable nature tourism products and their marketing. Products will include a guide to the park, outdoor information stands and a plant-finder tool for visitors (featuring common but attractive species rather than focusing on vulnerable species).

LIFE07 ENV/LV/000981  
POLPROP-NATURA



### Beneficiary:

#### Type of beneficiary

Development agency

#### Name of beneficiary

Latvian Country Holiday Association "Lauku Ceļotājs"

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#### Name of contact person

Asnāte Ziemele

### Duration of project:

36 months (01/02/2009 – 31/01/2012)

### Total budget in euro:

501,535

### EC contribution in euro with %:

244,900 (50.00%)

### Generic Theme:

Sustainable tourism

A methodology for monitoring tourism and its social, economic and environmental results will be determined. Based on the project's experiences – and those of other national parks in the Baltic countries – it will prepare a policy document on sustainable tourism for biodiversity in Latvia. It is foreseen that this will be used by the Latvian government as the basis for national policy on tourism development in protected nature areas.

To encourage other Natura 2000 management authorities in Europe to use the project's readily transferable tourism-management model, the results and a manual of best practice in sustainable tourism will be actively disseminated. Baltic Natura 2000 sites will be particularly targeted for awareness raising – including through a Baltic Nature tourism conference – as well as through other dissemination strategies (tours, public discussions, publications, etc.) to local stakeholders and the general public.

# Application of integrative modelling and monitoring approaches for river basin management evaluation

## Project background

The Water Framework Directive (WFD) requires EU Member States to implement measures that will lead to the achievement of good ecological status of waters by 2015.

One important milestone under the WFD is the definition by Member States of programmes of measures (POM), or river basin management plans, that have to be applied in order to achieve the goals of the Directive. POMs will outline the main strategies of improvement of the ecological status of surface waters, based on a participative process involving public authorities, as well as other stakeholders, from water utilities to civil society representatives. Establishing a POM will result from a balance between implementation costs and ecological benefits.

Consequently, there is a need for scientific accompanying actions that will guide and benchmark proposed measures: so far there are very few tools that can evaluate proposed actions in terms of their impact on the ecological status of surface water.

## Project objectives

The m<sup>3</sup> project will test in the field combined monitoring and modelling approaches that could be used when deciding on cost-effective measures to be taken in managing river basins in accordance with the WFD. Scientific concepts have been developed; the project will test these means to optimise decision support, planning and monitoring of the efficiency of water basin management measures in the Delfland region in the Netherlands; the Erft river basin in Germany, and in Luxembourg.

The project will:

1. Characterise emission sources and loads through modelling and monitoring;
2. Carry out uncertainty assessments in river basin mass flow modelling and monitoring;
3. Develop good practice guidance for monitoring design;
4. Evaluate the accuracy and cost-efficiency of modelling and monitoring approaches;
5. Characterise an emission situation through water quality modelling;
6. Carry out scenario-building and outcome forecasts for river basin management measures.

LIFE07 ENV/L/000540

M<sup>3</sup>



## Beneficiary:

### Type of beneficiary

Research institution

### Name of beneficiary

Centre de Recherche Public

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### Name of contact person

Tom Gallé

## Duration of project:

48 months (01/01/2009 – 31/12/2012)

## Total budget in euro:

2,580,231

## EC contribution in euro with %:

1,238,990 (50.00%)

## Generic Theme:

Water management at the scale of the river basin

# Recultivation of Jelonek and Winiary lakes in Gniezno by inactivation of phosphorus in bottom sediments

## Project background

Gniezno is situated in the Gniezno Lake Region in central Poland, an area with the lowest rainfall in the country. Lake Jelonek and Lake Winiary are subject to pressure from municipal agglomeration. For many years, household and industrial sewage was drained into the lakes. Since the 19th century, the inflow of high loads of contaminants has been responsible for the increasing mortality rates of fish in the lakes. The restricted potential for exchange of water between the lakes results in sedimentation and accumulation of suspensions and dispersed components. Used for several decades as containers of municipal sewage, the lakes have lost their potential for self-purification and without immediate regeneration they will degrade even further.

## Project objectives

The project targets lake recultivation in Gniezno by deactivating phosphorus in bottom sediments using coagulants. The aims of the project are to:

- Inhibit progressive eutrophication of natural waters;
- Improve water quality and biotope quality;
- Revive biocenosis in the lakes' environment and protect inland resources on surface waters in line with the Water Framework Directive;

Expected results of the project:

- A reduction in phosphorus content of the water from 0.5 mgP/L to approximately 0.2-0.1 mgP/L;
- Decreased production of phytoplankton;
- Increased visibility of Secchi's disc: water transparency restored from 0.1 m to around 0.6-1 m;
- A reduction in chlorophyll content – to around 15 mg/m<sup>3</sup>;
- An increase in sub-aquatic plants and fishes leading to an improved ecological balance;
- Stock reconstruction of immersed plants and plants with floating leaves;
- Eradication of blooming blue-green algae;
- An improved landscape and an increase in the recreational value of the lakes

LIFE07 ENV/PL/000605  
Lake recult. in Gniezno



## Beneficiary:

### Type of beneficiary

Local authority

### Name of beneficiary

Town of Gniezno

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### Name of contact person

Piotr Wiśniewski

## Duration of project:

22 months (01/02/2009 – 30/11/2010)

## Total budget in euro:

431,861

## EC contribution in euro with %:

215,930 (50.00%)

## Generic Theme:

Water supply – Water quality – Ground water protection



# Environmental performance indicators and their relation with economic factors in textile BAT implementation

## Project background

The implementation of BATs (Best Available Techniques) is a necessity for companies operating IPPC (Integrated Pollution Prevention and Control) systems in order to secure sustainable development approaches to environmental management. BAT details are explained in BREFs (BAT REFERENCE Documents), which are technical documents that set out the standards required for environmental factors, such as emissions. BREF information about emission requirements for the textile sector is currently not indicated. This can create difficulties for stakeholders during assessment of textile companies' environmental performance and in identifying methods that can be considered as BAT.

Portugal's textile sector represents an important industry in terms of employment and management of the environment. The industry includes around 2 500 companies (95% are SMEs), of which 36 companies are directly involved in IPPC systems for the pre-treatment or dyeing of fibres or textiles (exceeding 10 tonnes/day).

## Project objectives

The main objective of the LIFE project is to define best environmental performance indicators, with targets, for the textile and clothing sector in Portugal. The methodology will provide a common working tool to obtain comparable results. The aim is to demonstrate an effective approach that can be flexible and applicable to other sectors across Europe.

Economic factors will be examined to assess commercial impacts of BAT implementation and an IT tool will be created to illustrate positive and negative impacts in different operational circumstances. A Decision Support Manual will also be produced to provide textile companies with appropriate information about environmental performance indicators, economic factors and BAT implementation. Special attention will be paid to preparing advice about reducing carbon footprints and CO<sub>2</sub> emissions.

Expected results of the project include: a list of best environmental performance indicators for the textile sector; a model for evaluating the economic factors of BAT; an informatics tool; and a decision support manual (600 copies). In addition, four seminars will be held and a project website built.

LIFE07 ENV/P/000625

BATinLoko



### Beneficiary:

#### Type of beneficiary

Professional organisation

#### Name of beneficiary

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#### Name of contact person

Paulo Cadeia

### Duration of project:

30 months (01/01/2009 – 30/06/2011)

### Total budget in euro:

311,955

### EC contribution in euro with %:

152,752 (50.00%)

### Generic Theme:

Clean technologies

# Electric and electronic eco-assembly alternatives for the valorisation of the end-of-life products in the recycling market

## Project background

According to the latest studies and reports, Europe produces 10.3 million tonnes/yr of electronic waste, around a quarter of the world's total, and the amount is predicted to rise to 12.3 million tonnes/yr by 2020. Currently just 25% of Europe's medium-sized household appliances and 40% of larger appliances are collected for salvage and recycling. The figure for small appliances is close to zero. These figures highlight the scale of potential opportunities for recovering secondary raw materials.

In Europe, the use of virgin raw materials in the aforementioned electronic equipment manufacturing is still close to 100%. Being a material intensive manufacturing sector, the impact on natural resource depletion and climate change is high and this remains incompatible with European policies, in particular, those associated with the WEEE Directive.

## Project objectives

The core goal of the ELECTROVALUE project is to assist the competitiveness of European SMEs by adopting sustainable waste management approaches. This will be achieved by: integration of WEEE and RoHS standards within a user-friendly support package designed for SMEs; development of alternative cost-effective management tools and environmental products by re-using end-of-life reliable electric and electronic added value components; promotion of added value activities/business opportunities to EEE waste recyclers from using reusable EE components; improvements in the sustainability of the European Electric and Electronic industry through the implementation of environmental management systems; and evaluation of the economical and energy impact of a sustainable component recovery based on LCA analysis.

Project actions will focus on: supporting recycling centres for EEE materials; creating a pilot disassembly/recovery centre for EEE reusable components; helping SMEs implement and establish best practices; adopting sustainable waste management, materials and process technologies by Life Cycle Analysis; and disseminating findings from the project activities.

Key targets of the project include demonstrating opportunities to help reduce:

LIFE07 ENV/P/000639  
ELECTROVALUE



### Beneficiary:

#### Type of beneficiary

Research institution

#### Name of beneficiary

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#### Name of contact person

Eduardo Dias Lopes

### Duration of project:

36 months (01/01/2009 – 31/12/2011)

### Total budget in euro:

596,923

### EC contribution in euro with %:

297,959 (49.96%)

### Generic Theme:

Waste from Electrical and Electronic Equipment (WEEE)

- The amount of WEEE that is land-filled, incinerated or shredded without any pre-treatment, by 5%;
- The amount of hazardous substances released into the environment via WEEE disposal by 25%;
- The exploitation of virgin raw materials, through the reuse of existing ones, by 15%;
- The amount of energy used in component manufacturing by 10%; and
- The air emissions from component manufacturing by 20%.

# Waste Network for sustainable solid waste management planning and promotion of integrated decision tools in the Balkan Region

## Project background

In the Balkan region, the preferred disposal method for municipal waste is landfilling. There is little interest in alternative methods that will reduce the volume or reuse the waste. Besides technological constraints, one of the main reasons for this situation is an under-developed institutional framework.

## Project objectives

The BALKWASTE project aims to spread awareness of the EU waste strategy and policy and its implementation in Member States to the whole Balkan region, using Romania and Bulgaria as case studies.

The following results are expected:

- A 60% diversion rate from landfilling for municipal wastes;
- A 50% reduction of landfilling of biodegradable wastes;
- At least three new waste management plants in each case study region;
- Training of personnel to use the decision support tool (software developed by the project to assist decision making in waste management);
- Provision of support to 10 decentralised waste management authorities;
- A procedure for monitoring the performance of waste stakeholders;
- Raised awareness among stakeholders;
- Development of a Balkan Waste Network.

LIFE07 ENV/RO/000686  
BALKWASTE



## Beneficiary:

### Type of beneficiary

Development agency

### Name of beneficiary

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### Name of contact person

Julian Movila

## Duration of project:

36 months (01/01/2009 – 31/12/2011)

## Total budget in euro:

869,451

## EC contribution in euro with %:

431,742 (50.00%)

## Generic Theme:

Municipal waste (including household and commercial)

# Application of industrial ecosystems principles to regional development - ECOREG

## Project background

Industrial development in the county of Suceava has led to an agglomeration of industrial centres that generate significant amounts of industrial waste, including significant volumes of wastewater. This situation negatively affects the status of the natural and constructed environment and the quality of life in the target area.

## Project objectives

The primary objective of the ECOREG project is the application of industrial symbiosis (IS) principles in the area of Suceava, allowing regional symbiotic development with a minimum impact upon the environment, by conserving and developing its natural, leisure, cultural and industrial potential. One of the specific objectives of the project is to reduce the natural resources used as raw materials. More specifically the project aims to reduce natural resource consumption of the partners; reduce environmental impact related expenses by 20-50% for each partner; and identify best practices and disseminate these at national level.

The main result foreseen is a reduction in the amount of industrial waste disposed.

LIFE07 ENV/RO/000690  
ECOREG



## Beneficiary:

### Type of beneficiary

National authority

### Name of beneficiary

Ministry of Environment and Sustainable Development

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### Name of contact person

Iulia Degeratu

## Duration of project:

32 months (01/02/2009 – 01/10/2011)

## Total budget in euro:

880,700

## EC contribution in euro with %:

362,160 (41.48%)

## Generic Theme:

Industrial waste (including manufacturing)

## Resource efficient Universal Window Sash

### Project background

Environmental issues associated with the manufacturing of windows include consumption of raw materials (wood, PVC, aluminium) energy efficiency and waste management. Sustainable production techniques require manufacturing approaches that use appropriate technologies and methods. These should apply designs that optimise consumption efficiencies and minimise waste during the window manufacturing process, as well as maximising the thermal insulation capacity of the windows that are produced.

### Project objectives

The project aims to develop a new type of environmentally-friendly manufacturing process for windows. A prototype will be developed for universal window sashes. The prototype will be suitable for PVC, wood and aluminium window frames.

The beneficiary plans to reduce consumption of raw materials by 20-35% for each window unit. This should equate to a reduction in energy consumption of 20-40% per unit. Cost savings from these environmental benefits are expected, such as through reduced production costs.

In addition, the new type of window sash aims to improve thermal insulation potential by 7-12% on average. Targets for increased light and heat input through a newly available window surface have been set at 15-20% on average. Further predicted benefits include enhanced security, higher resistance and 5-8% better sound insulation.

Between 1 000 and 2 000 prototype units of the new universal window sash will be produced and these will be disseminated around Central Europe to raise awareness about the new technology.

LIFE07 ENV/SLO/000710  
UNISASH



### Beneficiary:

#### Type of beneficiary

International enterprise

#### Name of beneficiary

Kovinaplastika Lož  
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#### Name of contact person

Bostjan Kovac

### Duration of project:

27 months (01/04/2009 – 30/06/2011)

### Total budget in euro:

1,989,860

### EC contribution in euro with %:

987,430 (50.00%)

### Generic Theme:

Sustainable building



# Improved management of contaminated aquifers by integration of source tracking, monitoring tools and decision strategies

## Project background

The public water supply for the Slovenian capital Ljubljana and its surroundings is sourced from the Ljubljansko polje and Ljubljansko barje alluvial aquifers. The quality of these ground water sources is being adversely affected by anthropogenic factors, such as urbanisation, traffic and agriculture. These problems call for improved long-term management of the contaminated aquifers using integrated monitoring tools and decision strategies.

## Project objectives

An early priority for the LIFE project is to determine the actual conditions and assess the status of alluvial aquifers in the Ljubljana region. Findings from this exercise will inform the development and application of advanced expert tools and field techniques. These will be used to identify pollution sources, delimit deteriorated areas and design an appropriate programme of activities and remedial measures for improving the aquifers' status.

Key anticipated results include:

- Collection of precise spatial information (integrated using GIS technology) regarding aquifer characteristics (geology, hydrology), pollution sources and the status of ground water quality;
- Establishment of an advanced conceptual model and integrated database system which will serve as a base for different models of ground water flow, risk assessment in the impact zones and probability assessment of accidental pollution etc; and
- Production of a comprehensive monitoring network proposal for ground water quality. This will include maps with graphic presentations of pollutant plumes, flow directions and locations of potential polluters.

Outcomes from the LIFE project will be new tools for the managers of pollution control systems as well as a programme of activities and remedial measures for improving the management of the aquifers. The new tools will facilitate improved decision-making abilities via prompt information about sources of pollutions, direction of spill, travelling time to pumping wells, emergency contacts, responsible institutions and their actions, water chemistry details and remediation activities.

LIFE07 ENV/SLO/000725  
INCOME



### Beneficiary:

#### Type of beneficiary

Public enterprise

#### Name of beneficiary

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#### Name of contact person

Brigita Jamnik

### Duration of project:

42 months (01/01/2009 – 30/06/2012)

### Total budget in euro:

1,804,915

### EC contribution in euro with %:

834,860 (46.98%)

### Generic Theme:

Water supply – Water quality – Ground water protection

# Pilot Project for the Dismantling and Decontamination of End-Of-Life Ships (Recyship)

## Project background

A ship reaches the end of its working life after 20-30 years and is sold as scrap and dismantled to recover the steel. Almost 90% can be reused as high quality steel. The problem is that the remaining 10% contains high quantities of dangerous waste.

In the 1970s, ships were dismantled in European ports. It was a complex and mechanised industrial operation. Greater environmental regulation, and higher security and health standards, however, increased the costs and the industry moved its operations to cheaper countries, in particular those in south and east Asia (Bangladesh, India, China), and Turkey. In contravention of the Basilea Agreement, which bans the export of dangerous waste to developing countries, ships are now being dismantled overseas. In these countries, workers often lack protection and health and safety standards are poor. A great quantity of waste is dumped directly into the environment.

## Project objectives

The objectives of the RECYSHIP project are to:

- Develop a technically and economically feasible, safe and environmentally sound methodology for the dismantling and decontamination of end-of-life vessels;
- Reanalyse European and national legislation in order to ensure the acceptance of the principles of the Basilea Agreement, as well as general and specific environmental principles for end-of-life vessels;
- Assess the methodologies for decontaminating and dismantling end-of-life ships that will take into account the technical, environmental and labour standards. As a result of this analysis, prototypes will be developed;
- Develop a pilot test in a properly equipped shipyard in the southwest of Europe, where the prototype will be validated;
- Create a coastline capacity and impact study for Spain and Portugal. Homogenous land units will be drawn up for these two countries;
- Develop an integrated management system.

Expected results:

- A proposed regulation for end-of-life ships management;
- The definition of suitable areas for possible installation (based on capacity and ecological criteria);

LIFE07 ENV/E/000787

Recyship



## Beneficiary:

### Type of beneficiary

Small and medium sized enterprise

### Name of beneficiary

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### Name of contact person

Miguel Angel García Molina

## Duration of project:

48 months (01/01/2009 – 31/12/2012)

## Total budget in euro:

3,412,546

## EC contribution in euro with %:

1,686,773 (50.00%)

## Generic Theme:

Hazardous waste

- Optimised processes for decontamination and dismantling of end-of-life ships;
- Documentation of the Quality Integrated Management System ISO 9001, ISO (14001) and ISO (18001) for decontamination and scrapping of end-of-life ships;
- Development of a good environmental management system for European ships;
- Finding of a solution to the environmental problem caused by the current means of scrapping;
- Elaboration of a feasibility plan for the dismantling and decontamination facilities of end-of-life ships. This will include the needs, problems and expectations of stakeholders;
- Foster project awareness at local, national and European level;
- Strengthening of the dissemination of the LIFE project through the foreseen actions and project results.

# Bio-treatment of cow wastes to produce bio-stimulants for plants

## Project background

Reducing general waste production is widely recognised as an important objective in promoting environmental sustainability. It calls for adapted and sustainable strategies of recycling, re-use or disposal of waste products.

Most animal waste – in particular flesh and hair coming mainly from the leather industry – is disposed of in landfill sites or incinerated, and constitutes a major contamination concern in Europe, in addition to the notable cost of handling and landfill treatment.

One possible form of treatment of such wastes is bio-hydrolysis or enzymatic digestion. Bio-hydrolysis transforms the proteins in a solution of amino acids and peptides by enzymatic activity. The enzymes are typically produced by a selected strain of thermoactinomycetes and/or by means of over-expression of pepsin and trypsin in *Bacillus subtilis*.

Laboratory tests and research have indicated the suitability of protease enzymes for hydrolysis of flesh and hair. However, to date, there has been no practical implementation of this process.

## Project objectives

The COWtoPLANT project aims to demonstrate the viability of a new technology based on the bio-hydrolysis of animal hair and skin waste using selected strains of actinomycetes and *Bacillus subtilis*. It hopes to show the efficiency of the products obtained from this process as environmentally friendly fertilisers and pesticides.

The idea of the project is to transform waste – bovine flesh and hair (category 3) – by enzymatic digestion to obtain organic amendments and demonstrate their application and benefits as bio-stimulants and bio-pesticides for plants as well as their economical viability at semi-industrial scale.

The project intends to select representative samples – 10kg – of animal waste category 3 from four optimal sources (three national and one international). This waste will be divided up and 70% treated by means of hydrolysis using the new bio-technological resources: actinomycete strains and *Bacillus subtilis*,

LIFE07 ENV/E/000788

Cowtoplant



## Beneficiary:

### Type of beneficiary

Research institution

### Name of beneficiary

Zurko Research S.L.

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Fax +34 91 141 26 55

Email jrmm@zurkoresearch.com

### Name of contact person

Juan Ramón Muñoz Montaña

## Duration of project:

36 months (20/01/2009 – 20/01/2012)

## Total budget in euro:

1,850,612

## EC contribution in euro with %:

925,306 (50.00%)

## Generic Theme:

Agricultural waste

first in 5L bio-reactors of and then applied in bio-reactors of 1 000-1 500 L. The remaining 30% will be treated with alternative environmentally friendly solutions, such as composting and alkaline hydrolysis.

The products of the bio-hydrolysis process will be tested as bio-pesticides and fertilizer. It is hoped to demonstrate the effect of use of these products on plants and soil, in particular an increase in plant growth of 20%. This will be done first in the laboratory and subsequently in field experiments.

# Legionellosis: risk reduction to public health from environmental sources using biotechnology in the textile sector

## Project background

*Legionella* bacteria – the cause of Legionnaires' disease – are classified as a public health risk of environmental origin. The bacteria are found in natural aquatic environments in general, and particularly in warm countries, as is the case in the Mediterranean. Some of these waters are used as a source for drinking water in cities, which means that the bacteria enter the water distribution systems.

Legionella is frequently found in public water supplies as well as irrigation water. It can even enter hospital water supplies – if it is not treated first – and any systems reliant on water, including those that transfer a mass of water within an air current.

One of the reasons the bacteria are so dangerous is that they reproduce rapidly given the right conditions. Legionella is a particular problem in the textile sector, where it can proliferate quickly due to the ideal humidity and warmth offered by these installations.

## Project objectives

The LIFE LEGIOTEX project aims to resolve the *Legionella pneumophila* bacteria problem in the textile sector by validating and demonstrating a new technique for its eradication. It seeks to attack the root of the problem by prohibiting the bacteria from reaching those installations where they can reproduce easily.

The project will use environmentally friendly biotechnology to develop advanced purification and disinfection systems to treat the water and clean it of exogenous microorganisms, rude particles in suspension and the organic matter that can be used by microorganisms as food and support for the formation of biofilm.

It hopes to show, through monitoring of the water input, that the process can reduce the presence of *Legionella pneumophila* in the water supply below 50 ufc per litre and control its proliferation below 100 cellules.

Preventing the bacteria reaching the installations will reduce health risks and also the costs and environmental risks associated with later cleaning and maintenance of infected installations. Another objective of the project is to ensure the compatibility of the equip-

LIFE07 ENV/E/000794

Legiotex



## Beneficiary:

### Type of beneficiary

NGO-Foundation

### Name of beneficiary

Asociación de Investigación de la Industria Textil

### Postal Address

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E – 03801 ALCOY  
SPAIN  
Phone +34 96 554 22 00  
Fax +34 96 554 34 94  
Email rlopez@aitex.es

### Name of contact person

Rosa López

## Duration of project:

33 months (01/04/2009 – 01/01/2012)

## Total budget in euro:

1,031,836

## EC contribution in euro with %:

506,168 (50.00%)

## Generic Theme:

Risk assessment – Pollution control

ment used for disinfection with conventional bactericides such as chlorine.

The project will result in the development of a proposal for legal regulations within the EC towards enabling national administrations to reduce and eventually eliminate *Legionella pneumophila* bacteria in water.

# Demonstration of a process to recycle glass fibre waste, placed on rubbish dump, producing polypropylene composites

## Project background

The production of glass fibre consumes high levels of energy and material. For each kilogram of glass melted, 1 kg of CO<sub>2</sub> is emitted into the atmosphere, in addition to nitrogen oxide and dioxide (NO<sub>x</sub>), sulphur dioxide (SO<sub>2</sub>), chloride, fluoride, volatile organic compounds (VOC) and particles. Furthermore 17 GJ of power are consumed for every tonne of melted glass.

At end-of-life, some 25% of glass fibre is sent to landfill, amounting to approximately 250 000 tonnes/yr in the EU. This leads to a considerable emission of substances into the environment and the reduction of landfill space. There is particular need for recycling of the polypropylene, and polypropylene and glass fibre compounds from the dismantling of end-of-life-vehicles, as established under the ELV Directive (2000/53/EC).

The beneficiary, Befesa Plásticos, has a factory in Murcia where it recycles 15 000 tonnes/yr of plastic film to produce 12 000 tonnes/yr of plastic pellets (nurdles). These can be used for the production of plastic films for construction, bin bags, work nets, pipes and many other products. The company exports 80% of its production to Germany, France, Italy and Greece

## Project objectives

The WGF-PP project aims to develop a demonstration-scale process for producing polypropylene composites reinforced with glass fibre wastes. Different composites will be specifically formulated for different uses, particularly in making cars and electro-domestic appliances. It hopes thus to show the technical and economic feasibility of the process for large-scale application.

The final products should be of good quality, meeting the following standards:

- Tensile strength: 32 MPa
- Tensile modulus: 3.125 MPa
- Flexural strength: 61 MPa
- Flexural modulus: 3.246 MPa
- Charpy impact strength (unnotched): 27.125 J/m<sup>2</sup>

The project expects to result in the recycling of 17 000 tonnes/yr of glass fibre waste in Spain alone. This equates to energy savings of 2 890 000 GJ/yr, which

LIFE07 ENV/E/000802  
WGF-PP



## Beneficiary:

### Type of beneficiary

Small and medium sized enterprise

### Name of beneficiary

Befesa Plásticos S.L.

### Postal Address

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E – 30840 ALHAMA DE MURCIA

SPAIN

Phone +34 968 63 22 21

Fax +34 968 63 22 33

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### Name of contact person

Isidoro Javier Román López

## Duration of project:

12 months (01/01/2009 – 31/12/2009)

## Total budget in euro:

5,973,622

## EC contribution in euro with %:

2,652,262 (50.00%)

## Generic Theme:

Industrial waste (including manufacturing)

is equivalent to 7 000 tonnes of crude oil and 17 000 tonnes of CO<sub>2</sub>.

If the project is successful, it would enable the recycling of more waste material from the dismantling of end-of-life vehicles. The beneficiary hopes to reduce the amount of glass fibre sent to landfill in the EU by 30%.



# Efficient Development of Eco-Architecture: Methods and Technologies for Public Social Housing Building in Extremadura

## Project background

In recent decades, housing construction has developed based merely on the maximisation of economical benefits and minimisation of costs, often due to urban pressure and speculation. In the European Union, the construction industry produces 40% of total waste and consumes 40% of materials and 40% of primary energy. This approach has also led to the construction of households with very low energy efficiency and significant direct and indirect impacts on natural resources, human health and comfort, particularly amongst low-medium income households.

The development of new legislation and certification systems now calls for the need to put into practice existing knowledge about material, design and energy efficiency. Efficient bio-climatic houses need to be made available and affordable to low-medium income citizens.

Within the Regional Ministry of Public Works of Extremadura, the Directorate General of Architecture and Special Housing Programmes is committed to introducing new technologies in building construction to improve efficiency, sustainability and quality-of-life.

## Project objectives

The main objective of the EDEA project is to develop an efficient methodology for the sustainable and energy efficient design and building of social housing. The project seeks to demonstrate that appropriate design of new products and suitable application of products already available in the market can considerably improve the environmental performance of buildings. It aims to do this without increasing costs beyond the scope of social housing projects, but by improving the competitiveness of the construction and energy sectors through innovation.

The project plans to construct two houses: the "Pattern house" will be built following the traditional construction scheme currently in use, whilst the "Experimental house" will serve as a laboratory to test and demonstrate different sustainability measures and renewable energy sources. Both houses will be subject to the same climatic conditions. By comparing the performance of two newly-constructed houses, the project seeks to test, evaluate and disseminate methodologies and technologies to eliminate CO<sub>2</sub> emissions and to identify best practices in the field of Bio-climatic Architecture.

LIFE07 ENV/E/000805  
EDEA



### Beneficiary:

#### Type of beneficiary

Regional authority

#### Name of beneficiary

Junta de Extremadura  
Consejería de Fomento

#### Postal Address

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SPAIN  
Phone +34 924 93 01 07  
Fax +34 924 93 01 09  
Email [dapev@fomento.juntaex.es](mailto:dapev@fomento.juntaex.es)

#### Name of contact person

José Timón Tiemblo

### Duration of project:

40 months (01/01/2009 – 30/04/2012)

### Total budget in euro:

2,384,647

### EC contribution in euro with %:

1,177,777 (49.39%)

### Generic Theme:

Sustainable building

As many technologies will be tested as possible in the "Experimental house", focusing on reducing water and energy consumption – including through intelligent home technologies (domotics); using renewable energies; reducing solid waste and wastewater generation; decreasing use of non-renewable raw materials; improving natural areas and indoor air quality; and reducing gas, dust, heat and light emissions.

The project thus hopes to identify best practices in bio-climatic architecture and construction – looking at the overall building life cycle – that can be transferred to other regions with a similar context. Various supporting handbooks and guides are foreseen and training planned for relevant practitioners in the fields of construction, engineering, acoustics and energy. Education and awareness-raising will target citizens and users of the housing.

# Integral management model of recovery and recycling of the proper solid waste from the fishing and port activities

## Project background

The fishing industry is a major provider of economic wealth and jobs for certain towns and villages. However, such fishing and port activities generate significant amounts of solid waste. This waste is often dumped directly into the marine environment. Where it is treated, this is often an inadequate generic treatment along with domestic waste. Three of the most significant and damaging inorganic solid wastes are: fishing nets, expanded polystyrene, and batteries/lighting devices.

Abandoned and mismanaged nets and fishing equipment directly and negatively impact on the sea bed, reefs and other ecosystems as well as presenting a hazard that can kill fish – ghost fishing – and other wildlife through suffocation or strangulation. Equipment can trap as well as poison marine life, which is all the more a concern if such equipment is composed of plastic that may remain between 50 and 450 years in the sea (and even longer if the equipment consists of expanded polystyrene).

Batteries, which are increasingly used in fishing and other marine activities, are all-too-often dumped at sea causing chemical pollution of the water and poisoning marine organisms. They remain a pollutant on the seabed between 1 000 and 100 000 years depending on their heavy metal or chemical compound content.

## Project objectives

The overall objective of the 3R-FISH project is to minimise the environmental impact of the most significant solid fishing industry waste (i.e. polystyrene, fishing nets and lighting devices/batteries) on water and seabed quality and to promote the sustainable development of fishing and port activities.

The project seeks to reduce the quantity of solid waste discharged into the marine environment and landfilled or incinerated as urban waste by supporting the proper use and recycling of devices and equipment used in the fishing industry and by developing and implementing a sustainable system of management, treatment, disposal and recycling.

Expected results of the project include:

- Selective collection of disused nets in three significant ports of Galicia – Marin, A Coruña and Ribeira – achieving close to 100% collection and recycling of the total nets generated by the third year;
- Separate collection of polystyrene, with the aim of recycling 100% of the total expanded polystyrene gen-

LIFE07 ENV/E/000814  
3R-FISH



## Beneficiary:

### Type of beneficiary

NGO-Foundation

### Name of beneficiary

Centro Tecnológico del Mar  
Fundación CETMAR

### Postal Address

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Fax +34 986 29 60 19  
Email jtaboada@cetmar.org

### Name of contact person

Julio Taboada Pérez

## Duration of project:

36 months (01/01/2009 – 01/01/2012)

## Total budget in euro:

1,447,990

## EC contribution in euro with %:

595,620 (50.00%)

## Generic Theme:

Industrial waste (including manufacturing)

- erated in the targeted ports by the third year;
- Ending the practice of battery disposal at sea in the port of Burela, in favour of structured collection and treatment (some 1 400 batteries will be collected).

The cooperation of the fishing industry and producers of fishing equipment will be encouraged through the definition of good practices in production, use and disposal of equipment. Port staff will furthermore be trained.

The project will identify the most viable systems by researching the potential uses of – and markets for – the recycled materials, including studies of the yields from recycling, the quality of the resulting raw material, the total cost of the process and potential economical benefits. It will also examine the possibilities for extending the sustainable management system to all the ports of Galicia and Portugal.

# Demonstration of a multi-feedstock sustainable biodiesel production scheme integrating an on-site by-products energy valorisation system

## Project background

Biodiesel has been produced at industrial scale in the European Union since 1992, the main feedstock being oily seeds. Production has increased significantly in recent years because of the high price of crude oil and national policies aimed at CO<sub>2</sub> emissions reduction. In 2005 alone, 3 184 000 tonnes of biodiesel were produced.

Although biodiesel is a renewable fuel, it has significant environmental impact from the way in which it is produced and transported. The high levels of energy consumed give the whole process of generating energy from biodiesel a poor energy and CO<sub>2</sub> balance.

Moreover, current biodiesel production schemes fail to provide a solution for the large quantities of glycerine by-product. If the EU meets its goal of increasing production of biodiesel to 8 million tonnes/yr by 2010, the annual production of glycerine will be 800 000 tonnes, which is 300 000 tonnes/yr more than current global consumption levels.

## Project objectives

The main goal of the INTEGRAL-B project is to provide an eco-efficient solution for biodiesel production. It specifically hopes to demonstrate the technical viability of a multi-feedstock biodiesel production scheme that enables on-site valorisation and reduced energy and material input through the use of by-products (feedstock wastes, glycerine and biogas).

The integrated system is based on two processes. The first process is the production of biogas from feedstock wastes and low-grade glycerine. The beneficiary plans to develop and validate an anaerobic digestion system in the biodiesel plant to extract maximal energetic potential from the plant residues, waste oil, and glycerine by-product. The second process to be demonstrated is the production of energy from a reciprocating engine burning a mixture of biogas and glycerine.

This integration will enable a drastic reduction of the environmental impacts associated with the production of biodiesel, in terms of CO<sub>2</sub> emissions, overall energy balance and production of waste. A formal comparison will be made with the traditional process to provide objective evidence of its environmental and economic benefits.

LIFE07 ENV/E/000820  
INTEGRAL-B



## Beneficiary:

### Type of beneficiary

Professional organisation

### Name of beneficiary

Asociación de Investigación de la Industria Agroalimentaria

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Email ttecnologia@ainia.es

### Name of contact person

Andrés Pascual Vidal

## Duration of project:

36 months (01/01/2009 – 31/12/2011)

## Total budget in euro:

1,487,600

## EC contribution in euro with %:

743,804 (50.00 %)

## Generic Theme:

Reduction of emission of greenhouse gases

The project aims to provide a profitable, market-independent solution for the problem that glycerine disposal presents and encourage the achievement of the EU's objectives for biodiesel. The beneficiary will promote the adoption of this technology by biodiesel producers and work to change public perceptions about the environmental benefits of this source of energy.

# Sustainable Forest Management of Menorca in a context of climate change

## Project background

The Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change highlighted that forest ecosystems in Europe are very likely to be strongly influenced by climate change.

Mediterranean forests and shrublands will be especially vulnerable to negative impacts in a context of global warming. Despite the fact that all effects have not been identified, forest fires will probably increase and predicted droughts will lead to more pests and vulnerability to biotic and abiotic factors. In addition, the change in rainfall regime will increase the risk of erosion.

Covering 50% of Menorca, forest ecosystems are highly significant in terms of landscape, erosion control, cattle management, water regulation and biodiversity. While agrarian activity is important on the island, forest exploitation has been very low since the 1960s. Besides, forests are mainly privately owned and do not benefit from sustainable management. In this context, adapted forest management could substantially decrease the risks that are foreseen from future climate warming.

## Project objectives

The main objective of the LIFE+ BOSCOS project is to contribute to the development of sustainable forestry management towards mitigating the negative impacts of climate change on Mediterranean forest in Menorca. The beneficiary plans to elaborate and assess a set of adapted planning and management guidelines for Menorca that can be usefully transferred to other settings as well.

Local sustainable forest management plans at estate level will be agreed and implemented, including on measures to decrease vulnerability of forest stands in the context of global warming. Activities will be designed taking into account governance elements and forest management criteria from the ministerial conferences on protection of forests in Europe.

The management plans will serve as reference pilot initiatives. At least 10 plots with different characteristics will be selected to enhance the demonstration effect and the transferability of the results to other settings.

LIFE07 ENV/E/000824  
LIFE+BOSCOS



### Beneficiary:

#### Type of beneficiary

Regional authority

#### Name of beneficiary

Consell Insular de Menorca

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#### Name of contact person

Raül Escandell Preto

### Duration of project:

60 months (01/01/2009 – 31/12/2013)

### Total budget in euro:

1,444,395

### EC contribution in euro with %:

717,973 (50.00 %)

### Generic Theme:

Forest management – Soil and landscape protection –  
Desertification prevention

Successful actions that are easily transferable to other forests will be specifically highlighted and described.

By the end of the project, guidelines for sustainable forestry management for Menorca in the context of climate change will be drafted and disseminated. These will particularly target forest owners, forest managers and other forest professionals to build capacities.

The project will also work to raise public awareness on forest functions and values, possible impacts of global warming and the role of sustainable forest management.



# Integrated water resources management and their application to local planning of the SCI Abegondo-Cecebre. AQUA-PLANN project

## Project background

As well as having significant ecological and environmental value, the Mero-Barces river basin – including the Abegondo Cecebre reservoir (SCI) – in Galicia, north-west Spain, provides drinking water for the entire urban area of A Coruña (500 000 inhabitants). The river basin is currently under threat, however, from numerous human activities (mining, intensive cattle raising, etc.) and urban planning pressure. Added difficulties are the high number of public entities and stakeholders involved in the management and/or use of the river basin, making it difficult to control water quality. The current status of the river basin provides a perfect example of the vital need to set up methods and techniques that integrate environmental, economical and social interests, in order to reach a sustainable and efficient management system.

## Project objectives

The general objective of the AQUA-PLANN project is to preserve and protect the current and future ecological status of the hydrographic basins of Rivers Mero and Barces and of the SCI “Embalse Abegondo-Cecebre” through the implementation of an integrated approach based on the application of adequate governance methods, technologies, and public participation processes at basin level.

Expected results of the project are:

- Scientific and technical studies and reports on the current state of the river basin including on: water quality; planning; current threats; quantitative risk assessment (related to water contamination); contingency plans (in case of accidental spills and water pollution); and water quality and eutrophication levels in the Abegondo-Cecebre reservoir;
- Cartography and GIS tools that are directed towards: developing an inventory of water points and water pumping works and spills; estimating the sediment deposit level; helping local planners to comply with the WFD; and designing an optimum means of slurry collection, treatment and valorisation/recycling;
- Installation of an automatic network for spills control and evaluation of water quality in all rivers;
- Publication of manuals of good practices and awareness-raising on groundwater pumping works, water treatment solutions, maintenance of septic tanks, and reuse of slurry as an organic fertiliser;
- Improvement in surface water and groundwater quality in the river basin by: eliminating contamination

LIFE07 ENV/E/000826  
AQUA-PLANN PROJECT



### Beneficiary:

#### Type of beneficiary

Local authority

#### Name of beneficiary

Ayuntamiento de Abegondo

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#### Name of contact person

Juan José Rocha Carro

### Duration of project:

42 months (01/01/2009 – 30/06/2012)

### Total budget in euro:

987,564

### EC contribution in euro with %:

333,304 (50.00%)

### Generic Theme:

Water management at the scale of the river basin

sources in wells and boreholes; restoring public springs for drinking water; and establishing adequate wastewater treatment in scattered small rural villages;

- Awareness-raising among water basin users by promoting the values proposed by the “New Culture of Water” and implementing various and practical demonstration activities/methods/technologies;
- Implementation of various processes of direct public participation in the management of water resources;
- Transfer of guidelines and criteria of the WFD into local legislation;
- Strengthening awareness and environmental education of the general public through: project presentations to schools and the population at large; organisation of scientific/technical meetings on water and sustainability; and media campaigns.



# Biogas Injection into natural gas grid and use as vehicle fuel by upgrading it with a novel CO<sub>2</sub> capture and storage technology

## Project background

In the next 20 years, world carbon dioxide (CO<sub>2</sub>) emissions are expected to increase by 1.9% annually. This increase is mainly foreseen from the burning of fossil fuels – coal, oil and natural gas – for energy production.

Given the link between CO<sub>2</sub> emissions and climate change, a central objective of the European Commission's energy policy is to reduce these. To achieve this aim, the EU considers essential the development of renewable energies as a clear alternative to fossil fuels.

Anaerobic digestion (AD) is a process in which microorganisms break down biodegradable material in the absence of oxygen. It has direct environmental benefits since it reduces the negative impact of organic waste on the environment – from odours, leaching, soil and water pollution and pathogens – without releasing CO<sub>2</sub> and CH<sub>4</sub> to the atmosphere.

Furthermore, AD contributes to the supply of “clean” energy since it produces a methane and carbon dioxide rich biogas, which can be used for energy production in place of fossil fuels. Biogas can also be upgraded to bio-methane, which can be injected into the natural gas grid and used as a clean transport fuel.

## Project objectives

The goal of the BIOGRID project is to demonstrate the feasibility of producing bio-methane from biogas as a CO<sub>2</sub>-negative fuel at a competitive cost, thus making it a genuine substitute for natural gas and offering a preferred waste management solution.

The project aims to develop a novel technology for upgrading biogas to bio-methane based on the combination of biological and cryogenic technologies. The process will include capture and storage of CO<sub>2</sub> and removal of other contaminants such as SH<sub>2</sub>, volatiles and moisture.

The project hopes to increase, optimize and define the best conditions for biogas production through the co-digestion of organic wastes. It specifically aims to demonstrate the feasibility of using algae biomass in the anaerobic process for biogas production.

LIFE07 ENV/E/000829  
BIOGRID



## Beneficiary:

### Type of beneficiary

Large enterprise

### Name of beneficiary

NATURGAS ENERGIA DISTRIBUCIÓN, S.A.

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### Name of contact person

Angel Maria Gutiérrez Terrón

## Duration of project:

36 months (01/01/2009 – 31/12/2011)

## Total budget in euro:

1,956,111

## EC contribution in euro with %:

896,781 (50.00 %)

## Generic Theme:

Reduction of emission of air pollutants

Beyond the production process, the project aims to demonstrate the feasibility of using bio-methane for remote use via injection into the natural gas grid and as transport fuel. Its suitability as a transport fuel will be tested on two vehicles. The project will study the gas requirements, safety regulations and national and European legislation to determine to what extent the gas produced can be used in these contexts.

Finally, the project will conduct an environmental and economic analysis of the process to determine its viability and cost-effectiveness compared with alternative technologies. It expects to demonstrate that the process can be replicated in other plants and in other sectors that generate CO<sub>2</sub>.

# Developing a best practices e-tool for reducing VOCs emissions in the European printing SMEs industry according to BATs

## Project background

The graphic sector makes a significant contribution to the European economy. It includes more than 106 000 businesses, has an annual turnover in excess of €125 billion and employs more than 1.2 million people.

The sector also has a significant environmental impact. This comes in particular from printing inks, varnishes, dampening solutions and cleaning agents. These activities and the reduction of their impact have been identified in the Best Available Technologies (BATs) document.

However, implementation of BATs is not always straightforward within companies in the graphic sector. One notable barrier is that the sector is highly fragmented – some 95% of enterprises employ fewer than 20 workers. This often means that there is no dedicated environmental manager within the company. Usually, the production chain manager is the person in charge of environmental aspects.

In general, therefore, the graphic sector has a lack of skilled staff on environmental issues and a lack of expertise on legislation and best practice

## Project objectives

The main objective of the BATsGRAPH project is to reduce the environmental and health risks of the graphic sector through the development of an eTool that raises awareness of and makes possible the implementation of the Best Available Techniques for reducing emissions of volatile organic compounds (VOCs) in printing companies.

The tool will be based on the BAT reference document (BREF) on “Best Available Techniques on Surface Treatment Using Organic Solvents” and will seek to significantly increase understanding of its recommendations. It will also include a compilation of the most successful experiences of implementing BATs from the associated countries.

The project hopes to reach 10 600 companies – of which 95% are SMEs – in the European graphic industries and improve their environmental management, particularly in countries that are less technically developed in this field, such as in Spain and Member States

LIFE07 ENV/E/000836  
BATsGPAH



### Beneficiary:

#### Type of beneficiary

Professional organisation

#### Name of beneficiary

Asociación Industrial de Óptica, Color e Imagen

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Email sotero@aido.es

#### Name of contact person

Susana Otero Beltrán

### Duration of project:

36 months (01/01/2009 – 31/12/2011)

### Total budget in euro:

872,331

### EC contribution in euro with %:

436,166 (50.00%)

### Generic Theme:

Clean technologies

in Eastern Europe. Activities of the project are anticipated to lead to a 10% reduction in VOC emissions from the use of organic solvents in the sector.

The tool should enable the graphic arts industries to fulfil in a competitive way the requirements of the European Directive on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain activities and installations (1999/13/CE) and the Directive on Integrated Pollution Prevention and Control (IPPC) (1996/61/EC).

# Project to demonstrate an innovative ICT platform as support tool to implement Community Policy for the sustainable management of e-waste

## Project background

Manufacturing and use of Electrical and Electronic Equipment (EEE) is developing fast. The waste produced from these goods (WEEE) is increasing annually at the alarming rate of 3-5%, which is three times faster than average waste production growth.

In 2005, it was estimated that the EU-27 produce 8.3 million-9.1 million tonnes/yr of WEEE. Some 90% of this waste is still landfilled, incinerated or recovered without any treatment. This causes significant environmental impacts, in particular air, water and soil contamination by heavy metals. It is also a notable risk for human health.

The current situation and associated risks are made worse by the lack of information available to WEEE managers and the financial burdens that they face. This has contributed to delays in the implementation of EU legislation.

The project addresses WEEE issues in the Spanish Basque Country, a region where EEE production is one of the most important industrial sectors. The beneficiary has close relations with the electronic and electrical products manufacturing industry in the region

## Project objectives

The main purpose of the WEEE-NET project is to demonstrate the viability of an innovative platform, based on Information and Communication Technologies (ICT), for the sustainable management, re-use and recycling of WEEE. It will target the electrical appliances sector and will include all stakeholders from the manufacturing industry to the consumer.

The project will develop an Internet-based platform that will centralise the information that EEE producers need to make available about the materials and components used and disassembled in order to comply with the WEEE Directive. It will include an environmental assessment module to determine the expected environmental impact of an EEE.

The platform will provide producers with design information to encourage the production of greener products, exchange best practice and promote the use of Radio Frequency identification systems (RFID) to identify products in an unambiguous manner. It is also hoped that it will eventually help consumers to make greener purchasing choices.

LIFE07 ENV/E/000842  
WEEE-NET



## Beneficiary:

### Type of beneficiary

Small and medium sized enterprise

### Name of beneficiary

Inkoa Sistemas SL

### Postal Address

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### Name of contact person

Idoia Unzueta Balmaseda

## Duration of project:

42 months (02/01/2009 – 29/06/2012)

## Total budget in euro:

1,266,536

## EC contribution in euro with %:

627,268 (50.00%)

## Generic Theme:

Waste from Electrical and Electronic equipment (WEEE)

The information on the platform and RFID will enable WEEE managers to rapidly identify the producer, component materials, presence (or absence) of hazardous materials and disassembling options for the WEEE. This will help them to optimise overall recycling and recovery of materials and energy. Additionally, the platform will serve as a reliable system for public administrations, enabling them to obtain real-time data, for instance on the amount, type, and percentage of WEEE that has been treated; total amount of materials recovered; and percentages reused/recycled or recovered as energy.

Once developed, the platform should be applicable to the EEE sector throughout the EU, making an important impact on current management of WEEE and the EEE life cycle, as well as on the implementation of WEEE-related Directives

## Medium and long term water re-sources modelling as a tool for planning and global change adaptation. Application to the Llobregat Basin.

### Project background

Climate change may cause a progressive increase of atmospheric temperature and consequently may change the amount, frequency and intensity of precipitation. Changes in meteorological parameters could modify the whole water cycle, including run-off, infiltration and aquifer recharge.

Moreover, changes of land use – such as abandonment of crops, growing urbanization and deforestation – together with growing demand for water from population increases and rising quality-of-life expectations – may cause even more impact on water availability than climate change.

These factors of global change are expected to affect water availability and quality, the occurrence of extreme events, surface and groundwater, marine and continental water. This will have an effect on our ability to implement different water policies related to river basin management; the marine environment; water quantity; water and health; and water pollution.

It is important to assess the potential impacts of global change on water resources so that water companies and other stakeholders can make informed water management decisions and adapt strategies and infrastructures to those potential changes.

### Project objectives

This WATER CHANGE project aims to develop water-resource modelling according to different global change scenarios. It will establish the methodology and create tools for this modelling. It hopes to improve knowledge of how global change impacts on the availability and quality of water resources and identify measures to mitigate negative effects.

The project team will create a tool for modelling future scenarios based around both climatic and anthropogenic medium- and long-term changes that may occur regionally in a river basin. The tool will provide medium- and long-term modelling of water resources based on these scenarios.

The tool will generate simulations, which connect input data, models and output data, and allow the user to visualize and analyse the results. They will predict

LIFE07 ENV/E/000845  
WATER CHANGE



### Beneficiary:

#### Type of beneficiary

Research institution

#### Name of beneficiary

CETAQUA - Centro Tecnológico del Agua

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#### Name of contact person

Isabel Escaler

### Duration of project:

36 months (01/01/2009 – 31/12/2011)

### Total budget in euro:

1,238,280

### EC contribution in euro with %:

616,020 (50.00%)

### Generic Theme:

Water management at the scale of the river basin

the impact of global change on water resources of the basin and enable adaptation measures to be proposed accordingly.

The tool will be applied to the Llobregat river basin, which is highly affected by human activity. Through cost-benefit and feasibility analysis, as well as discussion with relevant stakeholders, appropriate adaptation measures will be proposed for this case.

The project aims to provide a tool that can be used anywhere by water authorities and water companies to create models for long-term water resources and better understand the possible adaptation measures. This will enable them to develop the necessary plans for investment and water management strategies to ensure future water supplies.

# Energy self-sustaining and environmental footprint reduction on wastewater treatment plants via fuel cells

## Project background

The EU aims to transform Europe into a highly energy-efficient and low greenhouse-gas-emitting economy. It has made a firm, independent commitment to achieve at least a 20% reduction of greenhouse gas emissions by 2020 compared with 1990 levels.

Moreover, within the Energy Policy for Europe (EPE), the European Council endorses the target of a 20% share of renewable energies in overall energy consumption in the EU by 2020.

In this context, wastewater treatment plants (WWTP) must be considered from an energy perspective, both in terms of levels of consumption, but also the use of "green" energy.

Anaerobic digestion (AD) is widely used to treat wastewater sludge. This process produces a biogas rich in methane and carbon dioxide that is a renewable energy source suitable for replacing fossil fuels. Traditional CHP units have been widely used to produce electricity from this biogas.

New promising technologies, such as hydrogen fuel cells, have however been developed which offer both higher efficiency, and a further reduced environmental impact.

## Project objectives

The BIOCELL project aims to demonstrate the low environmental impact, feasibility and economic viability of energy production from biogas via fuel cells adapted to wastewater treatment plants (WWTP). It furthermore looks to provide the necessary tools for its industrial implementation.

The project plans to test energy production from both proton exchange membrane fuel cells (PEMF) and solid oxide fuel cells (SOFC). A PEMFC unit treating 10 m<sup>3</sup>/h biogas, including catalytic reforming and purification, and H<sub>2</sub> storage, will be operated in the WWTP of Murcia. An SOFC unit treating 5-10 m<sup>3</sup>/h biogas will be operated at a WWTP in Catalunya.

Through the two pilot schemes, the project will assess the energy self-sustainability and economic viability of energy production from WWTP biogas via fuel cells

LIFE07 ENV/E/000847  
BIOCELL



### Beneficiary:

#### Type of beneficiary

Research institution

#### Name of beneficiary

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#### Name of contact person

N/A

### Duration of project:

36 months (01/01/2009 – 31/12/2011)

### Total budget in euro:

2,426,810

### EC contribution in euro with %:

1,213,405 (50.00%)

### Generic Theme:

Waste water treatment

and analyse the most adequate treatment for each biogas recycling route considered.

The project will produce guidelines on the choice, implementation, operation and optimisation of energy production from WWTP biogas – via PEMFC and SOFC – providing technical details on every stage of the energy production process.

It expects to demonstrate the economic and environmental potential of this technique and provide the practical information necessary to see it implemented in wastewater treatment plants across Europe. This will reduce the environmental impact of these WWTP and increase the supply of clean energy



# Recycling of waste glass fiber reinforced plastic with microwave pyrolysis

## Project background

The volume of waste plastic in Western Europe increased by almost 50% between 1990 and 2002 – from 25 million tonnes to approximately 45 million tonnes. Recent improvements in the management of plastic wastes have created some benefits, but significant environmental problems remain, since the volume of plastic waste going into landfill sites has still increased.

A particular concern is the amount of glass fibre reinforced plastic waste that is not recycled. Improved EU waste management capacities are required for this, and other types of plastics, in order to match the range of existing facilities that are available to reprocess Europe's paper and glass wastes.

## Project objectives

The core aim of the Glass Fibre project is to develop and demonstrate a cost efficient and environmentally efficient microwave pyrolysis method for recycling plastic. A target has been set to identify technology that is capable of reducing the amount of glass fibre waste going into landfill sites by 90%. These results are anticipated to provide complimentary mechanisms to reduce the methane and carbon dioxide emissions from landfill sites.

Another outcome from the project will be the identification of commercial products from the treated waste. Uses for these newly developed products are anticipated to include: construction materials; insulation laminates; road building aggregate; drainage systems; grit blasting for removing paint; and refining oil in small refineries in Poland. Gases resulting from the process might even be used for electricity and heat production.

LIFE0 ENV/S/000904  
glass fiber



### Beneficiary:

#### Type of beneficiary

Large enterprise

#### Name of beneficiary

Stena Metall AB

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#### Name of contact person

Carina Petterson

### Duration of project:

36 months (01/01/2009 – 31/12/2011)

### Total budget in euro:

2,668,073

### EC contribution in euro with %:

739,118 (29.83%)

### Generic Theme:

Packaging and plastic waste

# Green tools for urban climate adaptation

## Project background

Climate change is one of the four priority areas in the EU's Sixth Environment Action Plan. Climate adaptation in Europe will need to focus on three key aspects: managing increased levels of precipitation that are anticipated in Central and Northern Europe; addressing problems associated with increased drought in areas such as Southern Europe; and tackling extreme heat waves that will affect the entire continent.

Urban areas are considered to play important roles in mitigating and adapting to climate change issues.

## Project objectives

The objective of the GreenClimeAdapt project is to demonstrate appropriate technology to deal with climate adaptations in urban areas. Experiences from Canada and the UK will be applied within a number of innovative environmental management tools, such as open storm water systems, green facades and a new type of 'green roof'.

A 45 ha industrial area in south-east Malmö will serve as a "Green Climate Adaptation area" in which the appropriate technologies will be tested. This area will include a storm water system that should retain up to 90% of rainfall over a 10-year period, in doing so greatly reducing flooding risks. Sedimentation and filtration ponds will also be used in the area to clean run-off water prior to its re-use.

The "Green Climate Adaptation Area" will include climbing plants on two buildings that will be grown to provide shade on the wall facades. The plant shading will act as a natural cooling mechanism for the buildings and the vegetation cover is furthermore expected to improve the efficiency of photovoltaic panels. Results from evergreen and deciduous plants will be monitored and compared to assess optimum noise and temperature parameters.

Conclusions from the project will assess the potential role that appropriate technologies can play in cooling European cities, saving lives and avoiding energy consuming air conditioning devices.

LIFE07 ENV/S/000908  
GreenClimeAdapt



### Beneficiary:

#### Type of beneficiary

Local authority

#### Name of beneficiary

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#### Name of contact person

Per-Arne Nilsson

### Duration of project:

60 months (01/01/2009 – 31/12/2013)

### Total budget in euro:

3,166,264

### EC contribution in euro with %:

1,582,932 (50.00%)

### Generic Theme:

Other area – Land use development and planning

# Feathers in Europa are THE resources for slaughterhouse

## Project background

Fossil fuels are widely used in Europe's process industries today. However, these fuels can have severe negative environmental impacts, particularly in terms of CO<sub>2</sub> emissions and global warming. The challenge for Europe's process industries is to reduce dependency on non-sustainable fuel sources and identify appropriate solutions that guarantee the security of affordable energy sources while reducing carbon emissions.

## Project objectives

The overall objective of the project is to utilise the energy content in waste products from food industries. New technology is needed to combust food waste and feathers, instead of oil and other fossil fuels, to generate hot water and steam used for the industrial processes in a poultry slaughterhouse. Approximately half of the biofuel content will be sourced from feathers and other by-products from poultry slaughterhouses. The other half of the biofuel will comprise a mixture of different biofuels, including wood-fuels. The project aims to eliminate all fossil fuel power impacts in the poultry slaughterhouse, such as CO<sub>2</sub> emissions. It also anticipates reducing transport impacts, since the volume of waste requiring transportation will be reduced significantly.

Demonstration work will focus on testing and evaluating the functionality and effectiveness of the biofuel. Targets include:

- Reducing annual emissions of fossil carbon dioxide by up to 1 600 tonnes; and
- Eliminating the need to transport 2 500 tonnes of by-products.

Results from the project are expected to have a wider relevance in other sectors, such as those using district heating systems.

LIFE07 ENV/S/000911  
FEATHERS



### Beneficiary:

#### Type of beneficiary

Large enterprise

#### Name of beneficiary

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#### Name of contact person

Tom K. Hansen

### Duration of project:

48 months (01/01/2009 – 31/12/2012)

### Total budget in euro:

4,493,702

### EC contribution in euro with %:

1,925,226 (50.00%)

### Generic Theme:

Industrial waste (including manufacturing)

# Towards sustainable value chains through a common approach for company strategic work and daily operations

## Project background

Economic growth can create negative environmental impacts and unsustainable patterns of resource use. Industry is largely responsible and more work needs to be carried out to identify mechanisms capable of decoupling economic growth from environmental pressures. This need is recognised in the 6th Environmental Action Programme and prioritised in the Thematic Strategy on Sustainable Use of Natural Resources.

## Project objectives

The fundamental goal for the LIFE TOSCA project is to facilitate the efforts of EU industry to reduce its impact. A new framework will be produced that helps industries identify and mitigate environmental problems within their value chains. The new framework aims to combine existing environmental management tools with accurate data management systems and effective communication techniques.

Following development, the framework will be tested in at least five international companies that have been identified as having high potential to improve environmental sustainability within their value chains. Target companies include Akzo Nobel and Svenska Cellulosa Aktiebolaget (SCA). Particular attention will be paid during the project to the following environmental factors in value chains:

- Natural resource use (material resources and energy resources);
- Emissions that contribute to climate change, ozone depletion, acidification, eutrophication, photo-oxidant formation (smog) and toxicity (human toxicity and eco-toxicity); and
- Waste volumes.

Findings from the project's framework tests will be used to demonstrate the framework's relevance for other value chains and companies, via 20 different awareness raising events (e.g., workshops, seminars and conferences).

LIFE07 ENV/S/000912  
TOSCA



## Beneficiary:

### Type of beneficiary

International enterprise

### Name of beneficiary

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### Name of contact person

Johan Widheden

## Duration of project:

36 months (01/01/2009 – 31/12/2011)

## Total budget in euro:

2,053,998

## EC contribution in euro with %:

1,026,999 (50.00%)

## Generic Theme:

Other area – Impact of economic activities

# Innovative technology for low-cost production of photovoltaic solar cells

## Project background

Photovoltaic (PV) solar energy provides a potential alternative to energy sources that produce CO<sub>2</sub> emissions. Today, PV solar cells are produced primarily in four countries: Japan, China, USA, and Germany, with Japan having the largest share of global production, at nearly 40%.

Reducing the manufacturing cost of PV solar cells and/or increasing the efficiency of their energy production process should help increase incentives for investment in PV solar cell manufacturing infrastructure. This in turn could lead to increased production of PV solar cells and greater use of PV solar cells, which would reduce CO<sub>2</sub> emissions.

## Project objectives

The overall objective of the 'SUNRISE' LIFE project is to test the functionality and effectiveness of a highly innovative PV solar cell production technology. These tests aim to demonstrate that the new approach is capable of significantly lowering production costs, increasing energy efficiency and so resulting in more environmentally-friendly final products.

Comparisons will be made against state-of-the-art technology and the LIFE project targets include demonstrating the M2 technology's ability to:

- Reduce energy payback time by 65%, compared with crystalline silicon;
- Reduce production costs per Watt by 90%, compared with amorphous silicon and by 60% compared with crystalline silicon;
- Create fully recyclable solar cells (i.e. 100% recyclable);
- Reduce the weight of PV cells by at least 50%, compared with crystalline silicon thin film solar cells; and
- Reduce packing and transportation volumes by at least 50%, compared with crystalline silicon thin film solar cells.

Results of the project are anticipated to lower production costs, increase energy efficiency and promote the development of environmentally friendly products. Knowledge gained during the development of the new production system is anticipated to benefit numerous European companies and help increase the production of PV cells in Europe.

LIFE07 ENV/S/000913  
SUNRISE



## Beneficiary:

### Type of beneficiary

Small and medium sized enterprise

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### Name of contact person

Andreas Andersson

## Duration of project:

30 months (01/07/2009 – 31/12/2011)

## Total budget in euro:

4,992,204

## EC contribution in euro with %:

2,406,102 (50.00%)

## Generic Theme:

Reduction of emission of greenhouse gases



# PHARMAFILTER, an innovative waste and waste water management concept for hospitals

## Project background

In hospitals, organic waste comes from various sources, including food waste, human faeces and urine. Human faeces collected at the bed of a patient presents risks of contagion, so the faeces are collected in metal pans, taken to a central collection unit and disinfected by thermal treatment. Since the used and clean bed pans are handled in the same area, there is an extra risk of contagion. Attempts to solve this risk have not yet led to positive results since the processes have been too complex.

Another problem that arises in hospitals is that wastewater is contaminated by medicine residues and hormone disruptors, often contained within the faeces and urine of patients. In the Netherlands alone, some 130 hospitals discharge approximately 20% of all the medicine residues and endocrine disruptors into the sewer systems. Even though wastewater containing medicine residues and endocrine disruptors is disposed of and treated by conventional wastewater treatment plants, it is known that these substances are hardly affected by such processes. While concentrations in surface water are still relatively low, it has already been proven that fish have been affected: hermaphroditic species have been found in the river Meuse as a result of the contamination of river water with endocrine disruptors.

## Project objectives

The PHARMAFILTER project aims to demonstrate a new concept for the specific treatment of wastewater and organic waste from hospitals that is cost-effective, easy-to-operate and leads to reduced risk of human contagion and contamination of surface water.

The project will develop and implement a full-scale treatment process comprising:

- Introduction of biodegradable plastic bed pans and other biodegradable disposables into the hospital;
- A collection system for organic waste, biodegradable plastics and human faeces;
- Milling installation for solid organic waste and biodegradable plastics;
- Waste-digester installation;
- Energy-recovery unit;
- Wastewater treatment installation: membrane bio-reactor (MBR) and after-treatment by oxidation and absorption.

The users of the PHARMAFILTER concept, including nurses and other care-giving staff, will be trained

LIFE07 ENV/NL/000576  
PHARMAFILTER



## Beneficiary:

### Type of beneficiary

Large enterprise

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### Name of contact person

Annelies Ten Broek

## Duration of project:

30 months (01/01/2009 – 30/06/2011)

## Total budget in euro:

2,989,136

## EC contribution in euro with %:

1,092,945 (50.00%)

## Generic Theme:

Waste water treatment

and supported to start using the new process. During the project, an expert team with members from water boards, hospitals and technological experts will closely monitor the progress, especially regarding aspects related to the environment, hygiene and public health. They will help define optimal process configuration and procedures.

It is expected that implementation will result in:

- A 70-80% reduction of disposed organic waste;
- Conversion of organic waste to energy: 20 000 m<sup>3</sup> of biogas per 100 tonnes of waste;
- 80% reduction of medicine residuals and endocrine disruptors in wastewater;
- Complete removal of viruses and bacteria;
- A reduction of health risks from cross contamination in a hospital environment.

The project will show that the process can be applied in both new and existing hospitals and will disseminate results accordingly.

# Green roofs against climate change. To establish a UK green roof code to support climate change mitigation and adaptation

## Project background

The impacts of climate change are starting to be felt. England in July 2007 saw widespread flooding, which served to heighten public awareness of the potential impacts, and has focused attention on the need for planning and to make buildings more sustainable in order to take account of the changing future climate. Accordingly, local authority planning departments will have to adopt more stringent controls to reduce the environmental impact of new and existing buildings. Green roofs – roofs covered with vegetation – are considered an innovative sustainable technology and can form part of a climate change adaptation approach. They can: help provide a solution to storm-water overflow; reduce high energy consumption; counter-balance increased building on land that provides natural drainage; and help combat the 'Urban Heat Island Effect'.

## Project objectives

- To increase the quality of green roofs as part of a strategy to address climate change;
- To develop a pan-European green roof code in collaboration with the European Federation of Green Buildings (EFB);
- To develop a supplementary planning policy for local authority use;
- To spread knowledge and experience relating to green roofs, through promoting a UK code via Groundwork Sheffield and Livingroofs.org;
- To identify possible barriers to uptake of green roofs and provide solutions, including addressing the technical and economic viability of large-scale introduction;
- To encourage adoption of the green roof code through an Innovation Awards scheme that will recognise inspirational approaches to roof greening combined with other sustainable features, such as the installation of photovoltaic cells and Sustainable Urban Drainage (SUD).

### Expected results:

- A UK good practice code, with associated standards and guidance, to be adopted in 2011;
- A Supplementary Planning Policy on Green Roofs, accompanied by bi-annual reports provided to EBF in order to spread good practice as a basis for development of a pan-European green roof standard;

LIFE07 ENV/UK/000936  
GRACC



### Beneficiary:

#### Type of beneficiary

NGO-Foundation

#### Name of beneficiary

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#### Name of contact person

Wendy Bussey

### Duration of project:

36 months (01/01/2009 – 31/12/2011)

### Total budget in euro:

914,213

### EC contribution in euro with %:

454,905 (49.76%)

### Generic Theme:

Sustainable building

- To hold events for raising awareness of the code, and for information sharing and good practice exchange. Events will be aimed in particular at construction professionals, and policymakers;
- To work with 10 local authorities and/or public agencies on the implementation of supplementary planning guidance on green roofs;
- To build a publicly-accessible library of 30 case-studies demonstrating the benefits of green roofs for meeting environmental and biodiversity targets;
- To produce a relevant website and e-bulletins;
- To make 25 Innovation Awards (non-financial);
- To produce three guidance notes.

## Partnerships Involving Stakeholders in the Celtic Sea Eco-System

### Project background

The Celtic Sea, to the south and south-west of Ireland and south-western England and Wales, is a rich ecosystem that encompasses deep water features such as seamounts and canyons, as well as varied coastal habitats such as tidal estuaries and rocky reefs. These features and habitats support a wealth of biodiversity, including cold water corals, sharks, cetaceans, and commercially important fin and shellfish species such as scallop, crab, shrimp, tuna, anglerfish and salmon.

As with oceans and seas globally, the health of the marine ecosystem in the Celtic Sea is under significant threat from a variety of external pressures (climate change, fisheries, food cultivation in the open ocean, chemical pollution, shipping, construction and dredging, coastal development, recreation and tourism). A response to this is implementation of the ecosystem approach, or integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way.

### Project objectives

The project will work closely with target stakeholders from several Member States to test collaborative methodologies for implementing the ecosystem approach in the Celtic Sea. The project will add to the development and demonstration of innovative policy approaches and will specifically contribute to the effective implementation of the European Union's Marine Strategy.

The project will particularly focus on the implementation of the ecosystem approach in the Celtic Sea. Concentrating on this region of the EU's maritime waters, the project will apply a demonstration approach, and its findings will contribute to improved policy and governance for other sub-regions and regional seas in EU maritime waters. The project will produce new guidance for effective delivery of the ecosystem approach, developed by key marine stakeholders in close collaboration with the governments of the Celtic Sea.

As a result, by 2012, relevant marine stakeholders in the Celtic Sea will have a significantly greater shared understanding of the ecosystem approach towards

LIFE07 ENV/UK/000943  
PISCES



### Beneficiary:

#### Type of beneficiary

NGO-Foundation

#### Name of beneficiary

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#### Name of contact person

Janet Miller

### Duration of project:

36 months (01/07/2009 – 30/06/2012)

### Total budget in euro:

2,103,888

### EC contribution in euro with %:

1,022,753 (50.00%)

### Generic Theme:

Sensitive area management (coastal, protected)

integrated marine management. Cooperation and coordination between relevant representative marine stakeholder groups will have led to the development (and Celtic Sea Member State recognition) of agreed mechanisms for implementing the ecosystem approach in the context of relevant EU marine policies. The project will promote its results to the wider marine community in the Celtic Sea, and to other EU marine sub-regions.

# LIFE+ Information & Communications 2007: Commission funds 11 innovation projects in seven countries with €8 million

The European Commission has approved funding for 11 new environmental innovation projects in seven countries under the LIFE+ Information & Communications programme in 2007, a new thematic component of LIFE. These projects will either raise the profile of environmental issues, or provide training and awareness-raising for the prevention of forest fires. The projects are led by 'beneficiaries', or project promoters, based in Finland, France, Italy, Malta, Spain, Sweden and the United Kingdom. They represent a total investment of €16 million, of which the EU will provide some €8 million.

### LIFE Information & Communications in 2007

LIFE+ Information and Communication projects disseminate information and raise the profile of environmental issues, or provide training and awareness-raising for the prevention of forest fires. Of the 118 proposals received, the Commission selected 11 projects for funding from a range of public and private sector nature and/or environment organisations. The projects are situated in Finland, France, Italy, Malta, Spain, Sweden and the United Kingdom, and represent a total investment of €16 million of which the EU will provide €8 million.

### Background

LIFE is the EU's financial instrument supporting environmental and nature conservation projects throughout the EU and in certain non-EU countries. Since 1992, LIFE has co-financed some 2 750 projects, contributing approximately €1.35 billion to the protection of the environment. LIFE+ is the new European financial instrument for the environment with a total budget of €2 143 billion for the period 2007-2013. During this period, the Commission will launch one call for LIFE+ project proposals per year.

LIFE+ Information & Communications is one of three thematic components under the LIFE+ programme.

The other two components, LIFE+ Nature & Biodiversity and LIFE+ Environment Policy & Governance, focus respectively on improving the conservation status of endangered species and habitats and on supporting pilot projects that contribute to the development of innovative policy ideas, technologies, methods and instruments.

More information on each LIFE+ project is available at:

<http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=home.home&cfid=656029&cftoken=cab1cf8091752717-4430206A-E1CB-E45B-8C0A15178EBFFE27>

It is also possible to contact the relevant national authorities:

<http://ec.europa.eu/environment/life/contact/nationalcontact/index.htm>.

# Climate Change Community Response Portal

## Project background

Evidence of global warming comes from increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global average sea levels. Recent research shows that mean annual temperatures in Finland increased by some 0.7° C during the twentieth century, with the greatest warming in spring and modest warming in summer and autumn. Continued or accelerated greenhouse gas emissions are expected to cause further warming, and changes in the global climate system during the twenty-first century are likely to be greater than those observed during the twentieth century. In northern Europe, including Finland, warming is forecast to be more rapid than the global average, and to be accompanied by higher precipitation, especially during winter.

Climate change is central to EU environment policy and legislation. The EU has taken a leading role globally on the issue, by agreeing to cut greenhouse gas emissions by at least 20% by 2020, or 30% provided that other industrialized countries commit to similar levels of ambition. Further emission reductions of 60-80% by 2050 will be required in the EU and other industrialized countries in order to stabilise global carbon dioxide concentrations in the atmosphere at a level of 550 parts per million – a level said to be necessary in order to prevent the most damaging impacts of global heating.

## Project objectives

The project aims to:

- Raise awareness about global climate change and its implications for Finland;
- Communicate to the general public in an understandable way scientific information on global warming, its impacts and possible adaptation and mitigation responses at the community level;
- Offer guidance to local decision-makers, especially at municipal and regional levels, on integrating climate change information into their planning and decision-making processes;
- Assist Finnish municipalities and regions in fulfilling their national and EU responsibilities for sustainable development, including the achievement of greenhouse gas emission reduction targets;
- Improve the adaptation capacity of Finland's environment and society in order to avoid the adverse effects of climate change, and even to realise potential benefits from global warming;

LIFE07 INF/FIN/000152  
CCCRP



### Beneficiary:

#### Type of beneficiary

Research institution

#### Name of beneficiary

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N/A

### Duration of project:

36 months (01/01/2009 – 31/12/2011)

### Total budget in euro:

1,987,534

### EC contribution in euro with %:

990,317 (50.00%)

- Enhance networking between key national institutions that work to disseminate climate change information and to raise awareness;
- Create a common platform for different institutions to deliver climate change information in an integrated manner to various target groups and the general public.

### Expected results:

- Heightened awareness about the implications of climate change among the main target groups;
- Enhanced understanding of scientific information about climate change, its impacts, and options in Finland for mitigation and adaptation;
- Improved capability on the part of decision-makers to integrate information on climate change into their planning and decision-making processes;
- Improved networking among the key national institutions that provide information related to climate change, and a common platform for delivery of this information to target groups and the general public.



# European Week of Waste Reduction

## Project background

On 21 December 2005, the European Commission, in applying the Sixth Community Environment Action Programme (2002 – 2012), presented the following:

- A communication to the European Council, the European Parliament, the European Economic and Social Committee and the Committee of Regions entitled "Taking sustainable use of resources forward: a thematic strategy on the prevention and recycling of waste";
- A proposal for a European Parliament and EU Council Directive on waste, which became Directive 2006/12/EC of the European Parliament and the Council on waste.

The objectives of the Directive were as follows:

- Implement a more ambitious and effective waste prevention policy;
- Encourage the reuse and recycling of waste;
- Simplify and modernise the previously-existing legislation.

This was done in the context of the doubling of the weight of household waste in the past 40 years, and continuing domestic waste volume growth at a rate of 1-2%/yr.

## Project objectives

The main objective of the European Week of Waste Reduction (EWWR) project is to reduce the amount of municipal waste generated in Europe by involving all the players concerned in awareness programmes. The project will be an awareness campaign to mobilize European society on the problems of waste. It will build on the experience of French waste reduction campaigns (which were launched in 2004 within the framework of a national plan for prevention of waste production) and aims to sensitise and mobilise Europeans on the need to reduce the amount of waste that everyone produces daily.

The specific objectives of the project are as follow:

- To contribute to the execution of long-lasting waste reduction campaigns;
- To present and explain the waste strategy and the policies of the EU and Member States on waste prevention and reduction;
- To raise the awareness of the greatest number of people, and highlight what is at stake in terms of

LIFE07 INF/F/000185

EWWR



### Beneficiary:

#### Type of beneficiary

National authority

#### Name of beneficiary

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#### Name of contact person

Valérie Jouvin

### Duration of project:

36 months (01/01/2009 – 31/12/2011)

### Total budget in euro:

2,146,633

### EC contribution in euro with %:

1,073,317 (50.00%)

sustainable development, notably the impact of consumption patterns on climate change;

- To simplify and illustrate the concept of waste reduction.

### Expected results:

- To help stabilise the production of household and assimilated waste in European countries for 2009-2011;
- To broaden the quantitative and qualitative coverage of EWWR (geographically and regarding stakeholder types);
- Increase participation in key events;
- Disseminate communication tools and information (including through media coverage);
- Raise awareness on waste reduction challenges and solutions;
- and develop a network.

The project will include a qualitative and quantitative assessment of changes in behaviour with regards to waste reduction as a means of assessing the impact of the EWWR.

# GPPinfoNET - The Green Public Procurement Information Network

## Project background

The flow of resources and energy into the modern socio-economic system needs to be drastically reduced in order to achieve sustainable development objectives. This requires addressing the underlying causes of human pressure on the environment, mainly unsustainable rates of consumption of natural resources, and from current levels of energy use and waste production. Awareness raising and providing information on green public procurement (GPP) is one way of reducing these threats.

Major adjustments to current consumption and production patterns are essential. GPP is a tool for changing consumption and production habits. When public authorities decide to adopt GPP practices, and thus to purchase greener products and services, they include in their purchasing decisions consideration of environmental criteria over the life cycle of those products and services.

## Project objectives

The overall objectives of the Green Public Procurement Information Network are:

- Reducing the resource consumption and pollution that results from public procurement;
- Preparing the ground for the introduction and implementation of National GPP Plans;
- Promoting the implementation of GPP at a national and European level.

The project's specific objectives are:

- Raising awareness about the role of GPP for the implementation of sustainable consumption and production strategies, including the promotion of environmental technologies;
- Overcoming the information gaps that hinder the implementation of GPP.

LIFE07 INF/IT/000410  
GPPinfoNET



### Beneficiary:

#### Type of beneficiary

Local authority

#### Name of beneficiary

Amministrazione Provinciale di Cremona  
Settore Ambiente

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#### Name of contact person

Mara Pesaro

### Duration of project:

36 months (01/02/2009 – 30/01/2012)

### Total budget in euro:

2,120,500

### EC contribution in euro with %:

1,041,250 (50.00%)

# European awareness raising campaign for an environmentally sustainable olive mill waste management

## Project background

Olive trees are among the most-commonly cultivated crops in the Mediterranean basin, in terms of the area covered. There are approximately 750 million productive olive trees worldwide, occupying an area of 7 million ha. Nearly all (98%) of the area dedicated to olive orchards is found in the Mediterranean region, which is responsible for 97% of world olive production. The main olive oil producers are Spain (27%), Italy (26%), Greece (18%), Turkey (6%) and, to a lesser extent, Tunisia, Morocco and Syria (4% each) and Portugal, Egypt and Algeria (2% each).

The volume of olive waste generated, amounting to 13 500 x 10<sup>3</sup> tonnes/yr, represents a key environmental problem for Mediterranean areas, especially because olive oil production (and in turn the generation of its waste) is concentrated over a short period of time between November and March. The waste is highly phytotoxic because of considerable concentrations of phenols, lipids and organic acids. However, these residues also contain valuable resources such as large quantities of organic matter and a wide range of recyclable nutrients.

## Project objectives

The main aim of the Olèico+ project will be to raise awareness among olive growers and olive oil producers about the environmental problems caused by the careless disposal of olive waste. In addition, technical support, information on financial opportunities and other concrete measures will be provided to olive mill owners so that they can take concrete steps to adopt eco-friendly technologies for the recovery and recycling of waste. Overall, the project will make a contribution to the implementation of EU environmental legislation by improving olive waste management.

Previous projects, co-financed by the European Commission, have dealt with this subject, and this project will build on the work already done. The project will also promote its outcomes as widely as possible.

Expected results of the project are:

- At least 50% of the target audience for the project will demonstrate increased environmental awareness and interest towards possibilities for using suggested proposed technologies (this aspect of the

LIFE07 INF/IT/000438

Olèico+



## Beneficiary:

### Type of beneficiary

Research institution

### Name of beneficiary

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### Name of contact person

Francesca Santori

## Duration of project:

36 months (01/01/2009 – 31/12/2011)

## Total budget in euro:

1,003,636

## EC contribution in euro with %:

500,413 (49.98%)

project will be developed according to the results produced by questionnaires sent to the target audience);

- At least six olive mill owners/cooperatives will change their waste disposal practice from land spreading or lagooning, to one of the proposed eco-friendly technologies;
- A draft proposal will be submitted to the EU Regional Office detailing the eco-friendly technologies identified after the awareness-raising campaign;
- A European network on olive waste management will be established, involving Spain, Portugal, Greece and Italy;
- Project results will be disseminated internationally.

# Raising Awareness on climate change and energy savings for teachers, families and stakeholders

## Project background

The European Union has agreed to reduce its greenhouse gas emissions by 20% by 2020 compared with 1990 levels as a step towards reducing the negative impacts of climate change. The United Nations Intergovernmental Panel on Climate Change (IPCC), in its fourth assessment report (published in 2007) warned that "warming of the climate system is unequivocal," and that without reducing greenhouse gas emissions considerably, the global average surface temperature is likely to rise by 1.8-4.0 °C this century, with harmful consequences for ecosystems and societies.

## Project objectives

The objectives are:

- To raise awareness of climate change and its impacts, and of mitigation and adaptation strategies, particular in relation to a sample of different urban environments in Italy, and their cultural context (e.g. north, south, coastal, inland). The awareness-raising campaign will target school teachers, families and local stakeholders;
- To make citizens and especially families more aware of possibilities for environmentally-friendly lifestyles and consumption habits and to encourage them to experiment in their daily lives with actions that will help reduce carbon dioxide emissions;
- To improve local environmental governance by promoting and supporting a bottom-up participatory model that gathers local stakeholders (families, teachers and local administrators) and encourages them to share perspectives on climate change mitigation and adaptation.

The information and communication campaign at the heart of the project will consider teachers and families as strategic information multipliers. The information and communication campaign will be strengthened through a family-tutoring scheme and a participation model that allows the public to participate more in environmental decision-making processes. The campaign is expected to reach 400 teachers directly, and thus, indirectly, a further 8 000 students. In addition, a minimum of 245 families will be involved. Communication actions targeted at the general public will reach 5 000 -10 000 visitors to the participating cities during a series of four-day exhibitions. The campaign will

LIFE07 INF/IT/000487

R.A.C.E.S.



### Beneficiary:

#### Type of beneficiary

Local authority

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#### Name of contact person

Natale Seremia

### Duration of project:

28 months (01/01/2009 – 30/04/2011)

### Total budget in euro:

1,161,184

### EC contribution in euro with %:

573,256 (49.47%)

also reach 50 000 listeners to national and local radio campaigns; and up to 20 000-30 000 people through a local media dissemination campaign. A network dissemination action using the Europe Direct network will reach a further 30 000 people across Europe.

# Changing cultural attitudes to trapping in order to facilitate implementation of the Birds Directive in Malta

## Project background

When it joined the European Union in 2004, Malta secured a derogation from the Birds Directive (79/409/EEC), under which trapping of some wild songbirds continued to be permitted for a transition period. This period came to an end on 31 December 2008. The trapping activity caused great damage to populations of songbirds arriving on the island, but there has been only limited awareness of this on the island. The limited awareness of the issues became evident during an earlier project (LIFE06 NAT MT 000097), which dealt with conservation of the shearwater (*Puffinus yelkouan*) in Malta.

## Project objectives

The key project objectives are:

- To raise awareness among trappers and among the general public about the ending of the transition period for trapping activities and about the damage to wild bird populations done by trapping;
- To extend the awareness-raising activities to a media campaign, including conference organisation and brochure/film production;
- To promote a change in attitude among people towards these issues.

Expected results:

- At least 70% of the Maltese population to be aware of the relevant issues by the end of the project;
- The awareness-raising activities should reach the following proportions of relevant stakeholder groups: 80% of public authority decision-makers and 60% of children and young people;
- Some 90% of trappers to be aware of the law on trapping of wild songbirds, and 70% to respect the law by the project end;
- Law enforcement authorities to be more aware of biodiversity issues, thus helping them to carry out their work more effectively;
- There should be a more rapid implementation of the Birds Directive in Malta, and a measurable decrease in deliberate trapping.

LIFE07 INF/MT/000554  
STOP-TRAPPING-MALTA



## Beneficiary:

### Type of beneficiary

NGO-Foundation

### Name of beneficiary

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### Name of contact person

Geoffrey Saliba

## Duration of project:

30 months (01/01/2009 – 30/06/2011)

## Total budget in euro:

315,794

## EC contribution in euro with %:

157,897 (50.00%)



# LIFE+campaign 'Changing the change'. The Galician agriculture and forest sector facing climate change

## Project background

The Galician countryside is undergoing a crisis due to abandonment of farming activities and rural depopulation. This is also leading to a loss of biodiversity, loss of agro-ecosystems and the diminishing of the genetic variability of native species of crops and livestock. These problems are compounded by an increasing number of wildfires, which in 2006 devastated almost 100 000 ha.

The agro-forestry sector must also respond to climate change. However, Spain is lagging behind in the implementation of the Kyoto Protocol and different climate change plans and strategies defined by the EU. In the agro-forestry sector, one explanation for this is the lack of information for farmers on how their activities impact on climate change, or on how they could help global warming adaptation and mitigation processes.

## Project objectives

The main objective of this LIFE project is to provide information to the Galician agro-forestry sector and the general public on the problems of climate change, and to promote their involvement in activities that support adaptation and mitigation processes. The project also intends to promote a shift of attitude in farmers as a way of encouraging sustainable management. The project will actively promote the use of renewable energies and biofuels; recycling; the establishment of energy efficiency measures; a shift to organic farming; use of climate-adapted crops; and other environment and climate-friendly measures. It is expected that results will be transferable at regional and international levels.

Expected results:

- An initial diagnosis of the situation of Galician agro-forestry in the context of climate change, allowing for future measurement of impacts;
- An improvement in the exchange of information and resources between relevant stakeholders in the agro-forestry sector;
- Organisation of 29 meetings, leading to the drafting of two documents: 'Strategy to mitigate climate change in the agriculture and forest sector' and a 'Strategy for adaptation to climate change in the agriculture and forest sector';
- Organisation of 41 workshops with 1 800 participants; attendance at the International Galician Green

LIFE07 INF/E/000852  
CHANGING THE CHANGE



## Beneficiary:

### Type of beneficiary

Professional organisation

### Name of beneficiary

Unions Agrarias - UPA

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### Name of contact person

Pablo García García

## Duration of project:

24 months (01/01/2009 – 31/12/2010)

## Total budget in euro:

533,771

## EC contribution in euro with %:

266,885 (50.00%)

Week; the creation of an advisory office in each of the 37 'comarcas'; the creation of a mobile exhibition or roadshow; the creation of a website; and the publication of specific awareness-raising and educational materials;

- Enhanced local participation in environmental measures, particularly in relation to addressing the problems caused by climate change.

These actions should lead to:

- An increase in the use by farmers of biofuels;
- An increase in the surface area of solar panels installed on farms;
- A reduction in water consumption;
- An increase in the surface area dedicated to energy crops;
- A reduction in the use of nitrogen-based fertilizers/an increase in the use of organic fertilizers;
- An increase in the concentration of carbon dioxide in farm soil;
- An increase in forestry plantation.

## Awareness-raising campaign on the values of l'Albufera Nature Park, a Natura 2000 Network Site

### Project background

The Albufera Natural Park in Valencia is one of the last wetlands in the area, and has a very high ecological value. It is a stopover for many important bird species on the Euro-African migration route. However, there are pressures on the area because it is close to a conurbation with 1.5 million inhabitants. Each year, three million tourists come to the area, mostly for beaches, food and night life; most tourists are not especially aware of the importance of Albufera Natural Park. Other complexities also confuse the general understanding of the role of the Natural Park: the relevance of its inclusion in the Natura 2000 network is not clearly understood, and inhabitants and local businesses are confused by overlapping environmental regulations.

### Project objectives

Albufera Natural Park, and of the Natura 2000 network. An intensive environmental-awareness campaign will be launched, with the objective of reaching millions of people. Different and varied activities are planned for local residents, visitors, non-governmental organisations, associations, businessmen and the media. Interpretative materials will be produced, including audio-guides that will help visitors discover the natural and conservation assets of the Natural Park, and will provide information about Natura 2000.

The project will also work to develop tools to help with promotional activities; these tools will be directly transferable to other Natura 2000 sites. The tools will include a regulatory guide and an innovative mapping database using the open-source software gvGIS. A participatory approach will be followed as far as possible to involve stakeholders in the management of the area.

Expected results:

- Raising awareness among, and increasing the knowledge of, a high proportion of the park's visitors, concerning the park, the Natura 2000 network, and the potential impact of human activities on such natural assets;
- Establishment of communication flows enabling a participatory approach to the management of the park;

LIFE07 INF/E/000865  
SEDUCCION AMBIENTAL



### Beneficiary:

#### Type of beneficiary

Local authority

#### Name of beneficiary

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#### Name of contact person

Antonio Vizcaino Matarredona

### Duration of project:

48 months (01/01/2009 – 31/12/2012)

### Total budget in euro:

1,783,803

### EC contribution in euro with %:

795,353 (44.59%)

- To fix the place of the park management office as a focal point for complaints, problems and suggestions of interest to local stakeholders or visitors;
- To build understanding of the conservation rules and laws overlapping in the Albufera Natural Park and the Natura 2000 network;
- The production of useful tools for dissemination of information about the importance of the site, and its participatory management;
- To provide good practice examples and a pilot experience for other Natura 2000 site managers.

# Communicating environmental actions to children and youth

## Project background

Children and young people take a lot of their environmental information from the media and the Internet.

Alarming reports about issues such as global warming, the extinction of species and algal blooms in the Baltic Sea are part of this daily news feed, and there have been reports about Swedish children and young people suffering anxiety and fear about these issues as a consequence of the reporting. Children and young people, therefore, need a forum in which to discuss environmental problems, and their potential solutions, and should be able to respond in a positive way on environmental issues, rather than just experiencing negative emotions.

## Project objectives

The overall objective of the project is to create a well-informed generation with the tools and the power to respond to environmental issues. The specific objective is to raise awareness among 260 000 children and young people about European Union (EU) environment policy. This will be achieved by:

- Developing and implementing an awareness-raising campaign (national demonstration project) on EU environment policy, in particular the Sixth Environmental Action Programme (6thEAP), targeting children and young people, and operating through the school structure;
- Developing a campaign that is sustainable and democratic, and also transferable to other EU states.

This project will give schools the opportunity to work on a range of environmental issues. It will provide teachers with the latest information on the four themes of the 6thEAP and give children and young people the tools to act and to become "ambassadors" in solving environmental problems in the future.

The expected results of the project include:

- 260 000 children and young people will be actively engaged with EU environment policy;
- 18 000 Swedish teachers will be educated on EU environment policy;
- 1 800 schools will join the Eco-schools network during the project period;

LIFE07 INF/S/000901  
COM-U



### Beneficiary:

#### Type of beneficiary

NGO-Foundation

#### Name of beneficiary

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#### Name of contact person

Anna Widén

### Duration of project:

36 months (01/01/2009 – 31/12/2011)

### Total budget in euro:

2,534,643

### EC contribution in euro with %:

1,261,397 (50.00%)

- 3 000 Swedish schools will receive information on EU environment policy;
- 75 000 visitors will visit the project's web page in 2011;
- 600 stakeholders will be reached through lectures and seminars.

## Regional Environmental Networks for Energy & Water

### Project background

Use of energy and water by the residential sector is a major cause of pressure on environmental resources. In Europe, households consume some 25% of energy (excluding transport), and 24% of all water abstracted. Trends of increasing energy and water consumption put at risk the realisation of the European Union's current 2020 targets of reducing greenhouse gas emissions by 20%, compared with 1990, and of increasing the share of renewables in the energy supply to 20%.

Increasing imbalances between supply and demand of water resources cause damage to aquatic ecosystems and protected areas. This further reduces the adaptive capacities of public water services and ecosystems to cope with the impacts of climate change.

In order to reduce these negative impacts, the residential sector's eco-efficiency could be significantly increased using a wide variety of tools, including environmental product standards, financial incentives and targeted communication measures. The residential energy saving potential is estimated at around 27% and the water saving potential up to 50%.

### Project objectives

The RENEW project will combine water-saving advice aimed at households with an existing domestic sustainable energy campaign in order to test a 'one-stop-shop' approach that will allow consumers to access expert advice on a range of sustainability issues that have underlying compatible messages.

The project will identify issues and provide advice on water consumption reduction that has an associated and positive energy-saving benefit, and vice versa. To ensure wider replication at the pan-European level, the project will also analyse geopolitical differences in three pilot urban areas (South-east England, Wales and Scotland) to understand how water and energy-saving advice can be adapted to address regional variances.

In addition, the project will carry out an awareness-raising campaign that will influence consumer behaviour so that consumers reduce their carbon emissions, preserve natural resources and move towards a wa-

LIFE07 INF/UK/000932  
RENEW



#### Beneficiary:

##### Type of beneficiary

NGO-Foundation

##### Name of beneficiary

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##### Name of contact person

Simon Green

#### Duration of project:

36 months (01/01/2009 – 31/12/2011)

#### Total budget in euro:

1,941,702

#### EC contribution in euro with %:

970,850 (50.00%)

ter-saving culture (in line with the EU's objectives on climate change adaptation and mitigation, sustainable consumption and production, and water scarcity and droughts). Finally, the project will communicate its findings by sharing the knowledge gained for possible replication in other EU Member States.

## Eco-Animation: a cutting edge cartoon to raise awareness on climate change and sustainable use of natural resources among European children

### Project background

There can be communication barriers in trying to present serious environmental issues to children. It would therefore be helpful to translate the messages into a medium that children find captivating. Children are visual by nature and love cartoons and cartoon characters. Cartoon animation can cross gender, age, linguistic and cultural barriers and can have an impact on a broad range of audiences. Animated characters can also provide role models for children.

### Project objectives

Eco-Animation will produce cartoons aimed at children aged 5-8 in order to introduce them to simple messages about the environment, sustainability and climate change. The cartoon animations will show that small actions such as using less water, asking where your food comes from, recycling, and reducing electricity consumption, can point the way to more sustainable living. Eco-Animation will thus directly help children adopt environmentally-sustainable behaviour, and will indirectly raise awareness of these issues among adults.

Eco-Animation will:

- Study which messages work best for European children aged 5-8;
- Engage directly with these children through an enjoyable medium;
- Indirectly, raise awareness among teachers and families of climate change and sustainable use of water and natural resources.

The project partners will develop the content of the programme; establish a Pedagogic Evaluation Committee to get feedback from children during production; prepare a 30 minute animation; and will promote the project and the products through an integrated communication and dissemination plan.

The animated cartoon will be produced in English and translated into the three languages of the focus groups of children involved in the pedagogic evaluation (Italian, Romanian and Portuguese). The resulting cartoon will be distributed to European television channels, and export opportunities will also be considered. The intention is to reach a target audience of some 3.5 million children, teachers and parents across Europe.

LIFE07 INF/UK/000950

Eco-Animation



### Beneficiary:

#### Type of beneficiary

Small and medium sized enterprise

#### Name of beneficiary

Business Solutions Europa Limited

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#### Name of contact person

Luigi Petito

### Duration of project:

27 months (01/01/2009 – 31/03/2011)

### Total budget in euro:

541,092

### EC contribution in euro with %:

258,371 (47.75%)





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