



# LIFE - Environment



*Projects-Projekten-Projets-Projectos-Projectos-Projecten-Progetti-Projektit-Projekte-Proje  
Projekten-Projets-Projectos-Projectos-Projecten-Progetti-Projektit-Projekte-Projects-Proje*

# 2002



European Commission

# Introduction to LIFE-Environment projects 2002

---

## The LIFE Regulation

LIFE is the European Union's Financial Instrument for the Environment. Launched in 1992, its overall objective is to contribute to the development and implementation of EU environmental policy through the financing of specific actions. LIFE has three distinct components -- LIFE-Environment, LIFE-Nature and LIFE-Third countries – and co-finances environmental initiatives for environmental and nature conservation projects throughout the EU, in participating candidate countries and certain third countries bordering on the Mediterranean and the Baltic Sea.

LIFE has been implemented in phases: EUR 400 million were allocated for the first phase (1992-1995) and approximately EUR 450 million for the second phase (1996-1999). For the period 2000 – 2004, LIFE III has a total proposed budget of EUR 640 million Euro, 47% of which is earmarked for LIFE-Environment projects in the European Union.

LIFE-Environment is open to any natural or legal person established in the European Union and the participating Candidate Countries (Estonia, Hungary, Latvia, Romania, Slovenia), however it is addressed in particular to the industrial sector and public authorities.

## Environment projects funded under LIFE III

To contribute to the development of integrated and innovative techniques and methods and to further the development of Community environment policy, LIFE focuses on encouraging and facilitating the implementation of demonstration projects.

Demonstration projects must seek to develop and test an innovative solution to an environmental problem and lead to concrete, practical results. They must be implemented at a scale which allows for evaluation of the technical and economic viability of the solution on a large scale.

As the purpose of the programme is to bridge the gap between research and development results and their large-scale application, LIFE-Environment does not finance research or investment in existing technologies or infrastructure. To this end, demonstration projects based on the results of research projects which have been supported in the past, or technological research and development programmes are encouraged.

The LIFE III Regulation identified the following 5 areas for LIFE-Environment funding:

- **Land use development and planning:** integrating environment and considerations on sustainable development in land-use development and planning, including in urban and coastal areas, or
- **Water management:** promoting the sustainable management of groundwater and surface water, or
- **Impacts of economic activities:** minimising the environmental impacts of economic activities, particularly through the development of clean technologies and by placing the emphasis on prevention, including the reduction of emission of gases having a greenhouse effect, or
- **Waste management:** preventing and or reusing, recovering and recycling waste of all kinds and ensuring the sound management of waste streams, or
- **Integrated production policy:** reducing the environmental impact of products through an integrated approach to production, distribution, consumption and handling at the end of their life-time, including the development of environmentally-friendly products.

These five priority areas are in line with The Sixth Environment Action Programme of the European Community 2001-2010, which provides the strategic direction for the Commission's environmental policy for the next decade. The Sixth Environment Action Programme stresses the need for Member States to better implement existing environmental laws, work with businesses and consumers to achieve more environmentally friendly forms of production and consumption, and continue to integrate environmental considerations into other policies such as transport, energy and agriculture and the importance of spatial planning and action at the local and regional level to promote sustainable development.

## Funding under LIFE-Environment III

The European Union has allocated approximately EUR 300 million for LIFE-Environment for the period 2000-2004. The rate of Community co-financing can be up to 30% of eligible costs for projects having the potential to generate income or reduce operational costs, or as high as 50% in other cases. Eligible costs are those which are provided for in the original budget, are directly necessary to the project and are incurred during the lifetime of the project. Ineligible costs include land purchase, research and technological development activities and costs for intellectual property rights protection.

## Applications

The deadline for applications for 2002 pilot projects was 30 November 2001. An Application Guide with application forms was produced and made available on the LIFE-Environment web site. The guide presented a detailed explanation on how to apply. The application forms were also included and both the guide and forms were provided in PDF format for easy downloading.

By 30 November 2001, a total of 479 applications from the 15 EU Member States and five Candidate Countries were submitted to the Commission.

## Selection procedure

The applications submitted underwent the following five stages:

- Receipt of projects by the Member States
- Admissibility check
- Evaluation of projects by assessment using established selection criteria
- Classification and pre-selection of projects at Commission level
- Revision phase (where necessary)
- Consultation of Member States
- Decision by the Commission on the projects to be cofunded
- Informing the applicants

*The dates for the various stages of the selection process are outlined in Table 1.*

## Reception by the Member States

Each of the Member States set their deadline for the LIFE 2000-2001 proposal submission. The Member State authorities had to transmit the proposals to the Commission (DG ENV D.1) by 30 November 2001. At this stage the proposals were registered and checked for admissibility, an administrative step to be sure that, they were in compliance with the given requirements.

## Evaluation of projects

At this stage the project proposals were first checked for formal eligibility, i.e. financial and technical soundness. The eligible projects were then evaluated by the Commission desk officers, technical units and independent experts, according to the following technical and thematic criteria:

### *Technical criteria:*

- coherence
- organisation, i.e. partnerships, roles, management
- planning
- durability
- overall quality
- possibility of integration
- demonstration, possibility of dissemination

### *Thematic criteria*

- community interest
- environmental problem
- geographical extent
- cooperation
- transferability
- innovative nature
- cost/benefit ratio

The project proposals were awarded scores for each of the above criteria. The selection of projects is the sole responsibility of the European Commission, however Member States and Candidate Countries participated informally at all stages of the procedure. Thematic units in DG Environment were consulted once the list of eligible proposals was drawn up.

### Classification and pre-selection of projects

The projects were listed in order of merit according to the total scores allocated by the evaluators for each of the evaluation and bonus criteria. In the case of equal scores between one or several proposals, the score obtained on criterion 5 for "Community interest and environmental problem" was used to decide between the proposals.

According to the available budget, the proposals were ranked on merit and were classified either as "preliminary selected" or "preliminary reserved".

### Revision phase

The Commission services then revised the project proposals and worked with potential beneficiaries to improve the overall quality of the proposal, as needed. This process led to the establishment of a draft list of selected projects and a list of projects in reserve.

The LIFE Committee is the regulatory committee attached to the LIFE programme. Its role is to enable the Commission to establish a dialogue with national administrations before adopting implementing measures.

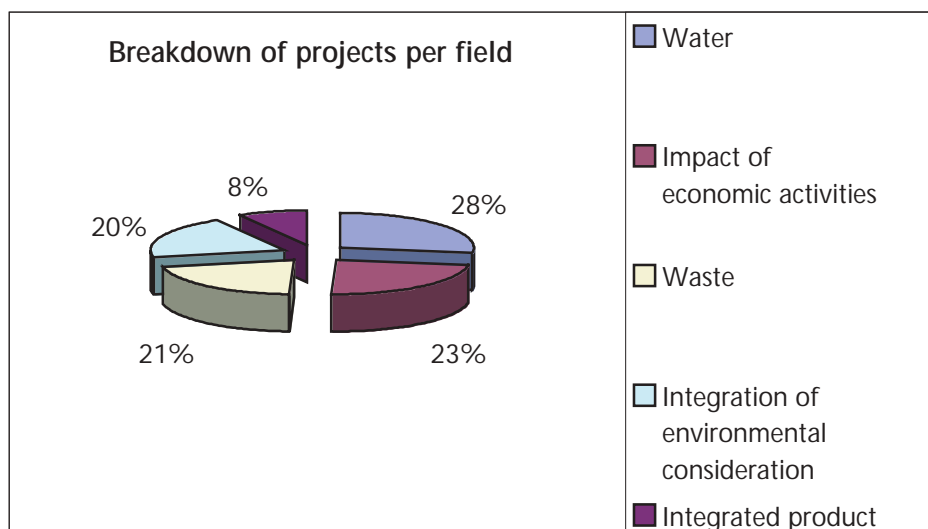
Composed of representatives of the 15 Member States and of observers coming from the accessing countries eligible to LIFE, the LIFE Committee takes the final decision on the selection of projects to be selected for LIFE-Environment. The Committee was consulted on the draft list of projects to be selected and met on 11 June 2002 in Madrid to vote on the final selection list and a list of projects in reserve. After the LIFE Committee meeting, the Commission began the formal administrative procedure leading to the final written decision.

### Informing the applicants

After the adoption of the Commission decision, individual decisions were communicated to the successful beneficiaries, who were invited to formally accept the decision or countersign the agreement within 90 days following the date of notification of the decision.

### LIFE-Environment projects funded for 2002

Sustainable management of water resources is the theme of the largest proportion of projects selected and the EU funding allocated (30 projects, EU contribution EUR 20.4 million, which represents 29% of the total). There are 25 projects on minimising the impact of economic activity (EU contribution EUR 15.7 million), which cover clean technologies, integrated environment management (Eco-Management and Audit Scheme - EMAS etc), sustainable tourism and the reduction of greenhouse gas emissions. Twenty three projects, funded by EUR 15.7 million, relate to the area of preventing, recycling and re-using waste, mainly dealing with packaging and plastics, hazardous or problematic waste or waste important in volume. Twenty two projects for co-financing in the amount of EUR 13.5 million relate to the theme of promoting the integration of environmental considerations, whether in the urban environment, in coastal zone management, other areas of land-use development and planning, including projects which target the quality of air and noise abatement. Finally, EUR 4.4 million has been allocated to nine projects which focus on promoting an integrated product policy through eco-design, eco-labelling and green financial products.



## Geographical distribution of projects

The Commission approved 111 projects selected from the 479 proposals submitted by organisations from the fifteen EU Member States and the five Candidate Countries participating in the programme, i.e. Estonia, Hungary, Latvia, Romania, and Slovenia. Spain was awarded the highest number of grants, for 27 projects; Italy, 16 projects; France, 8; The Netherlands, 9, Finland, 8; Germany, 7; Greece, 7; United Kingdom, 6; Hungary, 3; Austria, 3; Belgium, 2; Denmark, 3; Sweden, 4; Estonia, 2; Latvia, 2; Portugal, 2; Romania, 2.

## Beneficiaries of LIFE

Among the 111 projects selected, over half involve public authorities or public institutions as their main beneficiaries, followed by private bodies (43%), small and medium-sized enterprises and finally non-governmental organisations.

A one page description in English of the 111 projects follows. This document is also available on the LIFE-Environment home page at:

<http://europa.eu.int/comm/life/home.htm>

**Table 1. Timetable of the evaluation-selection procedure LIFE-Environnement 2002**

| Period            | Actions/Milestone events   |
|-------------------|--|
| 30/11/2001        | Proposals received by Commission   |
| 12/2001 - 04/2002 | Commission services evaluation<br>Member State consultation                  |
| 04/2002           | Establishment of preliminary selection list                                  |
| 04/2002 - 06/2002 | Proposal revisions   |
| 11/06/2002        | LIFE Committee vote - Approval of final selection list                       |
| 07/2002           | Commission decision  |
| 08/2002           | Beneficiaries receive decision/agreement of Commission                       |
| 11/2002           | Latest date for formal acceptance of decision of Commission by beneficiaries |

---

### *Note for the reader*

*This document presents the projects selected for the 2002 round of LIFE Environment call for proposals. Three projects were approved in late December and are currently missing from the compilation (two Spanish projects and one from The Netherlands). These will be added as soon as the information becomes available.*

---

## Index of projects selected in 2002

| Location | Projects number                                 | Title of project   |
|----------|---|--|
| AUSTRIA  | LIFE02 ENV/A/000282<br>LIRILI                   | Cleaning up the river Liesing  |
|          | LIFE02 ENV/A/000284<br>UT-HALLE                 | Teaching environmental studies in an eco-classroom   |
|          | LIFE02 ENV/A/000285<br>BBMPASSIV                | Timber building conforming to "passive house" standards  |
| BELGIUM  | LIFE02 ENV/BE/000333<br>ZEWADI                  | Testing the benefits of using "vacuum evaporation" in the plating industry   |
|          | LIFE02 ENV/B/000341                             | An integrated approach to remove TBT from the marine environment   |
| DENMARK  | LIFE02 ENV/DK/000150<br>SHORT-CIRCUIT           | Optimised recycling of organic household waste by establishing a close relation between the sources, households, and the end users |
|          | LIFE02 ENV/DK/000151<br>OSIS                    | Using permanently mounted sensors for monitoring oil spills at sea   |
|          | LIFE02 ENV/DK/000155<br>PVC HYDROLYSIS          | Thermal hydrolysis of PVC and recycling of the reaction products   |
| ESTONIA  | LIFE02 ENV/BE/000338<br>RE-USE WORKS            | Democratic Urban Planning Using eTechnology  |
|          | LIFE02 ENV/EE/000424<br>HASCO                   | Controlling pollution from the oil-shale processing industry   |
| FINLAND  | LIFE02 ENV/FIN/000319<br>GREEN VALLEY – E SALON | Mobilising stakeholders to manage the "Green Valley" of Salo   |
|          | LIFE02ENV-FIN-000320<br>ENVEDU                  | Finnish know-how to increase the number of EMAS-registered schools and colleges  |
|          | LIFE02 ENV/FIN/000321<br>EMSS FOR SMES          | User-friendly and inexpensive environmental management tool for SMEs on the web  |
|          | LIFE02 ENV/FIN/000322<br>ECO LEARN              | Educating citizens about the food chain, environment and sustainable development   |

| Location | Projects number                            | Title of project   |
|----------|--|--|
| FINLAND  | LIFE02 ENV/FIN/000324<br>ROKUA LIFE        | Rokua – eco-friendly tourist resort  |
|          | LIFE02 ENV/FIN/000328<br>PAROC-WIM         | Handling waste from stone wool production in a less costly and more environmentally friendly way |
|          | LIFE02 ENV/FIN/000329<br>KUKKIA CIRCLET    | Keeping roads in good shape with waste materials   |
|          | LIFE02 ENV/FIN/000331<br>ECOREG            | Demonstrating eco-efficiency in the Kymenlaakso region   |
| FRANCE   | LIFE02/ENV/F/000289<br>PRIVILEGES          | Mobilising local population to minimise greenhouse gas emissions                                 |
|          | LIFE02/ENV/F/291<br>DIFPOLMINE             | Managing water pollution from former mining sites in France and Hungary                          |
|          | LIFE02/ENV/F/295<br>GIPSYNOISE             | Software tool for noise evaluation and management  |
|          | LIFE02/ENV/F/297<br>FEAT                   | Monitoring municipal activities from an environmental viewpoint                                  |
|          | LIFE02/ENV/F/000301<br>PLASTAGRI           | Environmentally friendly management of plastic waste on the farm                                 |
|          | LIFE02/ENV/F/000303<br>LILIPUB             | New treatment system for waste water in a rural community  |
|          | LIFE02/F/000305<br>ECO SEN                 | Mobilising users for a pollution prevention approach   |
| GERMANY  | LIFE02 ENV/D/000398<br>RECYPOL             | Economical and ecological recycling of all polyurethane plastics                                 |
|          | LIFE02 ENV/D/000399<br>HYDROSTYX           | More efficient management of storm water   |
|          | LIFE02 ENV/D/000403<br>CIRCO-CLEAN         | Producing smoked sausages in an environmentally friendly way                                     |
|          | LIFE02ENV/D/000404<br>ULTRASCHALLREINIGUNG | Advanced technology for cleaning up waters   |
|          | LIFE02 ENV/D/000406<br>NT-PLASMA           | Sound and cost-effective non-thermal plasma plants for purifying waste air                       |
|          | LIFE02 ENV/D/000408<br>SUPERC              | Geothermal heating for students in Aachen  |
|          | LIFE02 ENV/D/000410<br>EBEBOBO             | Soil-gas extraction to decontaminate very deep soils   |

| Location | Projects number  | Title of project   |
|----------|--|--|
| GREECE   | LIFE02/ENV/GR/000359<br>IMMACULATE                       | Promoting clean vehicle technologies in Thessaloniki   |
|          | LIFE02/ENV/GR/000360<br>ICOL                             | Innovative collection system and Life Cycle Assessment for waste lube oils   |
|          | 01/GR/000362<br>MEDCLIMA                                 | Climate Alliance for Mediterranean Cities  |
|          | LIFE02/ENV/GR/000363<br>EMAS-EDIN                        | Implementing EMAS at the University of Macedonia   |
|          | LIFE02/ENV/GR/000371<br>Humification of sludge STP       | Producing soil from municipal sewage sludge  |
|          | LIFE02/ENV/GR/000373<br>Green Batteries                  | Development of a Pilot Separate Collection and Management Scheme in Crete for Batteries and Accumulators                 |
|          | LIFE02/ENV/GR/000392<br>GREENCULT                        | Greening cultural events in Ancient Olympia  |
| HUNGARY  | LIFE02 ENV/H/000435<br>UTILISATION OF HAZARDOUS<br>WASTE | Adding value to the treatment of spent pickling acid   |
|          | LIFE 02 ENV/H/000442<br>EPS-RECYCLING                    | Innovative and environmentally friendly technology for collecting and recycling expanded polystyrene-type plastics (EPS) |
|          | LIFE02/ENV/H/000443<br>RHIZOSPHERIC-WETLAND              | Development of a reed-bed wastewater treatment system through the recultivation of a decommissioned landfill site        |
| ITALY    | LIFE01 ENV/IT/000015<br>EMAS.PO.LI                       | Environmentally friendly policy and management in Tuscan ports   |
|          | LIFE02 ENV/IT/00017<br>The P.A.T.T.E.R.N                 | The P.A.T.T.E.R.N. get into the park   |
|          | LIFE02ENV/IT/000018<br>VISP                              | Methodological tool for health impact assessment in urban environment  |
|          | LIFE02 ENV/IT/00019<br>SFIDA                             | Decision Support System for environmental planning   |
|          | LIFE02 ENV/IT/0023<br>GPP NET                            | Green purchasing for public administrations  |
|          | LIFE02 ENV/IT/00034<br>WARM-WOOD                         | Using wood as a source of energy in mountain areas   |
|          | LIFE02 ENV/IT/000049<br>WAMARIBAS                        | Testing an innovative state-of-the-art numerical model in three river basins of Central and Southern Italy               |
|          | LIFE02 ENV/IT/0052<br>MICROFINISHING                     | Environmentally friendly ceramics micro-finishing  |
|          | LIFE02 ENV/IT/0064<br>PVTRAIN                            | Using solar energy to power trains   |
|          | LIFE02 ENV/IT/00065<br>SIGEA UDINE SUD                   | Mobilising all stakeholders to manage the environment in Udine   |



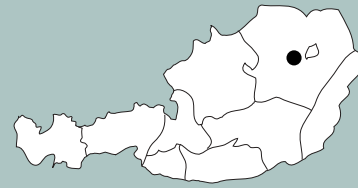
| Location    | Projects number                             | Title of project  |
|-------------|---|---|
| ITALY       | LIFE02 ENV/IT/000079<br>TRELAGHI            | Natural techniques for reducing pollution in three Italian lakes                                  |
|             | LIFE02 ENV/IT/0089<br>FERTILIFE             | Sustainable and innovative management of vegetable waste biomass                                  |
|             | LIFE01 ENV/IT/000092<br>CER-COM+ EMAS II    | Environmental management systems certification  |
|             | LIFE02 ENV/IT/00106<br>RAVE                 | Instilling the sense of a "quality of life" culture in a medium-sized town                        |
|             | LIFE02 ENV/IT/00111<br>NEW TUSCIA           | Introducing EMAS to Tuscia Romana   |
|             | LIFE02 ENV/IT/000112<br>GIDUT               | Proactive approach to managing rubbish on the Riviera   |
| LATVIA      | LIFE02 ENV/LV/000478<br>ENERLAB             | Energy Labelling of Apartment Buildings   |
|             | LIFE02 ENV/LV/000481<br>ZIEMELSUSEJA        | Elaboration of a new comprehensive Ziemelsuseja River Basin Management System                     |
| NETHERLANDS | LIFE02/ENV/NL/000114<br>TANEFTREAT          | New integrated wastewater treatment system for tanneries  |
|             | LIFE02/ENV/NL/000116<br>ALTWA               | Saving natural ecosystems through improved wastewater management                                  |
|             | LIFE02/ENV/NL/000117<br>MEMBRANE BIOREACTOR | The application of Membrane Bioreactor technology to large-scale effluent treatment               |
|             | LIFE02/ENV/NL/000118<br>BIOCONTROL          | Sustainable horticultural production: replacing pesticides with biocontrol                        |
|             | LIFE02/ENV/NL/000124<br>ECON-tainer         | New environmental friendly cargo handling and fumigation plant                                    |
|             | LIFE02/ENV/NL/000128<br>BIOFUEL             | Residual municipal waste as fuel for power stations   |
|             | LIFE02/ENV/NL/000130<br>SORDISEP            | Recovery of sand and inert fibres from digested paper   |
|             | LIFE02/ENV/NL/000133<br>WADDEN WATER HOUSE  | New "Wadden Water House" demonstrates state-of-the-art energy-saving and sustainable construction |
| PORTUGAL    | LIFE02 ENV/P/000416<br>ECORIVER             | Crystal clear: Eco-friendly wastewater management   |
|             | LIFE02 ENV/P/000421<br>SEIXAL.COMP.COM      | Putting waste to good use: Community composting in Seixal   |

| Location                                   | Projects number  | Title of project   |
|--|--|--|
| ROMANIA                                    | LIFE02 ENV/RO/000461<br>ENVACTCARB                               | New ecological product for purifying gases and water   |
|  | LIFE02 ENV/RO/000462<br>ECOMARKET                                | Eco food markets for Bucharest   |
| SPAIN                                      | LIFE02/ENV/E/000164<br>PAEGA                                     | Organic agricultural production: A pilot programme in Galicia, Spain                                       |
|  | LIFE02/ENV/E/000176<br>DIVERS                                    | Information and sustainable development in urban environments  |
|  | LIFE02/ENV/E/000177<br>TRAGAMÓVIL                                | Hidden hazards: A pilot project for separate collection, disposal and recycling of discarded mobile phones |
|  | LIFE02 ENV/E/000180<br>TRAMA                                     | Integrated environmental management system for farm cooperatives   |
|  | LIFE02/ENV/E/000182<br>MACROPHYTES                               | Innovative methods to treat residual urban water   |
|  | LIFE02/ENV/E/000183<br>DROPAWATER                                | Good water resources management: A challenge for the Spanish Autonomous City of Ceuta                      |
|  | Life02/ENV/E/000186<br>URGARBI                                   | Integrated residual water treatment in the canning industry  |
|  | LIFE02/ENV/E/000187<br>ENERWASTE                                 | Safe disposal and recycling of animal sub-products   |
|  | LIFE02/ENV/E/000194<br>ECO-Degreasing                            | Eco-degreasing: A new take on an old tradition   |
|  | LIFE02/env/e/000198<br>ECO-VALLE                                 | Sustainable urban design for open public spaces  |
|  | LIFE02/ENV/E/000200<br>GALLECS                                   | Peri-urban renewal: Getting a diffused city into shape   |
|  | LIFE02/ENV/E/000201<br>SOSSANABRIA                               | Sustainable tourism in Sanabria Park   |
|  | LIFE02/env/e/000210<br>HAGAR                                     | Self-management irrigation tools for over-utilised water systems   |
|  | LIFE02/ENV/E/000216<br>AFINO CONDUCTIVIDAD                       | Eco-friendly hide tanning techniques in Murcia, Spain  |
|  | LIFE02/ENV/E/000222<br>DEHESAS                                   | An ecologically safe grazing model for livestock   |
|  | LIFE02/ENV/E/000223<br>VELIF                                     | Traction fire engine beats forest fires  |
| LIFE02/ENV/E/000236<br>RECYCLING OF GREASE | An eco-conscious alternative for the hide tanning industry       |  |
| LIFE02/ENV/E/000237<br>PERCUS              | Transforming dangerous industrial waste into valuable substances |  |

| Location                   | Projects number  | Title of project   |
|----------------------------|--|--|
| SPAIN                      | LIFE02/ENV/E/000241<br>ECOFOOT                             | Best foot forward: Eco-concious footwear for Europe's citizens                 |
|                            | LIFE02/ENV/E/000242<br>CALINDIS                            | Solvent-free: Using safe adhesives in shoe manufacturing                       |
|                            | LIFE02/ENV/E/000253<br>ECOBUS                              | Getting the oil out: Recycling cooking oil into environment-friendly fuel      |
|                            | LIFE02/ENV/E/000255<br>ENVACIO                             | Safe substitutes for insecticides in rice production                           |
|                            | LIFE02ENV/E/000263<br>PARPEDRA TOSCA                       | Enchanted forest: Bringing Bosc de Tosca back to life                          |
|                            | LIFE02/ENV/E/000269<br>AUTOREWASTE                         | Staying power: An automatic waste recovery system extends plastic's shelf life |
| LIFE02ENV-E-000274<br>HADA | "Dust-free": A project for clean air in Spain's port zones |  |
| SWEDEN                     | LIFE02 ENV/S/000344<br>RESOLVE                             | REduction of SOLVents in the European newspaper printing industry              |
|                            | LIFE02 ENV/S/000349<br>EASYMONITOR                         | Better and more cost effective water quality monitoring                        |
|                            | LIFE02 ENV/S/000351<br>DANTES                              | New integrated eco-efficiency evaluation of products                           |
|                            | LIFE02 ENV/S/000355<br>COASTAL WOODLANDS                   | Integrated management of coastal woodlands                                     |
| UNITED KINGDOM             | 02/ENV/UK/136<br>CATCH                                     | Clean Accessible Transport for Community Health                                |
|                            | 02/ENV/UK/140<br>INWATCO                                   | Finding innovative solutions for water management in coal mining areas         |
|                            | 02/ENV/UK/143<br>REMAS                                     | Improving environmental performance through EMAS                               |
|                            | 02/ENV/UK/144<br>SMURF                                     | Cleaning up the river Tame   |
|                            | 02/ENV/UK/146<br>AFM                                       | Filtering drinking water with a new product made from waste glass              |
|                            | 02/ENV/UK/147<br>CARRA                                     | Strategies for carbon emissions reduction in inner London                      |

# Cleaning up the river Liesing

LIFE02 ENV/A/000282  
LIRILI



## Official title

Living River Liesing  
Demonstrative Ecological Reconstruction of a Heavily Modified Waterbody in an Urban Environment

## Background

The River Engineering Department of the City of Vienna is responsible for water management planning, hydrology, river monitoring, flood protection and river restoration for the preservation and improvement of the ecological status of rivers within the border of the City of Vienna. The river Liesing in Vienna has been heavily modified for the purpose of flood protection measures, its use as a watercourse for a water treatment plant and by an increased riverside population. The "LiRiLi" project covering 5,5 km of the river will be part of a large-scale restoration project for the entire river Liesing. It will be the first river of this size to be restored in an urban area. The River Engineering department is experienced in this field as a similar project was implemented on the River Wien.

## Project Objectives

The objective of the pilot project is to maximise the "ecological potential" of the River Liesing, in conformity with the Water Framework Directive and specifically with regard to "heavily modified water bodies"<sup>1</sup>

A canal-like concrete channel over 5.5km in length and located in an urban area will be re-designed into a semi-natural river meeting the relevant flood protection requirements.

The "LiRiLi" project also aims at an improvement of the water quality (from quality class IV to quality class II of the saprobic system) by restoring the river continuity and different flow conditions.

The flora and fauna will be improved and high quality public recreational areas will be established. Finally, information on the project will be disseminated on a large scale.

## Beneficiary:

**Type of beneficiary**  
public authority

**Name of beneficiary**  
Stadt Wien, Magistratsabteilung 45  
Wasserbau

**Postal address**  
Wilhelminenstr. 93  
A-1160 Wien  
AUSTRIA  
Tel.: 00 43 1 4000 965 71  
Fax: 00 43 1 4000 999 657 1  
E-mail: post@m45.magwien.gv.at

**Name of contact person**  
Herr Dipl.-Ing. Gernot LADINIG

## Duration of project:

From October 2002 to January 2002

## Total budget in euro:

2,017,350

## EC contribution in euro with %:

770,500 (49.99% of eligible costs)

## Priority theme covered by the project:

PG2.5 Water management: other area

<sup>1</sup> A body of surface water, which, as a result of physical alterations by human activity, is substantially changed in character, as designated by the Member State in accordance with the provisions of Annex II of the Water Framework Directive (2000/60/EC of 23 October 2000).

# Teaching environmental studies in an eco-classroom

## Official title

Environmental Engineering hall for the High School  
for environment and economics

## Background

The municipality of Yspertal as the beneficiary of this project is, in partnership with the local High School for the Environment and Economics, involved in construction of a teaching hall for environmental engineering purposes. The municipality and High School will capitalise on their experience in project management and technical know-how to erect the hall in a sustainable way.

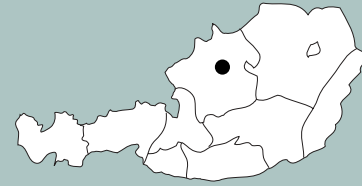
## Project Objectives

The environmental engineering teaching hall will be used as a demonstration hall for the pupils of the High School in Yspertal as well as of partner schools from other European countries. It is planned to give lessons in applied environmental studies there.

The total annual energy consumption will be less than 60 kWh/m by an innovative energy, insulation- and lighting-concept. Renewable energy resources from the region (wood, straw, and hemp) will be used in the construction and heating facilities. The hall will be approximately 18m x 35m in size and will rely on wood chips for heating.

Compared to a conventionally erected hall the CO<sub>2</sub> emissions will be reduced, as CO<sub>2</sub> neutral resources will be applied for both the erection and the energy demand. It is also the aim of this project to quantify the reduction of CO<sub>2</sub> emission by monitoring measurements carried out by students of applied studies.

LIFE02 ENV/A/000284  
UT-HALLE



## Beneficiary:

**Type of beneficiary**  
public authority

**Name of beneficiary**  
Marktgemeinde Yspertal, Gemeindeamt

**Postal address**  
Altenmarkt 100  
A-3683 Yspertal  
AUSTRIA  
Phone: 00 43 7415 6767  
Fax: 00 43 7415 6767 24  
E-mail: gde@yspertal.com

**Name of contact person**  
Herr Bürgermeister Karl MOSER

## Duration of project:

From November 2002 to March 2006

## Total budget in euro:

659,760

## EC contribution in euro with %:

152,734 (50% of eligible costs)

## Priority theme covered by the project:

PG5.1 Products: Eco-design, eco-efficiency, green financial products

# Timber building conforming to “passive house” standards

## Official title

Multifunctional company and administration building with logistics and

cultural centre in passive house standard in sustainable timber construction

## Background

The project promoter BBM and its parent company MIVA work in the field of development co-operation for the Catholic Church. Over the past 12 years, BBM has implemented projects in over 100 countries world-wide, including ecology and energy projects.

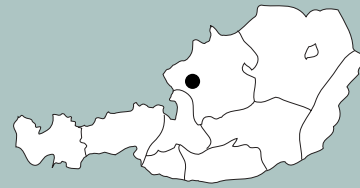
The administrative building in “passive house”<sup>1</sup> standards resulting from this project will be a demonstration object for visitors from abroad as well as an example of innovative construction developed by the Catholic Church in Austria.

## Project Objectives

The main goal of the “BBMpassiv” project is the eco-design and eco-construction of a multifunctional company and administration building in sustainable timber construction according to “passive house” standards. The annual energy demand for heating purposes will be less than 15kWh. Innovative concepts in energy consumption, heating and aeration will be developed.

The beneficiary will organise a cost management workshop for non-profit organisations from the candidate countries in order to find ways of making this technique affordable. International experts from the EU Member States, the candidate countries and the Third World countries will also be involved in the planning, realisation and maintenance of the project to encourage mutual learning. This house will be presented as a reference project for other new buildings of the Catholic Church and related organisations.

LIFE02 ENV/A/000285  
BBMPASSIV



## Beneficiary:

**Type of beneficiary**  
non-profit organisation

**Name of beneficiary**  
Beschaffungsbetrieb der MIVA, BBM

**Postal address**  
Maximilian-Pagl-Strasse 5  
A-4651 Stadl-Paura  
AUSTRIA  
Phone: 00 43 7245 28636 0  
Fax: 00 43 7245 28636 30

**Name of contact person**  
Herr Direktor Franz X. KUMPFMÜLLER

**Duration of project:**  
From December 2001 to December 2003

**Total budget in euro:**  
2,149,749

**EC contribution in euro with %:**  
780,241 (50% of eligible costs)

**Priority theme covered by the project:**  
PG5.1 Products: Eco-design, eco-efficiency, green financial products

<sup>1</sup> A Passive House is a building with an extremely low heating energy demand. The term “Passive House” refers to a construction standard. The standard can be met using a variety of technologies, designs and materials.

# Testing the benefits of using "vacuum evaporation" in the plating industry

## Official title

ZEWADI - Implementation of "Vacuum Evaporation" to obtain "Zero Waste Discharge" and "Energy Recovery"

## Background

To meet the demands of European Directives on clean water, integrated water management will be an environmental priority. In this context, the plating industry cannot continue to dump chemicals, heavy metals, and metal-containing wastes without any treatment.

Furthermore, several factors call for a change in the way waste from the plating industry is managed:

- The progressive increase in the cost of destruction of toxic waste such as metal hydroxide sludge.
- A decrease in the number of disposal sites for heavy metal sludge, which leads to a radical increase in disposal costs.
- A progressive enforcement of local, national and international laws which contribute to the quality of industrial waste water.

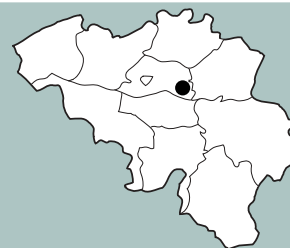
In this context, the "evaporation technology" is a very promising alternative to reduce the environmental impact of the processes used in the plating industry, especially the treatment of waste water containing chemicals and heavy metals.

## Project Objectives

The proposed "vacuum evaporation" technology ensures the total treatment of all waste water streams, the recuperation of rinsing water and at the same time the production of electricity. The objective of the "ZEWADI" project is to implement a prototype which treats the waste water streams produced by the electroplating plant of the private company and beneficiary of the project, STC. Because of the composition of the waste waters (emulsion or metal-containing), the streams will be divided into two separate systems with different prototypes.

After the adjustment of the equipment on site, the prototypes will be tested under real conditions with

LIFE02 ENV/BE/000333  
ZEWADI



## Beneficiary:

### Type of beneficiary

Private structure

### Name of beneficiary

Surface Treatment Company nv

### Postal address

Schurhovenveld 4077

B-3800 Sint-Truiden

BELGIUM

Tel.: 00 32 011 67 29 01

Fax: 00 32 011 67 33 93

E-mail: [bernard.vandewiele@vcst.be](mailto:bernard.vandewiele@vcst.be)

### Name of contact person

Bernard VANDEWIELE

## Duration of project:

From September 2002 to October 2004

## Total budget in euro:

1,983,624

## EC contribution in euro with %:

482,775 (30% of eligible costs)

## Priority theme covered by the project:

PG2.3: waste water treatment

the emulsion- and metal containing waste waters of the end-user followed by a complete evaluation of the concept and the international exploitation of the new environmental system.

The closed-loop system using evaporating techniques, proposed by this project, will make it possible to obtain a zero waste discharge and should prove to be cost-efficient and environmentally sound. Since there will be a big demand for such technology in the near future, the technical, ecological and economic benefits of the technique will be investigated within this project.

# An integrated approach to remove TBT from the marine environment

## Official title

Development of an integrated approach for the removal of tributyltin (TBT) from waterways and harbours: prevention, treatment and reuse of TBT contaminated sediments.

## Background

Tributyltin (TBT) is an aggressive biocide that has been used in anti-fouling ship paints since the 1970s. The toxicity of TBT prevents the growth of algae, barnacles and other marine organisms on the ships' hull.

However, TBT leaches from the paint and enters the marine environment ; it accumulates in the sediment, especially in areas with a high density of ship movements like harbours and ports. From 1 January 2003 the use of TBT in anti-fouling systems on ships will be banned, following a decision taken by the International Maritime Organisation (IMO) and a EC Directive (Commission Directive 2002/62/EC of 9 July 2002 on organostannic compounds). In order to prevent the desorption from sediments reintroducing TBT into the marine environment, effective removal and treatment methods for TBT contaminated sediments need to be implemented.

This project aims at demonstrating an integrated approach to eliminate TBT from the marine environment: prevention, removal, treatment and finally reuse.

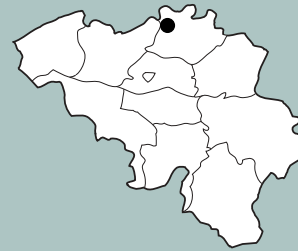
## Project Objectives

The overall objective of the project is to provide an integrated solution for the permanent removal of TBT from waterways near harbours and inland ship repair yards.

Specific objectives include the following:

- assess the environmental impact of already available alternatives for TBT;
- evaluate the release of TBT from sediments into the aquatic environment during dredging operations;
- test on a pilot-scale several treatment technologies for TBT contaminated sediments;
- identify possibilities for the reuse of treated sediments.

LIFE02 ENV/B/000341



## Beneficiary:

### Type of beneficiary

Public authority

### Name of beneficiary

Gemeentelijk Havenbedrijf Antwerpen

### Postal address

Entrepotkaai 1

B-2000 Antwerpen

BELGIUM

Tel.: 00 32 03 205 23 16

Fax: 00 32 03 205 20 32

E-mail: Eddy.Bruyninckx@haven.Antwerpen.be

### Name of contact person

Eddy BRUYNINCKX

## Duration of project:

From October 2002 to October 2004

## Total budget in euro:

3,222,366

## EC contribution in euro with %:

1,335,495 (44.83% of eligible costs)

## Priority theme covered by the project:

PG4.4 Other area - Waste management

The following specific results can be expected:

- a list of environmental friendly alternatives to TBT in anti-fouling systems;
- a turbidity limit that can be imposed during dredging operations in order to prevent the release of TBT from sediments;
- the presentation of dredging techniques minimizing TBT release from sediments;
- an integrated treatment technology for TBT contaminated sediments, according to the BATNEEC principle;
- reuse possibilities for treated sediments.



# Optimised recycling of organic household waste by establishing a close relation between the sources, households, and the end users

## Official title

Short circuiting the carbon and nutrient cycle between urban and rural districts by establishing three new systems for source separation, collection and composting of organic waste in the greater Copenhagen area

## Background

The Community Strategy for Waste Management states that recycling activities should be promoted all over the Community, but that this requires the public to be convinced of the health, safety and environmental benefits of the recycled products. Composting is mentioned as an important tool for recycling biodegradable municipal waste for agricultural use, leading to a saving of resources by substituting for commercial fertilisers. The LIFE-Environment Programme outlines in detail the main priorities regarding Community waste management projects: Next to the prevention of waste generation, projects promoting recycling – including composting have the highest priority. The need for projects focusing on source separation of biodegradable waste and improving compost quality is stressed.

The "SHORT-CIRCUIT" project should be seen as contributing to optimising the Community strategy for recycling nutrients and organic carbon from organic waste. It should go some way towards meeting the European strategy on waste management as put forward in the draft proposal for a composting Directive which could include mandatory source separation of biodegradable material, and limits on contaminants in composted material and also targets for composting. It will also be in accordance with the impending Community regulation on animal by-products.

## Project Objectives

The "SHORT-CIRCUIT" project will develop and demonstrate to the public three new full-scale source separation and composting systems (involving

LIFE02 ENV/DK/000150  
SHORT-CIRCUIT



## Beneficiary:

### Type of beneficiary

Public institution

### Name of beneficiary

The Danish Forest and Landscape Research Institute

### Postal address

Hoersholm Kongevej 11, Hoersholm

DK-2970

DENMARK

Tel.: 00 45 45 17 82 63

Fax: 00 45 45 76 32 33

E-mail: [ulr@fsl.dk](mailto:ulr@fsl.dk)

### Name of contact person

Ulrik REEH

## Duration of project:

From October 2002 to October 2005

## Total budget in euro:

1,987,171

## EC contribution in euro with %:

783,903 (49.94% of eligible costs)

## Priority theme:

PG4.3 Waste important in volume

11,400 households within the greater Copenhagen area) which are designed to optimise the recycling of organic household waste by establishing a close relation between the sources, households, and the end users, mainly farms and market gardens.

The project will attempt to maximise public participation, thereby maximising the amount of organic waste source separated and simultaneously minimising the amount of contaminants.

It also aims to evaluate the three systems by using a computerised systems analysis to compare recycling efficiency, environmental impacts and costs between the three systems, and also make the comparison with more conventional, centralised systems.

# Using permanently mounted sensors for monitoring oil spills at sea

## Official title

Sensor for identification of oil spills from offshore installations

## Background

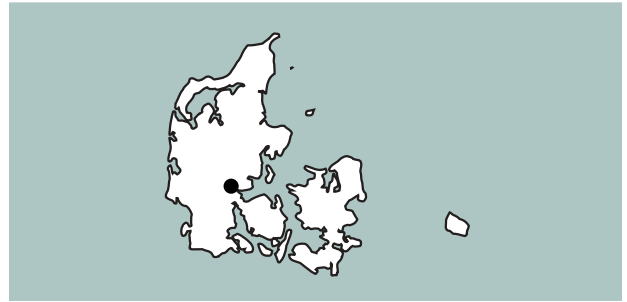
Ships and offshore installations are the most common sources of more than 500,000 tons of oil spilled into the marine environment every year. The Convention for the Protection of the Marine Environment of the Northeast Atlantic (the OSPAR Convention), which entered into force in March 1998 and includes the participation of the EU, will develop new programmes and measures required to identify, prioritise and monitor the emissions, discharges and losses of substances, which reach or could reach the marine environment.

A comprehensive feasibility study, carried out by the Danish Environmental Protection Agency, concluded that the technology required for the successful enforcement and implementation of the OSPAR strategies and action plans is not currently available. Existing methods employing airplanes, inspection teams and satellite surveillance are not sufficient to ensure mandatory continuous surveillance and are also expensive and unreliable. The feasibility study did nevertheless reveal that the appropriate technology to expose polluters could be developed in time to meet the Danish regulatory requirements and could be run as a successful business venture in the future.

## Project Objectives

The objective of the "OSIS" project is by 2004 to develop and test a technical solution for implementing and enforcing the programmes and measures adopted according to the strategy established by the OSPAR Convention and, hence, also provide the required tool for the implementation of the Community environment policy and Danish legislation on the protection of the naval environment.

LIFE02 ENV/DK/000151  
OSIS



## Beneficiary:

### Type of beneficiary

Micro enterprise (<10 empl.)

### Name of beneficiary

OSIS International Ltd

### Postal address

Tirsbaekvej 131, Vejle

DK-7120

DENMARK

Tel.: 00 45 21 25 19 88.

E-mail: pmj@post10.tele.dk

### Name of contact person

Peter MOELLER-JENSEN

## Duration of project:

From January 2002 to December 2004

## Total budget in euro:

3,360,087

## EC contribution in euro with %:

867,392 (25.82% of eligible costs)

## Priority theme:

PG3.2 Integrated environment management

The OSIS concept is to create permanently mounted sensor system technology that will permit continuous online remote monitoring of offshore installations in any location, using the latest generation of satellite and Internet communication options. The project will demonstrate the viability of such technology for continuous, immediate and accurate detection of oil spills from offshore installations to the sea areas, which are identified as "Special Areas" by the International Maritime Organization, and will thus provide a potential solution to a widespread problem of international concern.

# Thermal hydrolysis of PVC and recycling of the reaction products

## Official title

Innovative demonstration project for chemical recycling of PVC waste through the use of thermal hydrolysis

## Background

PVC waste is one of the focal points of the EU environmental policy for a number of reasons. The incineration of PVC waste constitutes a recognised environmental problem because it results in dioxin formation. The quantity of PVC waste generated annually in the EU Member States is significant and it is important to avoid depositing such waste in landfills and to find other sustainable solutions to treat it.

The European PVC industry has identified two processes to recycle PVC waste:

- "Mechanical recycling" consists of specific methods, whereby one pure type of PVC waste is recycled to produce the goods that generated the waste, and;
- "Feedstock recycling" in which PVC waste of mixed types is converted to other useful chemical products that may be recycled in turn.

The PVC hydrolysis concept is one of four techniques used in feedstock recycling and is considered to be potentially the most promising by the European PVC industry.

## Project Objectives

The objective of this innovative project is to study the continuous thermal hydrolysis of PVC waste and the recycling of the reaction products. The project also aims to establish if this recycling process can be achieved at a relatively low cost in a treatment facility with a capacity of around 60,000 metric tons of PVC waste per year.

LIFE02 ENV/DK/000155  
PVC HYDROLYSIS



## Beneficiary:

### Type of beneficiary

Private enterprise

### Name of beneficiary

RAASTOF OG GENANVENDELSE SELSKABET AF  
1990 A/S

### Postal address

Selinevej 4, Copenhagen

DK-2300

DENMARK

Tel.: 00 45 58 19 10 33

Fax: 00 45 58 19 13 03

E-mail: jprocida@rgs90.dk

### Name of contact person

Jan PROCIDA

## Duration of project:

From September 2002 to June 2004

## Total budget in euro:

12,725,905

## EC contribution in euro with %:

3,605,597 (30% of eligible costs)

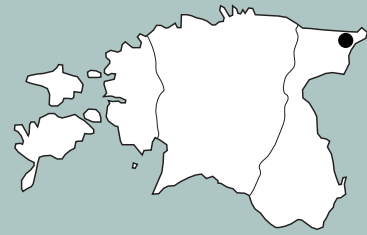
## Priority theme:

PG4.1 Packaging and plastics

# Democratic Urban Planning

## Using eTechnology

LIFE02 ENV/BE/000338  
RE-USE WORKS



### Official title

e-System for Real Time Democratic Land-Use Planning of Urban Environment – Pilot Action in Narva Community

### Background

In the wider environment, urban planning in the past has not always contributed to the potential of cities and of neighbourhoods to provide various functions simultaneously. Monofunctional areas have emerged, catering for specific elements of human life (work, shopping, leisure, living). Such areas reduce the potential of cities to become a space where people can develop their lives to the fullest. Development is needed in urban planning to allow for greater sustainability, mix and diversity, and to restore the role of the city as a lively meeting place for all activities at all times of the day.

The expanding economic growth in Eastern Europe, especially in the EU candidate countries, contributes significantly to global climate change. These countries are experiencing rapid increases in the emission of greenhouse gases. The key reason for this trend is the ongoing urbanisation.

It is clear that new efforts are necessary to strengthen or restore the role of Europe's cities as places of social and cultural integration, as sources of economic prosperity and sustainable development, and as the bases of democracy.

### Project Objectives

The objective of the "eCommunity" project is to promote sustainable and democratic urban planning by using opportunities offered by information technology and the World Wide Web. The aim is to apply innovative web-based software solutions, which will promote the concept of e-democracy by enabling an exchange of opinions and information. That will help raise public awareness. The aim is to produce results that can be reproduced in spatial planning and policymaking processes at a local level. The final goal of the project is to demonstrate the system as a tool for urban planning in the EU.

### Beneficiary:

**Type of beneficiary**  
Public authority

**Name of beneficiary**  
Narva Municipality

**Postal address**  
Peetri Plats 5, Narva  
ESTONIA  
Tel.: 00 37 250 388 72  
Fax: 00 37 235 990 51  
E-mail: ular.mark@narvaplan.ee

**Name of contact person**  
Mr. Rauno SCHULTS

### Duration of project:

From September 2002 to August 2005

### Total budget in euro:

1,591,010

### EC contribution in euro with %:

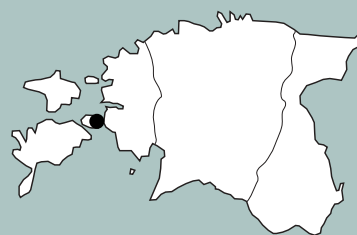
768,205 (48.77% of eligible costs)

### Priority theme covered by the project:

PG1.1 Urban environment

# Controlling pollution from the oil-shale processing industry

LIFE02 ENV/EE/000424  
HASCO



## Official title

Oil- shale semi-coke processing into soil improver, which is used to stabilize slurry and restore damaged soils for afforestation with hybrid aspen

## Background

Ida-Virumaa, the most north eastern county of Estonia, has large-scale oil-shale processing industries (> 10 million tonnes/year) and, as a result, suffers from a depletion of oxygen.

The coking of oil-shale by the companies Viru Keemia Grupp and Kiviõli Keemiatööstuse OÜ leads to the production of oil, and harmful solid waste (semi-coke). Currently, the waste is stored in hills situated nearby the enterprises (the amount of semi-coke in these hills is approximately 85 million tonnes, and is increasing by 1 million tonnes annually). Semi-coke is an extremely alkaline (pH = 12,8), porous substance, containing toxic sulphides, phenols, polycyclic aromatic hydrocarbons and other harmful components.

On the other hand, non-stabilized slurry is a point source of water pollution, whereas semi-coke, pre-treated with peat, is an excellent absorber and stabilizer of slurry, having the ability to stop odour emission.

The "HASCO" project aims to stop, or reduce considerably, the pollution in Ida-Virumaa and return the damaged or poor soils to efficient use. Solving the environmental problems in this area which has one of the highest unemployment rates in Estonia will encourage a positive attitude among the local population.

## Project Objectives

In general terms, the project will lead to an improvement of the environmental situation of Ida-Viru County and considerably reduce pollution into the Baltic Sea. It will allow for atmosphere CO<sub>2</sub> binding and a decrease in greenhouse gas emissions. The recycling of oil-shale processing solid waste will lead to the development of an environmentally friendly by-product – an organic

## Beneficiary:

### Type of beneficiary

Public authority

### Name of beneficiary

Sonda Parish

### Postal address

Lembitu 46, Sonda

ESTONIA

Tel.: 00 37 233 740 02

Fax: 00 37 233 740 02

E-mail: sondavv@estpak.ee

### Name of contact person

Mr. Erm PEEDU, Chairperson of the parish

## Duration of project:

From February 2002 to December 2004

## Total budget in euro:

3,560,000

## EC contribution in euro with %:

1,264,985 (50% of eligible costs)

## Priority theme covered by the project:

PG2.2 Ground water protection



fertilizer to stabilize polluting slurry. Soils damaged by the oil-shale industry will be restored and subsequently planted with hybrid aspen. Existing jobs will be maintained and new jobs will be created. Demonstration pilot areas proving the efficiency of the utilisation of the recycled toxic semi-coke and slurry to restore damaged soils will be set up.

# Mobilising stakeholders to manage the “Green Valley” of Salo

## Official title

Operation model of environmental management in Salo region

## Background

The “Green Valley – eSalon” project is part of a larger development project for the Salo region in north western Finland. Information services, administrative methods, planning, projects, which have an impact on the environment and overall attitudes, could be affected by this ambitious project to create a better environmental culture in the Salo region.

## Project Objectives

The overall aim of the “Green Valley – eSalon” project is to develop an operational model of environmental management which involves a wide range of stakeholders, both public, private and civil society organisations.

As the starting point, information on environmental programmes will be collected from the municipalities and other operators in the region and a regional environmental strategy will be developed. This strategy will inspire the preparation of an operational model for environmental management in the region. The model will be tested as a tool for ecological sustainable planning in Viitannummi, a new residential area of the city of Salo. The Salo region is considered to be one of the most remarkable cultural landscapes in Finland. The project also aims therefore to promote the respect of the region among the local citizens and improve their awareness of the cultural landscape. Guidelines for landscape management and the advancement of biodiversity in the cultural environment of the region will be elaborated. Development and training programmes in environmental management systems and environmental technology will be offered to private companies and civic organisations. Finally, an environmental platform – eSalon – will be developed as a general web site to promote environmental services in the region. Information will be presented in a user interface based on the Geographical Information System. The environmental database would be accessible for local citizens, entrepreneurs, schools and people moving into Salo from other regions.

LIFE02 ENV/FIN/000319  
GREEN VALLEY – E SALON



## Beneficiary:

### Type of beneficiary

Public authority

### Name of beneficiary

City of Salo

### Postal address

Tehdaskatu 1  
P.O. Box, Salo  
FINLAND  
Tel.: 00 358 027 781  
Fax: 00 358 027 782 014  
E-mail: matti.rasila@salo.fi

### Name of contact person

Mr. Mika ILOMÄKI

## Duration of project:

From August 2002 to December 2004

## Total budget in euro:

498,600

## EC contribution in euro with %:

229,050 (50% of eligible costs)

## Priority theme covered by the project:

PG3.2 Integrated environment management

The municipalities could present their services, assets and other information and citizens would have access to administrative information, formulas and regulations concerning the environment sector i.e. environment permits, decisions of environmental authorities etc.

# Finnish know-how to increase the number of EMAS-registered schools and colleges

## Official title

Creation of environmental evaluation system for educational establishments

## Background

The new Eco-Management and Audit Scheme (EMAS) of the European Communities (Regulation EC 761/2001) aims to promote improvements in the environmental performance of European organisations in all sectors, including the public sector. Furthermore, the Fifth Environmental Action Programme of the European Community obliged every educational institution to incorporate sustainable development in its activity. However, in Europe the implementation of environmental management systems (EMS) and the number of EMAS-registrations has been very limited in the education sector.

In Finland, although a recent report published by the National Board of Education has pointed to the effectiveness of sustainable development training for personnel, there are no EMAS-registered educational institutions in the country. Furthermore, less than 10 educational institutions have received an ISO 14001 certificate, which deals with the environmental management of organisations.

## Project Objectives

The aim of the "ENVEDU" project aims to support the incorporation of sustainable development in the management, teaching and maintenance activities of educational institutions in Finland. It will develop an environmental evaluation system that will provide a step-by-step path towards EMAS-registration. The system will be structured according to the criteria of the Environmental Certification Applying to Education, and will be subject to a network of qualified auditors for the public sector. It will also include training supports for educational establishments. The model developed in the project will be disseminated throughout Europe and should go some way towards addressing the limited number of EMAS-registered educational establishments of which there are only twenty three so far (Germany: 18, Sweden: 3, Austria: 2).

LIFE02ENV-FIN-000320  
ENVEDU



## Beneficiary:

**Type of beneficiary**  
Public authority

**Name of beneficiary**  
HYVINKAEAE-RIIHIMAEMI VOCATIONAL ADULT  
EDUCATIONAL CENTRE

**Postal address**  
Torikatu 18  
P.O. Box 67, Hyvinkaeae, 05800  
FINLAND  
Tel.: 00 358 197 782 359  
Fax: 00 358 197 782 310  
E-mail: erkka.laininen@hrakk.fi

**Name of contact person**  
Mr. Erkkka LAININEN

**Duration of project:**  
From December 2001 to November 2004

**Total budget in euro:**  
1,071,979

**EC contribution in euro with %:**  
534,891 (49.91% of the eligible costs)

**Priority theme covered by the project:**  
PG3.2 Integrated environment management

# User-friendly and inexpensive environmental management tool for SMEs on the web

## Official title

Tool for small and medium sized transportation companies to improve their environmental performance

## Background

According to recent research, companies all over the world have started setting up systems to manage the environmental aspects of their business. Generally large, well-resourced firms have implemented Environmental Management Systems (EMSs). However, small and medium-sized enterprises (SMEs) have not adopted these management practices to the same degree, although research shows that their managers have positive attitudes towards environmental issues. The main reason is the lack of resources they have at their disposal to build up their environmental systems. SMEs would be willing to develop and implement EMSs, if they had a practical tool to conduct the process, and, therefore, they need a tailored approach to the development of EMSs. This tool should be preferably accessible on the internet, user-friendly, inexpensive and have low maintenance costs, so that significant resources are not diverted from production and service expenses.

## Project Objectives

The aim of this project is to produce a web-based tool and an environmental training programme for small and medium sized transportation companies. This tool will help them to manage and monitor their environmental performance. A firm will input its operational data into the application, which in turn will generate different kinds of reports e.g. the Eco-management and Audit Scheme (EMAS) Statement and documentation for the environmental management systems. The web-tool can also be integrated as part of an environmental management system for large companies.

LIFE02 ENV/FIN/000321  
EMSS FOR SMES



## Beneficiary:

**Type of beneficiary**  
Public institution

**Name of beneficiary**  
Helsinki University of Technology,  
Lifelong Learning Institute of Dipoli

**Postal address**  
Otakaari 24  
Espoo  
FINLAND  
Tel.: 00 358 945 153 70  
Fax: 00 358 945 140 68  
E-mail: tuula.pohjola@dipoli.hut.fi

**Name of contact person**  
Tuula POHJOLA

**Duration of project:**  
From September 2002 to August 2004

**Total budget in euro:**  
1,119,674

**EC contribution in euro with %:**  
558,462 (50% of the eligible costs)

**Priority theme covered by the project:**  
PG3.2 Integrated environment management



# Educating citizens about the food chain, environment and sustainable development

## Official title

Integrated management of rural based environmental education – relations of environment, food chain and sustainable development

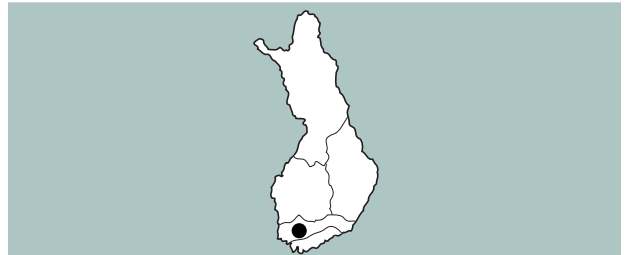
## Background

The citizens' awareness of key environmental issues regarding food production and food sustainability is not at a level that would enable them to effectively participate in decision-making on agri-environmental and integrated product policy and general environmental policy. They lack knowledge about the production of food and the food chain (from raw material to food and the return flow of nutrients through waste material back to nature). Furthermore, consumers do not receive sufficient information concerning the impact of the food industry on the environment. Therefore, relations between food production and the natural resources, as well as food services and the rural-urban interaction are becoming more and more obscure as the majority of citizens have lost direct contact with the production process.

## Project Objectives

The aim of the ECO LEARN project is to create a management plan for rural-based environmental education which will clarify the links between the environment, the food chain and sustainable development. A series of tools will be developed, including agri-environmental educational programmes, materials and thematic actions for schools, training for teachers, advisors and other stakeholders, experimental learning, networks of service providers and an IT portal for connecting customers and providers. Agropolis Oy, a development company operating in the agricultural and food sectors, is leading the "ECO-LEARN" project.

LIFE02 ENV/FIN/000322  
ECO LEARN



## Beneficiary:

**Type of beneficiary**  
Small and medium size

**Name of beneficiary**  
Agropolis Oy

**Postal address**  
Keskuskatu 29  
Jokioinen  
FINLAND  
Tel.: 00 358 341 861  
Fax: 00 358 341 867 382  
E-mail: juha.pirkkamaa@agropolis.fi

**Name of contact person**  
Juha PIRKKAMAA

**Duration of project:**  
From October 2002 to September 2005

**Total budget in euro:**  
1,142,092

**EC contribution in euro with %:**  
562,001 (50 % of eligible costs)

**Priority theme covered by the project:**  
PG3.2 Integrated environment management

# Rokua – eco-friendly tourist resort

LIFE02 ENV/FIN/000324  
ROKUA LIFE



## Official title

Ecologically Sound Tourism in Rokua Area

## Background

Rokua, an area with a rich natural environment in the northern part of Ostrobothnia, attracts considerable numbers of tourists. However, the natural environment, mostly comprising barren forest types, cannot support large numbers of tourists and still remain pleasant and in its natural state. The lichen heaths are particularly vulnerable to damage. When the vegetation protecting the ground surface gets damaged the rain and the wind begin to drive the sand underlying the hills thus causing drastic erosion.

In order to prevent erosion and other environmental damages in Rokua and in northern areas in general, special attention must be paid to the "environmental bearing capacity". While the environment is highly vulnerable, the recovery from damage is an extremely slow process. The condition of the nature in the Rokua area has been deteriorating as a consequence of several factors related to the activities taking place in the area such as tourism, area planning, construction and forestry. The impacts of these economic activities usually conflict with the conservation objectives unless they are taken into consideration at an early stage in the planning process. The seasonal nature of tourism in the area also puts pressure on the environment due to short peaks of use.

## Project Objectives

The objective of the "ROKUA LIFE" project is to develop and coordinate the know-how and expertise in different fields to demonstrate how an ecologically sound nature tourist resort can operate in practice. The local environmental Management system, which is certified according to the EN ISO 14001 standard, will serve as a starting point for the project.

An ecological administration model and environmentally friendly administration practices will be elaborated. To repair existing damages to the environment and to prevent further damage, various schemes will be drawn up and demonstrated.

Particular attention will be given to evening out the flow of visitors all year round and developing facilities for special groups (elderly and disabled).

### Beneficiary:

**Type of beneficiary**  
Public authority

**Name of beneficiary**  
Utajärven kunta

**Postal address**  
L Laitilantie 5  
91600 Utajärvi  
FINLAND  
Tel.: 00 358 855 101 00  
Fax: 00 358 855 422 78  
E-mail: kyosti.juujarvi@utajarvi.fi

**Name of contact person**  
Mr. Kyösti JUUJÄRVI

### Duration of project:

From September 2002 to June 2005

### Total budget in euro:

1,396,996

### EC contribution in euro with %:

698,498 (50% of eligible costs)

### Priority theme covered by the project:

PG3.4 Sustainable tourism

Ecological construction practices will be promoted and architectural guidelines for constructions will be worked out to create a distinctive "Rokua look".

Ecological business strategies will be developed and eco-products designed. The project is expected to secure existing jobs and create approx. seven new ones in the tourism and production industries.

In Rokua, a tourism area will be created in accordance with the principles of sustainable development, and the experiences gained can be passed on to operators in other similar tourism areas.

# Handling waste from stone wool production in a less costly and more environmentally friendly way

## Official title

Waste injection into the stone wool melting furnace

## Background

The total waste generated by the European stone wool industry is estimated to be between 20 to 60% of the product output. In the EU Member States there are 26 stone wool plants with about 40 stone wool production lines. With a yearly production of 20 000 tons/line on average, these plants generate 160 000 to 480 000 tons of waste in the EU.

The major part of the waste comes from the fiberizing process. When the spinning machine fiberizes molten material, a mixture of different types of rock, about 10-20% of the melt is not fiberized completely and consequently rejected from the production process.

Until now, there has been only one method to reuse this process waste, i.e. briquetting. The waste is ground and mixed with cement to briquettes. However, this "briquetting of waste", which is described in the BAT reference document for the glass industry, requires rather high initial production costs for machinery and buildings and uses an extra raw material, i.e. cement. Furthermore, the melting of briquettes causes increased atmospheric emission of particulate matter and sulphur oxides because of the impurities in cement.

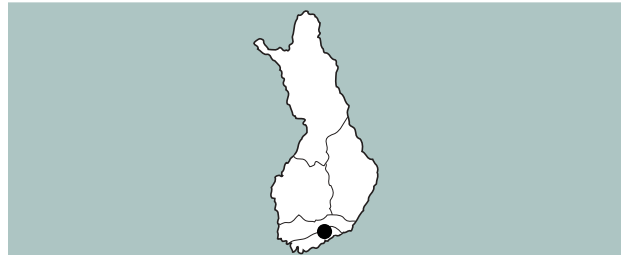
The Paroc enterprise has equipped one of its Swedish plants with the existing BAT for waste recycling (i.e. briquetting). The relatively high production costs and increased air emissions have intensified the need to find alternative techniques for waste recycling.

## Project Objectives

The main objectives of the "PAROC-WIM" project are:

- to demonstrate a cost efficient alternative to the technique presented in the BAT Reference Document for recycling production waste in the stone wool manufacturing process;
- to minimise the amount of waste from the manufacturing of stone (rock) wool by injecting the process waste into the melting furnace;

LIFE02 ENV/FIN/000328  
PAROC-WIM



## Beneficiary:

### Type of beneficiary

Enterprise (>250 employees.)

### Name of beneficiary

Paroc Group Oy Ab

### Postal address

Neilikkatie 17  
Vantaa, 01301  
FINLAND

Tel.: 00 358 204 556 526

Fax: 00 358 204 556 678

E-mail: kirsti.karppinen@paroc.com

### Name of contact person

Kirsti KARPPINEN

## Duration of project:

From December 2001 to November 2004

## Total budget in euro:

871,300

## EC contribution in euro with %:

194,490 (30% of eligible costs)

## Priority theme covered by the project:

PG4.3 Waste important in volume

- to develop the waste injection machinery to a commercial product available for all stone wool producers, using coke fired melting furnaces (over 90% of the stone wool production lines).

The demonstration project is in line with the Community strategy for waste management, 96/399, and with the Sixth Environment Action Programme 2001-2010.

## Keeping roads in good shape with waste materials

### Official title

Environmentally friendly systems to renovate secondary roads

### Background

The project addresses two major environmental problems that exist in every European country with significant industry and construction activities:

Firstly, environmental damage is caused to the ecological system, landscape and ground water resources when non-renewable natural stone materials are used to construct roads, landfills and other civil engineering applications. Increasing restrictions on the use of natural resources creates problems of limited availability and increases the costs of raw materials for the construction sector.

Secondly, there are vast quantities of industrial process waste uselessly deposited in landfills – either directly from the manufacturing process (like gypsum, sludge and filter-cake) or indirectly through incineration (ashes). This waste is an environmental problem both for the industry and society as a whole. In Finland alone, 4 million tonnes/year of process waste is being produced that could be used in geotechnical applications instead of depositing it. Industrial waste will never compensate for all natural stone materials, but it is estimated that it could potentially cover 20-25 % of the current consumption level.

### Project Objectives

The objective of the "KUKKIA-CIRCLET" project is to demonstrate the sustainable, environmental and competitive benefits of road construction methods that reuse old road material and recycle high-volume waste from the paper (fibre sludge and fly ash) and chemical industry (process gypsum and filtercake) in the construction and maintenance of the secondary road network.

The project will test the new, innovative methods to the full scale, assess the performance of the new processes and show the favourable long-term environmental, technical, social and economic benefits of the new methods to various interest groups in Europe.

LIFE02 ENV/FIN/000329  
KUKKIA CIRCLET



### Beneficiary:

#### Type of beneficiary

Public authority

#### Name of beneficiary

Finnish Road Enterprise

#### Postal address

Åkerlundinkatu 5 B

Tampere, 33101

FINLAND

Tel.: 00 358 204 444 250

Fax: 00 358 204 444 249

E-mail: seppo.kolkka@tieliikelaitos.fi

#### Name of contact person

Seppo KOLKKA

### Duration of project:

From December 2001 to December 2004

### Total budget in euro:

1,269,557

### EC contribution in euro with %:

626,815 (50% of eligible costs)

### Priority theme covered by the project:

PG4.3 Waste important in volume

A wide exploitation of the project results will protect non-renewable natural resources and reduce the quantity of waste and the need for landfills in Europe.

## Demonstrating eco-efficiency in the Kymenlaakso region

### Official title

The Eco-efficiency of Regions – Case Kymenlaakso

### Background

The European Community (EC) has recently published the Sixth Environment Action Programme 2001-2010 (1600/2002/EC) entitled "Environment 2010: Our Future, Our Choice". The Programme seeks new and innovative instruments for meeting complex environmental challenges and sets out five approaches, which emphasise the need for more effective implementation and more innovative solutions. The approaches are the following: to ensure the implementation of existing environmental legislation; to integrate environmental concerns into all relevant policy areas; to work closely with business and consumers to identify solutions; to ensure better and more accessible information on the environment for citizens, and to develop a more environmentally conscious attitude towards land use.

Eco-efficiency, combining the ecological, economic and social dimensions of development, has emerged as an important concept in environmental policy. The ECOREG project aims to deal with this issue by demonstrating how it can be implemented at the regional level. Kymenlaakso, a region situated in Southeast Finland will be used as a case study.

### Project Objectives

The ECOREG project will contribute to the implementation of the eco-efficiency concept and the deeper integration of environmental considerations into economic and social activities. To this end, it will introduce and quantify indicators of regional eco-efficiency, based on reliable and up-to-date environmental, economic and social information. It will also offer mechanisms for the assessment of these indicators and encourage a broad involvement of the various stakeholders. It will therefore contribute to the achievement of the goals defined by the Sixth Environment Action Programme, the Green Paper on Integrated Product Policy (COM (2001) 68) and finally the Integrated Pollution Prevention and Control - IPPC - Directive (96/61/EC).

LIFE02 ENV/FIN/000331  
ECOREG



### Beneficiary:

**Type of beneficiary**  
Public institution

**Name of beneficiary**  
Suomen ympäristökeskus/  
Finnish Environment Institute

**Postal address**  
Kesaekatu 6  
Helsinki, 00251  
FINLAND  
Tel.: 00 358 940 300 420  
Fax: 00 358 940 300 491  
E-mail: matti.melanen@vyh.fi

**Name of contact person**  
Matti MELANEN

**Duration of project:**  
From September 2002 to December 2004

**Total budget in euro:**  
681,400

**EC contribution in euro with %:**  
338,000 (50 % of eligible costs)

**Priority theme covered by the project:**  
PG5.1 Eco-design, eco-efficiency, green financial products

# Mobilising local population to minimise greenhouse gas emissions

## Official title

Projet d'initiative des villes pour la réduction des gaz à effet de serre

## Background

The Intergovernmental Expert Group on Climate Change (IEGCC) has concluded that the planet has warmed by 0.3 to 0.6°C since the end of the 19th century. The consequences of such a climate change could be disastrous.

The European Commission is aware of the importance of this phenomenon and is currently working on a **Community plan to combat climate change**.

The Inter-Ministerial Committee meeting on the greenhouse effect held in November 1998 and chaired by the Prime Minister of France defined the territorial basis of national policy to combat the greenhouse effect. Indeed, although international commitments have been made at state level (Kyoto protocol), emissions of greenhouse gases largely depend on decisions made at local level.

The PRIVILEGES project fits into the context of the guidelines set out in the LIFE-Environment programme to **reduce emissions of greenhouse gases**, applied to the urban area of Chalon-sur-Saône. It is intended to have a demonstrative impact at national and European level.

## Project Objectives

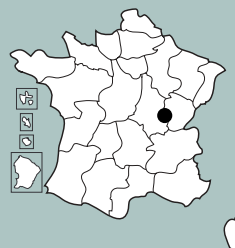
The project will mobilise diverse local actors (enterprises, households and local governments) in order to:

- define operational tools to reduce emissions of greenhouse gases;
- reduce the impact of economic activities on climatic phenomena.

The project will be co-ordinated by WWF - France, working in close partnership with the industrial sector (Maison de l'Environnement), the Municipality of Chalon sur Saône and the Agence de l'environnement et de la maîtrise de l'énergie - ADEME.

The project comprises the creation of an "eco-industrial" action plan and the implementation of a local community plan.

LIFE02/ENV/F/000289  
PRIVILEGES



## Beneficiary:

**Type of beneficiary**  
NGO

**Name of beneficiary**  
WWF - France

**Postal address**  
188, rue de la Roquette  
75011 Paris  
FRANCE

**Name of contact person**  
Mr Régis DICK  
Tel.: 00 33 1 55 25 84 84  
Fax: 00 33 1 55 25 84 85  
E-mail: rdick@wwf.fr

## Duration of project:

From September 2002 to August 2005

## Total budget in euro:

711,711

## EC contribution in euro with %:

355,800 (49.99% of eligible costs)

## Priority theme covered by the project:

CLEAN TECHNOLOGIES

PG3.3 Reduction of emission of gases having a greenhouse effect

## Expected results:

- achievement in **three years**, for Chalon-sur-Saône and some ten other local authorities, of the aims adopted in 1997 by France, namely an **average reduction of 5.2%** in their overall emissions of CO<sub>2</sub> between 1990 and 2010;
- implementation of **operational tools** applied to a local policy of managing emissions of greenhouse gases integrated in the various sectoral policies (construction, transport and education);
- promotion and dissemination of these tools at national and European level, with the products generated by the project being used by more than 50 local authorities.

# Managing water pollution from former mining sites in France and Hungary

## Official title

Prévention de la pollution des eaux de surface par des sources diffuses dues à des activités minières

## Background

Mining and metallurgical sites often give rise to diffuse pollution by metals or arsenic, as is the case in the gold mine at Salsigne (Aude, France) and the zinc mine at Gyöngyösoroszy (Hungary).

On both of these sites, the river water is unfit for consumption and cannot be used for irrigation. Agriculture is prohibited on many plots of land and the reputation of these sites has inhibited the development of agriculture and tourism, which are the only alternatives to the mining industry.

Diffuse pollution contaminates areas that can extend to several square kilometres. Every time it rains the runoff water carries particles of contaminated soil into rivers and lakes.

Erosion phenomena increase the accumulation of polluted sediments, giving rise to:

- chronic pollution in rivers due to the dissolving of metals and arsenic contained in the sediments,
- re-mobilisation of sediments during flooding, giving rise to toxic deposits (which was the cause of a disastrous event in Hungary in 1998).

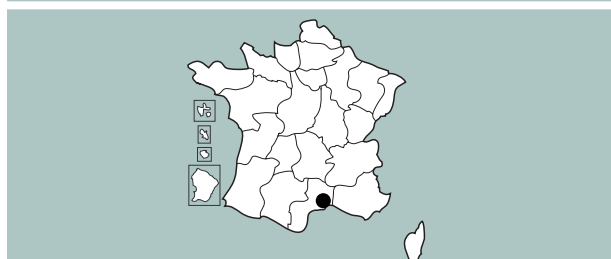
## Project Objectives

The principal aim of the project is to demonstrate that a suitable approach to the management of polluted runoff water and the phytostabilisation of soil makes it possible to reduce the transfer of pollution from former mining sites to surface water.

The project is planned to run as follows:

- design and building of water collection networks;
- construction of water processing works;
- design and introduction of phytostabilisation;
- design and operational implementation of a continuous water surveillance network;
- possible adaptation by progressive approximation of the water collection and phytostabilisation networks.

LIFE02/ENV/F/291  
DIFPOLMINE



## Beneficiary:

**Type of beneficiary**  
Public institution

**Name of beneficiary**  
Agence de l'Environnement et de la Maitrise et de l'Energie

**Postal address**  
Résidence ANTALYA  
119 avenue Jacques Cartier  
34965 Montpellier  
FRANCE

**Name of contact person**  
Mr Patrick JACQUEMIN  
Tel.: 00 33 4 67 99 89 79  
Fax: 00 33 4 67 64 30 89  
E-mail: patrick.jacquemin@ademe.fr

**Duration of project:**  
From October 2002 to December 2005

**Total budget in euro:**  
2,942,512

**EC contribution in euro with %:**  
1,008,757 (50% of eligible costs)

**Priority theme covered by the project:**  
PG2.4 Diffuse and dispersed sources of pollution

Rehabilitation of **20 hectares by using the proposed methodology** will allow a rapid reduction in the level of river-water pollution and an improvement in the quality of runoff water. Well-defined costs will show the benefits in the long-term management of these sites.

The study of adaptability to a Hungarian site will demonstrate the possibilities for using the approach on different sites and in different countries.

# Software tool for noise evaluation and management

## Official title

An efficient GIS tool oriented to meeting the objectives of the European Directive on the Assessment and Management of Environmental Noise (DAMEN)

## Background

Noise can have a significant effect on health: hypertension, stress, hearing difficulties, reduced learning capacity in young children, etc. It leads to a significant deterioration in living conditions which affects at least 25% of the European population. In addition, between 5% and 15% of European citizens suffer from difficulty sleeping due to noise.

In fact, the total social cost of noise in Europe is estimated to be between 13 and 38 billion euro per year, an amount which includes the depreciation in property, medical costs, loss of working days, etc.

As a result, the managers of urban areas must take into account all the environmental aspects of noise in their town planning projects. The new European directive on the assessment and management of environmental noise (Directive 2002/49/EC of 25 June 2002) requires all cities with more than 100,000 inhabitants (approximately 50% of the European population) to produce a noise plan and to adopt policies aimed at reducing the level of noise to which citizens are exposed.

## Project Objectives

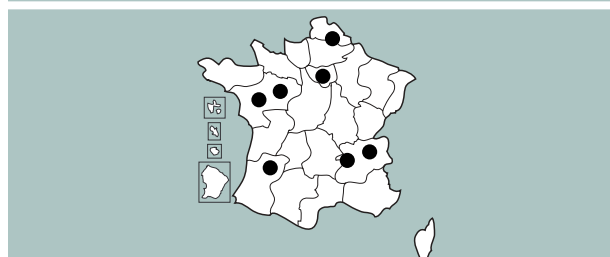
The GIpSyNOISE project will concentrate on four aspects of development of a software tool to assist in decision-making:

- introducing the standard models described in the EC Directive for the estimation of noise (road, rail, aircraft and industry);
- suggesting cross-correlations between noise and geo-referenced city management data, including the exposure of individuals to noise;
- improving the detailed modelling of noise nuisance;
- proposing relevant indicators and recommendations intended for decision-makers.

The project is proposed by the urban community of Lyon and on completion the partner cities in Spain (Barcelona, Huelva), Italy (Rome), Portugal (Porto), the Czech Republic (Prague) and Hungary (Szeged) will have access to version 1.0 of the software and a representative site will have been tested.

LIFE02/ENV/F/295

GIPSYNOISE



## Beneficiary:

### Type of beneficiary

Local authority

### Name of beneficiary

Communauté Urbaine de Lyon

### Postal address

20, rue du Lac – BP 3103  
69399 Lyon - Cedex 03  
FRANCE

### Name of contact person

Mr Olivier LAURENT  
Tel.: 00 33 4 78 63 46 71  
Fax: 00 33 4 78 14 39 80  
E-mail: Olaurent@grandlyon.org

## Duration of project:

From October 2002 to October 2005

## Total budget in euro:

1,382,409

## EC contribution in euro with %:

616,749 (44.60% of eligible costs)

## Priority theme covered by the project:

PG1.2 Quality of air and noise abatement

## Expected results:

- to offer decision-making support in relation to the application of the EC Noise Directive (strategic maps, action plans, communication);
- to make adequate tools available within a common software platform on a GIS (Geographic Information System) basis, intended for decision-makers (current situations and simulations);
- to anticipate the economic and social depreciation of urban areas that might result from the degradation of their environment in terms of noise;
- to integrate concerns about noise in new town planning projects, thanks to the various overlaps between socio-economic data and information related to noise.



# Monitoring municipal activities from an environmental viewpoint

## Official title

For an Environmental Accounting Tool (FEAT)

## Background

Local environment policies have an essential part to play because the majority of public services associated with the management of the environment are local. The organisation of services and the progressive introduction of standards have favoured the sectoral approach and the use of various intervention tools. The main aim of environmental actions is therefore to repair damage and to move and process effluents in a way that takes account of scale benefits.

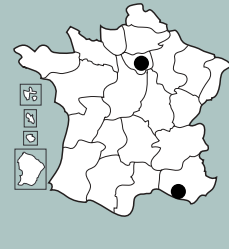
These processes have therefore given rise to an increase in expenditure and a search for specific revenues, which have been criticised by citizens in a context of rapid increases in public spending.

There are currently no details of the total cost nor the evaluation of actions associated with the environment that would make it possible to envisage alternative options. These would presuppose the ability to demonstrate the increased efficiency of preventative policies and the savings made through integrated approaches. At present the only indications of expenditure are at the level of whole services and the costs are only known on a forecast basis.

## Project Objectives

FEAT (For an Environmental Accounting Tool) is a tool for monitoring municipal activities from an environmental viewpoint. It enables an overall monitoring of the expenditure of these actions and their results, on the basis of an inventory of their environmental character. Tools will then be developed to evaluate the results and indicators of integration, prevention and overall cost of the actions. The analysis of expenditure on the basis of the ratio of their cost to the size of environmental effects will result in tools to aid decision-making. Five local authorities are involved and they will be supported by an experienced national team consisting of a specialised research organisation, the 'Fondation des Villes', and an association of 600 Mayors, the Eco-Maires.

LIFE02/ENV/F/297  
FEAT



## Beneficiary:

### Type of beneficiary

Association

### Name of beneficiary

Association les Eco-Maires  
(Association of mayors for the environment and sustainable development)

### Postal address

241, Boulevard Saint Germain  
75007 Paris  
FRANCE

### Name of contact person

Mr Dominique JOURDAIN  
Tel.: 00 33 1 53 59 58 00  
Fax: 00 33 1 53 59 58 09  
E-mail: [association.eco-maires@wanadoo.fr](mailto:association.eco-maires@wanadoo.fr)

## Duration of project:

From November 2002 to October 2005

## Total budget in euro:

794,051

## EC contribution in euro with %:

395,106 (50% of eligible costs)

## Priority theme covered by the project:

PG1.1 urban environment

## Expected results:

- creation of a transferable method for measuring expenditure and assessing local environmental actions currently dispersed between different city departments;
- elaboration of innovative tools to demonstrate the interest of sustainable and integrated approaches;
- comparison between cities, despite the diversity of the actions carried out.
- The usual way of disseminating the methods developed is through standardisation and certification. These municipalities will support the "transferability" of the method to other Eco Maires.

# Environmentally friendly management of plastic waste on the farm

## Official title

Optimiser la gestion des déchets plastiques agricoles

## Background

The EC Directive 91/156 on waste seeks to "limit the production of waste, particularly by promoting clean and recyclable technologies which are re-usable, taking into account the existing or potential outlets for enhanced waste,...".

In France the regulations on waste management are subject to the Law of 15/07/1975 and the Departmental Sanitary Regulations, which forbid dumping in the countryside, burning in the open air and the burying of waste. The Law of 13/07/1992 also forbids dumping after 1 July 2002.

Plastic waste is a problem on many farms. This waste is abandoned or buried in the fields, creating high levels of soil and water pollution and spoiling the landscape. Although it is illegal, this waste is sometimes burned, creating toxic fumes and polluting the air.

The project fits into the context of the implementation of a system of enhancement and recycling of plastic films used in agriculture.

## Project Objectives

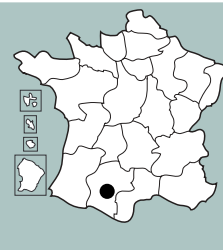
The aim is to set up a system of environmental management of agricultural plastic waste by:

- carrying out sorting of plastic waste on the farm with GIS (Geographic Information System) monitoring;
- encouraging the use of biodegradable plastics in agriculture;
- optimising the mechanical collection of used plastics;
- optimising the conditions for recycling and the yield;
- creating a precise methodological guide;
- transferring the method to other sites suffering from the same environmental problems.

The partners are:

- three industrial enterprises specialising in agricultural mechanisation and recycling of waste;
- four agricultural equipment sharing co-operatives, representing 30,000 farmers;
- one Portuguese partner.

LIFE02/ENV/F/000301  
PLASTAGRI



## Beneficiary:

### Type of beneficiary

Private association

### Name of beneficiary

Fédération Régionale des Coopératives  
d'utilisation du Matériel Agricole de Midi-Pyrénées

### Postal address

Zodiaque II - Z.A.C. du Canal  
3, passage de l'Europe  
31400 Toulouse  
FRANCE

### Name of contact person

Ms Eirios HUGO  
Tel.: 00 33 5 62 88 77 99  
Fax: 00 33 5 61 75 75 97  
E-mail: frcuma.midi.pyrenees@free.fr

## Duration of project:

From July 2002 to July 2005

## Total budget in euro:

1,320,897

## EC contribution in euro with %:

474,683 (37.66% of eligible costs)

## Priority theme covered by the project:

PG4.1 Packaging and plastics

## Expected results:

- to create a specific waste management method;
- to improve the recycling rate of agricultural plastics (at least 70 tonnes per operation);
- to arrive at a method that can be applied to other sites with the same environmental problems, for example with transferability to a site in Portugal;
- to communicate the results on an Internet site and distribute 120,000 copies of documents;
- to increase the use of biodegradable plastics by 10%;
- to create and strengthen local partnerships.

# New treatment system for waste water in a rural community

## Official title

Lagune naturel, infiltration-percolation et lits de traitement de boues plantés de roseaux: procédé de traitement des eaux pluviales, les eaux usées domestiques et boues primaires

## Background

The "Urban Waste Water" EC Directive stipulates that: "in the case of an existing collection system, if emissions are directed into fresh water and estuaries, agglomerations of less than 2000 inhabitants must set up an appropriate treatment system".

Many local authorities in France are faced with this obligation under the regulations. The existing network is often of the single unit type. The "natural lagooning" system brings an efficient response to this network constraint if emissions into the natural environment receiving them are in accordance with the UWW Directive.

The urban centre of the municipality of Aurignac currently has a rainwater network. Private individuals were responsible for setting up an individual purification system. Due to the difficulties encountered in setting up the system, most of the people connected their wastewater to the municipal rainwater network without treatment. The current situation is alarming: direct emissions run, with no treatment whatsoever, into a small stream which dries up at its lowest point and whose quality is deteriorating.

## Project Objectives

The aim of the "LILIPUB" is to confirm, in a rural environment, the usefulness of:

- a new branch associating the hydraulic capacity of a natural lagoon system with the qualitative performance of infiltration-percolation, as well as;
- the potential for treating primary sludge in situ.

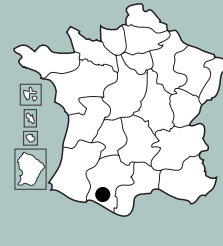
This procedure is intended to:

- achieve emissions at D4 level on effluent from a unitary network;
- limit the operating costs by an improved treatment of raw sewage;

The project provides for:

- building of a demonstration unit, to be installed at Aurignac (Haute-Garonne) with a view to processing domestic pollution of 300 inhabitant equivalents;

LIFE02/ENV/F/000303  
LILIPUB



## Beneficiary:

### Type of beneficiary

Local authority

### Name of beneficiary

Syndicat des Eaux Barousse Comminges Save

### Postal address

Chemin de la Chapelle Villeneuve de Rivière  
B.P. 204 - 31806 Saint - Gaudens - Cedex  
FRANCE

### Name of contact person

Mrs Nathalie BILOTTE

Tel.: 00 33 5 62 00 80 60

Fax: 00 33 5 62 00 80 69

E-mail: barousse.comminges@wanadoo.fr

## Duration of project:

From September 2002 to October 2005

## Total budget in euro:

1,021,933

## EC contribution in euro with %:

283,083 (47.91% of eligible costs)

## Priority theme covered by the project:

PG2.3 Waste water treatment

- monitoring measures that will make it possible to identify the capacities of the system, lagooning + filters, to purify these water types and define the quantity of rainwater that is acceptable;
- definition of several treatment systems depending on the quality of the emissions.

## Expected results:

- the choice of technical characteristics of the station depending on the quality objectives assigned to the receiving environment;
- dimensioning of treatment beds for raw sewage;
- hydraulic limits of the waste water treatment station;
- operating cost of the whole treatment system (water and sewage).

# Mobilising users for a pollution prevention approach

## Official title

Le management environnemental pour le contrôle de la qualité du réseau d' assainissement

## Background

The cleaning system is a real interface between wastewater emissions and the environment. The quantity and diversity of chemical products used by industry have increased significantly, causing damage to the networks themselves and also to the water treatment stations and, further downstream, to the environment as well. On the other hand, the quality of pipe connections is sometimes badly managed and the condition of sewers is difficult to monitor.

The "Urban Waste Water" Directive (91/271/EEC) is intended to prevent the degradation of the environment caused by emissions of urban wastewater and industrial wastewater. Ten years after it was introduced, however, the results of its implementation show a number of delays and loopholes.

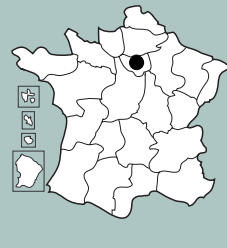
The introduction of the recent Framework Directive 2000/60/EC on water resources should make it possible to prevent and reduce pollution of these resources, promote their sustainable usage, protect their environment and improve the condition of aquatic ecosystems.

## Project Objectives

The aim of the "ECO-SEN" project is to develop a pollution prevention approach, combining quantitative assessment and a GIS (Geographic Information System), working in association with all cleaning system users.

Initially, the Syndicat intercommunal pour l'aménagement des vallées du Croult et du Petit-Rosne, will put in place an EMAS system of environmental management and audit, and will then assist enterprises in the area with their own environmental management systems and reproduce the programme in France and in Europe.

LIFE02/F/000305  
ECO SEN



## Beneficiary:

### Type of beneficiary

Local authority

### Name of beneficiary

Syndicat Intercommunal pour l'Aménagement Hydraulique des vallées du Croult et du Petit Rosne

### Postal address

rue de l'Eau et des Enfants  
95500 Bonneuil - en - France  
FRANCE

### Name of contact person

Mr Bernard CHOLIN  
Tel.: 00 33 1 30 11 15 15  
Fax: 00 33 1 39 93 32 32  
E-mail: info@siah-croult.org

## Duration of project:

From December 2002 to December 2005

## Total budget in euro:

1,250,210

## EC contribution in euro with %:

601,907 (49.9% of eligible costs)

## Priority theme covered by the project:

PG 3.2 Integrated environmental management

## Expected results:

In three years ECO-SEN should make it possible to:

- obtain ISO 14001 certification for the four pilot enterprises, EMAS certification of the SIAH (and the four pilots for 2006);
- introduce effective reporting of the data from the purification system;
- compile these data using a computerised super-system which is constantly updated;
- set up an exchange of information between industrial companies, organisations and the general public;
- ensure the transfer of skills in France and in Europe.

# Recycling scrubbing sludge from the quarry industry into expanded clay pellets

## Official title

Prototype de démonstration d'un nouveau procédé de valorisation des boues de lavage de carrières en billes d'argiles expansées

## Background

Decanting lagoons for clay-rich sludge resulting from the washing of granulates can be found on more than 2130 sites in Europe. Although these are mineral sludges, they are very fine and **their volume is very large**. They consequently constitute a significant hazard to surface and underground water (clogging) and for fauna and flora.

Their current use for accretion, their storage (gulying, moving sands) and their handling can create important sources of pollution. This type of hazardous waste is covered by EC Directive 1999/31/EC of 26 April 1999 on the emissions of waste materials.

The principal challenge is therefore the industrial transformation of this waste. The ENTEMA project fits into the context of the management of large volumes of waste using an experimental alternative method for recycling clay-rich sludge into expanded clay pellets, with many different applications (light concrete, etc.).

## Project Objectives

The aim is to carry out a pilot demonstration to validate the transformation of clay-rich sludges from a specific quarry site into expanded clay pellets.

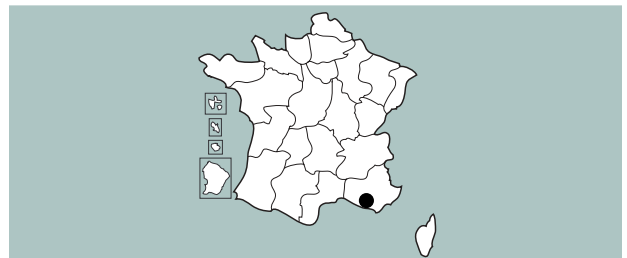
The project should make it possible:

- to reduce pollution by this type of sludge,
- to economise on mineral resources, these pellets are currently manufactured using pure clay from clay quarries;
- to reduce emissions of greenhouse gases (in accordance with the Kyoto protocol) by abandoning the current methods of manufacturing balls in rotating furnaces, since these installations emit greenhouse gases.

### Expected results:

- implement a prototype 250 kW microwave with a capacity of 1.4 t/hr;
- reduce gas emissions by 75% in comparison with rotating furnaces;

LIFE02/ENV/F/000307  
ARGIMIWE



## Beneficiary:

### Type of beneficiary

Small private enterprise

### Name of beneficiary

ENTEMA

### Postal address

Les Demeures de Marion - B.P. 48  
3, rue Antoine Fortuné Marion  
13275 Marseille  
FRANCE

### Name of contact person

Mr Frédéric VANDENBUSSCHE

Tel.: 00 33 4 91 40 15 56

Fax: 00 33 4 91 40 53 39

E-mail: f.vandenbussche.entema@nomade.fr

## Duration of project:

From December 2001 to September 2003

## Total budget in euro:

1,286,362

## EC contribution in euro with %:

317,867 (26.23% of eligible costs)

## Priority theme covered by the project:

PG4.3 Waste important in volume

- optimise the washing process and draw up an environmental guide;
- reduce lagooning by 80%;
- improve the mechanical properties of the pellets;
- reduce lagooning by 25% in 10 years in Europe;
- stimulate interest among five existing manufacturers;
- communicate and disseminate the results to 5 professional quarrying groups in Europe (9,000 quarries and 1,500 lagoons), to 30 journals and 10 existing manufacturers.

# Economical and ecological recycling of all polyurethane plastics

## Official title

Large-Scale Polyurethane Recycling

## Background

The reuse of polyol as a resource in the chemical recycling of polyurethane (PU) is currently carried out at a few, inefficient pilot plants across Europe only. The applied techniques are suitable for particular PU types only, with capacities being highly limited.

Economic efficiency can be achieved by performing chemical recycling on large-scale production plants. This kind of production could reduce costs by 40% in comparison to that of all new material.

A total EU production of more than 2,6 million tons of PU is incinerated or dumped. Chemical recycling by reusing the polyol is in the long term the only recycling technique with the potential of delivering a feasible recycling for all PU plastics with a high share of recycled-material.

## Project Objectives

The main objective of the project is to demonstrate an economically and ecologically viable recycling system (full cycle, not down cycling) for all polyurethane plastics (PU).

The system can be implemented at PU manufacturers of a reasonable size who could immediately use their PU-scrap to regain the polyol and merge it into the production process. Raw recycled polyol could be refined to make ready-to-use material blends. These could be useful to PU manufacturers who do not have their own recycling plant. Thus all manufacturers may profit from the advantages of the new technology.

It should be possible to recycle all PU waste by disseminating the new technology and establishing decentralized plants. This will positively contribute to the protection of resources and a reduction of waste and CO<sub>2</sub> output.

LIFE02 ENV/D/000398  
RECPOL



## Beneficiary:

### Type of beneficiary

Small and medium sized enterprises  
(fewer than 250 employees)

### Name of beneficiary

REGRA Kunststofftechnik GmbH

### Postal address

Im Wiesel 4  
66854 Pirmasens  
GERMANY

### Name of contact person

Herr Heinz BADER  
Tel.: 00 49 0 6331 8703 33  
Fax: 00 49 0 6331 8703 44  
E-mail: bader@regra.de

## Duration of project:

From December 2001 to December 2004

## Total budget in euro:

2,204,035

## EC contribution in euro with %:

390,042 (30% of eligible costs)

## Priority theme covered by the project:

PG4.3 Waste important in volume

## More efficient management of storm water

### Official title

Optimised environmental rainwater management systems in the sphere of environmental engineering

### Background

In five EU cities, the treatment of wastewater and storm water will be optimised by the use of the HydrOstyx discharge brake. This system will make it possible to ensure that less than 10 percent of the annual pollution load reaches the water body. The project will demonstrate the diverse utilisation possibilities under different conditions. A comparison and evaluation of the results will be obtained by measurements.

The practical benefits of using the system will be demonstrated by this project and it will lead to a more standardised, swift, cost-effective and optimised storm water treatment system in the EU.

### Project Objectives

The newly developed discharge brake will help to meet the requirements of the EC Directive 91/271/EEC of 21 May 1991 concerning urban wastewater treatment by reducing the high discharge of sedimentation with organic pollution as well as the run-off co-efficient causing ecological and hydrological stress.

LIFE02 ENV/D/000399  
HYDROSTYX



### Beneficiary:

**Type of beneficiary**  
private association

**Name of beneficiary**  
Europäische Kommunale  
Interessengemeinschaft (EKI) GdBR

**Postal address**  
Schaffhauser Str. 103  
79761 Waldshut-Tiengen  
GERMANY

**Name of contact person**  
Herr Dipl. Ing. (FH) Harald GUETHLER  
Tel.: 00 49 0 7741 6092 10  
Fax: 00 49 0 7112 1626 61  
E-mail: h.guethler@guethler-ingenieure.de

**Duration of project:**  
From July 2002 to June 2004

**Total budget in euro:**  
2,801,960

**EC contribution in euro with %:**  
535,113 (30% of eligible costs)

**Priority theme covered by the project:**  
PG2.3 Waste water treatment

# Producing smoked sausages in an environmentally friendly way

LIFE02 ENV/D/000403  
CIRCO-CLEAN



## Official title

First-time implementation of a new and environmentally sounded cold smoke climatic chamber for industrial production of uncooked sausages

## Background

The current technology for producing smoked sausages and similar products dried and/or smoked, is highly consumptive in energy (in order to dehydrate and reheat the air), water and chemicals (smoke-washing); it involves hygienic risks (germ contamination of fresh air) and pollutes the environment with chemicals and hazardous waste (smoke-tar and oil).

The "Circo-Clean" technology uses a hygroscopic and regeneratable salt solution to dehydrate the air, cutting down consumption for energy. Moreover, the circulation of smoke-loaded air leads to a considerable reduction in emission and improves hygiene in general.

## Project Objectives

Applying the "Circo-Clean" procedure for the first time, this LIFE-Environment project will result in the implementation of a new and environmentally sound cold smoke climatic chamber for the industrial production of smoked sausages.

It will considerably reduce the environmental impact by cutting down the demand of energy and natural resources (air, water) and by reducing hygienic risks as well as chemical and hazardous emissions from the production sites. At the same time it will improve the quality and safety of the food products. This innovative technology can moreover be easily transferred to other branches of the food industry.

## Beneficiary:

### Type of beneficiary

enterprise (more than 250 employees)

### Name of beneficiary

Lake Vaettern Society for Water Conservation

### Postal address

Schafft Fleischwerke Ansbach  
Zweigniederlassung der Union Deutsche  
Lebensmittelwerke GmbH  
Eyber Strasse 81  
91522 Ansbach  
GERMANY

### Name of contact person

Herr Dr. Knut KOEHLER  
Tel.: 00 49 0 9811 8013 49  
Fax: 00 49 0 9811 8011 06  
E-mail: Knut.Koehler@unilever.com

## Duration of project:

From August 2002 to January 2005

## Total budget in euro:

2,192,589

## EC contribution in euro with %:

543,498 (30% of eligible costs)

## Priority theme covered by the project:

PG3.1 Clean technologies



## Advanced technology for cleaning up waters

LIFE02ENV/D/000404  
ULTRASCHALLREINIGUNG



### Official title

Waste water cleaning through Ultrasonic Resonance

### Background

Wastewater from the food and beverage industry, leach water from municipal dumps as well as drinking water purification plants, invariably puts great strain on the environment.

The load of highly contaminated waste waters can be reduced dramatically by implementing the Ultrasonic Resonance Cleaning (ultrasonic based oxidation). The efficiency of this technology exceeds that of all traditional procedures.

### Project Objectives

In the project "Ultraschallreinigung" it is planned to develop three prototypes of Ultrasonic Resonance Cleaning specifically designed to use in different EU countries and in various typical fields of application, i.e. standard waste water cleaning requirements of food and beverage industries, municipal or special waste dumping sites and drinking water purification plants.

The technology should prove to be reliable and superior compared to the treatment technologies currently in use. It is intended to reduce the contaminant load of the wastewater below a threshold where wastewater may be drained into the water body or used as process water.

The know-how generated during the project will be used to optimise the system and to prepare for a broad market entry.

### Beneficiary:

**Type of beneficiary**  
micro enterprise  
(fewer than 10 employees)

**Name of beneficiary**  
Ultra Sonic Systems GmbH

**Postal address**  
Gewerbstraße 12-14  
86707 Westendorf  
GERMANY

**Name of contact person**  
Herr Ulrich POESCHL  
Tel.: 00 49 0 8273 9959 30  
Fax: 00 49 0 8273 9959 390  
E-mail: info@ultra-sonic-systems.com

**Duration of project:**  
From September 2002 to May 2005

**Total budget in euro:**  
2,014,660

**EC contribution in euro with %:**  
583,100 (30% of eligible costs)

**Priority theme covered by the project:**  
PG2.3 Waste water treatment

# Sound and cost-effective non-thermal plasma plants for purifying waste air

LIFE02 ENV/D/000406  
NT-PLASMA



## Official title

Improved application of catalytically supported low temperature plasma plants for waste air purification

## Background

The technology proposed by this project uses plasma to purify waste air. Plasma is a highly charged electric field, which leads to oxidation of waste air in presence of high humidity and catalysts. Non-thermal plasma plants are used for the purification of low concentrated (<1g/m) emissions. At the present time, waste air purification processes can be partially carried out only. In the case of waste air components, which are hard to oxidise (e.g. amines, paraffins and diverse Sulfuric components), non-thermal plasma methods often are not efficient enough.

The "NT-Plasma" project will aim at improving the efficiency of non-thermal plasma procedures for waste air purification. By the improvement of plasma generators a fail-safe and cost-effective waste air purification method can be achieved.

## Project Objectives

The expected results include:

- Significant reduction (>35%) of the present power consumption values in comparison to alternatively available waste air purification methods.
- Significant reductions of the investment costs (>50%).
- Reduction in the size of the technical plants.
- Increase of the catalyst's lifetime by reactivating its surface (e.g. by steady ozone - O<sub>3</sub> -oxidation of the catalyst at <200°C).

## Beneficiary:

### Type of beneficiary

Small and medium sized enterprises  
(fewer than 250 employees)

### Name of beneficiary

Doerken GmbH & Co. KG

### Postal address

Wetterstr. 58  
58313 Herdecke/Ruhr  
GERMANY

### Name of contact person

Herr Dipl.-Ing. Michael HAAS  
Tel.: 00 49 0 2330 634 33 (Zentrale-1)  
Fax: 00 49 0 2330 633 55  
E-mail: mhaas@doerken.de

## Duration of project:

From February 2002 to October 2003

## Total budget in euro:

435,340

## EC contribution in euro with %:

83,097 (30% of eligible costs)

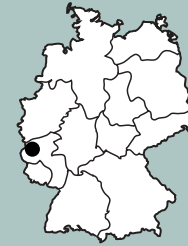
## Priority theme covered by the project:

PG1.2 Quality of air and noise abatement

- Make available a simple technique to purify emissions, which otherwise could only be treated in combustion processes.
- Reduction of greenhouse gas emissions.

# Geothermal heating for students in Aachen

LIFE02 ENV/D/000408  
SUPERC



## Official title

Geothermal energy supply for heating and cooling of the Students' Service Centre of RWTH Institute of Technology University of Aachen

## Background

Up to 60 % of global CO<sub>2</sub> emissions are caused by the supply of heating to buildings. The reduction of these emissions is a priority for EU environmental policy. Geothermal heat is the only renewable energy, which can be used as an alternative to fossil fuels across Europe all year round. The "SuperC" project demonstrates the economical and ecological advantages of geothermal energy for large buildings. The projected type of installation will reduce the CO<sub>2</sub> emissions by 95% and is highly transferable.

## Project Objectives

The installation, which will be developed by the project, will facilitate the heating and cooling of the Students' Service Centre of RWTH Institute of Technology at the University of Aachen. The deep geothermal heat exchanger (GHE) is dimensioned to operate without a heat pump over a period of 40 years. About 340 tons of CO<sub>2</sub> per year will be saved in heating and cooling the building. The self-contained water circulation will keep this type of installation free of corrosion and straightforward to maintain. The installation may take place in the vicinity of the customer at any location.

The project will involve the cooperation and technical expertise of six SMEs and two start-ups and will be a reference project in Europe. Technical and economic data for the planning of future projects will be supplied.

The nature of the building and the public relations infrastructure of the project partners guarantee that the concept of CO<sub>2</sub> - free heat supply by geothermal energy will be a subject of public debate during and after the project implementation.

## Beneficiary:

**Type of beneficiary**  
university

**Name of beneficiary**  
Rheinisch-Westfaelisch Technische  
Hochschule Aachen (RWTH)

**Postal address**  
Templergraben 55  
52056 Aachen  
GERMANY

**Name of contact person**  
Tel.: 00 49 0 2418 0956 90  
Fax: 00 49 0 2418 0921 50  
E-mail: Geothermie@IFM.RWTH-Aachen.de

## Duration of project:

From April 2002 to March 2006

## Total budget in euro:

5,140,710

## EC contribution in euro with %:

1,972,596 (50% of eligible costs)

## Priority theme covered by the project:

PG3.3 Reduction of emission of gases having a greenhouse effect.

## Soil-gas extraction to decontaminate very deep soils

LIFE02 ENV/D/000410  
EBEBOBO



### Official title

Development of design data for the extraction of soil-gas out of great depths

### Background

The administrative district of Harburg is carrying out this demonstration project in order to clean up a site, which is contaminated by tetrachlorethylene (PCE). The contamination was caused by a former laundry, which operated there from 1956 until 1985 and used PCE for cleaning purposes. The sewage from the laundry infiltrated into the soil.

### Project Objectives

The "EbeBoBo" project will demonstrate a newly developed soil-gas extraction technique to decontaminate very deep soils of some 40m depth, preventing the further contamination of the ground water. The PCE will be extracted from the unsaturated soil-zone by means of a vacuum.

The innovation of this project consists in the application of soil-gas extraction to a very deep soil and a gas treatment technique without any impact on the atmospheric air.

For this purpose technical and logistical design criteria will be elaborated. The results of the project will facilitate the design of cleanup devices suitable for similar cases across Europe where thick unsaturated zones are contaminated with volatile organic hydrocarbons (VOC).

### Beneficiary:

**Type of beneficiary**  
public authority

**Name of beneficiary**  
Landkreis Harburg, Abt.  
Boden/Luft/Wasser

**Postal address**  
Schlossplatz 6  
21423 Winsen  
GERMANY

**Name of contact person**  
Herr Dipl.-Ing. Andre FRANCOIS  
Tel.: 00 49 0 4171 6933 20  
Fax: 00 49 0 4171 6931 75  
E-mail: a.francois@LKHHarburg.de

### Duration of project:

From August 2002 to July 2005

### Total budget in euro:

771,934

### EC contribution in euro with %:

129,465 (30% of eligible costs)

### Priority theme covered by the project:

PG2.2 Ground water protection

## Promoting clean vehicle technologies in Thessaloniki

### Official title

Improvement of Urban Environment Quality of Air and Noise Levels by an Integrated, Cost Effective and Multi – Level Application of Clean Vehicle technologies

### Background

Nowadays, 28% of the CO<sub>2</sub> emitted in the EU is due to transport, with 84% of it coming from road transport. Emissions of other harmful gases have also increased by 18% over the period 1990 to 1998. Moreover, transport is responsible for high noise levels in cities, levels that are expected to increase by 24% by 2010.

Greece is in fact the fourth most polluted country in the EU in terms of CO<sub>2</sub>. Thessaloniki, situated in the North, is a very good example of such problems. The second largest city of the country, with a population of approximately one million, a national and international economic and transport centre, the city is surrounded by mountains and the sea, which leads to heavily populated and congested west-east corridors. The number of vehicles increased by 76% from 1990 to 2001 and there is a shortage of about 6.000-7.000 parking spaces daily at the city centre. Consequently, air pollution in the city, especially at the city centre, is high. To deal with this problem one of the three major policies that the city council has adopted is to promote the use of clean vehicles for both buses and private users.

### Project Objectives

The "IMMACULATE" project seeks to improve the quality of air and to reduce the noise levels in the urban environment of Thessaloniki by combining clean vehicle technologies (electric power-assisted bicycles, electric scooters, hybrid passenger cars and natural gas mini buses) with other innovations in urban transportation schemes (transport information, management and telematic systems, smart cards technology, mobility management schemes). It will also define the technical features of the vehicles that will be used and the requirements to be met.

LIFE02/ENV/GR/000359  
IMMACULATE



### Beneficiary:

#### Type of beneficiary

Private Structure

#### Name of beneficiary

Centre for Research and Technology Hellas/Hellenic Institute of Transport (CERTH/HIT)

#### Postal address

6th km Charilaou – Thermi Road,  
P.O. Box 361,  
GR-57001 Thermi, Thessaloniki  
GREECE  
Tel.: 00 30 310 49 82 65  
Fax: 00 30 310 49 82 69  
E-mail: abek@certh.gr

#### Name of contact person

Evangelos BEKIARIS

### Duration of project:

From September 2002 to August 2004

### Total budget in euro:

1,273,000

### EC contribution in euro with %:

570,000 (50% of eligible costs)

### Priority theme covered by the project:

PG1.2 Quality of air and noise abatement

Other actions envisaged are the development of a training programme for drivers and the elaboration and implementation of pilot studies in the city of Thessaloniki. The project also includes an assessment and risk analysis of the proposed plans, a cost-benefit and cost-efficiency analysis, as well as the dissemination of the results to other European cities. In this way, the project will work towards the creation of an "eco-consciousness" in the citizens of the urban environment.

# Innovative collection system and Life Cycle Assessment for waste lube oils

## Official title

Managing waste lube oils in a sustainable and environmentally friendly way

## Background

The project aims to provide solutions to the problem of the management of waste lube oils. The methods currently used are inadequate and do not completely guarantee environmental safety. Moreover, they result in poor collection rates that eliminate the potential for reuse of the oil collected. A large part of this waste stream is not directed towards appropriate management techniques. Therefore, it creates several environmental problems like soil, surface and groundwater pollution.

## Project Objectives

The primary objective of the project is to demonstrate and monitor an integrated collection system for the reutilisation of waste lube oils, providing in this way a sustainable solution to the problem of their management. It will also evaluate this system under different social and economic conditions. In order to accomplish this, the project will be implemented in two big urban and industrial centres: Thessaloniki, situated in Northern Greece, and Patra situated in South-western Greece. Following an evaluation of the project, a comparison of the results accumulated under the different situations will take place. Finally, the recovery rates achieved will be assessed.

The planned actions include the development of an inventory for the collection of data from different waste lube oil sources, the use of source separation and the improvement of waste oil collection routes. The management team also plans the installation of a transfer station and the supply of the necessary equipment for it, such as oil tanks, piping system, building in-house laboratory for quality control and all the necessary laboratory equipment. Other actions envisaged are the installation of monitoring equipment for the continuous monitoring system, the collection of data during its operation, the statistical analysis of the collected data and the elaboration of progress indicators. Finally, a Life Cycle Assessment from waste lube oil collection until oil treatment phase will also be elaborated.

LIFE02/ENV/GR/000360  
ICOL



## Beneficiary:

### Type of beneficiary

Private structure

### Name of beneficiary

CYCLON HELLAS S.A

### Postal address

Thesi Mavri Ora,  
GR-19300, Aspropyrgos  
GREECE  
Tel.: 00 30 108 09 39 91  
Fax: 00 30 108 09 39 60  
E-mail: deligiorgis@cyclon.gr

### Name of contact person

GEORGIOS DELIGIORGIS

## Duration of project:

From October 2002 to September 2005

## Total budget in euro:

3,109,443

## EC contribution in euro with %:

703,753 (30% of eligible costs)

## Priority theme covered by the project:

PG4.2 Hazardous or problematic waste

These actions will lead to higher collection rates of waste lube oils and the minimisation of collection costs along with other environmental benefits.

# Climate Alliance for Mediterranean Cities

## Official title

Mediterranean Network of cities for climate protection

## Background

Climate change has a major impact on the environmental and the socio-economic conditions of cities in the Mediterranean region. It is expected that in the future it could seriously undermine the efforts for sustainable development in this region.

Given this problem, there is a growing awareness of the necessity to take action at the local authority level since measures at the national level only are not going to suffice. Local authorities are responsible for their own energy consumption and the use of land, therefore they have the power to optimise the energy performance of new developments and to integrate traffic prevention strategies in development planning. Hence, local authorities can play an important role to climate protection by promoting environmental friendly policies and raising public awareness on environmental issues.

## Project Objectives

The project aims to build a network of cities situated in three Mediterranean countries (Greece, Italy and Slovenia) to promote climate protection and the exchange of know-how and experiences in this field. A checklist of climate protection measures at the local authority level will be drawn up, a comprehensive guide for climate protection for Mediterranean cities will be produced and a joint public awareness campaign will be formulated.

The activities to be undertaken by the network include the organisation of meetings and workshops with the participation of representatives from northern European countries (Austria, Germany, Netherlands and Sweden) to encourage the transfer of experiences and best practices in climate protection. Other measures envisaged are the parallel implementation of a common action plan by all partners, the launch of a joint public awareness campaign and the preparation of proposals for institutional arrangements to strengthen the role of local authorities.

01/GR/000362  
MEDCLIMA



## Beneficiary:

**Type of beneficiary**  
Public Institution

**Name of beneficiary**  
Municipal Enterprise of Holargos  
(Vocational Training Centre)

**Postal address**  
55 Pericleous Str.,  
GR-15561 Holargos  
GREECE  
Tel.: 00 30 106 53 70 50  
Fax: 00 30 106 51 38 40  
E-mail: holargos@holargos.gr, kek@holargos.gr

**Name of contact person**  
Giorgos TENDIS

**Duration of project:**  
From November 2002 to October 2005

**Total budget in euro:**  
892,942

**EC contribution in euro with %:**  
441,728 (50% of eligible costs)

**Priority theme covered by the project:**  
PG1.1 Urban Environment

The project will result in the establishment of closer cooperation between the stakeholders and, possibly, the expansion of the network to numerous Mediterranean cities. Finally, it will finally lead to economic and social advances and a more active role for local actors in the area of environmental protection in the European Union.

# Implementing EMAS at the University of Macedonia

## Official title

Development and implementation of Eco-Management and Audit Scheme (EMAS) in an educational institution (EMAS-EDIN)

## Background

In 1993, the European Union (EU) published the first version of the EMAS Regulation ((EEC) No 1836/93 of 29 June 1993) which referred to the development and implementation of environmental management and audit principles in industrial sites only and called for the continuous improvement of environmental performance leading to the adoption of economically viable Best Available Techniques (BAT). The implementation of EMAS and the registration of sites were limited, with the exception of countries such as Germany and Sweden. The new revised version of the EMAS Regulation, (Regulation (EC) No 761/2001 of the European Parliament and of the Council of 19 March 2001) extended the scheme to all interested organisations, including the public sector and allowed for the adopted Environmental Management System to be as specified in the ISO 14001, 1996 standard.

## Project Objectives

The principal objective of the project is to implement the EMAS Regulation in the University of Macedonia (UoM) in Thessaloniki, Northern Greece. The implementation of the EMAS scheme in public organisations has been low in Greece. The project will be elaborated together with the Municipality of Thessaloniki in order to demonstrate the potential of environmental co-operation between educational institutions and local authorities.

The management partnership (comprising the UoM research committee, the company for the development and management of UoM property, an environmental consulting engineering company and the Municipality of Thessaloniki) has planned various actions, which aim to integrate environmental principles in the every day operation of the university (raising awareness among the students, personnel and internal subcontractors, development and implementation of an environmental management system in the UoM premises).

LIFE02/ENV/GR/000363  
EMAS-EDIN



## Beneficiary:

**Type of beneficiary**  
Public Institution

**Name of beneficiary**  
University of Macedonia, Research Committee

**Postal address**  
Egnatias 156,  
P.O. 1591,  
GR-54006, Thessaloniki  
GREECE  
Tel.: 00 30 310 89 12 44  
Fax: 00 30 310 84 45 36  
E-mail: tsiotras@uom.gr

**Name of contact person**  
Prof. George TSIOTRAS

**Duration of project:**  
From September 2002 to December 2004

**Total budget in euro:**  
1,089,575

**EC contribution in euro with %:**  
487,300 (50 % of eligible costs)

**Priority theme covered by the project:**  
PG3.2 Integrated environment management

These actions will result in reducing the environmental impact of the UoM operation, improving the health and safety conditions in the UoM premises, raising environmental awareness, stimulating closer co-operation with other educational institutions and disseminating information on the experience acquired.



# Producing soil from municipal sewage sludge

LIFE02/ENV/GR/000371  
HUMIFICATION OF SLUDGE STP



## Official title

Process development for management of municipal sewage sludge

## Background

During the 1990s a considerable number of sewage treatment plants were constructed in Greece in order to handle the major environmental problem of sewage treatment and disposal. The majority of the plants have accomplished the initial objectives of sewage treatment, but none of them includes final sludge management and disposal. In all cases the sludge is led to the landfill for final disposal after dewatering. This has led to a severe reduction of the capacity of sanitary landfills. It has also increased considerably the production of heavily polluted leachate, and the generation of greenhouse gases, especially methane, because of the introduction of biodegradable organic products to sanitary landfills.

## Project Objectives

The aim of the "HUMIFICATION OF SLUDGE STP" project is to use the waste generated by municipal sewage treatment to produce soil. Applying the sludge-to-soil concept, the actions envisaged include the preparation of a mixture of sludge tailored to specific soil requirements, the evaluation of the properties of the generated product, the use of the produced mixture as a soil, and the possible large-scale application of the method.

The project team consists of the beneficiary, TOMI S.A., a private environmental engineering firm based in Athens, which will be responsible for the administration and the co-ordination of the project; the Association of Thessaloniki Municipalities (Syndesmos OTA THESS), which operates the sanitary landfill of Thessaloniki and will provide all the necessary raw materials and the site required for the implementation of the project, and the Austrian subsidiary Bilfinger + Berger Baugesellschaft m.b.H., a public works contractor specialised in environmental technology, construction and the operation of landfills, which will participate as the main technology provider.

## Beneficiary:

**Type of beneficiary**  
Private Institution

**Name of beneficiary**  
TOMI S.A.

**Postal address**  
Kritis 2 & Gravias 12,  
GR-16451, Argyrupolis, Athens  
GREECE  
Tel.: 00 30 109 97 67 00  
Fax: 00 30 109 97 67 01  
E-mail: madam@tomi.gr

**Name of contact person**  
Marion ADAM

## Duration of project:

From February 2003 to April 2005

## Total budget in euro:

1,396,996

## EC contribution in euro with %:

698,498 (50% of eligible costs)

## Priority theme covered by the project:

PG3.4 Sustainable tourism

The expected results of the project include the reduction of the volume of sludge to be disposed, by its conversion into easily handled material (soil) and the establishment of an alternative, practical and operational scheme to handle both the increasing quantities of sewage sludge and the stricter legislation concerning its disposal.

# Development of a Pilot Separate Collection and Management Scheme in Crete for Batteries and Accumulators

## Official title

Development of a Pilot Collection and Management Scheme for Batteries and Accumulators in Crete

## Background

Faced with an increasing amount of solid waste, with significant fluctuations during the year due to the tourist peak periods, and the involvement of a complex network of stakeholders, the Region of Crete considers the waste management problem to be a high priority. Therefore a pilot study for handling problematic waste will give the opportunity to the Region of Crete to alleviate this problem.

## Project Objectives

The management team consisting of the beneficiary - the Region of Crete, Terra Nova - an environmental consulting firm, and the University of Athens Laboratory of Meteorology, aims to design and implement an integrated pilot collection and recycling programme for two special waste streams i.e. batteries and accumulators. It will be based on the specific needs of the area and will be viable and cost effective.

Using this pilot programme as a demonstration tool, an analysis of the performance of the programme will be carried out in order to show the feasibility of such systems in areas similar to Crete, an island far from the mainland with a high percentage of tourism, significant economic activities, and a population of 600.000.

The project will promote separate collection at the source (door to door and curbside collection) and recycling of the problematic waste through the development of specific guidelines. Furthermore, a wide information campaign will aim to inform all stakeholders and increase their participation. The campaign will be targeted at car service stations, retailers of accumulators, supermarkets and shops selling batteries, local authorities and the public at large. In addition, guidelines will be elaborated for the implementation of such a system in the whole of Crete and its promotion in the rest of Greece.

LIFE02/ENV/GR/000373  
GREEN BATTERIES



## Beneficiary:

**Type of beneficiary**  
Public authority

**Name of beneficiary**  
Region of Crete Public Authority

**Postal address**  
Kountourioti Square  
GR-71202 Heraklion, Crete  
GREECE  
Tel.: 00 30 810 27 81 11  
Fax: 00 30 810 27 81 50  
E-mail: dir-gen@crete-region.gr

**Name of contact person**  
Kostas STRATARIDAKIS, Ph.D.

## Duration of project:

From October 2002 to September 2005

## Total budget in euro:

1,037,571

## EC contribution in euro with %:

456,790 (50% of eligible costs)

## Priority theme covered by the project:

PG4.2 Hazardous or problematic waste

Finally, the team will produce a Good Practice guide, an Internet site, a CD-ROM and organise a conference, in order to disseminate the results of the project and promote similar recycling programmes.

# Greening cultural events in Ancient Olympia

## Official title

Partnership for Greening Cultural Events in Archaeological Areas

## Background

Every major cultural event has a significant impact on the environment, starting from waste management to energy and water consumption, transport and the lack of environmental awareness. When the event takes place in an archaeological site, this environmental impact can significantly affect the overall value of the area unless precautionary action is taken. However, the cost of the measures that may be necessary for the restoration of the damages both to the local environment and the archaeological sites can be very high. Ancient Olympia, situated in Peloponnese, Southern Greece, falls into this category, as it is an archaeological site where important cultural events take place. During the 2004 Olympic Games, which will take place in Athens, several large-scale events will take place in Ancient Olympia (the lighting of the torch, amongst others), therefore the need for precautionary action is urgent.

## Project Objectives

The main objective of the project is develop a plan for "greening" the cultural events taking place in Ancient Olympia, through the implementation of the new Eco-management and Audit Scheme (EMAS) regulation. To this end, experience from EMAS implementation in other European countries, and in particular that of the local authorities in the United Kingdom, will be transferred. The project also aims to promote green purchasing policies, and create incentives for local companies, hotels and restaurants. Finally, it seeks to elaborate a sustainable waste management plan by transferring German know-how in waste management in archaeological areas, specifically with the participation of the Archaeological Park Xanten in Kreis Wesel, Germany.

The project team, composed of the beneficiary, the Municipality of Ancient Olympia Cultural and Tourist Development Company (DEPTA/DEPO), and the environmental consulting firm Global to Local Ltd (UK), has planned numerous activities, which include: involving representatives of local businesses in the

LIFE02/ENV/GR/000392  
GREENCULT



## Beneficiary:

**Type of beneficiary**  
Public Institution

**Name of beneficiary**  
Municipality of Ancient Olympia Tourist and Cultural Development Company

**Postal address**  
Floka Archaia Olympias,  
Archaia Olympia  
GR-27065  
GREECE  
Tel.: 00 30 624 02 31 00  
Fax: 00 30 624 02 31 25  
E-mail: olympia@epta.gr

**Name of contact person**  
Nikos KONDILIS

**Duration of project:**  
From November 2002 to April 2005

**Total budget in euro:**  
929,200

**EC contribution in euro with %:**  
427,275 (50% of eligible costs)

**Priority theme covered by the project:**  
PG3.2 Integrated environment management

project management, identifying harmful waste produced from the products consumed and used during the events, planning a communication campaign and finally, auditing and evaluation systems for the actions taken.

These activities will bring the following results: development of a methodology for integrating environmental considerations into the organisation of cultural events, protection of the local environment and the cultural assets of the area, establishment of communication structures between local authorities and the private sector, large-scale dissemination and the provision of practical advice to other local authorities located in areas of archaeological importance.

## Adding value to the treatment of spent pickling acid

### Official title

Utilisation of exhausted metallurgical pickling acids qualified as hazardous waste

### Background

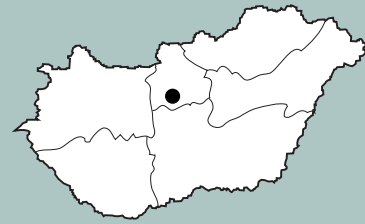
Today in Hungary, 3000 tons of "simple" (with only iron (Fe) content) and 3000 tons of "complex" (with iron (Fe), zinc (Zn), cadmium (Cd), lead (Pb) content) spent pickling acid waste is produced annually. This waste is categorised as hazardous waste in accordance with article 1 (4) of the EC Directive 91/689/EEC.

According to contemporary practice, spent pickling acids undergo a neutralizing alkalic ( $\text{Ca}(\text{OH})_2$ ) treatment. This process produces iron hydroxide ( $\text{Fe}(\text{OH})_3$ ) or zinc hydroxide ( $\text{Zn}(\text{OH})_2$ ) occasionally contaminated with cadmium (Cd) and lead (Pb), which may also qualify as hazardous wastes. These materials are not appropriate for an industrial use and are therefore deposited on waste dumping grounds. During the alkalic treatment of the pickling acids, a large amount of calcium hydroxide ( $\text{CaCl}_2$ ) is also formed, which has a negative effect on water quality. Spent pickling acids have been treated in this manner for decades.

### Project Objectives

The project aims to test an alternative treatment process for spent pickling acids which produces end products with commercial applications in the chemical industry and in metallurgy. A demonstration plant will be established, a technology will be elaborated and tested for the processing of pickling acids. In this way, the procedure to be realized aims to produce in industrial quantities utilisable materials from materials that have up to now been considered as waste.

LIFE02 ENV/H/000435  
UTILISATION OF HAZARDOUS WASTE



### Beneficiary:

#### Type of beneficiary

Small and medium sized enterprise  
(with 87 employees)

#### Name of beneficiary

KÖRTE-ORGANICA  
Technologies for Environment Rt

#### Postal address

T\_zoltó u. 59  
1094 Budapest  
HUNGARY  
Fax: 00 36 147 685 35  
Tel.: 00 36 145 580 60  
<http://www.korteorganica.hu/company/mailbox@korte-organica.hu>

#### Name of contact person

Mr. Attila BODNAR  
atti@organica.hu

### Duration of project:

From December 2001 to May 2004.

### Total budget in euro:

1,596,135

### EC contribution in euro with %:

449,826 (28.50% of eligible costs)

### Priority theme covered by the project:

PG4.2 Hazardous or problematic waste

# Innovative and environmentally friendly technology for collecting and recycling expanded polystyrene-type plastics (EPS)

## Official title

Implementation of a brand-new environmental-friendly innovative technology for collecting, shrinking and recycling expanded polystyrene (EPS) waste.

## Background

Expanded polystyrene (EPS) is an excellent insulator and packaging material, which is why it is still applied in Europe extensively and in huge volumes. However, EPS is environmentally damaging for several reasons.

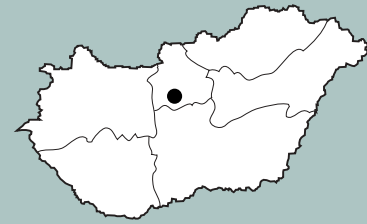
- Large storage space is necessary for the material, due to its great volume compared to its small mass. It causes a rapid saturation of landfills, resulting in a demand for new landfills, with significant financial impacts. In traditional landfills, the dissolution procedure is quite slow, and produces hazardous by-products – mainly several types of poisonous gases.
- During the procedure, recycling organic solvents were (and still are) applied, which cause serious damage to the environment.

2000 tons of EPS waste is produced in Hungary every year and since there is currently no economic or environmentally friendly technology for collecting and recycling EPS, the valuable material is either burned, which causes poisonous gas-emissions, or taken to landfills, causing their rapid saturation.

## Project Objectives

The objective of the “EPS-Recycling” project is to introduce an innovative and environmentally friendly technology for collecting, shrinking and recycling EPS waste. A new solvent will make the shrinking of EPS possible without destroying its structure. The collection and transport costs will be more economical, and recovering the solvent will result in a high quality, recyclable base-material.

LIFE 02 ENV/H/000442  
EPS-RECYCLING



## Beneficiary:

### Type of beneficiary

Small and Medium size enterprise (92 employees)

### Name of beneficiary

MEDIMPEX Trading Company limited by Shares.

### Postal address

Lehel ut 11  
1134 Budapest  
HUNGARY  
Fax :00 361 320 5344  
Tel.: 00 361 288 1417  
<http://www.medimpex.hu/>  
E-mail: medimpex@medimpex.hu

### Name of contact person

Mr. Andras MIKLOSI  
Director of Business Manager  
E-mail a.miklosi@medimpex.hu

## Duration of project:

From September 2002 until March 2004

## Total budget in euro:

622,720

## EC contribution in euro with %:

248,922 (49.97% of eligible costs)

## Priority theme covered by the project:

PG4.1 Packaging and plastics

# Development of a reed-bed wastewater treatment system through the recultivation of a decommissioned landfill site

## Official title

Integrated wastewater treatment and landfill recultivation by means of development of a closed-cycle rhizospheric biological wastewater treatment system on the top of a small municipal landfill of waste site – a solution for rural areas

## Background

The communal landfill site at Magosliget (NE Hungary, 350 km from Budapest) has been in use for about 20 years. When the site was established, it was not the environmental considerations that were the decisive factors, but rather the easy access to the site. On completing the road construction works, the aim was to fill up the large, open cut mine pits. Thus, the filling up of the area with communal waste began without establishing any kind of protective system. This policy is still practised today.

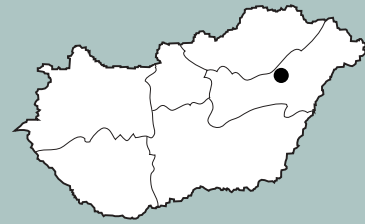
Fortunately, in this region there is a continuous, watertight clay (K= 10-8) layer at a depth of 4-5 meters below the surface, which has so far prevented the leaching of pollutants into the groundwater and into the wells which are used widely for supplying the communal water to the neighbouring settlements.

The fact that the landfill site does not have perimeter fencing also poses a serious problem, raising the possibility of accidents and the spread of infectious diseases. Furthermore, wind carries airborne pollutants from the site over a wide area, putting the Tisza Nature Protected Region at risk of environmental pollution.

## Project Objectives

The aim of the project is to undertake the complex reconversion of the solid communal landfill site located at Magosliget. The planned recultivation will involve establishing a reed-bed, or closed-cycle rhizospheric, biological waste water treatment system.

LIFE02/ENV/H/000443  
RHIZOSPHERIC-WETLAND



## Beneficiary:

### Type of beneficiary

Non governmental organisation

### Name of beneficiary

INNOSTART National Business and Innovation  
Centre Foundation

### Postal address

Fehervari ut 130  
H-1116 Budapest  
HUNGARY  
Fax: 00 361 382 1510  
Tel.: 00 361 382 1500  
Website: <http://www.innostart.hu/>  
E-mail: [innostart@innostart.hu](mailto:innostart@innostart.hu)

### Name of contact person

Ms Garab KINGA  
Director  
[garab@innostart.hu](mailto:garab@innostart.hu)

## Duration of project:

From October 2002 to September 2004

## Total budget in euro:

932,321

## EC contribution in euro with %:

438,473 (50% of eligible costs)

## Priority theme covered by the project:

PG2.3 Waste water treatment

In this way not only the recultivation of the landfill will be solved but the proposed, highly innovative technology will also ensure the cleaning and re-use of the sewage produced by four neighbouring villages (Magosliget, Uszka, Kispalád and Botpalád), which together have about 1,700 inhabitants. New job opportunities and alternative income sources will also be generated by this project.

## Environmentally friendly policy and management in Tuscan ports

LIFE01 ENV/IT/000015  
EMAS.PO.LI



### Official title

Experimental testing and diffusion of EMAS in the Port of Livorno

### Background

There are many negative environmental impacts caused directly or indirectly by port activities. The aim of this project is to reduce and minimise these negative impacts. This will be achieved through the implementation of Environment Management Systems (EMAS) into the local Port Authority Organisation. In particular, the project will focus on the promotion of environmental awareness among all port operators and on raising awareness of the environmental impacts of port activities. Further, the project will disseminate and implement EMAS II actions. EU environmental policies will provide the foundation for policy and management actions among the local operators to achieve environmental improvements in port areas.

### Project Objectives

- To create a shared system of actions in port areas to minimise the negative environmental impacts of port activities;
- To foster environmental awareness and encourage sustainable development objectives in planning activities;
- To improve participation in the planning of activities;
- To disseminate EMAS II.

### Beneficiary:

#### Type of beneficiary

Port Authority of Livorno  
(public authority)

#### Name of beneficiary

Port Authority of Livorno

#### Postal address

Autorità Portuale di Livorno  
Via Scali Rosciano, 6  
57100 Livorno  
ITALY  
Tel.: 00 39 058 684 25 40  
Fax: 00 39 058 684 24 55  
Email: g.motta@portauthority.li.it

#### Name of contact person

Giovanni MOTTA

### Duration of project:

From 1 November 2002 – 30 April 2004

### Total budget in euro:

293,356

### EC contribution in euro with %:

154.368 (50% of eligible costs)

### Priority theme covered by the project:

PG3.2. Integrated environmental management

# The P.A.T.T.E.R.N. get into the park

## Official title

The Park and the Town: Eco Resources Network

## Background

This project aims to strengthen the relationship between the park and the city by exploiting the growing interest in nature among urban dwellers. It involves creating an innovative environmental management model based on:

- Mutual recognition between social and public bodies
- Full utilisation of natural areas;
- Large participation of communities, enterprises, farmers, and other bodies in planning and carrying out on-site demonstration activities such as compensation actions in fragile park areas.

Monitoring and communication activities will be carried out making this project a reference model for EU countries.

## Project Objectives

- To create a management model for fragile areas with the aim of integrating the preservation of the nature with the promotion of a diversified economy and the enhancement of social welfare;
- To activate a process of participation giving the local communities a central role in territorial planning and allowing the Park to exploit the growing nature demand from urban dwellers;
- Strengthening of the political, social, economic parties in order to realise a sustainable management model, involving the social enterprises.

LIFE02 ENV/IT/00017  
THE P.A.T.T.E.R.N



## Beneficiary:

### Type of beneficiary

Public authority

### Name of beneficiary

Consorzio Parco dei Colli di Bergamo

### Postal address

Tutela del Verde  
Piazza Risorgimento, 4  
24128 Bergamo  
ITALY  
Tel.: 00 39 035 432 52 11  
Fax: 00 39 035 264 574  
E-mail: [parcodeicolli@libero.it](mailto:parcodeicolli@libero.it)

### Name of contact person

Mr Pasquale BERGAMELLI

## Duration of project:

From October 2002 to March 2005

## Total budget in euro:

671,394

## EC contribution in euro with %:

335,697 (50% of eligible costs)

## Priority theme covered by the project:

PG1.1. Urban Environment



# Methodological tool for health impact assessment in urban environment

## Official title

Health impact assessment as integrated territory planning tool

## Background

The project aims at developing and setting up a methodological tool for land-use development and planning, taking into account the possible health implications of decisions taken. The proposed tool consists in a procedure called "Health Impact Assessment" (HIA) and will be developed by looking at a real-life case study: a waste-to-energy plant planned for the neighbourhood of Florence. The project will assess the positive and negative effects on the health of the local population of the insertion of such an activity and will try and find solutions. The main target of the study is to develop a sound and rigorous scientific methodology that can become a useful tool for future land-use development and planning.

## Project Objectives

- To indicate the impact on the health of the population due to the insertion of a waste-to-energy plant in an urban environment;
- To support the local authorities in achieving local public health targets and to point the way towards more "healthier" decision-making;
- To improve mitigation actions;
- To make the new plant installation acceptable;
- To demonstrate that HIA can be a suitable tool to assist with decision-making.

LIFE02ENV/IT/000018  
VISP



## Beneficiary:

**Type of beneficiary**  
Public authority

**Name of beneficiary**  
Province of Florence

**Postal address**  
Provincia di Firenze  
Piazza Mercadante, 42  
29021 Firenze  
ITALY  
Tel.: 00 39 055 276 08 19  
Fax: 00 39 055 328 096  
E-mail: e.galanti@provincia.fi.it

**Name of contact person**  
Mr. Emilio GALANTI

**Duration of project:**  
From July 2002 to December 2003

**Total budget in euro:**  
269,366

**EC contribution in euro with %:**  
114,163 (46.91% of eligible costs)

**Priority theme covered by the project:**  
PG1.1. Urban environment

# Decision Support System for environmental planning

## Official title

Description of a Decision Support System and a set of procedures to integrate environmental issues into the programming and planning of local authorities. Case studies: 3 municipalities near Garda Lake.

## Background

The programming and planning of municipalities has an impact on the environment, which needs to be assessed properly before decisions are taken.

The "SFIDA" project concerns the study of methodologies and prototypes designed to be part of a comprehensive decision support system based on participation, the purpose of which is the integration of the environment into the programming and planning of municipalities.

Problems that can be faced using the decision support system, range from single project cycle monitoring to the strategic evaluation of public programmes. The decision support system will be developed and applied to case studies in three municipalities located near Garda Lake.

## Project Objectives

- To develop a light information system for a customised and decentralised territory interpretation;
- To develop an information procedure to structure the logical route of environmental impact assessment;
- To develop methodologies and tools for conflict management based on multi criteria and multi decision-making analysis.

LIFE02 ENV/IT/00019  
SFIDA



## Beneficiary:

**Type of beneficiary**  
small enterprise

**Name of beneficiary**  
POLIEDRA – Centri di Conoscenza e Formazione  
del Politecnico di Milano

**Postal address**  
Piazza L. Da Vinci, 32  
20133 Milano  
ITALY  
Tel.: 00 39 022 399 29 00  
E-mail: Poliedra@poliedra.polimi.it

**Name of contact person**  
Prof. Eliot LANIADO

**Duration of project:**  
From November 2002 to May 2005

**Total budget in euro:**  
745,560

**EC contribution in euro with %:**  
372,780 (50% of eligible costs)

**Priority theme covered by the project:**  
PG1. Land Use development and planning

# Green purchasing for public administrations

## Official title

La Rete Degli Appalti Pubblici Verdi

## Background

The "GPP NET" project aims to spread the adoption of green purchasing among Italian public administrations in order to make their procurement decisions more compatible with the environment. Greening public procurement by including environmental criteria in the purchasing decisions of European local authorities can play a powerful role on the demand-side for the greening of production. This project will serve as a model to influence the behaviour of companies, private institutions and households as well as make a positive contribution to environmental protection.

## Project Objectives

- Introduction of simple rules into public procurement procedures, such as: products with eco-labels, energy-saving and water-saving appliances, recyclable products, environmentally certified suppliers, etc .
- Editing of a GPP Handbook;
- Training 11 public authorities to use the GPP Handbook;
- Supervising the preparation of a sample call for tenders by each of these authorities.

LIFE02 ENV/IT/0023  
GPP NET



## Beneficiary:

**Type of beneficiary**  
public authority

**Name of beneficiary**  
Amministrazione Provinciale di Cremona  
Settore Ambiente

**Postal address**  
Corso Vittorio Emanuele, 17  
26100 Cremona  
ITALY  
Tel.: 00 39 037 240 64 41  
Fax: 00 39 037 240 64 61  
E-mail: ambiente.provincia@rccr.cremona.it

**Name of contact person**  
Ms. Mara PESARO

**Duration of project:**  
From December 2002 to November 2004

**Total budget in euro:**  
852,329

**EC contribution in euro with %:**  
398,000 (48.97% of eligible costs)

**Priority theme covered by the project:**  
PG5.1. Eco-design, eco-efficiency, green financial products

## Using wood as a source of energy in mountain areas

### Official title

Demonstrating the viability of a medium size biomass co-generation plant to distribute heat and electricity in a mountain rural area.

### Background

The initial idea for the "WARM-WOOD" project came from a report which showed the remarkable potential for using wood as a source of energy in many mountain areas of the Appennines.

The private firm and beneficiary of the project, Atzwanger spa, has chosen a small area in the province of Bologna to carry out the project where the local Municipality is willing to build a medium size biomass co-generation plant on available land.

The project will test the technical and economic viability of such kind of a plant and the distribution system, which might prove useful for local communities dispersed in mountain areas.

### Project Objectives

The project aims to reduce CO<sub>2</sub> emissions by experimenting wood burning to derive heat and electricity on a suitable scale (4 Mw). The new plant should prove economically viable for a mountain area where approximately 100 users might take advantage of such a facility. The project will act as a model for similar areas in Italy and elsewhere in Europe, where the use of wood for this purpose has until now often been limited in scope.

LIFE02 ENV/IT/00034  
WARM-WOOD



### Beneficiary:

**Type of beneficiary**  
Enterprise

**Name of beneficiary**  
Atzwanger spa.

**Postal address**  
Viale Druso 229-233  
39100 Bolzano  
ITALY  
Tel.: 00 39 047 124 38 11  
Fax: 00 39 047 124 38 40  
E-mail: info@atzwanger.net

**Name of contact person**  
Mr. Paul ATZWANGER

### Duration of project:

From October 2002 to March 2005)

### Total budget in euro:

4,280,150

### EC contribution in euro with %:

840,796 (30% of eligible costs)

### Priority theme covered by the project:

PG3.3. Reduction of emission of gases having greenhouse effect.

# Testing an innovative state-of-the-art numerical model in three river basins of Central and Southern Italy

## Official title

Water Management at River Basin Scale

## Background

The project will make use of advanced tools such as mathematical models, Geographic Information Systems – GIS - and data acquisition systems to deliver a methodology for water management on a river basin scale so that end users responsible for different areas of the integrated water cycle will see the added value of integrating their planning and management strategies.

The analysis of the water cycle will be carried out using state-of-the-art numerical models to simulate the processes taking place on a river basin scale. In particular the innovative Integrated Catchment Simulator (ICS) will be demonstrated in three pilot areas of Central and Southern Italy.

The ICS is the result of research carried out during a previous project financed under the INNOVATION Programme, part of the Fourth RTD Framework Programme (1994-98), which was managed by the Directorate General for Research of the European Commission. The ICS was developed as a prototype to model the interactions between the water assets of urban areas (sewers, wastewater treatment plants) with the receiving waters (rivers, coastal areas).

## Project Objectives

- Demonstrate a methodology to implement water management at river basin level involving the relevant stakeholders in three Italian pilot river catchments;
- Show the economic and technical viability of the methodology to support the New Water Framework Directive 2000/60/EC of 23 October 2000;
- Widen the application of the Integrated Catchment Simulator (ICS), currently developed as a prototype, to conditions in Central and Southern Italy, and to other European Mediterranean regions;
- Improve the capacity of water stakeholders by the transfer of innovative modelling and monitoring technologies.

LIFE02 ENV/IT/000049  
WAMARIBAS



## Beneficiary:

**Type of beneficiary**  
public institution

**Name of beneficiary**  
Società Progettazione e Servizi SPS

**Postal address**  
Via Senigallia 18  
60127 Ancona  
ITALIA  
Tel.: 00 39 71 289 34 01  
Fax: 00 39 71 289 34 47  
E-mail: Sps@fastnet.it

**Name of contact person**  
Mr. Giancarlo CANONICI

## Duration of project:

From December 2002 until November 2005

## Total budget in euro:

1,200,569

## EC contribution in euro with %:

530,145 (46.51% of eligible costs)

## Priority theme covered by the project:

PG2.1. Water management at the scale of the river basin

## Expected results:

- Stakeholders to agree on a concerted action to improve the water status in pilot river basins in compliance with the WFD;
- Quantify urban pollution loads into the pilot rivers and define measures to lower impacts on the water quality and quantity;
- Adapt and validate the ICS in the pilot basins and promote the use of the ICS to new end-users and other river basins in Italy and the European countries;
- Set-up monitoring and modelling systems at pilot sites;
- Provide guidelines to enhance water management at pilot river districts taking the specific socio-economic and environmental conditions into account.

## Environmentally friendly ceramics micro-finishing

### Official title

Project for ceramics and natural stone surfaces dry micro-finishing. This process will substitute traditional smoothing/polishing phase, reducing the ecological impact in order to pursue sustainable development

### Background

The finishing of surfaces in the ceramics industry is a known cause of specific environmental problems. The "MICROFINISHING" project plans to test a new dry polishing system which would have a less negative impact on the environment, whilst also reducing the requirement for water and electric power.

The dry polishing system uses as an abrasive the same material of the surfaces to be finished. The results of the project could be extended to finishing processes in other industries, for example the stone industries.

### Project Objectives

- To design and realise a pilot plant;
- To test the pilot plant;
- To disseminate the methodology and the results.

LIFE02 ENV/IT/0052  
MICROFINISHING



### Beneficiary:

#### Type of beneficiary

Private company

#### Name of beneficiary

CERAMICA FONDOVALLE S.p.A.

#### Postal address

Via Fondovalle, 5049

LocALITà Casona

I 41054 Marano sul panaro mo

ITALIA

Tel.: 00 39 053 693 42 11

Fax: 00 39 053 693 42 55

E-mail: info@fondovalle.it

#### Name of contact person

Mr. Vito Antonio REMIGIO

### Duration of project:

From October 2002 to June 2005

### Total budget in euro:

2,670,475

### EC contribution in euro with %:

733,704 (30% of eligible costs)

### Priority theme covered by the project:

PG3.1. Clean technologies.

# Using solar energy to power trains

LIFE02 ENV/IT/0064  
PVTRAIN



## Official title

The application of innovative photovoltaic technology to the railway trains

## Background

The project will attempt to demonstrate the feasibility of applying innovative photovoltaic technology to railways carriages and locomotives in order to utilise the potential of solar energy, improve the use of the electric accumulators and reduce their negative environmental impact.

By using photovoltaic cells, the accumulators will be recharged by solar energy and will have a longer life span.

## Project Objectives

- To test the possibility of using innovative photovoltaic cells in railways carriages and locomotives;
- To validate the pollution reduction by means of this technology;
- To verify its technical economic feasibility;
- To create a data bank for measuring the performances obtained in the tests;
- To disseminate the results among various interest groups.

### Beneficiary:

**Type of beneficiary**  
Public institution

**Name of beneficiary**  
TRENITALIA

**Postal address**  
Unità tecnologie e materiale rotabile  
Piazza Croce Rossa, 1  
00161 Roma  
ITALIA  
Tel.: 00 39 068 41 22 36  
E-mail: a.basili@trenitalia.it

**Name of contact person**  
Mr. Alessandro BASILI

### Duration of project:

From November 2002 to October 2004

### Total budget in euro:

1,252,972

### EC contribution in euro with %:

616,111 (50% of eligible costs)

### Priority theme covered by the project:

PG3.3. Reduction of emission of gases having a greenhouse effect.

# Mobilising all stakeholders to manage the environment in Udine

## Official title

Development of an environmental management system dedicated to industrial, artisan and urban areas around Udine.

## Background

The industrial area to the south of the town of Udine is host to 70 companies employing over 1500 workers. The project proposes to develop an environmental management system that identifies possible pollution, particularly where this might be harmful to neighbouring urban areas. An innovative aspect of the project is the strategic participation of a wide range of stakeholders, including not only the production companies concerned but also the bordering municipalities and above all the local citizens.

## Project Objectives

- Setting up ongoing co-ordination among the officials in charge of the control, management and promotion of the territory;
- Setting up a system with environmental, economic and social indicators and ongoing monitoring in time;
- Establishing an environmental budget through the government system that will enable environmental policies to be pursued on an objective basis.

LIFE02 ENV/IT/00065  
SIGEA UDINE SUD



### Beneficiary:

**Type of beneficiary**  
Public authority

**Name of beneficiary**  
Comune di Udine

**Postal address**  
Settore Pianificazione Territoriale  
Via Lionello, 1  
33100 Udine  
ITALIA  
Tel.: 00 39 043 227 14 42  
E-mail: settimo.dainese@comune.udine.it

**Name of contact person**  
Arch. Settimo DAINESE

**Duration of project:**  
From October 2002 to December 2004

**Total budget in euro:**  
476,730

**EC contribution in euro with %:**  
238,365 (50% of eligible costs)

**Priority theme covered by the project:**  
PG3.2 Integrated environment management.



# Natural techniques for reducing pollution in three Italian lakes

## Official title

Eutrophic reduction through natural techniques in three small Italian lakes

## Background

Eutrophication is a process of pollution that occurs when a lake or stream becomes over-rich in plant nutrients and subsequently overgrown in algae and other aquatic plants. The "TRELAGHI" project will attempt to achieve eutrophic reduction in three small lakes through natural techniques, notably by reducing the amount of phosphates and nitrates entering the lake from residential settlements, farms and the food industry.

The preservation of the aquatic environment is pursued in order to improve the quality of the existing biotypes and to support the development of ecological farming and tourist activities.

## Project Objectives

The process of eutrophic reduction involves three natural techniques:

"Local tasks" are filter-ecosystems positioned between direct discharge of wastewater and lake watersheds; these filters are made of plants which involves an innovative treatment obtained by enriching vegetation roots with bacterium and mycorrhizas and using zeolites and iron scoriae as catalysts.

"Tasks on extended areas" aim at biological reactivation of the farming soil using mycorrhizas instead of chemical dressings. Fertilization by mycorrhizas is cheaper than the chemical dressings and the agricultural product has a better quality.

"Territorial tasks" aim to reactivate Candia marsh restoring the natural drawing power of wet areas plants.

### Expected results:

The techniques used in the project could be demonstrated and transferred to other wet areas of Europe.

The three small lakes are placed in climatic, environmental and economical realities which can represent all European wet areas.

LIFE02 ENV/IT/000079  
TRELAGHI



## Beneficiary:

Type of beneficiary  
Public institution

Name of beneficiary  
Comunità Montana Val Cavallina

Postal address  
24060 Casazza (BG)  
ITALIA  
Tel: 00 39 035 810 640  
Fax: 00 39 035 811 536  
E-mail: valcaval@valcavallina.bergamo.it

Name of contact person  
Mr. Angelo ZAMBLERA

## Duration of project:

From November 2002 to October 2005

## Total budget in euro:

2,616,250

## EC contribution in euro with %:

876,250 (38.58 % of eligible costs)

## Priority theme covered by the project:

PG2.3 Waste water treatment

# Sustainable and innovative management of vegetable waste biomass

## Official title

Sustainable fertilisation of an intensive horticultural basin through an innovative management system of the local vegetal waste bio-mass by an existing composting plant and supporting a permanent infrastructure.

## Background

The "Fertiliife" project is located in an area where intensive horticulture is a major economic activity. This activity produces a lot of vegetable waste bio-mass which is currently partly transformed in an existing composting plant. The project aims to conduct a survey of all green waste produced locally and to develop an information system which allows for the utilisation of the compost in the same fields as it originated.

## Project Objectives

- To create a pilot rationalisation system of bio-mass waste recycling;
- To produce a high quality compost to be used as a fertiliser;
- To demonstrate the feasibility of a self-sustainable fertilisation system;
- To disseminate the methodology and results among target groups.

LIFE02 ENV/IT/0089  
FERTILIFE



## Beneficiary:

**Type of beneficiary**  
Public authority

**Name of beneficiary**  
ARSIAL  
Agenzia Regionale per lo Sviluppo e l'Innovazione dell'Agricoltura del Lazio

**Postal address**  
Via Lanciani, 38  
00162 Roma  
ITALIA  
Tel.: 00 39 068 627 32 37  
Fax: 00 39 068 627 33 09  
E-mail: [studieprogetti@arsial.it](mailto:studieprogetti@arsial.it)

**Name of contact person**  
Mr. Giulio SANTARELLI

**Duration of project:**  
From December 2002 to February 2006

**Total budget in euro:**  
1,071,454

**EC contribution in euro with %:**  
532,817 (50% of eligible costs)

**Priority theme covered by the project:**  
PG4.4. Waste management

# Environmental management systems certification

LIFE01 ENV/IT/000092  
CER-COM+ EMAS II



## Official title

EMAS II certification of the Comunità Montana delle Valli Nure e Arda

## Background

The Comunità Montana delle Valli Nure e Arda is an area of great environmental value that provides the main source of economic development in the zone. The main characteristics of the area are:

- Low industrialisation level;
- Low anthropic colonisation level;
- Good forestry development;
- Excellent quality of environment.

To enhance the development of the area, activities will be implemented in the following policy areas:

- Tourism development;
- Valorisation and promotion of the local products.

These objectives will be achieved in keeping with EU environmental policies and planning, and will be carried out by using Environmental Management Systems (EMAS II).

## Project Objectives

- To achieve EMAS II certification;
- To implement procedures and policies to improve the environmental aspects of actions and activities;
- To disseminate a positive image of the Comunità Montana;
- To improve tourism;
- To attract financial resources in the area.

## Beneficiary:

### Type of beneficiary

Public authority

### Name of beneficiary

Comunità Montana delle Valli Nure e Arda

### Postal address

Comunità Montana delle Valli Nure e Arda

Piazza Colombo, 6

29021 Bettola (PC)

ITALY

Tel.: 00 39 052 391 14 91

Fax: 00 39 052 391 15 41

Email: cm.bettola@sintranet.it

### Name of contact person

Mr. Giulio SANTARELLI

## Duration of project:

From December 2002 to February 2006

## Total budget in euro:

1,071,454

## EC contribution in euro with %:

532,817 (50% of eligible costs)

## Priority theme covered by the project:

PG3.2. Integrated environmental management

# Instilling the sense of a “quality of life” culture in a medium-sized town

## Official title

Il raggio verde di Novara

## Background

The “Rave” project aims to improve the quality of life in the medium-size town of Novara (100.000 inhabitants) which is located between Milan and Turin in northern Italy. A major investment effort is foreseen to create a slow mobility system (low-pollution transport, itineraries for cyclists and pedestrians, revision of planning tools, improvement of commuter’s timetables etc.) and to discourage the use of cars. The project aims to lower atmospheric pollution and noise and to raise citizen’s awareness by promoting a “quality of life culture” .

## Project Objectives

- To create a complete and integrated local slow mobility system;
- To reduce atmospheric/air pollution and noise thanks to a strategy that discourages motor vehicles use;
- To raise citizens’ awareness and to instil an environmentally sensitive quality of life culture in order to increase public green spaces and to reduce the ecological footprint.

LIFE02 ENV/IT/00106  
RAVE



## Beneficiary:

### Type of beneficiary

Public authority

### Name of beneficiary

Municipality of Novara

### Postal address

Comune di Novara  
Servizio pianificazione urbana  
Via G. Ferrari, 13  
28100 Novara  
ITALY  
Tel.: 00 39 032 137 027 11  
Fax: 00 39 032 137 027 25  
E-mail: urbanist@comune.novara.it

### Name of contact person

Ms. Paola VALLARO

## Duration of project:

From December 2002 to June 2005

## Total budget in euro:

4,069,752

## EC contribution in euro with %:

1,060,000 (49.95% of eligible costs)

## Priority theme covered by the project:

PG1.1. Urban Environment

# Introducing EMAS to Tuscia

## Romana

### Official title

Pilot testing and demonstration actions to implement EMAS on the territorial scale in the Tuscia Romana District.

### Background

The "New Tuscia" project aims to promote the Eco-Management and Audit Scheme - EMAS among SME's, business associations, local authorities, Chambers of Commerce and other interested partners etc. in the Tuscia Romana district. By facilitating EMAS registration for these local organisations, the project should contribute to integrating environmental considerations into local planning and reduce the environmental impact of economic activities.

### Project Objectives

- To facilitate EMAS registration for local organisations;
- To integrate the environmental dimension in local economic and social planning;
- To contribute to reducing the environmental impact in economic activities in the district of Tuscia Romana.

LIFE02 ENV/IT/00111  
NEW TUSCIA



### Beneficiary:

**Type of beneficiary**  
Public authority

**Name of beneficiary**  
Provincia di Viterbo

**Postal address**  
Provincia di Viterbo  
Settore Tutela Acque  
Via Saffi, 49  
01100 Viterbo  
ITALIA  
Tel.: 00 39 076 131 33 56  
Fax: 00 39 076 134 29 24  
E-mail: settore06@provincia.vt.it

**Name of contact person**  
Dr. Mara CIAMBELLA

**Duration of project:**  
From June 2002 to May 2005

**Total budget in euro:**  
919,511

**EC contribution in euro with %:**  
436,953 (48.20% of eligible costs)

**Priority theme covered by the project:**  
PG3.2. Integrated Environment Management

# Proactive approach to managing rubbish on the Riviera

## Official title

Divided Packaging Management for Tourist Use  
Gestione Imballaggi Differenziati UtENZE Turistiche

## Background

With its 290 beaches, 1400 hotels and the "Italia in Miniatura" theme park which attracts 620,000 tourists per year, the area near Rimini and Bellaria is under heavy touristic pressure.

The "Divided Packaging Management for Tourist Use" project aims to set up a system which facilitates the separate collection of six types of waste packaging (steel, aluminium, paper, wood, plastic and glass) generated by tourism activity and to raise awareness among tourists of the project by launching a communication campaign in six languages.

## Project Objectives

The beaches of Rimini and Bellaria have been chosen for the first separate collection of waste since they attract many tourists and are an ideal location for introducing a widespread communication campaign. The system to be implemented at the 290 beaches would involve the hotels, the theme park and more than 4000 commercial users on the coast in the separate collection of waste packaging. National and foreign tourists, coming from countries within the EU and the candidate countries would also be involved. Young people are a primary target of this campaign in order to encourage their respect for the coastal environment.

### Expected results:

The project involves Rimini and Bellaria borough councils, Selecta S.p.A., the "Italia In Miniatura" theme park, the national syndicate of packaging collection CONAI, and CNA, CIAL, COMIECO, RILEGNO, COREPLA, COREVE.

LIFE02 ENV/IT/000112  
GIDUT



### Beneficiary:

**Type of beneficiary**  
mixed public-private enterprise

**Name of beneficiary**  
AMIA S.p.A.

**Postal address**  
Strada Consolare per S. Marino N° 80  
47900 Rimini  
ITALIA  
Tel.: 00 39 054 136 12 11  
Fax: 00 39 054 175 22 56  
E-mail: info@amiarimini.com

**Name of contact person**  
Contact person: Mr. Luciano FABBRI  
Benefiting region: Emilia ROMAGNA

**Duration of project:**  
From November 2002 to April 2004

**Total budget in euro:**  
507,161

**EC contribution in euro with %:**  
233,781 (49.35% of total eligible costs)

**Priority theme covered by the project:**  
PG4.1 Packaging and plastics

### Objectives:

- achieve the separate management system for waste produced on the coast;
- recycle over 50% of the waste;
- encourage tourists to have more respect for the environment;
- involve economic activities in coastal environmental and management;
- develop an ecological culture among young people.

# Energy Labelling of Apartment Buildings

## Official title

Labelling of Apartment Buildings

## Background

Currently, one of the most important environmental issues which is causing concern is global warming which results from growing concentrations of greenhouse gas emissions in the atmosphere. CO<sub>2</sub> accounts for approximately 72% of the global man made emissions contributing to the greenhouse effect and has the tendency to grow annually.

The significance of this fact has been internationally acknowledged by the Rio de Janeiro Convention and the Kyoto agreement which oblige all countries to reduce their CO<sub>2</sub> emissions between 8-20% by 2012 compared with the level registered in 1990. Latvia is required to reduce its CO<sub>2</sub> emissions by 8%, however the requirements of many other European countries are higher than that.

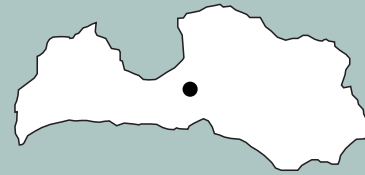
In Latvia space heating and hot water supply consumes at least 35% of the state primary energy resources. Estonia and Lithuania have the same level of energy consumption for heating as Latvia, compared to Finland where it is 23%, in Poland and the Czech Republic – approximately 30%, in Denmark - 28%, and in the USA it is - 33%.

## Project Objectives

The overall objective of the "ENERLAB" project is to reduce the energy consumption for the heating of dwellings and thereby minimise negative impacts on the environment.

This will involve establishing a heat consumption management system for apartment houses in the town of Ogre that will create energy awareness among the local population and stimulate reduced heat consumption.

LIFE02 ENV/LV/000478  
ENERLAB



## Beneficiary:

### Type of beneficiary

Labelling of Apartment Buildings

### Name of beneficiary

A/S Malkalne

### Postal address

Malkalnes pr. 3, Ogre  
LATVIA

Tel.: 00 371 5 045 619

Fax: 00 371 5 021 431

E-mail: malkalne@apollo.lv

### Name of contact person

Ms. Valentina SVIKKALNE

## Duration of project:

From April 2002 to October 2004

## Total budget in euro:

466,940

## EC contribution in euro with %:

203,720 (50% of eligible costs)

## Priority theme covered by the project:

PG5.2 Eco Labelling

# Elaboration of a new comprehensive Ziemelsuseja River Basin Management System

## Official title

Elaboration of a new comprehensive Ziemelsuseja River Basin Management System based on ecosystem approach and wide stakeholders involvement in the decision-making process at the local level

## Background

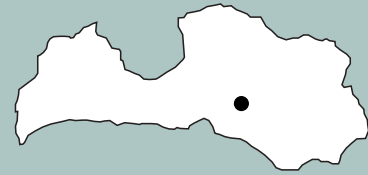
During 2000-2001, as part of a project on the Daugava river, a 1,005 km long river which crosses Russia, Belarus and Latvia, the Regional Environmental Centre (REC) conducted a feasibility study on the Ziemelsuseja river basin. The study revealed that the low standard of the drinking water and the pollution of the river was due to the obsolete municipal waste water treatment (WWT) facility. The poor quality of the drinking water is furthermore caused by the natural characteristics of the water (extensive level of iron), worn-out water supply systems and poor protection measures at the water extraction sources.

Since 1997 Latvia has been implementing the "Investment programme 800+" for the development of infrastructure in the municipal water sector. However, it is clear that over the next five to seven years this programme will only cater for larger municipalities with a population of over 2,000, and quite often the financing schemes proposed to cover the investment costs will be too expensive. This means therefore that smaller municipalities, i.e. those with a population of less than 1,000 which make up 70% of the Latvian local municipalities, will have little opportunity to improve their water sector infrastructure.

## Project Objectives

The "ZIEMELSUSEJA" project has several overriding objectives: To decrease the pollution load in the Ziemelsuseja river basin which contributes to pollution in the Baltic Sea; to strengthen the local capacity for implementing EU water legislation; to create an innovative system of river basin management appropriate for Latvian conditions and which enables co-operation on the local, regional and national levels (the Ziemelsuseja, the Daugava and the Baltic Sea basin); to create a scheme which ensures extensive public participation in the design and development of the river basin management plan and allows public groups to consider themselves as the "masters of the plan"; to create sets of indicators and procedures for monitoring

LIFE02 ENV/LV/000481  
ZIEMELSUSEJA



## Beneficiary:

**Type of beneficiary**  
Public authority

**Name of beneficiary**  
Jekabpils Region Council

**Postal address**  
Rigas 150a, Jekabpils Iv-5202  
LATVIA  
Tel.: 00371 5 281 217  
Fax: 00371 5 281 211  
E-mail: padome@jekabpils-rp.

**Name of contact person**  
Ms. Ilze BAIRE

## Duration of project:

From November 2002 to November 2005

## Total budget in euro:

1,219,667

## EC contribution in euro with %:

508,412 (49.37% of eligible costs)

## Priority theme covered by the project:

PG2.1 At the scale of the river basin

river basin quality and development, including a set of indicators to be monitored by the public; to demonstrate, by pilot projects, alternative possibilities to reconstruct wastewater and drinking water systems for small size (up to 2,000 inhabitants) local communities.



# New integrated wastewater treatment system for tanneries

## Official title

Demonstration of effective and efficient tannery effluent treatment system using an innovative, integrated and compact biological and physical treatment plant

## Background

The tanning industry is an industry that can potentially become a source of pollution. It is significant that "the tanning of hides and skins" is listed according to article 1 of the European Directive 96/61EC (IPPC Directive) as an activity for which integrated prevention and control of pollution has to be achieved.

The wastewater produced by European tanneries is treated in many different ways. There are cases in which an individual plant applies the Best Available Technology (BAT) on site, whereas in other situations only pre-treatment, partial pre-treatment or no treatment at all is applied, sending the effluent to a communal treatment plant.

The European tanning industry processes 240 million m<sup>2</sup> bovine hides per year. This is the equivalent of approximately 1.6 million tonnes of raw hides per year, leading to a sludge production of 320,000 tonnes and a sulphate discharge of approximately 250,000 tonnes per year. The treatment of these wastewater streams also results in an enormous consumption of chemicals and energy.

## Project Objectives

The "TANEFTREAT" project will be experimentally implemented in the Hulshof Royal Dutch Tanneries. It seeks to demonstrate and disseminate the effectiveness and efficiency of a new compact and integrated plant for the treatment of waste produced by the leather tanning industry. In order to present an alternative to BAT, the project aims to significantly reduce the use of certain dangerous products in the tanning process, cut down the levels of sludge and CO<sub>2</sub> produced, improve the cost-benefit ratio and reduce water consumption by recycling.

LIFE02/ENV/NL/000114  
TANEFTREAT



## Beneficiary:

**Type of beneficiary**  
Private structure

**Name of beneficiary**  
Waterstromen BV

**Postal address**  
Zutphenseweg 21  
P.O. Box 8  
7240 AA Lochem  
THE NETHERLANDS  
Tel.: 00 31 573 29 85 51  
Fax: 00 31 573 29 85 62  
E-mail: e.leeuw@waterstromen.nl

**Name of contact person**  
Ir. Eef LEEUW

**Duration of project:**  
From December 2001 to December 2004

**Total budget in euro:**  
5,096,692

**EC contribution in euro with %:**  
724,762 (29.46% of eligible costs)

**Priority theme covered by the project:**  
PG2.3 Waste water management

In this way the impact of the Hulshof Royal Dutch Tanneries on the environment will be reduced and the BAT for the tanning industry regarding wastewater treatment will be improved. The results will also be widely disseminated to other European tanning industries, as well as to the food, textile and paper processing industries.

# Saving natural ecosystems through improved wastewater management

## Official title

Wastewater management saves natural ecosystems

## Background

The region of Tilburg in the South of the Netherlands faces several problems in the water chain. The western parts of Tilburg are drying up, causing problems for nature and agriculture. This is further complicated by a large groundwater withdrawal. At the same time, the North is experiencing a disturbance in the water balance, while the eastern part has too much water (this over-capacity overflows natural areas like De Brand, where the survival of the vegetation is under threat).

The various parties involved in the water management of Tilburg have a common interest in finding solutions to the water problems and believe that they can be solved by organising better co-operation in the water chain. The "ALTWA" project is an attempt to organise such co-operation among the various stakeholders. It involves the purification of municipal wastewater and its re-use as process water in two industrial estates.

## Project Objectives

The aim of the project is to demonstrate that municipal wastewater can be re-used as process water in two industrial estates.

The measures envisaged consist of building a purification installation for upgrading the municipal wastewater and setting up a transport and distribution network to the various industrial facilities that will make use of the upgraded wastewater. Finally, the monitoring and evaluation of the use of the upgraded wastewater in the selected pilot-companies is also planned.

The expected results include an annual saving of groundwater of at least 1,700,000 m<sup>3</sup>, expected to eventually expand to 8,000,000 m<sup>3</sup>. The project will also help to prevent the drying up of the landscape and the supply of cheaper alternative water, intended to be used as process water, cooling water, fire-water, irrigation and infiltration. Apart from this, benefits are also expected for the environment, the society and the economy as a whole.

The results of the project will be disseminated throughout Europe.

LIFE02/ENV/NL/000116  
ALTWA



## Beneficiary:

**Type of beneficiary**  
SME

**Name of beneficiary**  
Tilburgsche Waterleiding Maatschappij

**Postal address**  
Zutphenseweg 21  
Bredaseweg 207  
P.O. Box: 5038 NE  
Tilburg  
THE NETHERLANDS  
Tel.: 00 31 135 84 04 00  
Fax: 00 31 135 84 04 01  
E-mail: joost.maas@twm.nl

**Name of contact person**  
Jost MAAS

**Duration of project:**  
From July 2002 to July 2005

**Total budget in euro:**  
4,165,875

**EC contribution in euro with %:**  
603,125 (30% of eligible costs)

**Priority theme covered by the project:**  
PG2.3 Waste water treatment

# The application of Membrane Bioreactor technology to large-scale effluent treatment

## Official title

Membrane Bioreactor

## Background

The criteria normally used for discharging effluents are defined on the basis of standard techniques such as activated sludge and secondary clarification.

However, it has become clear that in some cases specific effluent requirements are necessary. This applies in particular to water with a recreational function, ecological sensitive waters or water that is to be re-used. In order to meet these requirements, the 4th Dutch National Policy Document on water management has defined certain standards, the so-called maximum tolerable risk (MTR) quality standards, that cover both the present national and European Union (EU) criteria on the quality of surface water.

In order to fulfil these strict criteria, the project envisages the construction of a wastewater treatment plant (WWTP) based on the membrane bioreactor (MBR) technology.

Seeking to attain the future MTR quality standards, the beneficiary, the Waterboard Rijn en IJssel, decided to experiment with the MBR technology and implement it in the Varsseveld WWTP, that discharges its effluent in a small river serving as a regional ecological stepping stone.

## Project Objectives

The project aims to demonstrate the first full-scale application of MBR technology for treatment of municipal sewerage. This demonstration is a necessary intermediate step between pilot plant research and large-scale application.

It seeks to prove that MBR technology can be applied in large-scale municipal sewerage treatment and successfully demonstrate its application. It also aims to validate that effluent quality meets present and future water quality standards and that MBR technology enables new or existing WWTPs to build very compact and modular technologies.

Other expected results include the reduction of odour and noise nuisance, and eventually the decrease of sludge production.

LIFE02/ENV/NL/000117  
MEMBRANE BIOREACTOR



## Beneficiary:

### Type of beneficiary

Public authority

### Name of beneficiary

Waterschap Rijn en IJssel

### Postal address

Liemersweg 3  
P.O. Box 148  
Post Code: 7000 AC  
Doetinchem  
THE NETHERLANDS  
Tel.: 00 31 314 36 93 69  
Fax: 00 31 314 34 32 58  
E-mail: p.schyns@wrijn.nl

### Name of contact person

Philip SCHYNS

## Duration of project:

From October 2002 to June 2006

## Total budget in euro:

8,500,130

## EC contribution in euro with %:

1,700,000 (29.58% of eligible costs)

## Priority theme covered by the project:

PG2.3 Waste water treatment

# Sustainable horticultural production: replacing pesticides with biocontrol

## Official title

Biocontrol instead of pesticides for a sustainable horticultural production

## Background

The use of chemicals in the horticultural sector is still high. The 'low tech' part of this sector, where soil is still used instead of artificial substrate, uses large amounts of methyl bromide to disinfect the soil. Methyl bromide is a chemical, which contributes to global warming but, as yet, there is no effective alternative. Chemicals (especially fungicides) are also used for improving crop condition. Although there are agreements to reduce the use of pesticides at both national and international levels, a visible reduction has not yet been realised. Consequently, the horticulture sector in many countries still forms a diffuse and dispersed source of pollution, especially of ground /surface water and air.

The greenhouse sector is also energy intensive and thus contributes to CO<sub>2</sub> production and the "greenhouse effect".

## Project Objectives

The project seeks to demonstrate that biocontrol, involving the use of certain bacterial strains of the bacterium "Pseudomonas" for crop control in artificial substrate, will improve horticultural production, making it substantially less water polluting, more efficient and less energy consuming. One widely grown crop –the tomato– will be selected for this demonstration. This will positively affect the greenhouse sector for both horticulture and floriculture. The green image, food safety, improved pest resistance, better crop condition, consumer confidence, government objectives etc. will all be promoted by this project.

The use of biocontrol will make the use of pesticides largely superfluous, thereby significantly reducing the sources of pollution. It is estimated that the introduction of biocontrol will reduce the use of chemical pest control by up to 75%. Taking the Netherlands as an example, this would represent an annual reduction of 32,250 kg (4,300 hectares) for the horticultural sector and 105,225 kg (6,100 hectares) for floriculture.

LIFE02/ENV/NL/000118  
BIOCONTROL



## Beneficiary:

### Type of beneficiary

Private structure

### Name of beneficiary

Rockwool Grodan BV

### Postal address

Industrieweg 15  
P.O. Box 1160  
NL-6045JG Roermond  
THE NETHERLANDS  
Tel.: 00 31 475 35 35 18  
Fax: 00 31 475 35 35 66  
E-mail: daan.kuiper@grodan.nl

### Name of contact person

Daan KUIPER

## Duration of project:

From July 2002 to December 2004

## Total budget in euro:

657,216

## EC contribution in euro with %:

186,924 (30% of eligible costs)

## Priority theme covered by the project:

PG2.4 Diffused and dispersed sources of pollution

# New environmental friendly cargo handling and fumigation plant

## Official title

Demonstration of an environmentally friendly cargo handling plant in the port of Rotterdam (ECON-tainer)

## Background

In ports around the world methyl bromide is still used for the decontamination and fumigation of containers. However, about 90% of the methyl bromide that is used for these purposes eventually finds its way into the environment. It penetrates deep into the soil and is easily released into the atmosphere, where it causes considerable damage to the ozone layer. Fumigation and decontamination still take place in the open air. On arrival at the port of destination, containers that are marked are opened and left open for a couple of days for degassing purposes, releasing the methyl bromide into the air. On a yearly basis many kilotons of methyl bromide are released into the environment. Therefore it is highly important to come up with an alternative to the use of methyl bromide for fumigation and decontamination purposes.

## Project Objectives

The project marks the first step towards a total phase out of the use of methyl bromide in this sector. Ecogen, a private company specialised in alternatives for methyl bromide, has developed an environmentally friendly technique for pest control on the basis of an ultra low level of oxygen. By exploiting the Ecogen technique, the "ECON-tainer" project aims to demonstrate an environmentally friendly cargo handling and fumigation plant, improve the working conditions and environmental performance of the port of Rotterdam, and to disseminate the project results across Europe.

For this purpose, there are plans for the construction of 12 gas tight chambers, the installation of the necessary equipment and the training of the workers. The new plant will initially work for a demonstration period of 12 months, during which experiments will be made and about 2400 containers will be handled. A monitoring programme, aimed at the collection of data on environmental performance will also be implemented. Finally, the results of the project will be evaluated and disseminated to targeted organisations.

LIFE02/ENV/NL/000124  
ECON-TAINER



## Beneficiary:

### Type of beneficiary

Private structure

### Name of beneficiary

ECT BV

### Postal address

Parklaan 11  
P.O. Box 7400  
3000 HK Rotterdam  
THE NETHERLANDS  
Tel.: 00 31 10 440 35 55  
Fax: 00 31 10 440 35 05  
E-mail: rinus.oostlander@ect.nl

### Name of contact person

Rinus OOSTLANDER

## Duration of project:

From March 2002 to June 2004

## Total budget in euro:

2,999,649

## EC contribution in euro with %:

623,315 (30% of eligible costs)

## Priority theme covered by the project:

PG3.3 Reduction of emission of gases having a green house effect

# Residual municipal waste as fuel for power stations

## Official title

BioFuel: biological drying and upgrading of biodegradable residual municipal waste into BioFuel for coal burning power stations

## Background

Each year the EC generates 200 million tonnes of municipal waste composed of biodegradable waste, packaging and mixed waste. The majority of municipal waste is disposed of in landfill sites, which is still the cheapest available option, despite the introduction of landfill taxes in some European countries. Legal landfill sites however are beginning to fill up and the environmental threats concerning waste are seriously endangering human health and our quality of life. Therefore, the awareness of the need to prevent and minimise waste is increasing, as is recycling of waste in countries with advanced waste management systems.

The Organic Wet Fraction (OWF) is a highly problematic residual fraction of waste. Its calorific value is low, as a consequence of the low dry solid content of the organic components. Furthermore, the organic character of OWF is mixed with other non-organic components like inert materials, plastics and ferrous and non-ferrous materials. As a consequence, OWF has to be deposited in landfills.

## Project Objectives

The main objective of the project is to demonstrate the biological treatment of biodegradable residual municipal waste. The beneficiary, VAM, will process an Organic Wet Fraction into organic BioFuel with a calorific value of 10 MJ/kg, by using the method of biological drying and upgrading. A further objective is to demonstrate the combustion of BioFuel as a complementary fuel at the coal run power plant of EEP, the other project partner, in Geertruidenberg.

VAM and EEP will conduct detailed studies on the combustion and chemical properties of OWF/BioFuel, its logistical handling and the working conditions regarding its processing and combustion. Based on these studies, pilot installations for the production and combustion of BioFuel will be constructed.

LIFE02/ENV/NL/000128  
BIOFUEL



## Beneficiary:

**Type of beneficiary**  
Private structure

**Name of beneficiary**  
VAM NV

**Postal address**  
VAMweg 7  
P.O. Box 5  
9418 ZG Wijster  
THE NETHERLANDS  
Tel.: 00 31 593 56 39 85  
Fax: 00 31 593 56 39 93  
E-mail: h.woelders@vam.nl

**Name of contact person**  
Hans WOELDERS

**Duration of project:**  
From December 2001 to June 2004

**Total budget in euro:**  
5,605,459

**EC contribution in euro with %:**  
920,755 (27.23% of eligible costs)

**Priority theme covered by the project:**  
PG4.3 Waste important in volume

In addition, the technical and environmental effects and results of the process will be analysed over a one-year period. Finally, the results of the pilot production and its monitoring and evaluation will be widely disseminated to various stakeholders.

# Recovery of sand and inert fibres from digested paper

## Official title

Wet separation of anaerobically digested rest waste for the recovery of recyclables

## Background

Source separate collection of the organic fraction of municipal solid waste will be implemented more and more in Europe. However, this results in the production of a rest waste, which still contains a large fraction of biodegradable organic matter. Studies show that it contains 50 to 60% of biodegradable material, such as non-recyclable paper/cardboard and kitchen waste. This needs to be treated before disposal in accordance with the EU-landfill directive limiting the amount of organic waste going to landfill. Several plants have been built to demonstrate a mechanical and biological pre-treatment for the stabilisation of the rest waste, prior to incineration or landfill. In all of these schemes, the amount of material and energy recovered is minimal.

## Project Objectives

The "SORDISEP" project focuses on a new development for the treatment of household garbage. The main objective is to demonstrate the potential to recover fibre from digested paper, sand and clean biomass by applying a method of advanced wet separation after dry digestion. The project also aims to demonstrate the technical feasibility of combining wastepaper recovery and soil washing techniques, without increasing the amount of wastewater produced. This process is expected to reduce the disposal of digested waste by 60% by producing quality products.

The results expected from this project are the production of final products of certified quality, quantity and value, as well as lower disposal costs for the remaining waste. The project also envisages reaching the cost of the demonstration plant and the operating costs after one year of continuous operation. Finally, the introduction of this new method into the marketplace through dissemination is also planned.

LIFE02/ENV/NL/000130  
SORDISEP



## Beneficiary:

### Type of beneficiary

Private structure

### Name of beneficiary

Bio Thermische Conversie BV

### Postal address

Moldiepweg 7  
3313 LN Dordrecht  
THE NETHERLANDS  
Tel.: 00 31 786 30 67 00  
Fax: 00 31 786 30 67 01  
E-mail: feijter.jmde@phoenyx.nl

### Name of contact person

J.M. DE FEIJTER

## Duration of project:

From November 2002 to October 2005

## Total budget in euro:

4,543,618

## EC contribution in euro with %:

941,419 (30% of eligible costs)

## Priority theme covered by the project:

PG4.3 Waste important in volume

# New "Wadden Water House" demonstrates state-of-the-art energy-saving and sustainable construction

## Official title

Wadden Water House

## Background

The world is becoming more and more aware of the environmental issues that create a considerable challenge for the future of our planet. Global warming caused by the emission of CO<sub>2</sub> is one of the main problems that today's world faces. This is causing a slow but stable increase in sea levels. In several parts of Europe this is becoming very evident, especially in areas experiencing increasing incidences of flooding. Other related problems include the exhaustion of the world's natural resources and energy sources.

The European Union (EU) has developed a program that calls for action on providing solutions to the environmental problems described above. This call is for long term activities that contribute to sustainability. One of the policy areas concerned is Integrated Product Policy. The Ecological Building Design can help in finding solutions to environmental problems.

## Project Objectives

The project and the concept of Wadden Water House addresses various environmental problems, one of which is the problem of waste. The Wadden Water House is built with recycled materials, largely based on glass for which no appropriate use has yet been found. It is also highly insulated, using extremely low amounts of energy and collecting what energy it needs from the sun, wind and earth-warmth. It causes no CO<sub>2</sub> emission. Furthermore, the sourcing and production of the construction materials causes no lasting environmental damage, as the materials are 100% recyclable after the deconstruction of the building.

The low level of energy consumption in the Wadden Water House, combined with the collection of heat by using the pipe-grids, the recycled glass, the tin based construction materials and the glass-foam foundation principle will set a new state-of-the-art in the field of energy-saving and sustainable construction.

LIFE02/ENV/NL/000133  
WADDEN WATER HOUSE



## Beneficiary:

### Type of beneficiary

Private structure

### Name of beneficiary

Vermeer Infrastructuur BV

### Postal address

Kalkoven 3  
9351 NP Leek  
THE NETHERLANDS  
Tel.: 00 31 594 58 58 88  
Fax: 00 31 594 58 58 99  
E-mail: h.wijnstra@duravermeer.nl

### Name of contact person

Henk WIJNSTRA  
h.wijnstra@duravermeer.nl

## Duration of project:

From December 2001 to August 2004

## Total budget in euro:

727,336

## EC contribution in euro with %:

169,002 (30% of eligible costs)

## Priority theme covered by the project:

PG5.1 Eco-design, eco-efficiency, green financial products



## Crystal clear: Eco-friendly wastewater management

### Official title

Ecotoxicological Evaluation of Municipal and Industrial Wastewater

### Background

The composition of wastewater is complex and many of its components are not easily identifiable. Moreover, its toxicity depends on the interaction between different components and has to be measured directly. The Direct Toxicity Assessment (DTA), a measuring tool used in different European countries, has shown that an integrated approach to the ecotoxicological problems is an effective strategy to minimising ecotoxicological pressure caused by wastewater in the environment.

In Portugal, given the lack of a relevant legal framework, research in this area is poorly developed, although it has been recognised that ecotoxicological tests have a good cost/benefit ratio. Thus, there is a need to fill the existing gap in the national legislation and to create the necessary scientific basis. The project will be implemented in River Trancão and the adjacent basin, north of Lisbon. It is a small, but heavily industrialised and densely populated area, and flows into the Tagus estuary, one of the biggest rivers in Portugal. Therefore, this basin is suitable for a demonstration project aiming to compare several methods for evaluating ecotoxicity of different effluent types.

### Project Objectives

The main objective of the project is to demonstrate the importance of ecotoxicology for wastewater management, and to set up the technologies for planning and controlling industrial and municipal wastewater networks. The actions planned include the evaluation of ecotoxicity of municipal and industrial wastewater, the assessment of the wastewater's impact on the basin and the elaboration of a proposal for ecotoxicity criteria to be included in the national legislation. Methodologies will also be set up for the support of laboratories dealing with issues of toxicological evaluation of wastewater. Finally, the project will elaborate a model of the drainage basin, to predict the environmental benefits of wastewater control policy and to optimise future works.

LIFE02 ENV/P/000416  
ECORIVER



### Beneficiary:

#### Type of beneficiary

Public authority

#### Name of beneficiary

Instituto do Ambiente  
(ex-Direcção-Geral do Ambiente)

#### Postal address

R. da Murgueira  
Zambujal  
P-2720-865 Amadora  
PORTUGAL  
Tel.: 00 351 21 472 83 30  
Fax: 00 351 21 472 83 79

#### Name of contact person

Tereza VINHAS  
E-mail: tereza.vinhas@dga.min-amb.pt

### Duration of project:

From October 2002 to September 2005

### Total budget in euro:

1,151,131

### EC contribution in euro with %:

517,957 (50% of eligible costs)

### Priority theme covered by the project:

PG2.1 At the scale of the river basin

This project will help raise public awareness on the importance of ecotoxicity.

## Putting waste to good use: Community composting in Seixal

### Official title

Promotion of Community Composting in Seixal

### Background

The European Union (EU) Landfill Directive (1999/31/EC) requires Member States to set up strategies to reduce the amount of biodegradable municipal waste sent to landfills to 75% of the total 1995 baseline by 2010. Portugal still has much work ahead before reaching the EU target.

Seixal, a municipality located in central Portugal, produces around 50 000 tons per year of municipal solid wastes. Some organic materials, such as newspaper and office paper have a high recovery rate. Other organic materials (e.g. yard trimmings, food scraps and certain grades of paper) have a high potential for recovery, however these materials are still being sent to the landfill. Using garden and kitchen waste for composting is one way to minimise the organic waste currently being sent to landfills. This compost can be further used as fertiliser for houseplants and garden soil.

### Project Objectives

The project is part of a broader Integrated Waste Management Project (PEDSIRS), whose main goal is to promote, among other objectives, the source separation of recyclable materials (paper, glass, plastics, metals and batteries). The main objective of the project is to reduce the amount of biodegradable organic waste being disposed in the landfill at Seixal. This will be achieved by involving three different groups - local authorities, households and schools - in the source separation of selected organic materials to be composted. To this end, the project will implement community composting at three levels: municipal-composting of the organic waste from the municipality public gardens in a specific municipality composting unit, backyard composting by households and low-scale composting at schools. The main social goal of the project is to raise public awareness on environmental issues by educating and stimulating the community to consider waste as material with potential. Finally, through this project, Seixal could achieve the goals set by the EU Directive.

LIFE02 ENV/P/000421  
SEIXAL.COMP.COM



### Beneficiary:

#### Type of beneficiary

Public authority

#### Name of beneficiary

Câmara Municipal do Seixal

#### Postal address

R. Fernando de Sousa, nº 2

P-2840-515 Seixal

PORTUGAL

Tel.: 00 351 21 222 61 49

Fax: 00 351 21 221 52.39

E-mail: pel.ambiente.cms@mail.telepac.pt

#### Name of contact person

Eng. Jorge Eduardo DIDELET

### Duration of project:

From April 2002 to February 2005

### Total budget in euro:

602,210

### EC contribution in euro with %:

192,306 (50% of eligible costs)

### Priority theme covered by the project:

PG4.3 Waste important in volume

## New ecological product for purifying gases and water

### Official title

Activated carbon manufacturing using xylite charcoal for environment application

### Background

The need to observe environmental standards and to preserve the nature in line with European Union strategies and objectives is leading to the extensive use of various adsorbents when purifying gases and water. Traditionally, activated carbon is the main product used for that purpose. It fixes and retains effectively the substances from the fluids which it comes into contact with.

Nowadays, the use of ecological products is a visible trend worldwide. In this context, a continuous rise of activated carbon production (30% over the last decade) has been observed in particular with respect to its utilization in the area of environmental protection (purification of waste gases and waters).

In Romania, low rank coals – xylithes - due to their woody like physico-chemical and structural characteristics, are promising materials for the production of carboaceous adsorbents, charcoal and activated carbon.

### Project Objectives

The objective of the “ENVACTCARB” project is to develop a clean technology based on the recovery of xylith waste from brown coal in order to obtain a new ecological product – activated carbon.

The main goals of the project are:

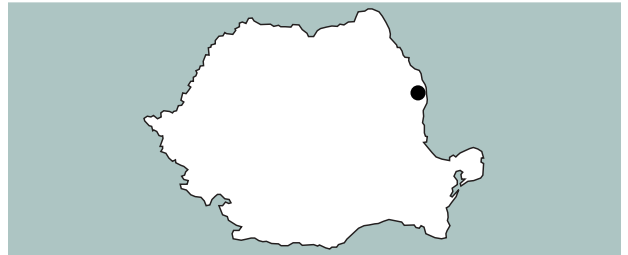
- recycling of xylith which negatively influences the grinding and the burning of brown coals;
- creating a new ecological product, xylith activated carbon, by the application of a new, non-polluting technology;
- promoting the utilization of the activated carbon in the purification processes.

#### Expected results:

##### *Ecological:*

- prevention of soil pollution (reducing dumping of waste xylith ),
- reducing forest exploitation,
- promoting the use of activated carbon in water treatment processes.

LIFE02 ENV/RO/000461  
ENVACTCARB



#### Beneficiary:

**Type of beneficiary**  
public authority

**Name of beneficiary**  
Metallurgical Research Institute – ICEM

**Postal address**  
Mehadia Street, No. 39,  
77769 - Bucharest  
ROMANIA  
Tel.: 00 40 1 220 55 06  
Fax: 00 40 1 220 42 95  
E-mail: dobrescu@metal.icem.ro  
Gpredeanu@metal.icem.ro

**Name of contact person**  
GeorgetaPREDEANU

**Duration of project:**  
From July 2002 to December 2004

**Total budget in euro:**  
830,820

**EC contribution in euro with %:**  
390,160 (50% of eligible costs)

**Priority theme covered by the project:**  
PG3.1 Clean technologies

#### *Social:*

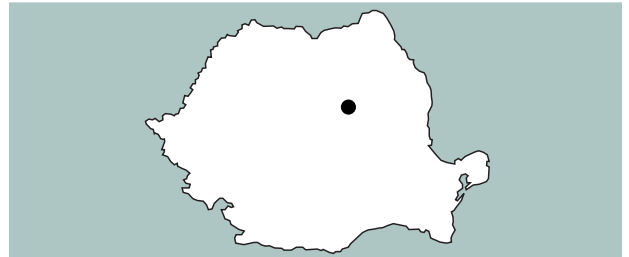
- increasing the quality of life by improvement of the environment,
- new jobs for unemployment people, in a new environmental business market,
- economic and social regeneration of former depressed mining regions.

#### *Technical-economic:*

- the product's quality will be similar to or higher than that of classical adsorbents,
- clean technology with a strong recycling component,
- low energy and raw material supply costs.

# Eco food markets for Bucharest

LIFE02 ENV/RO/000462  
ECOMARKET



## Official title

Implementation of ISO 14001 – EMS, of eco-labelling and of ecological models as tools on sustainability indicators in public administration and food markets

## Background

Food markets in Romania are operating in very poor conditions of hygiene and are a risk for the environment and the health of the population. The negative impact on the environment is notably caused by waste generation, air emissions and water discharges, water and energy consumption and also noises, smells and deterioration of the urban landscape, with its high population density. The food markets are also endangering the health of the population due to a lack of hygiene measures and the risk of contamination presented by perishable products. Due to their inappropriate storage and consequent alteration, these products become sources that spread for diseases and infections. Finally, the design of food markets does not take into consideration strict environmental and health norms.

## Project Objectives

The objective of the “ECOMARKET” project is to minimise the environmental impact of food markets that operate permanently in open or partially open spaces and to demonstrate how eco-labels can be an effective instrument in moving production and trade of agricultural and industrial products trade in Romania towards sustainability. In concrete terms, the project has the following goals:

- To introduce and certify an environmental management system (EMS) in compliance with the ISO 14001 requirements in Bucharest;
- To elaborate a food market ecological model and to apply it to one test market;
- To design, test and evaluate an environmental assessment method and sustainability indicators in order to obtain a voluntary eco-labelling scheme (VES) for retail shops located in food markets;
- To monitor and disseminate the project results.

## Beneficiary:

### Type of beneficiary

Public authority

### Name of beneficiary

General City Hall of Bucharest

### Postal address

B-dul Regina Elisabeta No. 47

Bucharest

ROMANIA

Tel.: 00 40 1 314 32 24

Fax: 00 40 1 314 76 72

E-mail: alexandrescu@pmb.ro

### Name of contact person

Mircea ALEXANDRESCU

## Duration of project:

From November 2002 to October 2003

## Total budget in euro:

662,772

## EC contribution in euro with %:

281,900 (49.90% of eligible costs)

## Priority theme covered by the project:

PG5.2 Eco-labelling

## Expected results:

- Environmental protection and resource consumption will be continuously optimized by the use of EMS;
- The negative impact on the environment and public health risk of the Bucharest food markets will be significantly reduced at the level of waste generation, water and energy consumption and at the same time the hygiene will be greatly improved.

# Organic agricultural production: A pilot programme in Galicia, Spain

## Official title

Pilot programme for training, awareness and dissemination of organic agricultural production

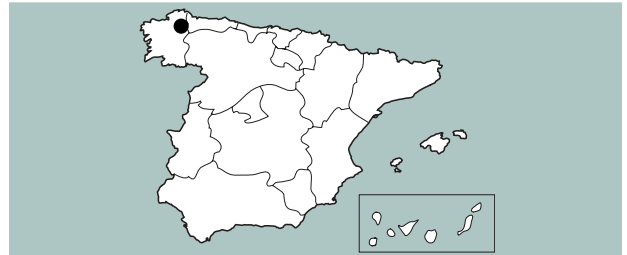
## Background

Spain has the highest percentage of cultivated land in the European Union. Its active farming population outnumbers the EU average by more than 3%, while the agricultural sector represents 71% of the overall water consumption in the country. To adhere to the Common Agricultural Policy, Agenda 2000 and Food safety, the Spanish agricultural sector faces the challenge of integrating sustainable development into their policies. It must therefore reduce practices which have negative effects on the environment, sustain and restore the functions of the ecosystem and guarantee a safe agricultural production in accordance with the needs of the country's population and the availability of food. Measures must also be taken to improve existing conditions in agriculture and the environment and to improve the agricultural sector in economic and social terms.

## Project Objectives

The project aims to identify potential areas suitable for ecological farming. This includes detection of areas eligible for organic farming and providing training in organic farming for young, unemployed and underemployed farmers, especially those from target areas where organic farming projects will be implemented. The project also envisages the settlement of young populations in rural areas. It will also launch a campaign for the dissemination of information to inform the public and raise awareness on organic farming. Finally, the project will foster the development of viable marketing methods. To this end, the project team will encourage interaction with agents, consultants, entrepreneurs and administrations not only within but also outside the region of Galicia in northwestern Spain, where the actions will primarily take place.

LIFE02/ENV/E/000164  
PAEGA



## Beneficiary:

**Type of beneficiary**  
Public institution

**Name of beneficiary**  
Ayuntamiento de Vilasantar

**Postal address**  
A Matés, s/n  
E-15807 Vilasantar - A Coruña  
SPAIN  
Tel.: 00 34 981 778 169  
Fax: 00 34 981 778 166  
E-mail: vilasantar@fegamp.es

**Name of contact person**  
Jesús Manuel CORRAL ABELLA

**Duration of project:**  
From August 2002 to August 2005

**Total budget in euro:**  
1,748,236

**EC contribution in euro with %:**  
845,413 (49.80% of eligible costs)

**Priority theme covered by the project:**  
PG5.1 Eco-design, eco-efficiency, green financial products

# Information and sustainable development in urban environments

## Official title

Information, competitiveness and sustainability in urban systems

## Background

Competitiveness and sustainability could be compatible if the current strategy based on the consumption of resources were replaced with a strategy based on "information". More information means a more efficient consumption of energy and materials.

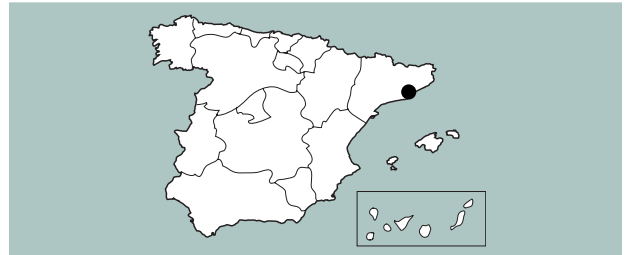
In terms of resource consumption ("sustainability"), natural systems with the most diversity are the most efficient. However, the development of cities leads to an unlimited rise in the consumption of resources, with the adoption of a functionalist approach that tends to reduce the functions of each geographical area and in so doing simplifies the diversity of the different urban fabrics. This simplification is one of the main causes behind strategies based on the consumption of resources, which generate the environmental impacts witnessed today.

## Project Objectives

The project aims to measure the information contained in the different fabrics of the urban system, such as the degree of resource consumption. The project focuses on the development of an instrument to help with strategic urban planning, where the compact and diverse city is considered the model for a more sustainable city. The objectives are to:

- Measure the information (in terms of biodiversity) contained in the different fabrics of the urban system. Develop the methodology and instruments to simulate scenarios.
- Determine the relationship between urban diversity and competitiveness, and between urban complexity and sustainability in order to devise urban development strategies that are based more on information and less on the consumption of resources.
- Apply the instruments developed to the urban planning of five cities.

LIFE02/ENV/E/000176  
DIVERS



## Beneficiary:

**Type of beneficiary**  
Public Authority

**Name of beneficiary**  
Ayuntamiento de Barcelona

**Postal address**  
Salvador Rueda Palenzuela  
Agencia de Ecología Urbana de Barcelona  
C/ Urgell 187  
E-08036 Barcelona  
SPAIN  
Fax: 00 34 934 020 641  
Tel.: 00 34 934 020 627

**Name of contact person**  
Francisco CÁRDENAS  
E-MAIL: cardenas@bcnecologia.net

**Duration of project:**  
From October 2002 to October 2004

**Total budget in euro:**  
1,759,744

**EC contribution in euro with %:**  
818,869 (50% of eligible costs)

**Priority theme covered by the project:**  
PG1.1. Urban environment

- 
- Create instruments for the development of a network of cities that interactively manages knowledge (resources, solutions and obtained results) and urban sustainability.

# Hidden hazards: a pilot project for separate collection, disposal and recycling of discarded mobile phones

## Official title

Demonstration Project of Separate Collection and recycling of Waste from Mobile Phones

## Background

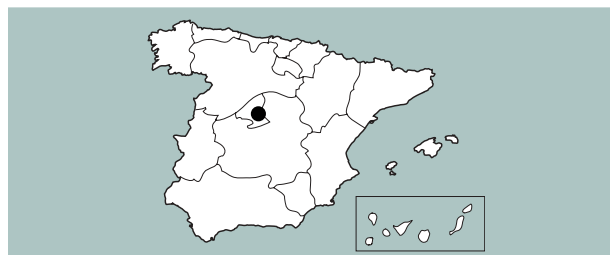
Mobile phones have become necessary devices for everyday life, but they also produce a growing amount of waste. Moreover, the rapid evolution in mobile phone technology has resulted in a spectacular increase in the number of obsolete terminals, which in Spain is estimated at three million. An analysis carried out in June 2000 by the Spanish National Multisectorial Association of Electronic and Communication Enterprises (ASIMELEC), estimated a generation rate of 766 506 kg of mobile phone waste in Spain for the year 2000, of nearly two million kg for the year 2001 and of as much as three million kg for the year 2003. Moreover, mobile phones are equipped with potentially hazardous substances such as batteries which require appropriate disposal management to prevent further damage to the environment. They are also equipped with valuable raw materials which are in limited supply, such as precious metals, that could be profitably recovered.

## Project Objectives

The main objective of the project is to find a solution to the problem of the waste generated by mobile phones, their accessories and components. Project activities include the estimation of waste generation rates and its management costs and the identification of the socio-economic patterns that may influence the disposal of obsolete mobile phones. It also envisages the development of a separate waste collection and integrated treatment system. Furthermore, it will promote "Eco-Design" among mobile phone manufacturers.

Consequently, the project will involve different actors participating in the life-cycle of mobile phones and their accessories: manufacturers, end-users, distributors, Public Administrations and recycling companies. Its aim is to make citizens aware of the need to collect and recycle waste mobile phones, to save raw materials and to protect natural resources.

LIFE02/ENV/E/000177  
TRAGAMÓVIL



## Beneficiary:

**Type of beneficiary**  
Private association

**Name of beneficiary**  
Spanish National Multisectorial Association of Electronic and Communication Enterprises (ASIMELEC)

**Postal address**  
C/ Orense, 62  
E-28020 Madrid  
SPAIN  
Tel.: 00 34 914 170 890  
Fax: 00 34 915 550 362  
E-mail: asimelec@asimelec.es

**Name of contact person**  
Gonzalo TORRALBO

**Duration of project:**  
From October 2002 to December 2004

**Total budget in euro:**  
2,266,727

**EC contribution in euro with %:**  
1,086,435 (50% of eligible costs)

**Priority theme covered by the project:**  
PG4.2 Hazardous or problematic waste

# Integrated environmental management system for farm cooperatives

## Official title

Integrated reduction of the environmental impact of agricultural economic systems

## Background

The agricultural sector accounts for a small portion of the economic activity of the EU, especially in the countries benefiting from the Cohesion Fund. In 99% of all cases, this portion corresponds to small farms.

Farmers have to adapt to the permanent changes in the agricultural sector if they are to satisfy the expectations and needs of the market. That is why small farmers are opposed to voluntary environmental plans like EMAS.

Agriculture is a sector whose impact on the environment is considerable. The fact that this impact can vary depending on the type of activity and that the owners of small farms use different traditional production methods makes it extremely difficult to introduce innovations or changes in the agricultural sector.

## Project Objectives

The main objective of the Trama project is to develop and validate an integrated system of environmental management for farm cooperatives in order to reduce the environmental impact of agriculture within the territorial unit stretching from the Ebre Valley to the Pyrenees.

Advanced technologies exist to reduce or totally eliminate the environmental impact caused by the activities of the farm cooperatives. However, socio-economic factors, combined with a lack of experience and the absence of a practical and organised global vision, are responsible for the present failure to apply in any widespread manner these measures to control and reduce the environmental impact.

Here, the aim is to establish an "optimal circle of environmental management" by using the socio-economic relations that already exist in the farm cooperative to actually apply these state-of-the-art technologies.

LIFE02 ENV/E/000180  
TRAMA



## Beneficiary:

**Type of beneficiary**  
SMEs

**Name of beneficiary**  
Fundación Catalana de Cooperació

**Postal address**  
Avda. Madrid 3, entresol  
E-25002 Lleida  
SPAIN  
Fax: 00 34 973 283 072  
Tel.: 00 34 973 283 151

**Name of contact person**  
Jovita Latorre SAURA  
E-mail: jovita@fundacop.org

## Duration of project:

From November 2002 to November 2004

## Total budget in euro:

1,051,716

## EC contribution in euro with %:

525.858 (50% of eligible costs)

## Priority theme covered by the project:

PG3.2 - Integrated environment management



# Innovative methods to treat residual urban water

## Official title

Floating macrophytes as new green filters for South East Spain

## Background

The quality of surface water in Spain at the moment is far from satisfactory. An analysis by the 533 surface water testing stations of the biochemical demand in oxygen shows that in 11% of the cases the water is polluted and that in 42% of the cases it is heavily polluted. If we take a closer look at the Segura river basin, there is little treatment of residual waters. Of the 207 residual water treatment stations listed, only 87 operate correctly, 2 have been abandoned, 59 are inoperable and the remaining 59 do not operate satisfactorily.

The small budgets available to municipalities to cope with the high cost of maintaining these stations are one of the factors that limit the level of water treatment in these areas. Another limiting factor is the scattering of populations and settlements, which prevents the establishment of residual water treatment networks. What is more, there are a large number of pig farms in the municipality of Lorca, and a satisfactory solution has not been found to deal with the problem of treating the solid and liquid manure.

Given the fact that there is no experience of systems of extensive treatment of this kind, the project offers an innovative method to treat residual urban water in other rural areas of the EU.

## Project Objectives

The project intends to:

- demonstrate the effectiveness of an innovative system for the treatment of residual waters using floating macrophyte plants (FMPs). What is new in the system is that macrophytes, which in their natural state are usually rooted, are made to float. Their power of filtration, tested in a preliminary phase of the work, proved to be better than that of green filters which use rooted or floating plants in their natural state;

LIFE02/ENV/E/000182  
MACROPHYTES



## Beneficiary:

**Type of beneficiary**  
Public Authority

**Name of beneficiary**  
Ayuntamiento de Lorca

**Postal address**  
Plaza de España 1  
E-30800 Lorca (Murcia)  
SPAIN  
Tel.: 00 34 968 466 351

**Name of contact person**  
Maria Dolores MILLÁN  
E-mail: mdmillan@wanadoo.es

## Duration of project:

From October 2002 to September 2005

## Total budget in euro:

1,013,008

## EC contribution in euro with %:

499,367 (50% of eligible costs)

## Priority theme covered by the project:

PG2.3 - Waste water treatment

- promote the new system in those Mediterranean regions where plants are not dormant in the winter, meaning that the system is especially suited for tourist areas, which are sometimes far from urban centres and where the population increases in the summer, a period when the filters are at the height of their activity;
- promote the new system of filtration in small communities and in various sectors (urban, livestock farming, industry). It is not subject to an economy of scale and costs little to implement and maintain.

## Good water resources management: A challenge for the Spanish Autonomous City of Ceuta

### Official title

Durable Regions On Peripheral Areas for Water Reduction

### Background

The Spanish Autonomous City of Ceuta, situated in North Africa in the Mediterranean Basin, has a history of water shortage. There are 3 reasons for this problem. Firstly, the city's limited water resources cannot guarantee a long-term supply of drinking water (only 15% of the drinking water consumed comes from local springs).

Since 1999, Ceuta's drinking water supply improved somewhat following the construction of a desalination plant that provides 64% of the total supply, with the remaining coming from springs. Secondly, the water supply system is inefficient because the meters are old and ineffective. The meters have also been subject to manipulation, causing losses of up to 3Mm<sup>3</sup> of water per year (45% of the total distributed). Finally, the lack of subterranean non-drinking water means that the drinking water is being used for other purposes.

### Project Objectives

The project seeks to demonstrate that the consumption of potable water in the Autonomous City of Ceuta can be reduced. This can be achieved by: installing telemeters, detecting leaks, maximizing use of subterranean water for street cleaning and gardening, and improving the potable water supply system. It also aims to raise public awareness on the issue of potable water scarcity in order to involve the local population in reducing water consumption. Finally, the project will support changes in the current local legislation to make it obligatory for telemeters to be installed in new buildings. With the proposed measures, Ceuta hopes to achieve a more sustainable management of its water resources. Project activities include the exchange of experiences at national, European and international levels as well as the dissemination of the results of the project to other peripheral or ultra-peripheral cities or regions facing the same problem.

LIFE02/ENV/E/000183  
DROPAWATER



### Beneficiary:

**Type of beneficiary**  
Public institution

**Name of beneficiary**  
Aguas de Ceuta Empresa Municipal S.A. (ACEMSA)

**Postal address**  
C/ Solís, 1  
E-51001 Ceuta  
SPAIN  
Tel.: 00 34 956 524 619  
Fax: 00 34 956 510 860  
E-mail: aguadeceuta@acemsa.es

**Name of contact person**  
Manuel Gómez HOYOS

### Duration of project:

From December 2001 to December 2004

### Total budget in euro:

1,009,457

### EC contribution in euro with %:

320,021 (50% of eligible costs)

### Priority theme covered by the project:

PG2.5 Other area – water management

# Integrated residual water treatment in the canning industry

## Official title

URGARBI, an innovative approach to the solution of environmental problems caused by the canning industry.

## Background

Bermeo, a fishing port in the north of Spain not far from a natural biosphere reserve (Urdaibai), has an important canning industry. Legislation stipulates that before residual waters can be discharged into coastal areas, rivers and sewers, most of the organic matter, oils and fats, and especially salts contained in the water have to be removed.

However, the heavy salt concentrations in this type of residual water can damage the biological system of the water treatment stations that are supposed to clean the water. What is more, the technical improvements needed to eliminate the salts are very costly and consume an enormous amount of energy, although this is no justification for simply displacing the pollution (it makes no sense to extract the salts from the residual waters and then dump them in a saline environment like the sea).

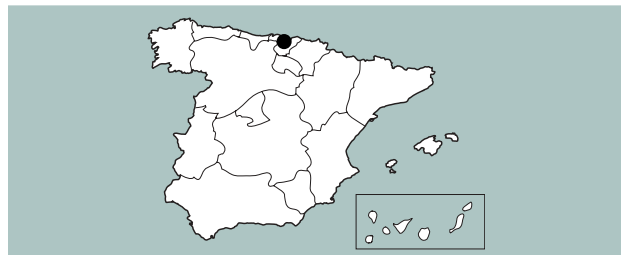
The project attempts to tackle the problem by combining all the residual waters of the area before sending them to the regional water treatment station. This lowers the salt concentration to a level where it no longer alters the biological phase.

## Project Objectives

The first objective consists in demonstrating that the best way to approach the problem from an environmental, social and economic point of view is to treat the residual waters in an integrated way. This means introducing a system of management and treatment for all the effluents of the fishing industry and incorporating the system in the main residual water treatment station.

Another objective of the project is to recover the solids and fats removed from the water during the treatment process and use them to make fish meal.

LIFE02/ENV/E/000186  
URGARBI



## Beneficiary:

**Type of beneficiary**  
Public Authority

**Name of beneficiary**  
Ayuntamiento de Bermeo

**Postal address**  
Sabin Tar Arana Emparantza s/n  
E-48370 Bermedo (Vizcaya)  
SPAIN  
Fax: 00 34 946 179 126  
Tel.: 00 34 946 179 100  
E-mail: beruala@bermeo.org

**Name of contact person**  
Nieves Lazcano VIGALONDO

## Duration of project:

From 1st quarter 2003 to 4th quarter 2005

## Total budget in euro:

1,238,641

## EC contribution in euro with %:

208,543 (50% of the eligible costs)

## Priority theme covered by the project:

PG5.1 - Eco-design, eco-efficiency,  
green financial products

Lastly, the project aims to demonstrate that by using chitosan (an organic substance derived from the exoskeleton of shellfish) as a flocculating agent in the treatment of residual waters, the solids and fats can be recovered for animal feed.

# Safe disposal and recycling of animal sub-products

## Official title

Implementation of an AD facility at a Spanish slaughterhouse for a sustainably closed energy and waste cycle

## Background

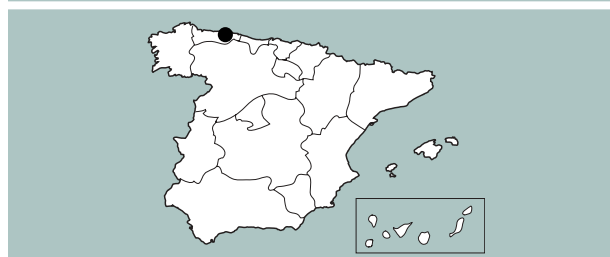
Disposal of animal sub-products produced in slaughterhouses generally takes 2 forms: transformation by grease extraction and recycling into the animal feeding chain. However, the impact of recent health and food safety crises means that recycling of dead animals now has to be reduced. Given the serious environmental and economic repercussions that this could entail, new methods will have to be found to dispose of animal sub-products.

The use of animal waste for the production of biogas could be a good alternative both in environmental and economic terms. The sludge resulting from the production of biogas from animal waste contains between 3%-4% dry matter and nitrogen that can be used in agriculture as fertilisers. This procedure also reduces the CO<sub>2</sub> emissions by replacing other fuels, avoiding incineration and producing a renewable energy.

## Project Objectives

The main objective of the project is to set up a pilot plant for the production of biogas from animal waste. The beneficiary Matadero Frigorífico del Nalón (MFN) plans to convert the waste products of a slaughterhouse into heat or electric power and thus generate a renewable energy and a new resource, such as fertiliser. MFN also intends to use the biogas as a source of energy for the slaughterhouse from which the waste is derived. Finally, the project seeks to obtain reliable process data and experience from the procedure and use these as a basis for a future comprehensive biogas plant.

LIFE02/ENV/E/000187  
ENERWASTE



## Beneficiary:

### Type of beneficiary

Small and medium sized enterprise

### Name of beneficiary

Matadero Frigorífico del Nalón

### Postal address

Polígono Industrial Riano, 2  
E-33929 Frieres-Langreo  
SPAIN

Tel.: 00 34 985 673 500

Fax: 00 34 985 699 504

E-mail: eganorsa@arrakis.es

### Name of contact person

Marcos DÍAZ PRADO

## Duration of project:

From February 2002 to May 2003

## Total budget in euro:

347,932

## EC contribution in euro with %

84,039 (30% of eligible costs)

## Priority theme covered by the project:

PG3.3 Reduction of emission of gases having a greenhouse effect

## Eco-degreasing:

### A new take on an old tradition

#### Official title

ECO-Degreasing Aqueous degreasing of fatty sheepskins through the replacement of ethoxylated nonylphenol by biodegradable ethoxylated alcohols and further recycling.

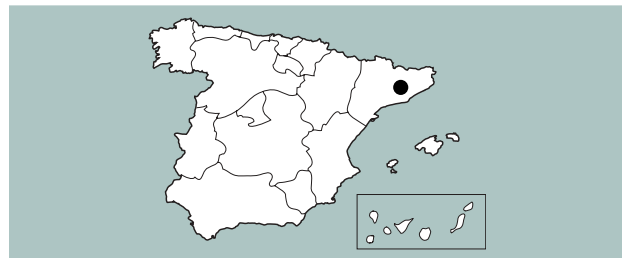
#### Background

Degreasing is one of several steps in the hide tanning process. The amount of natural fat contained in sheepskins is significant and can affect the process, therefore, the fat has to be removed to avoid stains and dyeing irregularities. However, sheepskin degreasing results in a high degree of pollution in the tannery wastewater and, although there have been improvements in hide tanning technology, the ethoxylated nonylphenols (NPEs) used for degreasing are environmentally questionable. The replacement of NPEs by aliphatic ethoxylated alcohols could provide a solution to the problem, however this method is not used because it is less effective yet more costly. Moreover, its inefficacy means that larger amounts of aliphatic ethoxylated alcohols have to be used, resulting in increasing to an even greater degree the Chemical Oxygen Demand (COD) added to the wastewater. Nevertheless, an efficient alternative has to be found given that NPEs are on the List of Priority Substances whose use, according to the Water Framework Directive of the European Community (Directive 2000/60/EC), has to be reduced.

#### Project Objectives

The main objective of the project is to propose a suitable alternative to NPEs for sheepskin degreasing which is effective and has low wastewater pollution parameters. The project also examines the capacity of the alternative substance to be recovered for recycling, as well as the possibilities of reusing the fat in other ways. Finally, the project seeks to improve and optimise the sheepskin degreasing process as a whole, taking into consideration the quality of the final product - the leather produced.

LIFE02/ENV/E/000194  
ECO-DEGREASING



#### Beneficiary:

**Type of beneficiary**

Private structure

**Name of beneficiary**

Asociación de Investigación de las Industrias del Curtido y Anexas

**Postal address**

Av. Pla de la Massa s/n

Apdo. Correos 58

E-08700 Igualada

SPAIN

Tel.: 00 34 938 055 388

Fax: 00 34 938 050 618

E-mail: info@aiica.com

**Name of contact person**

Xavier MARGINET

**Duration of project:**

From September 2002 to August 2004

**Total budget in euro:**

738,720

**EC contribution in euro with %:**

221,476 (30% of eligible costs)

**Priority theme covered by the project:**

PG3.1: Clean Technologies

# Sustainable urban design for open public spaces

## Official title

ECO-VALLE "Mediterranean Verandahways"  
Ensanche de Vallecas

## Background

The high population level of European cities, especially in the outlying areas created in the past decades, has led to a rather widespread deterioration of public spaces. This decline in the environmental quality of cities is reflected in a number of aspects:

- Steadily growing intrusion of motor vehicles,
- Increase in air and noise pollution,
- Spectacular rise in energy consumption and waste production,
- Uprooting.

This project focuses on two of the problems mentioned:

Over 30% of the time, automobiles are used to "go shopping".

The "thermal island" effect produced by the massive concentration of buildings means that a lot more money has to be spent to keep buildings cool in the summer, with outdoor areas becoming unpleasant as a consequence.

## Project Objectives

Come up with a real bio-climatic development project for open areas. This would be an innovative pilot experiment in "sustainable urban design" where the results obtained from two previous R & D projects, "APISCO" (4th F.P.) and "GREENCODE" (Altener), would be applied on a widespread scale to the public housing market.

### Additional aims

Reduce carbon dioxide emissions in urban areas by reducing energy consumption in buildings.

Promote a greater use of natural techniques for the development of outdoor areas.

LIFE02/ENV/E/000198  
ECO-VALLE



## Beneficiary:

**Type of beneficiary**  
Public Authority

**Name of beneficiary**  
Empresa Municipal de la Vivienda S.A.

**Postal address**  
C/ Paraguay, 8  
E-28016 Madrid  
SPAIN  
Tel.: 00 34 915 883 802  
Fax: 00 34 915 883 805  
E-mail: uropafgr@emv.es

**Name of contact person**  
Francisco José RUBIO GONZÁLEZ

## Duration of project:

From September 2002 to August 2005

## Total budget in euro:

1,834,830

## EC contribution in euro with %:

600,540 (50% of eligible costs)

## Priority theme covered by the project:

PG1.1. Urban environment

Study how "complexity, environmental quality and compactness" can be combined in the urban model of "Ensanche de Vallecas", Madrid.

Inform residents of the experiences and conclusions of the demonstration project.

The project is part of a strategic plan known as "ECO-VALLE". It will deal with the problem of "sustainability" through operational projects supported by the European Commission and carried out at different urban levels: "WATER SPIRALS" (Cohesion Fund 2000-2006) and "SUNRISE" (5th R&D Framework Programme).

## Peri-urban renewal: Getting a diffused city into shape

### Official title

Demonstration project on land use and environmental management of the physical planning in Gallecs as a biological and stable connector in the fringe space of Barcelona metropolitan area.

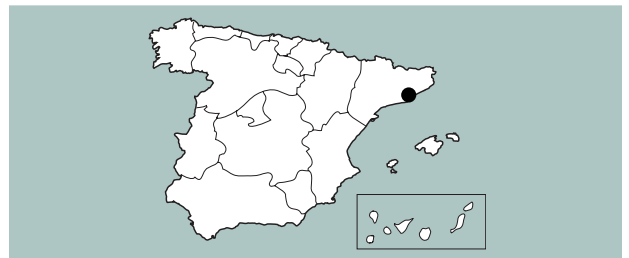
### Background

Gallecs is a rural area on the outskirts of Barcelona, Spain. As one of the green belts of the metropolitan area of Barcelona, it diffuses the environmental problems of the city. However, because it borders an urban area, Gallecs faces problems of dispersion, widespread occupation of the land, disorganisation and blurred boundaries separating the urban and rural areas. This "diffused city" phenomenon leads to acoustic and atmospheric problems as well as water and soil contamination and is occurring more and more in other peri-urban areas in Europe. A series of actions have been developed on land organisation, stabilisation, and land and environmental degradation control to contain this growing phenomenon. It is envisaged that these actions will improve the quality of life of all inhabitants in the vicinity of Barcelona.

### Project Objectives

The aim of the project is to promote and develop sustainable land-use planning to protect Gallecs from urban and industrial pressures and subsequent environmental degradation. The actions to be carried out to support this objective cover the following themes: restoration of the biological connector, sustainable agricultural and forest management, using alternative sources of energy, dissemination of the biological connector management and environmental education. The project will help to contain the fragmentation of natural landscapes and habitats by supporting rational, sustainable use of urban and peri-urban land.

LIFE02/ENV/E/000200  
GALLECS



### Beneficiary:

#### Type of beneficiary

Public Institution

#### Name of beneficiary

Consorti de l'Espai Rural de Gallecs

#### Postal address

Plaza Prat de la Riba,4  
E-08100 Mollet del Vallés - Barcelona  
SPAIN

Tel.: 00 34 935 708 751

Fax: 00 34 935 795 105

#### Name of contact person

Ricard ESTRADA ARIMON  
restrada@espairuralgallecs.net

### Duration of project:

From December 2001 to November 2004

### Total budget in euro:

1,501,183

### EC contribution in euro with %:

591,489 (45.09% of eligible costs)

### Priority theme covered by the project:

PG1.1 Urban environment

# Sustainable tourism in Sanabria Park

## Official title

The development of the sustainable tourism in the Sanabria's park and influence area

## Background

The park of Sanabria, in the province of Zamora in northwestern Spain, is a fragile ecosystem dominated by a lagoon. The great ecological and scenic value of the area has made the park a tourist destination of growing importance, thus endangering the balance of its ecosystem. The pressures of tourism have a more significant impact during the summer period, when the increased water consumption destabilises the ecological balance of the lagoon system and aquifers. Other side effects include littering and noise pollution, as well as the heightened risk of forest fires in the summer months.

## Project Objectives

The project seeks to analyse the phenomenon of the growing pressure caused by tourism in Sanabria Park and develop low season holiday offers throughout the year to encourage a more even distribution of tourism in the Sanabria's park and its surrounding areas. In this way, the project aims to mitigate the environmental impacts of tourism in the area. In addition, the project will liaise between the various stakeholders and will explore ways to raise public awareness of the problem. Finally, the project team will disseminate the experience learned to other high-volume tourist areas facing similar problems.

LIFE02/ENV/E/000201  
SOSSANABRIA



## Beneficiary:

**Type of beneficiary**  
Private Association

**Name of beneficiary**  
GAL "La Voz de Sanabria, Carballeda, Los Valles"

**Postal address**  
Plaza s/n.  
E-49350 El Puente de Sanabria - Zamora  
SPAIN  
Tel.: 00 34 609 280118  
Fax: 00 34 980 626813

**Name of contact person**  
Jesús VILLASANTE CARNERO

**Duration of project:**  
From September 2002 to March 2005

**Total budget in euro:**  
1,109,942

**EC contribution in euro with %:**  
507,650 (50% of eligible costs)

**Priority theme covered by the project:**  
PG3.4 Sustainable tourism



# Self-management irrigation tools for over-utilised water systems

## Official title

Self-management tools for water irrigation in areas where water systems are over-utilised

## Background

The per capita demand for water in Spain is 900 m<sup>3</sup>/inhabitant per year, a figure well above the European average (662 m<sup>3</sup>/inhabitant per year) despite the fact that the country has less available.

Agriculture accounts for 80% of the water consumed, be that groundwater or surface water - farming consumes 71% of the groundwater and 81% of the surface water in Spain. Irrigable crops require some 24,000 hm<sup>3</sup>/year, with an average of 7,000 m<sup>3</sup>/ha per year.

Groundwater satisfies a large part of the consumption demand in Spain where 18.5% of the 29,900 hm<sup>3</sup>/an of the natural refill of groundwater is used. Permanent extraction has destabilised certain water tables. If levels continue to decline at their current rate, it will become impossible to pump water from them in any sustainable fashion. The reasons for this are several: the depletion of reserves, the excessive increase in costs, but also, because of the deterioration in water quality resulting from the mobilisation of masses of water with a high concentration of salt. At present, 13 geohydrologic units have temporarily been declared over-utilised and 2 have reached the point of being definitively over-utilised.

Traditional systems of management are insufficient to satisfy the current level of demand. Frequent conflicts emerge between different types of demand for water use, be that a demand for direct anthropic use but also, and in particular, a demand for water to support ecological processes. Seen in this light, it is obvious that measures need to be introduced to manage the demand for water use in a more balanced and sustainable manner. Water-saving actions in the agricultural sector are therefore essential. These measures are entirely coherent with the Framework Directive on Water and with the future reforms of the Common Agricultural Policy (CAP): the use of efficient irrigation systems and the widespread introduction of crops requiring less water.

LIFE02/ENV/E/000210  
HAGAR



## Beneficiary:

Type of beneficiary  
SME

Name of beneficiary  
Asociación de Acciones Integradas de Desarrollo

Postal address  
Schlossplatz 6  
21423 Winsen  
GERMANY

Name of contact person  
Herr Dipl.-Ing. Andre FRANCOIS  
Tel.: 00 49 0 4171 6933 20  
Fax: 00 49 0 4171 6931 75  
E-mail: a.francois@LKHamburg.de

## Duration of project:

From August 2002 to July 2005

## Total budget in euro:

771,934

## EC contribution in euro with %:

129,465 (30% of eligible costs)

## Priority theme covered by the project:

PG2.2 Ground water protection

## Project Objectives

The "EbeBoBo" project will demonstrate a newly developed soil-gas extraction technique to decontaminate very deep soils of some 40m depth, preventing the further contamination of the ground water. The PCE will be extracted from the unsaturated soil-zone by means of a vacuum.

The innovation of this project consists in the application of soil-gas extraction to a very deep soil and a gas treatment technique without any impact on the atmospheric air.

For this purpose technical and logistical design criteria will be elaborated. The results of the project will facilitate the design of cleanup devices suitable for similar cases across Europe where thick unsaturated zones are contaminated with volatile organic hydrocarbons (VOC).

# Eco-friendly hide tanning techniques in Murcia, Spain

## Official title

Development of a new salt water purification system in the tanning sector for reuse.

## Background

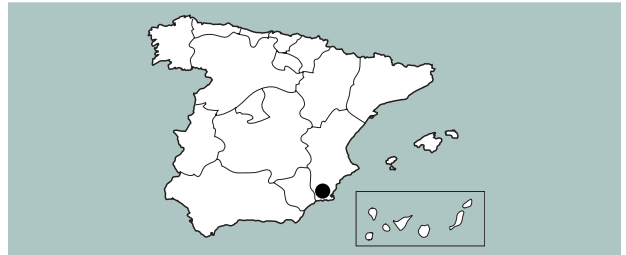
Tanning hides involves a complex series of steps which generate several environmental problems. The hides are subjected to different stages throughout the tanning process which are based on salting. Before and after tanning, the hide must reach the same level of moisture as that of the live animal in order to recover its original flexibility, softness and fullness, and to make the penetration and absorption of tanning products easier. Due to the moisture in the hides, highly saline effluents are produced. These have negative effects on the environment.

The technique currently followed by enterprises in the region of Murcia, Spain, consists of diluting the waste water which flows from the tanneries, and disposing it into the nearby river Guadalentín. This has the following consequences: high levels of organic and mineral pollution, high salinity, generation of odours, risks for human health and negative effects on the environment. It will also probably result in the closure of factories in the medium term followed by the expected socio-economic problems.

## Project Objectives

The first objective of the project is to develop a new wastewater treatment for the tanning sector based on membrane techniques to lower the water salinity to levels suitable for reuse of the treated water in both agricultural and industrial sectors. The second objective is to carry out the appropriate actions for the introduction of an evaporation technology. This will help to reduce the total volume of solid matter disposed and to recover water suitable for further agricultural or industrial use.

LIFE02/ENV/E/000216  
AFINO CONDUCTIVIDAD



## Beneficiary:

**Type of beneficiary**  
Private structure

**Name of beneficiary**  
AQUAGEST Levante S.A.

**Postal address**  
Nuestra Sra.de los Buenos Libros, 3  
E-30008 Murcia  
SPAIN  
Tel.: 00 34 968 270 661  
Fax: 00 34 968 249 809  
E-mail: anicolas@agbar.es

**Name of contact person**  
Don Juan GOZALBO GOZALBO

**Duration of project:**  
From December 2001 to June 2003

**Total budget in euro:**  
3,498,061

**EC contribution in euro with %:**  
702,334 (50% of eligible costs)

**Priority theme covered by the project:**  
PG2.3: Waste water treatment

# An ecologically safe grazing model for livestock

## Official title

Project demonstrating the economic viability of an extensive grazing model that preserves the ecosystem of grasslands by introducing an integrated and balanced form of management (pilot experiment in Los Pedroches, Cordoba, Andalusia, Spain).

## Background

The shift from traditional forms of farming and grazing to "modernised" forms that are intensive and heavily industrialised, and the disappearance in parallel to this of farming in large spaces, have created clear problems of environmental, economic and social sustainability.

The dehesas, which are forested areas used for grazing and visible models of sustainable management of agri-pastoral resources, are confronted with this situation. The techniques to domesticate the Mediterranean forest have generated an ecosystem of great biological and ecological diversity. The traditional dehesa's survival and adaptation to the present and future economic system is faced with serious difficulties. One of these difficulties is the small amount of capital available in relation to the amount of capital tied up. The result of this today is that the dehesa's profitability is more linked to the increase in value of the farm than to the income generated by what the farm produces. The owners therefore tend not to be interested in sustainable farming, lacking the available funds to make improvements that would preserve the dehesas. The farms exceed their natural capacity to feed the livestock by giving them artificial feed and in so doing contribute to the widespread intensification of farming. This not only leads to erosion and causes water pollution because of the rampant use of fertilizer and liquid manure but also reduces the biodiversity of the area where endangered species are the first victims.

However, the gradual disappearance of extensive methods of farming which are sustainable and a traditional characteristic of the dehesas is a trend that is continuing.

In a bid to remedy this situation and find a solution to the excessive cost of subsidising agriculture, the new Common Agricultural Policy is trying to replace production subsidies with quality subsidies and is giving special attention to the development of agri-environmental measures.

LIFE02/ENV/E/000222  
DEHESAS



## Beneficiary:

**Type of beneficiary**  
Public Authority

**Name of beneficiary**  
Mancomunidad de Municipios de Los Pedroches

**Postal address**  
C/ Dos Torres s/n  
Los Pedroches (Córdoba)  
Fax: 00 34 957 151 387  
Tel.: 00 34 957 151 384  
E-mail: pedroches@eprinsa.es

**Name of contact person**  
Jesús Fernandez Vioque

## Duration of project:

From November 2002 to October 2005

## Total budget in euro:

2,959,752

## EC contribution in euro with %:

1,417,578 (50% of eligible costs)

## Priority theme covered by the project:

PG1.4: Other area – Land-use development and planning

## Project Objectives

The project's main objective is to demonstrate the economic viability of an extensive farming model that can be used to cope with the decline in traditional farming. The introduction of intensive farming has already caused the disappearance of over 20,000 ha of grassland and is currently causing damage on 250,000 ha in the Los Pedroches area. A protocol for intervention therefore needs to be defined whereby products bearing a quality label can be produced and sold on a market that appreciates their added value. At the same time, guidelines have to be laid down so that the future aid granted by the European institutions for the dehesas is more environmentally effective.

# Traction fire engine beats forest fires

## Official title

Project to Demonstrate the Functionality and Effectiveness of a Traction Fire Engine for Extinguishing Forest Fires

## Background

Forest fires are one of the major environmental problems faced by southern European countries. Apart from the destruction of natural areas, deforestation and land desertification, they lead to other serious damages such as the loss of biodiversity. The conventional tools used for fire fighting are not always efficient or effective, particularly in severe weather conditions such as strong winds, darkness and/or lack of visibility. Therefore, new tools are needed for fire fighting. The new traction fire engine for extinguishing forest fires presented in this project causes minimal damage to the environment and its speed and efficiency in extinguishing fires is higher than that of the tools currently being used. Consequently, the environmental impact of forest fires will be reduced and natural habitats will be protected and preserved.

## Project Objectives

The project aims to demonstrate the functionality and effectiveness of a traction fire engine for extinguishing forest fires. This new tool intends to significantly decrease the fire extinguishing time, and therefore the surface of destroyed land, and to minimise the risks for the fire fighting personnel. The new tool is efficient even in the most adverse and harsh extinguishing conditions under which other methods cannot be used. The vehicle can approach the fire at its head, and attack it directly with water and foam to prevent it from spreading. Because of its high effectiveness, the system uses lower volumes of water, foam retardant and energy. It is also envisaged that this vehicle could be used in oil refineries to contain the damaging effects of natural disasters that produce large amounts of highly toxic gases.

LIFE02/ENV/E/000223  
VELIF



## Beneficiary:

**Type of beneficiary**  
Public Authority

**Name of beneficiary**  
Empresa de Transformación Agraria S.A.

**Postal address**  
C/ Maldonado, 58 8º  
E-28006 Madrid  
SPAIN  
Tel.: 00 34 91 3 963 545  
Fax: 00 34 91 3 969 100

**Name of contact person**  
Manuel LÓPEZ HERNÁNDEZ  
E-mail: mlopez@tragsa.es

## Duration of project:

From January 2002 to December 2003

## Total budget in euro:

1,414,750

## EC contribution in euro with %:

639,761.3 (50% of eligible costs)

## Priority theme covered by the project:

PG1.4 Land use development and planning

# An eco-conscious alternative for the hide tanning industry

## Official title

Demonstration plant for the recycling of fat produced by processes of degreasing skins

## Background

Sheepskins contain a high amount of natural fat, which interferes during the tanning process. In order to avoid stains and dyeing irregularities this fat has to be removed. However, this process requires special treatment of the tannery wastewater, due to the hazardous substances contained in waste produced by the degreasing process. Nowadays the majority of tanning industries have access to effluent treatment systems whereby fats are separated by filtration. The main challenge today is treatment of the remaining fat. This challenge affects the entire tanning sector as the quantities of fat generated are significant. The current practice is to store the fats in tubs or barrels and have them delivered to an authorised treatment plant for a suitable blanketing treatment.

## Project Objectives

The main objective of the project is to develop and implement a pilot project for the treatment of around 2,500 tons per year of natural sheep fat generated during degreasing in certain tanning industries. This would equal 20-30% of the total amount produced by all the sheepskin tanneries in Spain. In addition, this natural grease could be used as raw material in the manufacture of lubricating products for the skins, to supplement high-cost raw materials such as fish oils.

LIFE02/ENV/E/000236  
RECYCLING OF GREASE



## Beneficiary:

**Type of beneficiary**  
Private structure

**Name of beneficiary**  
INQUIMICA S.A.

**Postal address**  
Domenech i Montaner 5  
Pl Rubí Sud  
E- 8191 Rubí Barcelona  
SPAIN  
Tel.: 00 34 935 860 910  
Fax: 00 34 936 979 364  
E-mail: office@inquimica.com

**Name of contact person**  
Miguel COROMINAS SARDA

**Duration of project:**  
From April 2002 to November 2003

**Total budget in euro:**  
811,620

**EC contribution in euro with %:**  
162,186 (50% of eligible costs)

**Priority theme covered by the project:**  
PG4.2 Hazardous or problematic waste

## Transforming dangerous industrial waste into valuable substances

### Official title

Modular Electrochemical Process for the Recovery of Copper in metal form, contained in SPENT

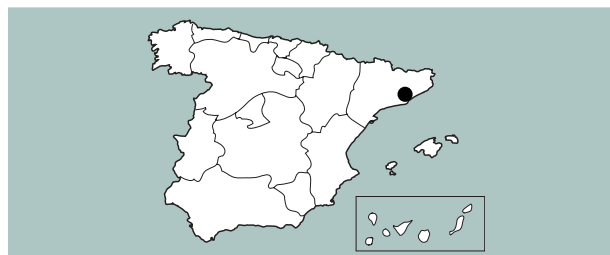
### Background

Hydrochloric SPENT is a drainage solution that emanates during the rinsing process in the manufacture of printed circuits. It is also rich in copper and therefore constitutes a dangerous and problematic industrial waste. Today in Europe alone, more than 48 million liters of SPENT are produced every year and there are clear indications that this amount is increasing. Unfortunately, the few SPENT treatment facilities that exist in Europe are generally located at a great distance from the places where the waste is produced. This means that the SPENT has to be transported via an inter-Community road and, due to its hazardous nature, must undergo special handling. Furthermore, the present chemical treatment of SPENT is focused exclusively on the production of copper salts and its use is almost exclusive to the phytosanitary sector.

### Project Objectives

The main aim of the project is the development of a modular unit designed to recover the copper contained in SPENT and transform it into two final products: copper in metal form and hydrochloric acid, both recognized for their high value in the industry sector. This new technology offers the possibility of SPENT treatment at the location where the waste is being generated. It also eliminates the need for waste treatment and transfer from the centers producing it to the current treatment plants, thus complying with the existing Community Regulations. It also facilitates the recovery of the copper contained in SPENT, in a metal form, as well as the improvement of its potential technical and economic evaluation. Finally, the project will contribute to the economic exploitation of the hydrochloric (HCl) obtained from the treatment as it will be used as raw material at a printed circuit production plant.

LIFE02/ENV/E/000237  
PERCUS



### Beneficiary:

#### Type of beneficiary

Private structure

#### Name of beneficiary

José M. SANTANA DE CARLOS

#### Postal address

Avda. Rafael Casanova, 81  
E- 8100 Mollet del Valles - Barcelona  
SPAIN  
Tel.: 00 34 935 796 677  
Fax: 00 34 935 938 011  
E-mail: Jmsantana@iqv-valles.com

#### Name of contact person

José M. SANTANA DE CARLOS

### Duration of project:

From May 2001 to October 2003

### Total budget in euro:

1,264,778

### EC contribution in euro with %:

346,438 (30% of eligible costs)

### Priority theme covered by the project:

PG4.2 Hazardous or problematic waste

# Best foot forward: Eco-concious footwear for Europe's citizens

## Official title

Promotion of the European eco-label for footwear.

## Background

Eco-labelling projects aim to foster the practice of shared responsibility and encourage the participation of market forces in environmental protection. Eco-labelling is a tool that takes advantage of the dynamics and competitiveness of the market to encourage and reward the use of less harmful products. Two and a half years after publication of the ecological criteria to be met to receive an eco-label by the European Union, only three of the 13 000 European footwear companies have obtained this EU distinction.

## Project Objectives

The project is in line with the LIFE-Environment programme thematic area "Integrated policy on products: Eco-labelling". The overall project objective is to develop and implement a widespread information dissemination campaign on all aspects of EU eco-labelling for footwear. The dissemination activities will target all 13 000 EU footwear manufacturers, mainly Small and Medium-Sized Enterprises (SMEs), and traders from all 15 EU countries. Promotional activities will include the development of a multimedia CD about the eco-label for footwear which will be presented at all European footwear trade fairs, conferences and in informative leaflets. A web site will also be created to further promote the initiative.

LIFE02/ENV/E/000241  
ECOFOOT



## Beneficiary:

### Type of beneficiary

Private structure

### Name of beneficiary

Asociación de Investigación para la Industria del Calzado y Conexas (INESCOP)

### Postal address

Polígono Industrial Campo Alto

E-03600 Elda

SPAIN

Tel.: 00 34 965 395 213

Fax: 00 34 965 381 045

### Name of contact person

Joaquín FERRER PALACIOS

E-mail: [jferrer@inescop.es](mailto:jferrer@inescop.es)

## Duration of project:

From December 2002 to November 2004

## Total budget in euro:

830,850

## EC contribution in euro with %:

415,425 (50% of eligible costs)

## Priority theme covered by the project:

PG5.2 Eco-labelling

## Solvent-free: Using safe adhesives in shoe manufacturing

### Official title

Bonding operations free of hazardous solvents in the complete process of footwear manufacture

### Background

Adhesives and treatments are used frequently throughout the footwear manufacturing process. These materials, which are generally solvent-based, cause environmental problems and present potential dangers for the health of the employees.

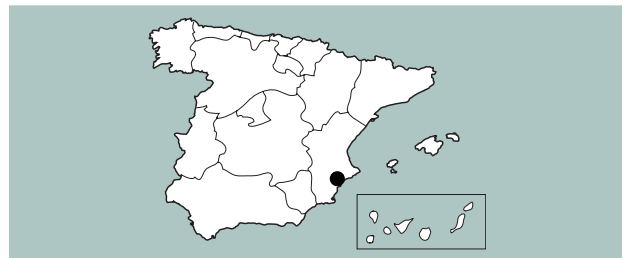
The development of several European projects has opened the way for possible alternatives to solvent-based adhesives, such as water-based ones. These alternatives focus mainly on sole-bonding, the most demanding process in shoe manufacturing. However, footwear manufacturers are either not yet informed about the existence of these alternative products, or they are reluctant to use them due to a lack of information and/or because they do not trust their processing characteristics and are unsure about whether the alternative substances would meet performance requirements.

The complete elimination of solvents from the adhesives and the treatment process would mean a reduction of more than 80% of the use of solvents in the manufacturing process. This would enable companies in this sector to comply with European regulations.

### Project Objectives

This project seeks to provide footwear manufacturers with alternatives to the solvent-based bonding currently used in the manufacturing process, and conduct a wide dissemination campaign on these alternative substances. To meet these objectives, a study of the different solvent-free adhesives and treatments will be carried out and the technology used in the current manufacturing process will be adapted. Finally, the adapted bonding technology will be presented to other companies.

LIFE02/ENV/E/000242  
CALSINDIS



### Beneficiary:

**Type of beneficiary**

Type of beneficiary

**Name of beneficiary**

Ana TORRO PALAU

**Postal address**

PI Campo Alto

E-3600 Elda - Alicante

SPAIN

Tel.: 00 34 965 395 213

Fax: 00 34 965 381 045

E-mail: atorro@inescop.es

**Name of contact person**

Ana TORRO PALAU

### Duration of project:

From October 2002 to September 2004

### Total budget in euro:

1,013,250

### EC contribution in euro with %:

448,600 (50% of eligible costs)

### Priority theme covered by the project:

PG3.1 Clean technologies



## Getting the oil out: Recycling cooking oil into environment-friendly fuel

### Official title

Collecting used cooking oils to be recycled as biofuel for diesel engines

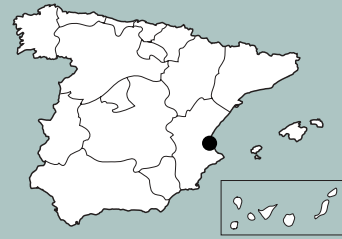
### Background

Cooking oil is a waste stream that can be found everywhere in the European Union and for which the collection schemes and recovery options are not sufficiently developed. They have been until now recycled and used for animal feed. However, due to recent legislative developments, this practice may not be possible in the near future. Therefore it is necessary to find another option of recovery and an outlet for waste cooking oils. The usual method of depositing the oils in the sewage system is an illegal practice causing many problems in the sewage systems. The oils clog the systems causing malfunctions in the filters and oil/water separators. Cooking oils can be recycled into an environmentally friendly fuel and could then be used by public transport serving the city centre of Valencia, Spain.

### Project Objectives

The main objective of the project is to put Valencia's used cooking oils that are generated on a large scale, to good use. The project will develop a pilot scheme whose results will serve as a starting point for setting up an adequate collection system for waste vegetable oils. This system will collect not only domestic oils, but also those coming from the catering sector (coffee shops, restaurants, hotels etc.). The waste vegetable oils will then go through chemical processing to produce bio-fuel to be used in Valencia's municipal bus service. In this way, the project will also help reduce the amount of hazardous and polluting emissions, thus improving the air quality in Valencia.

LIFE02/ENV/E/000253  
ECOBUS



### Beneficiary:

**Type of beneficiary**  
Public institution

**Name of beneficiary**  
Empresa Municipal de Transportes de Valencia

**Postal address**  
C/ Abben al Abbar 2 - Valencia  
SPAIN  
Tel.: 00 34 963 696 900  
Fax: 00 34 963 607 405

**Name of contact person**  
Ramón RUIZ HERNÁNDEZ

### Duration of project:

From November 2002 to November 2004

### Total budget in euro:

2,100,000

### EC contribution in euro with %:

1,000,000 (47,62% of eligible costs)

### Priority theme covered by the project:

PG3.1 Clean Technologies

# Safe substitutes for insecticides in rice production

## Official title

Demonstration project to eliminate methyl bromide from the insecticide sprays used to process rice and to replace it with a vacuum-packing process for rice that has a lower environmental impact and reduces the emission of gases in the atmosphere.

## Background

Methyl bromide (MB) is a disinfectant that must be eliminated by 2005 and replaced with acceptable alternatives. The use of MB in the industrial rice sector is modest in terms of EC standards, but it nonetheless has to disappear by 2005. To treat the rice against insects, the industrial sector has to find non-chemical methods that are acceptable for consumers and the environment. The results of the project may be applied in other processing plants in the EU and in other parts of the world where MB is used to treat rice against insects.

The processing plant where the project will be implemented is located next to the Nature Reserve of the Ebre Delta, which is home to a rich assortment of wildlife. The use of the pesticide is not compatible with the plant's close vicinity to this protected area. So the elimination of MB as an insecticide will help reduce the plant's environmental impact there.

## Project Objectives

The aim of the demonstration project is to promote the conservation and improvement of the environment and ecosystem of the Ebre Delta and its Nature Reserve, meaning the areas of Montsiá and Baix Ebre, by reducing as much as possible the plant's impact on the environment. This is to be achieved by replacing the current industrial techniques used to treat processed rice against insects with the introduction of non-polluting technologies.



### Beneficiary:

**Type of beneficiary**

Private

**Name of beneficiary**

Cámara ArrosSera D'Amposta

**Postal address**

Address: c/ San Cristóbal, 115

Fax: 00 34 977 700 190

Tel.: 00 34 977 700 054

E-mail: coop@camara-amposta.es

**Name of contact person**

Juan ESPELTA PUELL

**Duration of project:**

From October 2002 to September 2005

**Total budget in euro:**

1,571,708

**EC contribution in euro with %:**

623,581 (50% of the eligible costs)

**Priority theme covered by the project:**

PG3.1 Clean technologies

The project is innovative in that it aims to totally eliminate methyl bromide in the treatment of rice and replace it with a vacuum-packing process. This will result in lower production costs, which will unquestionably have beneficial repercussions for farmers, increasing their farm income while introducing the use of an environmentally compatible technique. The consequences for the natural environment of the Ebre Delta will without a doubt also be positive.

## Enchanted forest: Bringing Bosc de Tosca back to life

### Official title

Pedra Tosca Park

### Background

The Bosc de Tosca, situated within the Parque Natural de la Zona Volcánica de la Garrotxa in northern Spain, was once a major European forest. The forest was home primarily to oak trees, until the beginning of the 19th century when they were cut down for coal and wood. After deforestation, the area underwent a process of land clearing to prepare the land for cultivation; the volcanic stones were removed from the land, creating small cultivatable plots of land enclosed by walls built with the stones.

Today the Bosc de Tosca is threatened by the growing city of Olot and unchecked activities, such as illegal waste sites and the proliferation of shantytowns. The environmental degradation of this area is further accelerated due to extinction of traditional crops, changes in agricultural systems and irrigation problems.

### Project Objectives

The project aims to restore the "Bosc de Tosca", a natural area of great environmental and ecological value, and protect this area from the dangers of environmental degradation that it is currently suffering due to the aggressive peripheral urban growth of Olot. The actions envisaged include the creation of a "scenic park" by constructing different thematic walks and by restoring the species, vegetation, fauna and traditional crops and to maintain the biodiversity of the forest. Control and management activities of the hydro resources in the area will also be carried out to facilitate water supply to the charred lands and reduce the danger of flooding. Finally, in order to inform the citizens and the institutions about this initiative, the project will include activities to support ecological tourism and the development of a pedagogical strategy on natural environment.

LIFE02ENV/E/000263  
PARPEDRA TOSCA



### Beneficiary:

**Type of beneficiary**  
Public institution

**Name of beneficiary**  
Ajuntament de Les Preses

**Postal address**  
C/ Major, 2  
E-17178 Les Preses  
SPAIN  
Tel.: 00 34 972 693 535  
Fax: 00 34 972 694 720  
E-mail: cempreses@lespreses.org

**Name of contact person**  
Laura CAÑADA SIERRA

**Duration of project:**  
From September 2002 to September 2005

**Total budget in euro:**  
819,903

**EC contribution in euro with %:**  
279,444 (50% of eligible costs)

**Priority theme covered by the project:**  
PG3.4 Sustainable tourism

# Staying power: An automatic waste recovery system extends plastic's shelf life

## Official title

Automatic System for Selective Recovery of Waste

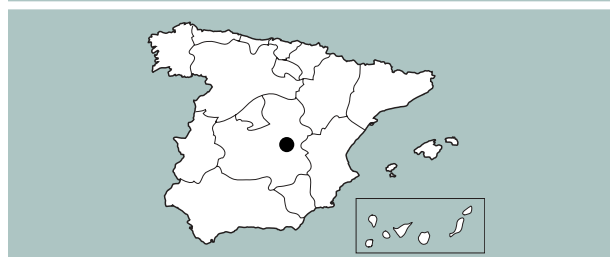
## Background

Estimates show that 30% of domestic waste is plastic. Its recycling is difficult because waste selection is carried out manually in triage plants because recycling is more expensive than incineration. In Spain alone, approximately 14 600 000 tons of solid waste are produced each year. The recovered waste amounts to about 1 780 855 tons, that is 27.32% of the plastic consumed, while the average percentage of plastic waste recycled in the European Union (EU) is 24%. Mechanical recycling can only be carried out efficiently if the plastic materials are prepared in mono-material groups of identical molecular structure. This segregation proved to be viable in German plants in the early 90's but only for large pieces (heavier than 10 grams, such as bottles). The real challenge is to obtain high recycling rates in the treatment of small and dirty pieces. According to statistics such small pieces make up 70-80% of the total solid waste therefore recycling them would make a major contribution to the percentage of waste recovered.

## Project Objectives

The project seeks to demonstrate that the use of an innovative computer label, developed and patented by one of the project partners, can have a significant impact on the plastic waste recycling chain. With the computer label, segregation and selection could be carried out automatically, even based on the chemical characteristics of the plastics. The project will also demonstrate that the use of robots for identification and selection of plastic materials is compatible with conventional segregation waste plants. In the long term, the automatic recycling of plastic waste could become a new industry, with very high outputs. Finally the project includes a dissemination plan to facilitate the implementation of this technology throughout Europe.

LIFE02/ENV/E/000269  
AUTOREWASTE



## Beneficiary:

**Type of beneficiary**  
Public institution

**Name of beneficiary**  
Ayuntamiento de Alcázar de San Juan

**Postal address**  
Plaza de España, 1  
E-13600 Alcázar de San Juan - Ciudad Real  
SPAIN  
Tel.: 00 34 926 579 100  
Fax: 00 34 926 579 111

**Name of contact person**  
Fernando Sánchez Bódalo

**Duration of project:**  
From March 2002 to March 2004

**Total budget in euro:**  
1,803,036

**EC contribution in euro with %:**  
895,508 (50% of eligible costs)

**Priority theme covered by the project:**  
PG4.1 Packaging and plastics

# “Dust-free”: A project for clean air in Spain’s port zones

## Official title

Ente Público Puertos del Estado

## Background

The problem of hazardous emissions has been steadily growing worse in Mediterranean ports. Traditionally, environmental problems caused by port activities were attributed to dredging operations. Nevertheless, in recent years, environmental degradation has been linked to controlled or uncontrolled emissions into the atmosphere originating from other port activities, such as the movement of solid bulk cargo, the storage of dust bearing substances and other engineering works carried out in port areas. Dust particles, along with gas emissions (SO<sub>2</sub> and NOx) and noise, are indeed considered to be the most important problem in view of the serious implications inside and outside of port areas. Moreover, the enforcement of the European Community (EC) Directive 1990/30/EC on July 19th 2001 requires that the port authorities control certain particle concentrations of various other gas concentrations. In addition, the Annex VI of the International Convention for the Prevention of Pollution from Ships (known as the MARPOL Convention) underlines the need to monitor the limits of Nox, SO<sub>2</sub> and BTX gases emitted in port areas.

## Project Objectives

The main objectives of the project are to: design a system for air quality control in port areas; design a system for monitoring and reducing noise levels; develop a particle emission model; develop a “real time” decision-making and response system to be able to take action in the event of irregular situations. Finally, a cost-benefit analysis of the particle contamination reduction systems will be carried out. The project will also verify the compliance of the Spanish port authorities with European Directives and international agreements regarding port zones. The project, modelled on a pilot project in the Port of Valencia, Spain, will be carried out in various Spanish ports.

LIFE02ENV-E-000274  
HADA



## Beneficiary:

**Type of beneficiary**  
Public Institution

**Name of beneficiary**  
Puertos del Estado

**Postal address**  
Avda. Partenón, 10  
E-28042 Madrid  
SPAIN  
Tel.: 00 34 915 245 573  
Fax: 00 34 915 245 504

**Name of contact person**  
Andrés GUERRA SIERRA  
E-mail: andres@puertos.es

**Duration of project:**  
From July 2002 to June 2005

**Total budget in euro:**  
EUR 2,476,300

**EC contribution in euro with %:**  
808,145.00 (39.49% of eligible costs)

**Priority theme covered by the project:**  
PG1.2 Quality of air and noise abatement

# REduction of SOLVents in the European newspaper printing industry

## Official title

REduction of SOLVents in the European newspaper printing industry

## Background

Over the past 10-15 years consumers and advertisers have significantly increased their demands for more four colour prints in newspapers. The increased use of printing blankets requires a greater cleaning capacity. There are several conventional systems for cleaning printing blankets of which the majority are based on the use of solvents. Approximately 90%, or 17,540 tons, of the total solvents purchased by newspaper printing plants in the European Union today, that use the quadrichromy offset technique, are utilized to clean printing blankets.

The RESOLVE project will meet the aims of the Council Directive 96/61/EC of 24 September 1996 concerning integrated pollution prevention and control arising from activities such as "installations for the surface treatment of substances, objects or products using organic solvents in particular for cleaning; with a consumption capacity of more than 150 kg per hour or more than 200 tons per year". It lays down measures designed to prevent or to reduce emissions in the air from activities such as the above mentioned in order to achieve a higher level of environmental protection.

## Project Objectives

The objective of the "RESOLVE" project is to perform a full-scale demonstration and evaluation of a unique and highly innovative Web Cleaning System for the newspaper printing industry. The aim is to minimize, possibly eliminate, the use of solvents in the cleaning process. The innovative aspect of the project is to present a new way of tackling the cleaning of presses. Instead of cleaning the printing blankets it will remove the causes of staining in the printing press and debris from the paper webs, preventing it from reaching the printing press.

LIFE02 ENV/S/000344  
RESOLVE



## Beneficiary:

**Type of beneficiary**  
Enterprise

**Name of beneficiary**  
Tidningstryckarna Aftonbladet Svenska Dagbladet AB

**Postal address**  
Vandagatan 3, Kista, 16493  
SWEDEN  
Tel.: 00 46 8 703 43 02  
Fax: 00 46 8 703 44 41  
E-mail: catarina.karlsson@ttab.se

**Name of contact person**  
Catarina KARLSSON

**Duration of project:**  
From April 2002 to October 2003

**Total budget in euro:**  
6,664,622

**EC contribution in euro with %:**  
1,408,957 (30% of eligible costs)

**Priority theme:**  
PG3.1 Clean technologies

## Better and more cost effective water quality monitoring

### Official title

European applied system for lake monitoring using optical measurements

### Background

Continuous long term water quality monitoring programmes are critical to detect changes in water quality, and are required in order: to monitor the effects of past and ongoing management programmes, monitor the effects of continuing anthropogenic influences, particularly effects related to climate change and; to meet EU directives to show that water quality is adequately monitored and not deteriorating.

This project will develop an innovative water monitoring system using optical measurements from the latest generation of Earth Observing (EO) satellites and special buoy based measurement systems. The resulting system will provide a valuable source of data, which will improve the understanding of water quality trends in Europe's largest lakes. Rather than developing new technologies this project is concerned with tailoring existing technologies to meet the needs of lake monitoring and combining them to provide a unique operational monitoring system.

It is expected that the constraints imposed on the monitoring other large lakes in Europe will be at least as great if not greater than those encountered in Sweden. Therefore, more cost-effective ways to supplement to present monitoring of large European lakes with more resolute spatial and temporal data are needed.

### Project Objectives

The "EASYMONITOR" project will demonstrate a monitoring system, which will provide low cost measurements of three important water quality parameters: algal biomass, turbidity and dissolved organic matter. This system will greatly aid in the interpretation of data that are presently collected by costly and infrequent monitoring efforts. The system will support the EU water framework directive requirement for documenting changes in water quality.

LIFE02 ENV/S/000349  
EASYMONITOR



### Beneficiary:

#### Type of beneficiary

Non-governmental organization (NGO)

#### Name of beneficiary

Lake Vättern Society for Water Conservation

#### Postal address

Hamngatan 4, Jönköping, 551 86  
SWEDEN

Tel.: 00 46 363 950 53

Fax: 00 46 361 671 83

E-mail: mans.lindell@f.lst.se

#### Name of contact person

Lindell MANS

### Duration of project:

From November 2002 until December 2005

### Total budget in euro:

1,044,115

### EC contribution in euro with %:

502,499 (49.92% of eligible costs)

### Priority theme:

PG2.4 Diffuse and dispersed sources of pollution



The monitoring system will be based on the optical sensing of lake water using Earth Observing (EO) satellite sensors and prototype buoy based measurement systems.

# New integrated eco-efficiency evaluation of products

## Official title

Eco-efficiency evaluation of new and existing products

## Background

Over the past ten years, a number of environmental tools have been developed for the purpose of monitoring and controlling the environmental impact of industrial activities and that of separate products or product groups. Examples of such tools, include – Risk Assessment, Life Cycle Assessment (LCA), Life Cycle Cost (LCC), Design for Environment (DFE), Environmental Product Declaration (EPD). However, these methods and tools do not address the whole spectrum of the environmental impact of different products, most of them are product or industry specific. Moreover, many producers, especially small and medium sized enterprises do not have the necessary resources to launch and perform their own environmental research or to create specific environmental assessment tools for their products. Whereas the increased environmental awareness of customers and new environmental requirements such as the EC “Strategy for a future chemicals policy” and the Kyoto protocol etc. are imposing increasing demands to improve the eco-efficiency of products.

## Project Objectives

The aim of the “DANTES” project is to create, demonstrate and disseminate a new integrated product environmental impact assessment method that will cover all the potential environmental impacts of the products and will be universally applicable across different industrial sectors and without geographical restrictions. To establish the most efficient and economically sustainable assessment method, all the existing tools will be analysed, tested and combined for different product groups throughout their life cycle.

The project partners include a number of industry leaders from different sectors – chemical, power & automation, pulp & paper. Public participation and the involvement of representatives from other sectors are expected through close co-operation with the CPM (Center for Environmental Assessment of

LIFE02 ENV/S/000351  
DANTES



## Beneficiary:

**Type of beneficiary**  
Enterprise

**Name of beneficiary**  
Akzo Nobel Surface Chemistry AB

**Postal address**  
OEstra Koepmansgatan 6  
444 85 Stenungsund  
SWEDEN  
Tel.: 00 46 303 850 00  
Fax: 00 46 303 813 06  
E-mail: klas.hallberg@akzonobel.com

**Name of contact person**  
Hallberg KLAS

## Duration of project:

From September 2002 to September 2005

## Total budget in euro:

3,327,000

## EC contribution in euro with %:

1,642,029 (50% of eligible costs)

## Priority theme:

PG5.1 Eco-design, eco-efficiency, green financial products

Product and Material Systems). The new assessment method will be of benefit to large international companies, small and medium sized enterprises and the general public alike.

The envisaged outcome of the project will be an easily accessible web-based environmental management platform for producers and customers worldwide, which will present the assessment tools, information exchange, user's manual, application guidelines and the methodology used.



# Integrated management of coastal woodlands

## Official title

Integrated Coastal Zone Management in Woodlands  
by the Baltic Sea

## Background

Since 1996, the European Commission has been working to identify and promote measures to remedy the problems of deterioration facing coastal zones. A Recommendation concerning the implementation of Integrated Coastal Zone Management in Europe, which was adopted by Council and Parliament on 30 May 2002, outlines steps which the Member States should take to develop national strategies for ICZM. These national strategies are due for Spring 2006 and should involve all the coastal stakeholders.

On the assumption that the implementation of ICZM might exclude large areas of woodlands that would not be seen as important in the definition of these strategies, the "Coastal Woodlands" project aims at promoting cooperation between environmental, forestry and NGO stakeholders at the national, regional and local levels in the Baltic sea region in order to ensure that forestry issues are properly taken into account when implementing ICZM.

## Project Objectives

The benefiting region of the project covers the coastal woodlands in Finland, Sweden and Estonia and the main objectives to be achieved are as follows: Inventories of coastal woodlands within the project area and mapping of the culturally valuable sites; Demonstration of the best use of existing methods and legal instruments of nature protection in the coastal areas, ensuring that all environmentally and historically valuable coastal sites in Sweden enjoy legal protection; Initiate active public involvement in the decision-making process, specifically regarding development planning in the coastal areas; introduction of sustainable forestry management guidelines for Swedish coastal zones, specifically for Archipelago forestry; Extensive dissemination of information on coastal woodlands in the most popular coastal recreation sites in Sweden. To ensure that the project has an international impact an Expert

LIFE02 ENV/S/000355  
COASTAL WOODLANDS



## Beneficiary:

**Type of beneficiary**  
Public Authority

**Name of beneficiary**  
Skogsvaardsstyrelsen Oestra Goetland

**Postal address**  
Aatervaendsgatan  
P.O. Box 288  
Vaestervik, 59324  
SWEDEN  
Tel.: 00 46 132 038 37  
Fax: 00 46 132 038 18  
E-mail: bo.thor@svsog.svo.se

**Name of contact person**  
Bo THOR

**Duration of project:**  
From June 2002 to April 2006

**Total budget in euro:**  
2,415,300

**EC contribution in euro with %:**  
1,205,570 (50% of eligible costs)

**Priority theme:**  
PG1.3 Integrated Coastal Zone Management

Advisory Group for the Baltic Sea Coastal Woodlands will be established, workshops with stakeholders will take place in Finland, Estonia and Latvia, while in Denmark and Germany the involvement of the local population in the project activities will be encouraged.

# Clean Accessible Transport for Community Health

## Official title

Clean Accessible Transport for Community Health

## Background

European Directives (96/62/EC and 99/30/EC) on air quality, define the policy framework and set limits for key pollutants in ambient air. In the UK, the limit values have been accepted as national objectives in the Air Quality Strategy published in January 2000. A key part requires local authorities to draw up air quality action plans. Road transport is a major source of the local air pollutants, cutting road transport emissions is therefore a fundamental aspect of local air quality management plans.

The "CATCH" project will demonstrate the kinds of practical measures that can be implemented to meet these requirements and improve air quality in a major UK city, i.e. Liverpool. A strong focus will be given to the city centre air quality management zone. The project will foster co-operation between transport planners, land-use planners and environmental health officers and will establish a new agency to promote widespread introduction of clean fuels, the implementation of green travel plans, and promotion of environmental objectives within regeneration plans.

## Project Objectives

The project's overall objectives are:

- To support the Community's Sixth Environmental Action Programme by promoting sustainable mobility.
- To develop an innovative, partnership-based approach to transport-related environmental policy in a major UK city undergoing radical land use development allied to economic regeneration.
- To significantly improve urban air quality.
- To contribute to the EC's Kyoto commitments by reducing emissions of greenhouse gases.
- To disseminate the results of the project and promote best practice.
- To transfer knowledge and experience to other EU member states and candidate countries.

02/ENV/UK/136  
CATCH



## Beneficiary:

### Type of beneficiary

Public Authority

### Name of beneficiary

Merseyside Passenger Transport Executive and Authority

### Postal address

24, Hatton Garden  
Liverpool  
L3 2AN  
UNITED KINGDOM

### Name of contact person

Dr Karen BOOTH  
Tel.: 00 44 151 330 1184  
Fax: 00 44 151 330 1094  
E-mail karen.booth@merseytravel.gov.uk

## Duration of project:

From January 2002 to December 2004

## Total budget in euro:

5,685,793

## EC contribution in euro with %:

1,493,843 (50% of eligible costs)

## Priority theme covered by the project:

PG1.2 Quality of air and noise abatement

# Finding innovative solutions for water management in coal mining areas

## Official title

Integrated Water Management in Former Coal Mining Areas

## Background

The management of groundwater resources in areas that have been subject to extensive coal mining is a major international problem due to the difficulty of predicting the hydrological characteristics of groundwater drainage regimes and the potential impact on groundwater quality, surface water flow and quality, stability of structures and public safety. Under the EC Water Framework Directive it will become increasingly important to incorporate large-scale groundwater drainage networks such as those in former coalfield areas into River Basin Management Plans. Without improved understanding of the opportunities for integrated management of coalfield groundwater systems they will remain a major environmental risk and a significant barrier to the successful implementation of fully integrated river basin management systems.

The project aims to support the development of effective integrated management strategies by considering the relationships and linkages between coalfield groundwater systems and all other catchment water resources including abstractions, discharges, flow controls and land development issues.

## Project Objectives

The objective of the project is to demonstrate and evaluate innovative techniques and procedures for integrated management of groundwater resources in former coal mining areas. The overall aim is to develop a methodology to reduce the risks and uncertainties associated with strategic approaches to integrated management of water resources at a river basin scale. Research by the project partners has suggested that groundwater systems that interact with mine workings can be managed to minimise public and environmental risk in the following ways:

- Internal balancing of system flows to ensure optimum dilution of contaminated water and controlled discharge to receiving waters.
- Identification of hydrological trends related to underground drainage system instability and the potential for catastrophic groundwater impacts.

02/ENV/UK/140  
INWATCO



## Beneficiary:

**Type of beneficiary**  
Private Structure

**Name of beneficiary**  
National Coal Mining Museum for England

**Postal address**  
Caphouse Colliery  
New Road  
Wakefield  
WF4 4RH  
UNITED KINGDOM

**Name of contact person**  
Dr Margaret FAULL  
Tel.: 00 44 192 484 8806  
Fax: 00 44 192 484 0694  
E-mail: m.faul@ncm.org.uk

**Duration of project:**  
From September 2002 to August 2005

**Total budget in euro:**  
4,240,986

**EC contribution in euro with %:**  
1,446 977 (50% of eligible costs)

**Priority theme covered by the project:**  
PG2.1 At the scale of the river basin

- Establishment of integrated management and response systems that allows real-time control over system flows.
- Co-ordination with water management systems at river basin scale to optimise opportunities to support low river flows and alleviate flooding.

It is anticipated that the project will provide significant support to the implementation of the EC Water Framework Directive in the many regions of Europe where coalfield drainage is a major consideration.

# Improving environmental performance through EMAS

02/ENV/UK/143  
REMAS



## Official title

The Value and Issues of Utilising EMAS II in the Regulation of Industry (REMAS)

## Background

Environmental laws and regulations are implemented to prevent and minimise environmental degradation. The Eco-Management and Audit Scheme - EMAS - provides an open, transparent and accountable framework for organisations to demonstrate compliance and improvement with environmental laws and regulations. However, the uptake of EMAS has not been consistent across the Member States. A key influencing factor in this implementation process is considered to be the role of the State regulator in actively supporting the integration of EMAS based on objective evidence.

The key environmental problem being addressed by the "REMAS" project is to determine objectively whether EMAS can improve an organisation's environmental performance. The demonstration approach used by the project will set the standards for companies and demonstrate the benefits of complying with these standards. This will improve the process of legitimising EMAS by producing and disseminating objective evidence for its implementation. The model will show clear incentives to further participation in the EMAS programme, thus producing greater environmental benefit.

## Project Objectives

A barrier to regulatory bodies linking to EMAS is the lack of comparative data for registered and non-registered companies on environmental performance and compliance. This project aims to:

- Demonstrate mechanisms to meet Article 10 of the EMAS Regulation (EC) No 761/2001 of the European Parliament and of the Council of 19 March 2001.
- Demonstrate where EMAS improves a company's performance & compliance with environmental regulation.

## Beneficiary:

### Type of beneficiary

Public authority

### Name of beneficiary

The Environment Agency

### Postal address

Rio House - Waterside Drive

Aztec West - Almondsbury

Bristol - BS32 4UD

UNITED KINGDOM

### Name of contact person

Mr Martin BROCKELHURST

Tel.: 00 44 145 462 4400

Fax: 00 44 145 462 4409

E-mail:

[martin.brocklehurst@environmentagency.gov.uk](mailto:martin.brocklehurst@environmentagency.gov.uk)

## Duration of project:

From September 2002 to August 2005

## Total budget in euro:

2,103,989

## EC contribution in euro with %:

1,037,414 (50% of eligible costs)

## Priority theme covered by the project:

PG3.2 Integrated environment management

- Demonstrate how effective implementation of EMAS improves environmental performance faster or further than command and control regulation.
- Encourage uptake of the approach through dissemination with key stakeholders in the European Union.

# Cleaning up the river Tame

02/ENV/UK/144  
SMURF



## Official title

Sustainable Management of Urban Rivers and Floodplains (SMURF)

## Background

The West Midlands has a history of industrial activity starting in the 1800s. Since 1980 the region has experienced steady industrial decline and this has led to significant land-use changes. The focus of the "SMURF" project is the River Tame basin which is 73% urban industrial and home to 1.8 million people. River water quality across the basin is among the poorest in the UK. Of the 140kms of river in the basin, 75% are classed as poor or very poor under the "General Quality Assessment" scheme used by the Environment Agency (England and Wales) to test and rank the aesthetic quality of rivers. Having a very large urban area developed over relatively small capacity rivers creates tremendous environmental pressure on the water resources. Under the European Water Framework Directive, Member States are required to bring waters up to "good ecological status".

## Project Objectives

The "SMURF" project aims to successfully demonstrate the reversal of pollution and a reduction in the frequency of flood events in an extreme environment. The technology and methodology of the project could possibly be adapted and applied to other places in the UK and the rest of Europe.

The project is specifically designed to respond to the environmental problems on the River Tame through the following objectives:

- Implementing sustainable land-use planning and water management in the urban floodplain.
- Improving the amenity, ecological status and sustainable drainage of the river basin.
- Involving local citizens in the planning and urban river basin.
- Establishing ecological objectives for the river system and a transferable sustainable indicators set.
- Developing a detailed land-use planning model to govern future redevelopment in the floodplain.

## Beneficiary:

**Type of beneficiary**  
Public Authority

**Name of beneficiary**  
The Environment Agency

**Postal address**  
550, Streetsbrook Road  
Solihull  
West Midlands  
B91 1QT  
UNITED KINGDOM

**Name of contact person**  
Mr Colin BERGHOUSE  
Tel.: 00 44 121 711 2324  
Fax: 00 44 121 711 5872  
E-mail: colin.berghouse@environment-agency.gov.uk

**Duration of project:**  
From August 2002 to August 2005

**Total budget in euro:**  
3,235,217

**EC contribution in euro with %:**  
1,130,408 (50% of eligible costs)

**Priority theme covered by the project:**  
PG2.1 At the scale of the river basin

- Demonstrating how small scale modifications can significantly improve a heavily modified water body.

# Filtering drinking water with a new product made from waste glass

## Official title

Development and application of Advanced Filtration Medium (AFM)

## Background

The 6th Environmental Action Programme recognises the importance of the link between the environment and public health and promoting the more sustainable use of natural resources. It also specifically identifies the need to ensure the "sustainable use and high quality of our water resources", the need to aim for "a non-toxic environment" and the need to "reduce the quantity of waste going to final disposal".

The AFM project will make a positive contribution to these key EU environmental objectives by developing and testing a product made from a recycled material which is more effective than sand at filtering drinking water, viz.

- Reducing the need for chemical treatment through improved primary filtration.
- Reducing use of natural non-renewable resources through replacing virgin sand as a medium.
- Reducing the disposal of glass to landfill.
- Increasing sustainability as glass will survive the duration of the filtration system.
- Decrease waste water discharge by industry through new applications.

## Project Objectives

The overall objectives of the project are:

- The mass production of a high value product from waste glass, to provide an improved filtration system for municipal drinking water supplies.
- The protection of public health through improvement of drinking water quality.
- A reduction in the environmental impact of waste water from industrial and sewerage water discharge.

02/ENV/UK/146  
AFM



## Beneficiary:

**Type of beneficiary**  
Private Structure

**Name of beneficiary**  
Dryden Aqua Limited

**Postal address**  
Butterfield Industrial Estate  
Bonnyrigg  
Midlothian  
EH19 3QJ  
UNITED KINGDOM

**Name of contact person**  
Dr Howard DRYDEN  
Tel.: 00 44 187 582 2222  
Fax: 00 44 187 582 2229  
E-mail Howard@drydenaqua.com

**Duration of project:**  
From April 2002 to March 2004

**Total budget in euro:**  
1,654,000

**EC contribution in euro with %:**  
219,250 (19.78% of eligible costs)

**Priority theme covered by the project:**  
PG2.3 waste water treatment

Specific project objectives are:

- To confirm that the advanced filtration medium meets Drinking Water Inspectorate Standards.
- To establish the first full scale processing facility for AFM.
- To establish market acceptance of AFM.

# Strategies for carbon emissions reduction in inner London

02/ENV/UK/147  
CARRA



## Official title

Carbon Assessment and Reduction in Regeneration Areas (CARRA)

## Background

The EU 6th Environmental Action Programme identifies climate change as one of four key priority areas. The consensus is that increased concentrations of greenhouse gases are a significant contributory factor in global warming. Therefore, Member States across the EU need to develop and implement CO<sub>2</sub> reduction strategies in order to meet their targets and contribute to the EU target. The European Climate Change Programme sets out policies and measures to reduce EU greenhouse gas emissions to 8% below the 1990 level by 2008-2012, in line with the Kyoto Protocol.

## Project Objectives

The "CARRA" project will address the integration of environmental considerations into urban land-use development and planning. In addition, the project aims to test the concept, application and effectiveness of a carbon budget for reducing CO<sub>2</sub> emissions in an inner urban regeneration area and test whether this, and subsequent local action projects lead to more involvement in carbon reduction lifestyles and strategies.

The following objectives will be pursued: Firstly, the carbon budget will engage, and be meaningful to, institutions, citizens and other key stakeholders in urban regeneration areas and lead to increased levels of involvement and participation via local actions to reduce carbon emissions. Secondly, carbon budgeting is to be integrated with, and applied to regeneration programmes and spatial planning policy to assess carbon use in inner urban areas, and lead to reductions in carbon emissions.

## Beneficiary:

**Type of beneficiary**  
Public Authority

**Name of beneficiary**  
London Borough of Islington

**Postal address**  
Environment and Conservation Department  
Planning Policy Unit,  
Upper Street 222  
Islington  
London  
N1 1YA  
UNITED KINGDOM

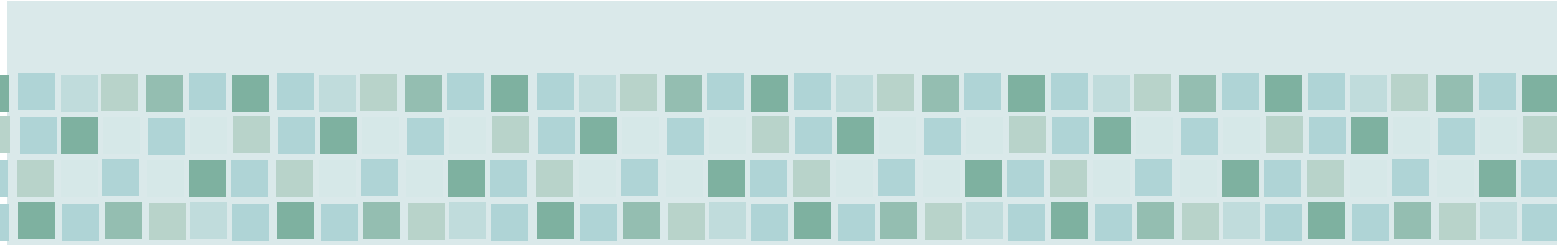
**Name of contact person**  
Mr Miles DUCKWORTH  
Tel.: 00 44 020 7527 2001  
Fax: 00 44 020 7527 2731  
E-mail Miles.duckworth@islington.gov.uk

**Duration of project:**  
From September 2002 to August 2004

**Total budget in euro:**  
424,320

**EC contribution in euro with %:**  
203,830 (48.34% of eligible costs)

**Priority theme covered by the project:**  
PG1.1 urban environment



© European Communities, 2002

Reproduction is authorized provided the source is acknowledged

ISSN 1725-3292

This document is only available in electronic format.