# LIFE09 ENV /FR/00059

# Water Research to Market

## DELIVERABLE: SORTED LIST OF PRE-SELECTED PROJECTS

## ASSOCIATED ACTION 1.1

Due date of deliverable: 01/08/ 2013

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Organisation name of the coordinator of this deliverable: Office International de l'Eau

Status of the document: Confidential, only for members of the consortium and the Commission Services; the final version will be public.

Data Project

| | |
|---|---|
| **Project location** | FR, POL, RO, ES |
| **Project start date:** | 01/09/2010 |
| **Project end date:** | 31/08/2013 **Extension date:** <dd/mm/yyyy > |
| **Total budget** | 799 594€ |
| **EC contribution:** | 399 797€ |
| **(%) of eligible costs** | 50% |

Data Beneficiary

| | |
|---|---|
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## Table of contents.

## 1. List of key-words and abbreviations

LC Liaison Committee

SC Steering Committee

ReMAS Research to Market Assessment Strategy

## 2. Introduction

The permanent watching of the sector involved both research and implementation sides. On the research side, a key task was the identification of current and past projects. This included identification of their related outputs and results, and a first ranking of outputs in terms of distance to the market but also where necessary, upstream discussion with the researchers.

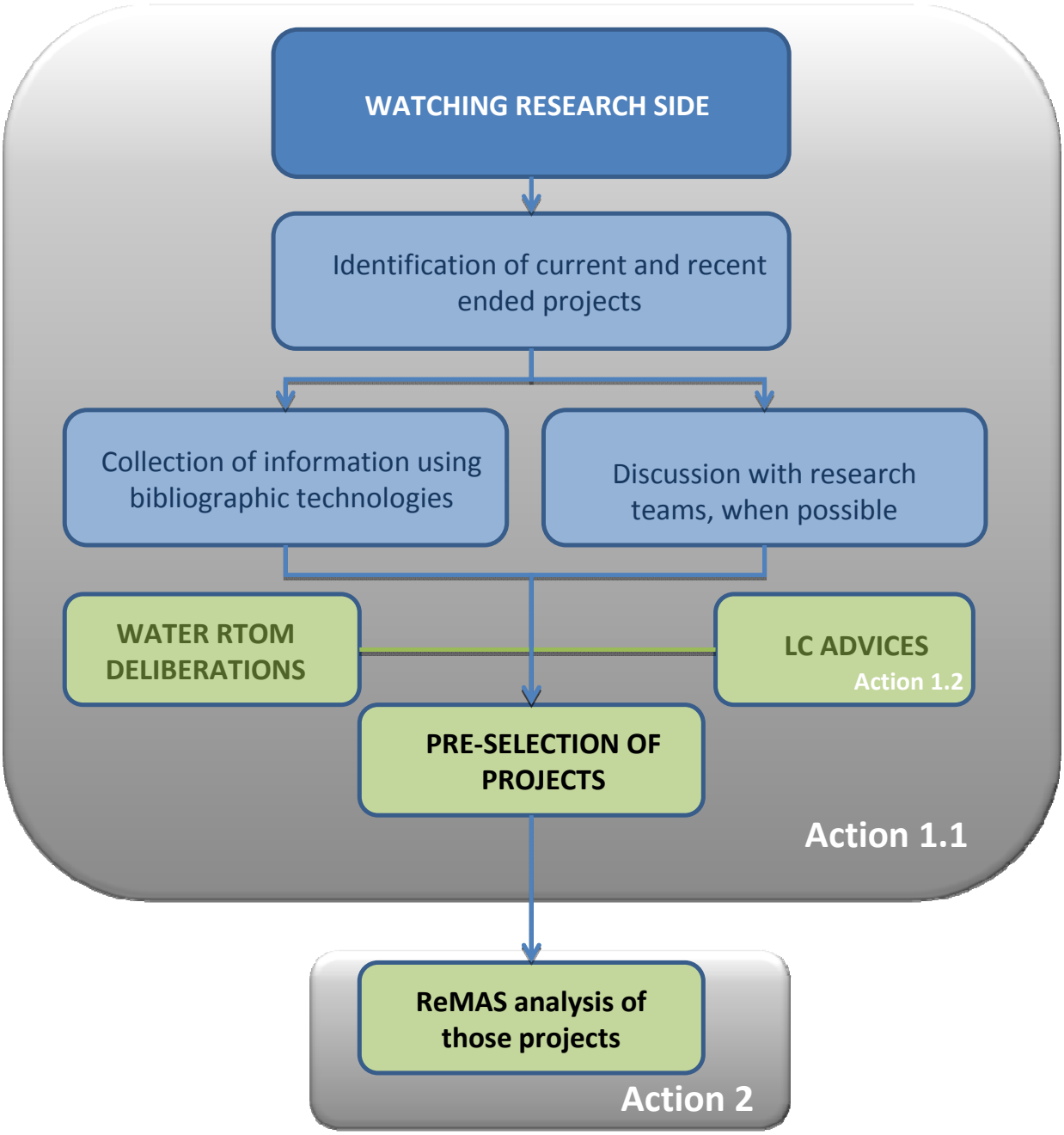
Thus, project partners performed a list of projects that was being updated on a regular basis according to conclusions on the discussions/deliberations among partners and between researchers and the Water RtoM consortium.

Project partners were looking for research projects at EU level, but also, Water RtoM made special emphasis at a national or regional level. The aim of looking not only at EU level was to rise up those projects funded by national or regional programmes into the international context in order to favour the transferability of related outputs.

The list of projects shows key information on the project as well as a first Partner's approximation about the potentiality to become Innovation precursors.

This deliverable comprises the full list of projects collected during the project duration.

Next figure shows this process.




## 3. Method for listing projects

The permanent looking to the research side comprises sub actions that were continuously being performed by project partners.

First sub action was related to regularly checking, in each partner country, the status of research on water issues. This allowed for the identification of research groups and projects in which those groups were involved.

After having identified groups and projects, partners made a bibliographic analysis on all those listed projects, aiming at identifying outputs and their status in terms of distance to the market.

Additional inputs came from the LC meetings and the parallel individual interactions with them. The brokerage events also gave the opportunity to present the WaterRtoM projects, identify new research projects or further inform research teams that we collected research results from. Moreover, during the regular SC webmeetings, the consortium discussed on criteria used to select projects.

The research organisation and actors involved were widely variable from one country to the other. To insure all information sources had been covered, whether identified by each partner or advised to use, we gathered in this report the bibliographic sources used by each partner of the project.

The databases used to collect projects and related outputs are currently free of access. In the Application, it was a foreseen risk to have difficulties accessing databases. To solve this risk, agreements with database owners were proposed. Nevertheless, access to the database is easy, free, and we did not need to establish agreements with their owners. In France, the national Office for Aquatic Ecosystem gave the list of the financed research projects without difficulty.

## EUROPEAN PROJECTS (OIEau)

Regarding the European projects identified in France, the bibliographic sources of OIEau are all free of access:

- LIFE+ website: http://ec.europa.eu/environment/life/project/Projects/index.cfm
- Interreg website, http://www.interreg-sudoe.eu/FRA/f/138/Les-Projets-SUDOE/Les-projets-approuves, http://www.interreg4c.eu/approved_projects.html, http://www.interreg-rhin-sup.eu/priorite-c,11904,fr.html,
- Eureka website: http://www.eurekanetwork.org/project/
- Database on climate change: http://bddrecherche.gisclimat.fr/fr/content/impacts-du-changement-climatique-et-...
- Cordis: http://cordis.europa.eu/home_fr.html
- http://publications.edpsciences.org/

**FRANCE (OIEau).** National projects identified in France, free of access

- List of ONEMA and Cart'Eau website, http://carteau.onema.fr/
- ANR: http://www.agence-nationale-recherche.fr/
- Close contact with the local University of Limoges (GRESE, Research group for Water, Soil and Environment) http://www.unilim.fr/filiere-eau/site/index.html
- Research teams after have been contacted for a REMAS, They propose other projects

**SPAIN (AMPHOS 21):** Projects identified in Spain,

During year 1 A21 faced the need to look for and list current or recently ended research projects, due to the fact that there is no unique database of Spanish research funded projects, not even a unique list of publications. High efforts were made to identify interesting research projects. The preliminary methodology was to:

- Identify national and regional funding programmes
- Searching in the funding programmes database for water related projects. Result: production of a raw list of projects
- Integration of this list into D1.1

As one of the constraints to achieve our objectives was the willingness of researchers, we identified that establishment of prior contacts with them was more efficient to have good collaborations. Therefore, we participated in promotion events to better reach researchers, in order to get them involved in our activities for Action 2.

Summarizing, due to the large amount of research projects funded by a wide range of national/regional and public/private funds we adopted a multiapproach methodology to identify research outputs:

- Permanent watching to the sector with online database from the major funding programmes
- Registration to water related newsletter, to be aware of new events, new innovations, etc (those are iAgua, infoEnviro, Hispagua, Infoagua, EMWS, WSSTP news)
- Participation in some key events with a scientific and dissemination character to identify new projects (e.g Iberian Groundwater Congress, Annual Meeting of the Water Spanish Technology Platform, etc.)
- Finally, permanent contacts with our LC members , who are informing us on new projects which could feed our database.

**POLAND (GWF).** National projects identified in Poland

The normal methodology of project searching in case of Gdansk Water Foundation was based upon Internet web page looking. GWF used general search tools like Google and with the help of key words, tracked down projects of interest.

GWF also had some web pages checked, like the LIFE+ site or Polish National Fund for Environmental Protection.

Further to that, it was a good experience to look for projects during the brokerage events to get the chance to meet and talk to the engaged people face to face.

In a good search it is also important to find out about the current situation and environmental trends. For example since in Poland there is a special pressure for flood prevention project- we tended to focus on this aspect in our further search.

GWF enhanced the level of cooperation with the output owners. Engaged more frequent online phone contact, if there was a chance- took them with us to the brokerage events.

We also enhanced the dissemination actions among our group of contacts. It was crucial to keep them informed about each of the changes occurring on the web page, e-platforms or in the projects we cooperated with.

**ROMANIA (CFPPDA)** national projects identified in Romania

CFPPDA used as the main source of information for selecting projects from National Authority for Scientific Research. (**http://www.ancs.ro/en/articol/980/despre-ancs-prezentare**)

The Authority's mission is to ensure the elaboration, application, monitoring and evaluation of the policies in the field of research-development and innovation, consistent with the strategy and the Governing Programme, for the purpose of ensuring on this basis the enlargement of the national and international technological and innovation patrimony, the sustainable economic development, the access on the internal, European market and on the global markets, the creation of the informational knowledge-based society, the satisfaction of the citizens needs and a growth in the quality of their lives.

To identify new projects, CFPPDA used research links created with the environment in year 1 and 2 of the Water RTOM. Part of the research team recommended new projects for Water RtoM.

We monitored other scientific events organised by universities and research institute related to water.

## 4. List of projects

The lists of projects are shown below, sorted by project countries and years. There is also a list is dedicated to EU projects (LIFE, INTERREG, etc.). In brief, the number of projects identified within WaterRtoM is the following:

**Table 1: Number of projects financed by National and Regional or European funds**

| WaterRtoMpartner | NATIONAL | EU | TOTAL |
|---|---|---|---|
| A21 | 33 | 8 | **41** |
| CFPPDA | 25 | 0 | **25** |
| GWF | 54 | 35 | **89** |
| OIEau | 46 | 34 | **80** |
| | **158** | **77** | **235** |

And from these projects, a part is financed in the national or regional framework and the other part by European funds. 77 projects financed by European funds are selected (LIFE, Interreg, ERDF (European Regional Developing Fund), Operational Programme Innovative, PHARE, Central Europe Programme, IEE…).

**Table 2: Geographical distribution of projects**

| National/EU | Total |
|---|---|
| Spain | **39** |
| France | **51** |
| Poland | **49** |
| Romania | **25** |
| Other EU countries / Multi country projects | **71** |
| total | **235** |

## 4.1. List of Spanish projects for year 1

**Table 3 : List of Spanish projects for year 1**

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 1. | ACCUA: WATER USE ADAPTATIONS TO CLIMATE CHANGE IN THE MEDITERRANEAN | There is clear evidence that human activity is influencing climate leading to strong impacts and changes in natural and human systems. New policies must be carried out beyond mitigation efforts (reduction of greenhouse gases).<br>The interdisciplinary ACCUA project attempts to identify the main vulnerabilities that affect these systems and propose some adaptation measures at local scale (Catalonia, NE Iberian Peninsula).<br>The main objectives are (1) to establish land vulnerabilities according to water availability and (2) to propose adaptations addressed to overcome these vulnerabilities. And finally, to suggest recommendations on how to optimize future water uses. | Spain | CREAF (Centre for Ecological Research and Forestry Applications) | 2009-2012 | La Caixa Obra Social |
| 2. | AQUA-PLANN Project: Integrated water resources management and their application to local planning of the SCI Abegondo-Cecebre | Integrated water resources management and their application to local planning of the SCI Abegondo-Cecebre | Spain | Local authority (Council of Abegondo) | 2009-2012 | LIFE07 |
| 3. | AQUATOOL_DMA: no related to a project | no related to a project | Spain | Politechnical University of Valencia | 1990-2011 | Multiple funding sources |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 4. | CEMAGUA | A study of presence and fate of emerging polluting substances in surface or groundwaters, and development of tools to survey and control their presence in the environment | Spain | IDAEA | 2007-2012 | Ministry of Science and Education |
| 5. | CNR Cops | National Reference Centre for Persistent Organic Pollutants | Spain | IMDEA | 2008-no date | Ministry of the Environment and Rural Marine Affai |
| 6. | ECOWATCH | Detection of episodes of low quality water by continuous measurement network and expert system application | Spain | ADASA | 2010-2011 | Plan Nacional de Investigación Científica, Desarr |
| 7. | NOVEDAR: Conception of the Sewage Treatment plan of the XXI century | The project aims at developing advanced technologies for wastewater treatment and post-treatment, including suspended biomass, biofilm and hybrid reactors, Membrane Biological Reactors (MBR), coagulation-flocculation-sedimentation processes, Granular Activated Carbon (GAC) columns, oxidation processes such as ozonation, photochemical oxidation and fenton-like systems | Spain | Univ. de Santiago de Compostela | 2007-2012 | CONSOLIDER |
| 8. | OPTIMAR: operación OPTima Inteligente de los sistemas de saneaMiento de Aguas Residuales urbanas | Optimized and intelligent operation of urban WWTP (OPTIMAR) | Spain | Centro de Estudios e Investigaciones Técnicas de Gipuzkoa (CEIT) | 2009-2010 | Spanish Ministry of Science and Innovation |
| 9. | PROBASE | Processes and hydrological balances on various scales in mediterranean environments: consequences of climate change and change in land use practices. | Spain | IDAEA | 2006-2011 | CONSOLIDER |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 10. | REAGUAM: Reuse of Treated Water for Environmental Applications: groundwater recharge using permeable reactive barriers and for energy forestry purposes | This project deals with the study of two different technologies for the reuse of urban waste water for environmental applications under RD 1620/2007: first re-use agricultural techniques (Green Filters species and irrigation for biomass and biofuels) and reuse of surface recharge systems through regeneration by horizontal reactive beds | Spain | University Alcalá de Henares | 2008-2011 | Ministry of Science and Technology Affairs (MICINN |
| 11. | REMTAVARES: Madrid's Network for Wastewater Advanced Treatment | REMTAVARES is a research consortium leading R&D in advanced technologies for the treatment of wastewater containing non-biodegradable pollutants. The network is integrated by five research groups from the major public Universities in Madrid and the IMDEA Water Foundation, a leading research centre. | Spain | IMDEA | Permanent-Ongoing | Directorate General of Universities and Research ( |
| 12. | RESEL: Red de Estaciones Experimentales de seguimiento y evaluación de la erosión y desertificación | Experimental measuring stations network in order to follow and evaluate erosion and desertification | Spain | IDAEA | 2006-2008 | Dirección General para la Biodiversidad, Ministeri |
| 13. | SMAA: SMAA | Development of a groundwater simulation methodology compatible with integrative water management tools in the WFD planning process that already exists for surface water. | Spain | Tragasatec | 2009-2011 | Grupo Tragsa |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 14. | Software MBR: MBR CONTROL | AUTOMATIC CONTROL SYSTEM FOR ENERGY OPTIMIZATION IN MEMBRANE BIOREACTORS | Spain | Laboratory of Chemical and Environmental Engineering, University of Girona | 2006-2011 | National funding, diverse programmes (ACCIO10, Env |
| 15. | TAPCAP: Water purification through capacitive deionization | The main objective is to develop a water desalination system by using Capacitive Deionization, a low pressure process of deionization that can directly compete with membrane or distillation as a means to deliver waters free of ions at reduced cost. This process operates by sequestering ions near charged surfaces in the electrical double layer. Furthermore, because ions are stored at the interface of a charged surface this device is actually capable of storing its own energy just like an electrochemical capacitor. In this project we will use new nanoporous materials that are more efficient and a novel method of regeneration, so that energy efficiency can be greatly improved, making it even more competitive with reverse osmosis and multi-stage distillation. | Spain | IMDEA | 2008-2010 | ECC-590000-2008-130, within the “Strategic Action on Energy and Climate Change” of the National Plan of Scientific Research, Development and Technological Innovation 2008-2011. |
| 16. | TRAGUA: Tratamiento y Reutilización de Aguas Residuales para una Gestión Sostenible (TRAGUA)” | Treatment and Reuse of Waste water for Sustainable Management | Spain | CETAQUA | 2006-2011 | CONSOLIDER-INGENIO 2010 |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 17. | VIECO: Desarrollo y validación de plataformas integradas de VIgilancia biológica y química optimizada ECOnómicamente | Development and validation of integrated platforms for ECOnomically Optimised Biological and Chemical Surveillance (VIECO) | Spain | CETAQUA (Water tecnological center) | 2008-2010 | Ministry of the Environment and Rural and Marine A |
| 18. | WATERCHANGE | Medium and long term water resources modelling as a tool for planning and global change adaptation.<br>Application to the Llobregat Basin<br>With advisory committee composed of stakeholders and users | Spain | Research institution (CETAQUA - Centro Tecnológico del Agua) | 2009-2011 | LIFE07 |

## 4.2. List of Spanish projects for year 2

**Table 4: List of Spanish projects for year 2**

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 19. | AG-GUAS: Sustainable water management at regional scale through Airborne Remote Sensing based on Unmanned Aerial Systems (UAS) | The general objective of AG_UAS is to demonstrate the technical and economic feasibility of a new Aerial Remote Sensing methodology, based on UAS (unmanned aircraft system), to improve global water management, contributing to its sustainable use on a regional scale. The intention of this methodology is to close the gap that exists between satellite remote sensing (with critical limitations in temporal and spatial resolution) and remote sensing based on traditional airborne means (very much for a regional scale). The specific objectives of the project are to test two new innovative aerial remote sensing systems, designing and constructing two prototypes, one based on a high-resolution infrared camera and another on a multispectral camera, both systems using an unmanned helicopter as an aerial platform and to demonstrate the technical feasibility of the method. | Spain | Asociación de la Industria Navarra (AIN) | 2010-2013 | LIFE + |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 20. | DECEMON: Developing Cost-effective Environmental Monitoring Network | Methodology for increasing the environmental monitoring efficiency in the scope of the Water Framework Directive 2000/60/EC . This methodology can recognize if sampling frequency could be reduced and if possible, decrease the number of active sampling stations | Spain | DEPARTAMENTO DE INGENIERIA HIDRAULICA Y MEDIO AMBIENTE, UNIVERSIDAD POLITECNICA DE VALENCIA, Spain | 2007-2011 | Valencian regional environment ministry (Conseller |
| 21. | Geedar: Gestión Eficiente de Estaciones Depuradoras de Aguas Residuales | Efficient management of wastewater treatment plants of small towns | Spain | ECOWATCH | 2008-2010 | FEDER Fund |
| 22. | MICROALGAE: Microalgae: water purification plants, biofuel production and CO2 fixation | Studying the feasibility of integrating a nutrient removal process by culturing in photobioreactors for microalgal species of high oil content in waste water treatment. | Spain | El Centro Andaluz de Ciencias y Tecnologías Marinas (CACYTMAR), | 2008-2011 | Ministerio de Ciencia e Innovación en el marco del VI Plan Nacional de Investigación Científica, Desarrollo e Innovación Tecnológica 2008-2011, |
| 23. | MONTES | Good forestry practices for improving the water regime in woodlands (qualitatively and quantitatively). | Spain | Centre de Recerca Ecològica i Aplicacions Forestals (CREAF) | 2009-2013 | CONSOLIDER |
| 24. | OPTIMECA | Membranes improvements and active | Spain | Oriol Gibert, CETAQUA (Water tecnological center), CTM | 2008-2011 | ACCIO10 |
| 25. | REDSIM-IS: REmote-sensing based DSS for Sustainable Drought-Adapted Irrigation Management | In the frame of the EU-DGE 'Pilot project on development of prevention activities to halt desertification in Europe', REDSIM addresses the topics "Water savings/water efficiency measures' and 'alternative forms of irrigation'. More precisely, REDSIM deals with the development of management technologies | Spain | UPCT | 2011-2012 | LIFE (EC-DGE LIFE Program „Halting Desertification |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| | | and tools to improve land and water productivity in arid agricultural lands, at farm and watershed levels. Our overall objective is to improve Irrigation Water Productivity (IWP) in water-stressed watersheds | | | | |
| 26. | SCARCE 1: Assessing and predicting effects on water quantity and quality in Iberian rivers caused by global change | SCARCE is a multipurpose project that aims to describe and predict the relevance of global change impacts on water availability, water quality and ecosystem services in Mediterranean river basins of the Iberian Peninsula, as well as their impacts on the human society and economy. | Spain | IDAEA (CSIC) | 2009-2014 | Ministerio de Ciencia e Innovación (CONSOLIDER-ING |
| 27. | SCARCE 2: Assessing and predicting effects on water quantity and quality in Iberian rivers caused by global change | SCARCE is a multipurpose project that aims to describe and predict the relevance of global change impacts on water availability, water quality and ecosystem services in Mediterranean river basins of the Iberian Peninsula, as well as their impacts on the human society and economy. | Spain | IDAEA (CSIC) | 2009-2014 | Ministerio de Ciencia e Innovación (CONSOLIDER-ING |
| 28. | SCARCE 3: Assessing and predicting effects on water quantity and quality in Iberian rivers caused by global change | SCARCE is a multipurpose project that aims to describe and predict the relevance of global change impacts on water availability, water quality and ecosystem services in Mediterranean river basins of the Iberian Peninsula, as well as their impacts on the human society and economy. | Spain | IDAEA (CSIC) | 2009-2014 | Ministerio de Ciencia e Innovación (CONSOLIDER-ING |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 29. | SOSTAQUA: Technological development for self-sustainability of the urban cycle Output 1 | The ultimate goal of the project is to ensure that self-sustainability of the urban water cycle will be more likely the lower the requirement for natural resources (water and energy) and the lower the volume of waste generated<br>Output 1 : Integration of renewable energy sources (photovoltaic) in wastewater treatment. | Spain | GRUPO AGBAR | 2008-2012 | cenit/CDTI |
| 30. | SOSTAQUA: Technological development for self-sustainability of the urban cycle Output 2 | The ultimate goal of the project is to ensure that self-sustainability of the urban water cycle will be more likely the lower the requirement for natural resources (water and energy) and the lower the volume of waste generated<br>Output 2: 'Water desalination by solar energy | Spain | Centre de Recerca i Investigació de Catalunya (CRIC)—Centro tecnologic (CTM) | 2008-2012 | cenit/CDTI |
| 31. | SOSTAQUA: Technological development for self-sustainability of the urban cycle Output 3 | The ultimate goal of the project is to ensure that self-sustainability of the urban water cycle will be more likely the lower the requirement for natural resources (water and energy) and the lower the volume of waste generated<br>Output 3: 'Biological inserting by electric pulses | Spain | Centre de Recerca i Investigació de Catalunya (CRIC) | 2008-2012 | cenit/CDTI |
| 32. | TECOAGUA: Desarrollo de tecnologías sostenibles para el ciclo integral del agua | The main objective of the initiative is to develop sustainable technologies for generating alternative water resources. It will consider advanced technologies for recovering polluted natural resources, the regeneration and reuse of waste water, and new desalination processes, among others. Another key aspect to be developed by the project is the conservation of existing | Spain | Befesa agua | 2009-2013 | Cenit |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| | | resources and the optimisation of water management in terms of energy efficiency, as well as mitigating climate change. | | | | |
| 33. | Water-Radd: Automatic Radioactivity Level Measurement in Freshwaters | Water-Radd, the innovative product for a continuous low level radioactivity measurement based on plastic scintillation microspheres | Spain | ADASA | 2010-2012 | CDTI |
| 34. | WINDOSMOSIS: Energy savings for seawater desalination by wind power | Conduct an analysis of technical feasibility of alternatives to directly use mechanical energy of a windmill to pump impulsarBlas installation of seawater desalination by reverse osmosis and harness the energy of the brine rejection to produce electricity through Pelton turbine. | Spain | GENERACIÓN DE AGUA S.A. (GASA)---Instituto del Agua, Universidad de Granada | 2011-2014 | Subprograma INNPACTO. Ministerio de Ciencia e Innovación |

## 4.3. List of Spanish projects for year 3

**Table 5: List of Spanish projects for year 3**

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 35. | ADEMETER: Automated Meter Reading solution for non-energized meters (gas and water) in urban areas, based on autonomous, wireless, low-cost devices. | The solution to Automated Meter Reading developed by Adevice for urban spaces based on wireless communication devices. | Spain | ADEVICE | No date-No date/ended | private research |
| 36. | ENSAT: Enhancement of Soil Aquifer Treatment to Improve the Quality of Recharge Water in the Llobregat River Delta Aquifer | This project aims at improving the quality of the recharge water at Sant Vicenç dels Horts Managed Aquifer Recharge site by means of the implementation of an organic substrate layer for enhancing Soil Aquifer Treatment (SAT). | Spain | CETAQUA | 2010-2012 | LIFE+ |
| 37. | MCPhreeqc 1.1: An IT tool for modelling many different types of natural geochemical processes | Phreeqc is used for modelling many different types of natural geochemical processes. What they all have in common is that there is an uncertainty about the exact value of the parameters used. In the classical modelling method, the model is calibrated to find the "correct" values of these parameters. Another approach is to apply stochastic modelling using Monte-Carlo simulations. A probability | Spain | AMPHOS21 | 2010-2012 | private |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| | | distribution is chosen for each parameter. Then combinations of random values are generated according to these distributions. For each combination Phreeqc needs to be run. The results of all these runs is then combined to show the uncertainty for specific output variables, given the uncertainty of the input parameters. | | | | |
| 38. | MUSIASEM: Multi-scale Integrated Assessment of Societal and Ecosystems Metabolism | This project aims at improving the quality of the recharge water at Sant Vicenç dels Horts Managed Aquifer Recharge site by means of the implementation of an organic substrate layer for enhancing Soil Aquifer Treatment (SAT). | Spain | ICTA | 2008-2013 | no specific programme |
| 39. | Software MBR | Software for automatic control system for energy optimization in membrane bioreactors (MBR) | Spain | Laboratory of Chemical and Environmental Engineering, University of Girona, Spain | No date-No date | National funding |

## 4.4. List of French projects for year 1

**Table 6: List of French projects for year 1**

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 40. | ALGEQUEAU: Algea and water quality management in artificial channels | Management of the biological quality of water in artificial transport and distribution systems (artificial waterbodies): the case of micro-algae (Algae and management of water quality in channels) | France | UMR G-Eau | 2007-2010 | PRECODD/ANR; Cemagref, Montpellier SupAgro, IRD, Ademe |
| 41. | AMPERES: Analyse de Micropolluants Prioritaires et Emergents dans les Rejets et les Eaux Superficielles | Analysing priority and emerging micropollutants in discharges and surface waters | France | CEMAGREF | 2006-2009 | PRECODD/ANR |
| 42. | BEEST: Vers le bon Etat Ecologique des grands ESTuaires atlantiques : Seine, Loire, Gironde | Towards good ecological status of large atlantic estuaries: Seine, Loire, Gironde. BEEST research project aims to contribute to the implementation of the WFD in terms of quality indicators, survey and apprehension of Good Ecological Status. The characte | France | GIP Seine aval | 2007-2010 | LITEAU |
| 43. | CAVHYTE: A new oxydation technique using cavitation | Towards an optimization method of the oxydation techniques of organic and chlorinated pollutants, industrial water treatment and sterilization by the use of hydrodynamic cavitation. Application to the rehabilitation of polluted ground water | France | Grenoble INP | 2006-2009 | PRECODD/ANR |
| 44. | COBIAS: Biological oxidation unit of arsenite contaminated groundwater | Understanding the function of bacteria biofilm and managing its growth control when treating water contaminated by arsenic in fixed bed bioreactors | France | BRGM | 2006-2009 | PRECODD/ANR |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 45. | DIESE: Une panoplie d'outils pour tester la toxicité des sédiments | diagnosis tools for sediment ecotoxicity | France | UNIVERSITÉ DE METZ | 2007-2010 | PRECODD/ANR |
| 46. | DISCOBIOL: utilisation des dispersants dans les eaux côtières ou estuariennes | dispersing agents and fighting techniques in coastal environment: biological effects and inputs to the regulation | France | CEDRE | 2007-2010 | PRECODD/ANR |
| 47. | EVALEAU: Environmental and economic integrated performance of drinking water production processes assessment | Developing tools for predictive analysis of environmental performances, on a multicriteria basis, of drinking water processes | France | INSA | 2009-2011 | PRECODD/ANR |
| 48. | IDEAUX: Pour une intégration des politiques de développement, de l'eau, d'aménagement et d'urbanisme en faveur des milieux aquatiques | For an Integration of the water development land management and urban planning policies, in favour of aquatic environments | France | SOGREAH consultants | 2008-2011 | Eaux et territoires |
| 49. | INDIGAU: Indicateurs de performances pour la gestion patrimoniale des réseaux d'assainissement urbains | performance indicators for sewer networks patrimonial management | France | G2C Environnement | 2007-2010 | RGCU/ANR |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 50. | INTEGREAU: Micro-système de mesure en continu de metaux lourds dans les eaux | Development of a generic microsystem for the application of the Water Framework Directive - heavy metals monitoring chain | France | Université Lyon 1 | 2008-2011 | PRECODD/ANR |
| 51. | LITEAU2 2005: Programme Sciences et Gouvernance en appui au Développement Durable du Littoral | Development of a fish indicator for transitional waters | France | CEMAGREF | 2005-2008 | LITEAU |
| 52. | LITEAU2 2005: Programme Sciences et Gouvernance en appui au Développement Durable du Littoral | Development of diagnosis and forecasting decision support systems to assess performance of Marine Protected areas | France | IFREMER | 2003-2006 | LITEAU |
| 53. | MICROGAM: Modélisation des contaminations bactériennes du Golfe d'Aigues-Mortes en vue d'une gestion de risques en temps réel | Modelisation of bacterial contaminations from fecal origin in the Gulf of Aigues-Mortes in view of real-time management of risks | France | Université de Montpellier | 2007-2010 | LITEAU |
| 54. | NATEAU: Déposition d'N et traçage dans les bassin versants alpins | Tracing N-Deposition impact in Agricultural Alpine Watersheds | France | ANR | 2008-2011 | VMC/ANR |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 55. | NITRADIRECT: Développement d'un capteur simple et économique pour la mesure en continu et in situ de lateneur en nitrate et nitrite dans les eaux | Development of a simple and economical sensor for continuous in-situ monitoring of nitrite and nitrate concentration in water | France | CNRS | 2006-2009 | RECODD/ ANR |
| 56. | POME: Pilote de traitement eau de mer | Objective validation protocols for membrane processes used in water production and treatment | France | Institut National Polytechnique de Toulouse | 2006-2010 | PRECODD/ANR |
| 57. | PROLIPHYC: Proliférations phytoplanctoniques | Operational systems for surveillance and real-time warning of phytoplancton blooms: the case of cyanobacteria | France | SOGREAH consultants | 2007-2010 | PRECODD-écotech/ANR |
| 58. | REEBiM: Réutilisation d'Eau usée Epurée par association de procédés Biologiques et Membranaires | purified wastewater reuse by combining biological and membrane processes | France | SAUR | 2007-2010 | PRECODD/ANR |
| 59. | REMAPRO: Développement d'une méthodologie de cartographie 3Dde la perméabilité des aquifères par REsonance MAgnétique PROtonique pour mieux gérer les sites pollués et prévoir le transfert des polluant | Development of a 3D aquifer permeability mapping method using Protonic Magnetic resonance for better management of polluted sites and forecasting pollutants transfer | France | BRGM | 2006-2009 | PRECODD/ANR |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 60. | RExHySS: Impact du changement climatique sur les ressources en eau et les extrêmes hydrologiques dans les bassins de la Seine et de la Somme | Climate change impact on water resources and extreme hydrologic events in Seine and Somme basins | France | SISYPHE | 2005-2008 | GICC |
| 61. | RIVES: Risque d'Inondation en Ville et Evaluation de Scénarios | Flood risk in city and scenari evaluation | France | CEMAGREF | 2007-2010 | VMC/ANR |
| 62. | SEDIGEST: GESTion durable des SEDiments de dragages des ports | Sustainable management of harbour dredging sediments: building a validation methodology for the sector "restoration of terrestrial cavities of the littoral band" | France | ENTPE | 2007-2010 | PRECODD/ANR |
| 63. | SEMEAU: Mettre au point un outil de modélisation des masses d'eau sur le site pilote de l'impluvium préservé de Volvic | Application of the Water Framework Directive through the implementation of an expert system providing a total modelling of a water mass | France | International enterprise (DANONE, Volvic) | 2009-2012 | LIFE07 |
| 64. | SURVAQUA: Evaluation de l'impact des perturbateurs endocriniens sur les milieux aquatiques | Impact assessment of endocrine disruptors on aquatic environment | France | INERIS | 2006-2009 | PNRPE |

## 4.5. List of French projects for year 2

**Table 7: List of French projects year 2**

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 65. | BAR3D: Logiciel de Calcul 3D de Barrages Flottants | 3D Computational tool for floatting oil barrier | France | Ecole d'ingénieur en génie des Systèmes industriels (EIGSI) | 2006-2008 | PRECODD/ANR ADEME |
| 66. | BIOALERT: Immunocapteur à ondes de Love ultra-sensible pour la détection rapide de micro-organismes dans l'eau, visant la réalisation d'un dispositif d'alerte | This project produces a rapid detection device for bacterial contamination in liquid medium (bathing water, sewage), for monitoring the environment. Previous works have shown the feasibility of a microsensor surface acoustic wave, with a bioreceptor (antibodies), for rapid detection of bacteria. To improve device performance, the proposed research project aims to develop new studies. | France | ENSEIRB - IXL (Université de Bordeaux - Laboratoire IXL) | 2006-2009 | PRECODD/ANR |
| 67. | CLARAII: Calculs Liés Aux Rejets Accidentels en Méditerranée | Calculations linked to accidental spills in mediterranean Sea | France | ARMINES - Ecole des Mines | 2006-2010 | PRECODD/ANR |
| 68. | DIGUE: Nouvelles filières de DIGestion anaérobie des boUes pour la gestion des risques Environnementaux (maîtrise des substances prioritaires et valorisation des produits finaux) | New treatment sludge: anaerobic digestion "eco-friendly" able to control the reduction or elimination of priority substances and emerging in sludge and ensure recovery of final products (quality and quantity of sludge and biogas) | France | Suez Environnement – CIRSEE | 2006-2008 | PRECODD/ANR |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 69. | Ecopluies: Techniques alternatives de traitement des eaux pluviales et de leurs sous-produits : vers la maîtrise du fonctionnement des ouvrages d'infiltration urbains | alternative techniques for rainwater treatment and by-products: towards the control of urban infiltration structures operation | France | INSAVALOR - Unité de Recherche en Génie Civil /INSA Lyon | 2005-2008 | PRECODD/ANR |
| 70. | GALERNE: GAz et Liquides Evaporants et Risques de Nuisances Environnementales et humaines | The project GALERNE considers a maritime accident involving chemical tankers transporting a hazardous substance or gas evaporating charged gas in a liquid state. In the event of a maritime accident, the gases emitted from vessel or floating slicks pose significant risks to stakeholders and populations. | France | CEDRE | 2005-2008 | PRECODD/ANR |
| 71. | HAB SEACHIP: Biocapteurs de détection d'algues toxiques en milieu marin | This project therefore aims at the realization of a biosensor sensitive to the level of alert thresholds set for microalgae problematic in the economy related to aquaculture. It addresses the need to automate and simplify the identification of species producing phytotoxins responsible for severe food poisoning because conventional techniques for monitoring require advanced skills in taxonomy and are long. | France | IFREMER, centre de Brest | 2005-2008 | PRECODD/ANR |
| 72. | HYBIOX: Procédés biologiques hybrides pour l'amélioration de la dégradation des composés | The project offers technological solutions (purification process) to reduce emissions of hazardous substances from industrial effluents. In particular, the objective is to minimize the transfer to gas phases, solid | France | INSA Toulouse | 2006-2009 | PRECODD/ANR |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| | xénobiotiques et substances dangereuses | (sludge) or liquid, and promote biodegradation of organic molecules easily biodegradable (the project focuses on aromatics PAH, BTEX and phenols). | | | | |
| 73. | INCOAGENE: Générateur de coagulant pour la production d'eau potable | Generating coagulant for drinking water production | France | University of Limoges | 2009-2013 | Ministery of Research, EDF, DRIRE |
| 74. | PAMPA: Indicateurs de la Performance d'Aires Marines Protégées pour la gestion des écosystèmes côtiers, des ressources et de leurs usAges | Establish a dashboard for monitoring the performance of MPAs (Marine Protected Areas). For this, the project seeks to test and validate indicators for monitoring resources, uses and governance based on 7 French MPA. | France | Ifremer | 2008-2011 | Programme LITEAU |
| 75. | PERLE: Préparation d'échantillons d'Eaux Résiduaires pour fiabiliser l'analyse de LEgionelles | The objective is to improve the selectivity and sensitivity of existing methods of agar culture and quantitative PCR analysis of Legionella (Legionella pneumophila and Legionella spp.) In wastewater and activated sludge. Several lines of work are considered: 1. Improved pre-treatment before the physico-chemical cultivation 2. Search selective growth media 3. Application of a magnetic immuno-separation (IMS) or before culture before PCR; 4. Refining pre-treatment extraction and purification prior to PCR. These pathways will be explored individually and then coupled. Following an intra-laboratory exercise in one of the partners, the most | France | Suez environnement | 2005-2007 | PRECODD/ANR |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| | | efficient methods will be selected. They will ultimately be approved through inter-laboratory testing on various natural samples. Project certified by the competitive cluster "AXELERA". | | | | |
| 76. | PHARE: Procédé Hybride d'Adsorption et de Réaction pour le traitement de l'Eau et des effluents industriels | This is an innovative technology for water treatment. This is combining two techniques, the adsorption and oxidation, to retain organic pollutions relatively diluted and degrade them, either sequentially or continuously, by advanced oxidation. The originality of the study consists of hybridization of both techniques in a single reactor. | France | SARP Industries | 2005-2008 | PRECODD/ANR |
| 77. | TRAN SAT: Evaluation des temps de Transfert, dans la zone Non SATurée des sols, de contaminants dissous ou particulaires | Improve the prediction of the transfer of pollutants in the unsaturated zone (ZNS) soils, which are spread evenly to the soil surface or already present at industrial sites. | France | Improve the prediction of the transfer of pollutants in the unsaturated zone (ZNS) soils, which are spread evenly to the soil surface or already present at industrial sites. | 2005-2008 | PRECODD/ANR |
| 78. | TROPHIMATIQUE: New in situ miniaturised and automatic instruments for hydrological indicators | The goal of this project (called TROPHIMATIQUE) is to develop a new miniaturized and automated instrumentation to validate the hydrologic indicators proposed for the classification of water bodies in coastal DCE. Project certified by the competitive cluster "Sea Britain", French Region. | France | IFREMER Centre de Brest | 2005-2008 | PRECODD/ANR |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 79. | Wat-ER-bargain: Water environmental and resource allocation | Theoretical analysis of the effects of nonlinear agricultural water pricing on the environment (watercourse flow), the agricultural production, the farmers' benefits and on the water user association (WUA) budget balance.<br>Parameter estimation for an easy-to-use, acceptable contract between WUA and farmers.<br>Nonlinear pricing is presented as a simple double entry table. | France | IRSTEA | 2010-2012 | Noviwam (EU), Riseco (Agence Nationale de la Recherche – France): financed till 2012.<br>No funding organization yet found thereafter. |

## 4.6. List of French projects for year 3

**Table 8: List of French projects for year 3**

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 80. | Bioengineering and climatic changes: Bioengineering and climatic changes | This work takes place in the field of restoration ecology and aims to better understand the capabilities of recovery and vegetative growth of willows used in bioengineering in a context of climate change. | France | Unité Ecosystèmes Montagnards, Irstea Grenoble | 2009-2012 | CNRS |
| 81. | Biomarq'indic: Biomarkers and bioindicators complementarity to assess rivers ecological status. | The project will study biomarquers and bioindicators answers to quality levels to obtain a likely complementarity between the two tools. | France | IRSTEA | 2012-2015 | IRSTEA |
| 82. | Fallopia genus invasion | Rivers banks across France and other european countries are invaded by fallopia species (renouée du Japon). The project aims to seek effective ways of restoring endemic plant communities affected by the invasion in searching competing species resistant to allelopathic compounds generated by fallopia species. Also, the project works on species with chemical weapons against fallopia species. | France | Université de Lyon, CNRS | 2008-2010 | FEDER Fund, french water agencies |
| 83. | Gabion fishway | Fishways are used to bypass dams and other devices for migratory species. Habitually, necessary infrastructures need heavy works. With gabions, we have an easy use material to implement fishways. | France | Syndicat mixte Monts et Barrages | 2012-2013 | FEDER Fund, french water agencies |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 84. | Hydro-mimicry: Renaturation of sediments transports for streams ecological-economic reconquest. | This dynamic approach will support hydroelectric units managers to actively participate in solids transport managing while using sediments from hydroelectric units . It will allow streams local managers make infrastructures less invasive with sustainable and positive impacts on the functioning of streams dynamic evolution while controlling costs. This methodology will limit heavy works. | France | Syndicat de rivière du Gave de Pau, France | No date- No date | Syndicat de rivière du Gave de Pau, territorial collectivities, hydroelectricians |
| 85. | IMECO: Use of high-def images of earth in order to identify ecosystems along the Rhone river | Use of high-def images of earth in order to identify ecosystems along the Rhone river | France | EMGR (CEMAGREF Grenoble) | No date- No date | CNRS |
| 86. | INGEZHA: Ecological engineering of Artificial Wetlands to limit transfers of pollutants of agricultural origin. | The objective of this project is to contribute to ecological engineering artificial wetlands (ponds, planted ponds, lagoons ...) in order to better understand the relationship between the floristic diversity of these areas, features purifying communities (macrophytes, microalgae , microinvertebrate, zoobenthos, etc..) and the fate of pollutants from agriculture (ex: nitrates). | France | CEMAGREF UR HBAN | 2008-2011 | CNRS |
| 87. | Remineralization/neutralisation of drinking water: Remineralization/neutralisation of drinking water using lime milk | Remineralization/neutralisation of drinking water using lime milk | France | OIEau | 2010-2013 | Own funds |
| 88. | Pyrobio: Valorisation of sludge in a waste water treatment plant | Pyrogazeification of waste and WWTP sludge for valorisation through electrical energy production. | France | FINAXO Environnement | 2010-2012 | LIFE08 |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 89. | Settler filter for drinking trough: Settler filter for drinking trough (cows) | Drinking troughs are used to avoid cows trampling on the bank. Drinking troughs are feeded by gravity water (rivers, creeks,...) full in colloids and suspended solids. Settlers filters has been designed and experimented to treat raw water. Thes filters include a fine grid (1 mm in diameter) coupled to a settler. | France | Syndicat mixte Monts et Barrages, CEN Limousin , France | 2012-2013 | Agence de l'Eau Loire Bretagne, Région Limousin, France |
| 90. | Wired trees | Fallen trees in the river are fixed with cables and emerged parts cutted to minimize jams. These trees are located in or near pits along the shore. They bring to the fish fauna area caches, food and support to some species for reproduction. For some fish, it is a nesting support. | France | Syndicat mixte du Clain Sud, France | 2008-2012 | Agence de l'Eau Loire Bretagne, Conseil Général du Poitou, Syndicat mixte du Clain Sud, France |

## 4.7. List of Polish projects for year 1

**Table 9: List of Polish projects year 1**

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 91. | EHREK: Ecohydrological rehabilitation of recreational reservoirs ”Arturówek” as a model approach to rehabilitation of urban reservoirs | Ecohydrologic rehabilitation of recreational reservoirs “Arturówek” (Łódź) as a model approach to rehabilitation of urban reservoirs. | Poland | Lodz University (Uniwersytet Łódzki), Poland | 2010-2014 | European Commission, National Fund for Environment |
| 92. | EKOROB: EKOROB: Ecotones for reducing diffusion pollution (EKOtony dla Redukcji zanieczyszczeń Obszarowych) | Ecotones for reducing diffusion pollution | Poland | Regional Water Management in Warsaw (RZGW w Warszawie), Poland | 2010-2014 | National Fund for Environmental Protection and Wat |
| 93. | KLIMAT: The issue of climate change is one of the key environmental, social and economic, and political consequences and. The influence of climatic conditions on the economic life of countries is already widely recognized and given to them a lot of attention both in the world and the governments of the individual states. Due to | The impact of climate change on environment, economy and society (changes, effects and ways to reduce, applications for science, engineering practice and economic planning)/ Wpływ zmian klimatu na środowisko, gospodarkę i społeczeństwo (zmiany, skutki i s | Poland | Ministry of Regional Dewelopment, Poland | 2008-2014 | European Funds - Operational Programme Innovative |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| | the seriousness of the problem, it was necessary to develop a strategy to minimize potential adverse effects which may result in processes of global warming as a regional scale and local. | | | | | |
| 94. | Flood protection | Protection against flooding - a preliminary flood risk assessment | Poland | National Water Management Authority (KZGW), Poland | 2010-Ongoing | own funds |
| 95. | PROJEKT PL 0494: Terms of catchment area management and protection of diversity area for sustainable development valuable as an example catchment Black Orava which is part of the Danube border” | Conditions of river basin and biodiversity protection management for assurance of the sustainable development of the nature valuable areas, based on the example of the Czarna Orawa basin belonging to the transboundary Danube basin | Poland | Regional Office of Environmental Protection in Kraków (RZGW), Poland | 2009-2011 | EEA(European Economic Area), Financial Mechanism |
| 96. | ZiZOZap: Management in Reservoir Catchment and Socio-economic Effects as Elements of Model and Integrated System Supporting Management of Water Reservoir (ZiZOZap) | Management in Reservoir Catchment and Socio-economic Effects as Elements of Model and Integrated System Supporting Management of Water Reservoir | Poland | University of Silesia, Poland | 2010-2014 | European Funds - Operational Programme Innovative |

## 4.8. List of Polish projects for year 2

**Table 10: List of Polish projects for Year 2**

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 97. | AMBER: to estimate the inflow of groundwaters into the marine ecosystem of Baltic sea and to predict the changes it will put on the living organisms | In 2009 on the oceanographic institution of Gdansk University on hell a realization of a priject has started. The main goal of the porject is to estimate the flow of pollutions and biogenic substances to groundwater and through them to the baltic sea- its efect on the ecosystems and the sanitar quality of waters. Research os focust on the costal area. Pollution load that travels with two main rivers wisła and Odra is regularly monitored, nevertheless there are no data regarding pollution concentrations. | Poland | Marine Station of Oceanographic department of Gdansk University /Stacja Morska Instytutu Oceanografii | 2009-No date | Baltic sea region programme 2007-2013 |
| 98. | Chodzież: Wastewater Management in City and council of Chodzież City and community | Wastewater management | Poland | Miejskie Wodociągi i Kanalizacja Spółka z o.o. | 2007-2015 | Program Infrastruktura i Środowisko |
| 99. | COCONET: Towards COast to COast NETworks of marine protected areas (from the shore to the high and deep sea), coupled with sea-based wind energy potential (CoCoNET) | Towards COast to COast NETworks of marine protected areas ( from the shore to the high and deep sea), coupled with sea-based wind energy potential. | Poland | not specified | 2013-No date | LIFE07 |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 100. | EKO-COMP: Effect of fertilizing soil with improvers "EKO-COMP" | Effect of fertilizing soil with improvers "EKO-COMP" and willow mineral fertilizer on sandy soil , on the content of nutrients in the soil, ground water level, biomass yield, its quality and the emission of pollutants in the combustion process of biomass | Poland | Koszalin University of Technology, Poland | 2011-No date | own funds |
| 101. | GEOSAP: Geocomposites absorbing water | Geocomposites absorbing water - innovative technologies to support vegetation | Poland | Wrocław University of Environmental and Life Sciences, Poland | 2009-2014 | European Funds - Operational Programme Innovative |
| 102. | GNIEZNO: Recultivation of lakes of Jelonek and winiary with the PROTE phosphorus method | Lake recult. in Gniezno - Recultivation of Jelonek and Winiary lakes in Gniezno by inactivation of phosphorus in bottom sediments | Poland | Gniezno Town, Poland | 2009-2010 | LIFE+, LIFE07 ENV/PL/000605 |
| 103. | GREEN : Preservation and improvement of the water source on the planet | The global rivers environmental education network (GREEN) – an international programme of ecological education concerning the school based study of rivier water quality - report on rezlization in Poland during programme cycle 2003/2005. It involves preservation and improvement of the water source on the planet, on which the existence of all life forms depends. GREEN encourages ecological education, training, communication, collaboration on a global level. Education programs are created to enhearten ethics, sensitivity and respect towards Nature, this contributing to a world more peaceful and untroubled. Initially the idea was born in Michigan in 1984. | Poland | National Foundation for Environmental Protection,(Narodowa Fundacja Ochrony Środowiska) NFOŚ, Poland | 1984-Ongoing | National Inspection for Environmental Protection ( |
| 104. | INORGANIC WASTE: Inorganic chemical industry wastes - Technology foresight | The goal of the project is to identify and estimate needs, possibilities and threats connected with the inorganic industry development in Poland until 2030 in context of following it waste. That aspect could appear to be decisive for the | Poland | FERTILIZERS RESEARCH INSTITUTE Inorganic Chemistry Division "IChN" in Gliwice | 2010-2011 | European Funds - Operational Programme Innovative |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| | | development of this industrial brand and even for maintaining all existing product assortments produced by the industry. The subjects of considerations are: waste economy analysis, new and existing research directions providing to economically friendly technologies which generate less and less difficult economic exploitable waste. The analysis results of the previous state and the most possible scenarios of the waste economy of inorganic industry generated under different marginal conditions will be donated to decision-makers in government and economic administration as well as to all interested. The results should serve to preparation appropriate preceding acts in the economic area and should be used to creating and subsequently to achievement the scientific and innovative politics in the researched area. | | | | |
| 105. | INTERGEO: Attempt to create a hydrogeological dictionary | A company that makes projects about for example a hydrogeological dictionary | Poland | Intergeo company | 1997-Completed | http://www.intergeo.com.pl/realizacje+intergeo.php |
| 106. | KALINA: Purification and revitalization of Kalina aquifer | Purification and revitalization of Kalina aquifer | Poland | not specified | 2013-2015 | Operational program of infrastructure and environment, as a request of the Katowice Inspectroate od environemntal protection |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 107. | Arrangements of wastewater management in Biała Nizna and Stróże. Uporządkowanie gospodarki ściekowej w miejscowościach Biała Niżna i Stróże | The main purpose of this project is to increase the quality of surface waters through decresasing the quantity of untreated sludge dumps to streams and rivers another aspect is the major protection of surface waters. This project will also influesnce the water supply lever in Grybów-stróze aglomeration. | Poland | Water Supply and Sewerage Unit/Zakład Wodociągów i Kanalizacji w Grybowie | 2010-2013 | Funded from the European Cohesion Fund projects under the Operational Programme Infrastructure and Environment 2007 – 2013, |
| 108. | Centrum Naukowo-Dydaktyczne Wydziału Budownictwa i Inżynierii Środowiska – „Centrum Wodne" SGGW | the aim of the project is the realization of a modern teaching and research object of the Faculty of Engineering and Environmental SGGW in Warsaw, for improving the quality of education in the field of construction, engineering and development environment, and undertake new tasks of teaching, learning and research carried out on highest level of European universities | Poland | SGGW | 2008-2010 | Operational Programme Innovative Management 2007-2013 |
| 109. | Methods of elimination of trees in wetlands to protect the precious flore. | Methodology showing the administrative and environmentally friendly way of treas protection on a special areas | Poland | Technical University of Bialystok | 2010-2012 | research project of the Scientific Research Comitee/ projekt badawczy Komitetu Badań Naukowych realizowanych w Politechnice Białostockiej (lub innej Jednostce) |
| 110. | Development of biodegradable biofilters for remediation of pollution resulting from nitrogen and phosphorus application on agricultural area | Development of biodegradable biofilters for remediation of pollution resulting from nitrogen and phosphorus application on agricultural area | Poland | University of Łódź | 2009-2012 | LIFE |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 111. | Revitalization of Elblaski channal on specific areas like Drużno Lake | Purpose of the project: To enhance the sailing conditions , safety and funtions that the chanal serves, as a result it will increase the tourism in this area. | Poland | RZGW Gdańsk | 2008-2015 | Operational Programme Innovative Management 2007-2013 |
| 112. | Retention wall built with a special concrete site: SCC preventing waste dissemination | Implementation of innovative technology building of modular retaining wall with concrete SCC | Poland | ZIBET Sp. z o.o., POLAND | 2010-2012 | European Funds - Operational Programme Innovative |
| 113. | Macrophites in surface waters | The key to the determination of macrophytes for needs of assessment of environmental surface water | Poland | The Institute of Environmental Protection - National Research Institute (IOŚ), Poland | 2010-2010 | National Fund for Environmental Protection and Wat |
| 114. | Evaluation of changes of groundwater resources in small water reservoirs regions | Determination of the growth of groundwater resources in the environment of small water reservoirs is essential for rational water management. The main task of this paper is to identify methods for the analysis of interactions between a number of factors and a methodology to evaluate the impact of small water reservoirs for hydro-geological conditions of the surrounding areas in terms of changes in groundwater resources. The complexity of the problems that makes the most effective in this case, research tools are based on the method of numerical models of underground water filtration field. | Poland | The Polish Geological Institute - National Research Institute | 2009-2009 | National Fund for Environmental Protection and Wat |
| 115. | Methodology for determining groundwater reservoirs for need of planning and water management in river basins | Methodology for determining groundwater reservoirs for need of planning and water management in river basins | Poland | Ministry for Environment, National Water Management Authority, The Polish Geological Institute - Nat | 2009-2009 | National Fund for Environmental Protection and Wat |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 116. | Development and implementation of GIS analyzer for need of water monitoring optimizing | 'The pilot application (Analyzer) allows diagnosis of the efficiency of the existing monitoring network design and support of new network elements. Having the following features: *- distinction the river network elements, | Poland | Warsaw University of Technology, Faculty of Environmental Engineering, Poland | 2009-2009 | National Inspection for Environmental Protection ( |
| 117. | Develop methodology for the study and classification of biological elements in the procedure for assessing the ecological status of the Polish zone of transitional and coastal waters of the Baltic Sea. | Preparation guides for field studies and laboratory analysis of phytoplankton, other aquatic flora and benthic macro invertebrates and developed a program of surveillance monitoring and operational for the years 2010 - 2015. | Poland | National Foundation for Environmental Protection,(Narodowa Fundacja Ochrony Środowiska) NFOŚ, Poland | 2008-2015 | National Inspection for Environmental Protection ( |
| 118. | Developing methodology for assessing ecological potential of surface waters flowing | Develop methods for assessing ecological potential of surface water flowing .2. Development of guidelines for carrying out monitoring and assessment of potential ecological heavily modified and artificial bodies of surface water flowing | Poland | Consortium:Instytut Meteorologii i Gospodarki Wodnej, EKOSOFT ul.Podleśna 61, 01-673, POland | 2010-2011 | National Inspection for Environmental Protection ( |
| 119. | Development of genetic methodology of evaluation of the size of invariant flow (based on the IFIM method) and its use for selected surface watercourses at mountain catchment | The aim of the project is to develop scientific method of estimating flow based on the indivisibility of cause - and effect relationship between reduction in the volume of water flow in the surface stream | Poland | Institute of Meteorology and Water Management - National Research Institute | 2003-2005 | State Committee for Scientific Research, Poland |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 120. | NORWET: Innovative Solutions for Wastewater Management in Rural Areas | The aim of the project is to reduce eutrophication of surface waters in the surveyed catchments (Borucinka and Grabia) through analysis and presentation of innovative solutions concerning sewage sludge management for rural areas. This purpose will be achieved through determination of innovative technologies for sewage treatment and sludge management, estimation of natural environment potential in limitation of pollution discharge in the catchment and through elaborating solutions that integrate technological and natural potentials. An important issue in testing new solutions will be the possibility for energy recovery and closure of water and material flow in small-scale systems | Poland | Gdańsk University Pomeranian Center for Environmental Research & Technology POMCERT,<br><br>Pomeranian Sci | 2008-2011 | Norweski Mechanizm Finansowy |
| 121. | POLIMAT : Technologies of water reclaiming | POLIMAT: Methods used in the reclaiming of water reservoirs are costly and ineffective. Characterized by high innovation and efficiency, with no adverse effects on the environment. Our project provides a cheap and simple solution to implement. It is: *1. overbotto | Poland | POLIMAT EKO Sp. z o.o., Poland | 2011-No date | National Fund for Environmental Protection and Wat |
| 122. | ROVAPO - technology "zero discharge" | ROVAPO: The PP-EKO company is an environmental engineering enterprise providing solutions in sewage and water treatment. It has developed an original “zero-discharge” technology called ROVAPO, which allows for the recovery of all water from sewage.<br>Depending on the industry, the system allows to:<br>• obtain water with a conductivity of <10 mS (de-mineralised water), e.g. for galvanic industry;<br>• obtain deionised water of pharmaceutical quality;<br>• obtain water that can be reused in production processes | Poland | PP-EKO Sp. z o.o. (Ltd.), Poland | 2005-Ongoing | National Fund for Environmental Protection and Wat |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 123. | SEDIMENTS: Research data of water sediments | Sediments website presents research data of water sediments of rivers and lakes within the subsystem performed SEM - Monitoring the quality of inland surface waters. Service provides current data from the production database for sediments. It consists of | Poland | National Inspection for Environmental Protection (GIOŚ), Poland | 2010-2012 | National Fund for Environmental Protection and Wat |
| 124. | SMALL HYDRO PLANTS: The development of eco-innovation in Wielkopolska region. The energy or surface waters. | The purpose of this project is to enable and make it easier to focus on gaining energy from small plants using surface waters as a source of energy. | Poland | Small electric powerplants /Małe Elektrownie Wodne Władysław Malicki, Kiekrz | No date-2009 | EFS, Kapitał Ludzki |
| 125. | SSI: How to engage the public in the implementation of the Water Framework Directive in Poland? - Guidebook | SSI: Farm's rapid identification system for assessment of water quality in nitrate vulnerable zones and regions of intensive agricultural production (SSI) | Poland | National Foundation for Environmental Protection (NFOŚ), Poland | 2004-2011 | WWF Polska |
| 126. | SYMBIO -protection of water supplies against sudden contamination | SYMBIO: SYMBIO Biomonitoring System is the only fully automatized and maintenance-free system of on-line water monitoring available on the market. It increases water safety in water toxicity terms. | Poland | PROTE Technologie dla Środowiska Sp. z o.o., Poznań, Poland | 2010-Ongoing | own funds |
| 127. | TRIAS OPOLSKI: protection of the groundwater aquifers for Opole, Prószków and Tarnów Opolski aglomerations- II stage. | Actually only little information is available about the real amount of waste affected within the informal waste collection. Based on a quantitative estimation the financial and environmental consequences of informal waste collection, which are nearly unknown currently, will be investigated. Additionally the social background of the waste collectors has to be analysed. With a view to sustainability criteria (ecological, economical and social) possible solutions for a formalisation will be evaluated. | Poland | Water Supply and Sewerage Unit in Opole | 2007-2013 | Funded from the European Cohesion Fund projects under the Operational Programme Infrastructure and Environment |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 128. | Zulawy: Comprehensive flood protection Żuławy Region | Purpose - reconstruction and modernization of the flood protection system in Żuławy, human and economic safety regarding degradation of nature and halting peripheralization Żuławy area. The result - improving flood safety, livelihood and property security of people, improving the safety of doing business, increasing flood barriers, securing the smooth functioning of odwodnieniowego by the occurrence of medium and high water and to maintain adequate depth in the river and the estuary of the Vistula. | Poland | RZGW Gdańsk | 2010-2030 | Fundusz Spójności, Program Operacyjny „Infrastruktura i Środowisko” |
| 129. | Development of turism | The main purpose of this project focuses on electrifiying the watergate. The investment is the electrification of Gdansk head lock. Now lock mechanism is operated by hand-operated | Poland | RZGW Gdańsk | 2011-2012 | Programu Operacyjnego Innowacyjna Gospodarka 2007 – 2013 |

## 4.9. List of polish projects for year 3

**Table 11 : List of Polish projects for Year 3**

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 130. | CEZAMAT | The project is a unique research center which will allow to carry on interdisciplinary research on future-oriented materials and technologies. The Center will be equipped with advanced technological line and platforms of design, simulation, diagnosis and characterization. CEZAMAT will offer the access to ultramodern tools, not only the consortium members but also other leading Polish and foreign researchers. | POLAND | The Warsaw University of Technology. | 2011-Ongoing | Innowacyjna Gospodarka - A polish programme |
| 131. | CROP PROTECTION: Polish strains of Trichoderma in crop protection and management of organic waste. | Objectives of the project:<br>• Production of biopreparations containing groups selected, Polish strains of fungi of the genus Trichoderma to a comprehensive and integrated use of organic vegetable crops. Biopharmaceuticals are to be an alternative to the chemicals used to improve the growth and health of plants.<br>• Development of technology for the production of biologicals using waste and the use of developing technologies for recycling and improve the health status of organic waste from the horticultural industry and food processing. | Poland | Institute of Horticulture<br>ul. Constitution of May 3, third<br>96-100 Skierniewice<br>Tel: 046 8332211<br>Fax: 046 8333186<br>E-mail: iwarz@inhort.pl<br>http://www.inhort.pl | 2010-2013 | Grant from the Ministry of Science and Higher Education. |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 132. | INCAS: Innovative carbon sources for supporting denitrification in urban wastewater treatment plants. | The project was divided into two main parts:<br>Kinetic studies (task 1)<br>The purpose of the first task is to assess the usefulness of the waste products from the production of alcohol to intensify the process of biological denitrification in communal wastewater treatment plants based on the method of activated sludge (the main and the purification of effluents from sludge treatment processes).<br>Microbiological testing (task 2)<br>The second task is to assess the impact of the dose of these products on the biocenosis sludge and thus the capacity of wastewater treatment.<br>Part of the research will be carried out in three stages, related to the scale of the work under way, such as laboratory scale, pilot scale and technical scale. | Poland | Technical University of Gdansk, Poland | 2010-2013 | European Regional Development Fund (ERDF) , Innovative Economy |
| 133. | The risks associated with a water deficit | This publication which is a short work of the author, entitled "Conflicts over water" is a discussion of the causes, development, conflicts over water and the problems related to the prevention of the formation and removal of existing. Changes in the regime of rivers, lakes and reservoirs that may occur as a result of projected climate change (or climate variability) will lead to a significant risk of aquatic ecosystems or in the case of changes that are beneficial to the ecosystems lead to their development. | POLAND | Wydawnictwo Kurpisz S.A., Poznan, Poland | No date-2008 | Regional Fund of Environmental Protection and Water Management in Poznan, Poland |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 134. | KPH Neutrolizer | Neutralizer of acids KPH NavoTech is used to neutralize acids in waste water and are designed to be installed in chemical laboratories or on the approaches to sanitation facilities where there is a risk of spillage of mineral acids, such as accumulators, laboratories, etc. The proposed system also serves as a condensate neutralizer. Neutralizer does not apply to sewage and rainwater. | Poland | NAVOTECH - INŻYNIERIA ŚRODOWISKA | No date-No date | own sources |
| 135. | Construction of water reservoir Jutrosin | Building of retention reservoir Jutrosin | Poland | Wielkopolski Zarząd Malioracji i Urządzeń Wodnych w Poznaniu, Poland | 2010-2011 | Regional Fund of Environmental Protection and Water Management in Poznan, Poland, European Regional Development Fund (ERDF) |
| 136. | Prevention the effects of stormwater runoff in mountainous areas. Increasing the retention and maintenance of creeks and related infrastructure in good condition | The aim of the project is to slow down outflow of water from mountain areas by increasing the retention basin. This can minimize the negative effects of natural phenomena such as: floods, destructive activities of flood and drought in the mountainous forest areas.<br><br>The project planned activities that increase retention of mountain areas (including the construction of reservoirs, restoration of streams and wetlands), to protect the slopes from excessive runoff and ensure maintaining the condition of the existing hydro infrastructure. The investment projects will include complex combining environmental friendly natural and technical methods. | Poland | Dyrekcja Generalna Lasów Państwowych, Poland | 2007-2013 | The Operational Programme Infrastructure and Environment (OPI&E) |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 137. | Map of groundwater sensitivity to pollution in Poland | The reason to do this kind of map was dictated by the need to complete certain provisions of the Environmental Protection Law and the Water Law and the adaptation of national practice for the protection of groundwater to the requirements of the European Union. The project was implemented in close cooperation with many research centers. | Poland | ARCADIS Sp. z o.o., POland | 2007-2009 | Ministry of the Environment, Poland |
| 138. | RestTorfWys: Restitution of of the bog vegetation on degraded high peat bogs of the Pomorskie Voivodeship | The strategic objective of the project was to stop the degradation of the high bog habitats after cessation of industrial exploitation of peat and initiate regeneration of the vegetation cover of a peatland<br>.<br>The main operational objectives of the project are:<br>a ground water level and increasing the peat surface moisture,<br>former settlement area of voids by peat forming species introduced,<br>c improve the physical characteristics of the substrate<br>peat in sufficient detail to enable the development of introduced species and spontaneously materialize and maintain a high peat other species,<br>d Follow-active protection on the surface voids of regenerating Sphagnum species. | Poland | Fundacja Rozwoju Uniwersytetu Gdańskiego | 29.05.2009-28.02.2012 | National Fund for Environmental Protection and Water Management (NFOŚiGW),Poland, Operational Programme Infrastructure and Environment Prior V, Act. 5.1. |
| 139. | SOLARFILTR: mobile water treatment filter battery-powered photovoltaic | "SOLARFILTR - mobile water treatment filter battery-powered photovoltaic"/ „SOLARFILTR - mobilny filtr uzdatniania wody zasilany baterią fotowoltaiczną" | Poland | Military Institute of Enggineer technology, Wroclaw, PL Technical institute. Wrocław | 2010-2012 | project was carried out within the framework of scientific work by the science as a development project |

## 4.10. List of Romanian projects for year 1

**Tableau 12: List of Romanian projects year 1**

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 140. | A-PORT: Monitoring the satisfaction of citizen for water supply and wastewater services. | Monitoring the satisfaction of citizen for water supply and wastewater services. | Romania | SIVECO Romania | 2007-2010 | CNMP - National Centre for Program Management (Min |
| 141. | CITYPROTECT: Multimedia platform for flood risk areas real-time monitoring, simulation and solution generation for optimal usage of water flow capacity regulation equipments arround cities | a project which contributes to national effort for flood risk management. This project will elaborate an intelligent decisional support solution which will assess in real time the environmental parameters correlated with infrastructure technical state for flood risk management, based on advanced technologies such as: automated systems of field data acquisition, radio or SM/GPRS communication, Relational databased System, integrated analysis mediums of historical data massifs – Business Intelligence, modeling and prognosis technologies, GIS systems, mobile access devices for efficiently coordination of the operative activities. Complex S&T monitoring and controlling services will be provided on this technological platform. The goal of the project is vulnerability reduction and prevention of floods in urban areas. | Romania | INSTITUTUL DE TEHNICA DE CALCUL ITC SA DIN BUCURESTI | 2006-2008 | CEEX |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 142. | ECAVAS: Vulnerability assessment and mapping of groundwater resources to ensure their sustainable use | Assessment and cartography of groundwater resource vulnerability in order to ensure a long lasting use of the resource. | Romania | Agentia Spatiala Romana | 2007-2010 | CNMP Programul 4 – Parteneriate in domeniile prior |
| 143. | FENPEST: Promotion of photo-induced based green technologies for water treatment with pesticides content | Treating pesticides in water with solar energy. | Romania | National Research and Development Institute for Industrial Ecology-INCD ECOIND | 2008-2011 | CNMP, Executive Unit for Financing Higher Educatio |
| 144. | MTPA12: Complex, high power and self supporting installation for evacuating the residual water from calamity zone affected by the floods | The project proposal is intended to provide a complex installation with high capacity for water drainage in case of flood disaster. Given the fact that in case of a natural disaster some public utilities (eg electricity supply network)may become unavailable, the project proposal envisages that the plant is available in a system of constraints as less numerous, autonomous and small size so that it can be moved and operated as soon as possible. Although the idea for the project proposal originated in a conjunctural situation, suggested by the event occurred in May 2005 in Timis county. The plant can be used in applications designed, programmed, seasonal or short-term, in various fields of social activity: irrigation, land reclamation, etc.. In essence, the project proposal refers to achieving a high | Romania | INSTITUTUL NATIONAL DE CERCETARE DEZVOLTARE TURBOMOTOARE, COMOTI BUCURESTI | 2005-2008 | CEEX |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| | | capacity plants, about 12,000 m3 / h and a delivery head of 12 m water column, by siphoning water from flooded areas in proximity of riverbed specially designed channels. The plant will have a power source that will lead a powerplant via a gear pump equipment. The entire assembly is mounted on a mobile plaform, allowing rapid movement on the location of intervention. | | | | |
| 145. | Automatic monitoring system on-line environmental parameters of river Colentina | Automatic monitoring system on-line environmental parameters of river Colentina | Romania | INCD-ECOIND | No date-No date | National Authority for Scientific Research |
| 146. | Hydrology STUDIES USING Isotope traces | Develop methodologies to investigate groundwater on isotopic techniques, with practical application from the field of isotope hydrology | Romania | Institutul Naţional de Cercetare-Dezvoltare pentru Tehnologii Criogenice şi Izotopice ICSI Rm. Vâlce | 2007-No date | CEEX |
| 147. | Installation for determining the strategic reserve of water in reservoirs by means of telematic | Installation for determining the strategic reserve of water in reservoirs by means of telematic | Romania | SC Filiala Institutul de Cercetari si Modernizari Energetice - Icemenerg SA | 2005-2008 | CEEX |
| 148. | Methodology for assessing the transformations suffered by the metal ion species in river sediments | Methodology for assessing the transformations suffered by the metal ion species in river sediments - | Romania | INCD ECOIND | 2006-2008 | National Authority for Scientific Research |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 149. | NPTT: After-treatment technology for urban wastewater sludge | Achieving a composting technology, short time obtained from the waste treatment and waste water treatment plants of a product with high potential for fertilization of agricultural land; Transformation of difficult waste disposed of station treatment plants into a valuable, marketable product, that will help to increase the benefit of water-channel operator; recovery and valorisation of other types of waste (plant ones); end product - compost as fertilizer. | Romania | National Research and Development Institute for Industrial Ecology-INCD ECOIND | 2007-2010 | CNMP, Executive Unit for Financing Higher Educatio |

## 4.11. List of Romanian projects for year 2

**Tableau 13: List of Romanian projects year 2**

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 150. | AGRICOLNAM: Ways of exploitation of biodegradable waste sludges (from the river basins and the wastewater treatment plants) to reduce pollution | The objective was to identify by analysis and research of biodegradable waste recovery methods such as residue reservoirs (storage pools) and sludge from urban wastewater treatment plants.<br>The objective was to identify by analysis and research of biodegradable waste recovery methods such as residue reservoirs (storage pools) and sludge from urban wastewater treatment plants.<br>The end result of the project had two main directions: exploitation in agriculture of residue sludge from the ponds / lakes and / or urban wastewater treatment plants and / or energy recovery in biogas plants.<br>Through the 3 stages of the research were obtained:<br>• 1 model of recovery type of waste sludge from sewage plants and waste from storage pools by using as a substrate for biological material such as fruit trees, corn and lettuce;<br>• 1 way analysis of greenhouse gas emissions from biodegradable waste in order to establish an energy recovery solution.<br>• 3 working procedures for the determination of physico-chemical characteristics and removal of biodegradable waste.<br>• 1 documentation containing input data to perform a database of different types of biodegradable waste (sludge from wastewater treatment plants, waste from storage tanks, etc.). | Romania | Politehnica University of Bucharest - Science and Material Engineering Faculty - Center for Research | 2008-2011 | CNMP |
| 151. | AMAP: Architectures of advanced materials with applications in the treatment of polluted water | One of the most spread pollutants in the surface and deep waters are the nitrate and nitrite ions. High levels of nitrate/nitrites in drinking water increase the incidence of serious diseases of human beings such as cancer, and kidney diseases. The abatement of nitrate and nitrites in polluted waters is of great importance, the admitted level in the drinking water being 50 mg/L. One of the proposed | Romania | "Ilie Murgulescu" Institute of Fpysical Chemistry | 2008-2011 | CNMP |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| | | solution in this project was the catalytic reduction of nitrate ions on bimetallic nanoparticles having a controlled morphology, structure and chemical state. By this strategy the following practical problems were intended to be solved: (I) increase in the catalytic activity (conversion), (II) in the selectivity to N2 and (III) in the stability in time. At present, the catalysts exhibit low conversions and high selectivity for NH3 formation (the accepted limit is up to 0.5 mg/L) and high deactivation rate. The catalyst development strategy took into account that the catalytic reduction of NO3-/NO2- to N2 is a structure sensitive reaction involving the making of N-N bond. As a consequence, the catalytic active phase (supported metal/bimetal) must have optimum, well-defined morphology. In other words, the size as well the structure (core-shell or alloy) of the metal particles should be controlled so to direct the reaction to the selective formation of N2 instead of NH3. Another important fact that was not taken enough under consideration is the support porosity. An ideal pore structure assumes facile diffusion of reactants at active sites and products from internal pores in reaction medium. So, an ideal catalytic support has to present an ordered porosity with an average pores dimension of nanometers range. The advantages of this kind of support materials are: (I) high specific surface area values that determine an optimal dispersion of catalytic active phase and (II) facile diffusion through the pores of reaction species. The rigorous control of morphology of both metallic species and support allows the design of new advanced material architectures, leading hopefully to the significant improvement of catalytic performances. The main objectives of the proposal are related to: (I) the implementation and optimization of modern green techniques for synthesis of nanomaterials (oxides and metals) with a controlled morphology (ordered pores | | | | |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| | | structure, particle sizes, geometrical shape) and (II) the utilization of these materials in catalytic processes for reducing of environmental pollution. The practical proposed solutions are: (i) the use of reverse microemulsions technique to produce alumina-based nanooxides with controlled morphology, (II) the preparation of mono/bimetallic nanoparticles (Pt-M, Pd-M, Rh-M; M=Cu, Ag) with controlled morphology by polyol method, (III) the obtaining ordered architectures with high catalytic activity and selectivity by assembling the ordered mesoporous structures with metallic nanoparticles, (IV) catalytic tests for selective reduction of NO3- and NO2- to nitrogen with hydrogen and (V) the possibility to investigate in deepth the correlation between catalytic performances and morphology (specific surface are, average pores diameter and particle size) in order to develop viable strategies for synthesizing catalytic materials with better performances. | | | | |
| 152. | APIFLOT: Theoretical and experimental researches in order to design an advanced treatment technology (flotation) for heavily loaded wastewaters | The main objective of the project was the designing of a wastewater treatment equipment with high efficiency, very compact, which can solve the problem of heavily loaded wastewaters. It was conceived a dissolved air flotation unit. We wanted to reach the discharge parameters below the limits set by current regulations (NTPA 001), in an attempt to keep a clean environment.<br>Specific objectives of the project were:<br>- Literature study to assess the current situation and the latest developments in the field;<br>- Dissolved air flotation unit design that can be transported on the trailer;<br>- Developing an experimental laboratory facility for complex tests to be performed and to certify the proposed technology;<br>- Realization of experimental tests. | Romania | SC DFR Systems SRL | 2009-2011 | Sectoral Operational Programme“INCREASE OF ECONOMIC COMPETITIVENESS“ |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 153. | AQUATHM: Drinking water quality and citizens safety related to carcinogenic substances (THM) | Complex program for ensuring the water quality and consumers' safety in exposure to carcinogens (thm) in drinking water, In order to reduce the negative impact generated by the presence of trihalomethanes (THM) in drinking water, the project addresses integrated aspects of water quality and consumers' safety, proposing a comprehensive program to ensure water quality, with impact upon the quality of life, the project study area being the Transylvanian central area (the counties of Cluj, Mures and Salaj). In order to achieve the project's objectives, the control of exposure to THMs was performed, as well as medical surveillance of a target population group and appropriate strategies to reduce exposure to THMs and health monitoring were developed. | Romania | Environmental Health Center Cluj Napoca | 2007-2010 | CNMP |
| 154. | BIOENZINIT: "biosensors based on covalentyly immobilized on polymers enzymes for the monitoring of nitrates and nitrites from waters for human consumption" | The coating of different electrode materials (Pt, vitreous carbon, planar imprinted electrodes) with polypyrrole films was achieved by various methods. Both electrochemical processes were favored by low pH values. The influence of various parameters (electrolyte, electrode material and pH) on the reduction/oxidation electrochemical processes was studied by cyclic voltametry, targeting the establishment of optimal experimental conditions.<br>The results show that the laboratory technologies may be used for the entrapment of nitrate reductase in polypyrrole films coated on the planar imprinted electrodes surface, for the characterization of the new obtained biosensors and for their testing in various matrices (water for human consumption, environment samples, foods and drugs) | Romania | The National Institute for Research & Development in Chemistry and Petrochemistry | 2008-2011 | CNMP |
| 155. | ERPISA: the assessment and remediation of the groundwater historical pollution through non- | Direct quantifiable results:<br>• a coherent and rigorous characterization and assessment system of groundwater quality;<br>• define the parameters that determine vulnerability to pollution of groundwater resources; | Romania | Technical University of Civil Engineering Bucharest | 2005-2008 | CEEX |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| | conventional technologies | • establish parametres, ranking their importance, needed to characterize polluted aquifer layers: hydrogeological, hydraulic, chemical, biological;<br>• establish feasibility criteria to define levels and techniques of remediation;<br>• define the criteria necessary in selecting and sizing a local system of addressing groundwater quality to reduce chemical consumption by using modern new methods, of biotechnology and bioremediation, of natural attenuation of hazardous chemical compounds concentrations present in the groundwater; | | | | |
| 156. | GISHIDRO: Integrated GIS platform for analysis, design, simulation and optimisation of water suply networks | Creation and development of an integrated GIS platform allowing for the analysis, design, simulation and optimisation of water suply networks | Romania | TECHNICAL UNIVERSITY "GHEORGHE ASACHI" OF IAŞI | 2006-2008 | CEEX |
| 157. | HIBROX: Biotechnological hybrid process for wastewater with a higher content of ammonium | There were constructed experimental models for conducting experiments of treatment for the wastewater streams with high content of ammonium, such those at urban sludge from dehydrating of anaerobically fermented ones (experimental model for the part-SHARON nitritificare, experimental model for the anaerobic oxidation of the ammonium-ANAMMOX). It was designed and developed a mathematical model of SHARON process kinetics by considering two substrata: ammonium and nitrite and two types of microorganisms that coexist in the reactor, microorganisms that oxidize ammonium, Nitrosomonas type, and microorganisms that oxidize nitrite, Nitrobacter type. | Romania | National Research and Development Institute for Industrial Ecology-INCD ECOIND | 2008-2011 | CNMP - PNCDI II |
| 158. | IDEI: "combined processes of advanced treatment of waste | Project proposes the study of advanced treatment processes for efficient elimination of persistent organic pollutants in wastewater and for the increase of effluents' | Romania | "Gheorghe Asachi" Techical Universit of Iasi, | 2009-2011 | PN II |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| | water for the discharge of persistant organic pollutants and improvement of waste water biodegradability " | biodegradability. In this way, one can combine different advanced treatment processes before or after aerobic biological treatment (depending on the wastewater matrix) in order to increase the treatment degree and the number of applications for the recirculation of municipal and industrial effluents. | | | | |
| 159. | IDMB: quantifying the structural evolution of large dams by numerical and experimental investigations | Monitoring of barrages behavior is influenced by the existence of appropriate devices installed in the barrag body and / or location and the collection and interpretation of data timely and periodically. Monitoring systems can be supplemented with mobile laboratories to perform specific type measurements. In pursuit of structural behavior under static and dynamic operation of hydrotechnical construction is efficient use of hybrid models (real structure - mathematical model) which, by postcalcule allow calculation model calibration and gathering information for his analysis or general use. | Romania | Technical University of Civil Engineering Bucharest | 2005-2008 | CEEX (national program) |
| 160. | MEDESTRO: Complex detection system for hormonal drugs and xeoestrogenic compounds at nanoscale range, in water sources | The aim of the project is to put in place/create a new method, allowing for detection of small concentrations of hormonal oestrogene or xeoestrogenic substances, and later to suggest treatment methods | Romania | UNIVERSITATEA BABES-BOLYAI DIN CLUJ-NAPOCA | 2006-2008 | CEEX |
| 161. | PIMBEMOPA: Molecularly imprinted polymers as supports for the building of enzymatic biosensors for the monitoring of some pollutants in waters | The project researched the obtaining of electrochemical enzymatic sensors. The basic idea consists in the covalent immobilization of enzymes on polymer molecularly imprinted membranes, deposited on the electrode of the electrochemical sensor. In order to enhance the sensitivity and the sensibility of the sensor, had been used molecularly imprinted membranes, because these, having a molecular recognition of the pollutant with which they have been imprinted, assures at the membrane surface, in the enzyme vicinity, an increased concentration of the target analyte. | Romania | University of Bucharest | 2005-2008 | CEEX |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 162. | RIWA-TECH: advanced treatment technologies for recycling industrial wastewaters | The main objectives of the project development and implementation of advanced treatment technologies for industrial effluents recirculation in order to reduce pollutant loadings and the quantity of wastewater discharged into the emissary, improving management practices for conservation, wastewater treatment and waste water from cellulose and paper industry recycling considering the necessity of implementing the IPPC Directive and the Water Framework Directive (WFD), developing and implementing continuing education programs and training in the area of sustainable management of water for industrial users, the portability of technology practices, the integrated monitoring, management and education in the cellulose and paper industry, dissemination of project RIWA-TECH outputs significant at national and international level, in the scientific, economic units, for representatives of environmental authorities and civil society. Advanced treatment technologies for industrial effluents recirculation in order to reduce pollutant loadings and the quantity of wastewater discharged into the emissary, improving management practices for conservation, wastewater treatment and waste water from cellulose and paper industry recycling. | Romania | TECHNICAL UNIVERSITY "GHEORGHE ASACHI" OF IAŞI | 2005-2008 | CEEX |
| 163. | STEDIWAT: Technical and Decision Making Support System for Sustainable Water Management | The main objective of the STEDIWAT Project was to develop a support system that would ensure a scientific base for decisions in IWRM, to contribute to knowledge transfer, to regional, national and international cooperation of different stakeholders, so as to contribute to the implementation and improvement of the IWRM processes in Romania. The project has developed technical and management instruments which were targeted at minimizing environmental pressures on water resources, aquatic ecosystems and human health, and, at the same time it has provided a sustainable dimension for the whole water use cycle (water supply, water use, treatment and reuse). | Romania | TECHNICAL UNIVERSITY "GHEORGHE ASACHI" OF IAŞI | 2008-2011 | the Environment Domain of the National Plan for Research, Development and Innovation (PNCDI II) |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 164. | URBWATER: urban water management decision support system | As main achievements within the project are the following:<br>a) Creating a database in GIS environment comprising: Numerical Model of the Land, coverage and exploitation of urban area, discharge infrastructure of municipal and pluvial waters, as well as a database necessary for calculations to determine the flood basin level.<br>b) Elaboration of the methods and models to identify and delimitate floodable areas due to flooding on the river upstream products of cities or following the failure of hydraulic defense works: ditches and dams.<br>c) Elaboration of the methodology to identify and delimitate flooded regions in the urban area caused by drain rainwater from urban areas and rural surface slopes adjacent to cities, which represent a unique sub-basin.<br>d) Modeling of pollutant transport within sources of surface water and groundwater used to supply water in urban areas, and delimitation of sanitary protection areas.<br>e) Elaboration of a methodology for integrated management of urban water, taking into account both the strictly urban area and the entire basin of which it is part. | Romania | Technical University of Civil Engineering Bucharest | 2005-2008 | CEEX |

## 4.12. List of European projects for year 1

**Tableau 14: European projects list year 1**

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 165. | AGUAFLASH: Determine the risks of deterioration of water quality in agricultural catchments | Development of a method to determine the risks of deterioration of waters quality in agricultural catchments during floods events, transposable to the Sudoe territory | France, Spain, Portugal | Research institution CNRS (or ENSAT?) | 2009-2012 | Interreg IV SudOuest |
| 166. | AQUAVAL: The efficient management of rain water in urban environments | The principal aim of this ambitious project is to provide innovative solutions to problems related to runoff quantity and quality in the urban environment, through the integration of part of the hydraulic infrastructure into the municipality landscape using Sustainable Urban Drainage Drainage Systems (SUDS), thereby decreasing the impacts of urban development and adding social an environmental values to the programmed actions | Spain, United Kingdom | Ayuntamiento de Xàtiva, FCVRE Valencia | 2010-2013 | LIFE+ |
| 167. | ARCADIS: Technical Assistance in the implementation of the Water Framework Directive/ Pomoc Techniczna we wdrażaniu Ramowej Dyrektywy Wodnej | As part of the Project, among others, were carried out the following issues: *- Improving the monitoring network for surface and groundwater (eg, in cooperation with the twinning project)<br>*- The improvement of databases on the quantity and quality of surf | France, Poland | ARKADIS, Poland | 2004-2005 | PHARE |
| 168. | ArtWet: Mitigation of agricultural nonpoint-source pesticides pollution and phytoremediation in artificial wetland ecosystems | Mitigation of agricultural non point-source pesticide pollution and phytoremediation in artificial wetland ecosystems.<br>The project consisted in building experimental prototypes (lab scale or mesocosms scale) and demonstration prototypes (full s | France, Italy, Germany | Training Center (ENGEES) | 2006-2010 | LIFE06 |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 169. | BaltActHaz: Baltic Actions for the reduction of Pollution of the Baltic Sea from Priority Hazardous Substances | Baltic Actions for the reduction of Pollution of the Baltic Sea from Priority Hazardous Substances | Estonia | NGO (Baltic Environmental Forum Estonia) | 2009-2011 | LIFE07 |
| 170. | CONCERTEAU: Plateforme collaborative pour la mise en oeuvre de WDF dans un contexte agricole. | Collaborative Technological Plateform for implementation for WDF within agricultural context | France, Spain | Adera/Ecobag (Research Institution) | 2006-2009 | LIFE06 |
| 171. | deWELopment: Development and validation of methods for integrated assessment of ecological status of rivers and lakes to support river basin management plans | Method - using an integrated assessment of ecological status of rivers and lakes<br>Credible assessment of water status, which can reduce the risk of improper allocation resources for repair action, and thus allows for more efficient use of public funds. | Poland, Norway | Institute of Environmental Protection - National Research Institute,Warszawa(Instytut Ochrony Środow | 2008-2011 | Norwagian Finanacial Mechanism, Ośrodek Przetwarz |
| 172. | DHI sampler: Sampler Education Pilot Project | Sampler Education Pilot Project | Denmark, Germany, Finland, Italy, Latvia, Netherlands, Norway, Sweden, United Kingdom | DHI, Copenhagen | 2006-2008 | LEONARDO DA VINCI project under the Community Voca |
| 173. | ECOMAWARU: ECO-sustainable MAnagement of WAter and wastewater in RUral communities | ECO-sustainable MAnagement of WAter and wastewater in RUral communities | Italy | Local authority (Municipality of Varese Ligure) | 2010-2013 | LIFE08 |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 174. | EcoPest: Develop, apply and demonstrate an economically-viable Strategic Plan for the sustainable use of pesticides and fertilizers | Develop, apply and demonstrate an economically-viable Strategic Plan for the sustainable use of pesticides and fertilizers | Greece | Resaerch Institute (Benaki Phytopathological Institute) | 2009-2011 | LIFE07 |
| 175. | EULAKES | * to evaluate lakes in all: starting from existing monitoring systems to new evaluation methods * to introduce chiefly the environmental problems which European lakes deal with, such as the environmental weakness and its associated risks – in short term and in long term; * to put the basis for a first model of international and environmental Governance about lakes, involving local communities and promoting the commitment of the public bodies on this theme | Austria, Hungary, Italy, Poland | IMGW | 2010-2013 | European Regional Development Fund, Central Europe |
| 176. | FLOODSCAN: Large scale adjustment of new technology for fast, precise and cost-efficient hydraulic 2d-modelling of flood (hazard) areas by combining laser scanning with remote sensing data | LArge scale adjustment of new technology for fast, precise and cost-efficient hydraulic 2d-modelling of flood (hazard) areas by combining laser scanning with remote sensing data.<br>Better mapping of flood hazrad areas | Germany | Regional authority | 2004-2009 | LIFE06 |
| 177. | FOKS: Focus on Key Sources of Environmental Risks | The project will develop new tools for groundwater contamination assessment and build upon existing ones as well as elaborate a joint transnational strategy for groundwater management and a transnational decision support system.<br>FOKS will focus on the remediation efforts in degraded areas on the key sources of contamination. By employing this approach, the effectiveness of mitigation measures should increase significantly. This would contribute to | Poland, Germany, Czech Republic, Italy | Central Mining Institute (GIG) | 2008-2011 | Central Europe Programme |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| | | satisfy the need for protection and enhancement of environmental resources, as well as reduction of man-made hazards. | | | | |
| 178. | GENESIS WP3000 | GENESIS project is to validate and demonstrate the GENESIS solution through one concrete and typical use case, in the fresh surface water quality domain. That is more they support sanitary inspection regarding the diagnosis and decision making about additional sampling in the bathing areas threatened by the bacteriological contamination or general loss of the water quality, and a possible action plan to enable a fast warning system. | France, Poland | Thales Alenia Space, France | 2008-2011 | FP7 |
| 179. | HydroSense: Innovative precision technologies for optimised irrigation and integrated crop management in a water-limited agrosystem | Innovative precision technologies for optimised irrigation and integrated crop management in a water-limited agrosystem | Greece | NGO Fundation (Goulandris Natural History Museum) | 2010-2012 | LIFE08 |
| 180. | INCOME | INCOME, effective support for the management of water resources | Slovenia, Germany | Public enterprise (Ljubljana Water Works and Sewerage) | 2009-2012 | LIFE07 +Municipality of Ljubljana +Ministry of the |
| 181. | Inter-waste: Demonstration of an integrated waste-to-energy system for energy generation from biodegradable organic waste & wastewater | Demonstration of an integrated waste-to-energy system for energy generation from biodegradable organic waste & wastewater | Cyprus | Cyprus University of Technology | 2010-2013 | LIFE08 |
| 182. | IWPM: Integrated Wastewater Purification Management | Integrated Wastewater Purification Management | Germany | Public enterprise | 2006-2011 | LIFE06 |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 183. | M3: modelling, monitoring, management | Application of integrative modelling and monitoring approaches for river basin management evaluation | Luxembourg, Germany | Research institution (Centre de Recherche Public) | 2009-2012 | LIFE07 |
| 184. | OpenMI: Open Modeling Interface | Modelling catchement processes. OpenMi (Open Modelling Interface and Environment) | United Kingdom, Denmark, Greece,The Netherlands, Belgium | Research institution (Natural Environment Research Council) | 2006-2010 | LIFE06 |
| 185. | PURE: From Treated Wastewater to Alternative Water Resources in Semi-Arid Regions | From Treated Wastewater to Alternative Water Resources in Semi-Arid Regions | Greece,Cyprus | Public enterprise (Municipal Enterprise for Water & Wastewater of Chersonissos) | 2010-2013 | LIFE08 |
| 186. | RAINMAN: RAINWater MANagement and treatment plant Vienna-Blumental | RAINWater MANagement and treatment plant Vienna-Blumental | Austria | Local authority (MA30 department of the Vienna City Administration) | 2005-2010 | LIFE06 |
| 187. | REURIS: Revitalisation of Urban River Spaces | The essence of this project is to implement strategies and actions that aim to revitalize public spaces in urban river basins and to promote sustainable management of revitalized space. This is done in order to create links between research work and practice - both social and engineering. For the first time in Central Europe attempt is made to create, in transnational cooperation, the full set of rules for river revitalization and illustrate these principles through practical implementation. | Poland, Germany, Czech Republic | Central Mining Institute, Poland | 2008-2012 | Central Europe Programme (3.1.) |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 188. | SALT: Gestione sostenibile del bacino del fiume Esino per prevenire l'intrusione salina nell'acquifero costiero in considerazione dei cambiamenti climatici | Contributing to the efficient use and protection from saltwater intrusion of groundwater resources in the lower Esino river valley. | Italy | Mix enterprise (multiservice spa) | 2009-2011 | LIFE07 |
| 189. | SGGW: 'Prognosis and reduce non-point pollution, emissions constant and extreme flows from rural areas | Prognosis and reduce non-point pollution, emissions constant and extreme flows from rural areas | Poland, Norway | Szkoła Główna Gospodarstwa Wiejskiego | 207-2010 | European Economic Area (EOG) |
| 190. | STAR: Standardisation of River Classifications: Framework method for calibrating different biological survey results against ecological quality classifications to be developed for the Water Framework Directive | For the purposes of this project two 'core streams types' are recognised: small, shallow, upland streams and medium-sized, deeper lowland streams. Besides the evaluation of existing data, a completely new data set is sampled to gain comparable data on macroinvertebrates, phytobenthos, fish and stream morphology taken with a set of different methods from sites representing different stages of degradation. This will be the main source of data for cross-comparisons and the preparation of standards. A number of 'additional stream types' will be investigated in order to extend the range of sites at which field methods and assessment procedures are compared. The participants will be trained in sampling workshops and quality assurance will be implemented through an audit. Using the project database, assessment methods based on benthic macroinvertebrates will be compared and inter-calibrated, particularly in terms of errors, precision, relation to reference conditions and possible class boundaries. The discriminatory power of different organism groups to detect ecological change will be tested through various statistical procedures. | United Kingdom, Austria, Czech republic, Denmark, France, Germany, Greece, Italy, The Netherlands | CEH - Centre for Ecology and Hydrology, Dorset | 2003-2005 | European Commission (EC), State Committee for Scie |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 191. | TREASURE: Treatment and re-use of urban stormwater runoff by innovative technologies for removal of pollutants. treatment facilities obtaining very high pollutant removal in urban stormwater and road runoff. The project demonstrates how stormwater in the future can | Treatment and re-use of urban stormwater runoff by innovative technologies for removal of pollutants. treatment facilities obtaining very high pollutant removal in urban stormwater and road runoff. The project demonstrates how stormwater in the future can | Denmark | Silkeborg Kommune (Municipality of Silkeborg) | 2006-2009 | LIFE06 |
| 192. | VACCIA: Vulnerability Assessment of ecosystem services for Climate Change Impacts and Adaptation | Assess the impacts of climate change in ecosystem services. Outline the means of adaptation and convey information to decision-makers and the general public. Produce environmental change scenarios and develop modelling, GIS and database solutions to assess the changes. Generate information for adaptation strategies at the national and EU level and support local and regional-scale planning and decision making. | Finland | Research institution (SYKE) | 2009-2011 | LIFE07 |
| 193. | WALPHY: Conceive a decision support system for hydromorphological restoration of waterbodies in Wallonia | Design of a decision tool for hydromorphological restoration of water bodies in Walloon Region | Belgium | Regional authority (Service Public de Wallonie) | 2009-2013 | LIFE07 |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 194. | WATACLIC: Water Against Climate Change | The project Life + WATACLIC - Water LIFE08/INF/IT/000308 Against Climate Change, which will be completed later this year, has had as its objective the dissemination of methodologies and techniques for a more rational use of water resources, as well as a lower environmental impact. | Italy | Ambiente Italia | 2010-2011 | LIFE08 |
| 195. | WATER: Strengthening the scientific foundation of water quality programs | The overall goal of the project is to strengthen the scientific foundation of water management programmes, including criteria development for pollutants of high potential impact on environmental quality and biodiversity. As such the project will establish and demonstrate an innovative set of methods and tools for the design and implementation of programmes for the preservation of high environmental quality and good ecological status of water bodies. In particular the proposed tools will increase the scientific basis for constructing, communicating and evaluating water management plans and measures. Further the project will help to establish Policy, Scientific and Technical integration between programmes for the development of water quality standards and criteria and regulations relevant to pollution prevention such as the issuance of emission permits and implementation of EIAs.<br>In summary, key elements of the project are the following:<br>- Introduces carrying capacity considerations in water quality management planning. Carrying capacity assessments will be driven by a set of water quality criteria that will aim to ensure good ecological status and high environmental quality and to maintain the water body functions.<br>- Facilitates water management decisions through scientifically verified maximum allowed pollutant load<br>- Facilitates the allocation of allowable pollutant loads through a well verified and transparent scientific process<br>- The project will build a dynamic water quality | Cyprus | National authority (Ministry of Agriculture, Natural Resources and Environment ) | 2010-2013 | LIFE08 |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| | | management system that will facilitate the continuous monitoring and updating of water quality plans and measures<br>- Specific target of the project is the preparation of a quality management plan for the Larnaca Salt Lake | | | | |
| 196. | WEISS: Water Emissions Inventory, a planning Support System | The Water Emissions Inventory, a planning Support System aimed at reducing the pollution of water bodies | Belgium | VMM Regional authority | 2010-2012 | LIFE08 |
| 197. | WET: Wastewater & Effluent Treatment | Current techniques for the treatment of municipal wastewater are not designed to remove the priority substances mentioned in the WFD, which are to be met in 2015 (plans with the measures required for achieving these standards must be ready by 2009). The objectives of the LIFE project were to prepare the development of these measures by demonstrating the technical feasibility of:<br>-The removal of dissolved organic compounds using coagulants in WWTP-effluent;<br>- The simultaneous removal from WWTP-effluent of nitrate and phosphate in a filter bed;<br>- The use of activated carbon in granular (GAC) or powdered (PAC) form in WWTP-effluent. GAC is applied in the form of a filter bed. PAC is dosed in line and subsequently filtered from the effluent;<br>- The application of advanced oxidation on municipal WWTP-effluent; and<br>- Bio filtration at extremely low substrate-concentrations. | The Netherland | Regional authority | 2005-2009 | LIFE06 |

## 4.13. List of European projects for year 2

**Tableau 15: European projects list year 2**

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 198. | Forecast and reduction of area pollution, constant emissions and extreme flows from rural areas | The aims of this project are: the analysis of hydrological processes in agricultural catchments including rainfall-runoff-sediment transport- nutrients transport leading to mathematical description (mathematical model); practical use of received description (mathematical model) for prediction purpose in changeable environment (as results of stock change and climate change as well); elaboration of nutrient concentration reduction from agricultural areas; reduction of flood flow and sediment flow and determination of their impact on good quality status of Nature 2000 areas and/or designed to net Nature 2000. | Poland, Norway | Warsaw University of the Life Science (SGGW), Poland | 2008-2010 | European Economic Area (EOG) |
| 199. | CLC: CORINE Land Cover | The aim was to create a database of biophysical occupation of soils | EU countries | for the project at the national PL level was responsible National Inspection for Environmental Protection | 2006-No date | European Economic Area (EEA)and all coutries - mem |
| 200. | CLEAN WATER: clean water: Water detoxification using innovative vi-nanocatalysts | CLEAN WATER: Water detoxification using innovative vi-nanocatalysts | Greece, Italy | NCSRD: National Center for Scientific Research Demokritos, Institute Patriarchou Grigoriou Polycarpo | 2009-2012 | CleanWater is a Collaborative Project co-funded by the Research DG (EC) within the joint RTD activities of the Environment and NMP Thematic Priorities |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 201. | COHIBA: Control of hazardous substances in the Baltic Sea Region | Cohiba project consists of six packages Task: *- Identify the major sources of emissions to water (11 selected hazardous substances); *- Determine the amount of selected dangerous substances discharged into the Baltic Sea; *- Development of best practice | Finland, Denmark, Estonia, Germany,Latvia, Lithuania, Poland, Sweden, Helsinki Commission | Finish Environment Institute (SYKE) Finlandia - koordynator Ansa Pilke, ansa.pilke@ymparisto.fi | 2009-2012 | European Union within the Baltic Sea Region Progra |
| 202. | LifePower: Optimisation of water and emissions reduction | Installation and monitoring of probes in the soil to evaluate the real hydric needs. Management of water used to make energy savings. | Spain, Italy | Fundacion San Valero | 2010-2013 | LIFE 08 |
| 203. | MAGIC: Management of groundwater at industrially cantaminated areas | Long term objectivies<br>Supporting sustainable spatial development by the abatement of groundwater damages<br>Developing the innovative, integral, emission-orientated management approach developed in the FP5 RTD-project INCORE<br>Elaboration, implementation and specification of a set of proper tools of groundwater management<br>Application of the integral approach in the CADSES region<br>Publication and dissemination of the results in training seminars offered to the main target groups as staff of public administration and service providers | Poland, Germany, Czech Republic | Central Mining Institute, Poland | 2005-2008 | INTERREG IIIB CADSES Program |
| 204. | Response: Responding to the risks from climate change - developing sustainable strategies for management of natural hazards in coastal areas taking account of the impacts of climate change | The project showed how a local stretch of coast can be divided into 'Coastal Behaviour Systems' defining not just landforms, but patterns of behaviour, sensitivity to predicted climate change, and the consequences and likelihood of change. The project cla | Poland, United Kingdom(coordinator) | led by the Isle of Wight Centre for the Coastal Environment, Isle of Wight Council, UK, supported by the LIFE financial instrument EC | 2003-2006 | CIP Eco-Innovation initiative |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 205. | SCENES: Evaluating methodologies for developing scenarios of Europe's waters with the aim of improving these methodologies. Developing and analysing a set of comprehensive scenarios of Europe's fresh waters up to 2025. Evaluate the socio-economic, environmental and ecological impacts of the different water scenarios. | Main objectives and deliverables: To evaluate different methodologies for developing scenarios of Europe's waters with the aim of improving these methodologies, involving different pan-Europe, regional and pilot area scale modelling efforts. To develop and analyse a set of comprehensive scenarios of Europe's fresh waters up to 2025. These scenarios will provide a reference point for long-term strategic planning of water resource development in Europe, alert policymakers and stakeholders to emerging problems related to water use (e.g. new water quality and ecological problems, new regions of water scarcity); and allow river basing managers to test their regional and local water plans against uncertainties and surprises which are inherently imbedded in a longer term strategic planning process. To evaluate the socio-economic, environmental and ecological impacts of the different water scenarios. This is accomplished by analysing and assessing the complex relationships between water availability, water demand, water use, and water quality to provide a basis for strategic planning and technological alternatives. To help launch an on-going process in Europe of scenario-development. We will also devise a plan for institutionalising the on-going development of water scenarios in Europe./ | Germany, Poland, (23 countries) | Coordination and management Administrative coordination Scientific coordination Coordination of all | 2008-2011 | SCENES is jointly funded by EC 6th Research Framework Programme (Contract number: 036822) and the research programmes of the collaborating organizations |
| 206. | STREAM MAP: Stream Map is a project coordinated by ESHA and co-financed by the IEE Programe of the European Commission under the responsibility of the EACI. It runs from 2009 until 2012. | Stream Map is a project coordinated by ESHA and co-financed by the IEE Programme of the European Commission under the responsibility of the EACI. It runs from 2009 until 2012. For the first time ever the Stream Map project gathers together detailed energy, market and policy data to a central HYDI (Hydro Data Initiative) database which is free of access to the public. Based on the collected data a Roadmap for the small hydro sector will be drafted together with recommendations for the future with a view of the 2020 | Belgium, Italy, Portugal, France, United Kingdom, Romania, Poland, Slovenia, Sweden, | The European Small Hydropower Association (ESHA) | 2009-2012 | IEE Programme of the European Commission |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| | | targets set in the RES Directive. This is what the Stream Map aims to achieve: The creation of a central database which will compile information on the Hydropower sector in the 27 EU Member States starting from year 2007 and which is consequently updated every year.<br>An analysis of the current status of the sector.<br>The instruction of recommendations for future development of the sector.<br>To influence National Renewable Energy Action Plans on their choice of the RES mix.<br>To offer regular advice and information at local and national level on the sector's development and needs.<br>ORIGINAŁ: Stream Map provides you with information on the opportunities and challenges the hydropower sector is facing in the EU-27 today. It presents detailed energy, market and policy data in a regularly updated centralized HYDI Database. Stream Map draws a Roadmap for the Small Hydropower sector analyzing upcoming trends and prospects for the future. | Lithuania | | | |
| 207. | TransWaste: Formalization of informal sector activities in collection and transboundary shipment of wastes in and to CEE | One of the main goals of the present project is the development of sustainable solutions for formalising the informal waste collection. As a basis for the formalisation, background data concerning material flows, environmental effects and social effects will be collected. | Austria, Germany, Poland, Hungary, Slovakia | University of Natural Resources and Life Sciences, Vienna; Institute of Waste Management | 2009-2012 | European Regional Development Fund, Central Europe |
| 208. | TRUST: Tool for regional-scale assessment of groundwater storage improvement in adaptation to climate change | The TRUST project intends to incorporate climate change in river basin management and identify adaptation measures based on artificial aquifer recharge to mitigate the impacts of drought and water scarcity.<br>Establishment of this co-operative stakeholders' framework.<br>The primary goal of the TRUST project is to adapt groundwater resources of the Veneto and Friuli Plains to the impacts of future climate changes. | Italy | AdB - North Adriatic Rivers Basin Authority | 2009-2011 | LIFE07 |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| | | The secondary aim is to build the capacity of the project benefi ciary, the Alto Adriatico RBA, through the provision of a tool for the regional assessment of groundwater storage improvement in adaptation to climate change.<br>The third objective is to support the project benefi ciary in the implementation of the European WFD and related directives.<br>The fourth aim of TRUST project is to disseminate the acquired experience in aquifer recharge on a national and European scale. | | | | |
| 209. | WASTEred: Waste reduction and process optimisation in the European meat and dairy industry. | Waste reduction and process optimisation in the European meat and dairy industry. | Spain, Belgium, Poland, Germany | Bioazul, Spain | 2009-2011 | LIFE07 ENV/PL/000605). |

## 4.14. List of European projects for year 3

**Table 16: List of European projects, year 3 (see next page)**

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 210. | ADVOCATE: developing innovative in situ remediation (ISR) concepts for the sustainable management of contaminated land and groundwater | Its research links lab-scale studies of processes with field-scale evaluation and demonstration of novel technology applications, using state-of-the-art methods. It will develop new scientific understanding, performance assessment tools and decision-making frameworks which advance the use of sustainable ISR for contaminated land and groundwater. The aim is for more sustainable treatment, to optimise resource investment in environmental restoration.<br><br>The main objectives are to : Train a group of highly qualified professionals in state-of-the-art approaches for in situ land and groundwater remediation, research innovative processes and techniques for the sustainable remediation of contaminants in situ, develop process-level understanding and appraise technology concepts at laboratory-scale through to field-scale application, develop relevant performance assessment methods and tools for engineering design of sustainable in situ remediation processes and technology, develop a decision-making framework for the use of in situ remediation in the sustainable development of groundwater resources, considering relevant technical, environmental, social and economic issues, deliver a programme of knowledge transfer and public outreach on sustainable in situ remediation for contaminated land and groundwater for researchers, practitioners and other end-users, develop collaborative links with other science-based networks and industry forums within Europe and overseas, which are involved in sustainable remediation research, knowledge transfer and training to identify new initiatives in these areas | UK, Italy, Deutchland, Denmark, Germany | Jenny Chambers<br>Project Manager<br>Kroto Research Institute<br>North Campus<br>University of Sheffield<br>Broad Lane<br>Sheffield S3 7HQ | 2011-2014 | own funds |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 211. | Baltic Master II : follow - up project to its successful predecessor Baltic Master I which in 2007 was elected as the best European maritime project by the Committee of Regions and the magazine Regional review. | The overall aim of Baltic Master II is to improve the on-land response capacity to oil spills in the Baltic Sea as well as to enhance the prevention of pollution from maritime transport. | Denmark, Estonia,Finland, Germany, Poland | Region Blekinge is lead partner with an overall responsibility for Baltic Master II. | 2009-2012 | Partially financed by the european development found |
| 212. | BERAS: Baltic Sea Action Plan, EU Water Framework Directive and EU Marin Strategy Framework Directive through conversion of the food system to effective recycling of nutrients and no use of pesticides in line with BERAS results combined with other known measures in all BSR countries. | The objective of the BERAS Implementation project is to realize the Baltic Sea Action Plan, EU Water Framework Directive and EU Marin Strategy Framework Directive through conversion of the food system to effective recycling of nutrients and no use of pesticides in line with BERAS results combined with other known measures in all BSR countries.<br>Recycling and sustainable use of resources will be strengthened through involving the whole food chain from farmer to consumer on a local and regional scale that also contributes to rural development.<br>Exchange and building of ecological competence will be realized in the whole food chain with a focus on market driven development of the ecological sector. Conversion process will be driven by:<br><br>Increasing market demand through education of private and institutional consumers about “Diet for a clean Baltic”.<br>Increasing competence among farmers.<br>Introducing techniques and knowledge about ERA to agriculture advisory services, in agricultural authorities.<br>Developing agricultural policy instruments to overcome economic barriers for conversion and provide long term economic incentives for low input recycling agriculture in line with Polluter Pay Principle. | 10 countries around the Baltic Sea | Södertörn University | 2010-2013 | Baltic Sea Region 2007-2013, European Regional Developing Fund and European Neighbourhood and Partnership Instrument |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 213. | BIOAZUL: WASTE-RED | The WASTEred project aimed to promote the use and encourage the market penetration of LODOred, a new and ECO-Innovative product, in the food industry (slaughterhouses, meat processing and dairy companies) in order to reduce the large amounts of sewage sludge generated in their wastewater treatment plants. The expected reduction decreases the environmental impact of these sectors, as well as the costs associated to the sludge management. | spain, germany | Bioazul, Spain | 2009-2011 | ECOINNOVATION ECO/08/239048/SI2.535244 |
| 214. | BioKube mini wastewater | BioKube is a Danish developed and manufactured mini wastewater treatment plant. BioKube is the only approved treatment plants in all 4 classes of treatment. | Denmark | BIOKUBE | No date-2005 | own sources |
| 215. | CH2OiCE: do the right ch2oice | The proposed action aims at developing a technically and economically feasible certification procedure for hydro power generation facilities of high environmental standard, being explicitly coherent with the requirements of the Water Framework Directive, to be implemented in labelled electricity products, and being integrated, as much as possible, with existing EU tools, such as Ecolabel, EMAS, EIA and SEA.<br><br>This includes developing a general, agreed and widely transferable approach for such a certification, discussed by all relevant stakeholders, and developing an operational methodology, which will be tested for 2 partner countries - Italy and Slovenia. The certification methodology will primarily refer to existing plants. However, to allow a wider use of the results of the project, the issue of hydropower plants (re)licensing will be considered. Following the same logical approach used for the certification of existing plants, a set of guidelines will be produced, to be used by decision makers during planning and licensing procedures and by plants proposers in their EIA and SEA studies. | Italy, Slovenia, France, Spain and Slovakia | Ambiente Italia srl - Giulio Conte , Italy | 2008-2011 | Intelligent Energy Europe |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| 216. | CITYchlor: City Chlor | Chlorinated solvents are amongst the most common soil and groundwater contaminants due to their widespread use as solvents and degreasing agents. Because of their physicochemical properties, they produce large-plumes of pollution in the groundwater. This type of pollution is often caused by small scale activities as dry-cleaners, garages and printers. In the densely populated Northwest Europe, the pollution is often situated under residential areas and therefore with difficulty accessible. | Project partners from Belgium, France, Germany The Netherlands. | The complementary team consists of project partners who all have direct responsibility in the definition of policies and guidelines in their respective regions | 2010-2013 | CityChlor is co-funded by INTERREG IVB North-West Europe (NWE), a financial instrument of the European Union's Cohesion Policy. |
| 217. | CLIM - WASTENER | Biogas produce with waste leads in anaerobic conditions to supply a gas turbine and the residual heat to convert with an Organic Rankine Cycle into electricity. The project objectives are to design, implement, test and disseminate an innovative integrated pilot that generates electricity from waste heat in the specific context of a landfill. The heat recovery system is based on an Organic Ranking Cycle (ORC) that improves the electric efficiency of the waste-to-power plant by 5%. A primary loop containing superheated water is used to transfer the heat from the exhaust fumes to the ORC fluid. This working fluid then drives a125 kW gross electric power module. Without any modification of the existing biogas power plants, the pilot units will be installed on two different sites: Saint Laurent des Hommes and Orange in France (see the map). Various measurements will be made to monitor the operation of both units. A comparative study will be carried out and improvement proposals will be made based on the results. This return on experience is essential to determine the best transfer conditions to other landfills and will therefore support the ORC technology dissemination across Europe. The project brings together several EU institutions and industrialists to create a transnational consortium of | France, Belgium | VERDESIS | 2010-2013 | LIFE |

| | Project Title | Project description/Title of Publication | Country | Responsible organisation | Start - End | Funding Organisation |
|---|---|---|---|---|---|---|
| | | excellence. Every partner builds up their own skills by working on one or several specific missions. | | | | |
| 218. | ECO-INNOVA: ECO-INNOVA – creating business ecosystems through innovation | ECO-INNOVA – creating business ecosystems through innovation | Portugal,Denmark, UK, Spain | ECO-INNOVA Paulo, Gomes Tel.: +351 226 086 300 Fax: +351 226 061489 E-Mail: coop-atlantico@ccdr-n.pt | 2007-2013 | ERDF for the 2007 to 2013 programming period |
| 219. | GREENLYSIS: hydrogen and oxygen production in waste water plant | The treated water of a WWTP is disinfected and treated (Ultra filtration process+ UV disinfection + purified by membrane distillation) to be electrolysed and supplied by renewable electrical energy (solar and wind). The Electrolysis of this water produces oxygen to improve biologic treatment and hydrogen to produce fuel and. The project consist in the balance between energy consumption and energy production to reduce the GHG of the process of WWTP | Spain, France | CETaqua | 2010-2012 | LIFE+ |
| 220. | Heat Eco: Regenerating heat energy from cleaner wastewater | The heat exchangers HeatEco 60 and HeatEco 30, developed by Estonian company Green Idea Ltd. are for regenerating heat energy from cleaner wastewater (shower, washing machines, swimming pools etc). Warm wastewater flows over the heat exchanger unit and preheats cold water, which can be fed to the shower or into water heater. Heat is transferred from wastewater to cold water through the heat exchanger unit made of special copper. By using the heat exchanger, it is possible to reduce hot water and/or energy consumption up to 60%. While HeatEco 60 is suitable in private houses, HeatEco 30 suits best in location where the water flow rate in drainage pipes is higher than in small households, for example shower rooms of sports facilities etc. Since heat is transferred from wastewater to cold water | Estonia | Green Idea Ltd Kalle Riepulk Serva 3 Tallinn +372 502 4294 info@heateco.eu www.heateco.eu/ | No date-2007 | own sources |

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| | | through the wall of heat exchanger unit, the consumption of hot water and energy is reduced up to 60%. The cold water temperature rises from ca 9 °C to 24 - 28 °C (15-28 °C depending on the model and installation of the heat exchanger) at the wastewater temperature of 37 °C and flow rate of 9 l/min. It corresponds to the energy saving appr. 9.5 kWh. The water heat recovery system pays off within 3,7 years (in condition the household uses water 30 minutes per day where the heat exchanger is installed).<br>When taking a shower (30 min) without using the heat exchanger system, 145,1 litres of hot water is used. At the same time, taking shower with the system of heat exchangers, 67,5 litres is needed. | | | | |
| 221. | Hydrochip: a reliable and quick way to test water quality. | The Hydrochip project aims to demonstrate a new measuring device called Hydrochip, which will provide an opportunity to monitor the implementation of the WFD with regard to the ecological parameters phytobenthos and phytoplankton in an innovative way. | Netherlands | TNO | 2012-2016 | LIFE 11 |
| 222. | Kolisoon: An automated on-line self control device for the detection of E. coli | An automated on-line self control device for the detection of *E. coli* | Italy | ISRIM | 2006-2009 | LIFE |
| 223. | LAGOONS: Integrated water resources and coastal zone management in European lagoons in the context of climate change | The main and overall objectives of the LAGOONS project are to develop science-based strategies and decision support frameworks for the integrated management of lagoons, based on an increased understanding of land-sea processes and the science-policy-stakeholder interface. To this end, the project will seek to contribute to the EU Water Framework Directive, the Habitat Directive, the EU's integrated coastal zone management (ICZM) Recommendation, and the EU Marine Strategy Directive. | Portugal, Norway, Russia, Scotland, Poland, Ukraine, Germany, Spain | CESAM, Portugal | 2011-2013 | FP7 |

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| 224. | MEDDMAN: Integrated water resources management, development and comparison of common transnational methodologies to combat drought in the MEDOCC regions | National Technical University of Athens (NTUA), Greece | Greece,France,Spain, Italy | Scientific Responsible/Project Leader Prof. M.A. Mimikou Tel.: +30-210-7722880 Fax: +30-210-7722879 Email: mimikou@chi.civil.ntua.gr | 2006-2008 | E.U |
| 225. | NOAH: NOAH's ark | The NOAH project sets up an innovative mechanism for management and transmission of vital information in case of flooding. This German-Dutch experiment, focused on the Rhine, could be reproduced in all regions subject to flooding. | Ireland, Germany, Netherlands | STOWA (Foundation for water research) | 2006-No date | INTERREG IIIB |
| 226. | OMZET: WWTP as energy and mineral recovery utility: production of hydrogen and oxygen with treated water. Oxygen for the biologic treatment and hydrogen for fuel and energy production. | Improve the efficiency of WWTP and urban sludge – Phosphorus recovery from sludge - Increase of biogas production by improving the CHP – Ultra sonic sludge disintegration – Reuse of heat to dry sluges | Netherlands | Omzet.Amersfoort/ Waterschap Vallei en Eem | 2011-2016 | LIFE 10 |
| 227. | PlasTEP: Dissemination and fostering of plasma based technological innovation for environment protection in the Baltic Sea region | The pollution control is a transnational request of all countries and a strategic aim of the European Union. This is also reflected in the increasing tightening of the exhaust emission standards particularly in the Baltic Sea region (BSR) countries. The objective of the project is to push plasma based cleaning technologies of atmospheric air and water treatment to a visible practical application. | Germany(leader), Denmark, Finland, Latvia, Lithuania, Sweden, Poland Estonia | Consortium | 2010-2012 | Part-finansed y the European Union (Eupean Regional Development Fund)Baltic Sea Region, |

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| | | We would like to raise wide awareness about the practical applications of plasma technology for environmental protection<br><br>The public should know that PlasTEP contributes to a better future by cleaning exhaust gases or wastewater. We will disseminate and foster plasma based technological innovations for the environment protection in the BSR. We will also build up a network to combine the existing knowledge about plasma technologies with partners from industry, science and policy.<br><br>This project is one of 22 new transnational projects of the Baltic Sea Region Programme 2007-2013. It is contributing to the EU Strategy for the BSR and it is part-financed by the European Union (European Regional Development Fund). It aims to bring the idea of investing in plasma technology and therewith in future research into the minds of decision makers and show them: Plasma opens new ways!<br><br>Plasma technology breaks new ground and gives us the chance for environment-friendly industrialisation, which means that it is not necessary to miss the advantage of modern time beside reducing air pollution. | | | | |
| 228. | PlasTEP: Dissemination and fostering of plasma based technological innovation for environment protection in the Baltic Sea region | The aim of the Work Package 6 of the PlasTEP project was developing a prototype of mobile device for destruction of oil and oil-type leakages in ports of the Baltic Sea using plasma. The concept of the entire device is based on the module construction. All modules are fixed on the platform equipped with floats. The following main modules has been developed: – power supply module – which provides proper voltage and current to all electrical components of the device, including pumps, valves, rotors, high voltage sections of plasma modules, – first plasma module – the role of which is using | Germany(leader), Denmark, Finland, Latvia, Lithuania, Sweden, Poland Estonia | Institute of Fluid-Flow Machinery, Gdańsk, Poland | 2010-2013 | Baltic Sea Region Programme 2007-2013 |

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| | | microwave plasma for conversion of oil slick polluting sea surface to gaseous hydrocarbons, – second plasma module with filters – it has to decompose gaseous hydrocarbons transported from the first plasma section into harmless products. On the platform, besides above mentioned modules, also other element of the device are installed, such us high pressure flask with nitrogen delivering gas to plasma modules, and drum separator for oil-water separation. | | | | |
| 229. | PLUSK: Developing a computer system for the joint Polish - Slovak border waters according Water Framework Directive and Flood Directive | The project aims to develop a system for the exchange, processing and sharing of spatial information about the environment and the database on the Polish-Slovak border river catchments. | Poland, Slovakia | Regionalny Zarząd Gospodarki Wodnej w Krakowie oraz Słowackie Przedsiębiorstwo Gospodarki Wodnej, Przedsiębiorstwo Państwowe w Żylinie | 2009-2011 | Baltic Sea Region Programme 2007-2013 |
| 230. | PRESTO: Project on Reduction of the Eutrophication of the Baltic Sea Today | Project PRESTO (Project on Reduction of the Eutrophication of the Baltic Sea Today) tackles the eutrophication which is the main environmental problem of the Baltic Sea. Eutrophication is caused by excess load of nutrients - nitrogen and phosphorus - to the sea mainly from land-based sources.<br><br>Some of the symptoms of eutrophication are visible for all of us like reduced water transparency, massive occurrences of harmful algae and slimy beaches. Some of the problems lay under the surface like dead zones in the bottom of the sea and deteriorated spawning areas of many fish species. Visible or not these symptoms indicate that actions are needed right now. | Finland, Germany, Belarus, Lithuania, Latvia | Union of the Baltic Cities (UBC) Environment and Sustainable Development Secretariat Vanha Suurtori 7 FIN-20500 Turku Finland | 2011-2014 | INTERREG IVB Baltic Sea Region Programme 2007-2013 |

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| | | Good environmental state of the Baltic Sea is important for attractiveness, living conditions and welfare of the cities and communities along its shoreline. It is also important to realize that the symptoms of eutrophication are not a problem only by the Sea but also excess load of nutrients has very negative effect on rivers and lakes in Baltic Sea catchment area.<br><br>PRESTO aims at significant nutrient load reduction: app. 500 tons reduction of phosphorus load to the Baltic Sea. This can be achieved with joint investments that are realised in Belarusian municipal wastewater treatment plants. Reducing transboundary nutrient load from Belarus improves also water quality of European rivers and in the end actions are improving the state of the Baltic Sea.<br><br>In addition to investments, PRESTO increases the competence of operating staff of the waste water treatment plants, plant designers and trainers of future wastewater engineers by organizing courses on modern waste water treatment and showing practical examples of reconstruction projects in their different stages. | | | | |
| 231. | PURE: project of urban reduction of eutrophication | Project PURE (Project on Urban Reduction of Eutrophication) implements one of the most cost effective and quickest ways to tackle eutrophication: it enhances phosphorus removal at selected municipal wastewater treatment plants in the Baltic Sea region. PURE partner water utilities aim to achieve an average annual concentration of 0.5 mg phosphorus / litre in outgoing wastewaters. | Finland, Latwia, Poland… | Project management: | 2010-2012 | PURE is part-financed by the European Union. (European Regional Development Fund and European Neighbourhood and Partnership |

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| | | | | | | Instrument). |
| 232. | QUIMET: Geographical Information System based on HYDROGEOCHEMICAL ANALYSIS TOOLS | QUIMET was developed to improve the treatment, analysis, calculations, visualizations and interpretations of hydrogeochemical data in a GIS environment. QUIMET is composed of a geospatial database plus a set of tools specially designed for graphical and statistical analysis of hydrochemical parameters. | SPAIN, ROMANIA | CSIC | 2009-2013 | National funds |
| 233. | TIMBRE: Tailored Improvement of Brownfield Regeneration in Europe | Brownfield regeneration is essential for sustainable land management in European Member States. Major areas previously used for military, mining, industrial or commercial purposes are frequently beset by high levels of complex contamination. Regarded as being problematic, many have become brownfields, impeding the development of surrounding communities. Brownfields threaten scarce soil and water resources and cause environmental and health risks as well as economic and social costs.Many useful and innovative technologies for site clean-up as well as methods to support decision making processes exist - a lot of them have been developed in previous European funded research projects -, but often they are only rarely applied using their entire potential. Sometimes the non-visibility of tools is the reason that problem owners, managers, local authorities and other stakeholders do not regenerate brownfields using the best available technology and decision support systems measure. | Denmark, germany,france….. | Helmholtz Centre for Environmental Research - UFZ (Germany) (Coordination) | 2011-2014 | LIFE 7 |
| 234. | UPSOIL: Sustainable Soil Upgrading by Developing Cost effective, Biogeochemical Remediation Approaches | This is achieved by the smart coupling of technologies and the development of new frontier technologies, whereby:<br>soil structure, properties and functions are integral factors in selecting the type of remedial treatment,<br>side-effects of treatment, for example at multi-contaminant sites, on overall risk are taken into account,<br>active remediation (chemical or biological) is designed in such a way that the natural attenuation potential is fully | Spain, Czech Republic, France…. | Consorcium of 16 countries | 2009-2011 | LIFE 7 |

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| | | utilized and stimulated,<br>the injected remedial agent is better targeted at the location/distribution of the contaminant within the soil,<br>modelling and dynamic monitoring of the remediation progress are used in realtime to allow feed-back driven remediation,<br>reactant species are developed that are more selective towards the contaminant and less degrading towards the soil matrix,<br>indicators are developed that diagnose whether viable microbial soil populations are present and that microbial dynamics are such that the natural attenuation capacity of the soil has been restored. | | | | |
| 235. | VACUDEST: Vacuum distillation systems | Vacuum distillation is an excellent method<br>waste water such as waste oil<br>coolant emulsion used in foundries or<br>rinse water. Hydrocarbons and penetrating oils<br>distillate are very problematic. So far, the<br>type of pollution need to be separated<br>additional means.<br><br>Innovative technology ClearCat ® reliably<br>and efficiently cleans the wastewater of oil<br>Industrial. Due to the low oil content in the distillate<br>it can be re-used providing<br>same without sewage workshop, or can be<br>thrown directly into the municipal sewage system. | Germany | H2O GmbH, Germany | No date-No date | Own funds |