



Environmental Technologies

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Launching FP7 – Conference for Information Multipliers – Brussels, 7-8 February 2007





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WP 2007 structure for Env. Tech.

- **Sub-activity 6.3.1 Environmental technologies for observation, simulation, prevention, mitigation, adaptation, remediation and restoration of the natural and man-made environment**
 - Indicative available budget: 38 M€
 - Areas:
 - Water
 - Soil
 - Waste
 - Clean Technologies
 - Built Environment
- **Sub-activity 6.3.2. Protection, conservation and enhancement of cultural heritage, including human habitat**
 - Indicative available budget: 7 M€
 - Areas
 - Assessment and conservation of Cultural Heritage
 - Networking, knowledge transfer and optimisation of results in cultural heritage
- **Sub-activity 6.3.3. Technology assessment, verification and testing**
 - Indicative available budget: 5 M€
 - Areas
 - Risk assessment of chemicals and alternative strategies for testing



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- **Strong pillars:**
 - **The link with ETAP**
 - **The Strategic Research Agenda of the Water Supply and Sanitation Technology Platform**
 - **A new research programme on wastes (sorting, treatment, recycling, prevention)**
 - **Other environmental technologies (soil protection, air emissions, built environment, marine technologies, etc.)**
 - **Clean Processes and pollution prevention**
 - **The Strategic Research Agenda of the European Construction Technology Platform, in particular for the built environment and for cultural heritage**
 - **Technologies for protecting Cultural Heritage**
 - **Technology assessment (LCA, LCT), verification and testing**
 - **Chemicals safety (risk assessment, REACH, alternatives to animal testing)**
 - **The participation of the Commission in the European Partnership for Alternative Approaches to Animal Testing (EPAA)**
 - **The support to various Environmental Thematic Strategies (Soil, Wastes, Pesticides, Management of Resources, etc.)**
 - **Strategic Research Agendas of other Technology Platforms**

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SEVENTH FRAMEWORK
PROGRAMME



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How to design a multi-annual WP

- FP7 will last 7 years
- Almost all FP5 projects are expiring, but all FP6 projects are on-going and will last for some years during FP7
- We have to define a Roadmap that is based on the critical research needs, but takes into account what is on-going, in order to minimise duplications and overlaps



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Area 6.3.1.1. Water

- **ENV.2007.3.1.1.1. Innovative technologies and services for sustainable water use in industries**
 - Large-scale integrating project, up to 10 M€
 - This **large-scale action** should aim at the development and implementation of new, reliable and cost-effective '**clean**' **water technologies** for helping European industries to **reduce water use, mitigate environmental impacts, and better manage health and safety risks, while improving their product quality and process stability**. Proposals should consider adaptive solutions, within an integrated water resources management approach, which include **monitoring, information management systems and cross-sectoral technologies for reducing wastes and by-products** (e.g. separation technologies). Issues of industrial cooling, scaling and (bio)fouling, and monitoring of critical compounds in process water streams should be given due consideration. Project consortia should consist of at least **50% of industrial partners** representing various industries, inclusive of relevant SMEs, and at least 50% of the requested EC contribution should be in benefit of industrial partners. (**SME-relevant topic**)



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Cont.

- **ENV.2007.3.1.1.2. Technologies for measuring and monitoring networks**
 - Small or medium-scale focused research projects
 - **Priority will be given to miniaturised sensing systems and wireless network technology for the deployment of essentially self-sustaining wireless sensor networks aimed at spatial and temporal water quality assessment.**
 - A relevant **participation of industrial partners** as well as of **SMEs** is requested



Area 6.3.1.2. Soil

- **ENV.2007.3.1.2.1. Development and improvement of technologies for data collection in (digital) soil mapping**
 - Small or medium-scale focused research projects
 - Development, implementation and validation of new **field, remote and proximal observation technologies** capable to improve, accelerate and objectify the collection of soil data, allowing at the same time a non destructive approach.
 - The participation of industrial partners, and in particular of SMEs, is essential.
- **ENV.2007.3.1.2.2. Development of technologies and tools for soil contamination assessment and site characterization, towards sustainable remediation**
 - Small or medium-scale focused research projects
 - Technologies and tools for **site characterisation and monitoring** of contaminated soils - **industrial partners**, and in particular of **SMEs**.



Area 6.3.1.3. Waste

- **ENV.2007.3.1.3.1. Development of integrated waste management technologies for maximising material and energy recovery/recycling of the organic (humid) fraction of municipal solid waste**
 - Research activities on the **integration between different processes for the treatment of biodegradable waste** are needed, looking also at the potential consequences deriving from their large scale implementation on C balance and the release of greenhouse gases. The research shall cover processes treating **source-separated biodegradable wastes as well as the organic (humid) fraction coming from a pre-treatment stage**. The **co-treatment of organic waste deriving from other sources may be also considered**. It is requested the **demonstration of at least five different integration schemes** implemented in different European regions, **accompanied by Life Cycle Assessment studies, Life Cycle Social analysis and externality/Life Cycle Costing analyses**. LCA studies shall be ISO 14040 conform and data shall be provided according to data format and quality requirements set up by the European Platform for LCA. Other tools for process evaluation (e.g. entropy and exergy analysis, material and energy flow analysis, cost-effectiveness analysis, etc.) could be applied. Consortia should be constituted by a balanced mix of research institutions, industrial partners (with a relevant share of SMEs), municipalities and other end-users. (**SME-relevant and Policy relevant topic**)
 - **Funding scheme: collaborative projects (large-scale integrating projects) (Community contribution from 4 up to 10 million Euros)**



- **ENV.2007.3.1.3.2. New technologies for waste sorting**
 - New/improved technologies for the **sorting process** of environmentally and economically important **waste material flows** (e.g. plastic polymers, WEEEs, Automotive shredder residues, etc.)
 - **automatic identification units**, including **sensors and measuring technologies for the quality assessment** of sorted or unsorted fractions
 - A **Life Cycle Assessment study (ISO 14040 conform), Life Cycle Social analysis and externality/Life Cycle Costing analyses** shall be carried out.
 - This action should foresee the participation of **at least 50%** (in terms of number of partners and budget) of **industrial partners**, with a relevant presence of SMEs. **Funding scheme: collaborative projects (small or medium-scale focused research projects)**
- **ENV.2007.3.1.3.3. Networking and preparatory action in view of developing cost-effective, environmentally-safe waste treatment technologies and services adapted to the needs of developing countries, within a targeted life cycle approach**
 - The need of **appropriate and cost-effective technologies for developing countries**, will be addressed through an action for networking among research centres, industries and end-users.
 - **This action should be focussed on Asian countries**
 - **Funding scheme: coordination and support actions (coordinating type)**



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Area 6.3.1.4. Clean Technologies

- **ENV.2007.3.1.4.1. Networking and preparatory action in view of control of mercury in industrial processes and products**
 - **coordination action**
 - **safe disposal of existing and future mercury stocks, control of mercury emissions (e.g. coal-combustion and small scale gold mining), substitution of mercury in products and processes**
 - **The participation of industrial partners, and SMEs, is essential. (SME-relevant and Policy relevant topic)**
 - **Funding scheme: coordination and support actions (coordinating type)**



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Area 6.3.1.5. Built environment

- **ENV.2007.3.1.5.1. Low resource consumption buildings and infrastructure**^[1]
 - This **coordination activity** aims at **promoting and facilitating the uptake of new or improved technologies for the built environment which reduce the life-cycle environmental impact associated to the use of multiple, natural and non-renewable resources (water, primary raw materials, energy, land) and the generation of waste. Funding schemes: coordination and support actions (coordinating type)**
- **ENV.2007.3.1.5.2. Performance indicators for health, comfort and safety of the indoor built environment**^[1]
 - This **coordination activity** will help to **enable the application of new design and technologies that improve the impact of the indoor built environment on health, comfort, feeling of safety and positive stimulation** (including those for people with impaired cognitive, sensorial or motor capacity).
 - **Funding schemes: coordination and support actions (coordinating type)**

These actions will be executed in coordination with and complementary to the sub-activity 'Environment and Health' of the Environment (including Climate Change) Theme, as well to the 'Nanosciences, Nanotechnologies, Materials and new Production Technologies' – NMP Theme in relation to technologies for the built environment and cultural heritage.



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Area 6.3.2.1. Assessment and conservation in cultural heritage

- **ENV.2007.3.2.1.1. Damage assessment, diagnosis and monitoring for the preventive conservation and maintenance of the cultural heritage** [\[1\]](#)
 - This action should deliver new or improved **non destructive technologies for the damage assessment, diagnosis and monitoring of the cultural heritage**.
 - The **participation of Mediterranean Partner Countries**, in particular, is encouraged.
 - **Funding scheme: collaborative projects (small or medium-scale focused research projects)**

[\[1\]](#) This action will be executed in coordination with and complementary to the 'Nanosciences, Nanotechnologies, Materials and new production Technologies' – NMP Theme in relation to technologies for the built environment and cultural heritage.



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Area 6.3.2.2. Networking, knowledge transfer and optimisation of results in cultural heritage

- **ENV.2007.3.2.2.1. ERA-NET^[1] for the preservation of the tangible cultural heritage**

- This **ERA-NET** should aim to implementing the **networking of research programmes** in this field
- **Funding scheme: coordination and support actions (coordinating type) (Community contribution up to 2 million Euros)**

[1] This topic is subject to a joint call for ERA-NETs across the themes
– See Annex IV4 4

- **ENV.2007.3.2.2.2. Consolidation and dissemination of results related to cultural heritage**

- This action, mainly organised as a **large European Conference in principle in 2008**, should **promote the exploitation and spin off of EU research results**
- **Funding scheme: coordination and support actions (supporting type)**



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Area 6.3.3.1 Risk assessment of chemicals and alternative strategies for testing

- **ENV.2007.3.3.1.1 In-silico techniques for hazard-, safety-, and environmental risk-assessment** [\[1\]](#)
 - The objective is to improve **in-silico techniques**, including Quantitative Structure Activity Relationships (QSAR) models for environmental risk assessment
 - **eco-toxicological endpoints which are of highest relevance for the Replacement and Reduction of animal use in chemicals safety testing.**
 - **Funding scheme: collaborative projects (small or medium-scale focused research projects)**
- **ENV.2007.3.3.1.2 Defining a long-term research strategy for the full replacement of animal tests for repeat dose systemic toxicity** [\[1\]](#)
 - high-level **workshops** and experts meetings in order to develop a long-term research programme on the **development of alternative methods for the assessment of repeat dose systemic toxicity without compromising safety aspects.**
 - **Funding scheme: coordination and support actions (coordinating type)**

[\[1\]](#) These actions will be executed in co-ordination with and complementary to the 'Health' Theme within a common programme on Replacement, Reduction and Refinement of Animal Testing.

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Conclusions

- A work programme strongly focused on the promotion of the participation of industry and SMEs
- Priorities for 2008: those listed at the end of the work programme are just indicative
- Roadmapping principles: to minimise the overlaps with on-going activities while providing support to the evolution of the political priorities