



# Tackling urban soil and groundwater contamination caused by chlorinated solvents



Investing in Opportunities

CityChlor is a European project with partners from Flanders, France, Germany and The Netherlands. The aim of the project is to elaborate an integrated approach for the remediation of contamination with chlorinated solvents in urban environments.

The densely populated areas of Northwest Europe face similar difficulties with the presence of chlorinated solvent pollution. So far, regions have developed their own partial solutions. Now CityChlor will bring together different viewpoints, experiences, tools and keys for solutions.

The total research budget amounts to 5,2 M€ of which 50% is financed by the INTERREG IV B programme for Northwest Europe. The project started end 2009 and will run for 3,5 years.

## **New solutions for complex pollutions**

Remediation of a pollution with chlorinated solvents is complex. Not only for technical reasons but also because the pollution is often caused by small-scaled activities as dry-cleaners and printers that don't have the financial resources to solve it. In addition these sites are mostly situated in cities where the pollution hampers the redevelopment. That's why an integrated approach is needed to tackle the problem.

## **Developing an integrated approach**

The project starts with a review of the existing knowledge, present innovative approaches and technologies as well as different national approaches and their bottlenecks. Starting from this inventory – including needs for practical implementation strategies or research-further study and demonstration sites will be set-up on the following 4 topics:



- ▶ Technological innovation and transfer of know-how towards implementation on site characterisation and remediation of soil and groundwater pollution. Integration of innovations in routine procedures will be facilitated by demonstration sites, technology verification, uptake in codes of best practice and workshops.
- ▶ Integrated groundwater risk management approaches and their implementation at urban level. Such approaches, recently developed and applied at pilot scale in Germany and the Netherlands will be further developed, described and demonstrated as best practise.
- ▶ Cost-benefit of integrated approaches and alternative financing mechanisms. Besides the political consensus on the “polluter pays principle”, public driven and pre-financed integral approaches considering pollution clusters appear to be more appropriate solutions. A thorough analysis of the pros and cons will help to optimise the methodologies to be applied.
- ▶ Risk communication and community involvement. Long-term remediation or natural attenuation approaches in densely populated areas require public acceptance. Concepts to create a realistic perception of risks and to establish risk communication with stakeholders are developed.

Moreover it facilitates the implementation of the Groundwater Directive and European harmonisation. This is also relevant as the service providing sector is acting more and more on international scale and national procedures are increasingly hindering a European market for environmental technologies.

## Contact

For more information please visit our website

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## CityChlor partners

The realisation of the project is in the hands of a partnership between authorities, research institutes and cities. In total, 9 partners spread over Flanders, the Netherlands, France and Germany are involved:

- ▶ OVAM (lead partner), cities of Ghent and Mortsel (Flanders/Belgium)
- ▶ ADEME and INERIS (France)
- ▶ ITVA and municipality of Stuttgart (Germany)
- ▶ Bodem+ and municipality of Utrecht (The Netherlands)

Next to these partners, professional federations, experts and remediation funds are involved in the project.

