



SNOWMAN NETWORK

Knowledge for sustainable soils

FACTSHEET

INSPECT

Integration of SPatially Explicit risks of ConTaminants in Spatial Planning and Land Management

DURATION OF THE PROJECT:

15-1-2010 - 30-04-2012

PROJECT COSTS:

Total project costs: 404,219.38 EURO

SNOWMAN network contribution (ADEME, SKB, OVAM):

229,384.32 EURO

CONSORTIUM PARTNERS:

Lead organization: Centre National de la Recherche Scientifique (CNRS) France

Coordinator:– Renaud Scheifler

Research partner organization: University of Antwerp, Belgium

Research partner organization: Alterra, The Netherlands.

OVERALL OBJECTIVE:

The goal of the project was to further refine a decision support system (DSS) that was developed within another European project BERISP ('Breaking Ecotoxicological Restraints in Spatial Planning'). This DSS is a free computer program which allows an iterative procedure in spatial planning processes, in which a planner can review different scenario's of landscape uses and habitat distribution against scientific knowledge on risks of pollutants for organisms (little owl, blackbird, small mammals and large herbivores). Finally, the different scenarios are compared in pairs. Because of the use of maps, the DSS is a strong visual instrument. The program consists of scientific models that were validated for a number of contaminated areas in the Netherlands, Flanders and France. The research partners are the University of Franche-Comté (F), the University of Antwerp (B) and Alterra Wageningen UR (NL). The DSS is available at www.berisp.org

PROJECT RESULTS:

The overall objective of this programme was to better integrate environmental risk assessment of contaminants into land management and spatial planning processes in order to mitigate possible risks as efficiently as possible. To reach this goal, the operational objectives of this project are to validate and extend the use of a spatially explicit decision support system (DSS) named BERISP and to spread it within the scientific community and stakeholders involved in the study and management of contaminated sites.

The first objective of the programme was to develop BERISP-DSS for a wider range of application

than its initial capabilities (one case-study: the “Afferdensche en Deetsche Waarden” floodplain, one metal: Cd, one food web: the little owl *Athene noctua*). To fulfil this aim, data from previous scientific programmes and new data were collected on two different polluted sites: the Hageven-Plateaux reserve and the Metaleurop Nord area that have been contaminated by zinc and lead smelters. Three new metals (Cu, Pb, Zn) have been added in the DSS using transfer equations from data from previous and the current INSPECT programmes. Similarly, based on data from the literature and from INSPECT, two new target species (the European blackbird *Turdus merula*, large grazers) have been added in the DSS. Moreover, the food web of the little owl has been specified (the group of vole species undifferentiated in the first version has been divided into the common -*Microtus arvalis*- and the bank -*Myodes glareolus*- voles in the new version) and extended to take into account more species (the wood mouse *Apodemus sylvaticus*, undifferentiated group of beetles) that are included in the little owl diet. Data have also been collected on the common kestrel (*Falco tinnunculus*) to be implemented further in the DSS. Both the manual for users and the website have been updated. According to the communication plan of the programme, two presentations of the DSS were done in stakeholders meetings (one in Mechelen, Belgium, one in Gouda, The Netherlands) and eight talks were presented in scientific congresses. Four articles presenting some parts of the programme were published in international scientific journals, and the DSS was presented in an article in *Environnement Magazine*, a French journal for professionals of the environment (industry, national agencies, administrations...).