

FINITE VOLUME POINT DILUTION METHOD FOR TRACER INJECTION AND DETERMINATION OF TRANSFER VELOCITIES OF WATER IN THE SATURATED ZONE - TOOL

RIVER BASIN MANAGEMENT ISSUE										
Water Quality						Water Quantity		Alterations		Others
1	2	3	4	5	6	7	8	9	10	
C			C		C					
(1) Diffuse pollution by agriculture (3) Contaminated sediment and floodplain soils (5) Pollution by organic matter (7) Water scarcity (9) Hydromorphological alterations						(2) Salinisation (4) Large scale pollution due to past mining / industries activities (6) Emerging compounds (8) Floods and low flow (10) Soil erosion				
C = System Characterisation T = System Trend						M = System Monitoring R = System Remediation, Mitigation				
RIVER BASIN										
Danube	Ebro	Meuse	Elbe	Brévilles	Others					
				✓	Not river basin specific					
Spec. : Results specific to selected River Basin										
KEY FINDING TYPE										
Laboratory based				Field based				Modelling		
				✓				✓ - Analytical solution		
BENEFITS TO END-USERS										
Technical			Management		Policy					
WFD Implementation	Research		River Basin		Compliance			Policy making		
✓	✓									

INTRODUCTION

HYDRO 2 aims at collecting geological and hydrogeological data in order to improve the **understanding of hydrogeological / hydrodynamic phenomenon and contribute to the understanding of pollutant transfer.**

A better characterisation of hydrology and hydrodynamics in the saturated zone and in the unsaturated zone is a pre-requisite to improve the understanding of pollutants transfer.

HYDRO 2 focussed on assessing water input and water output in the **Brévilles catchment**. Together with FLUX 1 sub-module which deals with the chemical aspects, it contributes to pesticides modelling developed in the WP Compute 2.

TOOL SUMMARY

This tracer injection method and associated methodology for results interpretation enable the determination of local velocities in the saturated zones. This method is easy to use and relatively low cost. This tool can be used by hydrogeologists in service providers, consultancy and research institute.