# FGI - Programme 2: RADIOECOLOGY

*G. Deville-Cavelin (IRSN), H. Biesold (GRS), V. Chabanyuk (CC)*

## > Purpose

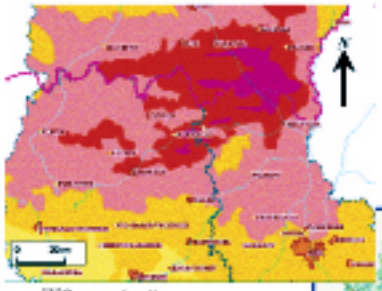
The main purpose of the RADIOECOLOGY programme focuses on studying the **radioecological consequences of the accident** mainly in the Kyiv, Zhytomyr regions of Ukraine, Gomel, Mogilev regions of Belarus, and Bryansk, Kaluga regions of Russia. The results of solutions of tasks presented below are integrated into the geographic and technical **R**adio **E**cological **D**atabase **A**fter **C**hernobyl REDAC. This data base will be used for the subsequent study of the impacts, for modelling, and for the development of strategies for waste control and counter-measures.

## > Tasks

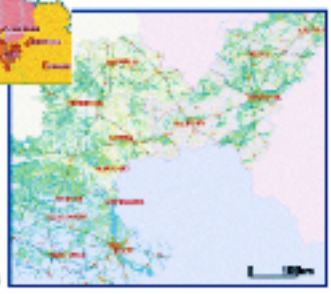
- Ecological Portrait
- Contamination
- Wastes Dumps and Operational database

Wastes Dumps categorisation

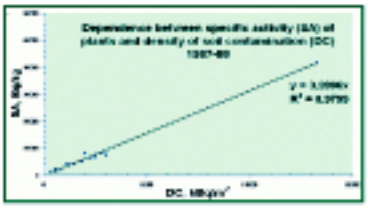
Screen of the Database

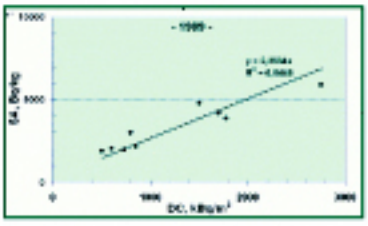


$^{137}$Cs map (part)



Zone of studies

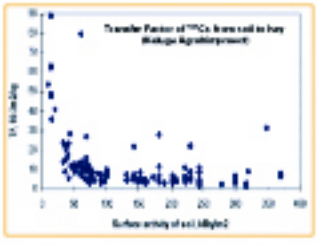




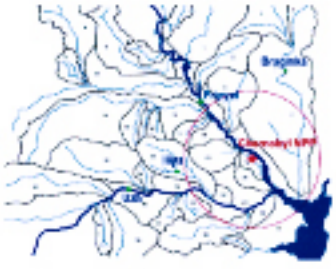
*Transfer factor of $^{137}$Cs from soddypozolic soil to cereals*

## > Tasks

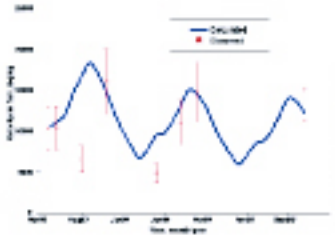
- Radionuclides transfers
  - from soils to plants
  - by surface run off
  - in aquatic environment
  - from plants to animals



*Example of transfer factor to animal feeding: TF for $^{137}$Cs from soil to hay*



30km zone - basic watersheds on surrounding area



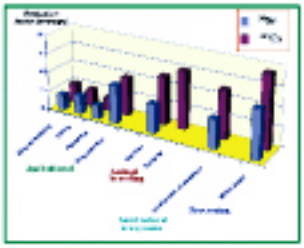
*The dynamics of Cs-137 activity in goldfish from Lake Kozhanovskoe calculated by the TRANSAQUA model with the validated parameter of radiocaesium bioaccumulation*

## > Tasks

- Urban environment:
  - Modelling transfers
  - Countermeasures
- Countermeasures in Natural and Agricultural Areas

*Screen of the database for countermeasures*

Classification of Countermeasures



*Examples of Effectiveness of Countermeasures*