

TOWARDS THE NATIONAL GEOCHEMICAL DATABASE OF ITALY: LOGICAL FRAMEWORK AND NETWORK FEATURES

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The importance of monitoring the environmental pollution of soil, air and water caused by industrial and agri-cultural activities is now recognized by all the Organizations in charge of development control. However, the evaluation of environmental damages must be based on the knowledge of the geochemical baselines, which are specific for any given territory, and exhibit remarkable changes with the nature of the substratum and climatic conditions. The simple application of internationally accepted tolerance limits could be deceptive and could penalize the productive capacities of the territory.

The MURST Project IGM-Italy provides a fundamental contribution to this work. The definition of Geochemical Baselines is the main objective of the Geochemistry Task Force (GTF) in the FOREGS framework as well as of the project IGCP360. A principal aim of the Project is to realize the National Geochemical Database of Italy, which is devoted to the acquisition, integration and distribution of geochemical data. Two engines compose this database. The first one is a GIS that manages the geocoded informations. The second one is an SQL database that stores the geochemical data. Both the GIS and the database are interfaced to the INTER-NET allowing data input/output (maps and tables), by web interface. The relational structure of the database and the integration with geographical information is conceived primarily to allow a flexible use of the geochemical data, respecting the true distribution of the information in time and space, and characterizing the real pattern of the geochemical baseline.