

Global Geochemical Baselines

Website: www.bgs.ac.uk/iugs/home.html

Project Goal

Establish a global geochemical database characterizing in detail the variations in the present background levels of chemical elements in the Earth's surface environment. Such a database would constitute a baseline that provides a scientific basis by which to identify and assess global changes in the chemistry of the Earth's surface brought about by economic development, population growth and other causes, which could have detrimental impacts on the health of humans, animals, and vegetation.

Project Phases

Assess the requirements and methods for global geochemical mapping and creating a Global Reference Network (GRN) of geochemical data against which existing local and national geochemical data could be compared and normalised (IGCP Project 259, 1988-1992). Recommendations published in, "A global geochemical database for environmental and resource management", by A.G. Darnley et al., 1995 UNESCO Publication 19.

Establish a worldwide network of professional geochemists. Develop a set of methods for GRN sampling in temperate climates. Initiate discussion of methods for sampling in other climates. (IGCP Project 360, 1992-1997). Published FOREGS field manual, which details internationally-agreed standardized methods for geochemical sampling in Europe and other glaciated terrains.

Collect the GRN samples in accordance with established, internationally-agreed methods. Analyse samples and establish a global geochemical database (1997 to project completion).