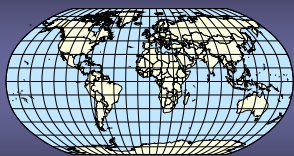


IUGS/IAGC Task Group on
"Global Geochemical Baselines"



Mapping the Geochemistry
of the Earth's Land Surface

GLOBAL GEOCHEMICAL BASELINES

A fundamental international project for environmental and resource management in the new millennium and for better quality of life for present and future generations

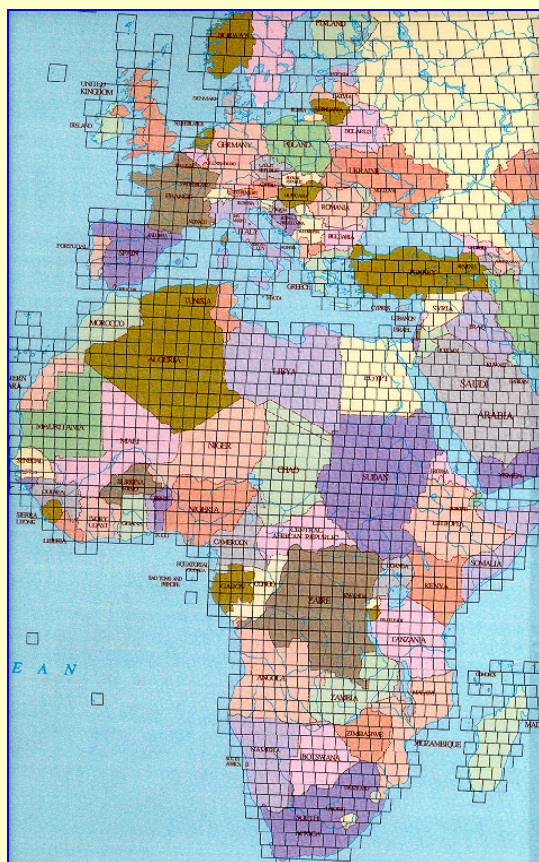
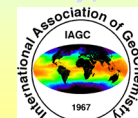
<http://www.globalgeochemicalbaselines.eu/>

It is a well-known fact that international interest, during the last few years, has been turned onto the possible hazardous consequences on the health of humans, animals and plants, because of environmental contamination by toxic elements. The rapid rates of economic development and population increase on our planet have caused the aggravation of environmental problems, concerned with degradation from uncontrolled urban and industrial development, intensive agriculture and overexploitation of water resources. All these problems are affecting, on a global scale, the chemistry and sustainability of life support systems. Hence, the significance to establish the Global multi-element Geochemical Reference Network.

(Funding by National Geological Surveys and sponsors. Sponsors are required to fund the project in economically poor countries and those with large areas)

The project is carried out under the auspices of the:

- International Union of Geological Sciences (IUGS)
- International Association of GeoChemistry (IAGC)



The Global Geochemical Reference Network covers the land surface of the earth by 5000 cells with dimensions 160 x 160 km. In each cell five random drainage basins will be selected from which samples of residual soil, humus, overbank sediment, stream sediment, stream water and lake sediment will be collected.

AIMS:

- To supply systematic multi-element geochemical data, which will be used to compile the Baseline Geochemical Atlas of the land surface of the earth;
- To provide reliable information on the chemical composition of different surface materials (e.g., residual soil, humus, alluvial soil, stream sediment and stream water) at sites which cover uniformly the land surface of the globe;
- To have specific sampling sites in each country for continuous monitoring of their geochemistry, which will make easy the recognition and measurement of 'changes' caused by any future abnormal event;
- To have reference sites for standardisation of the more detailed national geochemical data sets of each country, and the development of a uniform international database;
- To have an archive of reference materials from local materials of each country that will be used for other, more specialised studies, e.g., isotopic determinations, chemical speciation studies, determination of persistent organic pollutants, etc.

The systematic multi-element geochemical mapping of the earth's land surface will provide compatible results, which will be useful to agriculture, animal-rearing, epidemiology, urban planning, legislation, and to policy- and decision-makers concerned with the sustainable development of our planet.