

EUROGEOSURVEYS RTD POLICY SECTOR

The role of Research and Technology Development in Earth Sciences

THE EARTH

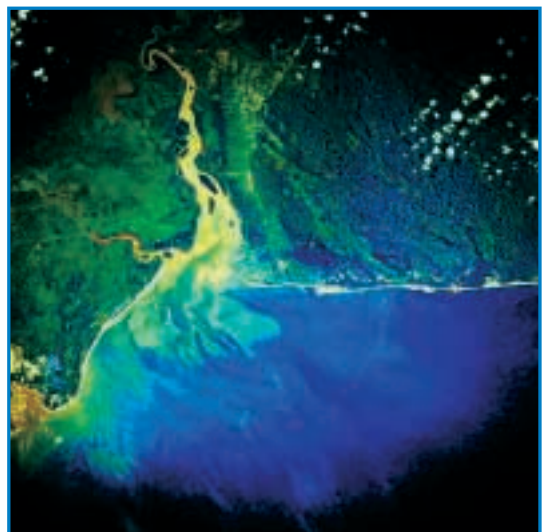
The earth is at the same time the habitat we live in and the provider of natural resources we depend on. Over time, earth has accumulated and concentrated energy, ore deposits of all kinds and several building and construction materials. These form the basis of our wealth and economic growth.

Earth also provides us with drinking water, with soils to harvest from and with a landscape to build on. These landscapes have been formed by geological processes, active over sometimes millions of years, either continuously at a gentle pace, or in an intermittent, brutal and catastrophic way, devastating both the habitat and its inhabitants.

The demand for better product quality, improved safety and health, environmental protection and sustainable development adds new dimensions to technological development. They are now mainstream concerns.

Geosciences, with its specialised knowledge, its “unique” research and demonstration equipment and multidisciplinary integration of technologies can increasingly provide the necessary leads to innovation.

The difficult geological conditions in Europe have resulted in a leading position for European geoscientists. This leading position is constantly threatened on the world market where globalisation of trade and services has replaced the protected regional or national markets.



INNOVATIVE GEOSCIENCE RESEARCH

Continued research will provide society with

- new reserves of non-replaceable resources,
- new and innovative uses of the subsurface,
- new safe sea and water sites for building, construction and food production,
- geological ways of restoring the stability of climate.

New methodologies will help us find simplicity and reason in the vast amounts of data that we have available, thus revealing:

- the secrets behind geo-hazards such as earthquakes, volcano eruptions and land slides,
- possibilities to predict, prevent or remedy major natural and environmental disasters,

In order to achieve these goals, a better understanding of the earth and the physical and biological processes acting upon it will help us to ensure a sustainable and safer environment for a prosperous society.

In the past ten years, members of EuroGeoSurveys have co-operated in several EU programmes in the areas of environment, health, remote sensing and sustainable development.

This has resulted in the creation of European geological data base systems, the creation of virtual laboratories, the development of environmental monitoring systems as well as the recognition of new CO₂ sequestration techniques, still to be demonstrated.

THE FUTURE

EuroGeoSurveys, with its worldwide cooperation links provides the ideal network of excellence to create opportunities for new innovative technological research and development.

As such, EuroGeoSurveys will promote the use of:

- the diversity of earth sciences to fully exploit geological opportunities, as well as to protect society from geological disasters and environmental errors,
- system of Global Monitoring of Environment and Safety based on technologies, initially applied for exploration of raw materials and linked to large databases,
- geologically sound methods to prepare society for the effects of global climate change scenarios,
- opportunities offered by geosciences to counter or mitigate increased erosion and sea level rise.

Studies of geological records will help us to prevent or prepare for possible cataclysms of all kind: e.g. impact of meteorites and reactivation of continental drift.

To that purpose, geoscientists will also have to integrate with other sciences to generate the new viewpoints and research ideas needed to cope with the ever-increasing needs for innovation. New science areas have already seen the light of days: geo-matics, geo-medicine, while others will follow (geo-biology).



FOR MORE INFORMATION

If you would like to know more about the activities of EuroGeoSurveys on RTD, please contact the Policy Sector Head :

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