



The Association of Geological Surveys of the European Union
(EuroGeoSurveys)
in their position as
custodians to their national natural resources
and
guardians of their terrestrial environment
present their contribution

**A European Food and Public Health Authority.
The future of scientific advice in the EU**

Richard Annells
Secretary general
EuroGeoSurveys
3, Rue du Luxembourg
1000 Brussels
Tel +32 2 282 95 14
info@eurogeosurveys.org
www.eurogeosurveys.org

December 1999

1 Introduction

EuroGeoSurveys is a European non-profit association. It is constituted by the Directors of the national Geological Survey organisations (GSOs) of all fifteen member states of the European Union plus Norway and Iceland and can draw on the expertise of over 7000 professionals. In most countries the GSOs exist continuously since more than 100 years.

The main aim of EuroGeoSurveys is to provide the entire range of European Union institutions with expert, balanced and practical pan-European advice and information as an aid to problem-solving and policy formulation in areas such as the use of natural resources (minerals, water, energy and soils), and the sustainable management of environmental issues and natural hazards.

Further details of EuroGeoSurveys are given at Annex A.

1 General remarks on the paper on the creation of a European Food and Public Health Authority

The paper well written and concise, relates mainly to the formal questions about what structure should be given to such a authority and how it should be placed optimal into the hierarchy of the European Commission to guaranty the three outstanding criteria of excellence, independence and transparency.

For the placement of the new authority two points are of main interest

- how can it act most reliably
- how can it gain public trust.

For both points a scientifically unquestionable way of decision making, based on a solid data base related to the questions to be decided, is one precondition. Another precondition is the scientific excellence of the staff. As mentioned in the paper, the main problem for such European scientific institutions is to overcome the contrast between the academic career at universities and the important but more administratively guided work in these centres. This limits the availability of scientifically outstanding people.

1 Comments on the text and suggestions for solutions to some of the problems

Looking at the vast tasks awaiting the new authority there are two fields where EuroGeoSurveys can contribute essentially to the new authority: EuroGeoSurveys can provide reliable data on the momentary situation and its historic development of our environment in relation to public health, on its analysis and on actions which are related to keep it safe. The environment is only marginally mentioned in the paper. It seems to have the most important, however, to date often underestimated influence on our health.

EuroGeoSurveys also could provide experts from all countries of the European Union for research and administration of earth related data. This could lead to new approaches in the research policy as shown in the section on research policy (page 3 of this opinion)

0.1 Environment:

Despite the fact that the environment is already covered by another European agency, it will form one of the main points of the new authority due to its central influence on human health. The environment represents the entire web of geological, biological and human interactions with its strong influence on food and health of the population. It comprises not only the air we breathe and the water, one of the most important single elements on earth for life, but also the soil on which grow the plants we eat or which we feed to our livestock, forming a main part of our nutrition („the food chain“). Despite that water covers 70% of the earth's surface, only 2.5% is freshwater usable for human or animal or plant consumption.

On the other end the environment is used to store the waste which we produce, which may be poisonous and has to be strictly confined. With the growing industrialization more and more dangerous waste is produced and has to be stored in a safe way to the environment, that is to OURSELVES. One of the big discussions in many European nations in this field is related to the safe storage of nuclear waste.

The environment, this complicated web of interactions, needs constant care which consists out of the following three main points

- surveillance (monitoring) of the situation
- creating a legal background for necessary actions
- creating new policies for research on the complicated interconnection between the public health and the environment.

0.1 Surveillance of the environment

It is constantly necessary to monitor any changes in our environment.

The environment starts out from rocks which form the geological background of our environment from which the soil is created and which strongly influences the content of the groundwater. It is modified by the human use (e.g. fertilization, waste storage, industrial pollution) or natural occurrences (e.g. floods, volcanic eruptions), which can cause sudden or slow changes. Therefore monitoring has to be done over many years and has to be based in its assumptions on the geological background.

Starting from this background, all the factors mentioned above influence the environment and cause constant and lasting changes. It needs specific methods to observe the mostly slight changes to the environment and with it to our life. It needs specific experience to interpret the values in a meaningful way.

A very important factor is the **chemical composition** of our environment. The GSOs are excellent information centres in this field. GSOs of all countries have developed methods optimized for their specific situation and based on statistically safe approaches. Methods used are founded on the investigation of stream sediments and flood plain sediments. These sampling techniques reflect the environment condition of a large catchment basin. They are investigating the water (e.g. stream or lake water), reflecting the soluble part of the chemical background and therefore the most moveable one.

GSOs are doing this since many years in a continuous mode and collect the information in large data banks with easy access all over Europe. They contain data on the contamination of soils and of the water following standard procedures for analysis and data classification.

0.1 Legal implications:

Actions necessary to control the environment need a legal background. Such a background normally is based on the maximum permitted limits of certain poisonous substances like heavy metals in the soil or the water. Policy makers have to be provided with a sound scientifically based basis for this part of the legislation.

An important point is the natural concentration of elements in the various types of soil and ground. They vary markedly between geologically disparate areas. State authorities, however, very often are not aware of these significant natural variations. There are already several legally binding limits for maximum concentrations that are lower than the natural concentrations of substances in a variety of locations. This can cause great legal problems declaring certain areas as „OFF limits“ and creating an uncomfortable feeling in the population living in these regions. In addition it undermines the public trust in public measures, obviously in contrast to the people's daily experience.

So providing the background on knowledge for the definition of legally relevant parameters has wide implications on the success of such a new authority and its acceptance by the people of the EU.

0.1 Research policy:

Although public health since many years has been the subject of several studies we have only limited knowledge of the reasons for a variable geographic distribution of health problems and diseases in man and animals. Natural environment is the least investigated sector behind the uneven distribution of diseases in Europe. Understanding the influence of the geochemical composition of rocks, soils and groundwater and the health of the local population requires the collaboration of geochemists, mineralogists and medical researchers. The combination of geological information with epidemiological studies would be an example of modern innovative utilization of multi disciplinary studies which could lead to important new findings.

Another important health factor could be the contents of pollutants (nitrates, pesticides, medicines) in the groundwater or the soil and their influence on the health situation of the population. In Europe, for example, fertilizers containing radium and uranium are widely used and cause a new distribution of these elements in nature. Experts of earth sciences are needed for pointing out the potential risk of soil deterioration on human health.

0.1 Supplying human expertise in the field of geo-related research:

in addition to the valuable data banks available at all of the national GSOs and which can be accessed via EuroGeoSurveys in a common and easy way, the GSOs could provide the experts necessary to perform the investigations related to human health indicated in the paragraphs above. Their scientific excellence is based on their thorough investigations in these fields since many years. Further advantages are their employment at governmental institutions, giving them the necessary independence from local or industrial funding, and their work at state institutions with a mixture of scientific and administrative procedures similar to their duties at institutions as the planned European Food and Public Health Authority. It is quite sure that ways can be found to send these experts for a limited time to European institutions and re-integrating them back home. It seems to be much easier than with people from universities or other purely academical oriented corporations.

Her should follow the annex A as in the opinion on the green paper you sent me.