GEOPHYSICS AND GEOCHEMISTRY-AN AID TO PREVENT AND PROTECT THE ENVIRONMENT

The geoecology as a new scientific direction in Albania, but we could demostrate their effectiveness, contributing in the solution of the environmental problems. We have carried out a lot of geochemical investigations in orticular regions of Albania, being firstly used in searching for base metals. Such investigations helping geological and geological-engineering problems have been carried out using geophysical radiometric, magnetic, electrical, gravity methods. Our experience of 30 years with geophysical and geochemical surveys allows us to apply them in new directions. The Geophysical Center of Tirana has begun the investigation "Geochemical Mapping und the Study of the Radioactivity of Albania". At Geophysical Center of Tirana are available the results of geochemical and geophysical, surveys which could demonstrate the effectiveness in using for environmental problems. The results of the geochemical survey carried out in the region of Elbasani showed that: Through geochemical methods are obtained very prominent pollution aureoles. The pollution intensity is higher for the elements related to the iron-nickel mineralization and to the metallurgical processes. The pollution spread out is related to the [illegible] elements possibility, wind directions etc.
The pollution in this region is very intensive; the penetration depth is more than 31 cm, affecting considerably the biosphere. The biogeochemical investigation confirms the presence of the pollution in all analyzed plants of the region with considerable intensities. Some immediate problems have been resulted from the experiments, which are to be solved in the future. The geophysical investigations can help in solving some problems, which have particular importance in the everyday life, such as: the danger of radon in the buildings and in the ground, and in the construction materials. Taking into the account the negative consequence of the radon concentration, it is not difficult to understand the importance of its study. From the geophysical surveys carried out during a long period we determined the following regions, in which as raw materials are used the geological formation high intensity of gamma-radioation: Kukës, Peshkopi etc. In some villages the population use water springs with unacceptable uranium and radium content to collect from them drinking water. The geophysical investigations can help many specific problems such as location of the adequate places to be used as waste deposit of a city or other industrial residues in order to minimize the decomposition and disactivation consequence. They can also help in solving other environmental problems such as erosion, landslide and other geological-engineering ones. Summarizing the application field of the and geophysical methods, it can be demonstrated that they are effective and necessary. They must be a component of the integration of other methods that will be used in future to salve the environmental problems.