

PRINCIPLES OF ENVIRONMENTAL GEOLOGY MAPPING IN LITHUANIA

VALIUNAS, J. Institute of Geology, Vilnius, Lithuania.

Environmental geology mapping (EGM) has been carried out in Lithuania since 1989 when the Environmental Geology Department was established at the Institute of Geology, Vilnius. The basic principles of EGM are: I. The use of available geological data, caused by the need to reduce the period and decrease the cost of mapping process. The 1:50,000 geological maps are the main information source for EGM. The other information sources are data from boreholes and special investigation results: geochemical, hydrogeological, mineral resources exploration. II. As a rule, three maps form an environmental geology map set. The Geological map presents information about surface geology. The main aspects shown on the Map of geological potential are geological resources. On the Ecogeological map (from ecological geology map), environment and resources protection aspects are emphasized. III. EGM is localized in administrative unit boundaries since it coincides with land-use planning system. To date whole Lithuanian territory has been mapped at a scale of 1:200,000, also the environmental geology maps have been compiled at a scale of 1:50,000 for 7 districts (one more is in progress) and the areas of 5 cities and their environs have been mapped at a scale of 1:25,000. A more or less universal map sets were prepared for four geomorphological reserves, including four maps in scale 1:10,000. IV. Until 1997 all maps were drawn manually. At present GIS software is using.