

NATURAL AND MANMADE BIOGEOCHEMICAL PROVINCES ON ARMENIAN'S TERRITORY.

SAGHATELYAN A.K., Center for Ecological-Noosphere Studies NAS RA, Yerevan, Republic of Armenia

The Republic territory is characterized by a complex geological structure conditioned by intense and diverse volcano-magmatic processes and accompanying ore forming ones which predetermine in its turn the primary geochemical state.

Typomorphic for the major part of Armenia's ore districts are found to be the following heavy metals: Mo, Cu, Pb and less - Zn, Sn, Ag. Metallogenic specialization conditions the high natural background of these elements in soil often exceeding maximum permissible concentration of a particular element. This fact explains the presence of natural biogeochemical provinces.

Manmade processes substantially change natural regularities of heavy metals concentration distribution and finally display themselves in two aspects.

In ore districts, technogenesis is mainly bound up with the activity of mining enterprises. Processes which occur there bring to the disturbance of natural parameters of spatial distribution of chemical elements concentration but without the inflow of new elements.

In industrial centers situated on volcanic plateaux and associated accumulative valleys, along with the increase in concentrations of chemical elements peculiar to the natural geochemical landscape, the intense inflow of alien elements occurs.

Long-term contamination conditions a stable character of environmental pollution. Research results of biogenic migration of elements and reaction of biota to pollution testify to the formation of anthropogenic biogeochemical provinces on industrial sites of anthropogenic biogeochemical provinces.

Thus, tessellation and heterogeneity of spatial distribution are peculiar to biogeochemical provinces on the Republic territory.