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CARTOGRAPHICAL DATA BASE OF GIS MODEL OF DISTRIBUTION OF RADIOACTIVE POLLUTION IN CASE OF EMERGENCY IN METSAMOR NPP.

Sustainable development is aimed at ensuring public safety. Radiation security has been an important component of this issue, especially in relation to the areas of high risk. Republic of Armenia is known as such an area where the Metsamor Nuclear Power Plant (NPP) has been operating since 1975 and its operation is inspected by Armenian Nuclear Regulatory Authority of the Government of The Republic of Armenia (ANRA). Together with WS Atkins Environment (UK) and Centre for Ecological-Noosphere studies of NAS RA (CENS) the ANRA carries out a project on the creation of GIS model of distribution of radioactive pollution in case of emergency in NPP.

For safe exploitation of NPP, planning and implementation of the national response to emergencies, ANRA collaborates with WS Atkins Environment and Center for Ecological-noosphere studies of NAS RA in creation of GIS model of distribution of radioactive pollution in case of emergency in NPP in relation to complicated relief of Armenia and movement of aerial masses using the software product of ESRI Co. ArcViewGIS 3.2a.

First of all, the following layers were created by us:

- state borders,
- roads,
- relief (isolines),
- river system,
- lakes and reservoirs,
- forests and meadows,
- settlements and population at the 30 km zone of NPP,
- direction of the movement of aerial masses on the territory of NPP.

The scanning and digitizing of topo-maps of Armenia (scale 1:200000) has been done by staff of WS Atkins Environment.

Besides, the development of sector-model of NPP and adjacent area of 30km radius is under way. According to the world standards, this model consists of 16 sectors. The population size is estimated for each settlement in these sectors for making efficient evacuation of people to the safety zones in case of emergency in NPP.

Later, we plan to update the data-base on a basis of the newly conducted national census of population and to create the new layers of GIS-model.