

Using Geo-informational System for determining land degradation processes

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The largest part of agricultural lands of the Republic of Moldova is concentrated in the arid zone.

Frequent droughts (once in 2-4 years) inflict vital casualties to agriculture of the Republic of Moldova. However droughts influence doesn't only limit itself to forming production. Drought after-effect is highly ruinous for water reserves, industrial enterprises functioning rhythm and human health. Droughts make for the drying up and crumbling of soil which is subject to excessive human influence and result in land degradation (desertification.) Term desertification means land degradation in the droughty zones. It is necessary to mention that the droughty ecosystems are extremely fragile and sensitive overexploitation.

Nowadays in the Republic of Moldova 33-37 % of agricultural lands is eroded. Republic of Moldova joined the United Nations Convention to Combat Desertification on December 24, 1998. The Government of the Republic of Moldova ratified the National Action Plan to Combat Desertification in 2000.

Within the framework of executing the National Action Plan by National Committee to Combat Desertification Geo-informational System on arid questions was organized. In addition a lot of indexes corresponding to international standards, were used for the evaluation of drought of the territory and land degradation processes. Mostly this information is presented in maps (erosion, landslides, aridity, water resources).

A rich experience of using satellite information for determining land degradation demonstrates high effectiveness of this method.Satellite determining methods are particularly important for organizing the monitoring of land degradation. In the Republic of Moldova area with homogeneous underlying surface (arable lands, pastures) is 2,2 millions hectares sufficed to get reliable information, using information from AVHRR satellite, including cartographic information.

This information can be got in a rut with existing land monitoring, which is carried out in system of Hydrometeorological Centre as well as with Soil Science Institute

measuring. Land monitoring includes survey and evaluation of land stocks, including soil and vegetation. Consolidation of surveys of natural environment is recommended along with an assessment of evolution of desertification focuses. Also a control ensuring observation of ecological norms in utilization of natural resources as set within ecological zones and periodical cartographic analysis is recommended.

In 80's large-scale land experiments connected with aerospace soil sounding were carried out in the Republic of Moldova. Information obtained as a result of these experiments is used nowadays for preparing and implementing sustainable development strategy.