

REGIONAL ECOLOGY KURSK REGION

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Ecology implies the relationship of organisms, communities among themselves and with the environment. Russia has enough difficult situation with ecology, because Russia is one of the most polluted countries in the world. Economic situation exacerbates ecological one, and the severity of the prevailing negative trends is growing every day. Major rivers shallows, large amount of small rivers vanish; superficial water pollution, depletion and pollution of the groundwater, drinking water quality degradation, seas pollution, deforestation are big problems in the Russian Federation. Plowing up of turf-covered slopes, low quality agricultural methods cause accelerated soil erosion. Also there was a large degradation of the land resources in the recent years.

The environmental pollution includes:

- 1) contamination of the lithosphere - occurs as a result of the construction and mining, and also due to industrial, agricultural and household waste;
- 2) the hydrosphere contamination, which occurs as a result of the waste dumping into the seas and rivers;
- 3) atmospheric pollution, which occurs as a result of the combustion of the mineral fuels.

Kursk region is one of the most beautiful on the nature and rich in the minerals in Russia. The huge supplies of iron-stones bed in the bowels of the earth of area. The most important irreplaceable gift of nature are black earth soils. One of major ecological problems of area and all Russia is a problem of maintainance of our main natural resource — black earth, because there is worsening and destruction soil cover as a result of development of erosion, violation of technology of treatment of soils, mining, and also a large problem with the quality of drinking-water.



Black earths are famous the fertility. They contain plenty of humus (approximately to (8-9%) under the natural steppe vegetation and (4,5-6,5%) on ploughed field), connections of nitrogen, potassium, calcium, phosphorus. They have slightly acidic or near-neutral pH for the good sprouting of plants.

The soil cover of Kursk region is subject of erosion. Wide distribution of slopes of different steepness, loose rocks composing territory, thundershower character of rainfalls, rapid melting of snow are the course of erosive processes.

The region has about 600,000 hectares of land, which need protection from erosion.

All-russian research institute of agriculture and defence of soils from erosion, located in Kursk, developed the “General chart of ravine measures”. The whole complex of measures of fight is foreseen against erosion: agrotechnical (ravine treatment of soil, high agrotechnics), fitomeliorativnye (zaluzhenie of steep slopes, forest bells) and hydraulic engineering (water- detention billows, pletnevye dams and other). As we know water - is source of life. But in the Kursk area there is serious problem with water. For the results of laboratory researches during the row of years to 14% investigational tests fall short of Gost 2874-82. And a drinking-water on physical and chemical indexes and to 8% tests is dangerous in an epidemic relation.

So on results 2013 in the districts of the Kursk area water falls short of norms.

Medvensk district	17,3%
Sudzhansk district	17,7%
Solncevsk district	18,2%
Khomutovsk district	20,1%
Fatezhsk district	22,9%,

Samples of drinking water does not meet the state standards in the areas of Kursk region on bacterial indicators at the average regional index of 6.8%.

Glushkovsk district	68,5%
Zolotukhinsk district	37,3%
Kastorensk district	22,1%
Oboyan district	20,9%

In relation to the atmospheric air, here is also serious enough problem, because contamination of the atmosphere increases the amount of small particles, harmful gases and impurities. And if oxygen diminishes reasonably slow, the contamination of the atmosphere grows swiftly. The atmosphere pollution affects, flora and fauna, reduces the atmosphere transparency, increases the number foggy days, destroys the ozone layer of the atmosphere. The negative influence of the atmosphere contamination on a human health is characterized by the change in the general structure of diseases. More specific: by the number of chronic nonspecific diseases for both children

and adults; by death rate growth.

Nowdays Kursk region is yet too far from the ecological prosperity: the soil degradation process has not been stopped, a natural environment is contaminated by production and consumption waste, by discharges and outlets of harmful matters during transport and production facilities operation; problems of the Mikhaylovskiy mining industrial complex, Kursk nuclear power plant and complex of town-planning problems are still important; the wounds from the Chernobyl disaster are not healed; the violation of the geological environment, hydrological and hydrogeological condition causes particular alarm.

Contamination of environment, exhaustion of natural resources and violation of ecological connections in ecosystems became global problems. And if humanity will continue to go on the present way of development, his death, as leading environmentalists of the world consider, through two-three generations inevitable.

Among the most effective ways of decision of ecological problems it is necessary to select introduction ecologically of effective and resource saving technologies, raw material, products and equipment, rational use of natural resources. So, very real already presently steps on introduction in a communal sphere and on the production of technologies on utilization of wastes - general and one of main sources of contamination of all natural spheres.

Swift market of consumption development entails continuous growth of volumes of education and accumulation of communal wastes, that makes the problem of one their utilization out of major tasks of humanity. In this connection, processing of wastes, acquires the special role for every separate state and planet on the whole. So, on the estimations of specialists, about 60% wastes are the potential second raw material which can be processed and advantageously realized.

There are three ways of decision of nature-conservative measures problems:

- 1) creation of cleansing buildings;
- 2) development of nature-conservative measures;
- 3) rational placing of dirty productions.

It is similarly necessary to mark that, in spite of all steps undertaken presently on the decline of level of anthropogenic pressure on an environment, a considerable result will not be attained without the increase of level of ecological culture of man, his ecological education and education.

Economics for Ecology [Текст]: матеріали XX Міжнародної наукової конференції, м. Суми, 6-9 травня 2014 р. / Редкол.: Д.О. Смоленніков, Л.А. Кулик. - Суми : СумДУ, 2014. - 145 с.