GEOLOGY, MINERALOGY AND SOIL SCIENCE

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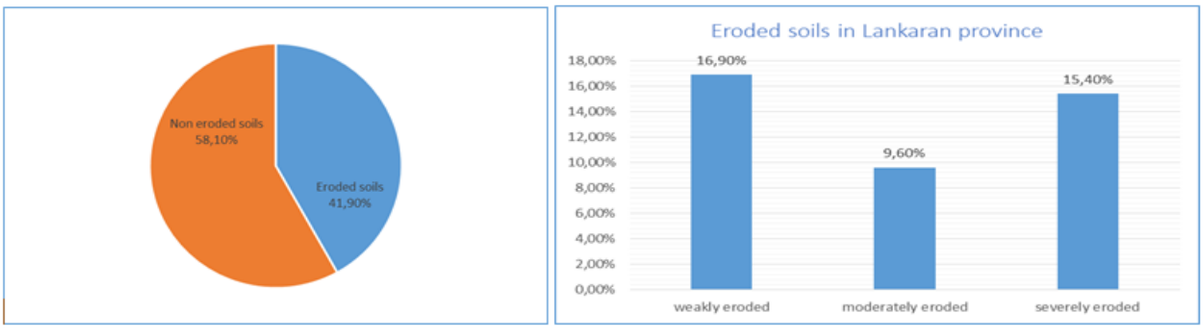
CAUSES OF WATER EROSION IN LANKARAN REGION AND FIGHT MEASURES AGAINST IT

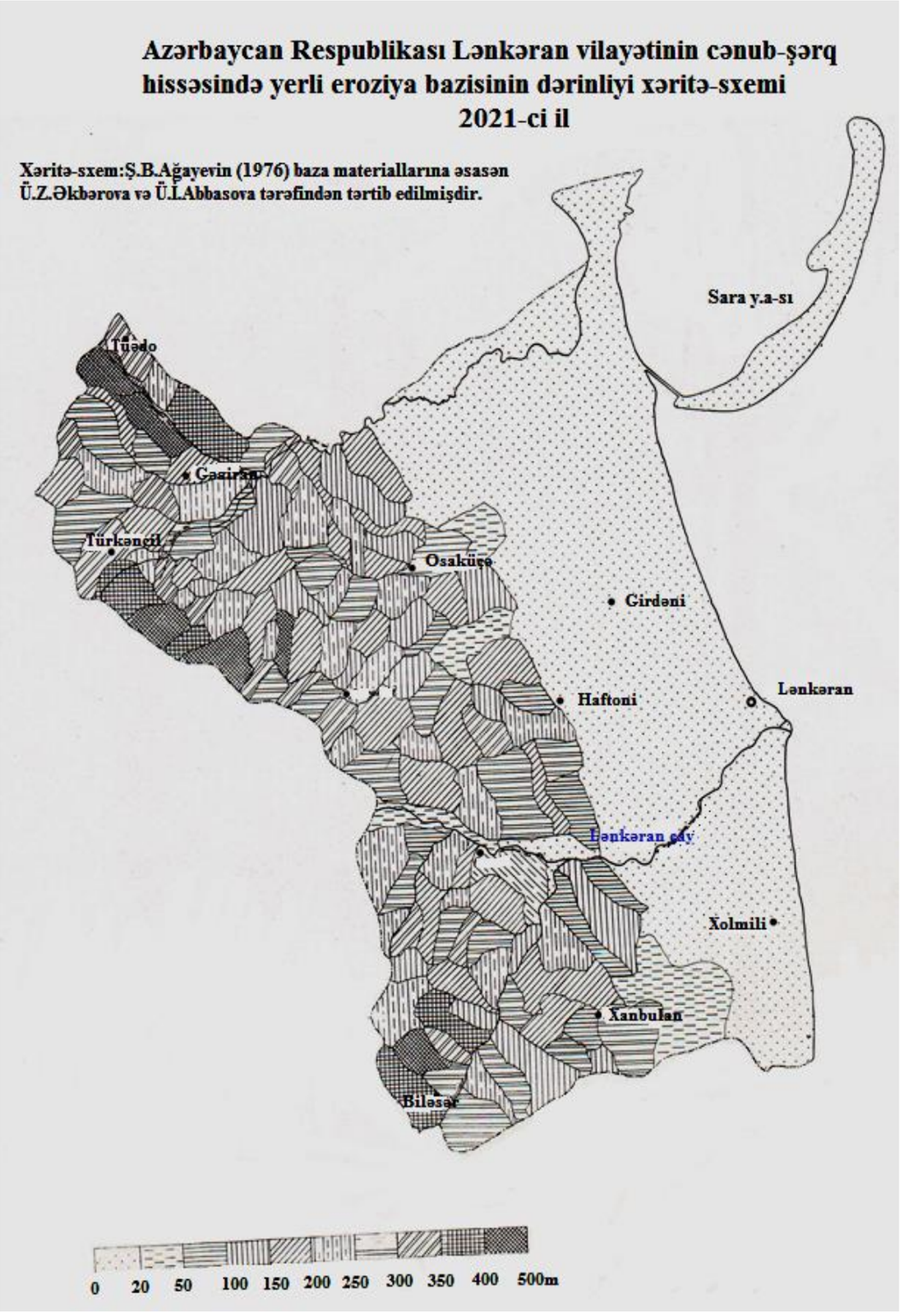
Water erosion is the most dangerous of all types of degradation. In the first place among the factors degrading the soil is water erosion by 56%, as a result of erosion 8,5 hectares of land are destroyed in 1 minute. All this shows how actual to study the erosion process.

Water erosion is widespread in Lankaran region. Trus, 266,5 thousand hectares, or 41,9% of the province were eroded (Picture 1) [1].



Picture 1. **Eroding state of soils of Lankaran region**

The formation and development of erosion was strongly influenced by natural and historical factors-relief, climate, chemical composition of soil-forming rocks, soil and vegetation, as well as the intensity of antropogenic pressure (Picture 2).



Picture 2. **Depth of local erosion base in the south-eastern part of Lankaran region map-scheme**

As a result of irrational human economic activity erosion got rapid character in the research object. Rapid erosion is caused by the destruction of vegetation on the slopes, the implementation of the fight measures against erosion in arable lands, plowing upside down, unsystematic grazing of livestock, improper observance of irrigation techniques and norms in arable lands, etc. [2, 4].

The process of erosion is sometimes so rapid that the soil cover is leached and destroyed in a short time and completely loses its importance for the economy [3, 5].

The greatest importance of land for agriculture is determined by its fertility. It is known that for the normal growth and development of plants, they need essential life factors-light, heat, air, water and nutrients. Mainly soil fertility is the ability to provide plants with the required amount of water and nutrients at the same time. Due to the sown areas on the planet, including in our country, it is impossible to increase it as much as possible to get additional crops. Therefore, the main direction to create an abundance of agricultural products is to intensify agriculture. Among the intensive factors, it is especially important to increase soil fertility and increase plant productivity through proper use after a system of anti-erosion measures.

In order to prevent the process of erosion, to protect the soil from erosion, to restore fertility and to achieve intensive development of agriculture, it is necessary to take comprehensive zonal measures against erosion. In developing and implementing these measures, soil and climatic conditions, factors that contribute to the development of erosion, the degree of soil erosion, the direction of the economy must be taken into account. All anti-erosion measures should be directed to improving soil fertility by protecting the soil cover from leaching and destruction.

Comprehensive anti-erosion measures include agro-technical, forest reclamation and hydro-technical measures.

The specific composition of anti-erosion measures is determined by the characteristics of the humidity of the area, the length of vegetation, relief conditions, the type of erosion and the direction of land use. Thus, the main role in the system of agro-ameliorative land reclamation measures in Lankaran region with high humidity belongs to phytomeliorative measures – planting of trees and shrubs, sowing of perennial grasses, creation of buffer zone, as well as cultivation rules and hydro-ameliorative measures.

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