

# THE INFLUENCE OF CLIMATE CHANGE ON THE STATE OF THE RECLAIMED LANDS OF THE UKRAINIAN POLISSYA ON THE EXAMPLE OF THE DRAINAGE SYSTEM "MARYANIVKA"

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**Introduction.** An important component of the agrarian potential of Ukraine is agricultural land with possible regulation of the water regime, that is, reclamation measures are a determining factor for sustainable agricultural production.

Drained lands in Polissya is the base of agricultural production in the northern and northwestern regions of Ukraine, the economic, environmental, and social stability of the entire region largely depends on the efficiency of its use. Today, the area of drained lands in Ukraine is about 3.2 million hectares, including 2.3 million hectares - with the help of closed drainage, on an area of 1.3 million hectares, bilateral regulation of the water regime of soils is carried out.

Drained lands are the main factor in sustainable agricultural production in Ukraine and are the guarantors of its stability.

**Materials and methods.** The research was conducted using the field, information-analytical, calculation - comparative, mathematical-statistical methods. The basis for calculating the project water consumption of crops is the equation of water balance.

**Results and discussion.** To determine the water supply of land plots for growing crops, the total runoff from the territory was used according to hydrological calculations and the project water supply of the territory on the basis of water consumption norm calculation. Water runoff on the drainage system "Maryanivka" is characterized by a very large unevenness. In high-water and middle years, the period of spring floods accounts for about half of the annual runoff, and in low-water and very low-water years, spring runoff can exceed 80% of runoff per year.

The need for bilateral regulation is due to insufficient water supply of agricultural land in dry and very dry years due to significant irregularities in the intra-annual runoff distribution, in particular, by insignificant runoff volumes during the growing season. Active water regulation on drained lands during the growing season of cultivated crops is possible due to the accumulation of runoff in the spring and partial accumulation of flood runoff in accumulating tanks, the amount and location of which is determined by the corresponding water balance calculations, as well as the results of geodetic and geological surveys. The choice of methods for regulating the water-air regime of soils for growing specific agricultural products is determined by technical and economic calculations.

**Conclusions.** Ensuring the reclamation within the drainage system "Maryanivka" and regulation of groundwater levels in the summer is possible only through the accumulation of runoff in May and partial accumulation of flood runoff by installing additional tanks in areas where there is no threat of flooding.