

Landscape Energy- Major Parameter for Identification of Natural-Territorial Complex Function

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Evaluation of energy parameters for natural-territorial complexes is identified as one of the significant factors in landscape complex research, their optimization (melioration, re-cultivation, etc.) and in the process of planning and projecting. The most important among them are the two main landscape energy parameters - solar radiation and gravitational energy (relief energy in particular). The evaluation of the mentioned parameters enabled to identify GIS SAGA (System for Automated Geoscientific Analysis) - the program considered to be the most powerful instrument for the landscape morphometric analysis.

Transformation of gravitational energy into natural complexes is reflected by the indices such as overall complex potential energy and separate geomass functioning.

$$(E = E_p + \sum A_n),$$

where, E_p - is landscape potential energy, $\sum A_n$ - arithmetical total of geomass functioning.

Landscape potential energy is calculated according to the formula:

$$E = mgh,$$

where, m - is landscape mass, g - free fall acceleration ($9,81 \text{ m/s}^2$), h - landscape (geohorizon) absolute height.