

Study of the Likelihood of Emerging Illegal Dumpsites in High Mountainous Rural Regions of Georgia

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1. Study Area & Methods

The high mountainous regions of Georgia are
characterized by relatively structural weaknesses that
contribute to increased likelihood of emerging one of the
most widespread problem in Georgia - illegal dumpsites [1].
Within the research, integrated methodology considers
determination of the likelihood of emerging illegal dumpsites
based on collected statistical data using mathematical
formula:

$$D = (AC - (Ln(L) + Sn(S))fq) / AC \cdot 100\%$$

where: D—percentage of the likelihood of emerging potential
illegal dumpsites; A- amount of wastes per capita; C- number
of inhabitants; L-capacity of large containers, kg; n(L)-
quantity of large containers, item; S- capacity of small
containers, kg; n(S)- quantity of small containers, item; f—
frequency of waste collection (frequency of servicing by the
waste truck per week), coefficient from 0 to 1; q—efficiency of
waste collection, coefficient from 0 to 1.

2. Results & Discussions

Obtained statistical data was verified using an unmanned
aerial vehicle and field visits and expeditions for the purpose
of verification of theoretical data.

Preliminary integrated estimates indicated that the
likelihood of illegal dumpsites in high mountainous rural
regions of Georgia from 30 to 80%.

References:

[1] Rural Development Strategy of Georgia 2017-2020,
[http://enpard.ge/en/wp-content/uploads/2015/05/Rural-
Development-Strategy-of-Georgia-2017-2020.pdf](http://enpard.ge/en/wp-content/uploads/2015/05/Rural-Development-Strategy-of-Georgia-2017-2020.pdf)