

ON THE APPROACHES TO THE ASSESSMENT OF DAMAGES IN FORESTRY

P. T. Voronkov, I. G. Rusova – Russian research institute for silviculture and mechanization of forestry, Pushkino, Moscow region

Keywords: *ecosystem services, complex damage, economic value, assessment of resource function of the woods, degree of reliability of an assessment, linear dependence, the law of the falling productivity, methods of an assessment of ecosystem services*

This paper studies goal is available assessment procedures for natural resources and damage caused by it including evaluation of integrated natural resources damage due to adverse factors.

The paper objective is to identify deficiencies of natural resources damage estimation with applied updated procedures and to find ways of their streamlining.

Now one of the important problems in natural resources damage assessment is that in fact only forest resource function is evaluated. Practically economic evaluation of other natural functions is lacking or minimal.

At the moment around 200 natural resources and environmental damage due to negative factors assessment procedures have been reviewed sufficient methodological faults that are reasons of systemic mistakes in calculations in each one have been found and grouped.

Identified systemic faults in applied assessment procedures of negative factor forest resources damage are problems involving status and application area of various calculation procedures, inaccuracies of stepped calculation within procedures, including inaccuracies in individual indicator grounding, unreliable basic information applied in procedures due to poor functioning monitoring of adverse impacts on environment and many others.

The authors reviewing links of information value and its costs apply the falling productivity law and make a conclusion on a need to develop specific damage differentiated indicators related to forest damage due to various adverse factors in other words standards applicable in most cases of forest damage assessment. Meanwhile special costly surveys to evaluate possible damage can be applied only in separate cases when calculation accuracy gain is greatly superior to reliable information costs.

One of the most advanced ways of damage evaluation is a total economic value concept that enables assessment of various profits that can't be obviously priced. Peculiarities to define 4 components of total natural resources value account for various accuracy of calculations. The most transparent and correct is calculation of direct forest use value and forest availability costs. Despite found faults in calculations under available procedures, the total economic value concept is the most promising and applicable in assessment of integrated forest damage due to negative factors. Natural resources damage calculation streamlining should be based on it.