

THE METHODOLOGICAL APPROACHES TO THE ASSESSMENT OF THE LEVEL OF ENVIRONMENTALLY SOUND MANAGEMENT

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In the article methodological approaches to the estimation of environmentally sound natural resource use in Ukraine are investigated. Whereas does not exist a single methodological approach to the estimation of environmentally sound natural resource use. The main purpose of this article is to study methodological approaches to the estimation of environmentally sound natural resource use in Ukraine and to determine the index of ecological safety of nature by means of mathematical modeling. To achieve this goal mathematical modeling techniques such as valuation metrics and fuzzy logic were used. On our opinion, the basis of methodological approaches to estimation of environmentally sound natural resource use should be entrusted with taking into account social, economic and environmental outcomes measures for the protection, restoration and sustainable use of the natural environment and resources.

In the article the stages of evaluation the estimation of environmentally sound natural resource use are examined, the essence of which, unlike the existing system, consists in applying system and comprehensive approach and taking into account the synergistic effect from the use, protection, restoration of the natural environment and

resources. Indeed, the estimation of environmentally sound natural resource use is a complex ecological characteristics of nature.

Method of valuation metrics and fuzzy logic on example of administrative regions of Ukraine were tested and determined that for more correct the estimation of the impact of these factors on the environmental condition of the area all the factors in relative terms are presented, namely the amount of emissions and solid waste estimated in tons per square kilometer the level of fresh water, polluted water into water sources evaluated in thousands of cubic meters for 1 person, the level of plowed farmland is represented as a percentage.

Fuzzy logic model identifies that the most environmentally sound natural resource use in Volyn, Zhytomyr, Rivne Zakarpattia regions. The relatively high level is in Vinnytsia, Zhytomyr, Ternopil, Khmelnytsky and Kherson regions. The two above mentioned models are adequate, because both approaches have given almost identical results, therefore, models which are used allow us to: assess the environmental safety of natural resources; manage the processes of nature, based on the allowable values of environmental indicators.