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EVALUATION OF ECOLOGICAL INTEGRITY ON REGIONAL SCALE WITH THE USE OF PARTICIPATORY APPROACHES

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ABSTRACT

As a contribution to applied methods of interdisciplinary research, this work is taking a holistic approach to ecosystem state and services valuation, using participatory mapping (PPGIS) and expert knowledge in context of a landscape. In a web-based survey, ecosystem services are being mapped by stakeholders from important landscape management sectors of the study region. Parallel to this survey, environmental experts are asked to evaluate integrity of the subject landscape ecosystems, expressed as percentage of a potential natural state and with ecological integrity orientors. The ecosystem services demand is expressed as hotspots using kernel densities calculation, related to the associated land cover. The state of the ecosystems, classified as vegetation cover and land use, and the demand for ecosystem services constitute an approach to connect ecosystem services demand and provision and address their relationship in a scientific manner. There is a lasting debate about data insufficiency for mapping ecosystem integrity and non-monetary valuation of ecosystem services methods. An attempt to design a quantitative index of regional ecological integrity is presented, understanding the socio-ecological system as a whole; the key is to identify and understand different stakeholder preferences and, according to related ecosystem capacities, set landscape management goals for environmental policy and planning.



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