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THE ENVIRONMENTAL PERFORMANCE ASSESSMENT OF RIVNE OBLAST

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Introduction. The administrative units implement the natural resources management policies according to the natural potential and managerial skills of the officials. There also objective limitations placed by financial and general economic considerations. In order to provide timely improvement and progress towards the sustainability targets, it is necessary to conduct regular assessments of the environmental performance. However, in Ukraine this approach is not widely used and there is now single evaluation method to apply.

Methods and materials. According to the standard ISO 14031, Environmental performance evaluation provides a robust and repeatable process to compare past and present environmental performance using standard set of parameters. It helps organizations and states determine trends, evaluate risk and identify its strategic objectives and targets. Enterprises and organizations can use life cycle assessment to perform such evaluation, while administrative units and state overall are better covered by multi-criteria analysis or environmental performance indicators [1]. In particular, Yale University and Columbia University in collaboration with the World Economic Forum and the European Commission have developed a system of 40 performance indicators across 11 issue categories, to rank 180 countries on climate change performance, environmental health, and ecosystem vitality with the Environmental Performance Index (EPI). These indicators reflect the approximation of countries to the established environmental policy targets. The EPI offers a scorecard that highlights progress and drawbacks on the way to sustainability and environmental safety. The evaluation approach used for scorecard development was modified to meet the peculiarities of Ukrainian environmental protection practices and data available.

Results. The Rivne oblast is known for its unique biodiversity. However, this biodiversity is under threat due to a range of factors, including habitat loss, climate change, and pollution. The primary reasons of the natural habitats loss are deforestation, urbanization, and agricultural expansion. Climate changes are expected to affect are not significantly in the upcoming decade and the most noticeable effect is change in the precipitations patters, which might pose additional threats to wetland communities of the region. The protected areas network was expanding during 2018-2021 and efforts on supporting connectivity of natural landscapes were applied. So, by the Biodiversity

and Habitat stability the region was scored moderately 4.25, as well as by ecosystem services provision (3.8). Condition of water bodies, sustainability of agriculture practices and erosion control have also demonstrated positive dynamics and therefore were rated as 3.6 – 4.2. The overall Ecosystem Vitality rating was 3.97.

The degree of disturbance in ecosystems and natural resources management from the climate changes was evaluated as low to moderate, if emission volumes and trends in ecosystems dynamics are accounted separately. However, the initiative on responding to climate changes in terms of mitigation and adaptation are at low level of development and implementation, which is reflected in poor performance rating by this component – 2.13.

According to the recommendation of the EPI methodology the group of the Environmental Health parameters accounts air and drinking water quality, waste management, technogenic pressure and pollution with heavy metals. The first two quality data sets were rated as satisfactory for air and acceptable for water. The technogenic pressure and heavy metals pollution is not evenly distributed in the area, but in some cases reaches extremely high levels. Thus, the Environmental Health was finally assessed as moderate with 3.42 points.

The final rating was calculated using weighting system from the EPI methodology with some amendments [2]. The value of the EPI of the Rivne oblast is by 12% over the average for Ukraine, but there is obviously significant room for improvement.

Conclusion

Overall, human activities have already altered the biodiversity and environmental balance of the Rivne region. Addressing these impacts will require a combination of efforts, including reducing habitat loss and fragmentation, regulating hunting and poaching, reducing pollution, and mitigating and adapting to the impacts of climate change.

References

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