DOI: https://doi.org/10.30836/igs.iies.2024.26

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DEVISING A MODEL PROTECTED AREA MANAGEMENT EFFECTIVENESS EVALUATION METHOD FOR THE CHORNOBYL RADIATION AND ECOLOGICAL BIOSPHERE RESERVE USING THE THEORY OF CHANGE APPROACH TO ENSURE RESERVE'S SUSTAINABLE DEVELOPMENT

The effectiveness of protected area management is essential for their success in safeguarding bio- and landscape diversity as well as ensuring sustainable development [1]. Protected areas (PAs) without effective management won't provide other benefits either. It is important to evaluate the management effectiveness of PAs to keep track of the progress toward the commitments of the strategy and make any necessary adjustments. Effectiveness assessments are crucial to understanding whether and why PAs are working or not, and how to improve PAs' quality [2].

Aiming to evaluate the protected area management effectiveness (PAME) the International Union for Conservation of Nature World Commission for Protected Areas (IUCN-WCPA) developed a special framework [3]. It became the basis of many PAME assessment methods in the world. Including one of the most used ones - Management Effectiveness Tracking Toll (METT) [4]. It has been used occasionally by some EU Member States to assess the management effectiveness of their Natura 2000 sites or their protected areas. Some countries adapted the method accordingly with their PAs peculiarities creating national METT-based PAME-evaluation methods.

Currently, there is no approved method for assessing the effectiveness of protected area management in Ukraine on the national level. However, there was a pilot project on assessing the PAME in national parks in the Carpathian region which showed an average of 53% in management effectiveness [5]. Low efficiency of protected areas in Ukraine, including not only national parks but biosphere reserves, is the existing problem that continues to emerge. War-induced challenges protected areas face only highlight the urgent need for improvement of PAs management in Ukraine and therefore the need to evaluate their effectiveness.

For now, the situation is: there is no PAME evaluation conducted in the PAs regularly as there are no obligations (from the Ministry of Environment and Natural Resources of Ukraine) on PAs, including the Reserve, to use some PAME method(s) (as we know it) and to conduct evaluations - so, PAs does not conduct it. The Ministry has micro-capacity in the management of the PA system (less than 20 people work in the relevant PA departments). PAs as institutions sometimes are very weak, as well as PA staff, who are underpaid, underskilled, and unmotivated to revise their management using some foreign method(s).

National Parks and Biosphere Reserves have a 10-year management plan and have had to review it at the end of the 10 years while creating a new management plan. But often organizations that create new management plans do it poorly, there are no criteria or Ministry's recommendations on how to do it properly - how to review the efficiency of the PA and no guidelines for providing recommendations for its improvement.

Chornobyl Radiation and Ecological Biosphere Reserve (ChREBR or Reserve), which was founded in 2016 and began to operate in 2017, has special functioning conditions as it is located within the Chornobyl Exclusion Zone (CEZ), occupying 87% of CEZ territory. The ChREBR was established to preserve the biodiversity that has recovered after the accident.

Protected area (PA) management of the ChREBR must be assessed to identify the current level of it's effectiveness and possible ways of improvement.

METT could be a basis for devising the model PAME evaluation method for the ChREBR. The standard METT questionnaire cannot reflect all the intricacies of managing such a specific PA as the Chornobyl Reserve (limitations in types of natural resources use due to radiation contamination (including forestry, recreation, etc), management measures. Radiation security is number one priority of the management). Therefore, our goal is to increase the management effectiveness of the Reserve by developing and establishing a Model Monitoring Method for PAME in the Chornobyl Radiation and Ecological Biosphere Reserve.

We choose to use the Theory of change (result chain) method used in conservation project management to reach our goal – devise an appropriate model PAME evaluation method for ChREBR. Theory of change is an approach that describes how with conservation interventions we can achieve desired outcomes.

Applying the theory of change approach and using Miradi software (a digital tool for conservation project management) we developed a specific result chain for our task (Fig. 1).

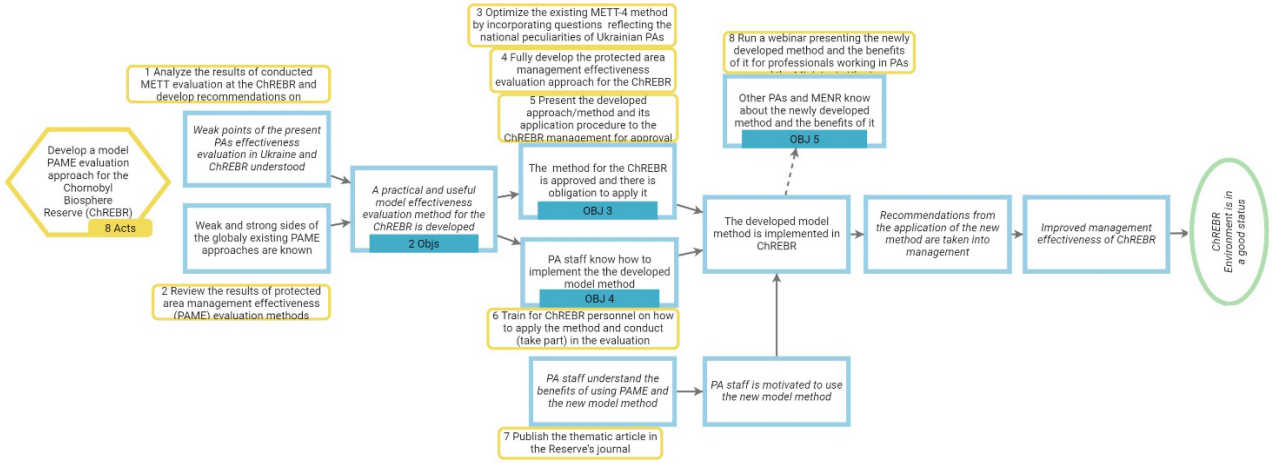

Fig. 1. Theory of change (Result chain) for devising the model protected area management effectiveness evaluation method for the Chornobyl Radiation and Ecological Biosphere Reserve developed using Miradi software

By devising a model PAME evaluation method for the Chornobyl Radiation and Ecological Biosphere Reserve, the Reserve's management effectiveness will be improved and create a positive example for the country. The Reserve can become a pioneer among PA in Ukraine in establishing a specific PAME Monitoring Plan. This Plan will ensure the sound PAME of the Reserve as well as will ensure its sustainable development.

We are grateful to the Klaus Toepfer Fellowship Programme and Volodymyr Milushev for providing the theory of change perspective on the issue discussed in the paper.

References

1. Geldmann, J., Manica, A., Burgess, N.D., Coa, L. & Balmford, A. (2019). A global-level assessment of the effectiveness of protected areas at resisting anthropogenic pressures. Proceedings of the National Academy of Sciences of the United States of America, 116 (46), 23209-23215.
2. Chen H., Zhang T., Costanza R., Kubiszewski I. (2023). Review of the approaches for assessing protected areas' effectiveness. Environmental Impact Assessment Review, Volume 98, 106929.
3. Protected Planet. (2023). Management Effectiveness (PAME). [Electronic resource]. - Mode access: https://www.protectedplanet.net/en/thematic-areas/protected-areas-management-effectiveness-pame?tab=Methodologies.
4. IUCN. (2021). Management Effectiveness Tracking Tool (METT): New edition of the METT Handbook launched. [Electronic resource]. - Mode access: https://www.iucn.org/news/protected-areas/202112/management-effectiveness-tracking-tool-mett-new-edition-mett-handbook-launched.
5. Support to Nature Protected Areas of Ukraine. (2020) A national version of the methodology for assessing the management effectiveness of Ukrainian protected areas was formed within the SNPA project. [Electronic resource]. - Mode access: http://snpa.in.ua/en/v-ramkah-proektu-sformuvaly-natsionalnu-versiyu-metodyky-dlya-otsinyuvannya-efektyvnosti-upravlinnya-pryrodno-zapovidnymy-terytoriyamy-v-ukrayini/.