

## REVIEW

of the foreign supervisor for PhD dissertation by

**Sapiyeva Akmaral Zhenisbayevna**

on the theme

**«Assessment of the multiplier effect of tourist and recreational activities in national parks of Kazakhstan for the sustainable development of tourism»**

presented for the degree of Doctor of Philosophy (PhD) in the specialty «6B090200-Tourism»

This review was prepared based on the following published journal papers written by the PhD candidate, in each case as co-author in a relatively large research team:

1. **Akmaral Sapiyeva**, Meirzhan Yessenov, Aliya Aktymbayeva, Yeldar Nuruly, Mereke Sakypbek, Olesya Razdobudko, Zhanna Assipova: Assessing the Multiplier Effect of National Parks: A Case Study of Buiratau State National Nature Park in Kazakhstan. *Sustainability* 2024, 16, 8407. <https://doi.org/10.3390/su16198407>
2. Asyma Koshim, Aigul Sergeyeveva, Yerkin Kakimzhanov, Aliya Aktymbayeva, Mereke Sakypbek, **Akmaral Sapiyeva**: Sustainable Development of Ecotourism in “Altynemel” National Park, Kazakhstan: Assessment through the Perception of Residents., *Sustainability* 2023, 15, 8496. <https://doi.org/10.3390/su15118496>
3. Aliya Aktymbayeva, Yeldar Nuruly, Alexandr Artemyev, Aida Kaliyeva, **Akmaral Sapiyeva**, Zhanna Assipova: Balancing Nature and Visitors for Sustainable Development: Assessing the Tourism Carrying Capacities of Katon-Karagay National Park, Kazakhstan. *Sustainability* 2023, 15, 15989. <https://doi.org/10.3390/su152215989>

All three papers were published in Sustainability, an open access journal that is included in The Register for Scientific Journals, Series and Publishers with 0 points. However, it also provides high visibility and has a 5-year impact factor of 3.6. Since the scientific value of such journals is evaluated differently around the world, here I add it only as a comment that it would have been advisable for the candidate to select more than one journal for the dissemination of her work.

The candidate is the last author of one paper and the first author of one paper, however, she is not the corresponding author for either articles. In case of a manuscript-based doctoral thesis, most universities require at least two (but usually more) papers of which the student is the first author. However, in the current PhD process it is sufficient for the candidate to be the first author or the corresponding author of only one article, and this criterion is met. Similarly, the requirement that in case of publications arising from collaborative projects, the doctoral candidate's individual contribution must be documented and confirmed by the



project partners has also been fulfilled by Akmaral Sapiyeva: the three articles include a relatively detailed explanation of each co-author's contribution.

Each of the three papers addresses distinct but interconnected challenges of sustainable tourism in Kazakhstan's national parks, contributing significantly to the discourse on conservation and tourism management, a relevant research topic on international level. Together, the articles provide a comprehensive view of sustainable tourism, addressing environmental conservation, economic impact, and visitor management. They are highly relevant to both academic research and practical policy-making.

The novelty of the research arises from its focus on Kazakhstan's national parks which fills a research gap in Central Asian tourism studies. The use of GIS-MCDA for ecotourism planning is a relatively novel approach in the region, and the application of economic multiplier effects in an emerging tourist destination context adds valuable insights for tourism policy.

The studies employ rigorous methodologies and data collection techniques, ensuring validity and contributing new insights to sustainable tourism research. The Altynemel National Park study uses surveys, GIS-MCDA, and sustainability indices, providing a robust assessment of local perceptions. The Buiratau National Park study applies input-output modeling to quantify tourism's multiplier effects, offering empirical evidence of economic benefits. Finally, the Katon-Karagay National Park study integrates carrying capacity models with real-time monitoring and psychocomfort approaches, presenting a new, innovative way to manage visitor flows. The methodological diversity applied in the evaluated studies enhances the credibility of the scientific results presented and discussed in the articles. The reliability of the research is ensured by using diverse and reliable data sources – including surveys, satellite imagery, and economic models –, and by supporting the conclusions drawn by the authors with empirical evidence. The replication potential of the methodologies also strengthens their scientific credibility.

The findings of these studies have both theoretical and practical implications. From a theoretical perspective, the papers contribute to sustainable tourism theories by integrating environmental, economic, and social dimensions in an internationally underrepresented destination. In addition, the research has refined tourism carrying capacity models, demonstrating their applicability in ecologically sensitive areas, while the economic analysis of multiplier effects has expanded our understanding of tourism's role in local economies. The Altynemel NP study emphasizes community perspectives, which is crucial in sustainable tourism discourse, highlighting local residents' role in ecotourism development. The Buiratau SNNP study extends economic impact analysis by applying the multiplier effect, a well-established but often overlooked concept in national park tourism studies. The Katon-Karagay study applies tourism carrying capacity analysis, addressing a crucial yet challenging aspect of visitor management in ecologically sensitive areas.

From a practical point of view, the three manuscripts together address a variety of issues that are faced by sustainable tourism planners, developers and practitioners. The




Altynemel NP study suggests specific policy recommendations for balancing conservation and tourism growth, the Buiratau SNNP study provides a framework for policymakers to maximize economic benefits while maintaining sustainability, whereas the Katon-Karagay NP study offers a structured methodology for monitoring visitor impact, which can guide national park management strategies.

In conclusion, the three papers collectively offer a multi-dimensional view of sustainable tourism, particularly in the context of Kazakhstan's national parks. They provide valid and novel scientific results, integrating environmental, economic, and social factors. Their methodologies ensure reliability, and their findings have strong theoretical and practical significance. Together, they offer a valuable framework for sustainable tourism development in protected areas. However, due to their highlighted focus on the Kazakh context, the studies lack a strong comparative dimension with other countries: including references to global best practices in sustainable national park management (e.g., in Costa Rica, Canada, or Kenya) could have strengthened the articles' international relevance. The papers would have also benefited from a greater integration between studies: the findings could be synthesized into a broader sustainable tourism model specific to Kazakhstan (or Central Asia), incorporating environmental, economic, and visitor management factors. In further studies, a stronger methodological rigor (expanding sample sizes, incorporating sensitivity analyses, and using adaptive modelling techniques) would enhance the findings' scientific validity, and more actionable policy recommendations could be provided for national park authorities to implement sustainable tourism policies effectively.

Future research directions could include the investigation of the long-term economic resilience of national parks, assessing how tourism income fluctuations affect local economies, measuring the environmental trade-offs of increasing tourism revenue (does higher economic benefit justify potential ecological risks?) as well as examining the role of digitalization in tourism marketing and revenue generation in Kazakhstan's national parks.

Based on the above evaluation, as the conclusion of my review, I recommend that Sapiyeva Akmaral Zhenisbayevna be awarded the degree of Doctor of Philosophy (PhD).

  
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