

# INNOVATION TRANSFER IN ECOTOURISM: THE TANZANIAN MANAGEMENT MODEL AND ITS APPLICABILITY IN SLOVAKIA

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## Abstract

Ecotourism in Tanzania represents an inspiring model for Slovakia on how to transform nature conservation into a primary pillar of the national economy and regional development. Tanzania has successfully implemented principles that channel revenue directly to local communities and the maintenance of protected areas. Lessons from Tanzanian practice for Slovakia are evident in the economic value of 'untouched' wilderness. Tanzania demonstrates that preserving ecosystems yields higher long-term value than their industrial exploitation. A direct link to local communities is also crucial. Cultural tourism programs in Tanzania allow visitors to experience the lives of local inhabitants, with profits directly funding the development of village schools and infrastructure. Furthermore, the regulation of visitor numbers through higher added value is essential; Tanzania's long-standing focus on quality over quantity ('high value, low impact') protects sensitive areas from over-tourism. Ecotourism in Tanzania is not merely about observing nature but about understanding ecological cycles, which enhances the environmental awareness of tourists. The study data were obtained through participant observation during a 45-day mobility in Tanzania, supplemented by semi-structured interviews with local tourism managers. In Slovakia, these best practices from Tanzania could manifest in social impact, biodiversity conservation, and the enhancement of ecosystem services.

**Key words:** sustainable development, community-based tourism, biodiversity, visitor management

## Introduction

Ecotourism integrates biodiversity conservation with community prosperity, transforming protected areas into active pillars of regional development (Samal, Dash, 2022). Tanzania leads in this field through its "High Value, Low Impact" model, which utilizes strict visitor regulation and participatory management to ensure direct tourism benefits for local residents (Honey, Gilpin, 2009).

Conversely, Slovakia struggles with unsustainable resource exploitation (MŽP SR, 2025; Považan et al., 2020), habitat fragmentation, and minimal local involvement in tourism profits (ŠOP SR, 2023a; CKO, 2024). Adapting Tanzanian innovations could redefine Slovak wilderness as a high-value economic asset surpassing returns from industrial landscape exploitation (Mgonja et al., 2015; Gajić et al., 2025). This study utilizes participant observation and expert interviews to analyze Tanzanian mechanisms and propose strategic solutions for the socio-economic stability of Slovakia's rural regions.

## Material and methods

The research was conceived as a comparative case study focused on the transfer of innovations in ecotourism between selected UNESCO biosphere reserves (BRs) in Tanzania (East Usambara, Ngorongoro) and Slovakia (Poľana). Primary data were obtained during a 45-day scientific mobility in Tanzania (Erasmus+ project) using the method of participant observation of interactions between tourists, guides and communities. The knowledge obtained was subsequently compared with the current status and care programs for BR Poľana (ŠOP SR, 2023b; NCAA, 2014; MNRT, 2001). Data synthesis took place in the form of a SWOT analysis, which identified the potential for the application of Tanzanian innovations, as well as institutional and socio-economic barriers to their transfer. The resulting comparison reflects the specifics of these sites as "world laboratories", where the balance between biodiversity protection and the prosperity of the local population is a priority.

## Results

### Quality Over Quantity

A key innovation is the transition to "High Value, Low Impact" management. The Tanzanian reserves of Ngorongoro and East Usambara have successfully used this model for decades to protect nature

while financing local communities through exclusive experiences. This approach represents an opportunity to increase revenue from a smaller number of visitors, thereby enhancing conservation efficiency without the need for massive infrastructure that would degrade the landscape.

#### Fair Revenue Sharing

Another vital element is the institutionalized Revenue Sharing system, where a fixed portion of entry fees goes directly to adjacent villages for infrastructure development. Linking ecotourism profits directly to municipal projects would create a strong incentive for local governments to actively protect the landscape, which serves as the primary draw for tourists.

#### Tradition-Based Experiences

Cultural Tourism Programs (CTP) in Tanzania effectively integrate ethnographic heritage with nature conservation. The innovation lies in moving from passive agritourism to participatory programs where visitors become active participants in traditional ecological cycles. This not only diversifies rural income but also raises environmental awareness through authentic education.

#### Low-Impact Accommodations

Tanzanian practice also offers inspiration for low-infrastructure accommodation, such as glamping or eco-lodging, which utilizes natural materials and renewable energy sources. They allow for the sensitive opening of the reserve's peripheral areas, strengthening the socio-economic impact on the region while respecting the carrying capacity of the natural environment.

#### Guides as Nature Interpreters

A fundamental pillar is the transformation of environmental education into an attractive product. Here, professional guides function not just as navigators, but as certified "interpreters" of the ecosystem. In Slovakia, this offers an opportunity to replace static information boards with "living education" in the field. BR Poľana is already a leader in this regard, turning expert-led tours into an exclusive service that naturally fosters responsible behavior among tourists.

#### Visitor Involvement in Conservation

Innovation is also evident in the direct involvement of tourists in nature protection projects (Conservation Tourism), such as species monitoring. Implementing similar programs in Slovakia, such as volunteer weekends focused on meadow management or wetland protection, would create a new target group of conscious visitors. This approach moves environmental education from theory to practice, building a deep emotional connection to the locality and social responsibility.

#### Science via Mobile Applications

The synergy between scientific knowledge and local experience opens space for modern digital interpretation. Through "citizen science" mobile applications, tourists can record species sightings or habitat conditions during their hikes. This integration of technology and tourism provides valuable data for protected area management while educating the public about the importance of biodiversity and ecosystem services in real-time.

#### Professionalization and Community Rangers

A fundamental element is the transformation of nature guards from a purely repressive force into educated interpreters and guides. By involving local residents in a system of "community rangers," social acceptance of conservation measures increases and new jobs are created. Thanks to their local knowledge, these workers effectively resolve conflicts and serve as a vital link between state administration and local communities.

#### Technology and Smart Management

Modern management utilizes digital cartography and real-time monitoring, involving rangers directly in applied research. Digital platforms for "smart reservations" allow for the dynamic regulation of visitor numbers in critical areas and the dispersal of tourist pressure. This prevents habitat degradation and the disturbance of wildlife in overcrowded tourist centers.

#### Green Initiatives and Micro-financing

A strict zero-waste tourism policy and plastic bans encourage the growth of local circular businesses and the deep ecological transformation of services. Another innovative feature is the use of voluntary conservation fees integrated directly into product prices. This "direct micro-financing" model creates a stable flow of funds for local projects, turning visitors into active investors in the restoration of the landscape.

The SWOT analysis evaluates the applicability of the Tanzanian ecotourism management model (based on experiences from East Usambara and Ngorongoro) within the context of the Poľana Biosphere Reserve (Table 1).

Tab. 1:

Strengths	Weaknesses
Existence of unique ecosystems and "untouched" wilderness as an economic asset.	Prevailing model of mass tourism with high anthropogenic load.
Strong tradition of rural management and crafts (potential for cultural tourism).	Passive approach to agritourism and lack of participatory programs for visitors.
High expert and scientific base in the field of biodiversity and ecosystem services.	Prevalence of the repressive function of nature guards over educational and guiding functions.
Developed network of protected areas and biosphere reserves.	Conflicts between nature conservation and the economic interests of local communities.
Opportunities	Threats
Transition to the "High Value, Low Impact" model – higher revenues with fewer tourists.	Resistance of the local population to nature conservation due to lack of direct benefits.
Introduction of Revenue Sharing to finance the development of municipalities within the parks.	Continued massive construction of hotel infrastructure at the expense of natural values.
Professionalization of rangers into certified interpreters and ecotourism guides.	Abuse of the ecotourism concept (greenwashing) without a real impact on conservation.
Implementation of Citizen Science through digital platforms and mobile applications.	Environmental degradation of the area due to unsuccessful regulation of visitor numbers.
Development of low-infrastructure accommodation (eco-lodging and glamping).	Lack of political will to change the institutional setting of park management.

## Discussion

Implementing the Tanzanian "High Value, Low Impact" model offers a solution to anthropogenic pressure in exposed Slovak locations such as the Tatras or Slovak Paradise (ŠOP SR, 2023a). While Tanzanian Revenue Sharing systems motivate communities to protect biodiversity (Nelson, 2012), Slovak national parks still face the barrier of being perceived as restrictive zones (IEP, 2022). The key to success is a shift from mass sports-oriented use of the mountains toward ecotourism, where visitors directly finance landscape regeneration through exclusive guided experiences (Spenceley et al., 2017). However, essential conditions include the institutional reform of nature guards into educated interpreters and technological adaptation that views innovation as a tool for prestige, not just cost savings. Ngorongoro serves as a warning that without carrying capacity regulation and transparency, there is a risk of marginalizing community interests and degrading ecotourism into a mere marketing label for mass exploitation (Gayo, Katonga, 2025). Successful application of Tanzanian know-how thus requires a systemic management change prioritizing the protection of ecosystem services (UNESCO, 2024).

## Conclusion

The Tanzanian model offers a comprehensive framework for the systemic transformation of Slovak protected areas, particularly the Poľana Biosphere Reserve, moving from mass tourism toward sustainable ecotourism based on quality and exclusivity. The key to success lies in a paradigm shift that views nature conservation as a strategic economic asset, where regional prosperity is achieved through direct revenue sharing with communities, the professionalization of personnel in landscape interpretation, and the minimization of the ecological footprint. The implementation of these innovations—ranging from "high value, low impact" strategies to participatory science and zero-waste policies—represents a path toward harmonizing biodiversity protection with rural socio-economic development, enabling Slovak reserves to become modern pillars of sustainability within the European context.

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### Souhrn

Zjištění potvrzují, že slovenský management chráněných území může dosáhnout vyšší efektivity přijetím tanzanského modelu, který upřednostňuje kvalitativní parametry před kvantitativními. Pokud bude masový turismus nahrazen exkluzivními službami a bude zavedeno spravedlivé sdílení zisku s obcemi, ochrana divoké zvěře přestane být vnímána jako překážka a stane se motorem regionálního rozvoje. Tento přístup, postavený na profesionálních průvodcích a citlivé infrastruktuře, může proměnit přírodní dědictví ve stabilní ekonomický aktivum, které chrání ekosystémy a zároveň zajišťuje prosperitu místních komunit.

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