

ABSTRACT

Tourism around water bodies, especially dams, has gained attention as a potential driver for regional development, ecological awareness, and community engagement. In India, where water infrastructure is vast, there exists immense untapped potential to develop dam sites as responsible and sustainable tourism destinations. India ranks third globally in the number of large dams, with a total of 6,281 dams according to the National Register of Large Dams (2023). While many of these structures are located in ecologically rich and scenic regions, it is neither feasible nor advisable to develop tourism around all of them. A clear, evidence-based method for selecting the most suitable sites is currently lacking.

This study aims to bridge that gap by developing a comprehensive framework to assess the preliminary feasibility of sustainable tourism around dam sites in India, with a focus on environmental integrity, economic viability, and social inclusiveness. The study not only introduces a structured method to screen and prioritize dams for tourism but also ensures that the recommendations align with sustainability principles and local contexts.

The research was conducted in two major phases. In the first phase, a systematic literature review was performed to identify relevant criteria for tourism feasibility. Key sources included the Draft National Strategy for Developing Dams as Sustainable and Responsible Tourism Destinations, the System of Environmental-Economic Accounting (SEEA), and the Statistical Framework for Measuring Sustainable Tourism (SF-MST). These documents, along with academic studies and government guidelines, helped in selecting initial factors related to infrastructure, environmental quality, cultural value, accessibility, safety, and local community readiness.

To validate and refine these factors, a Delphi survey was conducted with domain experts from fields including tourism planning, dam operations. This iterative process ensured consensus on which factors were most relevant and measurable during the preliminary stages of tourism planning. Factors requiring detailed, on-ground assessments were excluded to ensure practicality and applicability in diverse dam contexts across the country.

In the second phase, the finalized set of factors was grouped under three main pillars: economic, environmental, and social sustainability. Each factor was assigned weight using Multi-Criteria

Decision-Making (MCDM) methods, including the Analytic Hierarchy Process (AHP), Fuzzy AHP, and TOPSIS. A second-round Delphi survey was used to finalize expert-based rankings and validate the weightages. This created a robust, scalable framework for evaluating dams for tourism development.

The tool was then applied to selected dam sites in Andhra Pradesh to test its applicability. Data for these sites were collected from secondary sources, government reports, and stakeholder interviews. The analysis identified dams with the highest potential for sustainable tourism. For these high-potential sites, the study further suggests appropriate types of tourism (e.g., eco-tourism, heritage tourism, adventure tourism), along with zoning and circuit formation strategies for integrated regional development.

Key findings indicate that factors such as infrastructure availability, ecological resilience, and community participation are critical for success. Dams that strike a balance between scenic value, accessibility, and local readiness are most suitable for preliminary tourism development. The validated framework provides a transparent and replicable method to inform future decision-making.

In conclusion, this thesis presents a decision-support tool that enables policymakers, tourism authorities, and dam management bodies to systematically evaluate the tourism feasibility of dam sites. It offers a practical approach to promoting sustainable tourism, ensuring economic growth while safeguarding environmental assets and enhancing local community well-being. The framework is adaptable and can be extended to other regions and water bodies, contributing to India's long-term strategy for sustainable tourism and water infrastructure utilization.