An Analysis of the Protected Area Planning and Management Frameworks

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Abstract: Wildlife tourism is a significant contributor to many economies around the globe. Hence, effective planning and management of the protected areas that provide recreational opportunities in wildlife tourism is essential to ensure sustainable tourism practices. Over the years, several frameworks have been developed for protected area planning and management. This paper critically analysis a few of those frameworks on their origin, processes, strengths, and weaknesses. As a result, the paper highlights the common themes among the frameworks along with their limitations and scope for future research.

Keywords: Protected Area, Tourism Management, Limits of Acceptable Change (LAC), Recreation Opportunity Spectrum (ROS), Process for Visitor Impact Management (VIM), Tourist Area Life Cycle (TALC), Visitor Experience and Resource Protection (VERP), Protected Areas Visitor Management (PAVIM), Management Process for Visitor Activities (VAMP), Tourism Optimization Management Model (TOMM), Partnership Approach, Governance Based Approach, Stakeholders Engagement Approach, Adaptive Co-Management Approach

1. INTRODUCTION

Tourism refers to a journey which a person undertakes to various places (outside the place he/she resides). This journey can be for different purposes such as business, pleasure, education, medical treatment among others. Eventually, the person returns to the starting point and hence this journey does not result into permanent residency and is not connected with undertaking any earning activity (Malhotra, 1998)**.** Over the years, the tourism industry has developed and currently provides a wide variety of products/services. Some of the popular types of tourism worldwide based on the purpose of visit are leisure / holiday tourism, business tourism, cultural tourism, eco-tourism, study tourism, religious pilgrimage, health tourism, sports tourism and so on (Tourism and Hospitality Studies, 2013). International tourist arrivals reached USD 1 billion in 2022 according to the UNWTO World Tourism Barometer (2023) and is expected to reach 1.8 billion by the year 2030 (UNWTO Tourism Highlights, 2016).

Wildlife tourism is a type of tourism that is based on encounters with non-domesticated animals in either the natural or artificial environment (Higginbottom, 2004). It is estimated that 40–60% of international tourists are nature tourists, of which 20–40% are wildlife related tourists (Ahira et. al, 2016).

Wildlife tourism along with other forms of tourism plays a very important role in any economy. Tourism not only generates income for an economy (Richard, 2006), it also contributes to the development of nonmetropolitan areas or towns (Higginbottom, 2004), provides economic incentives and revenue for conservation of natural habitats and wildlife (Higginbottom*,* 2004; Gupta & Bhatt, 2009; Demssie, 2015), benefits local communities by providing employment opportunities (Gupta & Bhatt, 2009; Demssie, 2015) etc.

Thus, to capitalize on the opportunity of wildlife tourism and ensure sustainable tourism, it becomes essential for any country to manage their Protected Areas (PA) (national parks, sanctuaries, conservation reserves and community reserves) which provide wildlife tourism opportunities for tourists. The objective of this paper is to critically analyse the various existing approaches and frameworks of planning and management of Protected Areas (PA) for wildlife tourism. The paper will focus on understanding the various approaches and frameworks, their origins, the steps included in the process along with the strengths and weaknesses of the same.

2. RESEARCH PROBLEM

The research problem of this study is 'An Analysis of the Protected Area Planning and Management Frameworks'.

3. RESEARCH OBJECTIVES

The research objectives of this study are as follows:

1. To critically analyse the frameworks in the Traditional Approach to Planning and Management of Protected Areas.
2. To critically analyse the Contemporary Approaches to Planning and Management of Protected Areas.

4. RESEARCH METHODOLOGY

For the paper, frameworks in the traditional and contemporary approaches for planning and management of protected areas have been studied. Under the traditional approach, extensive literature review has been conducted on eight frameworks, namely Recreation Opportunity Spectrum (ROS), Tourist Area Life Cycle (TALC), Limits of Acceptable Change (LAC), Process for Visitor Impact Management (VIM), Visitor Experience and Resource Protection (VERP), Management Process for Visitor Activities (VAMP), Protected Areas Visitor Management (PAVIM) and Tourism Optimization Management Model (TOMM). Similarly, in-depth literature review has been conducted on the Partnership Approach, Governance Based Approach, Stakeholders Engagement Approach and Adaptive Co-Management Approach under the Contemporary Approaches.

These frameworks have been studied in terms of origins, process, strengths and weaknesses. As a result of this analysis, common themes of the frameworks, existing issues in the frameworks, and recommendations for future research have been identified.

5. FINDINGS

Since the 1970s, a lot of research has been conducted on the effective planning and management of protected areas and various frameworks have been developed over the years the same. Currently, the various frameworks can be divided into traditional approaches and contemporary approaches.

TRADITIONAL APPROACH TO PLANNING AND MANAGEMENT OF PROTECTED AREAS

Some of the frameworks developed based on the traditional approach include Recreation Opportunity Spectrum (ROS), Limits of Acceptable Change (LAC), Tourist Area Life Cycle (TALC), Process for Visitor Experience and Resource Protection (VERP), Visitor Impact Management (VIM), Management Process for Visitor Activities (VAMP), Protected Areas Visitor Management (PAVIM) and Tourism Optimization Management Model (TOMM). The details of these frameworks are given as below.

RECREATION OPPORTUNITY SPECTRUM (ROS)

Clark and Stankley (1979) to provide guidelines for the management of recreation opportunities developed Recreation Opportunity Spectrum (ROS). The steps of ROS focus on preparing an account of the recreational resources available in a protected area, determining the impact of management decisions on the recreational opportunities while meeting expectations (Nilsen & Tayler, 1997).

The main advantage of this framework is that it is a very practical approach and ensures that recreational opportunities are seen from the perspectives of the resources along with meeting the present expectations of the visitors. However, if a manager does not accept the criteria in totality before making a decision, the entire planning program will be affected (Nilsen & Tayler, 1997).

TOURIST AREA LIFE CYCLE (TALC)

Butler (1980) developed the model of Tourist Area Life Cycle (TALC) which suggests that a tourist area undergoes six stages in its evolution. TALC's believes that one needs to understand at which stage the tourist area belongs and accordingly management plans have to be developed and modified depending on the stage of the tourist area. In the 1st stage i.e. exploration stage, tourists are attracted to an area because it is unique and not explored as yet. However, due to low and irregular tourist pattern, facilities are not developed in the region, visitors usually make individual travel arrangements and use local facilities. The 2nd stage is the involvement stage where the numbers of visitors increase and become regular as a result locals start providing facilities exclusively for the visitors. By the development stage i.e. the 3rd stage, the tourist area becomes a well-defined tourist area, characterised by heavy advertisements and

local facilities are replaced by elaborate professionally run facilities. The 1st three stages of the model highlight growth in tourism, whereas in the consolidation stage (4th stage) tourism growth rate slows down even though the total number of tourists will still increase and finally reaches a saturation in the stagnation stage (5th stage). Post this phase, the destination may decline or adopts measures to rejuvenate the area.

These stages suggest that strategies for planning, developing, and managing tourist areas should keep adapting based on the life cycle the tourist area falls under. However, the model faced a number of criticisms such as measurement issues and issues related to the identification of the stages outlined in the model, theoretical approach in nature, limitations on capacity issues, limitations of the life cycle model itself, lack of empirical evidence among others (Butler, 2011).

LIMITS OF ACCEPTABLE CHANGE (LAC)

Limits of Acceptable Change (LAC) framework identifies acceptable level of resource and social conditions in recreation settings and suggests measures to protect and achieve the same. The framework suggests identifying area of concerns and opportunity classes in a recreational setting, determining the ideal resource and social conditions for the recreational area, understanding the current resource and social conditions, preparing standards for the parameters in each opportunity class, identifying plans to achieve standards, conducting cost benefit analysis of each plan, selecting the final alternative and finally implementation and monitoring of the selected alternative.

This approach not only helps management make plans for an area based on acceptable change for each opportunity class, but also provides indicators to monitor the ecological and social conditions. However, the framework was criticised on the parameter that while it focussed on those areas that were of concern, it did not provide direction on other topics (Nilsen & Taylor, 1997).

VISITOR ACTIVITIES MANAGEMENT PROCESS (VAMP)

Parks Canada developed Visitor Activities Management Process (VAMP) in the mid-1980s to give direction for the planning and management of new, developing, and established parks. Under VAMP, a project team is set up who prepares a database describing the park's goals and objectives, park settings, existing visitor activities, resource capabilities and identifies future recreational opportunities. Accordingly, they develop and implement a park management plan (Nilsen & Tayler, 1997).

This comprehensive decision-making framework studies both the opportunity and the impact of management decisions on planning and management of parks. However, this framework has received limited acceptance from management as they do not focus on the 'experience opportunity' as much while making the management plans (Nilsen & Tayler, 1997).

VISITOR IMPACT MANAGEMENT (VIM)

In 1990, U.S. National Parks and Conservation Association prepared the Visitor Impact Management (VIM) framework to address the issues relating to visitor impact and suggest management strategies to overcome the same. VIM requires determining management objectives, identifying key indicators and their standard, comparing standards with existing situations and accordingly formulating and implementing management strategies (Nilsen & Tayler, 1997).

The main advantage of this framework lies in having clarity on the indicators of impact and their standards, which guide management decisions. However, the focus of this framework is only on the effect of management decisions on existing impact indicators rather than to access future potential impacts.

VISITOR EXPERIENCE AND RESOURCE PROTECTION (VERP)

The Visitor Experience and Resource Protection (VERP) Framework highlights a framework that deals with carrying capacity issues in the national park systems. The steps of VERP include: setting up an interdisciplinary project team that prepares statements of park purpose, primary themes, ascertain planning obligations and limitations. Further, they evaluate park resources and existing visitor use along with visitor experience. Then, specific zones are allocated within the park with specific indicators, standards, and monitoring plan for each zone. Based on these, the resources and social indicators are monitored, and necessary actions are taken (National Park Service & U.S. Department of the Interior, 1997).

The framework is useful in planning and management of protected areas as it directs the management decisions based on the park's goals, resource availability, visitor experience, indicators and standards for monitoring. However, zoning is of primary importance in this framework, which requires additional part on the management. Failing which this framework may not provide the needed results.

PROTECTED AREAS VISITOR MANAGEMENT FRAMEWORK (PAVIM)

Farrell and Marion (2002) introduced Protected Areas Visitor Management (PAVIM) framework for management of protected areas that focuses on identifying management zones in the protected area, preparing objectives for each zone, identifying and analysing visitor related impact problems for every zone and preparing appropriate management action for the same.

Main positives of PAVIM include the model being simple, flexible, less expensive, and fast to implement. However, the framework is seen somewhat reactive in nature as managers' decisions are more focused on providing actions to minimise the problems related to visitor impact.

TOURISM OPTIMIZATION MANAGEMENT MODEL (TOMM)

Jiricka et al (2014) developed Tourism Optimization Management Model (TOMM) which aims at continuously monitoring tourism activities and facilitating local stakeholders to take part in the decision-making process. The steps of TOMM include determining the desired conditions of a tourism product (environment, economy, marketing, experience at the destination), identifying indicators to measure the desired conditions along with determining the standards for the indicators, monitoring the performance of each indicator, and identifying any need for action.

Though the advantage of this model is that it focuses on reducing conflicts by mutually shared desired conditions; however, availability of data acts as a major hindrance to carry out TOMM.

CONTEMPORARY APPROACHES TO PLANNING AND MANAGEMENT OF PROTECTED AREAS

More recently, many researchers have proposed alternate approaches for the planning and management of protected areas. A few of those contemporary approaches have been reviewed herewith.

PARTNERSHIP APPROACH FOR PLANNING AND MANAGEMENT OF PROTECTED AREAS

Many frameworks have been suggested by researchers for planning and management of protected areas that include some form of partnership. For instance, Glover and Burton (1998) suggested the following partnership models for managing tourism services in national parks and protected areas: (1) government agency operates all services; (2) alliance between a government agency and a private agency (profit making or not for profit organization); (3) private management (profit making or not for profit organizations) (Eagles, 2009). Similar models were proposed by Graham et al. (2003) and More (2005) where management of protected areas could be done entirely by government or private organizations (for profit or not for profit) or through some form of collaboration between the two.

Also, Eagles (2008) presented partnership based protected area management models in light of three elements namely: who owns the resources, where does the income for management of the protected area come from and who is the management body. Based on these three elements, various management models have been developed such as national park model where the government owns and manages the resource and societal taxes provide funding; non-profit organization model where the non-profit corporation owns and manages the resources and receives funding from donations; ecolodge model where for-profit corporation owns and manages the resources and funding comes from user fees to name a few (Eagles, 2009).

The strength of these models is that they encourage partnership / friendship between the government and the private sector (for profit or not for profit organizations). Further, they allow for the government to reduce their inefficiencies while working in collaboration with the private sector. However, these models have been criticised on the grounds that privatization in the planning and management of protected areas could lead to higher prices of products/services, exploitation of the visitors among others.

GOVERNANCE BASED APPROACH FOR PLANNING AND MANAGEMENT OF PROTECTED AREAS

Governance allows various stakeholders such as the government, Non-Government Organizations (NGO), research agencies, religious leaders, finance institutions, political parties among others to participate in decision making and implementation (United Nations Economic and Social Commission for Asia and the Pacific, UNESCAP, 2008).

Graham et al. (2003) supported the concept of 'Governance' and suggested the need to include local indigenous peoples in the planning and management of protected areas. Management practices of protected areas should be selected after conducting a cost-benefit analysis for locals, including locals in the decision making, incorporating traditional methods for resource management, and ensuring fair human resource management practices for the officials.

This approach suggests that groups in society other than government should be given a stronger role in addressing problems. When different groups take part in decision making, there is a holistic view of the problem at hand which in turn helps develop and implement the solutions more effectively. However, unwillingness to share power, mistrust among the groups may result in barriers for successful implementation of this approach.

STAKEHOLDERS ENGAGEMENT APPROACH FOR PLANNING AND MANAGEMENT OF PROTECTED AREAS

Newsome et. al (2005) highlight that participation of the various stakeholders in protected area planning, decision making, and management is essential for sustained tourism and can provide significant economic, social, cultural, environmental, and political benefits. The stakeholders suggested here includes the government, the businesses, local communities, environmental groups among others. Stakeholder engagement process focuses on identifying the stakeholders and ensuring their adequate representation, encouraging two-way communication between the various stakeholder groups and being flexible increasing the likelihood of consensus for achieving a mutually acceptable decision.

The benefits of this approach include providing employment and income generation opportunities, encouraging local participation, empowering various stakeholder groups, and boosting wildlife conservation efforts; however, several challenges exist with this approach including economic leakage, menial jobs creation and drainage of existing resources among others.

ADAPTIVE CO-MANAGEMENT APPROACH FOR PLANNING AND MANAGEMENT OF PROTECTED AREAS

Plummer and Fennell (2009) suggested Adaptive Co-Management approach for the management of protected areas. This approach combines cooperative and adaptive approaches to management, which includes characteristics such as collaborating interests, identifying values and continuous learning. The steps in the Adaptive Co-Management include identifying the tasks for which decisions need to be made, determining the participants who will make the decision, ensuring linkages (horizontal and vertical) among the participants and ensuring a process of communication to share knowledge for the purpose of problem-solving (Plummer and Fennell, 2009).

More efficient and effective decision making on account of exchange of knowledge among the groups taking part in the process is the major advantage of this approach. However, unwillingness to share power, lack of commitments to the process, mistrust among the group members and lack of capacity among others are few of the barriers identified to adaptive co-management (Plummer and Fennell, 2009).

6. COMMON THEMES AND LIMITATIONS OF THE FRAMEWORKS

TRADITIONAL APPROACHES TO PLANNING AND MANAGEMENT OF PROTECTED AREAS FOR WILDLIFE TOURISM

On studying the various frameworks in the traditional approach for planning and management of protected areas, it can be highlighted that most of the frameworks mainly emphasize on the carrying capacity; impact of tourism on the ecosystem and measures to reduce the negative impact and maximize the positive impact; and tourism experience on the tourist (Reynolds and Braithwaite, 2001). The frameworks in the traditional approach usually follow the following steps: set objectives, prepare terms of reference, situation analysis, understand deviation, formulate alternatives to reduce deviation, select the final plan, implement the plan, and evaluate the plan. Most frameworks focus on studying some form of factors (broad category of issues), indicators (specific variables within a factor) and standards (measurable aspect of the indicators) while making plans and managing protected areas.

However, as highlighted by Mahanta (2014) the limitation of the frameworks in the traditional approach is that they are reactive in nature. They study the visitor related problems on the protected area ecosystem and suggest strategies to overcome the same. Also, the implementation of these frameworks requires funding, effort, and skilled personnel to monitor visitor impact which might be difficult in some places that lack these resources. Further, these frameworks do not consider the other aspects of protected area management. Finally, they do not involve the other stakeholders such as the local communities, local businesses, NGOs, environmental bodies in the process of planning and management which many a times may lead to ineffective decision making and execution of the plans.

CONTEMPORARY APPROACHES TO PLANNING AND MANAGEMENT OF PROTECTED AREAS FOR WILDLIFE TOURISM

Most contemporary approaches for planning and management of protected areas emphasize on relationship between the government and other groups to ensure effective planning and management of protected areas. Hence, the focus of these approaches is on identifying the group with whom the government will collaborate for the purpose of protected area management. Further, the processes of these approaches also have a common theme where they first identify the various parties that will participate in planning and decision making, ensure that there is adequate representation from each group, encourage communication and information sharing among the parties for the purpose of effective decision-making and finally select and implement a plan that will be mutually beneficial.

However, adoption of these approaches is not relatively easy. Increased participants in planning, decision-making and implementation process leads to challenges such as unwillingness of groups to share power, lack of trust among the groups, conflict of interest among the groups and lack of skill/capabilities among others. Further, the focus is more on coming to a mutually accepted decision among the various groups which many a times may lead to a decision not in the best interest of the protected area.

7. RECCOMENDATIONS AND SCOPE FOR FUTURE RESEARCH

The previous section highlights the various frameworks developed for protected area planning and management. While elements of these frameworks are applicable on any scale, Higginbottom (2004) suggests that since protected areas differ in their characteristics, visitor impact, recreational opportunities, no one fixed management approach is effective. Effective management of protected area requires a framework that integrates various elements from the different approaches.

Hence, future research can focus on developing frameworks which integrate the various elements of the existing frameworks to ensure that protected area planning and management is done in a manner to reduce the negative impact of tourism on the environment, enhance visitor experience but at the same time allow participation by the various stakeholders. It will be through such frameworks that wildlife tourism will be carried out in a manner that helps achieve economic, social and environment sustainability along with maximising benefits.

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