

# Visitor Satisfaction Level Towards Facility Management at Lubuk Timah Recreation Center, Ipoh

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## Abstract

This study was conducted to evaluate visitor satisfaction with the management of facilities at Lubuk Timah Recreation Center. The objectives were to identify the facility management process and the level of visitor satisfaction with the facility management at Lubuk Timah Recreation Center, including the factors influencing satisfaction and assessing the effectiveness of the provided facilities. Data were collected using qualitative methods, namely interviews and surveys. Interviews were conducted with the recreation center manager, while the survey involved 100 respondents who visited the center. Thematic analysis was used for interview data, while descriptive statistics were applied to the survey data to identify the relationship between cleanliness, safety, and accessibility with visitor satisfaction. The findings revealed that the majority of visitors were satisfied with the facility management, particularly in terms of cleanliness and safety. However, issues such as insufficient parking spaces and facility maintenance were highlighted and require attention from the management. This study provides recommendations for improving facility management to ensure a better recreational experience and support efforts to promote Lubuk Timah as a premier recreational destination.

## 1. Introduction

Facility management has been developed in the United States (US) and the United Kingdom (UK) for more than 20 years. Today, it has expanded to several Asian countries such as Japan, Hong Kong, and Singapore, as well as developing countries like Malaysia and Thailand. Its diverse functions, which balance operational, tactical, and strategic intelligence, have significantly influenced the widespread growth of facility management. Operational activities emphasize service alignment between facility objectives and corporate goals. The integration of these

three functions contributes to an organization's success by fostering adaptability to changes, improving quality, and controlling costs (Ahmad Fauzi A. Wahab, 2001).

Facility management is widely applicable across various disciplines and sectors, whether public or private. However, in recent years, it has become highly relevant in building and infrastructure maintenance activities. Therefore, this study focuses on visitor satisfaction with facility management in recreational areas.

Visitor satisfaction refers to tourists' expectations of a destination based on their perceptions and evaluation of their experiences (Chon, 1989; Truong & Foster, 2006). Nasir, Faiz, and Lee (2011) argue that customer satisfaction is key to business success, as customers evaluate services based on their expectations. Measuring visitor satisfaction allows researchers to assess how well a tourism destination meets tourist needs (Meng et al., 2008). Grigg and Jordan (1993) emphasized that facility management has been designed in recent years to address building, infrastructure, and support service management. Atkin and Brooks (2000) described facility management as an integrated approach to operations, maintenance, enhancement, and adaptation of an organization's buildings and infrastructure, aiming to create an environment that strongly supports its core objectives. Hamer (1988) explained facility management as a process involving planning, implementation, and maintenance while considering the suitability of physical spaces and services within an organization, alongside cost-saving strategies. A recreational area generally refers to a space designated for leisure activities, providing relaxation and rejuvenation for visitors (Dewan Bahasa dan Pustaka, 2017).

Public recreational parks are popular gathering places for people of all backgrounds. Proper maintenance management is essential following the construction of these parks. Mohammed (2016) stated that maintenance aims to preserve the beauty and safety of park elements after construction. According to a report from Sinar Harian (February 6, 2024), cleanliness issues in waterfall areas remain a serious concern. The president of the Consumer Association of Penang (CAP) urged the Penang government and the Penang City Council (MBPP) to investigate and address waste pollution at Bayan Lepas Waterfall. Although Lubuk Timah Waterfall is a popular recreational destination among locals and tourists, studies have shown that facility management in such areas may not fully satisfy visitors (Abdullah, 2020; Chan & Tan, 2018). Issues such as inadequate maintenance, declining quality of basic facilities, and inefficient service delivery can negatively impact visitor experiences (Rahman, 2019). Thus, this study aims to assess visitor satisfaction with facility management at Lubuk Timah Waterfall and identify areas for improvement to enhance visitor experiences.

The scope of this study focuses on the types of facilities provided at Lubuk Timah Recreation Center and visitor satisfaction with these facilities. The study also collects feedback from visitors regarding facility management. Additionally, the study identifies attraction factors that encourage visitors to come to the recreational area. The important of this study are for facility manager to understand visitor satisfaction level to identify deficiencies in provided facilities and for the visitor to prove feedback on the facilities

## 2. Literature Review

Literature review is an important part of a research that provides theoretical references and research context based on existing sources. It involves critical reviews of documents such as journal articles, books, and other materials relevant to the topic of study. Literature review helps to form a research framework, identify knowledge gaps, and support the formulation of appropriate research questions and methodologies. Thus, it serves as a basis for understanding the background and importance of the topic being studied.

### 2.1 Introduction

A literature review is a discussion or summary of literature related to a specific subject or field. It provides an overview of topics discussed by experts, theories or hypotheses that support the research questions, as well as appropriate methods and techniques.

### 2.2 Definition and Concepts

#### 2.2.1 Level of Customer satisfaction

According to Oliver (1980), customer satisfaction is a measure of how well a company's products or services meet or exceed customer expectations. Satisfaction reflects an emotional assessment of a customer's experience with a company or product. Additionally, satisfaction represents how closely a customer's expectations match their actual experience (Anderson & Sullivan, 1993).

## 2.2.2 Recreational Area

According to Ford (1981), recreation is a program that utilizes natural environments to enhance teaching and learning. A recreational area is defined as a designated location for various recreational activities, including green spaces, parks, beaches, rivers, or lakes, designed to provide leisure experiences to the public (Godbey & Mowen, 2010).

## 2.2.3 Facilities

Facilities refer to all physical assets that provide services to support an organization's primary functions or activities. This includes buildings, infrastructure, equipment, and systems that ensure daily operations run smoothly (Alexander, 2003). Facilities also involve spatial planning, asset management, and maintenance (Nutt, 2000). In the tourism sector, facilities include amenities that enhance comfort and convenience, such as public restrooms, parking spaces, picnic areas, walking trails, and safety features (Lee & Chang, 2008).

## 2.2.4 Facility Management

According to the International Facility Management Association (IFMA), facility management is a profession that integrates multiple disciplines to ensure the functionality of built environments by integrating people, places, processes, and technology. It involves managing and coordinating physical spaces and support services to maintain effective, safe, and sustainable environments for organizations (Nutt & McLennan, 2000).

## 2.3 Location of Lubuk Timah Recreation Center

### 2.3.1 Lubuk Timah Waterfall

Lubuk Timah Recreation Center is unique due to its cold waterfall and natural hot spring pools. The hot spring pool was reconstructed and is located alongside the river and waterfall. There is a main pool that channels water into a secondary pool before flowing into the river. The waterfall cascades down a dam-like structure, creating a scenic view, especially during the rainy season, when the water flows over the dam, resembling Niagara Falls.

According to historical records, the dam was built along Sungai Anak Ayer Cina in the early 20th century, associated with tin mining activities of that period. The dam, estimated to be 30 meters high, is now partially filled with sand, with a small stream flowing through it.

Lubuk Timah Recreation Center is a popular destination for local residents and tourists, especially during holidays. Basic facilities such as toilets, a prayer room (surau), gazebos, and resting huts are provided. The recreation center is located 8 kilometers from the Simpang Pulai toll exit (Exit 137). Visitors can reach it by taking a right turn at the first traffic light after the toll exit and then driving 500 meters to another traffic light. The entrance to Lubuk Timah Recreation Center is along the main road leading to Cameron Highlands, with a small directional sign marking the entry point.

## 2.4 Functions of Facility Management

### 2.4.1 Facility Maintenance

Facility maintenance involves activities aimed at ensuring that facilities and equipment remain in good condition and function efficiently. This includes inspections, repairs, and replacement of worn-out components. The primary objective is to extend the lifespan of assets, reduce operational costs, and ensure user safety (Chotipanich, 2004).

### 2.4.2 Ensuring Safety and Health

This function ensures a safe and healthy environment for facility users. It involves compliance with safety regulations, risk management, provision of protective equipment, and staff training. Effective facility management helps reduce workplace accidents and health issues (Amaratunga & Baldry, 2020).

### **2.4.3 Energy and Resource Conservation**

This function focuses on reducing unnecessary energy and resource consumption within facilities. It includes managing lighting, heating, cooling, and water usage efficiently to promote environmental sustainability and reduce operational costs (Elmualim et al., 2010).

### **2.4.4 Information Technology Management**

This involves integrating technology to improve facility operations, including the installation of smart surveillance systems, Internet of Things (IoT) devices for predictive maintenance, and facility management software (Steven & Clarke).

## **2.5 Facility Management Methods at Lubuk Timah Recreation Center**

### **2.5.1 Facility Planning and Provision**

Planning and providing necessary facilities to ensure visitors have a comfortable and safe experience, including the construction of toilets, parking spaces, picnic areas, and other amenities (Walker, 2015).

### **2.5.2 Facility Maintenance and Upkeep**

Routine activities to maintain facilities in good condition, including regular inspections, minor repairs, and general upkeep (Cotts & Rondeau, 2010).

### **2.5.3 Safety and Health Measures**

Steps taken to ensure visitor safety, including installing warning signs, providing emergency kits, and training staff to handle emergencies (Reese, 2018).

### **2.5.4 Cleanliness and Sustainability**

Measures to ensure the recreation area remains clean and environmentally friendly, such as regular cleaning, waste management, and recycling initiatives (Talbot & Kaplan, 1984).

### **2.5.5 Visitor Management**

Techniques to regulate visitor flow and maintain comfort and safety, including setting visitor limits during peak hours and educating visitors on responsible behavior (Manning, 2011).

### **2.5.6 Monitoring and Improvement**

Processes to track facility usage and collect feedback for continuous improvement, including visitor surveys and data analysis (Neuman, 2014).

### **2.5.7 Risk Management Plan**

A structured plan to address potential risks and disasters, such as floods or landslides. This includes mitigation measures and emergency response procedures (Smith, 2013).

## 2.6 Factors Attracting Visitors to Lubuk Timah Recreation Center

### 2.6.1 Natural Beauty

Lubuk Timah Waterfall is unique as it features both a cold waterfall and a natural hot spring. The lush tropical forest surrounding the waterfall adds to its scenic appeal (Wong et al., 2023).

### 2.6.2 Complete Facilities

Facilities such as ample parking, clean toilets, and comfortable prayer rooms enhance visitor experiences (Malaysia Tourism).

### 2.6.3 Accessibility

Lubuk Timah Waterfall is easily accessible via well-maintained roads with clear signage, making it convenient for visitors (Tourism Perak).

### 2.6.4 Available Activities

Visitors can engage in various activities such as swimming, hiking, and relaxing in the hot springs (Pearce, 2005).

### 2.6.5 Safety Measures

Security personnel conduct patrols to ensure visitor safety and enforce regulation

## 3.0 Research Methodology

### 3.1 Introduction

Research refers to a systematic process that involves planning research methods, collecting data, analyzing data, and reporting information (Chua, 2014). In any research study, methodology is a crucial factor to ensure that findings obtained are valid and reliable (Mohd Majid, 1977).

### 3.2 Research Design

This study employs both quantitative and qualitative research designs to examine visitor satisfaction with facility management at Lubuk Timah Recreation Center and the factors attracting visitors to the site. A structured questionnaire was used to collect measurable data and identify patterns and relationships. Quantitative analysis helps in measuring desired variables and testing hypotheses. Additionally, qualitative methods were applied by conducting interviews with individuals involved in facility management at Lubuk Timah Recreation Center, particularly the facility manager.

#### 3.2.1 Qualitative Methods

The researcher conducted an interview with one respondent, while structured questionnaires were distributed to visitors at Lubuk Timah Recreation Center to assess their satisfaction with facility management.

#### 3.2.2 Observation

Observation methods originate from anthropological research (studies on societal life). Researchers typically immerse themselves in the studied environment to gain a clear understanding of issues affecting a community (Jasmi, 2012).

### 3.2.3 Interview Method

This method consists of four sections:

- i. Section A: Respondent information (name, position, and years of service).
- ii. Section B: Cleanliness aspects.
- iii. Section C: Safety aspects.
- iv. Section D: Facility aspects.

### 3.2.4 Questionnaire Survey

A questionnaire survey was used to collect responses on visitors' perceptions of facility management at Lubuk Timah Recreation Center. The questionnaire consisted of four sections:

- i. Section A: Demographic information.
- ii. Section B: Level of satisfaction.
- iii. Section C: Factors attracting visitors.
- iv. Section D: Visitor suggestions for improvements.

## 3.3 Sampling Method

The study's population was uncertain, as visitor numbers fluctuate depending on weather conditions. According to the interviewee, visitor numbers decrease during the rainy season and increase during dry seasons. The estimated number of visitors ranges from 200-300 per day, depending on the weather. Based on Krejcie & Morgan's (1970) sample size determination table, a sample size of 110 respondents was selected for the questionnaire survey.

## 3.4 Data Analysis Methods

### 3.4.1 Thematic Analysis

Thematic analysis was used for qualitative interview data. This method involves continuous reading and re-reading of transcripts systematically to identify themes (Cavendish, 2011).

Braun and Clarke (2006) argue that thematic analysis is theoretically flexible and allows for the detailed identification, explanation, and evaluation of patterns (themes) in a dataset.

### 3.4.2 Frequency Analysis

Frequency analysis was conducted using the Statistical Package for the Social Sciences (SPSS) software. Descriptive analysis was used to present findings in the form of means (average values). Effaziela (2007) explains that frequency analysis is useful for evaluating response distribution on a Likert scale (1 to 4) for each statement in the questionnaire.

This analysis was applied to:

- i. Section B: Visitor satisfaction level.
- ii. Section C: Factors attracting visitors.

## 4.0 Data Analysis

### 4.1 Introduction

This chapter presents and discusses the findings of the study. It includes an analysis of observations related to facilities at Lubuk Timah Recreation Center, interviews with a facility manager, and questionnaire results.

### 4.2 Interview Analysis

**Table 1 : Interview Analysis**

Aspect	Main Theme	Summary
<b>Cleanliness</b>	Consistent maintenance	cleanliness Placement of trash bins, daily cleaning, immediate response to complaints
<b>Safety</b>	Emergency preparedness	Availability of first aid kits, trained staff, daily facility inspections, safety equipment
<b>Facilities</b>	Facility maintenance and accessibility	Wheelchair-accessible paths, dam improvements, challenges during the rainy season, visitor population

### 4.3 Visitor Satisfaction Analysis

**Table 2: Visitor Satisfaction Towards Facility Management**

Variable (Aspect A: Cleanliness)	N	Mean Value
I am satisfied with the cleanliness and beauty of the waterfall	110	3.35
Food stalls here are clean and safe to visit.	110	3.35
The recreation area is clean and pleasant.	110	3.34
Toilets and bathrooms are very clean and comfortable.	110	3.34
Management ensures good maintenance of cleanliness.	110	3.34
Trash bins are sufficient to maintain cleanliness.	110	3.30

### 4.4 Factors Attracting Visitors

**Table 3: Factors Influencing Visitor Attraction**

Factors	Mean Value
Affordable entrance fees play a role in my decision to visit this waterfall	3.44
Experiencing a peaceful natural environment away from the city's hustle and bustle is a key factor in my choice to visit the waterfall	3.43
I am attracted to this waterfall because it is suitable for recreational activities such as swimming and hiking	3.42

I prefer to visit waterfalls that have proper waste management initiatives, such as sufficient trash bins	3.42
Safety measures at the waterfall, such as lifeguards and warning signs, influence my decision to visit	3.40
The availability of infrastructure such as public toilets, parking areas, and food stalls affects my choice to visit this waterfall	3.40
Waterfalls with easy access, such as well-maintained roads and clear signboards, attract me to visit	3.40
Promotions through social media and recommendations from friends or family influence my decision to visit this waterfall	3.34

## 5.0 Conclusion

This study assessed visitor satisfaction with facility management at Lubuk Timah Recreation Center. The management process involves identifying needs, planning, designing, implementing, monitoring, and evaluating. However, several issues require attention, such as cleanliness concerns, infrastructure damage and the impact of flash floods affecting visitor experiences. Although overall satisfaction was moderate to high, improvements are necessary in maintenance, infrastructure upgrades, and safety measures. This study recommends that local authorities take proactive steps to address the identified issues and enhance facility management at Lubuk Timah Recreation Center for an improved visitor experience.

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## Conflict of Interest

Authors declare that there is no conflict of interests regarding the publication of the paper.

## Authors Contribution

*The authors confirm contribution to the paper as follows: **study conception and design:** Syahidaton Akma binti Ishak, Abdul Jalil bin Omar; **data collection:** Syahidaton Akma; **analysis and interpretation of results:** Syahidaton Akma binti Ishak, Abdul Jalil bin Omar; **draft manuscript preparation:** Syahidaton Akma binti Ishak, Abdul Jalil bin Omar. All authors reviewed the results and approved the final version of the manuscript*

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