



**UNIVERSITI PUTRA MALAYSIA**

***Carrying Capacity Factors Influencing Visitors' Experience in the  
Giant Panda Conservation Centre, Zoo Negara, Malaysia.***

**Law Kar Men**

**FH 2016 6**

**Carrying Capacity Factors Influencing Visitors' Experience in the Giant Panda Conservation Centre, Zoo Negara, Malaysia.**

By

Law Kar Men

A Project Report Submitted in Partial Fulfilment of the Requirements  
for the Degree of Bachelor of Parks and Recreation Science in the  
Faculty of Forestry  
University Putra Malaysia.

2016

## **DEDICATION**

**This thesis is specially dedicated to:**

**My beloved parents,**

**Law Tong Mee and Ng Kam Fong**

**My dearly younger sisters and younger brother,**

**Law Kar Ley and Law Mun Loong**

**And**

**All my supportive friends,**

**With appreciation.**

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## ABSTRACT

Giant Panda Conservation Centre (GPCC), Zoo Negara, Malaysia was built at a cost of RM25 million and completed in April 2014 with world class facilities. After the birth of the panda cub, the number of people visit to GPCC is getting higher. In order to continue provide good experience for the visitors, carrying capacity factors that influence visitors' experience should be determined because there is no carrying capacity research had been done in GPCC before. Without this study, management unable to do a higher research on carrying capacity in GPCC. The purpose of this study is to explore the carrying capacity factors that influence visitor experience. This research was using face-to-face questionnaire survey with 250 respondents. Results from the study show that almost all the respondents are still satisfied with facilities and environment provided in GPCC. The visitors were most satisfied with the cleanliness in waiting area and most dissatisfied with the adequacy of space in the zoovenir. The age, marital status of the visitors, physical and social carrying capacity in GPCC, and the type of visit information sources which are television or radio, Internet and brochures have been identified as the factors that influence visitors' experience at GPCC. GPCC management should take effective planning to preserve and improve the current condition of the physical assets in GPCC.

## ABSTRAK

Pusat Konservasi Panda Gergasi (PKPG), Zoo Negara, Malaysia telah dibina dengan kos berjumlah RM25 juta dan siap pada bulan April 2014 dengan kemudahan yang bertaraf antarabangsa. Selepas kelahiran anak panda, bilangan pengunjung yang melawati ke PKPG semakin bertambah. Dalam usaha untuk memberikan pengalaman yang baik kepada pengunjung, faktor-faktor kapasiti yang mempengaruhi pengalaman pengunjung perlu ditentukan kerana tidak ada penyelidikan yang mengguna kaedah membawa kapasiti telah dijalankan dalam PKPG. Tujuan utama kajian ini adalah untuk mengenal pasti faktor kapasiti PKPG yang akan mempengaruhi pengalaman pengunjung. Penyelidikan ini telah dijalankan melalui kajian soal selidik muka-ke-muka dengan 250 responden. Keputusan kajian soal-selidik daripada 250 responden menunjukkan bahawa hampir semua responden masih berpuas hati dengan kemudahan dan persekitaran yang disediakan dalam PKPG. Pengunjung paling berpuas hati dengan kebersihan di kawasan ruang menunggu dan paling tidak berpuas hati dengan kecukupan ruang di dalam Zoovenir. Umur, status perkahwinan pengunjung, fizikal dan sosial kapasiti dibawa dalam PKPG, dan jenis sumber maklumat lawatan iaitu televisyen atau radio, Internet dan risalah telah dikenal pasti sebagai 7 faktor yang mempengaruhi keseluruhan pengalaman pelawat di PKPG. Pengurusan PKPG perlu mengambil perancangan yang berkesan demi memelihara dan memperbaiki fizikal aset dalam PKPG. Pengurusan perlu mengambil kira secara serius terhadap kapasiti di PKPG demi menyediakan pengalaman yang baik untuk bilangan pelawat yang melawati PKPG.

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## APPROVAL SHEET

I certify that this research project report entitled **“Carrying Capacity Factors Influencing Visitors’ Experience in the Giant Panda Conservation Centre, Zoo Negara, Malaysia”** by Law Kar Men has been examined and approved as a partial fulfillment of the requirements for the degree of Bachelor of Parks and Recreation Science in the Faculty of Forestry, University Putra Malaysia.

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## LIST OF ABBREVIATIONS

<b>GPCC</b>	Giant Panda Conservation Centre
<b>RM</b>	Ringgit Malaysia
<b>SPSS</b>	Statistical Package for the Social Sciences
<b>WOM</b>	World of Mouth
<b>PCC</b>	Physical Carrying Capacity
<b>SCC</b>	Social Carrying Capacity

# CHAPTER 1

## INTRODUCTION

### 1.1 Zoo

Zoo means an establishment, whether stationary or mobile. Zoo is the place where captive animals are kept for exhibition to the public and includes a circus and as a rescue centre but does not include an establishment of a licensed dealer in captive animals. According to World's Zoo Strategy (WAZA, 2005), the establishment of zoos have 4 main purpose and goals: 1) Recreation, providing a "green touch" environment for public; 2) Education about the diversity of life; 3) Research on wildlife using the captive facilities for studies not possible in nature and 4) Conservation of endangered species for which only captivity can provide shelter.

During our childhood, most of us had visited zoo with parents or fieldtrip organised by school. Most of the people think that zoo is a place for relaxation, entertainment or a place to have fun. Although the initial purpose of zoo was entertainment, over the decades, with the disappearances of natural habitat, zoos had transformed into centres for wildlife conservation and environmental education.

Zoo creates strong reactions especially for the people who live in urban area. People appreciate when they can see the animals they would never have the chance to see at urban area. Zoo has a role as species conservation. Many animal species greatly reduced in number and become extinct. Through captive breeding in zoo, the animal species will be preventing from extinction.

## **1.2 Zoo Negara**

Zoo Negara Malaysia is managed by a non- governmental organization. Which is the Malaysian Zoological Society; the establishment of Zoo Negara is the first local zoo for Malaysians. Zoo Negara has been officially opened on the 14th November 1963 and has matured into a well-known zoo all around the world. Zoo Negara has a total of over 5137 specimen from 476 species of mammals, birds, reptiles, amphibians and fish. (Zoo Negara, 2015).

Zoo Negara covers 110 acres of land which is situated only 5km from the city of Kuala Lumpur. Over the years, the zoo has transformed itself to an open concept zoo with over 90% of its animals being kept in spacious exhibits with landscape befitting its nature. (Zoo Negara, 2015). On June 15, 2012, the Malaysian and Chinese government have come to an agreement to loan a pair of panda which are Fu Wa (Xing Xing) and Feng Yi (Liang Liang) to Malaysia for 10 years as a mark for 40<sup>th</sup> anniversary of diplomatic relation between the two countries. The two Giant Pandas are housed at Zoo Negara.



### **1.3 Giant Panda Conservation Centre (GPCC)**

The Giant Panda Conservation Centre was launched by Prime Minister Datuk Seri Najib Tun Razak on June 25, 2014. During the opening ceremony, Prime Minister Datuk Seri Najib Tun Razak also announced the new name of male panda is Xing Xing (Fu Wa) and female panda is Liang Liang (Feng Yi).

The construction of this complex was started in July 2013 and completed in April 2014. According to Malaysian Natural Resources and Environment Minister Datuk Seri G. Palanivel (2014), GPCC needed RM25 million to be completed. GPCC completed with new facilities provided for the giant pandas and visitors. The design of the enclosure is done according to the original home of the giant pandas in China. Inside the 1.6 hectare complex, there are exercise area, holding den, laboratory, veterinary clinic, food preparation area, incubator room and a monitoring room. The entire enclosure area is air conditioned and maintains at temperature of 24 -25 degree Celsius in order to ensure the comfort of the pandas.

Xing Xing and Liang Liang have their own enclosures. Each enclosure includes a wooden playground, ice block, water features and a gully. The function of the water feature is to buffer the visitors' noise, prevent the giant panda from being startled. The entrance fee to GPCC is RM22 per adult and RM11 per child, while the entrance fee to Zoo Negara is RM32 per adult and RM11 per child.

#### **1.4 Carrying Capacity**

According to Wagar (1964), it was initiated with the view that carrying capacity of recreation lands could be determined primarily in terms of ecology and deterioration of areas. However, it soon became obvious that the resource – oriented point of view must be augmented by consideration of human value.

Carrying capacity refer to maximum number of visitor who can enter GPCC without destroy the physical environment and without any declination in the experience of visitors (Mathieson and wall, 1982). In this study, the carrying capacity will be focus on Physical carrying capacity in GPCC and Social carrying capacity of the visitors who had visited GPCC.

Carrying capacity can be an important issue for GPCC management. This is because carrying capacity study able provides the information about the condition of facilities in the GPCC able satisfies and provides high visitors experience to the number of arrival visitors. With a better management it may allow a better space organization according to the demand or amount of the visitors. Hence, in order to provide a quality experience to the visitor and maintain the desired condition, carrying capacity model able determine the limits considered admissible of the facilities in the GPCC.

### **1.5 Problem Statement**

The arrival of the giant pandas becomes the main attraction at Zoo Negara. According to The Star (June 26, 2015), since the arrival of the animal, they are proven to be an attraction at the zoo, because the Giant Pandas draw almost 365,000 visitors to GPCC in the past year. Moreover, Liang Liang (Feng Yi) was given birth to a baby panda on 18 August, 2015. The Giant Panda baby girl was delivered at 1.45pm at Zoo Negara. This baby panda break the world record, because it is a naturally reproduced cub within a short period of time while in captivity outside of China. Since the public appearance of panda cub on November 17, 2015 the number of visitors go to Zoo Negara has increased by 10%. The national Zoo deputy president Rosly Ahmat Lana said, the number of visitors to zoo until November 2014 was 12,000, and in less than a month the number of visitors rose by 1,200. (The Star, 2015).

A number studies in carrying capacity had been completed with the majority focusing on quality of the environment and resources in natural area. However, very few researches had been done to find out the relationship between crowding and use level and between crowding and visitor's experience in Urban Wildlife Tourism. In this study, carrying capacity can be an important tool for GPCC management. This is because carrying capacity study able provides the information about the condition of facilities, and social aspects from the visitors which can help in future improvement GPCC.

Based on the previous study done by Thoo (2015) which shows that majority of the visitors are satisfied for all the facilities provided. However they have lower satisfaction towards Zoovenir, toilet and photo taking spot outside the GPCC. Another study done by Afiq Akmal (2015) on “Visitors’ Attitude towards Giant Panda Conservation Program in Zoo Negara” shows that, most of the visitors have positive attitude towards GPCC. However, there are visitors which are not satisfied with the limitation of observe giant panda time, which is 20 minutes.

Due to time constraint in their study, the data collection has been done during weekend and a few of the public holiday in February 2014 only, but not during the long school holiday. Respondents of Thoo and Afiq majority stay in nearby area such as Kuala Lumpur and Selangor. Hence, Thoo and Afiq suggest the data collection should be cover long school holiday in order to get more varied and richness data since there will have differences in the socio-demographic characteristics of the long school holidays visitors.

The data collection of Thoo and Afiq was done on February 2014. Which, the giant panda cub hasn’t been born yet. The environment of GPCC will be varied from time to time. Hence, there is a need to conduct a study after the birth of panda cub on the influence of GPCC Carrying Capacity factors on Visitor Experience which covers the period of long school holiday, public holiday, weekday and weekend in order to know the visitors’ experiences after baby panda birth.

## **1.6 Objective**

1. To determine percentage of respondents' agreement on the perception of carrying capacity factors in Giant Panda Conservation Centre.
2. To determine carrying capacity factors that influence visitors' experience.

## **1.7 Justification**

The carrying capacity study will be the initial step to help the management identify the carrying capacity currently existing facility and condition in GPCC able to satisfy the tourist expectation and without decrease on the visitor experience.

Government had spent millions of ringgit in preparation to accommodate two pandas. Furthermore, Malaysia needs to pay panda's rental fee to China annually. Hence there is very important to retain the present visitors and at the same time need to attract new visitors go to GPCC.

Carrying Capacity Factors study able to help GPCC management finds out carrying capacity factors which will influence the satisfaction and experience of the visitors. With this study, GPCC management can plan more efficiently in order to provide good experience for present visitors and attract new visitors.

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