



UNIVERSITI PUTRA MALAYSIA

**VISITOR OPINION ON WILDLIFE ACTIVITIES AT KUALA GANDAH
NATIONAL ELEPHANT CONSERVATION CENTRE, PAHANG,
MALAYSIA**

DARISHAWATI BINTI DAUD

FH 2009 14



**VISITOR OPINION ON WILDLIFE ACTIVITIES
AT KUALA GANDAH NATIONAL ELEPHANT
CONSERVATION CENTRE, PAHANG, MALAYSIA**

DARISHAWATI BINTI DAUD

**MASTER OF SCIENCE
UNIVERSITI PUTRA MALAYSIA**

2009



**VISITOR OPINION ON WILDLIFE ACTIVITIES AT KUALA GANDAH
NATIONAL ELEPHANT CONSERVATION CENTRE, PAHANG, MALAYSIA**

By

DARISHAWATI BINTI DAUD

**Thesis Submitted to the School of Graduate Studies, Universiti Putra
Malaysia, in fulfilment of the Requirements for the Degree of Master
Science**

August 2009



DEDICATION

To my dearest mother and father, Puan Che Wa Binti Hj. Ismail and En.Daud Bin, bothers and sisters, Dalinawati, Darmize, Darmizan, Darmiyanti and Darizuan Shah, lovely nephew and niece, Ahmad Syazzrul Mirza and Nur Syaza Nabila and special one, Muhammad Fadzli Masran.



Abstract of thesis presented to the senate of Universiti Putra Malaysia in fulfilment of the requirement for the degree of Master of Science

VISITOR OPINION ON WILDLIFE ACTIVITIES AT KUALA GANDAH NATIONAL ELEPHANT CONSERVATION CENTRE, PAHANG.

By

DARISHAWATI BINTI DAUD

August 2009

Chairman : Abdullah Mohd, PhD

Faculty : Forestry

Human-wildlife interactive experience has become a popular recreational pursuit in the wildlife-based tourism. Many tourists seek close interaction with wild animal in a safe while in its natural or semi-natural settings. The interface between people who desired to be with animal in its habitat is able to create closeness atmosphere. Such experience could result in better appreciation of wild animals and sustainability of the wildlife interactive base tourism. .

This study was conducted in Kuala Gandah National Elephant Conservation Centre (KGNECC). The Department of Wildlife and National Park (DWNP) set aside a portion of the Krau Forest Reserve Pahang for the centre. The centre also takes care of the orphaned and abandoned elephants. The main objective



of this study was to determine the factors in visiting KGNECC that related with the human-wildlife interactive activity. These factors are to be considered as the basis for sustainability of KGNECC visitors-wildlife interactive activity.

In this study, questionnaires were distributed using convenience sampling technique to 400 visitors in order to get responses related to the wildlife interactive activity. The questionnaire were administered using structured questions that covers on respondents' opinions on KGNECC regarding the visitation attributes, preferences in tourism activities particularly on the wildlife tourism activities, including their level of interaction with the wildlife and their relationship between the types of wildlife tourism activities and the level of interactions that have occurred.

The results showed that respondents highly preferred the interactive activities when compared with the observation activities. This suggesting that there was close interaction experience occurred between visitors and elephants during the interactive activities include bathing together with elephant, feeding and riding elephant. The level of interaction for interactive activities was identified as high when compared to observation activities such as video show, taking pictures and watching elephants. In addition, it was found that there was no significant relationship ($p \geq 0.153$) between types of wildlife tourism activity and the level of human-wildlife interaction at 0.05 level of significant.

In conclusion, this study was able to demonstrate four factors that are related to visitation in KGNECC which are (i) nature-based activities (Eigen value: 7.89), (ii) conservation-led activities (Eigen value: 5.03), (iii) environmentally educative (Eigen value: 3.83) and (iv) human-wildlife encounter (Eigen value: 2.80). Further analysis using the non-parametric test; Mann-Whitney Test and Kruskal-Wallis Test found that that respondents' demographic background has also influenced the generated factors related to visitation in KGNECC. Result showed that respondents' socio-demographic background such as origin (local or international), age, and education level have significant relationship with factors related in visitation to KGNECC, while for gender, occupation and average monthly income have shown no relationship at 0.05 level of significant.

The generated factors illustrate several similarities among nature-tourism, wildlife tourism and ecotourism which suggested these industries can affect the sustainability of the wildlife interactive activity. Here, it can be said that most of the visitors of different background can be found visiting the KGNECC and their main outlook about KGNECC such site has the nature-based attractions with conservation-led activities, environmentally educative and able to offer human-wildlife close encounter. Therefore, it can be said that such evidence indicated that the wildlife based activities in relation with visitors-wildlife interactive activity offered has contributed in visitation to KGNECC.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Master Sains

**PENDAPAT PELAWAT TERHADAP AKTIVITI HIDUPAN LIAR DI PUSAT
KONSERVASI GAJAH KEBANGSAAN KUALA GANDAH, PAHANG**

Oleh

DARISHAWATI BINTI DAUD

Ogos 2009

Pengerusi : Abdullah Mohd, PhD

Fakulti : Perhutanan

Pengalaman interaktif antara manusia-hidupan liar telah menjadi sebuah aktiviti rekreasi yang terkenal dalam pelancongan berasaskan kehidupan liar. Ramai pelancong yang inginkan interaksi yang lebih dekat dengan kehidupan liar secara selamat, dikawasan semulajadi atau pun separa semulajadi. Pertembungan antara pelawat dengan kehidupan liar dan habitatnya dapat mencipta suasana yang lebih dekat. Pengalaman seperti ini dapat memupuk rasa menghargai terhadap kehidupan liar dan seterusnya memastikan pelancongan berasaskan aktiviti interaktif kehidupan liar akan berkekalan.

Satu kajian telah dijalankan di Pusat Konservasi Gajah Kebangsaan Kuala Gandah (PKGKKG). Jabatan Perlindungan Hidupan Liar dan Taman Negara



(Perhilitan) telah menyediakan sebahagian kawasan Hutan Simpan Krau bagi pusat ini beroperasi. Pusat ini juga melindungi gajah-gajah yang terbiar dan yang kehilangan ibu. Objektif utama kajian ini adalah untuk menentukan latar belakang pelawat dan factor-faktor yang menyumbang kepada interaksi manusia-hidupan liar. Faktor-faktor ini merupakan asas kepada pengelasan aktiviti interaktif pelawat-hidupan liar di PKGKKG.

Di dalam kajian ini, borang soal-selidik telah diedarkan kepada 400 pelawat untuk mendapatkan maklumbalas berhubung dengan aktiviti interaktif hidupan liar menggunakan teknik persampelan mudah. Servei ini menggunakan borang soal-selidik berstruktur untuk mendapatkan maklumat yang meliputi pendapat pelawat terhadap PKGKKG berhubung lawatan, kecenderungan dalam aktiviti pelancongan terutamanya ke atas aktiviti pelancongan hidupan liar, termasuklah tahap interaksi bersama hidupan liar dan perhubungan antara jenis aktiviti pelancongan hidupan liar and tahap interaksi yang berlaku.

Keputusan menunjukkan responden mempunyai kecenderungan yang tinggi bagi aktiviti interaktif berbanding aktiviti pemerhatian. Ini menunjukkan berlakunya pengalaman interaksi yang rapat antara pelawat dan gajah semasa aktiviti interaktif termasuklah mandi bersama gajah, memberi makan dan menaiki gajah. Tahap interaksi bagi aktiviti interaktif dikenalpasti sebagai tinggi dibandingkan dengan aktiviti pemerhatian seperti persembahan video,

mengambil gambar dan memerhati gajah. Selain itu, kajian ini menunjukkan tidak terdapat hubungan ($p \geq 0.153$) di antara jenis aktiviti pelancongan hidupan liar dan tahap interaksi antara manusia-hidupan liar pada tahap ketara 0.05.

Kesimpulannya, kajian ini dapat membuktikan empat jenis factor yang berkaitan dengan lawatan ke PKGKKG iaitu (i) aktiviti berasaskan alam semulajadi (nilai Eigen: 7.89), (ii) aktiviti yang membawa kepada konservasi (nilai Eigen: 5.03), (iii) pengajaran berkenaan alam sekitar (nilai Eigen: 3.83) dan (iv) pertembungan antara manusia-hidupan (nilai Eigen: 2.80). Analisis selanjutnya yang menggunakan ujian non-parametrik; Ujian Mann-Whitney dan Kruskal-Wallis dilaksanakan mendapati bahawa maklumat berkenaan pengaruh latar belakang responden mempengaruhi factor yang telah dikenalpasti dalam lawatan ke PKGKKG. Keputusan menunjukkan latar belakang responden seperti tempat asal (tempatan atau antarabangsa), umur dan tahap pendidikan mempunyai hubungan ketara bagi factor melawat PKGKKG manakala jantina, pekerjaan dan purata pendapatan sebulan menunjukkan tiada perkaitan pada tahap ketara 0.05.

Factor yang dihasilkan menunjukkan beberapa persamaan antara pelancongan semulajadi, pelancongan hidupan liar dan ekopelancongan yang mencadangkan bahawa industri ini boleh mempengaruhi pengekaln aktiviti interaktif hidupan

liar. Disini boleh diperkatakan bahawa kebanyakan pelawat yang melawat PKGKKG mempunyai latar belakang yang berbeza dan tinjauan utama mereka adalah untuk mencari tempat yang mempunyai daya tarikan semulajadi yang berlandaskan aktiviti konservasi, pengajaran alam sekitar dan mampu menawarkan pertemuan dekat antara manusia-hidupan liar. Berdasarkan bukti ini, ianya boleh diperkatakan bahawa aktiviti berasaskan hidupan liar yang berkaitan antara pelawat-interaktif hidupan liar yang ditawarkan di PKGKKG telah menyumbang dalam lawatan ke PKGKKG.

ACKNOWLEDGEMENTS

First and foremost, all praised be the Almighty Allah (S.W.T) for giving me time and patience to complete my Masters' study. It has been a memorable journey throughout my academic study. The whole process of completing this study, really testing on my patience, determination and strength to ensure I will be able achieved my dreams. It does really open up our mind and heart on the value of family and friends.

Here, there are number of people I would like to thank for their help in guiding me through this thesis. First and foremost, I would like to extend my sincere gratitude to my research supervisor, Associate Professor Dr. Abdullah Mohd. At various point of my study, he has guided me, challenged me and supported me. And so on to my other two committee members, Dr. Manohar Mariapan and Associate Professor Dr. Mohamed Zakaria Bin Hussin who has also guided and giving constructive critics and ideas that would help me in the process of completing this thesis. Without this supervisory guidance, I would not be able to complete this thesis. I also would like to express my special thank you to Dr. Roslan Mohammad Kassim who has also contributed invaluable guidance.

I would like to thank all the staff and student of Faculty of Forestry and the Department of Wildlife and National Parks of Peninsular Malaysia who has given



opportunity and permission in conducting this study. My special gratitude to all staff of Kuala Gandah National elephant Conservation Centre that has been really helpful and kind during the process of data collections. Our memorable and meaningful experience would stick forever. And also to all the staff of Institutes of Biodiversity, Bukit Rengit for giving nice place for me to stay during the data collections.

Finally, I would like to extend my sincere gratitude to all my family and friends. Especially to my dearest mother and father, Puan Che Wa Binti Hj. Ismail and En.Daud Bin Wahid who has given me tremendous love and support during my ups and downs in completing this study. Without their love and supported, I would never able to complete this study smoothly. Not to forget, to all my bothers and sisters, Dalinawati, Darmize, Darmizan, Darmiyanti and Darizuan Shah for their supports and to my lovely nephew and niece, Ahmad Syazzrul Mirza and Nur Syaza Nabila who has cheer up my day. I also wish to express my deeply gratitude and thanks to all my friends, Suzie who is also my research mate and roommate, Min (Farah Dayana), Kak Nana, Dee, Wafi, Zuhir, Wan and the whole member of Forgrads for their support and invaluable friendships. Last but not least, to my special one, Muhammad Fadzli Masran, who has given me strength, supports and invaluable loves throughout the journey of completing this study. Thanks again to all who has involves in this study. Only Allah S.W.T can repay all your kindness.



This thesis was submitted to the Senate of Universiti Putra Malaysia and has been accepted as fulfillment of the requirement for the degree of Masters of Science. The members of the Supervisory Committee were as follows:

Abdullah Bin Mohd, PhD

Associate Professor
Faculty of Forestry
Universiti Putra Malaysia
(Chairman)

Mohamed Zakaria Bin Hussin, PhD

Associate Professor
Faculty of Forestry
Universiti Putra Malaysia
(Member)

Manohar Mariapan, PhD

Lecturer
Faculty of Forestry
Universiti Putra Malaysia
(Member)

HASANAH MOHD GHAZALI, PhD

Professor and Dean
School of Graduate Studies
Universiti Putra Malaysia

Date: 17 March 2010



I certify that a Thesis Examination Committee has met on 19 August 2009 to conduct the final examination of Darishawati Daud on her thesis entitled "**Visitor Opinion on Wildlife Activities at Kuala Gandah National Elephant Conservation Centre, Pahang, Malaysia**" in accordance with the Universities and University Colleges Act 1971 and the Constitution of the Universiti Putra Malaysia [P.U. (A) 106] 15 March 1998. The Committee recommends that the student be awarded the Degree of Masters of Science.

Members of the Thesis Examination Committee were as follows:

Azmy Hj. Mohamed, PhD

Associate Professor
Faculty of Forestry
Universiti Putra Malaysia
(Chairman)

Azlizam Aziz, PhD

Faculty of Forestry
Universiti Putra Malaysia
(Internal Examiner)

Ebil Yusof, PhD

Faculty of Forestry
Universiti Putra Malaysia
(Internal Examiner)

Ahmad Azmi M. Ariffin, PhD

Faculty of Economics and Business
Universiti Kebangsaan Malaysia
Malaysia
(External Examiner)

BUJANG BIN KIM HUAT, PhD

Professor and Deputy Dean
School of Graduate Studies
Universiti Putra Malaysia
Date: 15 January 2010



DECLARATION

I declare that the thesis is my original work except for quotations and citations which have been duly acknowledge. I also declare that it has not been previously, and is not concurrently, submitted for any other degree at Universiti Putra Malaysia or at any other institution.

DARISHAWATI BINTI DAUD

Date: 1 January 2010

LIST OF TABLES

Table	Page
2.1 Human Values of the Natural World	48
4.1 The Respondents' Socio-demographic Profile	95
4.2 The Respondents' Places of Origin	97
4.3 The Respondents' Visitations Attributes and Interest in Tourism Activities	100
4.4 The Agreement on Definition of Observation and Interactive Activity	103
4.5 Activities offered at the KGNECC	105
4.6 The level of Visitors-elephant Interaction for Observation Activities	107
4.7 The Level of Visitors-wildlife Interactions for Interactive Activities	109
4.8 The Level of Interaction between the Visitors and the Elephants	111
4.9 The Visitors' Opinions on Activities and Attractions in KGNECC	117
4.10 The KMO and Bartlett's Test	120
4.11 The Total Variance Explained	122
4.12 The Visitors' Opinion Communalities	123
4.13 The Rotated Component Matrix	125
4.14 The Nature-based Activities Factor	129
4.15 The Conservation-led Activities Factor	132
4.16 The Environmentally Educative Factor	134
4.17 The Human-wildlife Encounters Factor	135
4.18 The Mean Scores of the Factors for Visiting KGNECC	137



4.19	The Test Statistics of Mann-Whitney for the Factors for Visiting KGNECC, based on the Socio-demographic Characteristics	141
4.20	The Mean Rank of Factors for Visiting KGNECC based on the Socio-demographic Characteristics	142
4.21	The Test Statistics of the Kruskal-Wallis Test for Factors for Visiting KGNECC based on the Socio-demographic Characteristics	147



LIST OF FIGURES

Figure		Page
2.1	An overview of wildlife tourism's position within tourism	20
2.2	The core component of non-consumptive wildlife use	23
2.3	The tourist destination and product components	28
2.4	Conceptual framework of non-consumptive wildlife oriented recreation and tourism	32
2.5	The Asian elephant, <i>Elephas maximus</i>	34
2.6	The spectrum of tourist-wildlife interaction opportunities	41
2.7	Model of Visitor wildlife interactions	43
2.8	Four Key Determinants of Human View of Wildlife	50
2.9	Proposed Conceptual Framework	74
3.1	The Location of Kuala Gandah in Malaysian Map	75

LIST OF ABBREVIATIONS

CITES	Conservation on International Trade in Endangered Species of Wild Fauna and Flora
CRC	Cooperative Research Centre
UNWTO	United Nation World Tourism Organization
DWNP	Department of Wildlife and National Park of Peninsular Malaysia
HEC	Human–elephant Conflict
IUCN	World Conservation Union
KGNECC	Kuala Gandah National Elephant Conservation Centre
KMO	Kaiser-Meyer-Olkin
MTB	Malaysian Tourism Board
NCWOR	Non-consumptive Wildlife-oriented Recreation
PAF	Principal Axis Factor
PCA	Principal Component Analysis
SoTWIO	Spectrum of Tourist–Wildlife Interaction Opportunities
SPSS	Statistical Package for Social Science
WCS	Wildlife Conservation Society
WTO	World Tourism Organization
WWF	World Wildlife Fund for Nature



CHAPTER 1

INTRODUCTION

This research is primarily an exploration into the constituent of wildlife tourism activity in relation with human-wildlife interaction based on opinion. Of particular interest are the factors that attract people to participate in interactive activity, which can stimulate human-wildlife relationship through such experience. The purpose of this chapter is to introduce the background of study and definitions necessary in framing the research exploration. The research objectives of study also presented.

1.1 STUDY BACKGROUND

At present, millions of people travel far distance to see and experience directly with natural environment. The development in tourism travel has created a growing concern in environmental conservation and affected its sustainability. Since 1945, tourism has grown rapidly to become one of the world's foremost economic phenomenon. The United Nation World Tourism Organization (UNWTO) Barometer 2008 estimated that there were about 898 million international tourists in 2007 compared to 2006 (UNWTO press, 2008). To be specific, Fillion, Foley and Jaquemot (1992) reported that there were 106 to 211 million of wildlife-related tourists.



In addition, UNWTO (2008) cited that the world tourism exceeds expectations in 2007 where visitor arrivals have grown from 800 million to 900 million travelers in the preceding years. Specifically, according to the latest UNWTO World Tourism Barometer (2008), international tourism scenario has shown the expansion (6 %) of 898 million international arrivals, as compared to 2006. The expectation by 2008 was that an overall positive prospect for tourism can be observed. The increase of the world tourism was highly contributed by the increase of growth rate of tourism in the Asian region. Upon on the strong background of tourism growth (7 % per year) since 2000, it was noted that Asia and the Pacific were pushing for the international tourism by attracting 185 million visitors (UNWTO, 2007). In addition, Malaysia (+20%), Cambodia (+19%), Vietnam (+16%), Indonesia (+15%), India (+13%) and China (+10%) also keep improving their growth rates in tourist arrivals.

In the coming years, the growth of tourism is seen to be a globalize phenomena. Lickorish and Jenkins (1997) claimed that the globalization of tourism not only about the scale of tourism activity itself, but included the distribution of tourism activity. Tourism activity could be referred as one system which is formed by the formation of other tourism based industry such as eco-tourism, nature based tourism, rural tourism, and cultural tourism, mass tourism, and wildlife based tourism, alternative tourism, adventure tourism and others.



Generally, tourism comprises of either mass tourism or alternative tourism. The alternative tourism usually means as an alternative form of tourism which place emphasis on greater contact and understanding between hosts and guests (visitors) as well as between tourist and the environment (Newsome *et al.*, Newsome, Dowling and Moore, 2005). In a different situation, Wearing and Neil (1999) describe alternative tourism as a form of tourism that involve consistent activities related to the natural, social and community values. This allows both hosts and guests to enjoy positive and worthwhile interaction and shared experience. While for adventure tourism, it is emphasizing on the activity which may occur in natural areas whereas nature-based tourism is more concerned with the viewing of nature.

Despite the success of tourism industry, one of the big businesses of tourism based industry for centuries continues until today is the wildlife based tourism. It is now becoming one of the fastest growing sectors of the world economy. Fillion *et al.* (1992) and The Ecotourism Society (1998) suggested that between 40 and 60 per cent of international tourists were nature tourists and that 20 to 40 percent of these were wildlife-related tourists. However, Reynolds and Braithwaite (2001) proposed that the wildlife tourism industry is still lacking on the important information on the needs, desires and opinion of the public. Such information is important since the public play a big role in the vitality of wildlife to human welfare and the social and economic benefits derived from the use of



wildlife resources. This can be seen in consumptive and non-consumptive use of wildlife including wildlife tourism which is being discussed here.

Wildlife tourism embraces all three types of natural area tourism. It is partly adventure travel, is generally nature-based and involves ecotourism's key principles of being sustainable and educative as well as supporting conservation (Newsome *et al.*, 2005). Besides, wildlife tourism also encompasses of an array of activities and specific animal species. These recreational-based activities can be in a form of less intrusive which involves wildlife-independent recreation or wildlife-dependent recreation which generally more disruptive (Sinha, 2001).

In wildlife tourism, there are a number of tourists that have the desire of seeking closer relationship through direct interaction with wildlife in their natural environment (Rodger, Susan and Newsome, 2007). The factors that contributed to the growth of wildlife tourism were not only based on the recreational activities and species, it also contributed by the level of interaction between visitors and wildlife (Sinha, 2001; Rodger *et al.*, 2007).

An early concept of wildlife tourism framework focused on three dimension of human-wildlife interaction between ecology, the recreational user and the historical context of the human-wildlife relationship (Duffus and Dearden, 1990). The dimension are differentiated based on consumptive use which include

hunting and fishing, low consumptive which comprise of zoos and aquaria, and finally the non-consumptive which embrace of wildlife observation and photography.

As the wildlife tourism grow, Orams (1996; 2002) proposed an additional approach by viewing the range of opportunities through a spectrum of tourist-wildlife interaction opportunities (the way tourist might meet an animal in a wild, semi-captive or captive state); management strategy options (such as physical or economic restraint and educational program) and outcome indicator for tourist and wildlife. However, Reynolds and Braithwaite (2001) take a step further by identified the factors that affect wildlife tourism and the tourist through their conceptual framework of non-consumptive wildlife-oriented recreation and tourism.

The combination of circumstances in Reynolds and Braithwaite's conceptual framework could provide the best possible outcome in term of tourist satisfaction and the protection of wildlife resources. This type of tourism-wildlife based activity can be referred to as non-consumptive recreation (Duffus and Dearden, 1990). This win-win scenario would happen when people are willing to go beyond the traditional confines of wildlife tourism and the constituent parts of the wildlife tourism process (Reynolds and Braithwaite, 2001).

