

Supplementary Material

How Tourist Preference and Satisfaction Can Contribute to Improved Welfare Standards at Elephant Tourism Venues in Thailand

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Tables

Table S1. Reasons respondents gave for choosing their preferred activity. Additional details for Table 5. in the text. When 'reason frequency' is nil, no reason was provided by respondents.

Preferred Activity (n = 75)	Reason Frequency
	Activities (Intentionally Observed)
Bathing in mud	6x Close contact with elephants 4x Elephants appeared happy or to like the activity 3x 'Connected' with elephants 2x The activity was fun 2x Able to interact with the elephants 1x Elephants in natural environment 1x Beautiful scenery 1x Elephants 'didn't seem to mind'
Bathing in river or waterfall	10x Elephants appeared happy or to like the activity 9x Close contact with elephants 7x The activity was fun 4x Able to interact with the elephants 3x Felt like they were 'helping' or caring for the elephants 3x It was a special or unique experience 2x Elephants in natural environment 2x Beautiful scenery 2x 'Connected' with elephants 1x Participant felt safe
Feeding	9x Close contact with elephants 6x Elephants appeared happy or to like the activity 3x Elephants were behaving naturally or weren't being commanded 3x Felt like they were 'helping' or caring for the elephants 2x To observe how elephants eat and behave 2x The activity was fun 2x Able to interact with the elephants
Riding	3x It was a special or unique experience 1x Elephants 'didn't seem to mind' 1x Made the participant feel important e.g. 'like a King' 1x The activity was fun 1x Close contact with elephants
Taking photos	NIL
Walking with the elephants	2x Elephants were behaving naturally or weren't being commanded 1x To observe how elephants eat and behave 1x 'Connected' with elephants 1x It was a special or unique experience 1x Spiritual experience 1x Close contact with elephants
	Interactions
Interacting with or touching elephants	1x Elephants appeared happy or to like the activity 1x Able to interact with the elephants 1x Close contact with elephants
'Organic' interactions over organised ones	1x Elephants were behaving naturally or weren't being commanded
Spend time with elephants	NIL
	Observing elephants
Observing elephants - general	2x Elephants appeared happy or to like the activity 1x Elephants in natural environment
Observing elephants bathe in mud	NIL
Observing elephants bathe in water	2x Elephants appeared happy or to like the activity 1x Elephants were behaving naturally or weren't being commanded
Observing elephants eat	1x Elephants appeared happy or to like the activity

	1x Able to interact with the elephants
Observing elephants in their natural habitat	NIL
Observing elephants play (together or alone)	2x Elephants appeared happy or to like the activity 1x Elephants were behaving naturally or weren't being commanded
Observing elephants throw dirt on themselves	1x The activity was fun
Other	
Baby elephant or nursery	1x It was a special or first-time experience 1x The elephants are cute
'Everything' - no other description (at bareback venue)	NIL
'Everything' - no other description (at non-riding venue)	NIL
Making vitamin balls for the elephants	1x Felt like they were 'helping' or caring for the elephants
Non-elephant activities	NIL
Total	123 reasons

Table S2. Reasons respondents gave for choosing their least preferred activity. Additional details Figure 7. in the text. When the 'reason frequency' is nil, no reason was provided by respondents.

Least Preferred Activity (n = 40)	Reason Frequency
Didn't have a least preferred - liked them all	
Participants who visited bareback riding venues	NIL
Participants who visited non-riding venues	NIL
Participants who visited seated riding venues	NIL
Activities (intentionally observed)	
Bathing in mud	2x Felt the elephants were forced to participate in the activity 2x They got wet or muddy 1x The activity felt like a performance 1x Would have preferred to watch the elephants bathe themselves 1x Felt weird around the guides 1x Personal health - got a rash or fear of sickness
Bathing in river or waterfall	5x Felt the elephants were forced to participate in the activity 3x They got wet or muddy 2x Felt the elephants didn't enjoy the activity 1x The activity felt like a performance 1x Would have preferred to watch the elephants bathe themselves 1x Elephant not doing what the participant wanted 1x Personal health - got a rash or fear of sickness 1x Activity did not involve elephants
Close contact activities	NIL
Elephant tricks	NIL
Elephant walk	4x Unprepared for a hike or unfit 1x Felt the elephants were forced to participate in the activity 1x Felt the elephants didn't enjoy the activity 1x Felt the elephants were not treated well during the activity 1x Hot weather
Feeding	2x Chained in the sun or chained in general 2x Felt they did not interact enough with the elephants 1x The activity felt like a performance 1x Didn't find the activity interesting
Riding - bareback	2x Felt the activity hurts the elephants or is 'inhumane and wrong' 1x Given too many commands or being yelled at by the mahouts 1x Elephants not in their natural habitat
Riding - seated	1x The activity felt dangerous
Taking posed photos with the elephants	NIL

Guides & mahouts	
Commands from mahouts	NIL
Information from the guide	1x Didn't understand the guide's speech (non-native English speaker) 1x Wanted more educational information from the guide
	Other
Information from the guide	NIL
Making vitamin balls for the elephants	1x Unsure of the purpose of the activity
Observing elephants being treated for captivity-related injuries	NIL
Participant expected to give more elephants a mud bath	NIL
Seeing the elephants chained	NIL
Throwing mud at the participants	NIL
Non-elephant activities	2x Long journey to the ETV 1x Personal health - got a rash or fear of sickness 1x Would have liked to spend more time walking instead of long lunch
Total	49 reasons

Table S3. Respondent preferences, per venue type, for riding or not riding an elephant in future.

Venue Type Visited	Venue Type Would Visit in Future (n = 132)				Non-Response
	Non-Riding Venue	Bareback Riding Venue	Seated Riding Venue	Riding Venue (Unspecified)	
Non-riding venue	84			4	18
Bareback riding venue	6	5		8	
Bareback riding venue (but did not ride)	2	4			1
Seated riding venue	2			1	
Total	94	6	0	13	19

Table S4. Reasons respondents gave for not riding an elephant in future. Additional details for Table 8 in the text.

Reasons Provided for not Wanting to Ride an Elephant again or in Future (n = 71)	Reason Frequency	Percent
Elephants unable to be natural		
Desire to experience elephants as naturally as possible	5	5.8
It is not normal	2	2.3
Should just observe them or we should not ride animals	2	2.3
For the elephant		
Hurts the elephant	10	11.6
Do not want to make elephant mad	1	1.16
Felt there were issues with the elephants' food	1	1.16
It's 'not right'	10	11.6
Riding elephants are treated badly or exploited	9	10.5
Riding is dangerous for the elephant	1	1.16
Riding is inhumane	19	22.09
The elephant 'doesn't like it'	5	5.8
Witnessed elephants being yelled at or physically manhandled	2	2.3
Won't ride an elephant because of the training process or because they 'have been abused'	5	5.8
For the participant		
Desire to protect elephants	1	1.16
Did it for the experience	2	2.3
Do not want to encourage lots of other tourists to do it	1	1.16
'I don't like it' or heard bad stories	3	3.5
It's a tourist activity – do not really meet the elephant	1	1.16
Riding is unnecessary or have no desire for it	3	3.5
Riding was scary	2	2.3
Will never ride an elephant and wants to spread the message	1	1.16
Total	86	

Table S5. Ranking of ETVs based on the tourists' satisfaction with the venues. '*' denotes the venues that were visited once, and '^' denotes the venue at which two participants did not respond to this question.

Rank	ETV Type	Tourist Satisfaction Percent	No. of Participants (n = 130)
1	Bareback riding	100	5
1	Bareback riding	100	2
1	Non-riding	100	7*
4	Non-riding	89.5	19
5	Non-riding	86.67	31^
6	Non-riding	80.56	36*
7	Bareback riding	66.67	6
7	Seated riding	66.67	3*
9	Non-riding	62.5	8
10	Bareback riding	33.3	4*
10	Non-riding	33.3	3*
12	Bareback riding	20	6

Table S6. Reasons respondents gave for willingness to return to the ETV they visited. Additional details for Table 9 in the text.

Reasons for Re-Visiting an ETV (n = 88)	Reason Frequency	Percent
Diverse activities or felt the elephants liked the activities	2	1.37
Educational	9	6.16
Liked the ETV	8	5.48
Repeat visitor	1	0.68
Guides or staff		
Guides and ETV staff were friendly or 'good'	19	13.01
Guides were knowledgeable or answered their questions re: treatment of elephants	8	5.48
Staff 'love' the elephants or believed they had a good relationship with the elephants	3	1.37
For the elephant		
Elephants seemed happy or allowed to be free at night	6	4.11
Felt like spent the day with elephants in their natural habitat	8	5.48
Felt the ETV cared for and treated the elephants humanely	31	21.23
The visit supports the elephants	1	0.68
For the participant		
Close contact or interactions with elephants	7	4.79
ETV is therapeutic	1	0.68
Felt a part of the wildlife	1	0.68
Felt safe	1	0.68
Liked the elephants	6	4.11
Good experience		
Had fun and enjoyed themselves at the ETV	23	15.75
Once in a lifetime or good experience	11	1.5
Total	146	

Table S7. Reasons respondents gave for not returning to the ETV they visited. Additional details for Table 10 in the text.

Reasons for <u>not</u> Re-Visiting an ETV (n = 29)	Reason Frequency	Percent
For the elephant		
Do not believe the elephants are treated well or have a 'good life'	3	8.1
Elephants were chained or sad to see them chained	3	8.1
Felt like the elephants were forced to do things they didn't want to do	2	5.4
Witnessed elephants being yelled at or physically manhandled	1	2.7
For the participant		
Do not think 'sanctuaries' in Thailand care for their elephants or do not believe the guides are telling the whole truth	2	5.4
Learnt new information and now believe elephants should be in a sanctuary	1	2.7
Scared of elephants	1	2.7
Too far to travel or won't be back to Thailand	3	8.1
Too many visitors or wanted a more personal experience or to volunteer for a longer time	2	5.4
Wanted to make better choices and find an ETV (or 'sanctuary') that does not use chains or offer activities like riding and elephant tricks	4	10.8
Want to visit another ETV or prefer another ETV	2	5.4
Wasn't what participant expected	2	5.4
Would like to help elephants in a different way	1	2.7
Would only ever visit an ETV or have this experience once	5	13.5
Would prefer to see elephants in their natural habitat	5	13.5
Total	37	

Table S8. Reasons respondents gave for believing the ETV they visited treats their elephants appropriately. Additional details for Table 11 in the text.

ETV does treat Elephants appropriately (n = 81)	Reason Frequency	Percent
Believe elephants are happy or relaxed or look healthy	8	6.7
Believe elephants are part of the mahout's or venue's family or are dedicated staff	6	5.04
Did not see anything that concerned them	9	7.56
Did not witness any harm towards the elephants or did not see any wounds	9	7.56
Elephants are able to be elephants or can do what they like	4	3.36
Elephants were treated well and cared for	28	23.53
Elephants had free time after finished the activities or could roam free on off days	2	1.68
Elephants have specialised individual health care or ETV makes medicine for them	3	2.52
Elephants live in a more natural setting compared to other ETVs or have freedom	8	6.7
Elephants received a lot of attention	1	0.84
Elephants were well fed or given extra water by hose	6	
Knowledge and information provided by the guides	10	8.4
It looks like a 'real' sanctuary...	1	0.84
'It's a feeling'	1	0.84
Kept calves with their mothers or calves could interact with other elephants	2	1.68
Large property or enclosure	1	0.84
Mahouts do not yell at elephants or carry sticks	1	0.84
No chaining	2	1.68
No elephant show	1	0.84
No hook or punishment	2	1.68
No riding or elephants only ridden for a limited time	3	2.52
Not sanctuary level care, but treatment seemed justified to allow for tourists to visit	3	2.52
Issues that concerned participants, but they still believe the ETV cares for its elephants		
Didn't like that mahouts pulled on the elephants' ears and want them to let the elephants do what they want	1	0.84
Elephants made to learn tricks	1	0.84
Elephants were chained or for long periods	2	1.68
Observed stereotypical behaviour	1	0.84
Sceptical re: where elephants are before and after activities – do not believe they roam free	1	0.84
Too many tourists - elephants seemed stressed	1	0.84
Wish the elephants could be in the wild	1	0.84
TOTAL	119	

Table S9. Reasons respondents gave for being unsure whether the ETV they visited treats their elephants appropriately.

Unsure whether ETV Treats Elephants Appropriately (n = 21)	Reason Frequency	Percent
Believe elephants are treated appropriately 'for what it is' – ETV seemed to care for the elephants	1	3.13
Believe the ETV profits from the elephants or recently 'purchased' elephants	2	6.25
Calves were separated from their mothers	1	3.13
Didn't like the elephants' enclosure	2	6.25
'Don't know why, just don't feel good'	1	3.13
Elephant still used for rides has killed people	1	3.13
Elephants treated well but felt the elephants were forced to do the activities or elephants are still a show	2	6.25
Elephants were chained for long periods	5	15.62
Elephants were ridden	1	3.13
Mahout had a small knife	1	3.13

Not fed enough	1	3.13
Elephants appeared stressed	3	9.38
Too many tourists	3	9.38
Unsure if the elephants should just be in the wild	1	3.13
Unsure what 'appropriate' treatment is - did not witness elephants being harmed	1	3.13
Witnessed perceived harm or cruelty		
Did not like how some of the mahouts behaved towards the elephants - wanted an explanation	2	6.25
Mahouts poked the elephants with bamboo	1	3.13
Mahouts pulled the elephants' ears	1	3.13
Mahouts yelled at elephants	1	3.13
Observed marks on elephants that seem recent	1	3.13
Total	32	

Questionnaires (format condensed here)

Pre-Visit Questionnaire

Please Fill in Your Initials & Year of Birth Here → Questionnaire#: _____

1. In what region is your permanent residence?

- East Asia The Americas Oceania Africa
 South Asia Europe Middle East

2. How do you identify?

- Male Female Prefer not to say Other_____

3. What is your age?

- 18-29 years old 40-49 years old 60-69 years old
 30-39 years old 50-59 years old 70 and over

4. What is the highest level of education that you have attained?

- Less than high (secondary) school High (secondary) school
 College Diploma/ Tafe Certificate Undergraduate Degree
 Masters/Honours Degree Doctorate

5. I currently own a pet or have owned a pet:

- Yes No

6. How long is your vacation in Thailand?

- Less than 1 week 2 – 3 weeks More than 4 weeks
 1 – 2 weeks 3 – 4 weeks

7. Please check all the activities that you have participated in, or wish to participate in, during your visit to Thailand:

- Cultural Attractions e.g. temples, hill-tribes, hiking, theatre etc. Wildlife Viewing
- Elephant Trekking Wildlife Reserve/Sanctuary Shopping
- Water Activities e.g. cruise, snorkelling, beaches etc. Medical Procedures
- Tiger Temples Sport e.g. Thai boxing Cooking Classes
- Botanical Gardens Other (Please Specify) _____

8. What is your primary reason for visiting Thailand?

9. Please check all reasons for visiting this particular elephant park:

- I heard it has a good reputation I researched elephant parks in the area and found that this best suited my needs
- This park was recommended to me This park fit within my budget
- This was the first place I saw This park was advertised by a local travel agent
- Other (Please Specify) _____

10. Is this your first visit to an elephant park?

- Yes No

11. If this is not your first visit, how many times have you been to an elephant park?

- Two Three Four More than 4 times

12. How long do you expect to stay at the elephant park?

- Day Visit Two days (1 overnight) Three days (2 overnight)
- Other (Please Specify) _____

13. Please check all the elephant-related activities that you have participated in, or would like to participate in, during your visit to Thailand:

- Elephant Walks (no riding) Elephant Shows e.g. painting, soccer, orchestra
 Elephant Ride Bareback Visit a Zoo
 Elephant Ride with Howdah (seat) Feed Street Elephants
 Visit a National Park/Sanctuary to View Elephants in the Wild
 Other (Please Specify) _____
 I would not participate in any elephant activities listed above

Please circle the number that best corresponds with your response to the statements below:

Question		Strongly Disagree				Strongly Agree
14	I enjoy viewing wildlife in a natural setting.	1	2	3	4	5
15	I am visiting the park because I would like to have close interactions with elephants.	1	2	3	4	5
16	I would like to learn more about the Asian elephant.	1	2	3	4	5
17	I enjoy watching elephants perform tricks.	1	2	3	4	5
18	I would like to volunteer with organisations back home that advocate and protect animal rights (i.e. a shelter).	1	2	3	4	5
19	I would like to donate money to animal conservation organisations.	1	2	3	4	5
20	The welfare and protection of animals is important to me.	1	2	3	4	5
21	I am aware of the conservation issues surrounding elephants in Thailand.	1	2	3	4	5
22	I am aware of the laws, regulations, and policies that govern elephant rights in Thailand.	1	2	3	4	5
23	I would <u>not</u> change the current policies governing elephants in Thailand.	1	2	3	4	5
24	I feel that elephants are treated humanely in Thailand.	1	2	3	4	5
25	I would like to volunteer at an elephant park.	1	2	3	4	5

Identify how important these factors are for elephant conservation:

Question		Not Important				Extremely Important
26	Laws/Protective Legislation	1	2	3	4	5
27	Fundraising	1	2	3	4	5
28	Creating Public Awareness	1	2	3	4	5
29	Government Support	1	2	3	4	5
30	Non-Governmental Organisation (NGO)	1	2	3	4	5
31	Community Support	1	2	3	4	5
32	Volunteers	1	2	3	4	5

Post-Visit Questionnaire

Please Fill in Your Initials & Year of Birth Here → Questionnaire #: _____

1. How long did you stay at the elephant park?

- Day Visit Three Days (2 Overnight)
 Two days (1 Overnight) I decided to stay on as a volunteer

2. What was your favourite activity that the elephant park offered today? Why?

3. What was your least favourite activity that the elephant park offered today? Why?

4. Did you ride an elephant today? (Please check all that apply)

- Yes No
 With Howdah (seat) Bareback

5. Would you ride an elephant again?

- Yes No
 With Howdah (seat) Bareback

6. If no, please explain

7. Would you visit this park again?

- Yes No

8. Why/why not?

9. From what you have seen here today, are you of the opinion that this park cares for their elephants appropriately?

Yes

No

Unsure

10. Why/why not? (did you see anything today that concerned you?).

Think about the experiences you just had at the elephant park and circle the number that best corresponds with your response to the statements below:

Question	Strongly Disagree				Strongly Agree	
11	I enjoy viewing wildlife in a natural setting.	1	2	3	4	5
12	I am visiting the park because I would like to have close interactions with elephants.	1	2	3	4	5
13	I would like to learn more about the Asian elephant.	1	2	3	4	5
14	I enjoy watching elephants perform tricks.	1	2	3	4	5
15	I would like to volunteer with organisations back home that advocate and protect animal rights (i.e. a shelter).	1	2	3	4	5
16	I would like to donate money to animal conservation organisations.	1	2	3	4	5
17	The welfare and protection of animals is important to me.	1	2	3	4	5
18	I am aware of the conservation issues surrounding elephants in Thailand.	1	2	3	4	5
19	I am aware of the laws, regulations, and policies that govern elephant rights in Thailand.	1	2	3	4	5
20	I would <u>not</u> change the current policies governing elephants in Thailand.	1	2	3	4	5
21	I feel that elephants are treated humanely in Thailand.	1	2	3	4	5
22	I would like to volunteer at an elephant park.	1	2	3	4	5

Identify how important these factors are for elephant conservation:

Question	Not Important				Extremely Important	
23	Laws/Protective Legislation	1	2	3	4	5
24	Fundraising	1	2	3	4	5
25	Creating Public Awareness	1	2	3	4	5
26	Government Support	1	2	3	4	5
27	Non-Governmental Organisation (NGO)	1	2	3	4	5
28	Community Support	1	2	3	4	5
29	Volunteers	1	2	3	4	5

Tourist Questionnaire Information Sheet

The relationships between Asian elephants and people at elephant parks in Thailand.

HARD COPY QUESTIONNAIRE COVERSHEET

Who is conducting the research

Chief Investigators: (Names)

Student Researcher: (Name)

University Name, Country

Phone: (International number)

Email: (Chief Investigator email)

Why is the research being conducted?

This research investigates elephant welfare in Chiang Mai, Thailand. It aims to identify the pre- and post-trip perceptions and opinions of international tourists and volunteers experiencing encounters with elephants in Thailand, and to determine how ecotourism affects the welfare of captive Thai elephants. This research forms a component of the student's academic program.

What you will be asked to do

As a participant in this research, you are asked to agree to participate in a questionnaire about your experiences with elephants and elephant parks in Thailand, in particular your attitudes towards, and perceptions of, elephant health and wellbeing. The questionnaire will take about 10 minutes.

The expected benefits of the research

This research is expected to contribute to scientific knowledge about the improvement of elephant welfare in Thailand, and ways to increase tourist satisfaction. In addition, we hope to educate the general public on the implications of training elephants (and in turn, other wild animals) to perform unnatural behaviours for the entertainment of tourists.

Risks to you

There are no foreseeable risks to you. Should you have any doubts about risks, you are able to discontinue the questionnaire at any point in time by voicing your concern to the researcher.

Your confidentiality

All data collected during this study will be de-identified. This means that data will be presented in research publications in a manner that will not identify you or allow you to be identified by third parties.

As required by (University name), all research data (questionnaire responses and analysis) will be retained in a password protected electronic file at (University name) for a period of five years, before being destroyed.

Your participation is voluntary

Your participation in this questionnaire is entirely voluntary. You are free to withdraw from the study, and can discontinue answering the questions posed to you at any time.

Mechanism for distribution and return

Questionnaires are distributed to people visiting the elephant parks, generally by bus. You may return your completed questionnaire to the person who distributed it.

The results of this study will only be used in scientific literature. No feedback will be given to participants outside of this.

Questions / further information

Should you have any questions or require further information, you are welcome to contact (Chief Investigator name and email), (Chief Investigator name email), or (Student Researcher name and email).

The ethical conduct of this research

(University name) has cleared this project regarding any ethical concerns (ref no.). (University name) conducts research in accordance with the *National Statement on Ethical Conduct in Human Research*. If you have any concerns or complaints about the ethical conduct of the research project, you may contact the Manager, Research Ethics on (phone number) or (**email address**).

Privacy Statement

The conduct of this research involves the collection, access and/or use of your identified personal information. The information collected is confidential and will not be disclosed to third parties without your consent, except to meet government, legal or other regulatory authority requirements. A de-identified copy of this data may be used for other research purposes including publishing openly (e.g., in an open access repository). However, your anonymity will at all times be safeguarded. For further information consult the University's Privacy Plan at (website) or telephone (number).

ETV Recruitment Email Script

Dear Sir/Madam,

My name is (Researcher name), and I am a PhD candidate at (University name), located in (State, Country).

My study investigates the attitudes of international volunteers/tourists travelling to Thailand to interact with elephants in the ecotourism industry. This study will involve personal visits to a number of elephant camps/parks in the Chiang Mai area to describe the range of interactions between visitors and elephants and to assess the experience of tourists with the park and the activities on offer. I plan to visit between Nov 2017- April 2018, however, I would only need to visit (Elephant tourism venue [ETV] name) for two days during this time. A number of parks have already agreed to participate in this study, and it would be great if you joined as well!

I do not require any special requirements as I hope to simply observe the interactions between the elephants and the guests of the park throughout the day. I am hoping to participate in activities like any other guest of the park, and as such would of course pay the entry fee associated with partaking in the day's activities.

The purpose of this email is to seek the permission of the staff at (ETV name) to undertake this research at the park. Please find attached my permission letter from the NRCT to perform this research in Thailand. I wish to visit your park as part of this study; however, I am aware that visitor placement may have been filled well into next year. This does not pose a problem as I would not require accommodation on your premises, simply to join in the daily activities. Please do not hesitate to contact me if you have any questions, and I look forward to hearing from you soon.

Kind Regards,

(Researcher name)