A STUDY OF ECOLOGICAL SUSTAINABILITY ASPECT OF TOURIST BEHAVIOUR

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INDIAN INSTITUTE OF TECHNOLOGY DELHI

JUNE 2025

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A STUDY OF ECOLOGICAL SUSTAINABILITY ASPECT OF TOURIST BEHAVIOUR

by

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DEPARTMENT OF MANAGEMENT STUDIES

Submitted

in fulfilment of the requirements of the degree of

DOCTOR OF PHILOSOPHY

to the

INDIAN INSTITUTE OF TECHNOLOGY DELHI

JUNE 2025

CERTIFICATE

This document certifies that the thesis titled "**A Study of Ecological Sustainability Aspect of Tourist Behaviour**," submitted by **Khyati Manchanda** to the Department of Management Studies, Indian Institute of Technology Delhi, for the award of the degree of **Doctor of Philosophy (Ph.D.)**, represents a genuine record of research work conducted by her. She worked under my guidance in accordance with the policies and procedures of the Indian Institute of Technology Delhi. The research reports and results included in this thesis have not been submitted, either partially or fully, for the award of any degree or diploma at any other University or Institute.

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ACKNOWLEDGEMENTS

My journey through the Ph.D. program has profoundly transformed both my personal and professional identity. Following years of diligent effort, I have evolved into the individual I am now, alongside the generation of knowledge. This journey has traversed a spectrum of emotions, yet it would not have been feasible without the support of pivotal figures in my existence. The universe, above all, warrants acknowledgement for guiding me along this path. At every juncture, the Divine bestowed upon me the fortitude and understanding requisite to complete this odyssey.

This thesis is dedicated to my parents, Mr. Rajesh Manchanda and Ms. Indu Manchanda. God has been benevolent in bestowing upon me the most devoted, optimistic, and loving parents, who have facilitated my pursuit of this degree. I am appreciative of the support and assistance my parents have extended to me over the years; despite the obstacles and difficulties they have faced. My sister, Ms. Pallavi Manchanda, has been my most trusted confidant, critic, and advocate not only during this research endeavour but also throughout my life. I am appreciative of her consistent encouragement.

Prof. Biswajita Parida, my research supervisor, deserves my heartfelt gratitude for serving as a mentor and guiding beacon throughout this challenging journey. Collaborating with her has been an immensely stimulating and enlightening experience. Her viewpoint regarding research and life had a profound impact on my understanding of the universe. I am grateful for your unwavering support, mentorship during ideation meetings, and, most importantly, your trust in my capacity to identify a challenging and understudied area of marketing research. I am grateful, ma'am.

I am deeply appreciative of the insightful comments made by Prof. Harish Chaudhry, Prof. Varsha Singh, and Prof. Mahim Sagar throughout the course of this research. I am grateful to

the Department of Management Studies at IIT Delhi for enabling me to conduct my research and for providing the necessary facilities, infrastructure, and resources. Furthermore, I would like to extend my heartfelt appreciation to each and every study participant who voluntarily participated in the study and provided their profound and insightful perspectives on the subject. I aspire to have had some influence on them through my research.

Finally, I would like to convey my gratitude for the support and encouragement of my peers and colleagues in academia and beyond during this academic journey.

Khyati Manchanda

ABSTRACT

The tourism industry ensures economic prosperity; however, it also brings ecological turmoil. Tourism's share in greenhouse gas (GHG) emissions is enormous. The tourism experts and academia stress upon the concept of sustainable tourism and the role of various stakeholders, especially tourist behaviour, to combat the pressing issue of climate change. However, the size of efforts is not commensurate with the number of natural disasters reported nowadays. There is a need to bring behavioural transformation to the ecological sustainability aspect of tourist behaviour, instilling a sense of connectedness with the natural environment. Two elements that have an ecological impact on tourist behaviour are the infrastructure of a tourist destination and the message framing used in tourism communications. The entire thesis is subdivided into two studies: study 1 examines the infrastructure variable, and study 2 examines the message framing variable.

The study on infrastructure explores how the infrastructure phenomenon of a tourist location brings behavioural transformation in the ecological sustainable tourist behaviour, instilling a sense of connectedness with the natural environment. The study considers two types of infrastructure, blue-green of Rock Garden in Chandigarh and grey of Heritage Street in Amritsar, taking in-depth interviews, individual and group, 21 and 17, at the respective tourist locations, and discusses comparative analysis of six themes obtained therein. The themes are tourist destination behaviours, infrastructure of tourist attraction, infrastructure of city of tourist attraction, connectedness to nature and feeling of oneness, attitudes and planning for ecological sustainable tourist behaviours, and past experience of COVID-19. The comparative analysis shows blue-green infrastructure brings humility amongst the tourists towards nature and the need to take action towards nature's protection. However, grey infrastructure brings the feeling of patriotism, spirituality, entertainment, and shopping experience. The practical implications

emphasise appropriate design and execution of infrastructure phenomena to combat the issues of ecological imbalance.

The study on message framing uses intervention execution to investigate the cause-and-effect link between different forms of framing, closeness to nature, and ecological sustainability components of tourist behaviour and the moderating effect of past experience of COVID-19. The study takes into account the implementation of interventions in a single blind study with a room setup, within-subject design, random assignment, and a sample of 177 respondents. Paired t-test and partial least squares structural equation model analysis are used for data analysis. The paired t-test analysis, run on R Studio, shows the effect of the ecological sustainability aspect of tourist behaviour in five types of framing: positive, global, recognized, future, and descriptive. Using the Smart PLS 4 applications, the PLS SEM analysis is carried out independently for each of the five framing styles. It has been found that the moderating effect of prior COVID-19 exposure is negligible for all kinds of framing models. Some framing models have demonstrated how closeness to nature acts as a mediator. The direct impact of the intervention on the dependent variable, ecological sustainability aspect of tourist behaviour is validated. The practical consequences highlight how the message framing element of tourism communications should be planned and carried out.

SAAR

पर्यटन उद्योग आर्थिक समृद्धि सुनिश्चित करता है; हालाँकि, यह पारिस्थितिक उथल-पुथल भी लाता है। ग्रीनहाउस गैस (GHG) उत्सर्जन में पर्यटन का हिस्सा बहुत बड़ा है। पर्यटन विशेषज्ञ और शिक्षाविद जलवायु परिवर्तन के दबाव वाले मुद्दे से निपटने के लिए स्थायी पर्यटन की अवधारणा और विभिन्न हितधारकों, विशेष रूप से पर्यटकों के व्यवहार की भूमिका पर जोर देते हैं। हालाँकि, प्रयासों का आकार आजकल रिपोर्ट की गई प्राकृतिक आपदाओं की संख्या के अनुरूप नहीं है। पर्यटकों के व्यवहार के पारिस्थितिक स्थिरता पहलू में व्यवहारिक परिवर्तन लाने की आवश्यकता है, जिससे प्राकृतिक पर्यावरण के साथ जुड़ाव की भावना पैदा हो। दो तत्व जो पर्यटकों के व्यवहार पर पारिस्थितिक प्रभाव डालते हैं, वे हैं पर्यटन स्थल का बुनियादी ढांचा और पर्यटन संचार में उपयोग किए जाने वाले संदेश फ्रेमिंग। संपूर्ण थीसिस को दो अध्ययनों में विभाजित किया गया है: अध्ययन 1 बुनियादी ढाँचे के चर की जाँच करता है, और अध्ययन 2 संदेश फ्रेमिंग चर की जाँच करता है।

बुनियादी ढांचे पर अध्ययन यह पता लगाता है कि कैसे एक पर्यटक स्थल की बुनियादी संरचना की घटना पारिस्थितिक रूप से स्थायी पर्यटक व्यवहार में व्यवहारिक परिवर्तन लाती है, जिससे प्राकृतिक पर्यावरण के साथ जुड़ाव की भावना पैदा होती है। अध्ययन में दो प्रकार के बुनियादी ढांचे पर विचार किया गया है, चंडीगढ़ में रॉक गार्डन का नीला-हरा और अमृतसर में हेरिटेज स्ट्रीट का ग्रे, संबंधित पर्यटन स्थलों पर व्यक्तिगत और समूह, 21 और 17, का गहन साक्षात्कार लिया गया है, और उनमें प्राप्त छह विषयों के तुलनात्मक विश्लेषण पर चर्चा की गई है। विषय हैं पर्यटन स्थल व्यवहार, पर्यटक आकर्षण का बुनियादी ढांचा, पर्यटक आकर्षण के शहर का बुनियादी ढांचा, प्रकृति से जुड़ाव और एकता की भावना, पारिस्थितिक रूप से स्थायी यात्रा व्यवहार के लिए दृष्टिकोण और योजना, और COVID-19 का पिछला अनुभव। तुलनात्मक विश्लेषण से पता चलता है कि नीला-हरा बुनियादी ढांचा पर्यटकों में प्रकृति के प्रति विनम्रता और प्रकृति की सुरक्षा की दिशा में कार्रवाई करने की आवश्यकता लाता है। हालांकि, ग्रे बुनियादी

ढांचा देशभक्ति, आध्यात्मिकता, मनोरंजन और खरीदारी के अनुभव की भावना लाता है। व्यावहारिक निहितार्थ पारिस्थितिक असंतुलन के मुद्दों से निपटने के लिए बुनियादी ढांचे की घटनाओं के उचित डिजाइन और निष्पादन पर जोर देते हैं।

संदेश फ्रेमिंग पर अध्ययन फ्रेमिंग के विभिन्न रूपों, प्रकृति से निकटता और पर्यटक व्यवहार के पारिस्थितिक स्थिरता घटकों और COVID-19 के पिछले अनुभव के मॉडरेटिंग प्रभाव के बीच कारण-और-प्रभाव लिंक की जांच करने के लिए हस्तक्षेप निष्पादन का उपयोग करता है। अध्ययन एक कमरे के सेटअप, विषय के भीतर डिजाइन, यादृच्छिक असाइनमेंट और 177 उत्तरदाताओं के नमूने के साथ एकल अंधे अध्ययन में हस्तक्षेपों के कार्यान्वयन को ध्यान में रखता है। डेटा विश्लेषण के लिए युग्मित टी-परीक्षण और आंशिक कम से कम वर्ग संरचनात्मक समीकरण मॉडल विश्लेषण का उपयोग किया जाता है। आर स्टूडियो पर चलाया गया युग्मित टी-परीक्षण विश्लेषण, पांच प्रकार के फ्रेमिंग में पर्यटक व्यवहार के पारिस्थितिक स्थिरता पहलू के प्रभाव को दर्शाता है: सकारात्मक, वैश्विक, पहचानने योग्य, भविष्य और वर्णनात्मक। स्मार्ट पीएलएस 4 अनुप्रयोगों का उपयोग करके कुछ फ्रेमिंग मॉडल ने प्रदर्शित किया है कि प्रकृति से निकटता किस तरह मध्यस्थ की भूमिका निभाती है। आश्रित चर पर हस्तक्षेप का सीधा प्रभाव मान्य है। व्यावहारिक परिणाम इस बात पर प्रकाश डालते हैं कि पर्यटन संचार के संदेश फ्रेमिंग तत्व की योजना कैसे बनाई जानी चाहिए और उसे कैसे कार्यान्वित किया जाना चाहिए।

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LIST OF ABBREVIATIONS

Full-Form	Short-Form
Positive Framing	PF
Negative Framing	NF
Present Framing	P1F
Future Framing	FF
Descriptive Framing	DF
Non-Descriptive Framing	NDF
Recognizable Framing	RF
Non-Recognizable Framing	NRF
Local Framing	LF
Global Framing	GF
Connectedness to Nature	CN
Ecological Sustainability Aspect of Tourist Behaviour	ESTB
Past Experience of Covid-19	C-19
Now, the following short-forms are given to each item of the questionnaire, for easy of performing and writing the PLS SEM analysis specifically.	
Item in the questionnaire	Short-form
"I often feel like I am only a small part of the natural world around me, and that I am no more important than the grass on the ground or the birds in the tress."	CN1
"I often feel a kinship with animals and plants. I often feel part of the web of life."	CN2
"I have deep understanding of how my actions affect the natural world."	CN3

“I feel as though I belong to the earth as equally as it belongs to me.”	CN4
“I often feel a sense of oneness with the natural world around me.”	CN5
“When I think of my life, I imagine myself to be part of a larger cyclical process of living.”	CN6
“I recognize and appreciate the intelligence of other living organisms.”	CN7
“I feel of the natural world as a community to which I belong.”	CN8
“My personal welfare is independent of the welfare of the natural world. I often feel disconnected from nature.”	CN9
“Like a tree can be part of a forest, I feel embedded within the broader natural world.”	CN10
“I feel that all the inhabitants of the earth, human and nonhuman, share a common 'life force'.”	CN11
“We are approaching the limit of the number of people the earth can support”	ESTB1
“Humans have the right to modify the natural environment to suit their needs.”	ESTB2
“When humans interfere with nature it often produces disastrous consequences.”	ESTB3
“Human ingenuity will ensure that we make the earth unliveable.”	ESTB4
“Humans are seriously abusing the environment.”	ESTB5
“The earth has plenty of natural resources if we just learn how to develop them.”	ESTB6
“Plants and animals have as much right as humans to exist.”	ESTB7

“The balance of nature is strong enough to cope with the impacts of modern industrial nations.”	ESTB8
“Despite our special abilities, humans are still subject to the laws of nature.”	ESTB9
“The so-called ‘ecological crisis’ facing humankind has been greatly exaggerated.”	ESTB10
“The earth is like a spaceship with very limited room and resources.”	ESTB11
“Humans were meant to rule over the rest of nature.”	ESTB12
“The balance of nature is very delicate and easily upset.”	ESTB13
“Humans will eventually learn enough about how nature works to be able to control it.”	ESTB14
“If things continue on their present course, we will soon experience a major ecological catastrophe.”	ESTB15
“Considering the situation and adverse impacts of Covid 19 pandemic, we feel more conscious about choice of travel destination.”	C1
“Post Covid19 pandemic, we feel the urge to travel more.”	C2
“Post Covid 19 pandemic, we do activities keeping in mind the sustainability of natural environment.”	C3