

# **Virus Outbreaks and Tourism Mobility**

As we gradually start the slow recovery from COVID-19 the book provides informative and comprehensive analysis of the various virus outbreaks and their impact on tourism. The global tourism industry needs to build resilience through sharing knowledge and learning from experience and best practice. This book provides a range of case studies and provides best-case examples to support the tourism and hospitality industry. Resilience, solidarity, humanity and leadership will take us forward towards using tourism to achieve the sustainable development goals by 2030.

–Professor Dimitrios Buhalis, Bournemouth University Business School

It is timely to take account of the connected and related themes of *Virus Outbreaks and Tourism Mobility*. This valuable collection adopts a systematic approach. The contributing authors offer new thinking about how border closures and other restrictions challenge prior assumptions about accelerating mobilities. Congratulations to the editors for this insightful and well-considered initiative.

–Professor Brian King, Associate Dean, School of Hotel and Tourism Management, The Hong Kong Polytechnic University

The second decade of this century has ended up with a particular emphasis on the significance of safety and security in human beings' life in general and tourist decision-making in particular. As a result, this is a timely contribution to overview the impacts of coronavirus on various parts of the travel and tourism industry across the globe. The book also suggests a number of effective strategies to maintain resilience and recovery out of such a global silence and disaster.

–Professor Metin Kozak, Dokuz Eylul University, Turkey

COVID-19 has spread over the world at an incredible rate. The world economy, especially the tourism industry related to mobility, has been severely damaged. This book provides useful suggestions on how the tourism industry responds, survives, adapts and develops when infectious diseases such as COVID-19 spread. I definitely recommend reading this book.

–Shunsaku Hashimoto Professor, University of the Ryukyus, Faculty of Global and Regional Studies, Management program

This looks to be an important and timely publication. I can't wait to read it and potentially use in my teaching. The coverage is broad and the topic is most urgent for examination.

–Johnny Skinner, Reader in Social Anthropology, Department of Life Sciences, Whitelands College, University of Roehampton London (UK)

I am hoping for a counterfactual outcome for tourism, once the dark clouds of the Covid-19 pandemic is passé; a better kind of tourism, with increased focus on health and wellbeing. Or, will the bad olden days of mass tourism make a vigorous comeback? This book offers hope, yet does not lose realism. Timely reading and excellent presentation.

–Babu George, PhD Professor, Christian Brothers University, USA

The tourism, travel and hospitality industry is the most sensitive as well as highly volatile global industry for demand and supply point of view. Any major disruption, i.e. political unrest, terrorism, disasters, natural calamities and pandemics, can directly affect and impact tourism mobility which may be the cause of huge loss of earnings and employment of millions. In this context, the book covers all such previous pandemic cases, which have directly affected the tourism industry.

–Professor S.P. Bansal, Vice-Chancellor, Himachal Pradesh Technical University, Himachal Pradesh, India

# Tourism Security-Safety and Post Conflict Destinations

Series editors: Maximiliano E. Korstanje and Hugues Seraphin

Since the turn of the century, the international rules surrounding security and safety have significantly changed, specifically within the tourism industry. In the age of globalization, terrorism and conflict have moved beyond individual high-profile targets; instead, tourists, travellers and journalists are at risk. In response to this shift, the series invites authors and scholars to contribute to the conversation surrounding tourism security and post-conflict destinations.

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# **Virus Outbreaks and Tourism Mobility: Strategies to Counter Global Health Hazards**

EDITED BY

**SHARAD KUMAR KULSHRESHTHA**

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*To my respected teacher (Guru) Professor Umendra Narayan Shukla. My respected parents Shri Jiwan Prakash Kulshreshtha (father) and Late Smt. Sushma Kulshreshtha (mother) for their endless affection, support and encouragement.*

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## List of Abbreviations

ACI	Airports Council International
AIDS	Acquired Immune Deficiency Syndrome
ARDL	Autoregressive Distributed Lag
ARIMA	Autoregressive Integrated Moving Average
CCTV	Closed-circuit television
CDC	Centre For Disease Control
CHIKV	Chikungunya virus
COVID-19	Corona Virus Disease 2019
CSV	Comma-separated Values
DRC	The Democratic Republic of The Congo
EASA	The European Aviation Safety Agency
EVD	Ebola virus disease
FDA	Food and Drug Administration
FSSAI	Food Safety and Standards Authority of India
FTA	Foreign tourist arrival
GBTA	Global Business Travel Association
GDP	Gross domestic product
H1N1	Haemagglutinin Type 1 and Neuraminidase Type 1
H2N2	Haemagglutinin Type 2 and Neuraminidase Type 2
H3N2	Haemagglutinin Type 3 and Neuraminidase Type 2
H3N8	Haemagglutinin Type 3 and Neuraminidase Type 8
H5N1	Haemagglutinin Type 5 and Neuraminidase Type 1
H7N9	Haemagglutinin Type 7 and Neuraminidase Type 9
HCoV-229E	Human coronavirus 229E
HCoV-HKU1	Human coronavirus HKU1
HCoV-NL63	Human coronavirus NL63

HCoV-OC43	Human coronavirus OC43
HIV	Human Immunodeficiency Virus
HMD	Hand and Mouth Disease
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
ICT	Information and Communication Technology
IHR	International Health Regulations
IPCC	Intergovernmental Panel on Climate Change
ITR	Income Tax Return
MERS	Middle East respiratory syndrome
MERS-CoV	Middle East respiratory syndrome coronavirus
MEs	Micro-enterprises
MICE	Meetings, incentives, conventions, exhibitions
NAIs	Neuraminidase inhibitors
NGOs	Non-governmental organizations
NIF	National Science Foundation
NIH	National Institutes of Health
NNSFC	National Natural Science Foundation of China
OECD	Organisation for Economic Co-operation and Development
PCR	Polymerase chain reaction
PHEIC	Public Health Emergency of International Concern
PPEs	Personal protection equipment
PPP	Public-private partnership
RevPAR	Revenue per available room
ROK	Republic of Korea
RPKs	Revenue passenger kilometres
RT-PCR	Reverse transcriptase polymerase chain reaction
SARIMA	Seasonal Autoregressive Integrated Moving Average
SARS	Severe acute respiratory syndrome
SARS-CoV	Severe acute respiratory syndrome coronavirus
SARS-CoV-2	Severe acute respiratory syndrome coronavirus 2

SDGs	Sustainable development goals
SIV	Swine influenza virus
SMEs	Small and medium-sized enterprises
S-OIV	Swine-origin influenza virus
SOPs	Standard operating procedures
STI	Sexually transmitted infection
UNWTO	United Nations World Tourism Organization
USAID	United States Agency for International Development
VFR	Visiting friends and relatives
WHO	World Health Organization
WFH	Work from home
WTTC	World Travel and Tourism Council
X-ray	X-radiation (X standing for ‘Unknown’)
ZIKV	Zika virus

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# Foreword

Declared as a pandemic on 11 March 2020 by the World Health Organization (WHO), the Coronavirus (COVID-19) outbreak has resulted in more than 1.3 million deaths out of the more than 56 million (or 0.8% of the world's population) known infected individuals (as of 18 Nov 2020) across the globe (WHO, 2020).

The global tourism industry has felt the full brunt of the pandemic, with business closures accompanied by massive job losses. Major airlines have filed for bankruptcies, and the abilities of every single government are tested to its limits. The need to protect lives and livelihoods has become a delicate balancing act, with proponents of business resumption and reopening of borders at odds with those who prioritize health and safety. There is even polarization at the most basic level – those for and against the wearing of masks. For all the progress made in the twenty-first century especially in education, the irony is that science (and rationality) risks being sidelined.

This book is timely as it provides a comprehensive review and compilation of topics related to the current and past pandemics and their direct and indirect impact on tourism. Dr Sharad must be commended for directing the research towards a more applied focus, as concrete solutions are needed in the collective responses by the people, industries and governments of the world.

There is reason to be cautiously optimistic. 38 million people have recovered from COVID-19. In parts of Asia, the situation has either improved with no further community spread or successfully achieved a huge reduction of COVID-19 positive cases. Some air travel bubbles have been established, safety protocols put in place, safe management measures instituted and implemented and a good number of vaccine candidates competing to complete their trials.

The day will come when we finally conquer COVID-19, yet we know it will not be the last widespread disease that we would witness in our lifetime. A measured and rational approach by all is needed to prepare for the next challenge, viral or otherwise. There is cautious optimism that mankind will prevail again.

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# Preface

Viruses have been found everywhere on Earth (NHGRI, USA). Viruses are found wherever there is life and have probably existed since living cells first evolved (Iyer et al., 2006). Virus outbreaks are not a new phenomenon. They have occurred many centuries ago and are happening in this twenty-first century too. The outbreaks of these viruses were most horrific because of lack of knowledge of these viruses and their severe impacts, as well as no research and development to encounter such viral diseases because of absence of the vaccination and its related treatments and precautions. Such pandemics will always be a dreadful experience for human beings due to mass death tolls and infection through community spread. According to the *National Human Genome Research Institute*, 'A virus is a small collection of genetic code, either DNA or RNA, surrounded by a protein coat' (NHGRI, USA). These viruses can enter our life and infect us in various ways. It can be possible through disease-bearing organisms, transmitted from plant to plant by insects and by blood-sucking insects. Influenza viruses are spread by coughing and sneezing etc. The book highlights several past and recent severe global pandemics that have broken out in various countries in the last few decades and harshly impacted tourism mobility and the tourism industry globally. The recent outbreaks of some well-known viruses such as *avian flu*, *SARS*, *MERS*, *yellow fever*, *Ebola virus*, *Zika virus*, *swine flu* and *bird flu* have directly affected tourism mobility throughout the world (CDC, 2020).

The most recent outbreaks of *COVID-19* inflamed throughout the world, and as a result the outbreak was declared a Public Health Emergency of International Concern on 30 January 2020 by the *World Health Organization (WHO)*. On 11 March, *World Health Organization Director-General* characterized *COVID-19* as a pandemic (*previously known as '2019 novel coronavirus'*) (CDC, 2020). The book highlights conceptual, theoretical background of studies and practical methods towards successfully handling these global pandemics and health emergencies as well as provides best practices to rejuvenate the tourism and hospitality industry from these pandemics.

The historical reviews of virus outbreaks exhibit the repulsive story which directly affects people, place, process, productivity, profitability and pleasure of business and society throughout the world. The dynamics of virus outbreaks are always painful, precautionary and preventive and involve follow-up on many strict restrictions, guidelines as well as standard operating procedures which are most essential protocols during such pandemic situations. The setbacks of these pandemics have always disrupted the social, economic and political environment

in the respective regions. It is an old saying that human beings are social creatures. Pandemics affect the social sphere and create a psycho-syndrome of virus infections during the socialization process, meeting for specific purposes, leisure, pleasure and recreation. The terms social distancing, covering mouth with mask, regular hand washing, hand sanitization and maintaining cleanliness and health and hygiene are expounded.

The outlook and approach to encounter such chronic and critical viral diseases have always disrupted our lively environment and physical and mental well-being. In this new age of globalization, commercialization and socialization, celebrations with faster connectivity mobility and advanced information and communication technology, sharing economy where people are the most vibrant sensible resource which require safety and security, protection, precaution during meetings, interactions, with various stakeholders are very routine affairs. Faster mobility with advanced means of transportation, inter-continental global connectivity of people is the most vibrant reason of virus outbreaks and virus infection. The most recent virus outbreaks are some supporting real examples of such global regional and local pandemics.

## **Purpose of the Book**

The purpose of this book is to bring historical and contemporary holistic understanding of various virus-related diseases and direct impact on tourism mobility is needed by academicians, researchers, and travel, tourism and hospitality industry practitioners. This book aims to fill that gap and offers a variety of perspectives through useful and current information in this most crucial aspect that relates to everyone through the focus on cutting-edge research, case study, conceptual, evidence-based study and viewpoints on virus outbreaks and tourism mobility. The book disseminates new knowledge and understanding relayed to emerging and re-emerging pathogens and their vulnerabilities which have influenced the travel, tourism and hospitality and aviation sectors globally. This will also explore the impacts of epidemics, risk factors, capacity to evacuate tourists from the vulnerable destination, the revival of the tourism sector and efforts to control infectious disease through these virus outbreaks.

Some chapters highlight the management and effective measures for prevention and control procedures of these virus outbreaks that provide practical guidelines and frameworks, standard operating procedures, protocols that can be adopted to minimize the severe impacts of the virus and make implementation efforts to control such pandemics successfully by efficiently managing tourism destination and tourism and hospitality enterprises globally.

This book provides an understanding of crisis management during virus outbreaks and recovery and revival after the pandemic of the travel, tourism, hospitality and events sectors worldwide. As an edited book, it will add on new research and knowledge base with high-quality contributions by international scholars and practitioners.

## **Organization of the Book**

The book provides an informative insight into various types of recent virus outbreaks and impact on tourism mobility in worldwide. The chapter coverage of this book is in context of stakeholders of the tourism and hospitality sector. These are people (as guests, visitors, tourists and host as services providers such as tour operators, travel agents, tourist guides, hoteliers, cabs and coaches operators, corporate event planners, destination management companies, local streets food and snacks vendors, souvenir sellers etc.), places (inbound and outbound, international and domestic tourist destinations, tourist spots), processes (booking, marketing, service quality feedback, online and offline payment, online customer care, practices (responsible, sustainable, eco-friendly), technology (technology enabled services) and environment issues (climate changes) destination governances etc., which provide an overview of the severe impacts of pandemics.

The book will have both theoretical and practical implications for researchers, academicians and policymakers who wish to share insights about virus outbreaks and the impact and revival of tourism mobility. The book contains 17 chapters relating to various virus outbreaks and their impact on sharing knowledge about tourism industry experience, learning, outcomes and practices during pandemics from country to country. A chapter-by-chapter brief description follows.

Chapter 1 highlights the catastrophic pandemics which have occurred in the twentieth and twenty-first centuries and their disruptive impact on tourism mobility. A detailed study of past pandemics is conducted starting from the Black Death or Bubonic Plague of 1346 to the recent COVID-19 outbreak and the effect of these diseases on the tourism and economy of the infected countries. Such pandemics have a negative effect on tourism destinations by damaging their image and competitiveness, and as a result leading to disruptions in mobility of tourists, with Asian countries being the most at risk of such disruptions.

Chapter 2 focuses on some demographic trends today that may increase the risk for spreading contagions and our vulnerability to viruses. This is mainly due to the sheer volume of today's population movements, from migration and travel as people fly within and across countries. This vast mobility may make it faster and easier for viruses to spread around the world. COVID-19, which purportedly started in 2019, was a global pandemic that now affects the whole world due to high mobility among countries.

Chapter 3 reports a comprehensive study to elucidate the existing landscape of scientific production of disease outbreaks, pandemics and tourism research. The authors analyzed scientific production of pandemics and tourism-related studies such as year-wise publications, productive authors, institutes, funding sponsor, thematic areas of research and citation analysis. The authors analyzed the research papers indexed in the online Scopus data base over a 50-year period, starting from 1971 to 2020 by using Bibliometrics, and the data are visualized by using data visualization tools like VOS viewer and the Tableau.

Chapter 4 briefly discusses the major viral outbreaks in Asian countries and discusses their impact on the tourism industry. It also discusses the resilience strategies taken by the Asian countries to re-emerge their tourism markets from

these outbreaks. It is based on the systematic review of the earlier literature on the various viral outbreaks and the corresponding resilience measures in the Asian peninsula.

Chapter 5 aims to review the effect of the 2003 SARS epidemic on tourism and to analyze the learning outcomes from this crisis critically. The study further proposes practical and strategic tips for airlines, hoteliers and destination marketers in the top Asian tourism markets such as India, China, Singapore and Thailand if a similar crisis affects the region. The research reviewed past literature by using the Prisma method, which is an evidence-based minimum set of items, for reporting in systematic reviews and meta-analyses. The research summarized the previous literature on the SARS outbreak in 2003 and reviewed various practices for tourism industry sustainability. The study provides information of how the airlines, hoteliers and destination marketers tackled the SARS epidemic and proposes the integrated strategy for managing such crises in future.

Chapter 6 synthesizes and organizes existing literature on contagious diseases and tourism. This systematic mapping of the literature helps to identify various mature and emerging themes around the research domain in the literature. The study uses systematic methodology along with bibliometric and content analysis. Using a combination of electronic database searching and forward and backward references searching, the study identifies 160 suitable published studies. The present study is one of the early attempts that analyzes the literature on contagious diseases and tourism using bibliometric analysis and contributes to the literature by identifying various mature and emerging on contagious diseases and tourism literature. These insights provide a robust map for future investigation in this field and also offer implications for practitioners.

Chapter 7 seeks to reflect on new expectations for the lodging industry regarding the post-epidemic social context of COVID-19. By presenting a brief historical review of the way of life and the configuration of cities over the years, mainly from the Middle Ages, it seeks to relate events to protocols developed in response to global sanitary demands. These past demands, since the tuberculosis crisis, have been able to respond after a century and a half to this new urban and architectural challenge. In this way, it points out these practices in different medium-sized locations in Brazil, developed through – and in function of – installation of these accommodations, such as Campos do Jordão (SP), Petropolis (RJ), Guaramuns (PE) and São Francisco de Paula (RS). This research seeks to explore, by means of a bibliographic reference survey, this demand.

Chapter 8 discusses the impact of COVID-19 on employments and livelihood measures and how safety, health and hygiene issues affected the tourism and hospitality industry. It describes a theoretical model to understand the mental health challenges and implication of policies on a practical level. It extends towards tourist destination governance practices that ensure better hospitality and tour operation businesses by minimizing the impact of the pandemic.

Chapter 9 portrays the pandemic period in the city and illustrated the government strategies that have effectively put the outbreak and society under control. The governmental actions can be categorized chronologically into five phases: from early warning and impeding both imported cases and community

spread during the two initial stages; city lockdown and encouraging domestic demand in the third and the fourth stages; and supported the resumption of the economy to the new normal by the fifth stage. The analyses showed that the success was, by large, the results of the swift actions and astute strategies of the government, from instant responses to the potential risks, seeking support from large enterprises through corporate social responsibility (CSR), to actively cooperate with the community and the vicinity.

Chapter 10 focuses on the COVID-19 pandemic, SARS, bird flu, Ebola, swine flu, MERS and Zika epidemics. The study also includes a review of studies on epidemics in previous years. Besides, the COVID-19 pandemic is quite different from other epidemics. In April 2020, international flights were stopped for the first time in the tourism history all over the world. From this point of view, the aim of the study is to compare the effects of the COVID-19 pandemic and epidemics that occurred after the 2000s on the tourism sector.

Chapter 11 explores how micro-enterprises (MEs) and small and medium-sized enterprises (SMEs) within the Norwegian tourism sectors were impacted by COVID-19 in early 2020. It examines central stakeholders' and tourism SMEs and MEs first responses to the pandemic. This study is based on a news media review. The media review reveals that Norwegian tourism SMEs and MEs so far have responded in five ways that are to some extent time-displaced yet continue simultaneously: (1) early response to business survival, (2) smaller operational changes, (3) employee layoff and bankruptcies, (4) innovation and alternative income sources and (5) gradual reopening.

Chapter 12 explores the innovative experiential marketing adopted by Japanese resorts and contributes to the identified need for more knowledge in the area. A multiple case approach was adopted and information from 12 resorts was obtained through secondary data. Results identify five innovative marketing approaches that were used by the Japanese resorts studied in this research. The chapter contributes theoretically in relating cultural consumption to experiential marketing in COVID-19 times, opens discussion for policy implications and aims to provide some inspiration to other firms in the business of tourism related to cultural consumption.

Chapter 13 delves into the approaches taken by Vietnam in pre-mediating the influx of COVID-19 from interlopers into the country and controlling its spread within the confines of the nation. This study examines the steps taken by Vietnam. The quick actions of the government have instilled confidence in their citizens, promoted greater internal travel mobility within the Vietnam thus helping the local tourism industry to remain vibrant and competitive. Unlike other countries, which have been severely affected by the COVID-19 virus, Vietnam is poised for a head-start in its recovery.

Chapter 14 aims to provide a generic discussion of how the coronavirus pandemic is likely to influence the services operated by the aviation industry. The chapter, to a greater extent, benefits from the results of existing conceptual/empirical studies, media news as well as the reports of various international organizations such as UNWTO and IATA.

Chapter 15 focuses on research carried out to contribute to this debate by presenting and discussing findings of an empirical investigation applying a factor–cluster analysis on a sample of 225 French consumers/travellers to profile them based on accommodation selection criteria. Further, a series of chi-square tests was run to investigate whether significant differences exist among clusters based on their socio demographic characteristics (i.e. gender, age, level of occupation, employment status) and travel-related variables (i.e. the preferred type of accommodation and the length of the holiday).

Finally, at the end of this journey of the book, as an editor I can say that the outcomes will be able to cover many issues and outcomes related to virus outbreaks and tourism mobility. I hope the readers will find some value in the contributions made by the authors from various countries representing a broad cross-section of university researchers and industry practitioners as they provide a global perspective to this topic. In summary, the book will also open up further avenues and opportunities for future research into the area of virus outbreaks and its impact on tourism, hospitality, events and transport industry globally in a diverse range of cross-disciplinary settings.

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