

Geographies of Tourism and Global Change

Thomas E. Jones
Huong T. Bui
Michal Apollo *Editors*

Nature-Based Tourism in Asia's Mountainous Protected Areas

A Trans-regional Review of Peaks and
Parks



Springer

The Springer logo, which consists of a stylized chess knight piece facing left, followed by the word 'Springer' in a serif font.

Geographies of Tourism and Global Change

Series Editors

Dieter K. Müller, Department of Geography, Umeå University, Umeå, Sweden

Jarkko Saarinen, Geography Research Unit, University of Oulu, Oulu, Finland

Carolyn Funck, Graduate School of Integrated Arts and Sciences,
Higashi-Hiroshima City, Hiroshima, Japan

In a geographical tradition and using an integrated approach this book series addresses these issues by acknowledging the interrelationship of tourism to wider processes within society and environment. This is done at local, regional, national, and global scales demonstrating links between these scales as well as outcomes of global change for individuals, communities, and societies. Local and regional factors will also be considered as mediators of global change in tourism geographies affecting communities and environments. Thus *Geographies of Tourism and Global Change* applies a truly global perspective highlighting development in different parts of the world and acknowledges tourism as a formative cause for societal and environmental change in an increasingly interconnected world.

The scope of the series is broad and preference will be given to crisp and highly impactful work. Authors and Editors of monographs and edited volumes, from across the globe are welcome to submit proposals. The series insists on a thorough and scholarly perspective, in addition authors are encouraged to consider practical relevance and matters of subject specific importance. All titles are thoroughly reviewed prior to acceptance and publication, ensuring a respectable and high quality collection of publications.

More information about this series at <http://www.springer.com/series/15123>

Thomas E. Jones · Huong T. Bui · Michal Apollo
Editors

Nature-Based Tourism in Asia's Mountainous Protected Areas

A Trans-regional Review of Peaks and Parks

Foreword by David Weaver

 Springer

Editors

Thomas E. Jones 
Environment and Development Cluster
Ritsumeikan Asia Pacific University
Beppu, Japan

Huong T. Bui 
Tourism and Hospitality Cluster
Ritsumeikan Asia Pacific University
Beppu, Japan

Michał Apollo 
Department of Tourism
and Regional Studies
Pedagogical University of Krakow
Krakow, Poland

ISSN 2366-5610

ISSN 2366-5629 (electronic)

Geographies of Tourism and Global Change

ISBN 978-3-030-76832-4

ISBN 978-3-030-76833-1 (eBook)

<https://doi.org/10.1007/978-3-030-76833-1>

© The Editor(s) (if applicable) and The Author(s), under exclusive license to Springer Nature Switzerland AG 2021

This work is subject to copyright. All rights are solely and exclusively licensed by the Publisher, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilms or in any other physical way, and transmission or information storage and retrieval, electronic adaptation, computer software, or by similar or dissimilar methodology now known or hereafter developed.

The use of general descriptive names, registered names, trademarks, service marks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.

The publisher, the authors and the editors are safe to assume that the advice and information in this book are believed to be true and accurate at the date of publication. Neither the publisher nor the authors or the editors give a warranty, expressed or implied, with respect to the material contained herein or for any errors or omissions that may have been made. The publisher remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

This Springer imprint is published by the registered company Springer Nature Switzerland AG
The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

*All my love and big thanks to CNHA. Also to
RDJSH, for 'having us walk the extra mile.'*

Foreword

An innovative way to approach the interdisciplinary investigation of mountains across Asia is to imagine them as multiple focal points. *Culturally*, and as exemplified by Japan's Mt. Fuji and the Five Great Mountains of mainland China, they often serve as national and/or religious icons of great beauty and importance. Particularly in South and Southeast Asia, they also typically serve as the homelands of diverse and distinct indigenous minorities. *Geopolitically*, the frequent use of watershed divides to demarcate international boundaries positions Asian mountains as sites of international tension, illustrated in mid-2020 by violent confrontations between Chinese and Indian military personnel along their disputed Himalayan border. Competition for access to fresh water and other natural resources exacerbate these increasing tensions, while some indigenous minorities, as in Myanmar, have pursued long-standing struggles of self-determination within their mountain heartlands. *Environmentally*, mountains are often studied as places of exceptional biodiversity as well as sites of frequent natural disasters such as floods and landslides. The vulnerability of fragile high-altitude ecosystems to climatic disruption, moreover, has put such places under increased surveillance as lofty 'canaries in the coalmine' of anthropogenic global warming. It is because of their rich environmental and cultural qualities—and sometimes to defuse simmering geopolitical tensions—that most Asian mountains are now designated under one or (usually) more national or trans-national IUCN protected area categories that recognise the unique management challenges of each such setting.

As richly illustrated in the following chapters of this book, Asia's mountains are also now evolving as exceptionally popular settings for rapidly expanding national tourism industries, giving rise to additional *economic*, *social* and *psychological* focal points of note. Long the destination stronghold of a few doughty pilgrims and adventurers, the transformation of Asia from a mainly less economically developed to a mainly more economically developed region during the past five decades has unleashed a tsunami of mostly domestic tourists into upland peripheries throughout the continent, enabled by growing populations, rising discretionary incomes, a desire to periodically escape seething and polluted cities, and the relentless expansion of national transportation networks. The resilience of affected human and non-human mountain communities, accordingly, has been sorely tested by local transformations

bestowing a complex array of costs as well as benefits. A few of these contemporary tourists, styled variably by academics as ‘ecotourists’, ‘nature-based tourists’ or ‘alternative tourists’, may well be aware of these transformations and try as a result to behave within the evolving contours of ‘sustainable’ or ‘responsible’ tourism. However, the majority, in all likelihood, are oblivious to these issues and stay focused on attaining personally satisfying and socially noteworthy experiences, ephemerally replicated these days in an endless cascade of carefully staged social media posts. Whether Asia’s peaks provide ‘peak experiences’, and how these peak experiences affect the peaks that provide them, are therefore questions well worth asking.

In the absence of effective self-regulation among mountain tourists, protected area managers in Asia face the formidable challenge of ensuring that core biocentric mandates are not sabotaged by parallel mandates to accommodate ‘complementary’ recreational activity. Recreational demand is not only increasing at a relentless pace (temporary disruptions from pandemics and other external forces notwithstanding), but a widespread pattern of reduced government funding is making protected area managers ever more dependent on revenue from tourism, so that such increases must be at least tacitly embraced by those managers despite the environmental risks they entail. Exposure to Western planning and management strategies focused around the attainment of optimal visitor distribution (as for example through zoning and quotas) and visitor behaviour (as for example through mindful interpretation, pre-emptive policing, and selective demarketing) do provide some extremely useful pathways to the sustainable management of increased visitation. However, these pathways must be qualified by the significant cultural differences which differentiate Asian domestic tourists from Western protected area visitors. The latter, for example, often experience culture shock when visiting Chinese protected areas, where blurred boundaries between the ‘cultural’ and the ‘natural’ give rise to temple complexes on high peaks, oversized red calligraphy on cliff faces, and enormous crowds of seemingly happy visitors. Clearly, the sustainable management of Asian protected areas requires the amalgamation of conventional Western strategies with endogenous inputs that reflect the distinct cultural, social, historical and political circumstances of each country and region.

A focus only on sustainability, however, is insufficient; Asia’s mountain protected areas must concurrently demonstrate *resilience* in the face of escalating external threats. It is helpful in this respect to imagine mountainous areas not only as multiple focal points, but as multiple focal points interacting and coalescing with increased frequency in obvious and less obvious ways. Ecological and landscape change induced by global warming or direct human intrusions, for example, may make mountain destinations less attractive or more dangerous, or it may stimulate so-called ‘last chance’ tourism among those hoping to take the last selfie in front of a dying glacier. Cross-border and separatist tensions in affected locations may force some governments to restrict or prohibit the entry of tourists, while other governments might encourage the expanded presence of tourists and associated infrastructure to strengthen their claims to disputed territory. The mountainous pleasure periphery is therefore also a geostrategic pleasure periphery in which national governments and their ‘big picture’ political calculations play as much a role in the future of Asia’s

mountain protected areas as local communities, park managers, environmentalists, the tourism industry, and other traditional stakeholders. The need to achieve sustainability and resilience within this broader context of diverse and often incompatible interest groups makes the management of such protected areas a classic ‘wicked problem’ that increasingly implicates the recreational visitor. Thoughtful analyses on tourism in Asia’s mountain protected areas, as systematically engaged on a sub-regional and country by country basis to capture the region’s natural, cultural, political, and social diversity, are therefore a welcome and timely contribution to the field.

Dr. David Weaver
Principal Research Fellow
Queensland University of Technology
Brisbane, Australia

Acknowledgements

Many thanks to the listed parties for their help that was gratefully received for the following:

- *Foreword*: Dr. David Weaver, also for his Keynote presentation in the Webinars.
- *Proofreading*: Prof. R. A. Salazar; Christian Tschirhart; Dr. A. Chakraborty.
- *Student Research Assistants*: Teresa Stetter, Raphaelle Delmas, Zaw Myo Win, Kelvianto Shenyoputro, Hoàng Nguyễn Minh and Nadar Sonny Widyagara.
- *Map-making*: Jin Ziming 金子茗 (using several programs including ArcGIS, CAD and PhotoShop, she created the maps for this book).
- *Financial support*: from the United Graduate School of Agricultural Sciences, Kagoshima University (FY 2017 and 2018) for Chap. 2 (Chen et al.).
- *Contributions to Chap. 10* (Wengel et al.): thanks to Andrew Kyaw (founder and leader of the Yangon Hiking & Mountaineering Club), Htet Eaindray (Mandalay Degree College) and Thiha Lu Lin (Thiha, the Traveller).
- *APU Research office*: initial grant for Workshop at AP Conference, and Research Finding Dissemination Subsidy, also for support with the 3 Webinars.

Contents

Part I Introduction

- 1 Mountainous Protected Areas & Nature-Based Tourism in Asia** 3
Thomas E. Jones, Michal Apollo, and Huong T. Bui

Part II Northeast Asia

- 2 Overcoming Barriers to Nature Conservation in China's Protected Area Network: From Forest Tourism to National Parks** 29
Bixia Chen, Yinping Ding, Yuanmei Jiao, Yi Xie, and Thomas E. Jones
- 3 Japan's National Parks: Trends in Administration and Nature-Based Tourism** 49
Thomas E. Jones and Akihiro Kobayashi
- 4 South Korea's System of Mountainous Protected Areas and Nature-Based Tourism** 71
Malcolm Cooper
- 5 Taiwan's National Network of Protected Areas and Nature-Based Tourism** 91
Chieh-Lu Li and Thomas E. Jones

Part III Southeast Asia

- 6 Indonesia's Mountainous Protected Areas: National Parks and Nature-Based Tourism** 111
Wahyu Pamungkas and Thomas E. Jones
- 7 Collaborative Management of Protected Areas in Timor-Leste: Stakeholder Participation in Community-Based Tourism in Mount Ramelau** 133
Antonio da Silva and Huong T. Bui

8	Protected Areas and Nature-Based Tourism in the Philippines: Paying to Climb Mount Apo Natural Park	153
	Aurelia Luzviminda V. Gomez and Thomas E. Jones	
9	Governance and Management of Protected Areas in Vietnam: Nature-Based Tourism in Mountain Areas	173
	Huong T. Bui, Long H. Pham, and Thomas E. Jones	
10	Mountainous Protected Areas in Myanmar: Current Conditions and the Outlook for Nature-Based Tourism	197
	Yana Wengel, Nandar Aye, Wut Yee Kyi Pyar, and Jennifer Kreisz	
 Part IV South Asia		
11	Indo-Himalayan Protected Areas: Peak-Hunters, Pilgrims and Mountain Tourism	223
	Michal Apollo, Viacheslav Andreychouk, Joanna Mostowska, and Karun Rawat	
12	Nepal's Network of Protected Areas and Nature-Based Tourism	245
	Rajiv Dahal	
13	Mountainous Protected Areas in Sri Lanka: The Way Forward from Tea to Tourism?	269
	Renata Rettinger, Dinesha Senarathna, and Ruwan Ranasinghe	
 Part V Conclusion		
14	Reflections for Trans-Regional Mountain Tourism	293
	Huong T. Bui, Thomas E. Jones, and Michal Apollo	

Editors and Contributors

About the Editors

Thomas E. Jones is Associate Professor in the Environment & Development Cluster at Ritsumeikan APU in Kyushu, Japan. His research interests include Nature-Based Tourism, Protected Area Management and Sustainability. Tom completed his Ph.D. at the University of Tokyo and has conducted visitor surveys on Mount Fuji and in the Japan Alps. ORCID: 0000-0002-4097-1886.

Huong T. Bui is Professor of Tourism and Hospitality cluster, the College of Asia Pacific Studies, Ritsumeikan Asia Pacific University (APU), Japan. Her research interests are Heritage Conservation; War and Disaster-related Tourism, Sustainability and Resilience of the Tourism Sector. ORCID: 0000-0003-1016-6197.

Michal Apollo is an Assistant Professor at the Institute of Geography, Department of Tourism and Regional Studies, Pedagogical University of Krakow, Poland, a Fellow of Yale University's Global Justice Program, New Haven, USA, and a Visiting Researcher at Hainan University – Arizona State University Joint International Tourism College, Haikou, China. Michal's areas of expertise are tourism management, consumer behaviours as well as environmental and socio-economical issues. Currently he is working on a concept of sustainable use of environmental and human resources. He is also an enthusiastic, traveller, diver, mountaineer, ultra-runner, photographer, and science populariser. ORCID: 0000-0002-7777-5176.

Contributors

Viacheslav Andreychouk Faculty of Geography and Regional Studies, University of Warsaw, Warsaw, Poland

Michal Apollo Department of Tourism and Regional Studies, Institute of Geography, Pedagogical University of Krakow, Krakow, Poland

Nandar Aye National Kaohsiung University of Hospitality and Tourism, Kaohsiung, Taiwan

Huong T. Bui College of Asia Pacific Studies, Ritsumeikan Asia Pacific University (APU), Beppu, Japan

Bixia Chen Faculty of Agriculture, University of the Ryukyus, Nishihara, Japan

Malcolm Cooper College of Asia Pacific Studies, Ritsumeikan Asia Pacific University, Beppu, Japan

Antonio da Silva Ministry of Tourism, Commerce and Industry, Dilli, Timor-Leste

Rajiv Dahal Department of Travel and Tourism Management, Faculty of Social Sciences and Humanities, Lumbini Buddhist University, Lumbini, Nepal

Yinping Ding School of Tourism and Geographical Science, Yunnan Normal University, Kunming, China

Aurelia Luzviminda V. Gomez School of Management, University of the Philippines Mindanao, Davao, Philippines

Yuanmei Jiao School of Tourism and Geographical Science, Yunnan Normal University, Kunming, China

Thomas E. Jones Environment and Development Cluster, College of Asia Pacific Studies, Ritsumeikan Asia Pacific University (APU), Beppu, Japan

Akihiro Kobayashi Faculty of Economics, Senshu University, Tokyo, Japan

Jennifer Kreis Hainan University—Arizona State University Joint International Tourism College, Haikou, China

Chieh-Lu Li Department of Tourism, Recreation, and Leisure Studies, National Dong Hwa University, Hualien, Taiwan

Joanna Mostowska Faculty of Geography and Regional Studies, University of Warsaw, Warsaw, Poland

Wahyu Pamungkas Forestry Agency of South Sumatra Province, Palembang, South Sumatra, Indonesia

Long H. Pham Faculty of Tourism Studies, University of Social Sciences and Humanities, Vietnam National University, Hanoi, Vietnam

Wut Yee Kyi Pyar Mother Earth Tourism Specialists Myanmar, Yangon, Myanmar;
LuxDev Aid & Development Agency, Yangon, Myanmar

Ruwan Ranasinghe Department of Tourism Studies, Faculty of Management, Uva Wellassa University of Sri Lanka, Badulla, Sri Lanka

Karun Rawat Department of Tourism, University of Otago, Dunedin, New Zealand

Renata Rettinger Department of Tourism and Regional Studies, Institute of Geography, Pedagogical University of Krakow, Krakow, Poland

Dinesha Senarathna Department of Geography, University of Kelaniya, Kelaniya, Sri Lanka;
New Zealand Tourism Research Institute, Auckland, New Zealand

Yana Wengel Hainan University—Arizona State University Joint International Tourism College, Haikou, China

Yi Xie School of Economics and Management, Beijing Forestry University, Beijing, China

Abbreviations

ASEAN	Association of Southeast Asian Nations
CBD	Convention on Biological Diversity
CITES	The Convention on International Trade in Endangered Species of Wild Fauna and Flora
ICOMOS	International Council on Monuments and Sites
IPRA	Indigenous Peoples Rights Act (1997)
IUCN	International Union for Conservation of Nature
MAB	Man and the Biosphere
MOE	Ministry of the Environment
MPA	Marine Protected Area
NBT	Nature-Based Tourism
NGO	Non-Governmental Organization
NIPAS	National Integrated Protected Areas System Act (1992)
PA	Protected Area
PAMB	Protected Area Management Board
UNEP-WCMC	UN Environment Programme World Conservation Monitoring Centre
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNWTO	World Tourism Organization
WDPA	World Database on Protected Areas
WHS	World Heritage Site

List of Figures

Fig. 1.1	Mt. Fuji rises from Fuji-Yoshida City on the edge of the national park (<i>Source</i> Author)	8
Fig. 1.2	International tourist arrivals 1990–2016 (units: millions) (<i>Source</i> UNWTO, 2017)	14
Fig. 2.1	Aggregate number of forest parks and national forest parks (NFP) in China 1982–2019 (<i>Source</i> China’s Forestry Yearbook 1949–1986, 1987–2005; FGA 2006–2019)	34
Fig. 2.2	The trends in forest park visitors and direct revenues from entrance fees (<i>Source</i> China’s Forestry Yearbook 1998–2005; FGA 2006–2019)	34
Fig. 2.3	The world’s highest outdoor sightseeing elevator in Zhangjiajie National Forest Park (<i>Source</i> http://www.qcqc.cc/XinDongFang/Class127/2750.html , Retrieved on July 20th, 2012)	38
Fig. 3.1	Map of Japan’s national parks and Mount Fuji	57
Fig. 3.2	Annual visits to Japan’s nature parks 1950–2016. <i>Source</i> MOE (2020). Unit: Millions of visits. (Note: data for Quasi national parks since 1957; Prefectural parks since 1965)	59
Fig. 3.3	Core zone at the top, buffer zone around the base of Mt. Fuji. <i>Credit</i> First author	63
Fig. 3.4	Willingness to pay a ¥1000 donation at Mt. Fuji (Jones et al., 2016)	65
Fig. 4.1	Topography of South Korean National Parks	72
Fig. 4.2	Trail map of Hallasan National Park. <i>Source</i> Author	74
Fig. 4.3	Crater lakes on the summit of Mt. Hallasan. <i>Source</i> Author	86
Fig. 5.1	Visitation trends to Taiwan’s national parks (2008–2017). <i>Source</i> Adapted from Taiwan National Parks (2020)	98
Fig. 5.2	Amis indigenous people in Hualien interpret their traditional fishery method (<i>Palakaw</i>). <i>Source</i> first author	101
Fig. 5.3	Paiyun Lodge located at 3,402 m altitude, 2.4 km to Yushan’s main peak. <i>Source</i> Yushan National Park (2020)	103
Fig. 6.1	Map of Indonesia’s protected areas	114

Fig. 6.2	Park rangers torch confiscated consumer goods including Sumatran tiger pelts. https://www.dailymail.co.uk/news/article-3604592/Indonesian-officials-seized-stuffed-Sumatran-tigers-elephant-tusks-endangered-animal-skins-set-fire-warning-illegal-poachers.html	120
Fig. 6.3	Tourist trends to Indonesia's national parks (2014–2018)	123
Fig. 7.1	Timor-Leste's Topography (<i>Source</i> Authors' compilation)	135
Fig. 8.1	Location of the Philippines' Protected Areas (PAs)	158
Fig. 8.2	Management zones of the MANP (<i>Source</i> DENR XI)	161
Fig. 8.3	Main climbing trails and distances to Mt Apo (<i>Source</i> DENR XI)	164
Fig. 8.4	Agreement of climber respondents with motivations for climbing Mt Apo ($n = 431$) (<i>Source</i> Gomez, 2015)	165
Fig. 9.1	Distribution of protected areas in Vietnam. <i>Source</i> Author compilation based on data from USAID (2013)	177
Fig. 10.1	Myanmar's protected areas (<i>Source</i> Authors' elaboration based on data from MONREC)	208
Fig. 10.2	Road to the summit of Mt Natma Taung (<i>Source</i> Photo credits: Htet Eaindray and Thiha Lu Lin)	214
Fig. 11.1	Division of the Himalayas (Apollo, 2017b)	228
Fig. 11.2	Altitudinal zones of the Himalayas (2016b). Adapted from Andrejczuk	229
Fig. 11.3	Himalayan areas under conservation. <i>Source</i> Author's elaboration	230
Fig. 12.1	International tourist arrivals in Nepal. <i>Source</i> MoCTCA (2020; various)	248
Fig. 12.2	Nepal's protected area system. <i>Source</i> Adapted from DNPWC (2019)	250
Fig. 12.3	DNPWC organizational structure. <i>Source</i> Unofficial translation from DNPWC (2020b)	252
Fig. 12.4	Aggregate revenue from divisions and PAs under DNPWC jurisdiction. <i>Source</i> DNPWC (2020c) and MoCTCA (2018) . . .	256
Fig. 13.1	Protected areas in Sri Lanka	272
Fig. 13.2	Horton Plains' international and domestic visitation (2008–2019). <i>Source</i> SLTDA (2020)	279
Fig. 14.1	Mountain tourists and prayers flags in Poon Hill with Dhaulagiri Peaks in the background, Annapurna range, Western Nepal. <i>Source</i> Author	294

List of Tables

Table 1.1	Mountain tourism and its impact on the natural environment	6
Table 1.2	Ratio of terrestrial and marine protected areas in target countries	11
Table 1.3	A comparison of ecotourism and mass nature-based tourism	11
Table 1.4	Comparative overview of select international conservation sites in NE and SE Asia	16
Table 1.5	Common and official names of target countries and case studies (※ alphabetical order)	20
Table 2.1	Modern chronology of forest tourism in China	33
Table 2.2	A seasonal pricing strategy in Huangshan Scenic Area	41
Table 3.1	Overview of Japans' triple-tiered nature park system	51
Table 3.2	Breakdown of Japan's nature park areas (ha) by conservation zone	54
Table 3.3	Estimated inbound visits to Japan's national parks 2015–2019 and FHINP inbound visits as a per cent	61
Table 4.1	Number of South Korean protected areas	74
Table 4.2	Area, location and designation of South Korean national parks	75
Table 4.3	IUCN classification of protected areas categories	78
Table 4.4	Management elements in the assessment of environmental values	80
Table 4.5	IUCN category and visitation to Korean mountainous national parks	81
Table 5.1	Overview of Taiwan's main systems of protected areas	92
Table 5.2	Overview of Taiwan's nine national parks and one national nature park	95
Table 5.3	Overnight stays and permits at Paiyun Lodge in 2019	103
Table 6.1	Subdivision of Indonesian conservation areas and IUCN protected area categories	115
Table 6.2	Human resources in select national parks	116

Table 6.3	Explanation of the zoning system used in Indonesia's national parks	118
Table 6.4	Indonesian national parks with the highest number of tourist visits	123
Table 6.5	Number of visits to Mount Bromo 2011–2016	125
Table 6.6	Entrance fees at Bromo Tengger Semeru National Park in 2020	126
Table 7.1	Protected areas in Timor-Leste	138
Table 8.1	Categories of Philippine PAs and aggregate area as of 2012 ...	155
Table 9.1	Protected areas in Vietnam	175
Table 9.2	Environmental laws and regulations	179
Table 9.3	Institutions involved in tropical forest and biodiversity management	181
Table 9.4	National Parks in Vietnam	184
Table 9.5	Visitor number and revenue from tourism in Hoang Lien National Park (2015–2019)	190
Table 9.6	Mountain trekkers' season, trails and costs	191
Table 10.1	Myanmar's protected areas	200
Table 10.2	Myanmar's mountain ranges	209
Table 11.1	Percentage of the total area under protection in the Indian Himalaya regions	226
Table 11.2	Domestic and foreign visitor trends to the Himalayas (2011–2012) and rate of change	228
Table 11.3	Overview of Stok Kangri case study site	238
Table 12.1	Policy and statutory instruments related to wildlife and PA management	253
Table 12.2	Tourist trends to Nepal's PAs	258
Table 12.3	Place of visit by tourists 2018–2019	259
Table 12.4	SNP mountain climbers and revenue in 2019	262
Table 13.1	List of national parks in Sri Lanka	273
Table 13.2	Selected mountainous protected areas in Sri Lanka	275
Table 13.3	Mountain protected area visitor numbers and income in 2019	279
Table 13.4	Longitudinal trends in mountain protected area visitor numbers	280
Table 13.5	Characteristics of the most popular tourism destinations in the Knuckles massif	285
Table 14.1	Intra-chapter synopsis of case study peaks' current issues and counter strategies	308
Table 14.2	World's major domestic tourism markets 2018	311

Part I

Introduction

Chapter 1

Mountainous Protected Areas & Nature-Based Tourism in Asia



Thomas E. Jones , Michal Apollo , and Huong T. Bui

1.1 Mountain Environments and Tourism

1.1.1 *Characteristics of Mountain Environments*

Definitions of mountain areas are unavoidably arbitrary (Messerli & Ives, 1997). Usually no qualitative, or even quantitative, distinction is made between mountains and hills (Barry, 2008). Overall, a mountain is a landform that rises prominently above its surroundings, generally exhibiting steep slopes, a relatively confined summit area, and considerable local relief. A generic typology includes volcanic, fold, plateau, fault-block and dome mountains (Goudie, 2004). However, as our understanding of the mechanisms of mountains' formation from plate tectonics has evolved, Ollier (1981) recognized four types of collisions: (1) continent-continental (*Himalayan* type); (2) continent-to-ocean, related to the continent's overhang and subduction of the ocean floor (*Andean* type); (3) the collision of the continent with the ocean floor and the associated advance of oceanic sediments under the continent, followed by the uplift of the edge of the continent and (4) thickening of the earth's crust as a result of a plate collision, possibly with the accompanying gravity flow of rocks close to the surface. Mountain ranges resulting from continent–continent and continent-to-ocean

T. E. Jones (✉) · H. T. Bui (✉)

College of Asia Pacific Studies, Ritsumeikan Asia Pacific University (APU), Beppu, Japan

e-mail: 110054tj@apu.ac.jp

H. T. Bui

e-mail: huongbui@apu.ac.jp

M. Apollo

Department of Tourism and Regional Studies, Institute of Geography, Pedagogical University of Krakow, Krakow, Poland

e-mail: michal.apollo@up.krakow.pl

collisions are thought to be the dominant geological formation on the Earth's surface (Dewey & Burke, 1973).

Mountain geosystems are complex, including elements of abiotic, biotic and anthropic natures interconnected with each other in myriad ways. Humboldt (1807) and Darwin (1859) found that environmental sensitivity increased with altitude and this zonation still represents a core concept in research on the mountain environment (Apollo & Andreychouk, 2020a; Apollo et al., 2020). Overall, mountains' higher elevations produce colder climates than at sea level, by deforming climatic zones to create an aspherical, Koppen's climate H (German: *Hochgebirge*)—mountain climate (see Beniston, 2006). These colder climates strongly affect the ecosystems of mountains: different elevations host different plants and animals. Moreover, endemic species became isolated in altitudinal niches due to inhospitable conditions in the adjacent zones that constrained their movement or dispersal (Barry, 2008).

Meybeck et al. (2001) estimated that about 25% of the land surface is occupied by mountains that are home to 26% of the world's population. Since time immemorial, man has penetrated further and higher into the mountains for hunting and later seeking areas convenient for agriculture (Zurick & Pacheco, 2006). Humans learned to use local raw materials (especially wood), build houses, and cultivate farmlands and pastures. Examples of such activities are abundant in high mountain regions (Barry, 2008). Excessive—related to the extremely dynamic population growth (e.g. Apollo, 2017b)—exploitation of limited resources, as well as poorly-planned development activities lead to degradation of mountain environment and ecosystem services. For example, headwater catchments protect vital supplies of fresh water via precipitation or glacial storage and release systems.

As human populations grew, areas of land use expanded over time, mainly at the expense of forests. In this way, the foothills and lower tiers of the system were anthropogenically transformed (Apollo & Andreychouk, 2020a, 2020b). Due to the upward shift in the range of crops, agricultural land use has also affected high-mountain zones. The indirect influence of man on the plant world is also based on the transformation of the soil, which is inextricably related with vegetation. Soil cultivation directly affects the modeling of the relief and significantly enhances erosive processes (Apollo et al., 2018; Hurni & Nuntapong, 1983). Human influence on the composition of vegetation affected not only forests and arable land, but also meadows. Mountainous environments share some common features, including dynamic and extraordinary sensitivity. The latter is due to the poorness of biotic geosystem which is associated with a harsh climate, unfriendly topography, etc.

Mountains are usually characterized as inaccessible, fragile, diversified and marginal areas (Messerli & Ives, 1997), and therefore over the ages most mountain ecosystems remained relatively isolated from the outside world, as reflected in marginalized or lower income communities. However, rapid improvements in technology, together with access infrastructure have thrust such communities into the spotlight of modernization, typified by the rapid rise of tourism. The variability of climatic conditions, high activity of geodynamic processes and generally poor development of vegetation render the balance in the high-altitude geosystem easily

disturbed. Mountains are thus becoming more vulnerable due to accelerating pressures from climate change (Auer et al., 2007). They are also under extra pressure from heightened footfall. For example, Chapter 12 documents the rise in international visitors to Nepal's Sagarmatha National Park from just 20 tourists in 1963, to 20,000 in 1998 and 57,289 in fiscal year 2018. As the number of climbers summiting Mt Everest soared, mountaineers such as Shackley (1993) warned that such peaks had become "giant cash cows." In tandem with climate change and commercialization, mountain tourism disasters are occurring more frequently as in the case of the 2015 Mt Everest avalanches that left 24 dead, or the 2015 Sabah earthquake that left 137 Kinabalu climbers stranded near Low's Peak. Mountain tourism depends on stable climatic conditions that limit "when specific tourism activities can occur (e.g. season length with snow cover or open water), tourism demand (e.g. proportion of people willing to swim or camp under certain conditions), and the quality of a tourism experience (utility) (e.g. hiking in warm, sunny conditions versus a cold rain or extreme heat)" (Scott et al., 2007).

1.1.2 Impacts of Mountain Tourism

Mountainous destinations account for 15–20% of global tourism, ranked second only to sun-sea-and-sand vacations on islands and beaches (Richins et al., 2016). Demand has grown along with access infrastructure as cable cars climb higher and roads reach further up the slopes. Meanwhile on and off-season visits increase as extra tourists seek to avoid the extreme heat of summer (Cavallaro et al., 2017). Even the high-altitude zones, including the inaccessible level, have been exposed for half a century or more to adverse impacts related to mountaineering, mountain trekking, rafting and other types of adventure tourism (Musa et al., 2015). Overall, nature-based tourism (NBT) activities have been increasing around the world since the 1960s (Cordell & Super, 2000; Jin-Hyung et al., 2001; Pröbstl-Haider et al., 2015), and this trend is expected to continue (Apollo, 2017a; Ryan, 2003). Mountains, with their remote and majestic beauty, are among the most popular destinations for NBT (Mieczkowski, 1995). Each year, millions of hikers, trekkers, and climbers swarm to mountains (Apollo, 2017a; Beedie & Hudson, 2003) such as the Seven Summits (Huddart & Stott, 2020) as well as other well-known spots like the Annapurna Circuit (Apollo et al., 2020; Joshi & Dahal, 2019) or Mt. Fuji (Jones et al., 2018). The threat from mass tourism is exacerbated by the tendency of tourists to congregate in mountain honeypots—specific areas, channels and times—which can coincide with biodiversity hotspots (Kruczek et al., 2018). In sum, the increasing volume of tourists presents a serious threat to both the quality of the natural environment (Table 1.1) and the unique cultural identity of local communities.

Tourism also brings cultural revolution via impacts on philosophies, economies and politics, since the commercialization of mountain NBT transforms residents' way of life, culture and customs (Apollo, 2015; Apollo et al., 2020; Musa et al., 2004, 2015). Tourism can stimulate changes in socio-cultural, environmental and economic

Table 1.1 Mountain tourism and its impact on the natural environment

	Trail impacts	Trampling and damage to vegetation	Disturbance or attracting of wildlife	Invasive species of plants	Littering of the mountain environment	Human waste pollution	Noise and light pollution
Apollo and Andreychouk (2020a)	☑		☑		☑	☑	
Apollo and Andreychouk (2020b)		☑					
Apollo (2017c)						☑	
Barros and Pickering (2014)				☑			
Barros et al. (2015)	☑	☑	☑	☑		☑	
Cilimburg et al. (2000)						☑	
Cole (1993)	☑	☑	☑	☑			
Cullen (1986)					☑		
Fidelus (2016)	☑	☑					
Gander and Ingold (1997)			☑				
Hempton and Grossmann (2009)							☑
Kaseva (2009)					☑	☑	
Knight and Gutzwiller (1995)			☑				
Marion and Olive (2006)	☑	☑					☑
Monti and Mackintosh (1979)	☑	☑					
Roe et al. (1997)					☑		
Stevenson et al. (2020)						☑	
Ścieżor et al. (2012)							☑
Wall and Wright (1977)		☑	☑	☑			

(continued)

Table 1.1 (continued)

	Trail impacts	Trampling and damage to vegetation	Disturbance or attracting of wildlife	Invasive species of plants	Littering of the mountain environment	Human waste pollution	Noise and light pollution
Weaver and Dale (1978)	☑	☑					
Weaver et al. (2001)				☑			
White et al. (1999)			☑				
Zwijacz-Kozica et al. (2013)			☑				

Source Author original

dimensions in places where such activities come into close contact with local communities (Ap, 1992; Apollo, 2015; Godde et al., 1999; Lama & Sattar, 2004). Mountainous NBT can also play a positive role in promoting an overall improvement in the locals' quality of life through economic development and environmental conservation (Nepal, 2002; Apollo, 2015). Yet the tourism mechanisms that generates such radical transformations must be taken into consideration when developing conservation plans, without which the mantra of 'sustainable development' remains an unobtainable goal (Apollo, 2015; Joshi & Dahal, 2019).

Overall, due to the various levels of economic development in mountainous countries, there is currently little possibility of introducing a comprehensive, rational and balanced approach to the natural environment (Sachs, 2015). However, there are ongoing attempts to set development along a more development trajectory, including the selective designation of PAs characterized by relatively undisturbed natural environments and rare, iconic flora and fauna. This harks back to the American ideal in the late 19th and early twentieth century, when the drive to 'go west' inadvertently culminated in the designation of some of the earliest, largest PAs. As the 'wild' West was gradually opened up, philosophers like John Muir and pragmatic policy-makers like Gifford Pinchot pushed for alternative ways to protect the last pockets of 'undeveloped' land. Meanwhile a concurrent dichotomy driven by a similar mix of 'frontier' development spirit and competitive conservation propelled investors ever upward into the mountain areas (Mose & Weixlbaumer, 2007). The Banff Springs Hotel was constructed in 1888 by the Canadian Pacific Railway, at an altitude of 1414 m. In the U.S., the Ahwahnee Lodge was built in 1927 on the floor of Yosemite Valley at an altitude of 1215 m. This mix of railroads, luxury hotels and other tourist infrastructure cemented the tangible 'taming of the highlands' for NBT, portrayed as a moral crusade to civilize the mountain wilderness rife with 'wild animals and evil spirits' (Nash, 2001). Much like the patriotic undertones that pitched American national parks against the castles and cathedrals of Europe, a similar pattern can be detected in today's PAs across Asia. From the 1934 Imperial Hotel in the



Fig. 1.1 Mt. Fuji rises from Fuji-Yoshida City on the edge of the national park (*Source* Author)

Japan Alps, the contemporary equivalents have carried the patriotic competition to civil engineering extremes as typified by the world's 'longest' cable car at Fansipan, Vietnam (the 3-rope non-stop cable car carries tourists a distance of 6293 m up the Muong Hoa Valley to a station near the summit—Chapter 9), or the 'highest' glass elevator in Zhangjiajie, China (326 m high—Chapter 2). However, despite the extant use of PA labels, the global perception remains wrapped in the North American narrative and rarely extends to include iconic Asian mountains such as Mt Everest, Mt Fuji or Mt Jade—all designated 'national parks' but not always recognized as such (Fig. 1.1).

1.2 Protected Areas & Nature-Based Tourism in Asia

1.2.1 *The Roots of Protected Areas (PAs) in Asia*

Asia is a place of contrasts, an ancient patchwork of cultures that is now the global pacesetter for economic growth. Regionally diverse interactions with mountains have long recognized the value of forests and the need to conserve them. Historical restrictions on hunting and forest exploitation were selectively justified by Confucian thinking and China had set up "offices to oversee the sustainable use of forest resources" by the sixth-second centuries BCE (Miller, 2017). In Japan, references

to hunting restrictions date back to the seventh century AD when the Taika Reforms established a separate land category for ‘bird hunting and preservation’ (Sheppard, 2001). ‘Sacred groves,’ ‘hidden valleys’ and ‘holy peaks’ form another cross-regional nexus with ancient roots. In Mongolia, for example, the custom of protecting certain forested hills dates back to the thirteenth century. The first reserve, the Boghd Khan Mountain Strictly Protected Area, was officially established in the late 1700s, by some estimates the first legally protected natural area in the world (Sheppard, 2001). Throughout history, many other areas and species have been protected across Asia for their cultural and religious significance. For example, Buddhist ‘Beyuls’ are sacred, hidden valleys found in many parts of the Himalayan region which also host significant biodiversity (Mu et al., 2019). In many cases, such hidden valleys, hunting reserves and sacred groves across Asia became the bedrock for today’s PAs.

1.2.2 IUCN Categories of PAs

The term ‘protected area’ (PA) is a conservation label that corresponds to any “clearly defined geographical space, recognized, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values (Dudley, 2008).” PA terminology incorporates a mix of land use classifications as diverse as ‘national park,’ ‘nature reserve,’ ‘wildlife management area’ and ‘wilderness area.’ PAs comprise the core of national conservation strategies and international treaties including the Convention on Biological Diversity (CBD). As biodiversity comes increasingly under threat in an era of the ‘6th mass extinction,’ PAs help safeguard biodiversity, provide such ecosystem services as clean water and air and mitigate climate change. PAs also have a role protecting vulnerable communities, cultural heritage and sacred sites, with the International Union for Conservation of Nature (IUCN—natural heritage) working together with the International Council on Monuments and Sites (ICOMOS—cultural heritage) as gatekeepers to UNESCO’s World Heritage Program. Mountains, in particular, symbolized a transformation wrought by a conservation and regional development dichotomy that proved justification for turning ‘wasteland into world heritage’ (Hall, 1992).

The global trailblazers and early PA templates were large mountainous national parks in North America such as Yellowstone and Banff set up from the end of the nineteenth century onward. Designation drivers included an emerging desire to ‘set aside’ primeval wilderness in an untouched form that belied the lengthy history of involvement with indigenous peoples (such as First Nations) or certain ‘less desirable’ species (e.g. the wolf) that were hunted, removed or deliberately eradicated from the parks (Emel, 1995). As PAs were subsequently designated all around the world, a spectrum of management goals evolved to cope with the diverse criteria that has also expanded over time. Classification of the different types of PAs was no simple task, but the IUCN have developed 6 categories (see Table 4.3 in Chapter 4) to cope

with the inherent national and regional diversity. These include a spatial mix of large-scale PAs over 10 km² (Mose & Weixlbaumer, 2007) versus small-scale ones such as the cat. 'IV' 1.64 km² Bukit Timah Nature Reserve near the centre of the city-state of Singapore (Dudley, 2008). At one extreme of the IUCN spectrum, a few sites such as the Swiss National Park are labelled category 'Ia,' with limited tourist access and a management agenda that prioritizes scientific research. Category 'II' corresponds most closely to the original 'Yellowstone model' whereby large areas are 'set-aside' with few permanent populations of people but significant tourism resources including spectacular geoheritage (e.g. waterfalls, hot springs and geysers) and iconic flora and fauna. Category 'V' PAs encompass traditional, inhabited landscapes and seascapes made, modified or maintained by human influences such as farming, forestry and fishing. The IUCN system also reflects the fact that PA management objectives are not static but have changed over time, shifting from sightseeing to biodiversity, and making more use of MPAs as outlined in the next section.

1.2.3 Aichi Target 11: Bigger and Better PAs?

Following the publication of Brundtland's landmark report on sustainable development in 1987, and the 1992 Earth Summit in Rio, the need for robust environmental governance has grown increasingly apparent (Jordan, 2008). In 2012, the IVth World Congress on National Parks & Protected Areas pre-empted the UN CBD's aim to designate over 12% of the earth's terrestrial surface as PAs by 2000 (Mose & Weixlbaumer, 2007). The CBD Framework included Signature Programme No. 2 to "unlock the potential of protected areas, including indigenous and community conserved areas, to conserve biodiversity while contributing towards sustainable development." This in turn paved the way for the Aichi Biodiversity Targets, wherein Target 11 sought to expand protected areas to 17% of terrestrial and inland water areas, and 10% of coastal and marine areas by 2020.

By 2014, there were 10,900 PAs covering almost 14% of terrestrial Asia (Juffe-Bignoli et al., 2014). Table 1.2 presents the ratio of terrestrial and marines PAs in selected countries covered in this volume, with Northeast Asian countries meeting or exceeding the terrestrial 2020 target of 17%. However, many PAs do not match up sufficiently with biodiversity hotspots, or are poorly managed. New and more effective modes of PA governance are thus being sought around the world today, but there is a lack of research related to non-English speaking countries, especially in Asia which has experienced some of the fastest-growth rates for tourism. The focus of this edited volume is to compare mountainous PAs holistically across Northeast, Southeast and South Asia, three regions that are actively seeking to promote NBT to capitalize on tourism resources including impressive landscapes and biodiversity while retaining conservation goals (Table 1.3).

Table 1.2 Ratio of terrestrial and marine protected areas in target countries

	Terrestrial (%)	Marine (%)	Areas of importance for biodiversity (%)
<i>Northeast Asia</i>			
China	16	5	9
Japan	29	8	68
South Korea	17	2	38
Taiwan	20	1	30
<i>Southeast Asia</i>			
Indonesia	12	3	26
Timor Leste	16	1	37
The Philippines	15	1	41
Viet Nam	8	1	39
Myanmar	7	0	25
<i>South Asia</i>			
India	6	0	24
Nepal	24	0	55
Sri Lanka	30	0	44

Source WDPA (2020)

Table 1.3 A comparison of ecotourism and mass nature-based tourism

	Ecotourism 1.0	Pragmatic mass NBT	Mass NBT
<i>Destination</i>	Unspoiled, wild natural destinations	Semi-wild natural or authentic cultural destinations	'3S' settings or PAs (front country only)
<i>Operational logistics</i>	Small scale guided groups	Higher volume offset by spatial & temporal mitigation	High volume during peak season
<i>Access & entry</i>	Visitor permits and limits of use	Cost recovery mechanisms gain revenue for conservation	Connectivity with mass transport
<i>Visitor Education</i>	Actively seek altruistic learning opportunities	Persuasive communication delivers targeted messages	Hedonistic and sight-seeing
<i>Visitor Profile</i>	Dominated by white, male western elites	Multicultural visitors with different cultural backgrounds, preferences, values, expectations	

Source Adapted from Weaver (2001, 2014)