### AQAR-2020-21

3.4.6: Documents for books and chapters in edited volumes published per teacher during the Session 2020-21:

Name of Department: **Geography** 

Name of Teacher(s): <u>Dr. Ravinder Jangra &</u>

Dr. S.P.Kaushik

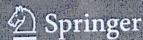
Advances in Geographical and Environmental Sciences

R. B. Singh Dongying Wei Subhash Anand *Editors* 

# Global Geographical Heritage, Geoparks and Geotourism

**Geoconservation and Development** 





# Chapter 22 Estimating Carrying Capacity in a High Mountainous Tourist Area: A Destination Conservation Strategy



Ravinder Jangra and S. P. Kaushik

Abstract In the sector of tourism, all issues are associated with the "magic number" of tourists that visit certain destination. The assessment of physical carrying capacity is an important component in the planning of spatial development to maintain sustainability for establishing standards in tourism sector. Study area has rich cultural and religious identity of tribal community as well as eco-system of cold desert which make it unlike any other in the world. Estimating tourist's threshold value of the destinations becomes vital considering the recent tragedies at the pilgrimage destinations in nearby hilly areas in Himalayas. Therefore, the present research assesses the physical carrying capacity of three selected tourist spots in Kinnaur based on the guidelines suggested by International Union of Conservation of Nature and Natural Resources (IUCN). As per calculations, the number of PCC, RCC, and ECC of selected tourist spots in Kinnaur are 64,835, 9595, and 5928, respectively. It is found that ECC is the most acceptable type of carrying capacity and the present status of tourism activity is highly under exploited vis-a-vis its carrying capacity in the study area.

**Keywords** Land use/land cover (LULC) · Physical carrying capacity (PCC) · Real carrying capacity (RCC) · Effective carrying capacity (ECC)

#### 22.1 Introduction

The natural environment, local culture, and geographically diverse habitats are the major attractions that play an important role to attract mass tourism at any destination (Hasan et al. 2014). Thriving economy of Asia and dirt cheap transportation and

R. Jangra (ﷺ) · S. P. Kaushik Department of Geography, Kurukshetra University, Kurukshetra 136119, Haryana, India e-mail: ravinderjangra13⊕gmail.com

S. P. Kaushik e-mail: spk3416 rediffmail.com

## Contents

| rai | TI Geographical Diversity and October ange   |    |
|-----|--|----|
| ľ   | Geographical Diversity of Georgia and Perspectives of Planning of Geoparks (Geo Heritages).  Nodar Elizbarashvili, Zurab Laoshvili, Giorgi Dvalashvili, and Rusudan Elizbarashvili   | 3  |
| 2   | Identifying and Assessing Geodiversities Around Takht-e Soleyman World Heritage Site to Propose the Territory as the Third Geopark in Iran Bahram N. Sadry, Azar Mohammadi-Aragh, Fatemeh Fehrest, Ali Bayatani, and Ali Haji-Moradi | 15 |
| 3   | Geoheritage: A Strategic Resource for the Society<br>in the Anthropocene<br>Francesca Romana Lugeri, Piero Farabollini, and Vittorio Amadio  | 43 |
| 4   | UAV's Multimedia Technology and Augmented Reality<br>(Geointegration): New Concept and New Paradigm<br>of Geodiversity Presentation<br>Ivaneide Santos, Renato Henriques, Gorki Mariano,<br>and Edjane Santos                        | 59 |
| 5   | Virtual Heritage: A Model of Participatory Knowledge<br>Construction Toward Biogeocultural Heritage Conservation<br>Pablo Mansilla-Quiñones, Hermann Manríquez,<br>and Andrés Moreira-Muñoz  | 75 |
| 6   | Communitarian Ethics, Environmental Conservation<br>and Development<br>Sibonakaliso Shadrack Nhlabathi and Brij Maharaj  | 9: |

| iv |  | Contents |
|----|--|----------|
| 7  | Ecological and Socio-Economic Vulnerability to Climate Change in Some Selected <i>Mouzas</i> of Gosaba Block, the Sundarbans | . 105    |

|      | in Some Selected Mouzas of Gosaba Block, the Sundarbans  Nabanita Mukherjee and Giyasuddin Siddique  | 105   |
|------|--|-------|
| Part | t II Geosites and Geoparks   |       |
| 8    | An Example of Geosite Evaluation of Fossils:<br>Zonguldak Coal Basin (Turkey)<br>Selin Isik Cakti, Okan Pulat, and Hulya Keskin Citiroglu  | 133   |
| 9    | Gullies and Badlands as Geoheritage Sites<br>Wojciech Zglobicki, Jean Poesen, Veena Joshi, Albert Sóle-Benet,<br>and Sofie De Geeter   | 147   |
| 10   | Geoeducation and Geoethics Among the Children for Sustainable<br>Tourism and Development of Aliage Geological Park in Spain<br>Julia Escorihuela                                     | 173   |
| n    | "Location, Location, Location": Challenges of Effective<br>Geoscience Education Within Geotourism Opportunities<br>at Coastal US Fossil Park Sites                                   | 187   |
| 12   | Geoparks and Geo-Sites: Geological "Learning Objects" Susanna Occhipinti   | 205   |
| 13   | Geoheritage Sites and Scope of Geotourism in Land<br>of Chhattisgarh, India<br>Suchita Tripathi  | 225   |
| 14   | The Exploration into Evaluation Index System for the Protection Effectiveness of Natural Heritage Protected Areas  D. Wei  | 241   |
| 15   | Geoheritage and Potential Geotourism in Geoparks—Indian<br>Perspective<br>Sudesh Kumar Wadhawan  | 257   |
| Pa   | rt III Geotourism  |       |
| 16   | New Routes of Geotourism for the La Campana–Peñuelas<br>Biosphere Reserve, Chile<br>Rodrigo Figueroa-Sterquel, Jorge Negrete-Sepúlveda,<br>Andrés Silva-Marambio, and Fernando Cosio | 285   |
| 17   | Modern Geotourism's UK Antecedents Thomas A. Hose  | . 307 |

| Contents |   | xv  |
|----------|---|-----|
| 18       | Geomorphological Resources for Geoeducation<br>and Geotourism<br>Lucie Kubaliková, Karel Kirchner, and Aleš Bajer   | 343 |
| 19       | Dinosaur Geotourism in Europe, a Booming Tourism Niche<br>Nathalie Cayla and Heidi Elisabeth Megerle  | 359 |
| 20       | The Use of Geoheritage, Geopark and Geotourism Concepts to Conserve and Sustain Tourism Development in Zambia Kagosi Mwamulowe and Imasiku Anayawa Nyambe   | 381 |
| 21       | Highlight of Geotouristic Values of a Volcanic Landform on the Mount Manengouba Eastern Slopes: Case of Djeu-Seh Basin Ghislain Zangmo Tefogoum, Armand Kagou Dongmo, David Guimolaire Nkouathio, and Merlin Gountié Dedzo  | 407 |
| 22       | Estimating Carrying Capacity in a High Mountainous Tourist Area: A Destination Conservation Strategy Ravinder Jangra and S. P. Kaushik  | 427 |
| 23       | A Strategy for Teaching and Learning Sciences and Geography, Puchuncaví, Chile Andoni Arenas-Martija, Jael Orrego-Araya, Carolina Ortiz-Pavéz, Camila Gajardo-Tapia, Nicolás Zanetta-Colombo, Karla Inzunza-López, Nataly Cisternas-Silva, Carolina Córdova-Veas, Ana Maria Goehler-Marchant, Natalia Báez-Córdova, Valeska Bustamante-Bernal, Ximena Galleguillos-Bustamante, Karolyn Gavilán-Maturana, María Gómez-Miqueles, Cynthia Iturrieta-Ortiz, Jeannette Nilo-Fuentes, Carolina Báez-Donoso, | 449 |
|          | Irene Constanza Chacana-Faras, and Ximena Rivera-Silva  |     |