

M. P. SINGH

BIODIVERSITY IN INDIA

IMPLEMENTATION AND BARRIERS OF
REGULATORY ACTS



Contents

Preface

Editors' Profile

Birds as bioindicators of environmental health

Mohsina Khan, Shaafay Khalid and Monowar Alam Khalid 1-17

Integrating Community Participation and Traditional Knowledge in Hornbill Conservation: Bridging the Past and Future

**Ruchira Nigam, Monowar Alam Khalid, Chitra Singh
and Asif Ahmad Siddiqui** 19-26

The role of zoos in biodiversity conservation: A review

Azra Ikram and Monowar Alam Khalid 27-51

Sustainable development and biodiversity: Mitigating conflicts and finding solutions

Saras and Padma Saxena 53-59

Conflict between development and biodiversity conservation

Abhishek Singh and Hifza Ansari 61-69

Conservation of endangered species: Legal and regulatory challenges

Nalini Yadav 71-89

Climate change, biodiversity and legal framework in India

Parul Mishra 91-98

Role of forests in support of conservation

Parul Mishra 99-108

Biodiversity conservation efforts : Focusing on the overcoming of regulatory challenges

Lokesh Kumar and Sandhya Sharma 109-118

Introduction to invasive Alien species: Regulatory gaps and challenges

Priyamvada Tripathi 119-126

Climate change biodiversity and legal framework in India

Rupali Yadav 127-142

Role of International conventions in shaping Indian biodiversity laws

R. P. Yadav 143-148

जैव विविधता : एक सामान्य अध्ययन

भूपेन्द्र सिंह 149-154

जैव विविधता में न्यायपालिका की भूमिका

नीति 155-164

भारत में जैव विविधता संरक्षण

किरण लता वर्मा 165-169

Historical overview of biodiversity conservation in India

Rajesh Yadav 171-182

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THE ROLE OF ZOOS IN BIODIVERSITY CONSERVATION: A REVIEW

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ABSTRACT : This chapter examines the multifaceted role of zoos in biodiversity conservation emphasizing their critical function as both conservation hubs and educational platforms. It systematically analyzes the contribution of zoos to the preservation of endangered species through managed breeding programs, genetic research, and reintroduction initiatives that enhance population viability in natural habitats. The chapter also addresses the importance of zoos in habitat conservation efforts, highlighting partnerships with local and global organizations to restore ecosystems and protect wildlife. Furthermore, it discusses the educational impact of zoos in raising awareness about biodiversity loss and fostering a conservation ethic among visitors. By integrating scientific research with community outreach, zoos are positioned as pivotal agents in global conservation strategies, ultimately contributing to the sustainability of biodiversity and the health of ecosystems worldwide.

Key words : Zoo, biodiversity, wildlife, conservation, SDG.

Introduction

Zoos, once primarily institutions for entertainment, have evolved into significant contributors to global biodiversity conservation. Their role extends beyond the mere exhibition, encompassing critical functions such as ex-situ conservation, research, and public education (Millar and Ross, 2018). As biodiversity loss accelerates due to human activities like habitat destruction, climate change, and overexploitation, zoos have become crucial safety nets for threatened species. By housing and breeding endangered animals, zoos can safeguard genetic diversity and provide a source of individuals for reintroduction programs when suitable habitats are restored [International Union for Conservation of Nature (IUCN), 2021].

Furthermore, zoos serve as invaluable platforms for scientific research. Zoos are live laboratories for researchers, they can study animal behavior, physiology, and reproductive biology in controlled settings, leading to insights that inform conservation strategies in the wild. For instance, studies on captive breeding programs have contributed to the development of techniques to improve reproductive success and genetic diversity in endangered species (Wild *et al*, 2017). Zoos, once primarily seen as places for entertainment, have evolved into crucial institutions for biodiversity conservation. Beyond their role as recreational spaces, modern zoos actively contribute to safeguarding endangered species and promoting environmental awareness. Through ex-situ conservation programs, zoos breed and maintain populations of threatened animals, ensuring their survival and potential reintroduction into the