

**M. A. KHALID, D. S. MALIK, R. A. BALIKAI,  
BASEEM TAMINI, K. K. YADAV & P. R. YADAV** *Editors*

## **ENVIRONMENTAL PROBLEMS, PROTECTION AND POLICIES**

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This book on "Environmental Problems, Protection and Policies" goes on to highlight the unfavourable conditions created by the human approach to nature. In other words, this book highlights what environmental pollution is! It can be understood how important the issue of environmental pollution is in the situation where even the air we breathe is threatened with pollution. The book contains 30 chapters encompassing different aspects of environmental problems, protection, and policy issues. This book summarizes the Green technologies for sustainable development, Soil pollution, Microplastic pollution in the aerial, soil and marine ecosystem, Plastic pollution, Water pollution, Ozone layer depletion, Biodiversity loss, Air pollution, Marine pollution, Deforestation, Acid rain, Environment degradation and disasters, Human impact on the environment, Pollution and its impact on animal and human health, and Light pollution as the driving force behind loss of biodiversity.



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# *AND POLICIES*

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## UNDERSTANDING THE IMPACT OF AIR POLLUTION ON BIRDS WITH SPECIAL REFERENCE TO HORNBILLS

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**ABSTRACT :** Air pollution is a pressing issue with far-reaching consequences, transcending human boundaries and affecting the intricate web of life. Birds, often overlooked victims of environmental degradation, serve as crucial indicators of ecological health. In the grand tapestry of nature, birds are the messengers, their flights narrating the health of our planet. This book chapter embarks on a journey to uncover the profound consequences of air pollution on avian species, with a particular spotlight on the majestic hornbills. As we delve into the intricacies of their existence, we must heed the silent calls of these winged custodians, signaling the environmental discord caused by our own actions. However, the symphony of their flights is increasingly disrupted by a growing threat of air pollution. Air pollution, being a global environmental challenge, affects not only human health but also has profound consequences for biodiversity. The chapter will navigate through the consequences of this invisible assailant; we uncover the unique vulnerabilities faced by hornbills in the modern era. The chapter will also explore the intricate dance between air pollution and our feathered friends, with a specific focus on the unique and charismatic hornbills. As we navigate through the impacts, intricacies and conservation challenges, we aim to understand the symphony of the skies disrupted by the unseen hands of pollution.

**Key words :** Air pollution, majestic hornbills, environmental degradation, vulnerabilities, ecological health.

### Introduction

*I am beginning this chapter writing with the thoughts of John James Audubon - "Birds are not just winged creatures; they are the poets of the air, the musicians of the skies and their songs tell us the stories of our environment".*

Today's era where the world is changing very fast, air pollution is emerging as a serious problem. This phenomenon is not only restricted to urban areas but also becoming common in rural areas. Atmospheric pollutants that arise from human activities exert a widespread effect on all living organisms. In this regard, human health has always been the primary concern of research (Gupta and Bakre, 2013). Various anthropogenic activities like vehicular emission, burning of fossil fuels, construction, industrialization, combustion *etc.* are the major source of pollution in the city. Yadav *et al* (2012) explain that the air pollution problem is associated with vehicular emissions. Air pollution is a pressing issue with far-reaching consequences, transcending human boundaries and affecting the intricate web of life. Birds, often overlooked