commentary

iMedPub Journals
www.imedpub.com

Global Journal of Research and Review
ISSN 2393-8854

2022
Vol.9 No.7:002

Comprehensive Review of Literature on Recent Progress in Climate Change and Biodiversity Conservation Research

Tanzeel Javaid*

Department of Environmental Science and Engineering, Nanjing University of Information Science and Technology, Nanjing, China

***Corresponding author:** Tanzeel Javaid, Department of Environmental Science and Engineering, Nanjing University of Information Science and Technology, Nanjing, China Email: Javaidtanzeel24@yahoo.com

Received date: June 06, 2022, Manuscript No. Ipgjrr-22-14565; **Editor assigned date:** June 09, 2022, PreQC No. Ipgjrr-22- 14565 (PQ); **Reviewed date:** June 20, 2022, QC No Ipgjrr-22-14565; **Revised date:** June 30, 2022, Manuscript No. Ipgjrr-22- 14565(R); **Published date:** July 08, 2022, DOI: 10.36648/Glob J Res Rev.9.7.2

Citation: Javaid T (2022) Comprehensive Review of Literature on Recent Progress in Climate Change and Biodiversity Conservation Research, China. Glob J Res Rev Vol.9 No.7:002

Description

Climate change is always an immense challenge for conservation biologists in the development and implementation of effective conservation strategies. The expected loss of biodiversity due to climate change weakens the delivery of ecosystem functioning and services, which can lead to a global environmental crisis. This study aims to conduct a comprehensive review of literature on recent progress in climate change and biodiversity conservation research and identifies the leading countries, institutions and researchers in this research area. We also aim to explore the current research trends and existing scientific knowledge as well as to provide perspectives on the topic. A scientometric analysis approach included co-occurrence analysis of countries, institutions, and authors for research productivity and academic development; co-occurrence of keywords for identification of research hotspots; co-citation analysis for prominent articles and journals; and keyword burst for detection of global research trends, was applied by using Cite Space based on 1965 articles retrieved from the Web of Science Core Collection for the period 2000–2021. During the last decades, global biodiversity loss is accelerating due to climate change and anthropogenic disturbances, and thus, humans are responsible for this huge loss.

Consequences on the Surrounding Environment That Underpins Human Wellbeing

These adverse anthropogenic activities mainly include land-use changes such as agricultural practices and infrastructure development, *i.e.*, the building of roads, dams and cities, which ultimately cause the degradation and fragmentation of natural habitats as well as environmental deterioration. As such, forest vulnerability to fire is another major threat to biodiversity which is probably due to logging or landscape fragmentation as well as global climate change such as irregular changes in temperature and precipitation. All these adverse impacts are due to the increasing human population and socio-economic conditions which not only alter environmental conditions but also largely influence biodiversity and their natural habitats. We cannot achieve biodiversity conservation without tackling climate change and vice versa. Thus, it is always recommended that protecting and restoring ecosystems is the only nature-based solution to reduce climate change and biodiversity loss, and their interlinked consequences on the surrounding environment that underpins human wellbeing. Assessing the far-reaching effects of climate change on biodiversity is one of the major societal concerns. A large spatio-temporal variation in responses of biodiversity indicators to climate change has posed new challenges for conservation biologists and practitioners in developing credible, long-term, and sustainable conservation strategies.

Climate Adaptation Solutions for Biodiversity Protection and Management

Thus it is a critical question of how to effectively manage biodiversity in the face of accelerating climate change. Ecosystem management can be considered a key strategy for meeting ecological and human needs. Climate adaptation solutions for biodiversity protection and management have been drawn out in several earlier studies, including the development and expansion of protected areas, better land use management, reduction in deforestation, and restoring naturally-functioning ecosystems. These measures have been shown to reduce the negative effects of climate change on biological diversity and improve ecological connectivity. However, some conservation planning and management projects overlooked the importance of climate change or climate-adapted strategies. Other issues are lack of funds, trade-offs between conservation and other priorities, limited regional and local predictions, and uncertainty, etc. Through scientometric analysis, we show that climate change and biodiversity conservation research is an interdisciplinary research field involving various disciplines. Although climate change and biodiversity conservation research have been studied across the globe, several more countries and regions are underrepresented which need to be covered in future studies on an urgent basis to better understand the consequences of climate change on biodiversity loss which can have global consequences.