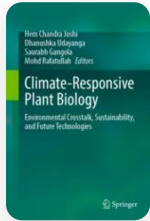


Conservation Strategies for Plant Diversity

| Chapter | First Online: 01 April 2026

| pp 111–133 | [Cite this chapter](#)



Climate-Responsive Plant Biology

Megha Sharma, Samiksha Joshi, Anroop Kaur, Sanjay Gupta, Ganesh Pandey & Saurabh Gangola

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Abstract

Plant diversity encompasses a wide range of plant species, from genes to ecosystems, and is primarily found in hotspots and crop diversity centres. However, different anthropogenic activities severely threatened the plant biodiversity and have a negative impact on human life as it depends on the plants up to a varying extent. The loss of biodiversity on a global, national, and regional scale is a complex problem that impacts social, economic, organizational, political, scientific, and communicational communities. Hence, there is an urgent need to preserve the plant biodiversity from extinction, thereby ensuring that the present and future generations to use plant material sustainably. The growing extinction and vulnerability of various plant species in the twenty-first century have made conservation areas such as sanctuary, parks, etc., as an essential part of the global biodiversity protection plan. To guarantee comprehensive worldwide biodiversity conservation strategies, the International Union for Conservation of Nature (IUCN) emphasizes the necessity of utilizing all available resources and methods, including collaborative and indigenous forest conservation techniques. To effectively focus on *both*

in situ and ex situ conservation, the completion of a global botanical inventory and an evaluation of the conservation status of 94% of plant species that have not yet been assessed are the most urgent demands. This chapter includes several in situ and ex situ strategies, as well as the growing trend of integrated conservation (which connects in situ and ex situ) activities, in an attempt to prevent the ongoing loss of plant diversity worldwide.

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Author information

Authors and Affiliations

School of Biosciences, Swami Rama Himalayan University, Jollygrant, Dehradun, Uttarakhand, India

Megha Sharma, Samiksha Joshi & Sanjay Gupta

School of Agricultural Biotechnology, Punjab Agricultural University, Ludhiana, Punjab, India

Anroop Kaur

Faculty of Agricultural Sciences, Shree Guru Gobind Singh Tricentenary University, Chandu-Budhera, Gurugram, Haryana, India

Ganesh Pandey

Department of Microbiology, Graphic Era (Deemed to be University), Dehradun, India
Saurabh Gangola

Editor information

Editors and Affiliations

Botany, Kumaun University, Nainital, Uttarakhand, India

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Cite this chapter

Sharma, M., Joshi, S., Kaur, A., Gupta, S., Pandey, G., Gangola, S. (2026). Conservation Strategies for Plant Diversity. In: Joshi, H.C., Udayanga, D., Gangola, S., Rafatullah, M. (eds) Climate-Responsive Plant Biology. Springer, Singapore. https://doi.org/10.1007/978-981-95-7354-7_6

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DOI

https://doi.org/10.1007/978-981-95-7354-7_6

Published

01 April 2026

Publisher Name

Springer, Singapore

Print ISBN

Online ISBN

eBook Packages

978-981-95-7353-0

978-981-95-7354-7

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