

## Ecological Evaluation and Conservation Strategies of Economically Important Plants in Indian Arid Zone

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**Abstract :** The Thar Desert of Rajasthan covers a wide geographical area spreading between 23.3° to 30.12°, North latitude and 69.3° to 76° Eastern latitudes; having a unique spectrum of arid zone vegetation. This desert is spreading over 12 districts having a rich source of economically important/threatened plant diversity interacting and growing with adverse climatic conditions of the area. Due to variable geological, physiographic, climatic, edaphic and biotic factors, the arid zone medicinal flora exhibit a wide collection of angiosperm families. The herbal diversity of this arid region is medicinally important in household remedies among tribal communities as well as in traditional systems. The on-going increasing disturbances in natural ecosystems are due to climatic and biological, including anthropogenic factors. The unique flora and subsequently dependent faunal diversity of the desert ecosystem is losing its biotic potential. A large number of plants have no future unless immediate steps are taken to arrest the causes, leading to their biological improvement. At present the potential loss in ecological amplitude of various genera and species is making several plant species as red listed plants of arid zone vegetation such as *Commiphora wightii*, *Tribulus rajasthanensis*, *Calligonum polygonoides*, *Ephedra foliata*, *Leptadenia reticulata*, *Tecomella undulata*, *Blepharis indica*, *Peganum harmala*, *Sarcostoma vininale*, etc. Mostly arid zone species are under serious pressure against prevailing ecosystem factors to continuation their life cycles. Genetic, molecular, cytological, biochemical, metabolic, reproductive, germination etc. are the several points where the floral diversity of the arid zone area is facing severe ecological influences. So, there is an urgent need to conserve them. There are several opportunities in the field to carry out remarkable work at particular levels to protect the native plants in their natural habitat instead of only their in vitro multiplication.

**Keywords :** ecology, evaluation, xerophytes, economically, threatened plants, conservation

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