

Chapter 6

Economic Perspectives on Managing Invasive Plant Species in Pakistan

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ABSTRACT

Exotic species turns to invasive have negative impacts on native biota and ecosystem functioning. Globalization, development of active transport accelerates plants trade, create threat to global biodiversity. Developing countries like Pakistan invasive species pose economic loss like agricultural productivity, Eucalyptus camaldulensis intentionally introduced for green cover and soil reclamation, Parthenium hysterophorus L. for trade, Lantana camara for horticulture purposes, Broussonetia papyrifera (L.) for landscaping purpose. Invasive plants have adaptability against wide range of environmental conditions, reduced yield by competing with native biodiversity and have econo-medicinal properties fodder, oil, some other allelopathic effects that could pay their damage cost. Pakistan requires specific management program to control their introduction, spread and their impacts on native species. The control and management of invasive species can be implemented by assessment of their risk factors on biodiversity degradation and loss.

INTRODUCTION

Pakistan is home to a wide range of ecosystems including forests, grasslands wetlands and agricultural lands (Aziz, 2021). However, the introduction and spread of invasive plant species pose a serious to the country spread rapidly and disrupt local ecosystem by outcompeting native species. These species often thrive due to lack of natural predators and favorable climatic conditions leading to ecological and economic consequences (Adedibu, 2023). Invasive plants species pose a significant challenge to Pakistan economy agriculture and natural ecosystems (Aziz, 2021). These nonnative species spread aggressively outcompeting indigenous flora, reducing agriculture productivity and increasing the costs of land management. The economic impact of invasive plants is multifaceted affecting farmers, policymakers and environmental agencies by increasing expenditures on control measures reducing crop yields and disrupting local biodiversity (Shin et al., 2022). Pakistan diverse climate and extensive agricultural sector make it particularly vulnerable to biological invasions with species such as *Parthenium hysterophorus*, *Eichhornia crassipes* and *Lantana camara* spreading rapidly across different ecosystems (Mohammeda & Bahmudb, 2023). The unchecked growth of these species leads to significant losses in crop production increased irrigation costs and additional expenses for herbicides and manual removal (Gathala et al., 2021).

Invasive plant species represent one of the most pressing ecological threats to natural ecosystems worldwide. These species non-native to the regions they invade disrupt the balance of native biodiversity, alter habitat structure, degrade ecosystem

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