

Climate Change and the Invasive Alien Species of Western Himalayan State of India

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Abstract : The fragile Himalayan ecosystems are sensitive to environmental stresses, including direct and indirect impacts of climate stresses. A total of 297 naturalized alien plant species belonging to 65 families in the IHR have already been reported. Of the total 297 naturalized alien plant species in IHR, the maximum species occur in Himachal Pradesh (232; 78.1%), followed by Jammu & Kashmir (192; 64.6%) and Uttarakhand (181; 60.90%). The present study reports the spread of some invasive and existing weed species like *Ageratum conyzoides*, *Bidens pilosa*, *Chromolaena odorata*, *Lantana camara*, *Brossnetia papyrifera*, *Oxalis corniculata*, *Galinsoga parviflora*, *Panicum maximum* at an extent that they are not only invading the agricultural fields but are also replacing the native plant species and degrading the existing grassland quality. Moreover, the degradation of grassland has led to the dry fodder shortage for livestock in the lower Shivalik ranges of the state of Himachal Pradesh and has also encouraged the use of herbicides at an extensive scale. This article provides a mapping of the current spread of some of these species at the block level to allow the development of appropriate management strategies and policy planning for addressing issues pertaining to plant invasion, agricultural fields, and grasslands across the IHR states.

Keywords : climate change, invasive alien species, agriculture, grassland, IHR

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