

Traditional ecological knowledge and conservation status of ethnobotanical species in buffer zone of the Pachmarhi Biosphere Reserve, Madhya Pradesh

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The Pachmarhi Biosphere Reserve (PBR) harbors some thick forests in central India that is inhabited by many tribal communities including the Gond and the Mawasi. This rich forest has provided ample opportunities to its inhabitants for observing and scrutinizing the various plant species for developing their own traditional knowledge. Through structured questionnaire and interviews, the study has documented a total of 128 ethnobotanical species from 10 villages located in the buffer zone of PBR. These species are distributed over various life forms (43% trees, 36% herbs, 15% shrubs, and 4% woody climbers). These species are used for multiple purposes, of which the highest number of species (52%) are used for food, followed by medicine (40%), cultural practices (13%) and construction of houses (11%).

A number of ecosystem services have been trapped by the local people in the vicinity of their dwelling places by setting up home gardens and establishing sacred groves in different localities. Apart from use and conservation of biodiversity, the local people have evolved knowledge on the soil and water conservation, which include crop rotation, burning of residues, planting forestry species, applying farmyard manure, and making land boundary. Traditionally, they used to collect the ripe fruits however, at present both raw and ripe fruits are being collected due to the influence of market forces. The traditional technique of hand picking of fruits is mostly replaced by modern destructive ways of harvesting, which include lopping and cutting of fruits bearing twigs due to increasing market demand. The conservation of ethnobotanically useful plants will help to maintain the ecological balance and traditional ecological knowledge as well as the livelihood security of local communities.