



Tropentag, October 6-8, 2009, Hamburg

“Biophysical and Socio-economic Frame Conditions
for the Sustainable Management
of Natural Resources”

Conservation of Endangered Plant Genetic Resources: Assessing the Role of Cultural and Religious Beliefs in the Sustainable Management of Sacred Forests in Pakistan

SIRAJ AHMAD¹, FAZLI RABBI²

¹*Jehanzeb College, Botany, Pakistan*

²*Justus-Liebig University Giessen, Institute for Project and Regional Planning, Germany*

Abstract

In Pakistan high deforestation rates (2% per annum) is causing the extinction of economically and medicinally beneficial plants. Several plant species of peculiar medicinal properties and genetic characteristics are on the verge of extinction. However, Muslims' Graveyards Forests are still preserved because of the local communities' religious beliefs. This paper assesses the relationship between conservation and religious beliefs in Phytosociological study using data of two sites in northern Pakistan. Muslim Graveyards forests unlike non-graveyard forests show a rich flora, which is a sign of their being naturally maintained ecosystems with minimal anthropogenic activities as people of the local community believe that cutting trees may harm their families.

In the first site, we counted 95 plant species (44 woody and 51 herbaceous). Second study site show 92 plant species (24 are woody and 68 are herbaceous). Important medicinal plants such as *Berberis lyceum*, *Vitex negundo*, *Acacia modesta* and *Olea ferruginea*, *Quercus diltata*, *Daphne mucronata*, *Celtis australis*, *Justicia adhatoda*, *Rubus fruticosus*, are abundantly found in the Muslim graveyard forests while non-graveyard forests with the same agro ecological conditions these plant species are not available due to forest degradation.

This study signifies the role of certain religious beliefs in environmental conservation in a community and thus Muslim graveyards forests could be used as a gene pool for future preservation of the important endangered medicinal plants species. Some biotic interference such as grazing, cutting and fuel wood extraction are occurring with changes in the society as well as changing landscape of overpopulation and urbanisation leading to the loss of the plant habitats which could endanger the conservation of these forests. Therefore, these plant genetic resources need to be conserved through the active participation of the local communities. The conservation agencies should focus on these sacred forests on one hand and should involve local elders and religious leaders in conservation programs to give incentives for future plant conservation. Legislations and incentives are needed to ameliorate the effects of grazing, lumbering and fuel wood extraction. Areas around these graveyards should be preserved to protect it from the effects of biotic interferences.

Keywords: Conservation, deforestation, Medicinal plants, Pakistan, Religious beliefs, Sustainable use