

# Women's role in biodiversity conservation: A case study in bordering villages of Mihintale Sanctuary

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Mihintale Sanctuary which is believed to be the first sanctuary in the world in 3<sup>rd</sup> B.C lies in the North Central Province of Sri Lanka and is in a rather neglected state. It has no proper boundaries demarcating the sanctuary and has been exploited in many ways. Women have a profound knowledge on the biodiversity from their role as caretakers and have contributed in many ways for the conservation of biodiversity. Hence, this study focused on the contribution of females towards the conservation of biodiversity in the bordering villages of the Mihintale sanctuary.

The study was implemented from October 2010 to May 2011 in five bordering villages of the Mihintale sanctuary; Ihala Mudawa, Katukaliyawa, Kudakirindegama, Kumarasirigama and Mihintale Purawidiyagama. A community survey of questionnaire was done to gather the relevant information on the involvement of females in the conservation of biodiversity in the sanctuary and their traditional knowledge on the conservation of biodiversity. Vegetation analysis was done to identify the economically important plants within the sanctuary and to identify the threats.

The total population of 384 people was composed of 53% women. Literacy rate of the females were quite high (94%). 74% of women were employed and their main employment is agriculture. Females are traditionally involved in the paddy cultivation (75%) and in home gardens (90%). Majority of the fringe women do their domestic cooking with the use of fire wood collected from the dead plants in the sanctuary (96%-100%). Mainly, *Grewia polygama*, *Azadirachta Indica*, *Drypetes sepiaria* and *Manilkara hexandra* species were used as firewood while *Drypetes sepiaria*, *Manilkara hexandra*, *Schleichera oleosa*, *Pometia Tomentosa* species were used as fruits. Also various tree species of medicines including *Elephantopus scaber*, *Munronia pinnata*, *Asparagus racemosus*, fiber *Ichnocarpus frutescens*, and timber *Pterospermum canescens*, *Grewia polygama*, *Azadirachta Indica* and *Evolvulus alsinoides* are collected from the sanctuary. The dominant crop species in Chena cultivation is *Zea mays*. Majority of the seeds to be cultivated for the next season are purchased (57%) from the market and remaining is obtained through storing. Well matured pods of vegetables are dried and kept in tightly closed jars or in old pesticide bottles and others can be kept by smoking or keeping in ash. 79% of the harvest is used by women for daily consumption. In the home gardens 95% work is done by women. Women plant many medicinal plants (60%) in their home gardens. The attitudes towards the conservation of biodiversity from the females are 100%. Women have engaged not only in conserving the sanctuary but also adding diversity to their home gardens. Sanctuary has a regeneration forest type and the diversity, evenness are at a very low rate. Mihintale sanctuary resulted in low evenness in distribution of species (0.786) and low species richness (1.039) due to a regenerating secondary forest.

Women contribution to the biodiversity conservation is at a high rate. So, their contribution should not be neglected. Methods should be taken to conserve their traditional knowledge related to biodiversity conservation of the indigenous women living in the bordering villages of the Mihintale Sanctuary.

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