ASSESSMENT OF THE ENVIRONMENTAL IMPACTS OF CAMPSITE USE BY VISITORS IN SELECTED NATIONAL PARKS OF DRY ZONE, SRI LANKA

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ABSTRACT

Camping is a popular nature based recreation activity in the contemporary nature-based tourism domain, and rapidly gaining momentum as a key recreational activity in Sri Lanka's National Parks. Recreational uses such as camping in natural areas can induce significant and often localized resource impacts that can affect soil, vegetation, wildlife, and water, with severity of such impacts tend to vary depending on the intensity of use. Hence, monitoring biophysical conditions of campsites has become an important component in reserve management agenda elsewhere, especially in developed countries. However, limited or no published researches have attempted to assess environmental impacts of campsite use in Sri Lankan context. Therefore, this study evaluated the current camp site conditions in selected dry zone National Parks using key biophysical attributes.

Ten campsites from 3 highly visited National Parks were selected to assess biophysical impacts caused by camping activities. Field measurements recorded using fixed radial transect method included visual counts of litter, soil compaction measured by penetrometer, erosion potential measured by `the total exposed area (devoid of vegetation or debris), exposed roots, and human damages to trees. Other information recorded from the campsites included the total area of the campsite, loss of coarse woody debris and number of fire places/ burn marks on the ground.
Results found a significant loss in coarse woody debris around campsites, indicating the potential negative impact of camping on ecological integrity of the area. High degree of soil compaction was observed in the activity area of campsites compared to periphery area and control plots. Field observations recorded multiple fireplaces inside a single campsite, affecting negatively on aesthetics. Severe root exposures of trees due to human activities were further evident in 'activity' or 'core' area of campsites and along social trails/footpaths. Non-biodegradable litter encounter rate was apparently higher than the biodegradable litter encounter rate at all examined campsites. Pearson's correlation test for the litter encounter rate and days of occupancy of campsites found a positive significant relationship ($r=0.674, p=0.047$). The number of cases of vandalism and tree damages seems to be dependent on the behaviours of campsite users rather than on the occupancy level. Study results overall highlights the importance of managing biophysical impacts in campsites to provide a high quality visitor experience, while sustainably managing tourism activities in National Parks.

KEY WORDS: Sustainable tourism, camping, recreation ecology, biophysical impacts, ecotourism