

**Session I - Biodiversity Conservation**

(223)

**Green Buildings Concept for Nature Based Tourism; A Case Study from Sri Lanka****Gunawardena M.P.**

*Department of Biotechnology, Horizon Campus, Malabe, Sri Lanka  
medhisha@gmail.com*

**Abstract**

The concept of green buildings and nature-based tourism are topics of global concern for effective sustainable environment management. This has now become a very popular business and marketing strategy since large amounts of money are drawn into these businesses by the hospitality industry. However, sustainability and monitoring progress is in want in most of these concept based projects. Therefore, a study was carried out with the objective of assessing the effectiveness of the concept of green buildings in relation to nature-based tours. This case study was conducted at a luxury resort located in Sigiriya, which has received the Gold Award based on the GREEN Rating System of New Buildings. In addition to a proper environment management plan, prominent green features of the resort in order to obtain high ranking in green building rating system was landscaped with native flora, a micro socio-economic system demonstrated by creating a lake and setting up a small paddy field on the site. The design of the resort is planned to keep the environment undisturbed as much as possible.

The success of the site for nature-based tours was analyzed by comparing the birds that can be observed naturally during the course of bird watching tours conducted within a period of 24 months, from 7th July 2014 to 7th July 2016. The bird diversity was observed and analyzed within the resort premises and adjacent sites with similar landuse patterns (abandoned farmland, man-made lake, paddy field and natural forest patch) and same extent. The fixed distance line transect method was used to count the bird species and then the alpha diversity and gamma diversity was calculated for the study area. According to the results, the resort site had the highest alpha diversity with 87 species. The lake, abandoned farmland, natural forest patch and paddy field had 70, 57, 47 and 43 alpha diversities respectively. The gamma diversity for the entire area was 112 species.

The manifold diversity within the resort was mainly due to the presence of large numbers of different micro habitats within a small extent of area when compared with the other sites with similar areas of extent. Hence, a bird watcher could observe many numbers of species that are present in various dissimilar habitat types with the same time and effort. This is worth the while for both the service provider (resort, travel agent or the guide) and customer (tourist). The different micro habitats were primarily created as a result of the passion inspired by the concepts of green buildings and nature based tours. Therefore, outcomes from such conceptual developments are an example for organizations which are involved in the same field to conduct effective nature based tours which benefit all parties such as the service provider, the client (tourist) as well as the local fauna and flora. Industry and conservation should run parallel to each other to optimize economic and conservation goals. Thus the 'green buildings concept for nature based tours' would be a new prospect in the field of effective conservation.

**Keywords:** Green building, Sustainability, Nature-based tourism