CONSERVATION OF SRI LANKAN MEDICINAL PLANTS USING A NOVEL MEDICINAL GARDEN CONCEPT

Perera P.R.M.[1*], Kudavidanage E.P.[1], Udayakumara E.P.N.[1], Wijesekara S.S.R.M.D.H.R.[1], De Zoysa A.I.U.[2], Kodithuwakku N.D.[3] and Perera H.M.R.P.[4]

[1]Faculty of Applied Sciences, Sabaragamuwa University of Sri Lanka, Sri Lanka
[2]Sri Lanka Institute of Architects, Sri Lanka
[3]Institute of Indigenous Medicine, University of Colombo, Sri Lanka
[4]Faculty of Agriculture, Sabaragamuwa University of Sri Lanka, Sri Lanka
*rumeshikaperera00@gmail.com

Sri Lanka is famous for the herbal medicine that attracts many local and foreign tourists. The medicinal garden concept is an integral part of the herbal medicine and it provides awareness and conservation of traditional medicine in Sri Lanka. With current deforestation and over-exploitation activities, valuable medicinal plant species are extinct and remove from nature. Therefore they need special attention and conservation methods. Further, due to urbanization and exhausting lifestyle, people suffer from numerous physical and mental problems. This study focused to design a novel medicinal garden concept to conserve and sustainable use of local medicinal plants. Mainly, the study consisted a questionnaire survey that performed in four tourist regions (*viz.* Dambulla, Kandy, Udawalawe and Galle) of Sri Lanka to select a suitable region and to identify the components (natural pool, natural scents, night sky watching, water paths ant etc.) that are needed to build a successful medicinal garden. Traditional doctors, local and foreign tourists and villagers were interviewed during January-July 2019. Results showed that the mean perception level to experience medicinal garden was 72.2%. All proposed 40 components were accepted by tourists with exceeding the 50% perception level. Dambulla region was selected to build the medicinal garden as the tourists' perception analysis, its regional characteristics and suitability of the land to establish the proposed medicinal garden. Based on the climatic, topographic, type of soil, size and space of the land extent, 124 medicinal plant species were identified with their information such as scientific name, medicinal usages and their acceptance for the selected region. A medicinal plant documentary was also developed for the medicinal garden. A scaled model medicinal garden was successfully developed with incorporating the existing characters of the selected land. The model also identified features that contribute to minimize potential damage to the environment and improve the livelihoods of the selected region. The outcomes of this study can be applied to uplift the Sri Lankan tourism industry by highlighting the values of its natural beauty and the traditional herbal medicine without adversely affecting the ecological systems. And conserve medicinal plant diversity with their environment.

Keywords: *Ayurveda medicine, Medicinal plant documentary, Perception analysis, Herbal tourism*