

Human perception to application of indigenous knowledge for biodiversity conservation in agricultural sector: A case study in Katupotha area

K.P.C.M. Pathiraja¹, H.A.D.S. Hettiarachchi¹ and H.M.S.A.K. Herath¹

Abstract

The continued growth of human populations and of per capita consumption has resulted in unsustainable exploitation of Earth's biological diversity, exacerbated by climate change, ocean acidification, and other anthropogenic environmental impacts. We argue that effective conservation of biodiversity is essential for human survival and the maintenance of ecosystem processes. Indigenous knowledge and biodiversity are complementary phenomena essential to human development. The indigenous knowledge is really important in conserving the biological resources existing in different altitudinal and climate variations. The knowledge and values of local communities are now being acknowledged as valuable for biodiversity conservation in agricultural activities. The study has been conducted in the Katupotha area in Kurunegala district where majority people depend on agriculture. The objectives of this study were to illustrate the human perception for application of indigenous knowledge for biodiversity conservation in agricultural sector, to study how to apply indigenous methods in modern agricultural societies and challenges and to identify the challenges encountered when applying the indigenous methods for biodiversity conservation. Data were collected surveying 45 households using a structured questionnaire and using stratified random sampling. These data were analyzed using descriptive analysis. The study revealed that about 75% of human perception indicated, that application of indigenous knowledge is the positive answer to conserve biodiversity especially in pest control. Also found the major traditional methods that are practiced in current agricultural background by farmers for enhancing the biodiversity preservation in agricultural practices. Further most of the farmers indicated that most of the indigenous knowledge such as sustainable fertilizations for crops, agroforestry etc. disappears due to the disturbance of modern technologies and development concepts that promise short-term gains or solutions to problems without being capable of sustaining them. Study found that poverty increases the pressure on natural resources and diverts people from complex indigenous knowledge systems to simple and easy techniques such as chemical agriculture. Meanwhile, this research revealed that younger farmer's knowledge was very much reduced and it is hard to implement the traditional methods in agricultural practices because profit is the main objective in current situation. Hence awareness, financial support, institutional support can be conducted to formulate a well-coordinated and sustained application of the indigenous knowledge to Sri Lankan agricultural sector to overcome the depletion of the biodiversity.

Keywords: *Biodiversity conservation, Human perception, Indigenous knowledge, Sri Lanka, Traditional methods*

¹ *Department of Environmental Management Rajarata University of Sri Lanka.
Corresponding author's email: chathurangipathiraja@gmail.com*