

Preface

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In many countries ecosystems and natural resources are subjected to an ever increasing anthropogenic pressure. On one hand this necessitates a rational management on a local, regional and/or even global level. On the other hand the developing status of many of the countries, where the natural degradation problems culminate with other problems such as social marginalisation, economic recession or political instability, require an integrated interdisciplinary approach in order to reach a sustainable equilibrium between man and its environment, both of which deserve equal right to be protected.

Numerous studies in the basic and applied sciences are dealing with fundamental issues related to our changing environment, and amongst them some aim to improve management of natural resources. The understanding of natural dynamics or ecosystem changes for instance is a focus that can include the current and/or retrospective situation, and that may contribute to sustainable management for the future. However, because changes in an ecosystem are often anthropogenic, and because in a majority of ecosystems people depend on the natural resources for their daily livelihood, local communities may be part of the problem, but they are definitely part of the solution. In order to understand ecosystem changes, we must understand the subsistence communities, or at least try to qualify or quantify how and to which extent they contribute to the observed changes. The management of an ecosystem is not an issue that is tackled by answering to fundamental scientific questions only, as exact scientists like to believe, but it has often a socio-economical basis and an ethical window that must not be neglected. Various papers have emphasized the need for understanding of ecosystems from a social and human sciences perspective, and particularly in combinatory research this may result in productive results. However, a large proportion of basic and applied scientists still have difficulties trying to accept that valuable scientific information may reside in these science fields. This is where ethnosciences come in very handy.

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Ethnoscience studies the reciprocal relationship between indigenous communities and their natural and physical environment, and may be subdivided according to the discipline studied such as ethnobotany, ethnozoology, ethnoecology, paleoethnobotany, paleoethnozoology, ethnopharmacology and so forth. Ethnoscience proves to be extremely flexible and useful to combine with basic and applied scientific research.

The above framework is in line with the scope of an international and multidisciplinary journal like *Environment, Development and Sustainability*, and the suggestion arose to create a special issue bridging the gap between natural resources and their human management for the future using ethnoscience.

Bridging the gap between natural resources and their human management for the future, using ethnosciences

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Fig. 1 Due to degradation of a coastal mangrove lagoon in Southern Sri Lanka an adverse canopy turnover was observed from typical and vulnerable mangrove trees species with particular physical, ecological and ethnobiological functions to species that do not have similar functions such as the Mangrove Apple *Sonneratia caseolaris*. However, the degradation was balanced by the commercialisation of this species for and by local people. Although this is a nice example of how traditional ethnobiological knowledge has been patented for the benefit of the people, it is not yet known to which extent this novel use outbalances ecological functions lost. For more information see Jayatissa et al. (this issue)



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