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## Ecological Changes and Local Knowledge Shifts in an Indigenous Honey Gathering Community in the Philippines

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### Abstract

One of the traditional livelihood practices of indigenous Tagbanuas in Palawan, Philippines is wild honey gathering from the giant honey bee. In order to analyse the linkages of the social and ecological systems involved in this indigenous practice, we conducted spatial, quantitative, and qualitative analysis on field data gathered through GPS mapping, community surveys, focus group discussions, and key informant interviews. We found that only 24% of the 251 local community members surveyed could correctly identify the giant honey bee. Inferential statistics showed that a lower level of education and higher household vegetation contribute to correct identification of the giant honey bee. Spatial analysis revealed that mean NDVI of sampled nesting tree areas has dropped from 0.61 in the year 1988 to 0.41 in 2015. This reduction on vegetation cover may contribute to reduced bee-human interactions and may also be an indication that commercialising non-timber forest products is not fulfilling its objective of development alongside conservation. Indigenous wild honey hunting and gathering as an ICDP shows the complexity of the social-ecological system of forest communities. It also shows the difficulty of getting a win-win situation out of simultaneous pursuit of forest conservation and rural development. Knowledge shifts can, indeed, occur from the interaction of ecological and social factors and we see that if resource management interventions do not employ a systems approach, it can overlook important feedback. NGO interventions should not only facilitate the learning of visible resource managers like wild honey hunters but of the community as a whole.

**Keywords:** Local knowledge, social-ecological system, spatial analysis, wild bee