

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



Denise Margaret S. Matias<sup>1, 2</sup>, Christian Borgemeister<sup>1</sup>, and Henrik von Wehrden<sup>3</sup>



Scan code & access this online.

## Indigenous wild honey hunting and gathering

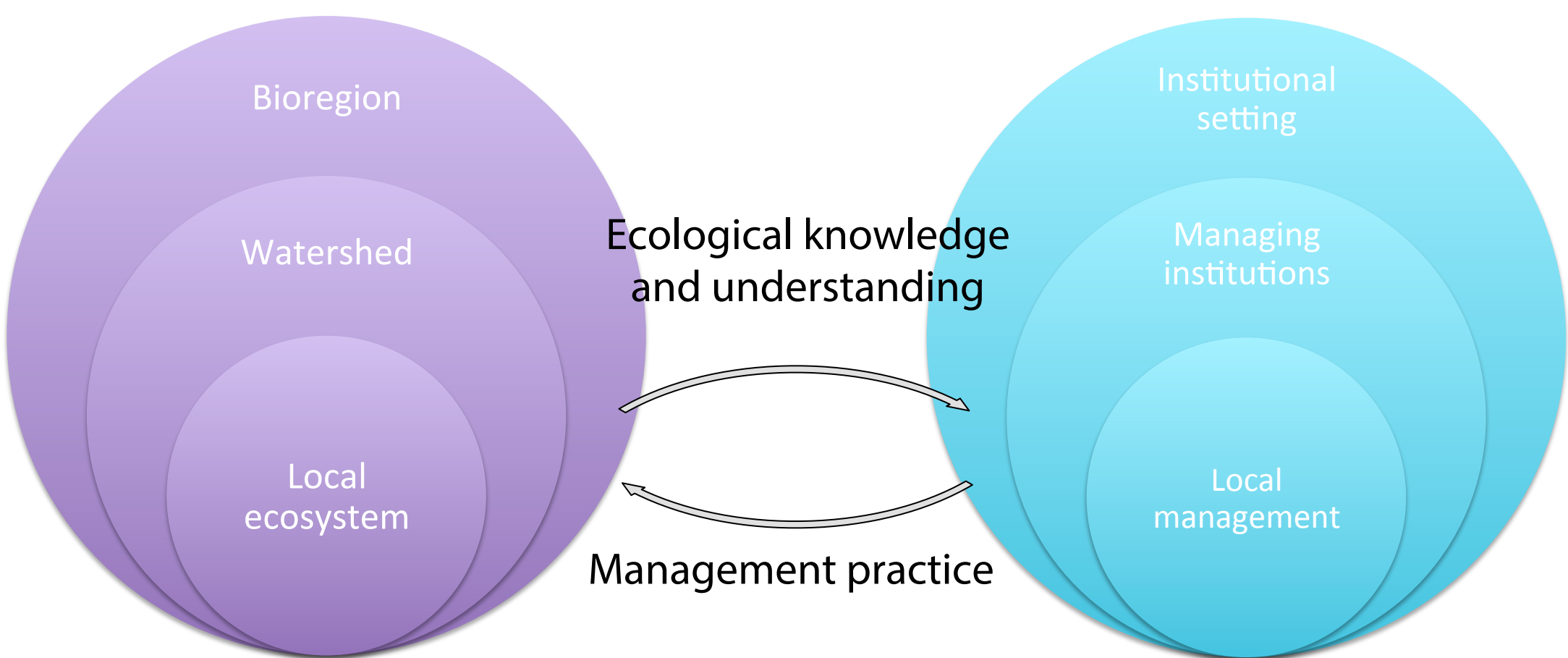


Figure 1. Giant honey bee (*Apis dorsata* Fab.) hive

Traditional gathering of honey from giant honey bees (*Apis dorsata* Fab.) transformed from a traditional practice into a commercial activity aimed at conserving forests while providing income to indigenous Tagbanuas. Previously gathering small amounts for personal consumption, the Tagbanuas are now gathering as many honeycombs as they can.

## Examining the linkages of social and ecological systems in community forestry enterprises

As an information-intensive endeavor, managing ecosystem services and human well-being relies on knowledge of the social-ecological system.



This study used the conceptual framework of Berkes and Folke (2002) in analysing the interaction between ecological knowledge and understanding in management practice in the social-ecological system.

## Methodology

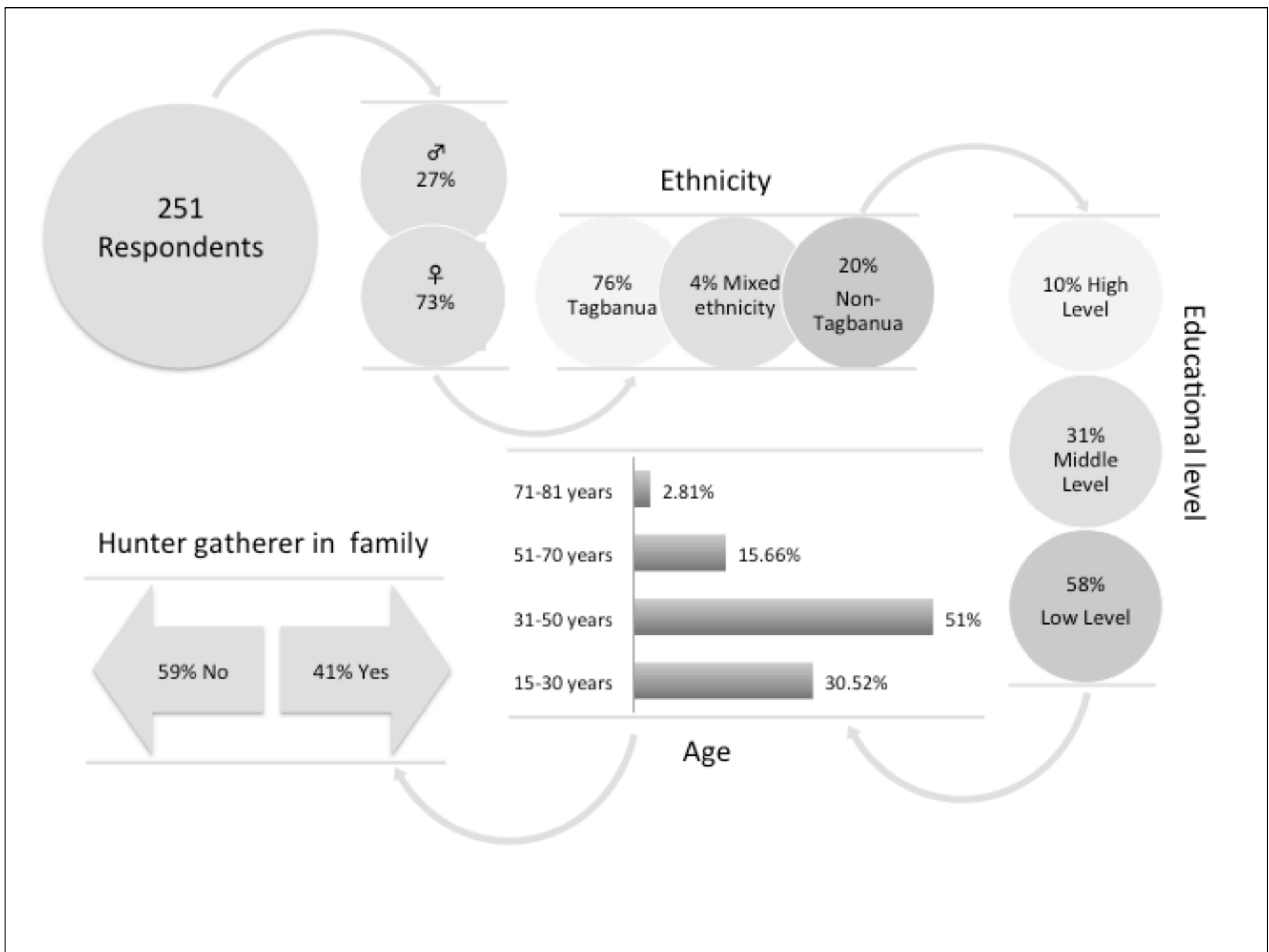
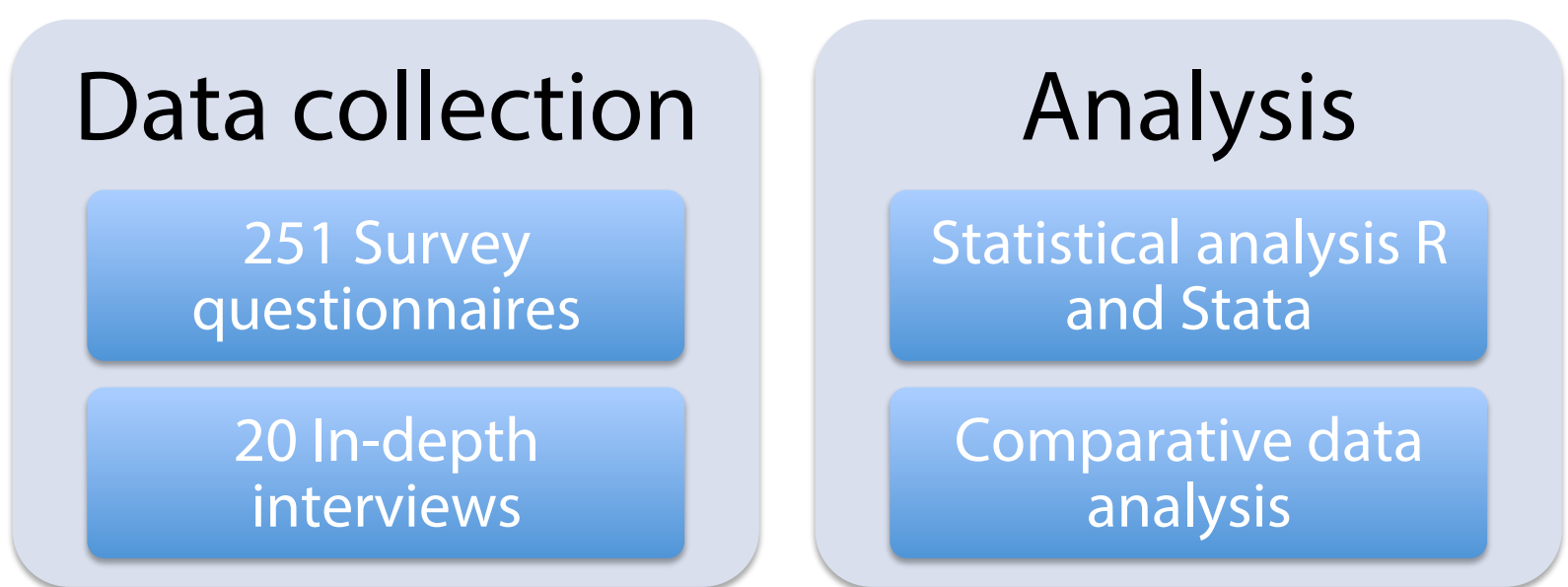


Figure 2. Summary of demographic data of respondents surveyed. Majority of the respondents are female, of Tagbanua ethnicity, with low level of formal education, aged between 31-50 years, and have no honey hunter-gatherer as an immediate family member.

## Results

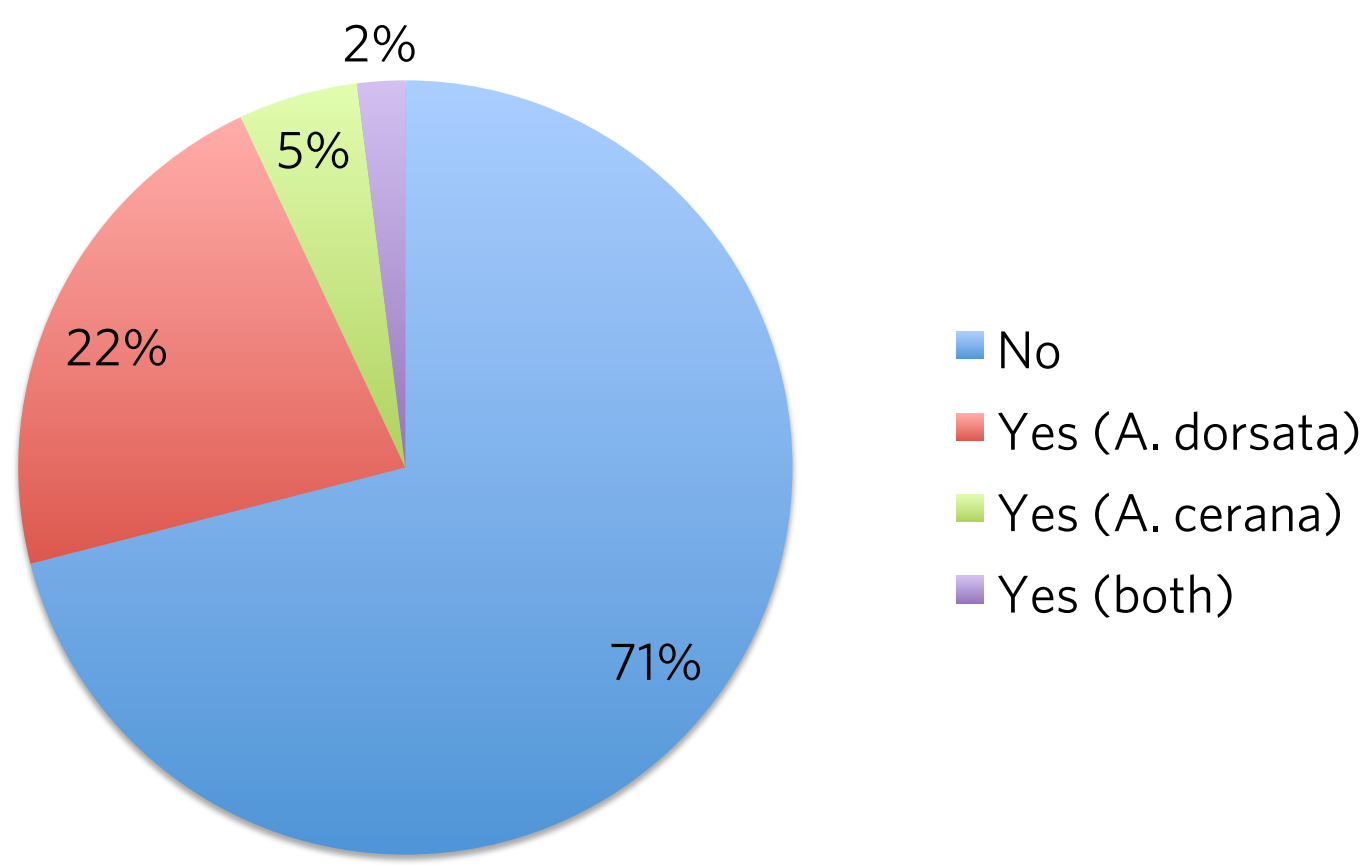


Figure 3. Identification of giant and Eastern honey bees by non-hunter gatherer respondents. The majority of the respondents (71%) could not correctly identify either the giant or Eastern honey bee (*Apis cerana* L.)

## Low level of education strong predictor of correct identification of giant or Eastern honey bees

Table 1. Results of logistic regression. Along all the variables tested, the level of education is the only significant predictor of correct identification of giant and Eastern honey bees.

Factors	p	Odds ratio
Ethnicity	0.399	1.489
Marital Status	0.543	0.698
Role in household	0.448	2.094
Educational level	0.024	0.512
Role in community	0.375	1.196
Residence in years	0.174	0.980
Age	0.226	1.021
Gender	0.538	1.227
Hunter gatherer relative	0.563	1.204

## Importance of local ecological knowledge



The low level of local knowledge on extant bees may be attributed to low interaction with bees brought about by decreased immersion time within the community due to the demands of formal educational instruction outside of the community. Schools for indigenous children should include indigenous cultures and traditions in its curriculum.

## Acknowledgements



<sup>1</sup> Center for Development Research (ZEF), Walter-Flex-Str. 3 53113 Bonn, Germany  
<sup>2</sup> The German Development Institute / Deutsches Institut für Entwicklungspolitik (DIE), Tulpenfeld 6 53113 Bonn, Germany  
<sup>3</sup> Leuphana University, Scharnhorststr. 1, 21335 Lüneburg, Germany  
[denise.matias@uni-bonn.de](mailto:denise.matias@uni-bonn.de) | [Denise.Matias@die-gdi.de](mailto:Denise.Matias@die-gdi.de)