

The logo for CEBioS, featuring the text "CEBioS" in orange and red on a white background, set within a black circle.

CEBioS

The logo for Labef, featuring the word "Labef" in white on a green background, set within a grey circle.

Labef

Laboratoire de Biomathématiques &
d'Estimations Forestières



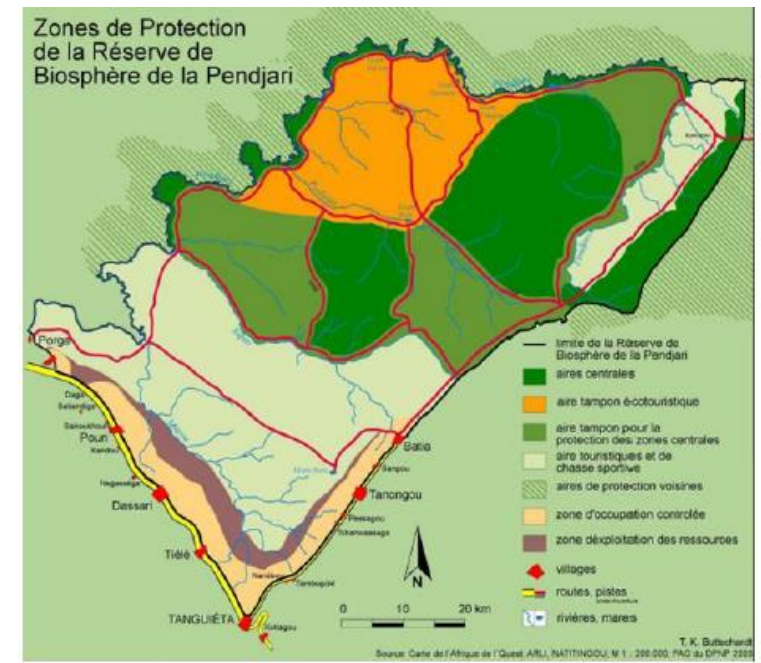
Rapid ecosystem services assessment & conceptualization of conservation effectiveness in Pendjari National Park, Benin

Devonne Goad



Pendjari National Park

- Pendjari Wildlife Reserve (1956)
- National Park (Park (1961)
- UNESCO World Heritage (1996) (WAP)
- **Drivers:** population growth, food insecurity & climate change
- (Provisioning) Ecosystem services are paramount to the livelihood & wellbeing



Research Objectives & Focus Group Summaries

- To investigate threats to ecosystem services in the villages outside of Pendjari National Park, Benin.
- To understand the 2017 management shift (CENAGREF to APN)
- To assess the utility of the **Nominal Group Technique** in conservation

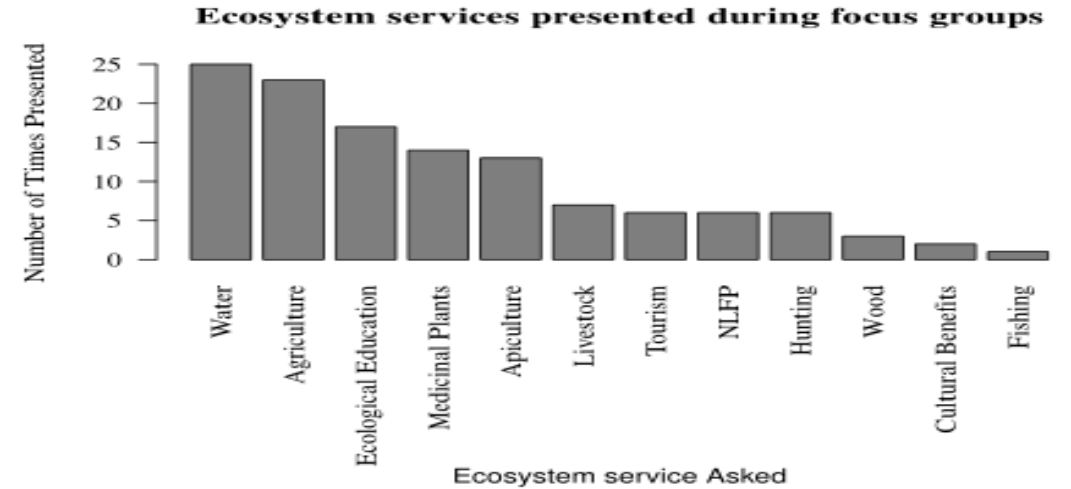


Table 1: Demographic characteristics of focus groups participants (n = 90).

Characteristic	% of Focus Groups
Sex	
Male	72
Female	28
Age	
< 30	30
30 < age < 60	42
>60	28
Education	
None	42
Alphabetisation/Primary	16
Secondary	38
University	4
Time Lived in Village	
< 10	15
< 20	17
> 20	68
Affiliations	
AVIGREF	29
CENAGREF	2

Response Summaries

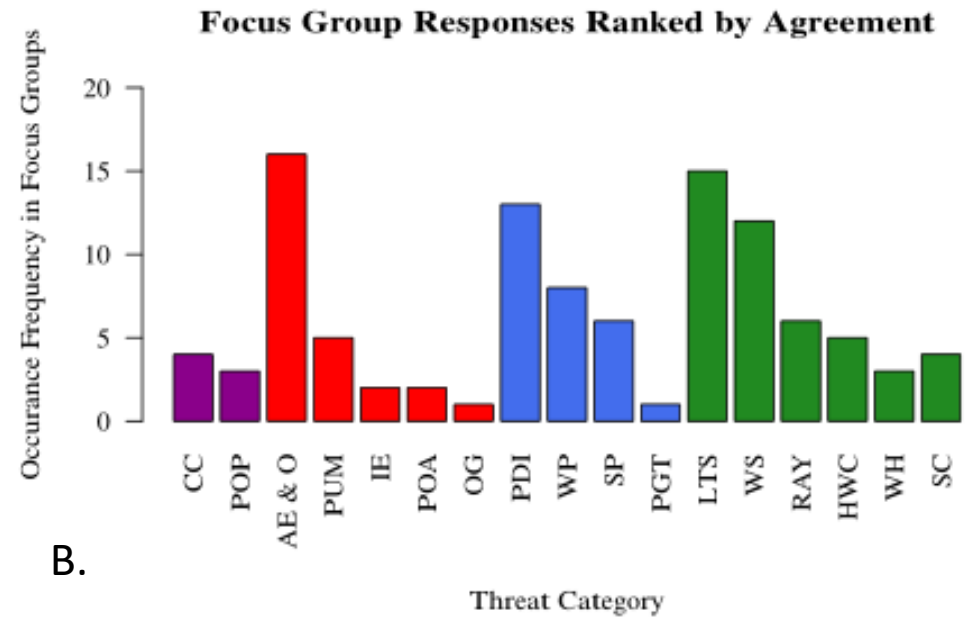
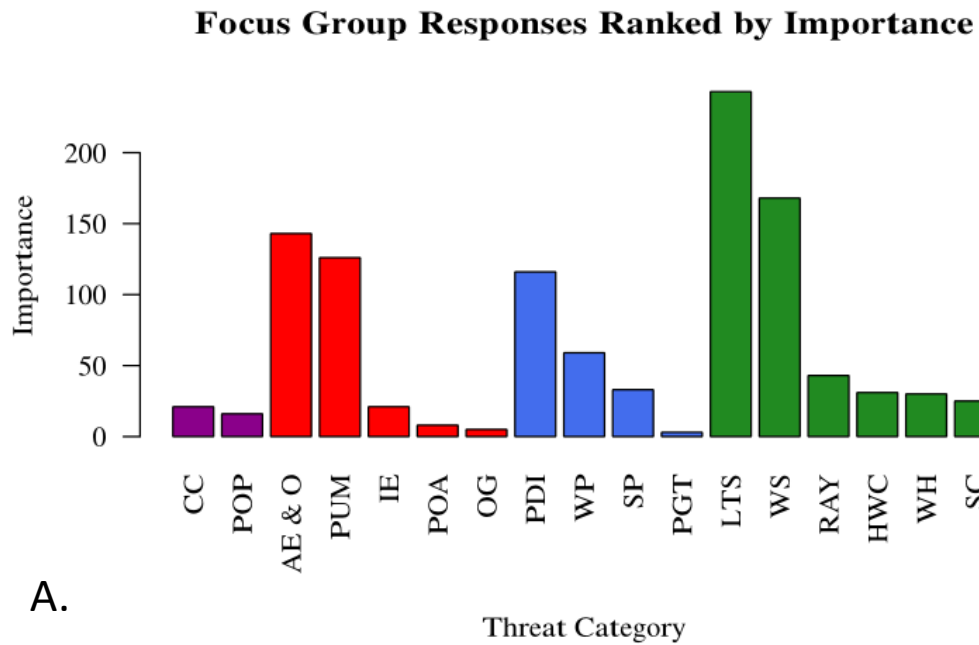


Figure 1. Top responses of focus group ranked by importance (A) and agreement (B).

Trends in Ecosystem Services

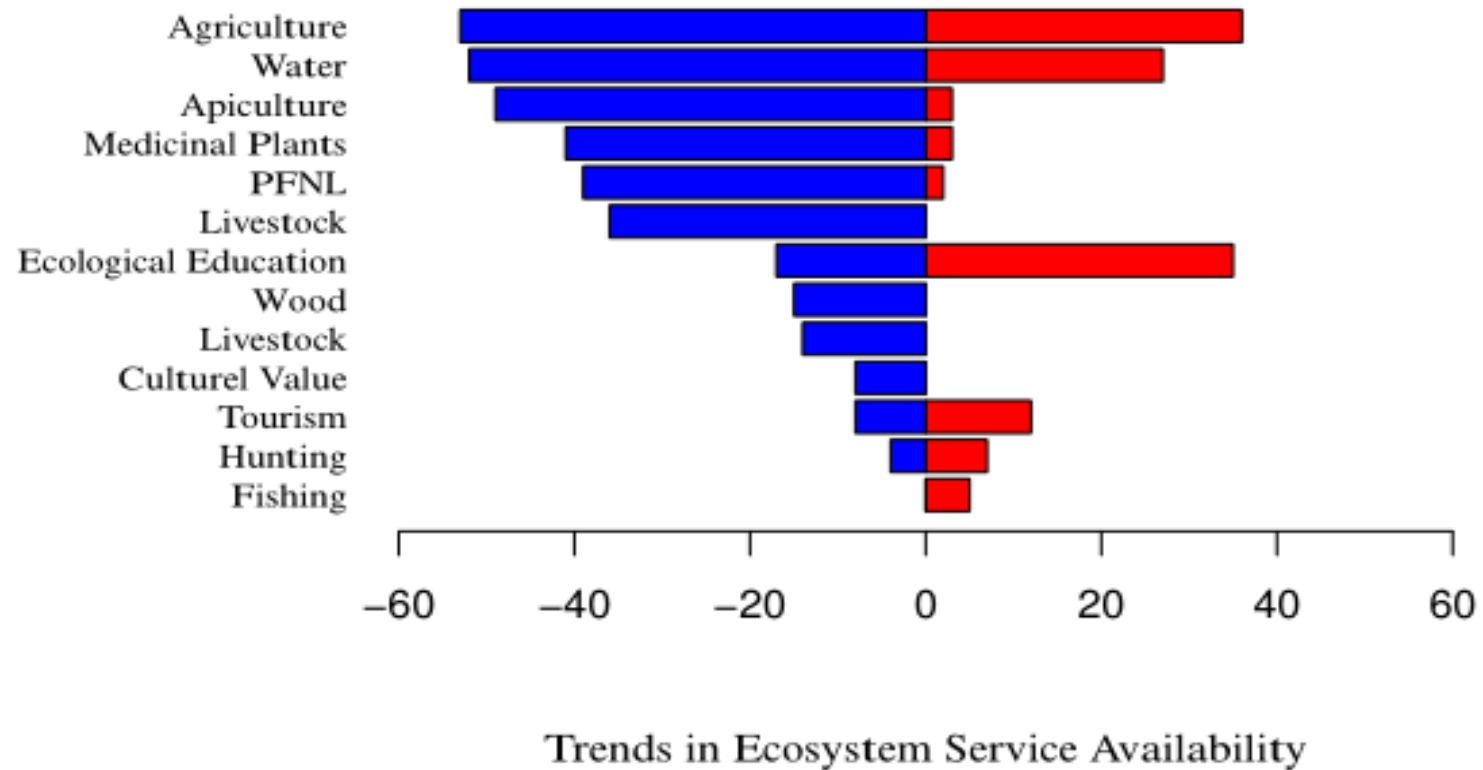


Figure 2. Trends in ecosystem services from focus groups

Policy Implications

- A strong understanding of the threats and trends of these to ecosystem services is essential in ensuring sustainable management of natural resources
- EVAMAB & CEBIOS: Documents to advise new policy options for government & information for NGOs and other
- Ideally, with the outcome of enhanced ecosystem service provision, biodiversity conservation, and sustainable management

Bibliographie

- 1. Hugé, J. & Mukherjee, N. The nominal group technique in ecology & conservation: Application and challenges. *Methods Ecol. Evol.* (2018). doi:10.1111/2041-210X.12831
- 2. Mukherjee, N. *et al.* Comparison of techniques for eliciting views and judgements in decision-making. *Methods Ecol. Evol.* (2018). doi:10.1111/2041-210X.12940
- 3. Peh, K. S. H. *et al.* TESSA: A toolkit for rapid assessment of ecosystem services at sites of biodiversity conservation importance. *Ecosyst. Serv.* (2013). doi:10.1016/j.ecoser.2013.06.003
- 4. Queiros, D. & Mearns, K. Khanyayo village and Mkhambathi Nature Reserve. Queiros & Kevin Mearns (2018). doi:10.1080/09669582.2018.1436177org/10.1080/09669582.2018.143617
- 5. West, P., Igoe, J. & Brockington, D. Parks and Peoples: The Social Impact of Protected Areas. *Annu. Rev. Anthropol.* (2006). doi:10.1146/annurev.anthro.35.081705.123308
- 6. Maynard, L. & Jacobson, S. K. Stakeholder Participation in Wildlife Management: Adapting the Nominal Group Technique in Developing Countries for Participants with Low Literacy. *Hum. Dimens. Wildl.* (2017). doi:10.1080/10871209.2016.1225139
- 7. Sink, D. S. Using the nominal group technique effectively. *Natl. Product. Rev.* (1983). doi:10.1002/npr.4040020209
- 8. Deip, P., Thesen, A., Motiwalla, J., & Seshardi, N.. Systems tools for projectplanning. Bloomington, Indiana: International Development Institute. (1977)
- 9. Maron, M. *et al.* Towards a Threat Assessment Framework for Ecosystem Services. *Trends in Ecology and Evolution* (2017). doi:10.1016/j.tree.2016.12.011
- 10. Timko, J. & Satterfield, T. Criteria and Indicators for Evaluating Social Equity and Ecological Integrity in National Parks and Protected Areas. *Natural Areas Journal* 307 *Natural Areas Journal* 28, (2008).
- 11. Bwalya, S., Nations, U. & Programme, D. CRITICAL ANALYSIS OF COMMUNITY-BASED WILDLIFE RESOURCE MANAGEMENT IN SOUTHERN AFRICA : CASE STUDY FROM ZAMBIA By Samuel Mulenga Bwalya Department of Environmental and Natural Resource Economic University of Rhode Island , Kingston R02881 USA Abstract : Th. Africa (Lond). 1–29 (2014).

Thank you!



AFRICAN
WILDLIFE SAFARI



- Focus Group Variation
- New to conservation

Le Nominal Group
Technique?

L'analyse des Données

Identify trends in threats according to group statistics



Place data within the DPSIR framework



Multinomial logistic regression to determine if socio-demographic aspects influence threat perception