



**Change in Governance as Collective Learning Process:
Management, Politics and Ethics in Forestry.**
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Local perspectives and dynamics of indicators of sustainable forest management in Tanzania

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Guidelines for criteria and indicators of sustainable forest management

"criteria and indicators + forest management" (google): 147 000 sites in 0.24 s)

F. Castañeda, C. Palmberg-Lerche, P. Vuorinen, 2001. Criteria and Indicators for Sustainable Forest Management: A Compendium. FAO.

<http://www.fao.org/DOCREP/004/AC135E/AC135E00.HTM>

P. Prabhu, CJP Colfer, R Dudley. Guidelines for developing, testing and selecting criteria and indicators for sustainable forest management. 1999. CIFOR, EU, GTZ, USAid. 186 p.

http://books.google.co.za/books?hl=pl&lr=&id=IEJ_lz2_kpcC&oi=fnd&pg=PA9&dq=%22Prabhu%22+%22Guidelines+for+Developing,+Testing+and+Selecting+...%22+&ots=USLNYDueJY&sig=YKjgdVRIWng1YwWcUcaLrZfoc3s#PPP4.M1

N.E. Stork, T.J.B. Boyle, V. Dale, H. Eeley, B. Finegan, M. Lawes, N. Manokaran, R. Prabhu and J. Soberon. 1997. Criteria and Indicators for Assessing the Sustainability of Forest Management: Conservation of Biodiversity. CIFOR. 29 p. (93 references)

http://www.cifor.cgiar.org/publications/pdf_files/wpapers/wp-17.pdf

Sustainable forest management in Africa and Europe (FAO, 2001, 2005)

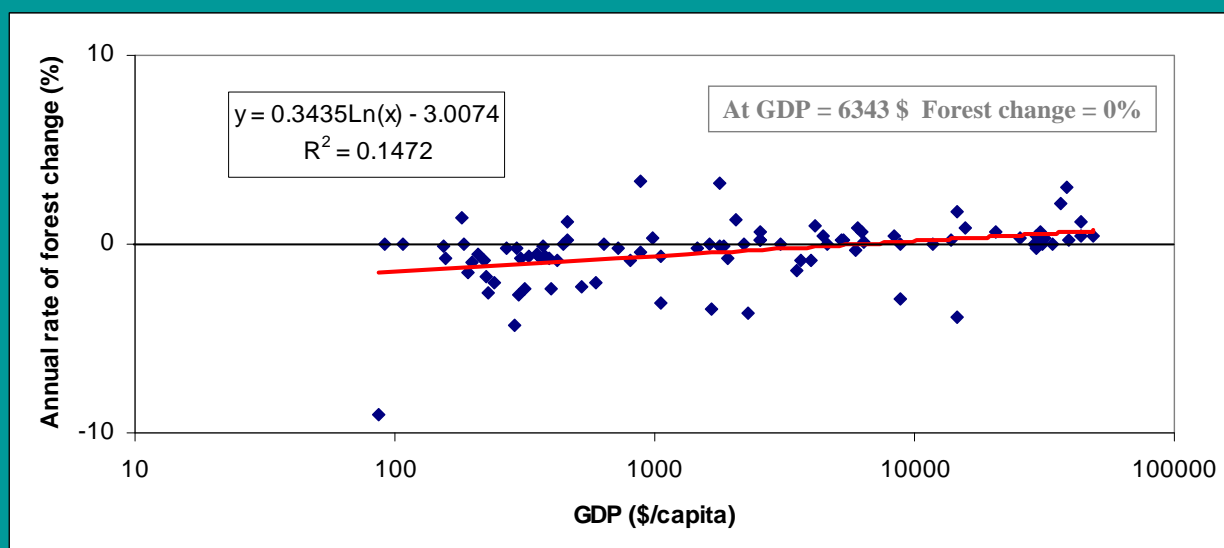
Continent	Countries with C&I for SFM (2000)		Forest management plans (2005)		Countries losing forest area (2005)	
	Yes	No	Yes	No	Yes	no
Africa	46	10	13	43	40	16
Europe	39	1	40	0	3	37

Chi sq test shows:

- Insignificant difference for C&I ($p > 0.05$);
- Highly significant difference in forest loss ($p < 0.001$)
- Highly significant differences in forest plans ($p < 0.001$)

Types of C&I in Africa: ATO, DZAf, NE,
Types of C&I in Europe: EUR, MON

Forest cover change and GDP in Africa and Europe 1990-2000 (FAO, 2005)



Hypothesis: Forests will be managed sustainably once C&I are identified

Study area and methods

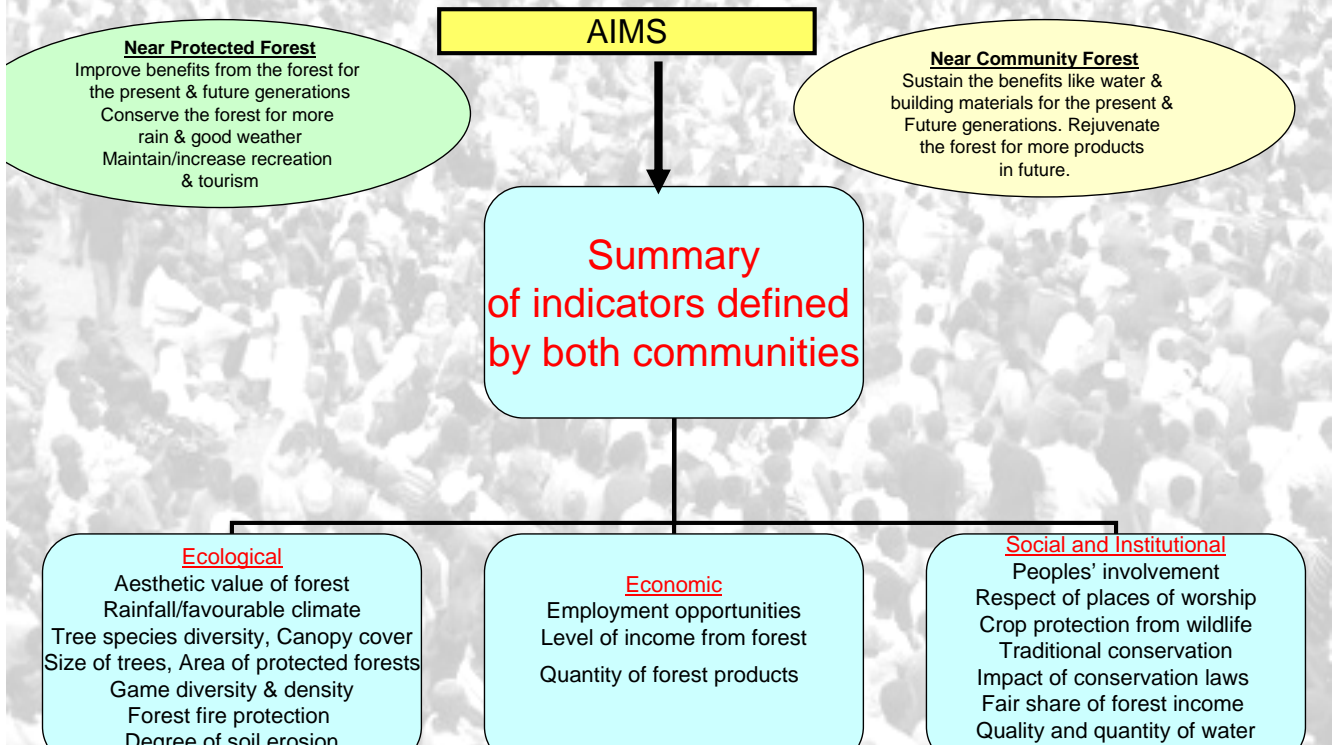


Study area: East Usambara is a low-lying Tanzanian mountain range of 1300km². The forests support about 36 000 people with a wide range of products. Due to human impact only 25% of the original forest area exists and about 30% of the species have become extinct or endangered.

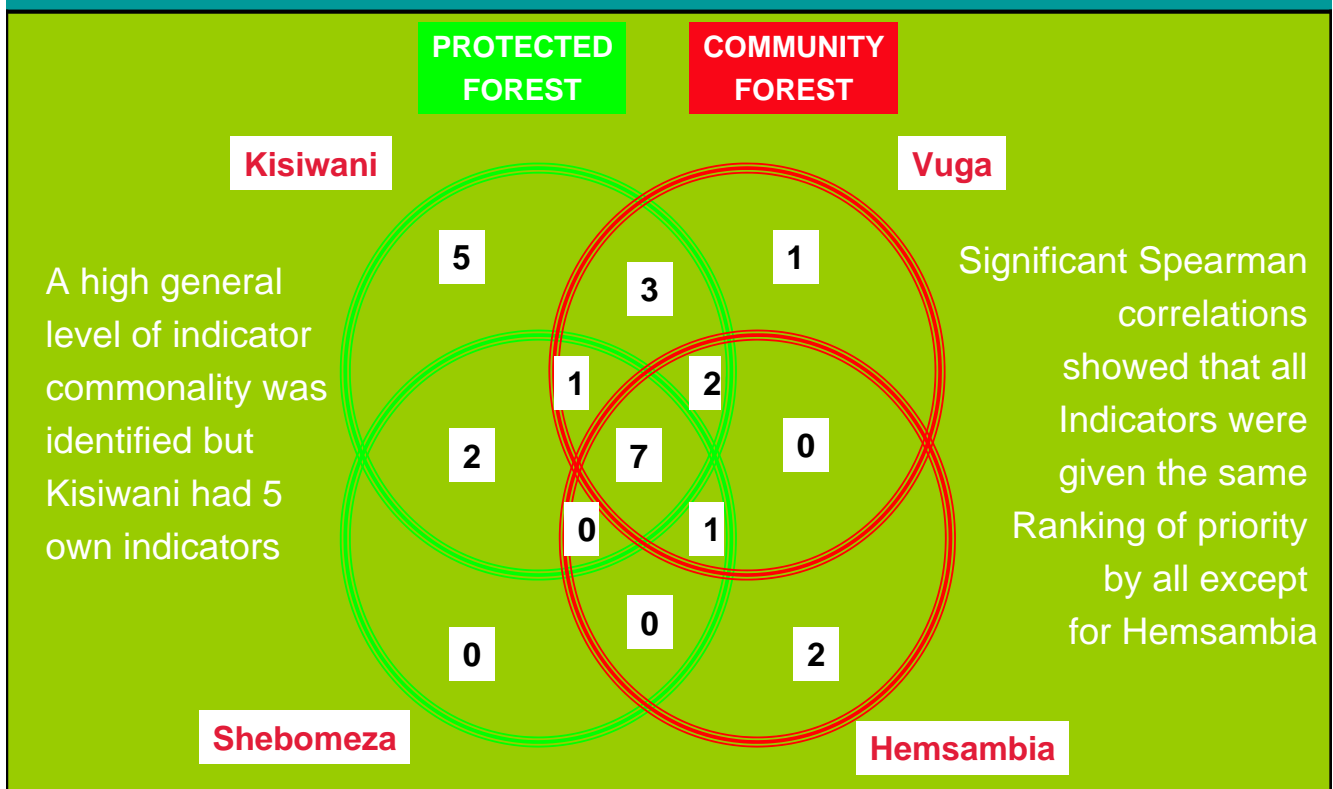
Methods: Two villages near a community forest (CF) and two in a protected forest (PF) were identified. Content analysis was used to extract indicators of forest sustainability from documented group discussions. Simple random sampling of households was followed by a 5-point Likert scale and semantic differential statements to verify the importance and relevance of indicators to local communities. Since the data was normally distributed analysis of variance, T test, Fisher's exact test and Spearman rank order test were used.

Results

The content analysis indicated that the local communities living close to the PF and the CF recognized similar objectives of sustainable forest management as well as indicators of sustainability. Further evaluation of the community-defined indicators showed that they cover the important aspects of effectiveness, relevance, and importance.



Distribution of Indicators by forest type and village

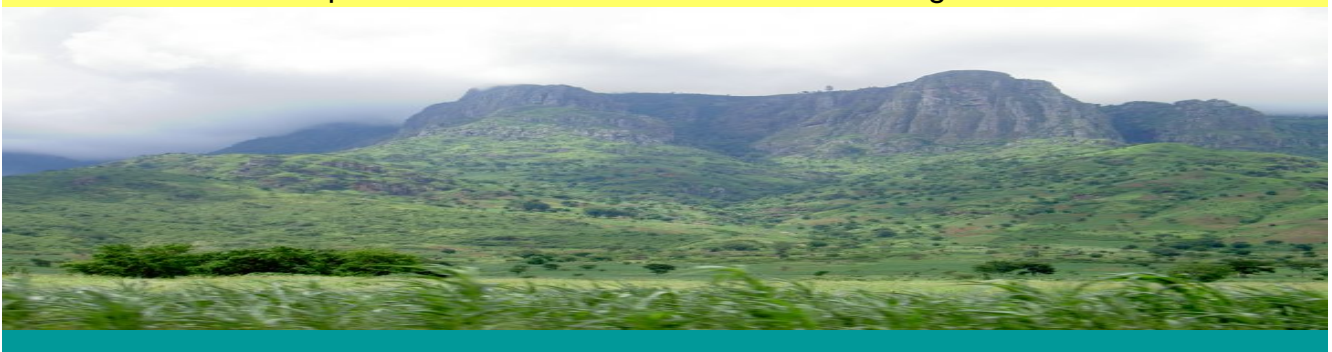


According to the communities:

“a sustainable forest management
CANNOT be achieved without
addressing socio-economic needs
of the local populations”

Conclusions

- Externally imposed indicators of forest sustainability were compatible with those existing at a community level for a long time but neither of them protected the forest, its cover and biodiversity.
- The development of “criteria and indicators of sustainable forest management” remains a gesture obscuring the need for effective measures to sustain forests and to improve livelihoods.
- Counteracting poverty in developing countries and easing peoples’ dependence on forests is the most important vector of sustainable forest management and conservation.



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Thank you

