Importance of forest income to the livelihoods of households adjoining protected areas in Cameroon

By

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Objectives

Overall objective: To quantify current and potential contributions of forest resources in protected areas to the local livelihoods in the Congo Basin.

Specific objectives:
- Evaluate sources of income and determine the forest-household dependency
- Determine cash and in-kind incomes of households
- Make recommendations on pathways to conservation & development outcomes

Research question: What are the income portfolios of households adjoining the TNS & to what level are households dependent on forest-derived income?
Context: Congo Basin countries

- Six countries: Cameroon, CAR, Rep. of Congo, DRC, Equatorial Guinea & Gabon
- Congo Basin’s forest: 228 Million ha (57.2%) and Protected areas (14.4%)
- Forest area per capita: 2.9 ha
- Net deforestation rate is -0.19%
- High political interest expressed by governments through regional processes: COMIFAC, CBFP
- Active presence of many national & international NGOs
- No previous in depth study on forest-dependency
Research site and methods

- Sangha Tri-National Park (TNS) of 28000 km$^2$ (7500 km$^2$ core area)
- Lobéke NP (Cameroon), Nouabalé-Ndoki NP (Rep. of Congo) & Dzanga-Ndoki NP (CAR).
- 5 out of 14 random villages (Koumela, Libongo, Mambele, Socambo & Zega) in Cameroon
- 22-23 random households in each village
- Quarterly questionnaire administered for one year
- Data input and analysis with MS Excel & Access, STATA 8 & SPSS 12
Key results: Forest and Non-forest income

Net income by source

- Forest: 44,44
- Crop: 18,34
- Livestock: 11,53
- Business: 8,36
- Other non-forest: 7,80
- Non-forest wage: 7,06
- Fishing: 3,15
- Non-forest environmental: 0,50
- Aquaculture: 0,17

Subsistence income:
- Forest: 22,54
- Crop: 11,53
- Livestock: 0,00
- Business: 0,00
- Other non-forest: 0,00
- Non-forest wage: 0,00
- Fishing: 0,00
- Non-forest environmental: 0,00
- Aquaculture: 0,00
Results: Income quintiles & forest income

The chart illustrates the distribution of income across different quintiles, with a focus on forest income relative to total income.

- **Quintile 1** shows the lowest average total income, with a relative forest income of 0.05.
- **Quintile 2** has an average total income slightly higher, with a relative forest income of 0.1.
- **Quintile 3** displays a notable increase in average total income, reaching 0.15 in relative forest income.
- **Quintile 4** exhibits a significant rise in average total income, achieving 0.25 in relative forest income.
- **Quintile 5** has the highest average total income, attaining 0.45 in relative forest income.

The vertical axis represents CFA, indicating the income levels, while the quintile levels are marked from 1 to 5 on the horizontal axis.
Results: Average total income & forest income by village

<table>
<thead>
<tr>
<th>Village</th>
<th>Average total income</th>
<th>Average forest income</th>
<th>Relative forest income (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Koumela</td>
<td>1200,00</td>
<td>400,00</td>
<td>33.33%</td>
</tr>
<tr>
<td>Libongo</td>
<td>1000,00</td>
<td>300,00</td>
<td>30.00%</td>
</tr>
<tr>
<td>Mambele</td>
<td>1400,00</td>
<td>500,00</td>
<td>35.71%</td>
</tr>
<tr>
<td>Socambo</td>
<td>800,00</td>
<td>200,00</td>
<td>25.00%</td>
</tr>
<tr>
<td>Zega</td>
<td>600,00</td>
<td>200,00</td>
<td>33.33%</td>
</tr>
<tr>
<td>Total</td>
<td>900,00</td>
<td>300,00</td>
<td>33.33%</td>
</tr>
</tbody>
</table>
Seasonality: Income shares by quarter

- **Total**
- **Forest**
- **Agric**
- **Oth Env**
- **Others**
Results: Household Forest dependency indices by village

- HH Forest dependency = forest-derived values/total values derived by HH from all sources.
- HH forest-dependency varied from 0.1 to 0.82 (mean=0.49; SD=0.18)
- Can forest-dependent households abandon harvesting forest products?
- Poverty will grow with limited access to forests & absence of other opportunities
Conclusions

- Forest contributes an unaccounted additional US$ 2602 million to the livelihoods of the rural people in the Congo Basin per year.

- Effective forest conservation must contribute to achieving MDGs by creating and stimulating income & livelihood opportunities.

- Funding agencies (e.g. UNFF, EFI, GEF, World Bank, AfDB etc) should consider budget lines for concrete measures against poverty for forest-dependent peoples.

National parks are not free of people and conservation would be Difficult to achieve without meeting local needs and aspirations.
Thank you for listening