Wildlife Monitoring in the TCO Takana

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Location

Greater Madidi-Tambopata Landscape (Bolivia-Peru)

TCO Takana I (Bolivia)
The goal of indigenous territorial management is:

Build governance and exercise territoriality

In this framework, through wildlife monitoring, data is gathered towards improving decision-making to strengthen management of the indigenous territory.
Wildlife Monitoring Activities in the Indigenous Territory

- Subsistence Hunting
- Community Fisheries
- Caiman Harvesting
- Wildlife in Tourism Areas
Self-monitoring of Subsistence Hunting
The system was based on self-monitoring of hunting activities by local hunters. The monitoring is with standard forms and registering the following information:

- Hunting effort
- Information on species
  - Which?
  - Sex (Reproduction)
  - Age
  - Weight
- Hunting location
- Use and distribution of meat
Subsistence Hunting

Number of individuals
Subsistence Hunting
Species biomass
Subsistence Hunting

Hunting effort

[Graph showing the effort of hunting over years for different species: Tapirus terrestris, Tayassu pecari, Dasypus punctatus, and Ateles chamek.]
Subsistence Hunting

Percentage of hunters that harvested each species
Subsistence Hunting

Sites with more hunting intensity

After georeferencing all hunting points reported by hunters
Fisheries Monitoring
**Fisheries Monitoring**

Report forms

<table>
<thead>
<tr>
<th>Year</th>
<th>Image</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>![Image](64x40 to 732x371)</td>
</tr>
<tr>
<td>2004</td>
<td>![Image](79x385 to 468x554)</td>
</tr>
<tr>
<td>2010&gt;</td>
<td><img src="80x419" alt="Image" /></td>
</tr>
</tbody>
</table>
### Fisheries Monitoring

New information for the country

- Most commonly caught species (total number of individuals)
- Fishing frequency of species
- Biomass caught
- Catch sizes
- Breeding season and sites

<table>
<thead>
<tr>
<th>Species</th>
<th>Number of Individuals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tachacá (Pseudorasbora)</td>
<td>2293 (12%)</td>
</tr>
<tr>
<td>Pintado (Pseudopleuronectes)</td>
<td>2092 (11%)</td>
</tr>
<tr>
<td>Tambauil (Caleosoma macropterum)</td>
<td>1855 (10%)</td>
</tr>
<tr>
<td>Sobelo (Pseudoboleus nigricans)</td>
<td>1682 (9%)</td>
</tr>
<tr>
<td>Bagre (Zungrea longirostris)</td>
<td>1503 (8%)</td>
</tr>
<tr>
<td>Buchere (Haplometopus litoralis)</td>
<td>1081 (6%)</td>
</tr>
<tr>
<td>Palometa (Pylodictis olivaceus)</td>
<td>990 (5%)</td>
</tr>
<tr>
<td>Sardinas (Chromis sp.)</td>
<td>846 (4%)</td>
</tr>
<tr>
<td>Cachorro (Hyphessobrycon scabrosus)</td>
<td>581 (3%)</td>
</tr>
<tr>
<td>Carancho (Parachromis multiradiata)</td>
<td>511 (3%)</td>
</tr>
</tbody>
</table>
Fisheries Monitoring

Very valuable information

• Analysis of sustainable fisheries

• Capture rate per fisherman/per community

• Biological information as a reference for management of fisheries in the area
Fisheries Self-monitoring

RESUMEN

Una de las características más representativas de la Amazonía en general es la remota actividad pesquera. Pese a que se han realizado esfuerzos para conocer las dinámicas de esta actividad, la mayor parte de las esfuerzos disponibles representan sobreestimaciones de la cantidad de pesca a nivel nacional. Así mismo, muchas pesca se realizan dentro de comunidades, a menudo en áreas con una serie de amenazas emergentes, como el cambio climático y la deforestación. Las pesca a nivel local puede tener un impacto significativo en la seguridad alimentaria y economía de los comunidades Takana del río Beni.

SUMMARY

One of the most important features of the Amazon is the remote fisheries activity in its lowlands. Many studies and projects aimed at estimating landings, but most of these suffer of lack of precision and reliability. Moreover, many fisheries are not monitored at all and do not appear in official landings data, as is the case with the semi-commercial fisheries practiced by local communities. This chapter presents the results of a participatory monitoring system set up by indigenous communities Takana in the Beni river, which was initiated in 2003. This community activity generated a huge amount of information which can be used to estimate the ecological value of the fish resource for the local communities. Threats that may affect food security and fisheries economy are discussed in the light of the results.
Other monitoring activities
With the data gathered during harvest and commercialization, it was possible to calculate that:

• Only 42% of the value of each individual caiman is used
• Each individual has an estimated potential value of 101 $US
• Next steps directed towards efficient and integral use of hunted animals
Wildlife Monitoring with Tourists and Guides

The community of San Miguel operates one of the most important ecotourism businesses in the region.

There is community interest in monitoring of wildlife in their tourism areas.
Wildlife Monitoring with Tourists and Guides

Wildlife registration form
What Next?
Application of Monitoring Information

• Sufficient elements for developing a Management Plan for use, access and conservation of wildlife in the Takana TCO.

• Incorporation of more Takana communities as part of the self-monitoring system of wildlife (especially related to ecotourism).
Self-monitoring

The monitoring was focused on “self-monitoring”, which is understood as the community members themselves in charge of registering the data from these activities in specifically designed standard forms.
¿Is “Self-monitoring” Sustainable?

High dependence on technicians
• Although the “self-monitoring” system is participatory in essence, so far the analysis and diffusion of monitoring results have always been done by technicians.

Significant budget
• Hard to keep the system running due to significant cost, especially when running the system for several years.
Proposed Monitoring System

Community-school based system
Benefits of the Proposed System

For the wildlife monitoring system

- Much closer to communities and consequently more frequent analysis moments
- Improving the quality and quantity of information
- Ownership of the system
- Low cost
Benefits of the Proposed System

For children’s education

• Using real data in their day-to-day school activities.
• Ability to analyze their own activities.
• Recovering their cultural values.
• Create outreach materials for schools based on data from the self-monitoring system of recent years.

For land management

• Generate information useful for community and representative authorities for making decisions to improve sustainable resource use.
Finally...

Complement the application of the self-monitoring system with new phases of:

✓ data analysis

✓ transmitting/transferring information towards their own community to improve the decision-making process with a real self-monitoring.
Thank you very much!