

Workshop Paraty, RJ, 08-09 Dec 2010

Fish ethnoecology in the Paraty Bay, southeastern Brazilian coast



Photo: A. Begossi

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Main goals

- Analyze the fishers' local ecological knowledge (LEK) about main commercial fishes
- Compare fishermen and fish vendors (*peixarias*)
- Compare fishermen from different ages

**Fishers' local ecological
knowledge**

Renato Silvano

Priscila Lopes

**Local knowledge and
the choices of
conservation areas in**

Paraty

Priscila Lopes

Same questionnaire and same database!

Five commercial fishes:

Grouper (Garoupa) (*Epinephelus marginatus*)

Mackerel (Cavala) (*Scomberomorus* spp.)

Snook (Robalo) (*Centropomus undecimalis*)

Snapper (vermelho) (*Lutjanus* spp.)

Cavala



Vermelho



Garoupa



Robalo



Photo: V. Nora

Enchova (*Pomatomus saltatrix*)



Compare with results of previous surveys on fishers' LEK of this fish (Silvano and Begossi 2005, 2010, Silvano et al. 2006, Nunes 2010)

Methods

Sampling: interviews using standardized questionnaires

Topics of interest about the studied fishes: temporal patterns on...

Abundance

Changes on fish size

Diet

Seasonal occurrence

Reproductive season

Migratory behavior

Sustainability or overfishing

Environmental changes: climatic changes?

When? Soon after this workshop, Dec 2010

Stratified sampling: age categories of fishers (**10 years fishing in the studied community, three to five fishers on each category**)

| Fishermen's age classes | Praia Grande | Tarituba | Trindade | Total |
|-------------------------|--------------|----------|----------|-----------|
| 18-30 | 0 | 0 | 7 | 7 |
| 31-40 | 4 | 4 | 6 | 14 |
| 41-50 | 3 | 5 | 1 | 9 |
| 51-60 | 2 | 8 | 7 | 17 |
| 61-70 | 1 | 2 | 0 | 3 |
| 71-80 | 0 | 0 | 0 | 0 |
| 81 and over | 1 | 0 | 0 | 1 |
| Total | 11 | 19 | 21 | 51 |

- Previous interviews from Begossi et al. 2010
- Snow-ball sampling
- Include some other communities

Data analyses: multivariate analysis, NMDS or similar

Matrix: fishermen age categories X % of answers to selected questions for each fish species

Fishing communities X fish caught, Tocantins River
(Hallwass 2010)

Resemblance: S17 Bray Curtis similarity

2D Stress: 0

barramento
● antes
■ depois

Mocajuba_1981

Ituquara_1981

Icangui_1981

Ituquara_2007

Baião_2007

Comunidades_2007



Expected results

- Comparisons with information from the literature, fish landings and fish ecology surveys: hypotheses to be investigated
- Inputs to co-management
- Insights on temporal trends on fish abundance and behavior

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