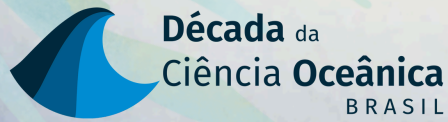


Socio-environmental Oceanography: a preliminary survey of marine biodiversity with Brazil's coastal peoples and communities



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INTRODUCTION

This paper gives a brief presentation of an ongoing project in the field of Socio-environmental Biological Oceanography that has achieved the seal of approval of the ethical parameters of environmental research interrelated with human populations. The next phases will take place in Brazil's coastal and marine zones, including ecotones of ecosystem transition areas and the human communities that survive on them.

METHODOLOGY

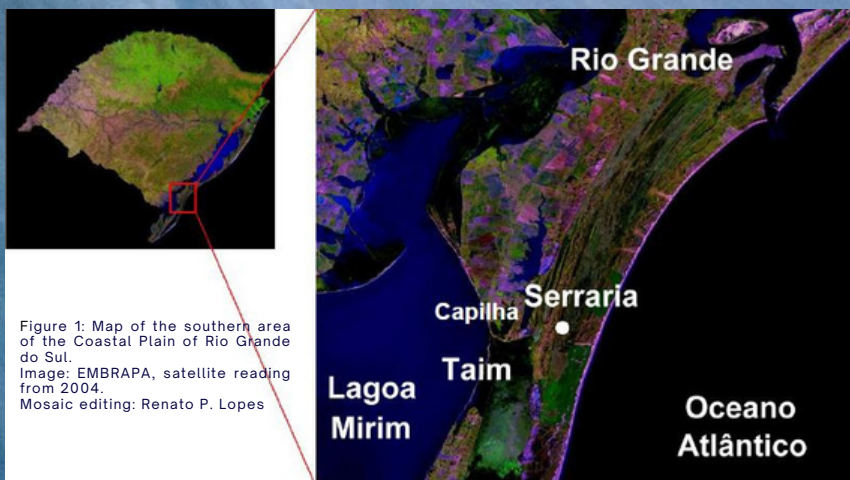
Interdisciplinary approach to the human environment and quantitative and qualitative research based on FAIR principles;
 Topographical survey and morphoclimatic determination;
 Collect of marine and coastal fauna and flora;
 Fauna monitoring by telemetry;
 Insertion of quantitative data into the Ocean Biodiversity Information System (OBIS);
 Sequence analysis and taxonomic determination (rRNA16S);
 Analysis of hydrological parameters.



Figure 2: Illustrative image of Brazil's Coastal and Marine Zone with the demarcation of the Blue Amazon mosaic. Source: AMAZUL

PRELIMINARY RESULTS

The preliminary results are based on data from the feasibility phase of the research and collected in the area of the Southern Coastal Plain of RS, Brazil, in the area bordering the ESEC-Taim Conservation Unit. This portion of the coastal and marine zone on Rio Grande do Sul's continental platform plays a fundamental ecosystem role in maintaining biodiversity and an extensive hydrological grid. Of recent sedimentary formation originating from sea level transpositions in the Quaternary; is characterized as the world's largest lagoon system - the Patos-Mirim-Mangueira complex - interconnected by marine macro and micro environments, wetlands, fields, dunes and native forests (Seeliger et al., 2004; Tomazelli & Villwock, 2000). This mosaic is influenced by human economic activities and is designated as a Ramsar Site under the protection of the Ramsar Convention for Wetlands and qualified as a Biosphere Reserve by UNESCO. The results present the main ichthyofauna species listed in Table 1 in the frequency of total landings in fishing activity and of importance to fisheries management. Other taxonomic groups of wildlife identified with high frequency in the indirect relationship with fishing activities were anurans, limnic and marine chelonians, limnic birds and seabirds



Fishing and Management:

| Scientific nomenclature | Vernacular name | dissemination Percentage |
|-------------------------|------------------------------------|--------------------------|
| Hoplias malabaricus | Traira / Trahiras | 69% |
| Odonthestes humensis | Peixe-rei | 15% |
| Odonthestes bonariensis | Peixe-rei / Argentinian silverside | 15% |
| Pimelodus maculatus | Pintado / Catfish | 7% |
| Loricariichthys anus | Viola-cascuda | 6% |
| Rhamdia quelen | Jundiá / Three-barbeled catfishes | 2% |
| Other species | ----- | <1% |

Graph 1: Frequency of species per landing. Sampling of the percentage score of species by the total average at 100% of fish landings



Figure 3: Images of the Wetlands that make up the Ramsar Site in the ESEC-Taim Conservation Unit and a photo illustrating artisanal fishing activity in the area surrounding the Conservation Unit. Source: Image UC/ESEC-Taim/Josiane Alves and Image fishing in the lagoon/Public Domain

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