

Preliminary results of the Ph.D. project

*“Drivers, Scenario Planning and Future Options for Coastal
Communities in Paraty, Brazil”*

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Workshop IDRC Project
UNICAMP/University of Manitoba

Campinas, May 2nd and 3rd, 2012



Purpose and objectives

My **purpose** is to understand how drivers (any natural or human-induced factor promoting change in the social-ecological system) originating at local, regional, and global scales, cause changes in the ecosystem services and human well-being.

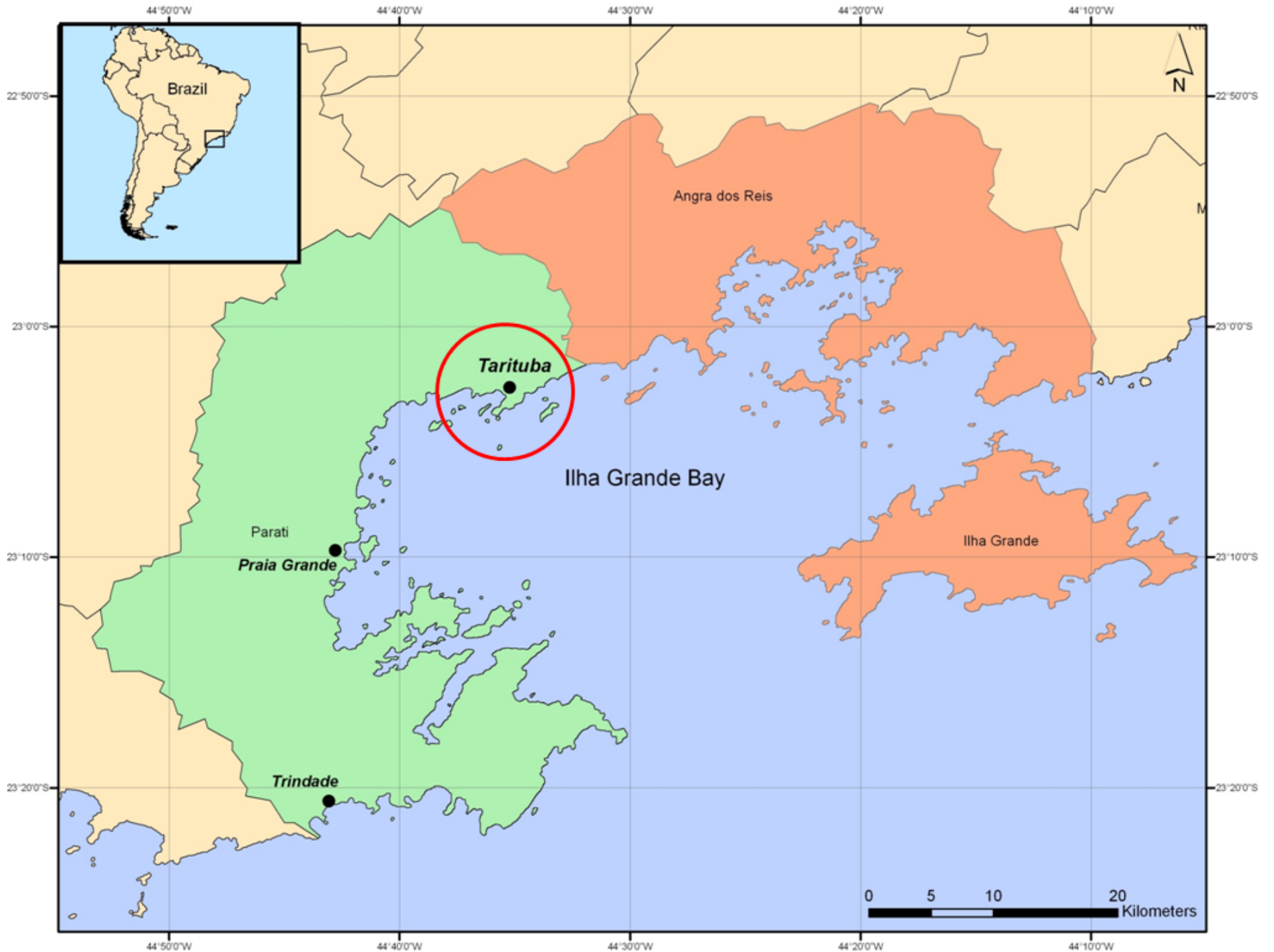
Objectives:

- To identify past and current ecosystem services and drivers of change in Tarituba, for the last 40 years (*objective concluded*)
- To understand the relationships between drivers of change, ecosystem services and human well-being (*data analysis ongoing*)
- To develop future scenarios (for the year of 2030) with community members (*data collection phase: June and July 2012*)

Methods (qualitative approach)

- Fieldwork conducted from September 2010 to October 2011
- **Selection of participants:** *purposive sampling* towards broader diversity of activities, ages, and gender
- **Data collection procedure:** *Participant observation* to observe and learn what are the most common forms of interaction between people and environment (N=36)
 - **Activities observed** include fishing trips, boat repairing, fixing fishing nets, cleaning fish at the fish market, community meetings, parties and religious events, music festival, and rehearsing with the group of traditional songs and dances
 - **Follow up questions** exploring relationships with the surroundings, changes over time, and drivers of change
- **Data analysis:** Notes were transcribed and coded using software *Atlas.ti*
- **Document analysis** including reports, scientific publications, traditional songs and dances, videos from movies and soap opera filmed in the area





Results: changes in use of provisioning services

Provisioning Ecosystem Services	Before 1970	2011	Trend over time*
<i>Small-scale fisheries</i>	Present	Present	D
<i>Large-scale fisheries</i>	Present	Present	I
<i>Aquaculture</i>	Absent	Present	I
<i>Tourism</i>	Absent	Present	I
<i>Pousadas</i>	Absent	Present	I
Restaurants	Absent	Present	I
Camping	Absent	Present	
<i>Small-scale agriculture</i>	Present	Absent	D
<i>Timber for house construction</i>	Present	Absent	D
<i>Hunting**</i>	Present	Absent	D
<i>Water provisioning</i>	Present	Present	I
<i>Non-timber forest products**</i>	Present	Absent	D
<i>Timber for canoe carving</i>	Present	Absent	D
“Defeso”	Absent	Present	I
<i>Oyster gathering</i>	Present	Absent	D
<i>Home garden</i>	Present	Present	N

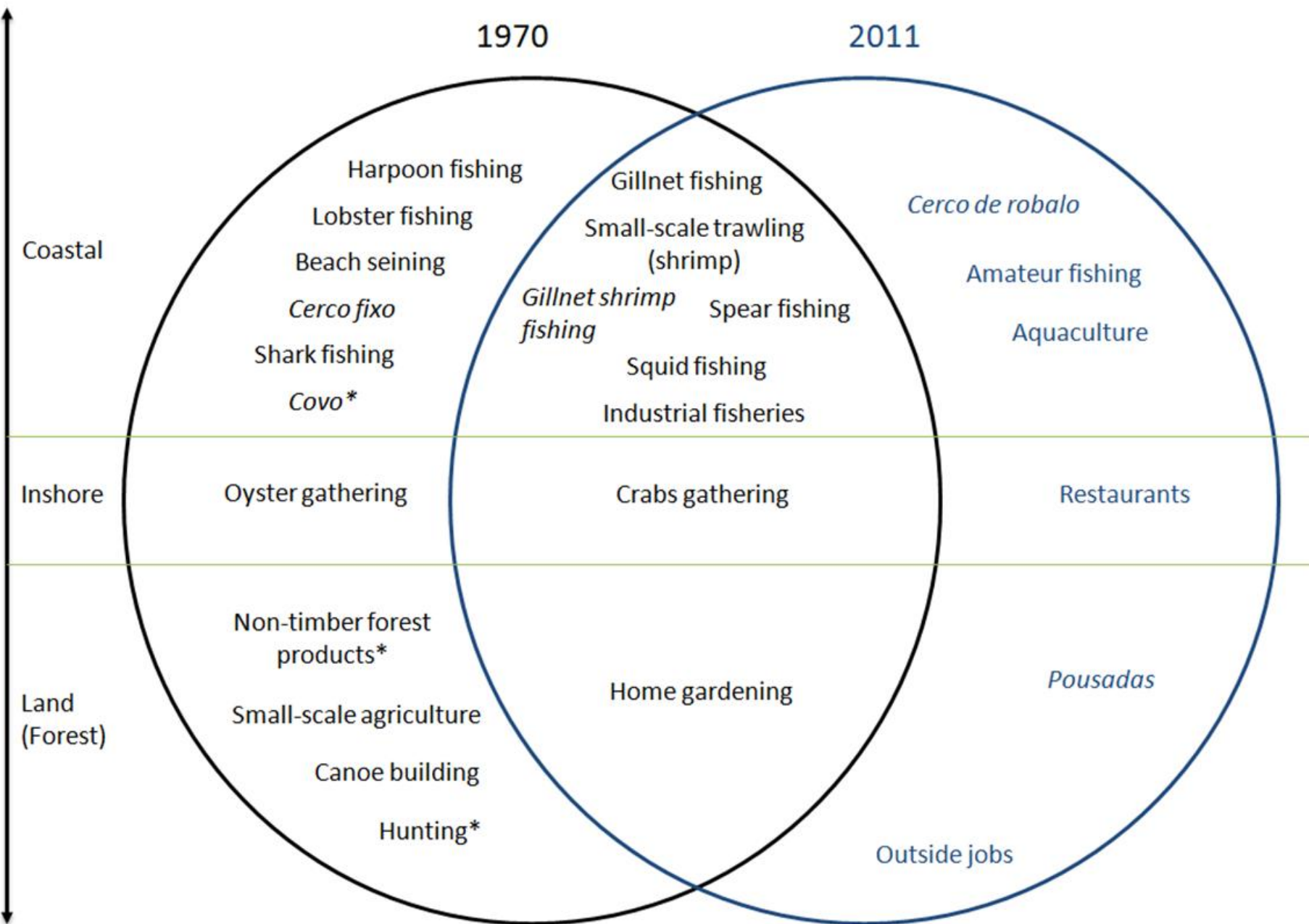


Results: changes in use of cultural services

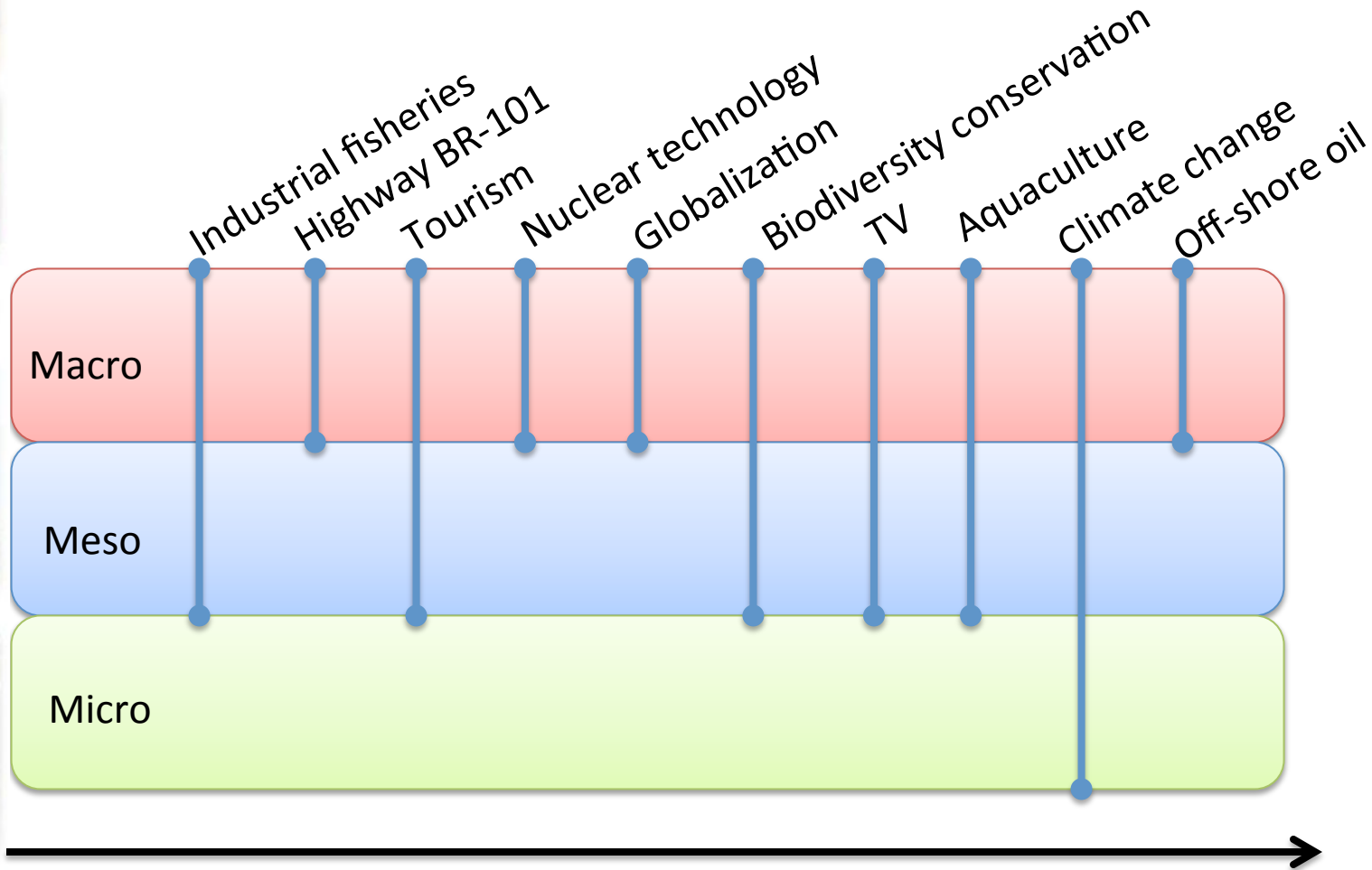


Cultural ecosystem services	Before 1970	2011	Trend over time
<i>Scenic beauty</i>	Present	Present	D
<i>Leisure options (beaches, islands, trails, waterfalls)</i>	Present	Present	D
<i>Scenery for TV and Cinema</i>	Absent	Present	I
<i>Inspiration for traditional songs and dances</i>	Present	Present	I
<i>Local Ecological Knowledge</i>	Present	Present	D
<i>Community parties</i>	Present	Present	D
<i>“Mutirão”</i>	Present	Present	D
<i>“Puxada de canoa”</i>	Present	Absent	D
<i>Religious ceremonies</i>	Present	Present	I
<i>Sacred groves</i>	Present	Present	N
<i>Science and education</i>	Absent	Present	I
<i>Spiritual connections</i>	Present	Present	D
<i>Soccer</i>	Present	Present	D

Results: Changes in livelihoods based on ecosystem services



Results: scale at which drivers were originated



**Micro-scale* corresponds to the community level; *Meso-scale* correspond to the municipal and state levels; and *Macro-scale* corresponds to federal and global levels;

Relevance of results to phase 2 (IDRC project)

- Cultural as well as provisioning ecosystem services are important for the well-being

- Besides use of provisioning services, attention is needed for recreational, aesthetics, scientific/educational, spiritual, and social cohesion dimensions of the social-ecological system

- Drivers are originated at multiple scales, especially at macro-scale

- Management schemes have to integrate all levels of organization

- Several drivers have caused disincentive to small-scale fisheries

- A change in the institutional arrangement of the ESEC Tamoios towards a participatory decision-making process may be a way of attenuating conflicts, and creating a multilevel arrangement to deal with macro-scale drivers

- Social cohesion still observed in the community (food sharing, parties, soccer, etc) can be used as an “ingredient” to build capacity in order to strengthen the basis for effective participation



Obrigado!

Comunidade de Tarituba

Funding:



International Research Chairs Initiative



Local support:

