

## 3 Site description for Imbituba, Brazil

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### 3.1 Context

Imbituba is a port with a unique shoreline formed by shifting sand dunes known as *Areais da Ribanceira*. The native vegetation has a high abundance of Butia (*Butia capitata*) which is extracted by locals for the preparation of cachaça and ice cream.

Before urbanisation, inhabitants were fishermen and farmers. In the 1970s farmers in the *Areais* had their lands expropriated to prepare the area for industrial developments. Developments have not yet materialized and farmers have continued using the lands for agriculture. This very unstable environment is traditionally used for slash and burn systems and the extraction of natural resources such as Butia and medicinal plants.

### 3.2 Institutional and project setting

The federal University of Santa Catarina (UFSC) is leading the Global CBM study at Imbituba site. The Traditional varieties of manioc and community based management: local knowledge and origin of new varieties project has been active in the site since 2009. The project objectives are to:

- analyse the local management and the linkage with the origin of new varieties of manioc;
- study the formation of seed banks in the soil that influences the generation of new varieties;
- analyse the farmers' perceptions on the generation of new varieties;
- analyse the local practices that have enhanced the dynamic process related to manioc management and the landscape management;
- identify the farmers' rationale that determines the extent and distribution of local manioc diversity; and
- contribute to strengthening the exchange networks of varieties at the local and regional scale.

The project is funded by CNPq and CAPES of Brazil, in partnership with ACORDI in Imbituba.

Another project entitled, Ethnobotany at *Areais da Ribanceira* of Imbituba: knowledge about use and local management of plants has been ongoing in the site since 2009 with the objectives of:

- studying the knowledge, use and management of native medicinal plants and the economic and cultural importance of these species;
- analysing the potential opportunities and threats to the natural resources of the region, according to the use and management of medicinal plants;
- analysing the local knowledge and management practices of *Butia capitata*, an abundant resource in the area;
- strengthening the local organization of farmers through ethnobotanical studies, emphasizing the value of the local knowledge about plant resources; and
- contributing to local management planning, for social and environmental sustainability.

This project is funded and implemented by the same partnership for the former project.

### 3.3 Key project activities

Main activities for the former project are to:

- include a participatory diagnostics approach to the ethnobotany of manioc and the landscape used for cultivation;
- take a community-driven and research oriented approach;
- establish ecological and agricultural plots for experimenting inside the communities; and
- strengthen a manioc varieties exchange network in a regional context.

The latter project includes the following activities:

- evaluating the use and management of native medicinal plants and *Butia capitata*;
- evaluating the environmental availability of the plant resources used;
- constructing guidelines for use, management and conservation of the plant resources in a participatory manner; and
- sharing and socialising the results with the local stakeholders and with both governmental and non-governmental agencies acting within the municipality.

### 3.4 Social and institutional organization

Today, farmers from five neighbourhoods surrounding *Areais* use the land for agriculture. The community in this context is an assembly of farmers that have continued a traditional farming livelihood. Farmers range between 37 and 85 years of age, most retired from regular wage paid employment, relying on retirement benefits for cash income. Fishing and agriculture provide additional household income. The average landholding varies between 0.5 and 4 hectares. In order to obtain land rights, this community is in the process of transforming *Areais* into a conservation unit or settlement of agrarian reform. Since the farmers do not yet own the land, they are not permitted to receive extension services from EPAGRI.

The farming community established the Rural Community Association of Imbituba (ACORDI), following an educated and strong leader Marlene Borges, to principally address the ongoing land rights issues. Today 25 families are members. Land issues are an important component of the CBM process because land is the primary resource necessary for CBM to operate at a collective level in the maintenance of biological resources. ACORDI direct CBM components and practices.

At the time of the exchange visit, the land was under judicial review and the farmers were prohibited from accessing and utilizing the area. This situation has led to tremendous social learning, scaling-up of awareness and social organization (which are all advanced components of the CBM process), reinforcing the role of the practices in the community. The annual cassava fair has contributed to the CBM process by enhancing awareness and capacity-building. Since 2009, the partnership with the Federal University of Santa Catarina (UFSC) has been important for understanding local biodiversity and helping the community to monitor and evaluate CBM processes. The Department of Ecology is doing ethno-botanical research and the Department of Geography is working with participatory resource mapping. Such activities contribute to policy and legal frameworks related to CBM.

Since 2003, ACORDI organizes the annual cassava fair. The aim of the fair is not to promote diversity. The main aim of the fair is to create awareness among the community members on the uses of cassava, and associated farming lifestyles. The fair is an important means of generating income for the association. Community activities and structures are financed with the proceeds of the fair. The fair programme includes seminars, with invited lecturers, on subjects chosen by ACORDI's members. During the fair, regional cassava food products are sold.

The community cassava-processing centre was built in 2009 with proceeds from the cassava fair and external financial support raised by ACORDI. Farmers cover the costs of processing their cassava in the unit with 30% of their produce. The processing centre share is then divided between farmers working in the processing unit; ACORDI, for maintenance of the processing unit; and farmers, who retain the largest amount of the produce.

The cassava fair has become a forum for activist groups with similar agendas. UFSC also plays an important role as an intermediary for attracting regional, national and potentially international attention to Imbituba.

### 3.5 Plant genetic resources

Important plant genetic resources are local cassava varieties and the natural population of *Butia* palm. Farmers cultivate approximately 37 cassava varieties. Community members, as well as outsiders, collect *Butia* from the wild in *Areais*.

### 3.6 CBM practices

1. Generating awareness and an understanding of local diversity:
  - UFSC characterizing the vegetation landscape, traditional knowledge and plant genetic resources;
  - annual cassava fair;
  - participatory resource mapping;
  - ethno-botanical research.
2. Establishing community institutions, developing their capacities and consolidating CBM in their working modalities:
  - providing a forum for activist groups with similar agendas;
  - formation and high degree of social organization within the *Areais* community association ACORDI;
  - UFSC provides an evidence base for environmental activist groups and other supporting organizations;
  - UFSC plays an intermediary role for greater exposure to the local prevailing issues;
  - action learning for policy and legal framework development;
  - seminars and lectures on subjects chosen by ACORDI.
3. Developing conservation practices (including entrepreneurship and marketing of agrobiodiversity), monitoring and evaluating practices, promoting social learning and scaling-up:
  - conservation and management of *Butia*;
  - mobilization of community funds for CBM activities and structures;
  - establishment of the community cassava processing unit;
  - recovery of funds from the processing plant for sustainable development;
  - income generation;
  - participatory monitoring and evaluation of the CBM process.