

# Natural Resource Use and Living Standard Generation by Indigenous Communities in comparison to Immigrant Settlements - The Case of Bananal Island, Tocantins, Brazil -

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## ***Abstract***

*Brazil is home to 218 different indigenous nations with a total population of 350.000 individuals, of whom 60% live in the Amazonian area. These ethnic groups are of pre-Columbian origin or ascendance and show cultural characteristics that distinguish them from other parts of the national society. Nowadays, their traditional dwelling areas in tropical rainforests are under increasing pressure from the use of the natural resources by various actors with conflicting interests. Indigenous groups depend on the use of natural resources not only with regard to basic food supply but also on the social and cultural level, where the respect towards forest entities has a spiritual dimension. The contact with non-indigenous settlers, who move into areas that were exclusively inhabited by Indians before, brings changes that may even end up in an irreversible acculturation. The resulting recognition of the value of natural resources for the immigrants frequently by indigenous communities and individuals frequently starts an unfair trade with forest goods. Simultaneously, spiritual respect declines as the interest in profit from this trade increases. The evolution of this process may transform indigenous communities into peripheral smallholders due to the overuse of natural resources and engender impoverishment of their societies. Holistic analyses of indigenous households and farming systems of immigrants are required to understand the dynamics of this process and to identify agreeable solutions for the involved actors. The application of a respective approach on the Bananal Island in the western part of Tocantins- Brazil yielded indications on the differences in objectives, perception of value of different forest goods and living standard between the indigenous population in recently recognized indigenous territories and settlers who were transferred out of these territories into adjacent areas.*

## **1 Statement of the problem**

The Bananal Island ecotone is in Amazonian marginal zone consisting of rainforest and savannah patterns. In the past it had been sought by the ranchers due to the excellent natural pasture and by fisheries for its richness in water resources. . The contact with non-indigenous brought to the Indigenous groups changes reflecting in an acculturation mainly in respect to consumption of industrialized products and decreasing of their own local knowledge believes. In 1986 most of the Island was declared indigenous land. One third of the Island remained National Park of Araguaia an environmental protected area. The smallholders were removed and allocated in settlements. The Indigenous are in process of protecting their culture and at the same time of achieving a sustainable economic development. Smallholders are in an upper level stage of the Farming System genesis and look for ways to increase their economic conditions in the economic society where they are peripherally positioned.

## 2 Objectives

This poster aims to explore the different socio-economic conditions among the indigenous group allowed to stay in the Island and the smallholders settled in Settlement out of the Island particularly with regard to natural resources uses and living standards. In face of this, the main objectives of this work are:

- To compare the socio-economic differences of Indigenous people and settlers group.
- To understand the natural resources uses by these groups.
- To link living standard generation potentials with socio-cultural aspects of the different groups living in the Bananal area and vicinity.

## 3 Methods

### 3.1 Information Base

Micro-survey was carried out with Rapid Rural Appraisal of 12 indigenous families and key-person interviews of indigenous leaders. Interviews were carried out using structure questionnaires with settlers (24 families). Secondary information was obtained in Government institutions, specific researches and NGOs.

### 3.1 Economic Analysis:

Utilizing the Faming System Approach the data were analysed in order to understand the available resources and the process of decision-making in allocating such resources. Comparative and historical analyses were carried out.

## 4 Study Area

The Bananal Island is situated in the Western part of Tocantins state in Brazil. It is delimited on the left side by Araguaia River in the boarder to Mato Grosso State. In its right side is bordered by Javae River. Bananal Island is part of three municipalities:

- The National Park of Araguaia is located in of the north part of the Island and belongs to Pium municipality.
- The Inawebohona Indigenous Land belongs to the central portion of the Island and is part of Lagoa da Confussao municipality.
- The Araguaia Indigenous Land lays on the south of the Island and it is under the Formoso do Araguaia municipality

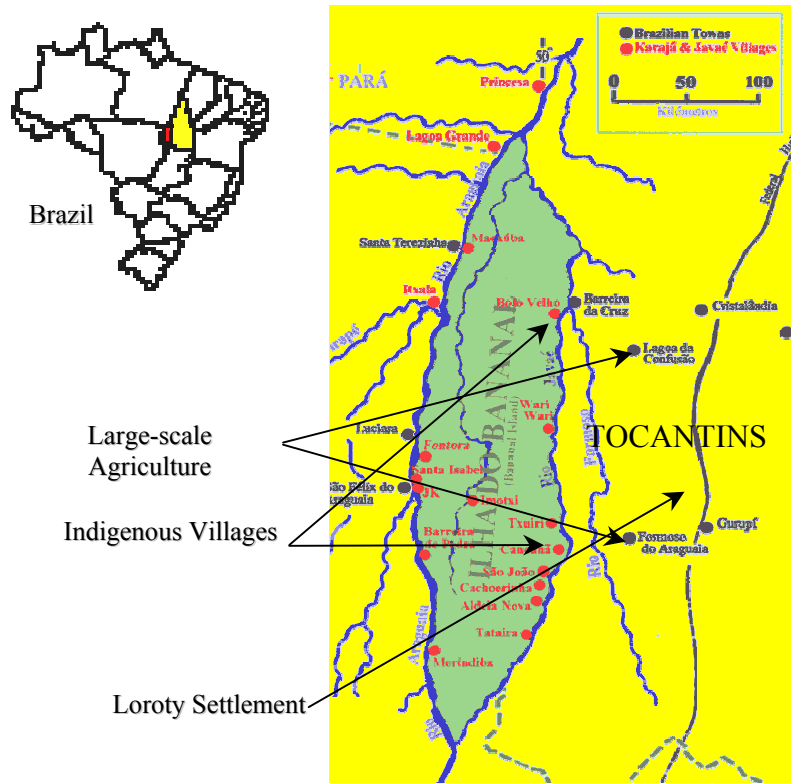
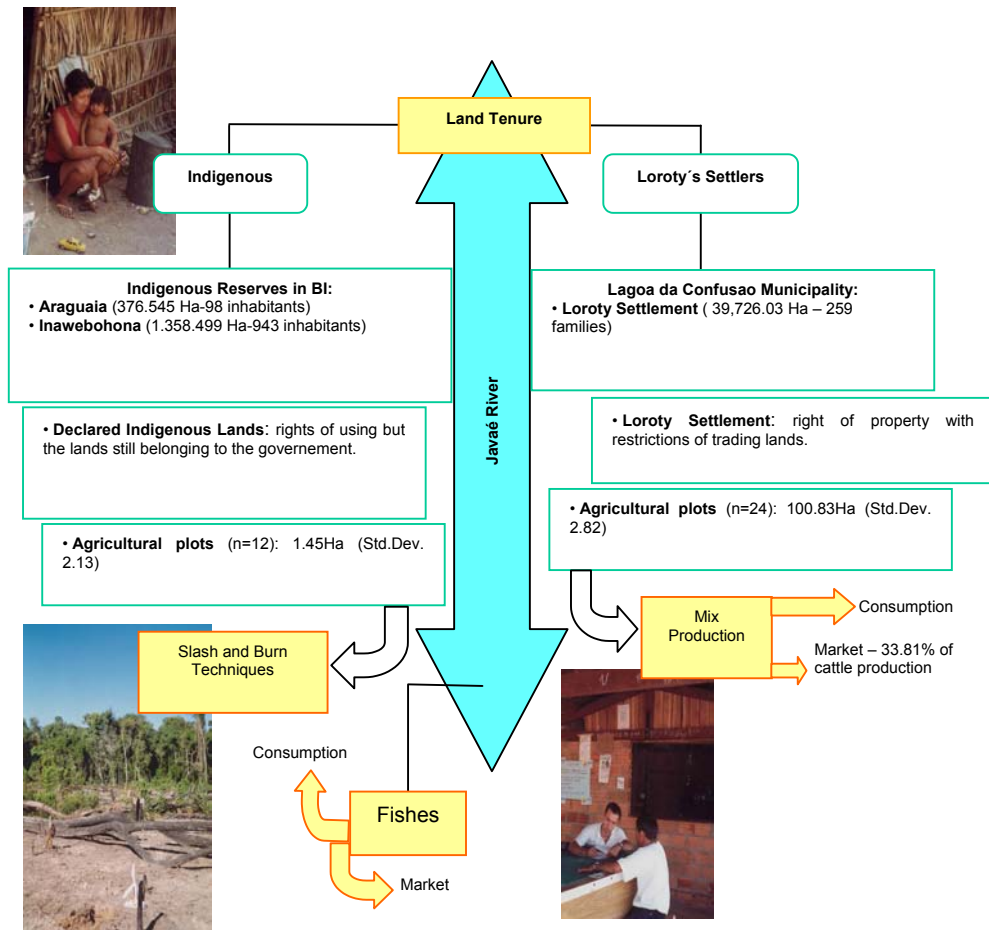


Fig.1: Study area in Tocantins State and target groups

The Javae indigenous group inhabits the right side of the Bananal Island along the river of the same name. On the other side of the river, in the rural area the farm systems are those formed by smallholders and large-scale agriculturist groups. (Figure 1)

### 5 Results

The indigenous villages located along the left side of Javae present different conditions of land rights and agricultural dynamics than the smallholders living in the right side of the river. (Figure 2). By the time a land is declared indigenous land the indigenous obtain the exclusivity of using the resources of such a land. Settlers of Loroty Settlement own the land but with restrictions of trading the land during the first years. Indigenous have different conditions of house buildings. Their houses preserve the characteristics of the ancestries built with straws. Settlers hold cement and brick houses.



**Fig. 2 Living and agriculture conditions of indigenous in comparison with smallholders**

The economic conditions expressed by the family income are shown in table 1.

**Table 1: Family income comparison between indigenous and settlers groups**

Family Income (R\$/year)				
	Indians (n=12)		Loroty Settlers (n=24)	
	Mean	Std. Dev.	Mean	Std. Dev.
Farm Revenue	5,567.49	5,188.63	9,813.58	9,410.86
Farm Expenses	0.00	-	1,868.75	1,635.32
Farm Income	5,567.49	5,188.63	7,944.83	8,974.14
Off-farm Revenue	2,730.00	2,193.60	2,529.75	2,872.01
<b>*Fam. Income</b>	8,297.49	5,929.96	10,474.58	9,385.31
<b>**Fam. Income per member</b>	1,659.50	1,185.99	2,355.44	1,955.83

\* In a Mann-Whitney test there were found no significant differences (0.687)

\*\* In a Mann-Whitney test there were found no significant differences (0.383)

The main socio-economic characteristics of each group can be divided in:

#### Indigenous Group:

- They are characterized as other fishermen groups with very low input in farm activities.
- They present a higher significant number of elders (0.83) in the family.
- By Javae's traditions by the time of a new marriage the new family joins the women's parents. This formation is known as extended families in contrast to nuclear families. This fact assures a secure source of income in the family through agricultural retirement payments.
- Fishery is the main source of farm income and protein consumption (1,032 Kg/year)
- Crop activities are restricted to 50.00% of the families that plant mainly manioc (33.33%), maize (16.67%) and watermelon (8.33%).
- The most industrialized products acquired from the market by the indigenous are: rice (61.54%), sugar (61.54%), coffee (46.15%), beans (38.46%) and oil (38.46%).
- In contrast, the most appreciated non-indigenous item for 58.33% of the families are the clothes.
- In the education sector, 60.00% of head of the families are illiterate.

#### Settlers Group:

- They are waiting for financial support for agriculture;
- They practice subsistence agriculture cropping: maize (83.33%), rice (83.33%), fruits (66.67%), beans (50.00%), manioc (41.67%) and others in less proportion in a mix production system.
- They hold a cattle herd production, in average of 32.55 (24.69) heads per family, representing safety in the liquidity aspect.
- A minimum of 29.17% of the families declared to have a low level living standard and the rest (70.83%) to have a medium level. Only 4.17% of the families expressed the wish to go back to Bananal Island,
- The off-farm income comes mainly from small business in the settlement itself.
- Most of the head of the families (80.00%) attended school maximum until 8th grade,

- They consume in average 232.32 Kg per year of beef meat and it is mainly substituted by chicken meat (184.20 Kg/year).

## **6 Conclusions**

The family income did not present statistical differences between both groups. But due to the economic dynamic of settlers they can be considered in a higher level of the genesis of farming system in comparison to indigenous group. The indigenous do not invest the family income into farm activities. Although the settlers practice low level agriculture they try to maintain a minimum level of farm activities during the period they wait for disbursement of credits to smallholder agriculture sector. The most industrialized products consumed by indigenous are those that complement their traditional food. This food bought in the market or through brokers is similar to the basic food of national society. The differences of education among the groups can be explained as the school system in the indigenous village is recent that explains that older generation did not have access to the education system.

## **7 References**

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