

## ETHNOCARTOGRAPHY AND NATIVE PEOPLE IN ACRE, BRAZIL - EXPERIENCES WITH PARTICIPATORY MAPPING

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### BACKGROUND AND OBJECTIVES

The paper presents a research developed since 1996, with actions directed to native people mapping their lands and working with cartography applied to environment management and sustainable development, in the Brazilian Amazon region. Indigenous groups learned about maps and geography at workshops given to native environmental agents engaged in activities related to conservation, forestry and agriculture at their lands in Acre (Figure 1). This initiative is a very interesting case to illustrate participatory mapping, as native people were involved in the whole process from gathering information and data, making maps of their lands to produce digital cartographic products based on satellite images.

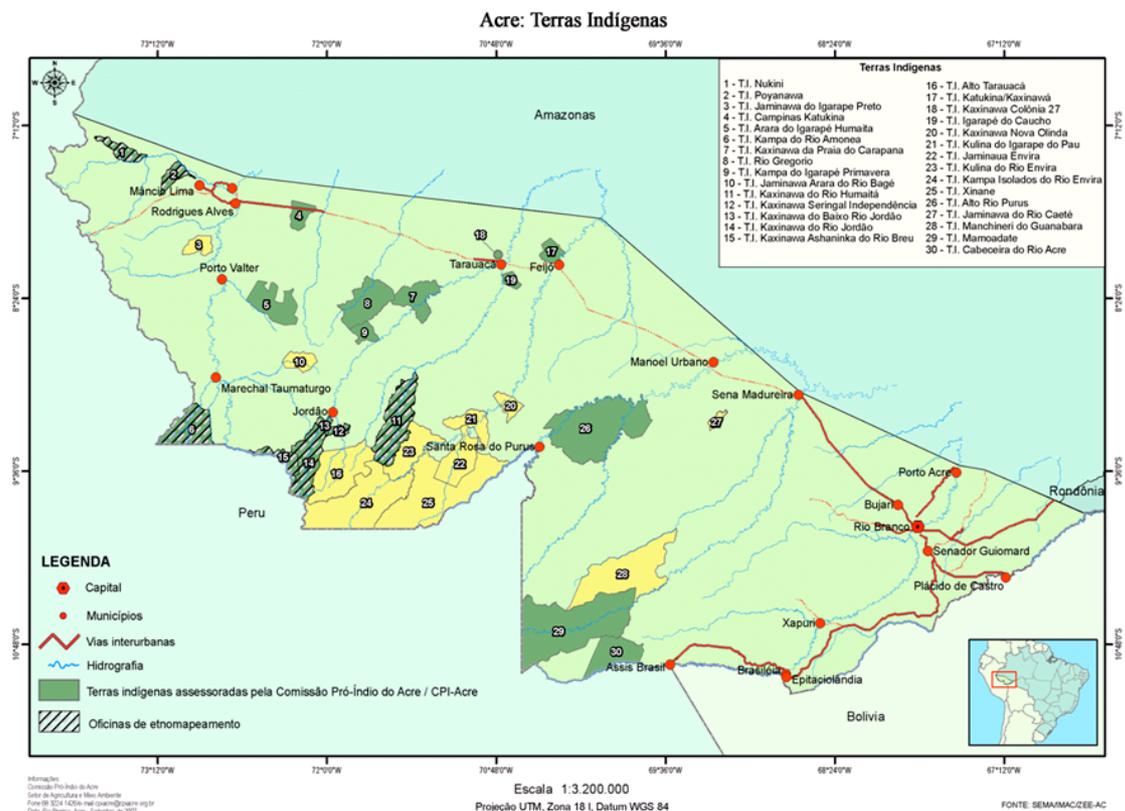


Figure 1 – Native lands in State of Acre, Brazil

For over 30 years, Comissão Pró-Índio do Acre - CPI has offered courses in a project based on enabling native people to take care of their lands, to protect their culture and traditions, in which cartography takes an important part. They are the authors of maps, drawings, books and environmental management plans. The mapping activities with a participatory approach is one of the main methodologies applied to produce cartographic materials, from mental cultural representations to digital georeferenced maps using satellite images. There are many initiatives with similar purposes around the world, such as showed by Chaping (2003), Chase (2005), Gessa (2008), Taylor (2009). Several courses and workshops were given, being 17 in the city of Rio Branco and 33 in 11 native lands, in an effort to prepare and involve environmental agents to participate in mapping activities.

### METHODS AND RESULTS: Amazonian native people as innovative cartographers in a digital era

Maps produced by the community in a collective effort reveal their perception of space and geographic knowledge aiming at problem solving and decision making actions to manage and protect their territories.

Cartography plays a relevant role in this process, as the authors discussed before (Almeida, 2005; Gavazzi, 2010). Maps, both the simple drawings made by native people and the digital georeferenced ones made by teams, were used successfully as cultural documents to treasure their traditions and ancestral knowledge and as technical tools to evaluate their lands, to locate their natural resources, and to prepare environmental assessment and planning reports. One atlas have been produced (Gavazzi, 1996), several articles and books published. CPI has an archive with over one thousand maps made by Brazilian native people, mainly drawings, and several digital cartographic products as the example showed in Figure 1.

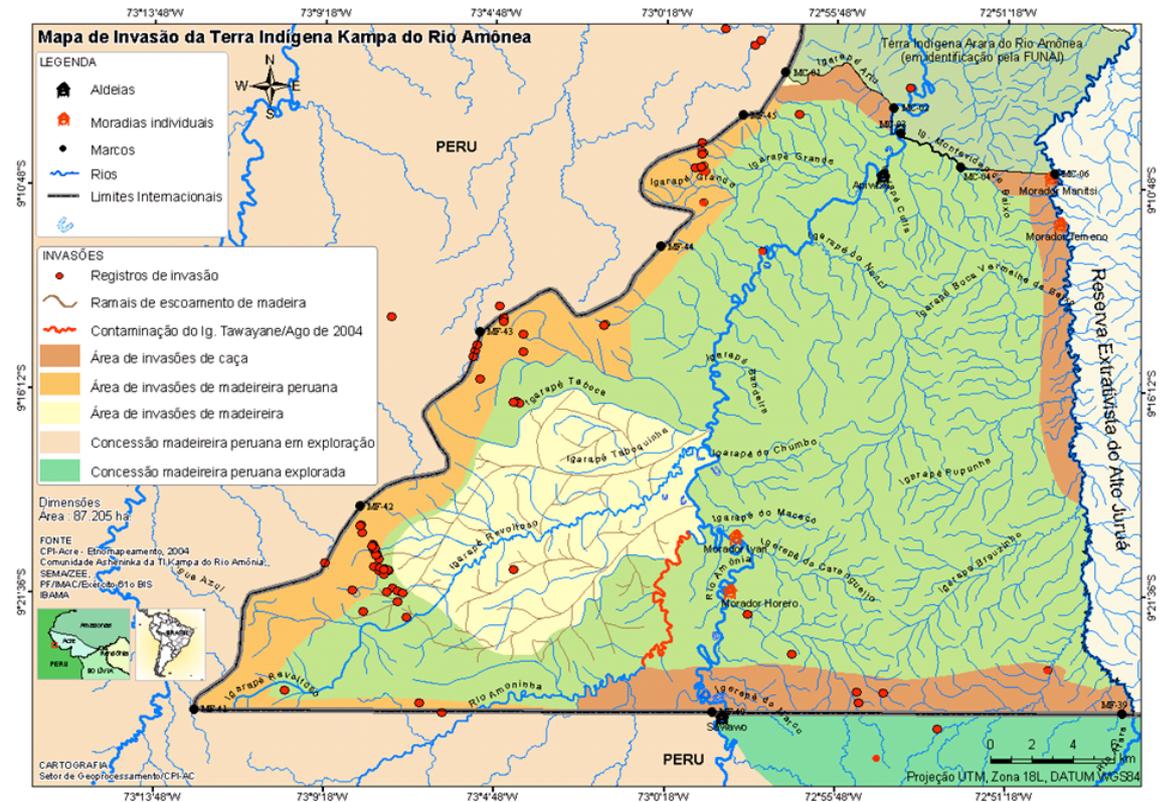


Figure 2 - Native land invasion map

All the materials produced, including maps, were also used at local native schools, as a means of capacity building for the whole community.

The main activities developed during participatory cartography workshops are concentrated in making thematic maps (such as relief, rivers, vegetation, fishing and hunting, land use) in different scales, using topographic digital maps and satellite images. These workshops start with data collection and its organization in digital format. For this phase, native participants have technical support from geographers and specialists. After these initial steps, the cartographic material is reviewed, published and its results (maps and reports) return to the native communities involved in the process.

**FINAL REMARKS: integrating past, present and future**



*Figure 3 – Native people mapping their lands*

Ethnoscography allows indigenous groups, through mapping activities, to achieve an understanding of their social environmental reality, its complexity, its potential and its political constraints. This empowerment helps them to be the protagonists of their future, to discuss and plan the actions to reach the territorial management which they need to survive, to make maps to guarantee their rights, including watching their lands, protecting its frontiers, implementing new projects of community development. Ethnomaps, in fact, have many functions in the lives of native people, they are used in a greater variety of situations and for a number of reasons, from economical to cultural, maps can be works of art, documents depicting their traditions or precise digital cartographic representations of their land. They are not afraid of combining art and culture to new technologies and digital maps. Each possible mapping approach brings different visions, in a way which maps are instruments to protect their lands or means to carry their dreams and emotions, involving their past, present or future.

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