Ethnocartography has been defined as the mapmaking by indigenous peoples, who draw on their knowledge of the land to define their territories and select what they consider significant for inclusion. But more than just a technical exercise using GPS, it has been described as a social process with important implications for land and human rights claims, local institution building, cultural revitalization, and natural resource management. This presentation describes the genesis, experience, methodology and results of an ethnocartographic mapping and land demarcation project involving collaboration between indigenous communities and academic researchers in the Venezuelan Amazon.