

3d Gis Participatory Mapping And Conflict Ladm: Comparative Analysis Of Land Policies And Survey Procedures Applied By The Igorots, Ncip, And Denr To Itogon Ancestral Domain Boundaries

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Abstract : Ang lupa ay buhay at ang buhay ay lupa (land is life and life is land). Based on the 2015 census, the Indigenous Peoples (IPs) population in the Philippines is estimated to be 11.3-20.2 million. They hail from various regions, possess distinct cultures, but encounter shared struggles in territorial disputes. Itogon, the largest Benguet municipality, is home to the Ibaloi, Kankanaey, and other Igorot tribes. Despite having three (3) Ancestral Domains (ADs), Itogon is predominantly labeled as timberland or forest. These overlapping land classifications highlight the presence of inconsistencies in national laws and jurisdictions. This study aims to analyze surveying procedures used by the Igorots, NCIP, and DENR in mapping the Itogon AD Boundaries, show land boundary delineation conflicts, propose surveying guidelines, and recommend 3D Participatory Mapping as geomatics solution for updated AD reference maps. Interpretative Phenomenological Analysis (IPA), Comparative Legal Analysis (CLA), and Map Overlay Analysis (MOA) were utilized to examine the interviews, compare land policies and surveying procedures, and identify differences and overlaps in conflicting land boundaries. In the IPA, master themes identified were AD Definition (rights, responsibilities, restrictions), AD Overlaps (land classifications, political boundaries, ancestral domains, land laws/policies), and Other Conflicts (with other agencies, misinterpretations, suggestions), as considerations for mapping ADs. CLA focused on conflicting surveying procedures: AD Definitions, Surveying Equipment, Surveying Methods, Map Projections, Order of Accuracy, Monuments, Survey Parties, Pre-survey, Survey Proper, and Post-survey procedures. MOA emphasized the land area percentage of conflicting areas, showcasing the impact of misaligned surveying procedures. The findings are summarized through a Land Administration Domain Model (LADM) Conflict, for AD versus AD and Political Boundaries. The products of this study are identification of land conflict factors, survey guidelines recommendations, and contested land area computations. These can serve as references for revising survey manuals, updating AD Sustainable Development and Protection Plans, and making amendments to laws.

Keywords : ancestral domain, gis, indigenous people, land policies, participatory mapping, surveying, survey procedures

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