

Participatory 3-Dimensional Modelling:

Integrating Traditional Knowledge and Protected Area Management

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Forest Peoples Programme

supporting forest peoples' rights

Participatory 3-Dimensional Modelling (P3-DM)



Contour Layers



The first group prepares carton sheets, exactly corresponding to the size of the wooden table and to the base map.

A second group, “the Tracers”, use the source map and the carbon paper, to outline each contour onto a separate corrugated carton sheet, selecting one corner of the map as a reference.

Consolidating Contour Layers



“The Carvers” cut out each single contour passing it on to the fourth group.

“The Gluers” paste each layer on the top of the previous one maintaining appropriate geo-references.

Blank Map



The outcome of the first phase is a scale relief model following the bare contours of the landscape

Legend Making



Informants and others can now finalize the legend, matching the range of features to be plotted with the array of different colors and media (pushpins, yarn and acrylic paint).

Applying Data



The nature of the process, which assures the concurrent participation of groups of people from neighboring locations and having different social, educational, cultural and economic backgrounds, allows for on-the-job data validation. Thus, compared to other participatory community mapping tools, there is lesser need for a final validation of the output.

Ogiek: Mau Forest Complex, Kenya



Benguet, Nueva Vizcaya and Ifugao: Mt. Pulag National Park, Philippines



Romblon: Mt. Guiting-guiting Natural Park, Philippines



P3-DM Applications

For Awareness Raising and Education

An enormous amount of information is collated, gets on permanent display and is readily accessible to all stakeholders, local residents and outsiders. Relief models are useful to enhance people's interest in conserving and restoring natural resources.

For Community Cohesion and Self-actualization

A well displayed 3-D model is appealing, fuels community esteem and sense of intellectual ownership, becoming part of the local cultural landscape.

For Collaborative Planning

Relief models are excellent visual aids capturing the ruggedness and details of a territory. A relief model highlights pressure points (household concentrations, converted forest, access ways, etc.) making them visible and tangible to everyone.

For Collaborative Research

P3-D models facilitate selective pinpointing of resources, households and other features. This can be used by outsiders to locate resources and meet development needs.

For Participatory Monitoring and Evaluation

A working P3-D model is never completed. Like in any dynamic system, change is a constant.

P3-DM Applications

For Increasing Local Communications Capacity

Because all stakeholders have played an active role in the realization of a 3-D Model, communities and administrators both understand it easily. A relief model makes information tangible and eases communication.

For Protected Area Management

Involving communities in developing management, zoning and resource use plans, identifying their priorities, aspirations, concerns and needs; Monitoring the dynamics of settlements, infrastructures and access points vis-à-vis a protected area; supporting planning workshops, and introducing visitors to the area. One of the biggest direct advantages is the documentation of an as yet unheard ecology of Bwindi.

For Conflict Resolution

Disputes over boundary issues, resource use and tenure are often contributory causes for conflicts. P3-D modeling can help in settling disputes through the visualization of the landscape associated land uses and settlement pattern.

Reference Material

- **P3DM Documents**
 - **Participatory 3-dimensional Modelling In Kenya**
www.iapad.org/publications/.../InfoDevPaper.grambaldi.a078592.pdf
 - **Manual on Participatory 3-Dimensional Modelling**
http://www.iapad.org/publications/ppgis/p3dm_nipap.pdf
- **P3DM Website**
 - www.iapad.org/participatory_p3dm.htm
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