LAND USE PLANNING (LUP) TOOLS

A bottom-up tool

PARTICIPATORY 3D MAPPING IN THE UPPER SURINAME RIVER BASIN

A tool for an inclusive land use planning and decision making in Suriname.

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ORGANIZE LAND USE IN AN EFFICIENT AND ETHICAL WAY HENCE PREVENTING LAND USE CONFLICTS AND THE CONSEQUENTLY DETRIMENT IN SOCIO-ECONOMIC WELL-BEING.
WHAT DO WE MEAN BY A BOTTOM-UP TOOL?
Study Goal: To provide information for sound land use planning in Suriname.

- To assist informed and inclusive land use decision processes in Suriname by providing spatial tools and **spatially explicit information** regarding tradeoffs associated with alternative management choices and the provision of important ecosystem services which in turn will facilitate the identification of areas where investment in natural capital can enhance development and conservation.
STUDY AREA  Upper Suriname River basin

Cluster 1:
14 communities
WHICH ECOSYSTEM SERVICES?

Those related to local people’s livelihoods

OTHER, LIKE RECREATION
PROCESS:

1. P3DM
2. LAND USE-COVER MAP
3. P-ASSESSMENT OF ES
4. P-SCENARIO BUILDING
5. TRADEOFFS
1. P3DM: Mobilization
1. P3DM: Making the legend

66 legend items were identified during workshops and subsequently re-grouped into 32 items which are represented in the P3DM.

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<th>Saamakatoongo</th>
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1. P3DM: Making the blank model
1. P3DM: Composing people’s knowledge
1. P3DM: Composing people’s knowledge
1. P3DM: Presentation to outsiders

Showcased during the World Park Congress 2014 by a community representative.
2. LAND USE-COVER MAP: Digitizing

Sequential high resolution pictures are taken at 4 m distance and prepared for geo-referencing with GIS.
2. LAND USE-COVER MAP: Digitized map
2. LAND USE-COVER MAP: Verification of the digitized information
2. LAND USE-COVER MAP: Handing the final map version.

Printed maps in A0 size were handed to each of the 14 villages and primary schools of cluster 1.

Additional maps in portable format will be handed in during next field trip.
MAIN RESULTS P3DM PROCESSES

• An “bird-eye view” of the area, including villages and features that are not in official maps. The map is helpful as a planning and educational tool.

• A considerable amount of data was captured and stored in relatively short time (34 layers of information related to land use, land cover and important places depicted as areas, points and lines data).

• A geo-referenced and validated land cover map which can be combined with other geo-referenced for use in further spatial analysis.

• The participation of 75 people in the preparation of the map legend and 47 in the actual participatory 3D mapping. The blank model was built with the collaboration of 25 kids.

• A 14 minutes film documenting the process and the context of the P3DM (http://participatorygis.blogspot.nl/2014/10/the-film-enabling-power-of-3d-mapping.html).
OUTCOMES P3DM PROCESSES

• **Ownership** of the process and the information.

• Collaborative research and **capacity building**: despite the literacy level of the local people, both researchers and local people are having equal understanding of the information being collaboratively produced. Likewise, collaboration in this research is creating capacity for local land use planning among local communities.

• **Gain of trust** with key local stakeholders within a relative short time.

• **Transfer of knowledge** to younger generations and information exchange between community participants.
3. P-ASSESSMENT OF ECOSYSTEM SERVICES (on going)

- Prioritizing ecosystem services
- Trend analysis of stocks of ecosystem services
- Ecosystem service governance
4. PARTICIPATORY SCENARIO BUILDING (in preparation)

1. Identification of current socio-environmental conditions.

2. Which land use future we want?

![Diagram of current state, resilience, and additional state transition](image)

- Present situation
- Scenario-A
- Scenario-B
5. TRADEOFFS (in preparation)
DANK U WEL VOOR UW AANDACHT

Sunrise at the Caquetá River, Colombian Amazon. ©Sara Ramirez-Gomez