Communities in the Development of Subnational MRVs

Matching local and district level variables in biophysical (& Social) data

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The presentation is about:

The Nyimba Forest Project:

- 1. Context
- 2. Concept: purpose, approaches, expected results, baseline data, protocols, etc.
- 3. Preliminary issues in the project process



1. The Project Context



UN-REDD+

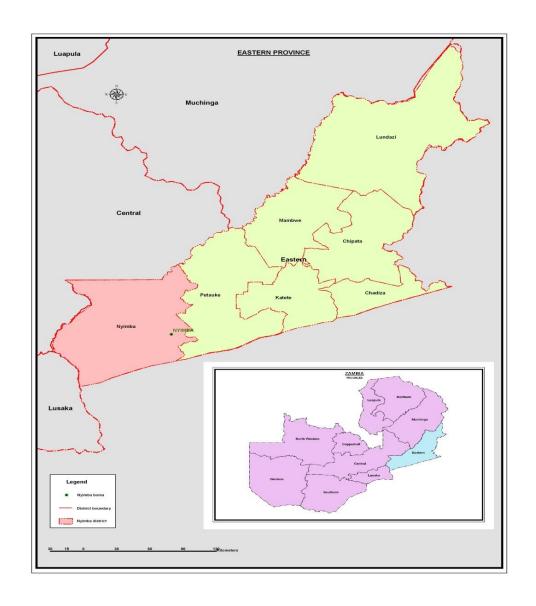
- Zambia one of the countries participating in the current UN REDD+ readiness program
- A robust REDD+ mechanism depends on <u>a solid</u> <u>scientific basis</u>, the participation of key <u>stakeholders</u>, and the political and institutional <u>will</u> to set up the processes necessary to quantify reductions in greenhouse gas (GHG) emissions from deforestation.
- REDD+ should integrate and coordinate fieldbased forest carbon inventories, remotely-sensed land-use change analyses and other datasets.
 - From the local to the national



- The GRZ is aware that consultation and inclusion of local communities is essential for sustainable land and forest management
- Potential benefits for local people's involvement in REDD+:
 - economic from REDD+ payments
 - Carbon as a commodity can be managed and traded
 - household and community income stream.
 - land and resource tenure security.
- The <u>involvement in measurement and monitoring</u> of forest carbon by local people can empower them as co-managers of areas under REDD+ projects.

2. The Project: some background information





Project Location

Source: Makano, 2013

District: Chiefdoms and Boundaries

Source: Halperin, 2013 Luembe Ndake Nyaluqwe

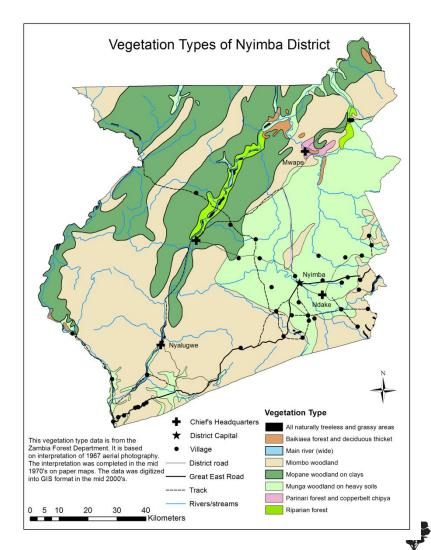
Vegetation Types

Forest types:

- Miombo,
- Mopane,
- Riparian Forest,
- Munga/Savanna

(Source : Edmonds, Edmonds, 1976; Chidumayo, 2012;

Map : Siampale, 2012; Halperin, 2013)



Some Statistics on Nyimba District

- Size: 10, 509 km²;
- Pop.: 85, 025;
- Pop. density: 8.1 persons/km²;
- Growth rate: 1.9 per year;
- Poverty incidence (Eastern Province): 67%
- Livelihood activities: agriculture, forestry, wildlife (GRZ, game ranches)

Objectives

- NFP: support from USAID in Lusaka, Zambia) providing additional scientific evidence
- Purpose: To develop a sub-national MRV prototype for Zambia's REDD+ initiative, test it at district level and make recommendations to the GRZ
- To generate scientific evidence and conduct analyses that will inform the formulation of GRZ's REDD+ strategy that is aligned with local and national needs



- To build institutional capacity at both district and community level by providing support in forest inventory and monitoring for sustainable utilization and management of forests
- To develop MRV prototypes for a national forest, open forest and game management area
- To develop community/village forest management plans for selected forests



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Expected research outputs

- Indicators of forest use related to forest structure
- Forest use by forest type (and forest canopy cover class)
- Rates of forest use (t C/ha)
- Impacts of forest use on forest structure (t C/ha)
- Upscale to the district level MRV



Research data needs & protocols

Biophysical data (i.e. Forest Types and Biomass)

- Forest Ecosystem Health and Vigour
- Forest/Vegetation Types
- Growing stock
- [Loss and change (drivers of change)]

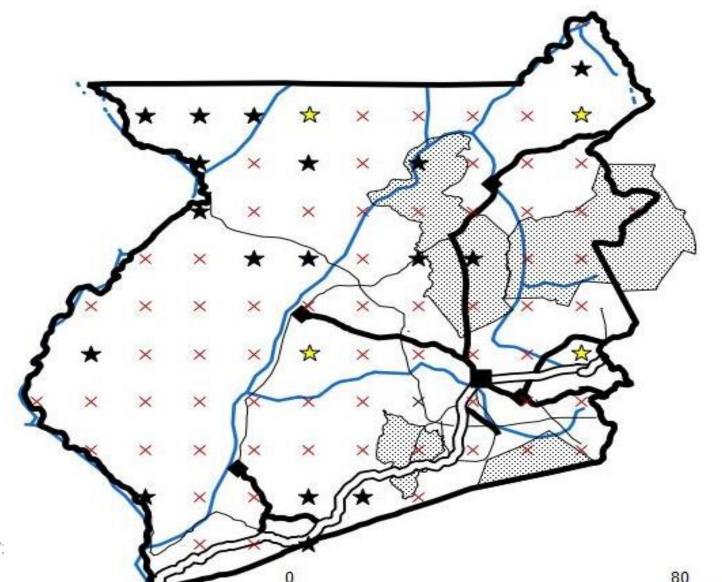
Socio-economic data (i.e. Access, Availability and Utilization of Forest Produce/Products)

- Threats to Forest Resources/Biodiversity
- Forest Enhancing Factors
- Forest Protection & management



ILUA II (NFP) Cluster/Plot Grid

Source: Halperin, 2013



Approaches and processes

- Participatory
 - Village based research assistants,
 - Village forest boundary mapping/ demarcation (GIS)
- Forest measurement (inventories) & social surveys
- Matching the variables at the community level with the district level (ILUA)



Assessment Tools

Biophysical assessment:

- Imagery: RapidEye (High resolution)
- UAVs (Unmanned aerials vehicles)/Drones
- Ground based resource measurement: forest inventories (ILUA II protocol adapted)

Socio-economic assessment:

- PRA/RRA: diagrams, transects, calendars, etc.
- Semi-structured questionnaires

INTEREST: the biophysical-socio-economic interactions and impacts related to change





Source: http://conservationdrones.org/hardware/

Preliminary Issues

- The complexity of the social-spatial interactions: The larger the spatial scale (village, ward, chiefdom, district, national), the more the variables to be covered/addressed
- Villages are more fragmented than district level where units aggregate to a single one
- Inter- and intra chiefdom boundaries
 - May affect implementation of resource management regimes (design of management strategies, etc.)



- Forests and carbon stocks (in dry forests)..... Where 8.1 persons/ km²
- What Information should go to the national level
 - Size of land / forest units
 - Forest units small
- Change through use is rapid and frequent (almost a daily occurrence)
- Can this loss of both forest and carbon be captured



Village Forests Boundaries

- Are the villages large enough?
- Tenure and gender issues?
- Social-biophysical issue(s) interface
- Is it enough to get just DBH or information will also be used for decision making? What form should that take?
-how can communities monitor forests
- How do they interpret change?

Issues of power / institutional arrangements (rules)

- What institutions?
 - Village headman
 - Conflict of use linked directly to livelihoods:
 Resource user groups e.g., edible caterpillars;
 bee keepers, Charcoal producers
- Population change and land allocation
- Are these institutions strong enough to monitor and manage change in forest use....for the MRV systems requirements?
- Link between national laws and local rules
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THINKING FOR THE FUTURE

- Local community members can generate data and information about forests and trees
- Data generated can be used to develop management plans BUT scaling up to a district level MRV difficult
- Village level data use
 - Nature of data forms important (volume vs number of stems)
 - Mental maps of where resources are vs real maps
 - Can village level institutions enforce exclusion
 - Can they enforce own members encroaching on other villages from forest products
- May need different MRV systems / protocols for the national and village levels



Thank You

