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Reconciling REDD+ at Multiple Scales

Republic of Zambia

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Scale of activities in Zambia

National Forest Reference Emissions Level (±75 Million ha)

ZIFL-P (±5 Million ha)

- BioCarbon Fund
- Eastern Province
- Sub-national FREL in preparation

COMACO – LMP (200,000 ha)

BCP – CFP (700,000 ha)

BCP – LZRP (40,126 ha)

- Project based activities
- Voluntary Carbon Market (VCS)
- VCS Methodologies (VM0009, VM0015)
- Various accounting approaches
- Various pools
- Various gasses

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Scope of FREL and REDD+ projects

	BCP's LZRP	COMACO LMP	National FREL
Activities included	Avoided unplanned deforestation	Avoided unplanned (gross) deforestation	Gross deforestation
Pools* included	AGB, BGB, SOC DW, L→ conservatively excluded	AGB, BGB, SOC DW, L→assumed insignificant Soil inclusion→assumed that forests converted to cropland so carbon stock change can be significant	AGB, BGB, DW
Gases included	CO_2 only CF_4 and N_20 from biomass burning considered conservatively excluded	CO_2, and CH_4 from biomass burning (assumed significant, fire is used to convert forestland to agriculture; N_2O considered insignificant)	CO_2 only

*AGB = above ground biomass; BGB = below ground biomass; DW = dead wood; L = Litter, SOC = soil organic carbon

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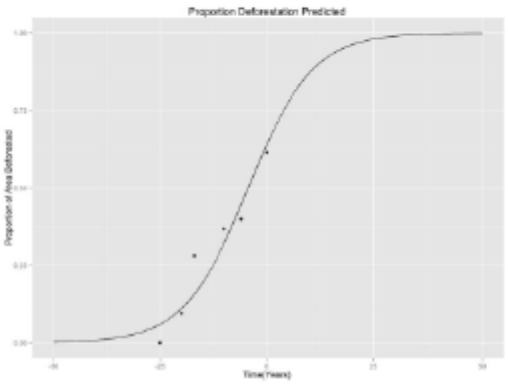
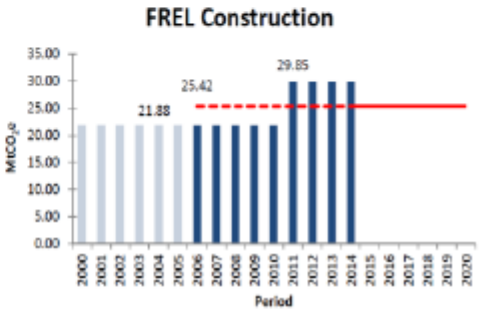
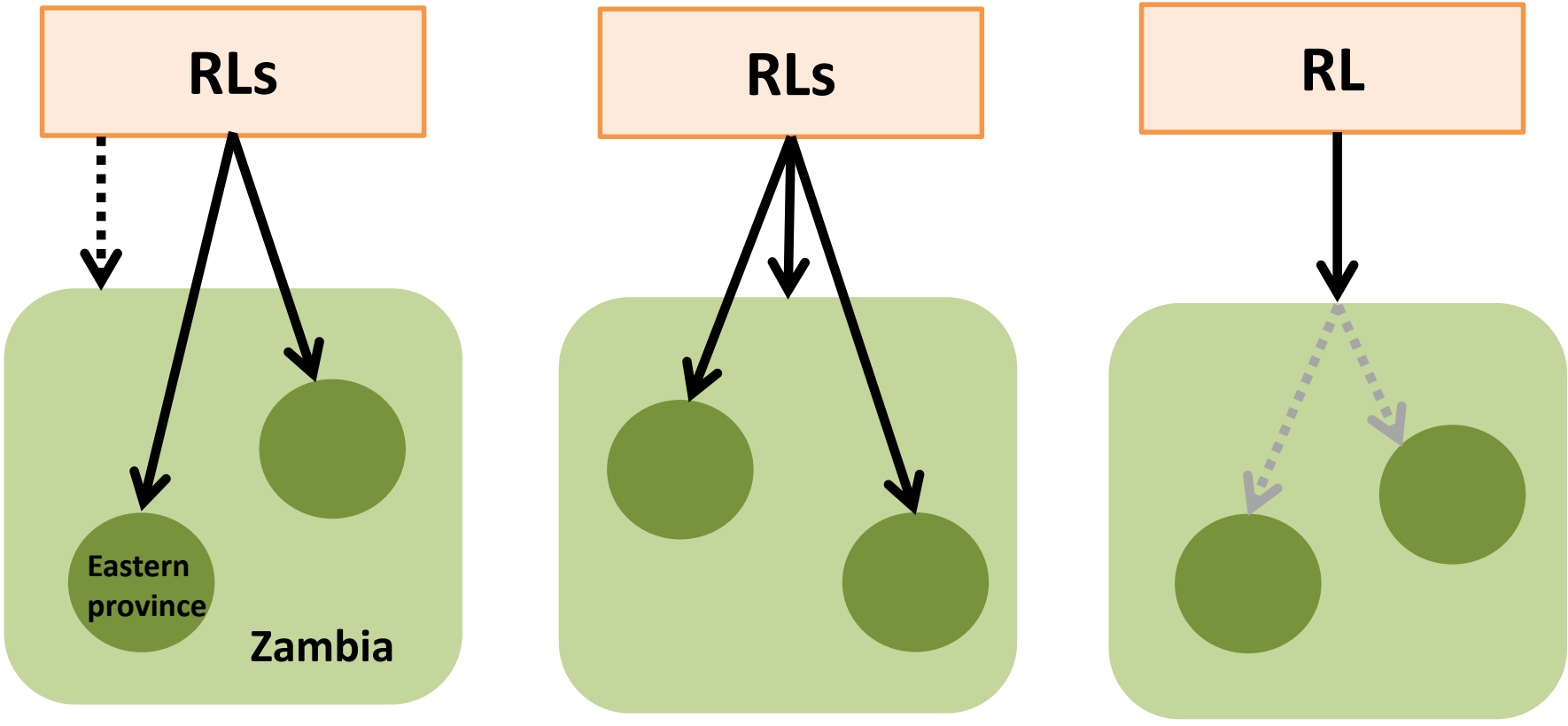
Differences between project baselines

	BCP's LZRP	COMACO's LMP	National FREL
Construction methodology	Ref. period: 1984-2009 Method: Logistic function 	Ref. period: 2002-2013 Method: Modeled emissions TerrSet Land Change Modeller was used to calculate expected deforestation based on the assumption that small-scale farmers are the main agent of deforestation; and therefore the key variables used in the model include distance to settlements and roads and topography.	Ref. period: 2006-2014 Method: Historical average 
Reference Level	**127,104 tCO_2e** on average per year over the first 10-year period OR **3.1 tons/ha/yr**	Ranging from **226,746 to 695,112 tCO_2e** on average per year over the first 10-year period (not including leakage and reversal discounts and ERs generated from non-CO_2 gases from reduced forest fires) OR **0.8 to 2.4 tons/ha/yr**	**25.42 $MtCO_2$** per year which is equivalent to **0.3 tons/ha/yr** (It is expected that a national FREL would have a lower per ha expected emissions rate since projects, ostensibly, choose higher-risk areas in which to operate)

Accounting/crediting at multiple levels

national/province levels



Jurisdictional only

Jurisdictional + National

National only

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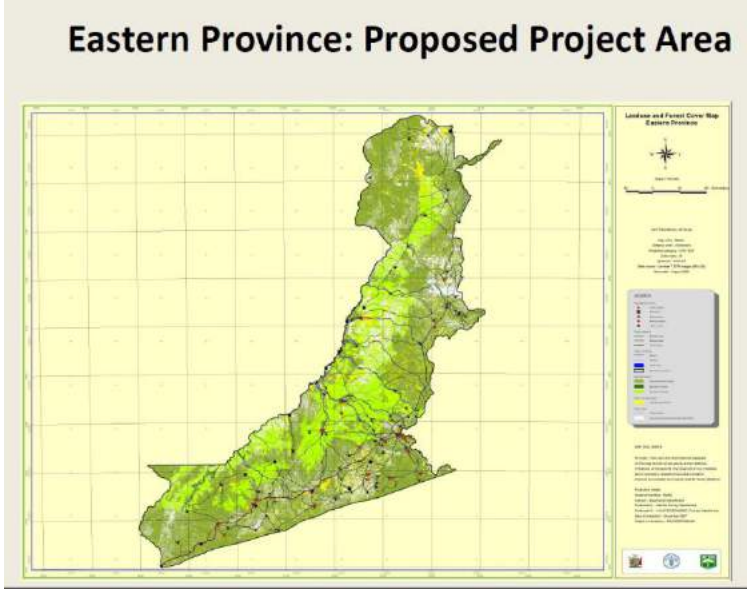
Activity Data

BCP's LZRP	COMACO's LMP	National FREL
Landsat imagery from 1984, 1989, 1992, 1999, 2002, 2009 of the reference area Stratification: Forest and non-forest Statistical sampling method using stratified random grid of 2600 points analyzed using visual interpretation to classify (into forest or non-forest) and this data used to create the logistic function applied to the accounting area. Uncertainties of baseline estimation calculated and assumed to be insignificant.	Landsat imagery for 2002, 2007 and 2013 for entire reference area Stratification: Forest and non-forest (agriculture, burned areas or water) Wall-to-wall land cover change using semi-automated detection; validation with high resolution imagery from Google Earth (Digital Globe imagery, 1m resolution) Map (LULC) accuracy was assessed, but a bias correction not employed for calculating the baseline.	Landsat imagery for 2000, 2010, 2014 across entire country Stratification: Forest and non-forest Wall-to-wall land cover change using semi-automated detection; base map = 2010 land cover map (89% accuracy on forest land, 85.5% overall accuracy); 2000 and 2014 map created based on direct change detection per pixel. Olofsson method used for accuracy assessment (using higher resolution imagery for validation) leading to area adjustment (i.e. bias correction).

Eastern Province



- 5,152,000 ha total
- Pilot project supporting jurisdictional approach:
  - World Bank-COMACO: 500,000 ha (10% of province)
  - USAID/BCP: 700,000 ha (13.6%)
  - Norway/COMACO: 160,000 Targeted

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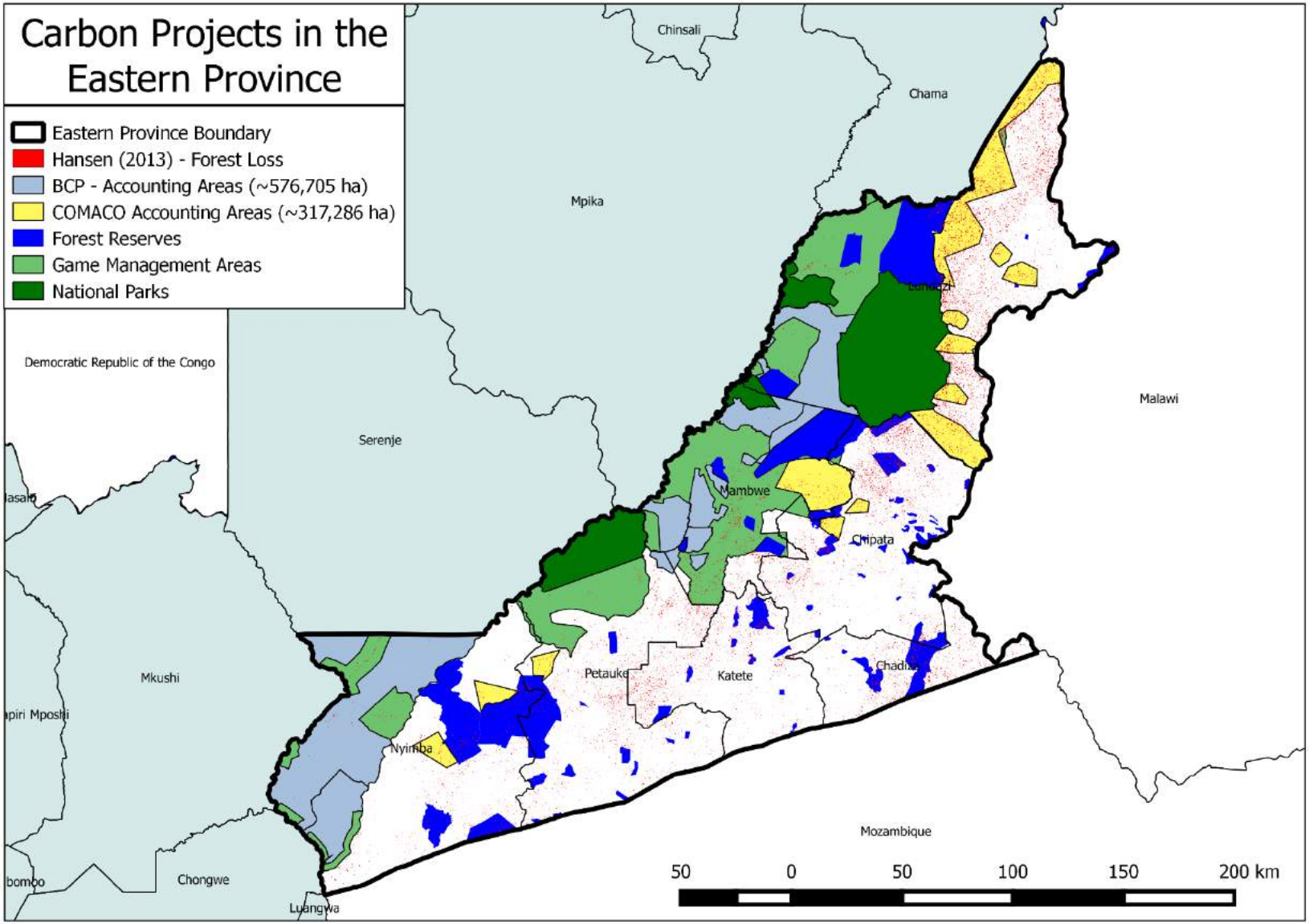
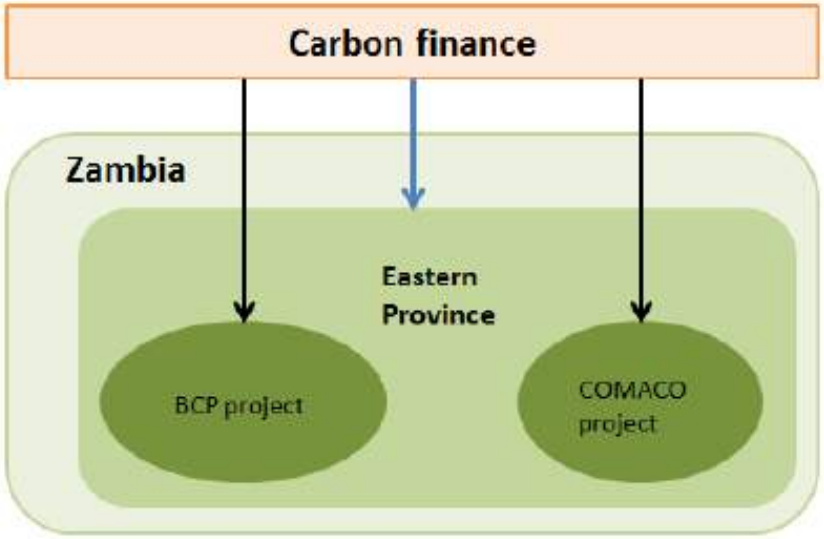
Accounting Areas vs Reference Areas

ZIFL-P (Eastern Province)



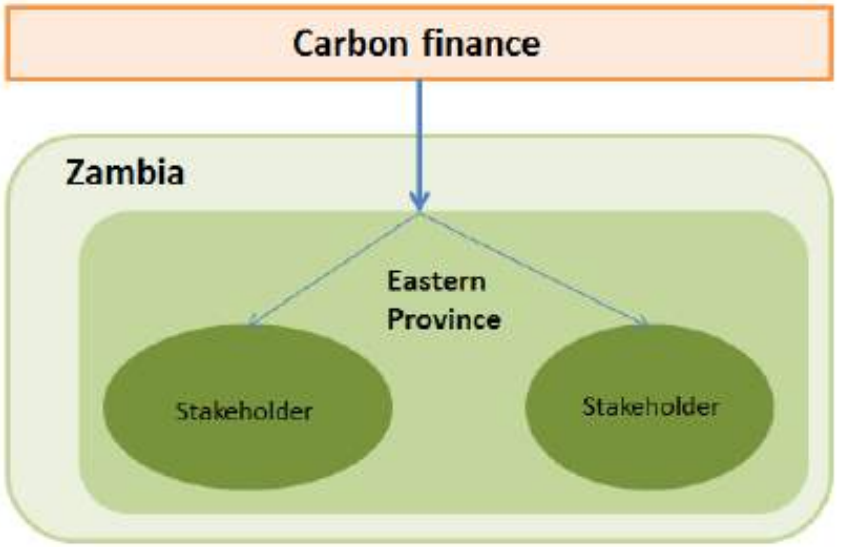
Scenarios for REDD+ “nesting”

Scenario A: Crediting at multiple scales



Project and provincial baselines and crediting

Scenario B: Crediting only at the higher scale



Provincial baseline for top-level crediting (only) with distribution to stakeholders based on agreed criteria

Scenarios for REDD+ "nesting" cont…

	Scenario A	Scenario B
Advantages	○ Projects can stimulate investment and provide early incentives—and early results ○ Clearer linkage between performance and incentives at the project scale ○ Reduces risk for REDD+ projects, i.e. not related to province-wide performance ○ Projects can often attract additional investments (e.g. from the private sector) ○ Allows tailoring of interventions to suit local circumstances ○ Lower risk to projects as their return on investment is not dependent on overall province wide performance (i.e. they may operate somewhat separately from the provincial wide program)	○ No risk of double counting ○ Can base sharing of carbon finance on a range of criteria that incentivizes more than just carbon performance ○ Reduces risk of leakage ○ Avoids situation where communities must negotiate contracts with project developers (and are often disadvantaged in doing so) ○ Avoids problems with a lack of transparency if projects are reluctant (or unwilling) to release information ○ Can potentially save transaction costs (including measurement, monitoring, reporting and validation/verification) if a single monitoring system is in place
Challenges	○ Double counting and consistency in how ERs are generated across projects	○ Development of a system to share carbon finance across the jurisdiction
Risk Management	To mitigate risks to communities, the government may create regulations that require minimum transparency, assist communities in negotiating fair contracts, and play a role in baseline setting of projects.	To minimize risks to projects, the government may agree to provide projects with a minimum floor of performance-based payments, e.g. if the province as a whole does not perform (but the project area does), then the government could provide payment from its own budget; alternately, it may then allow projects to sell credits in, e.g. voluntary carbon markets.

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END