

Economic assessment of REDD+ options:

Valuing the Arc in Tanzania

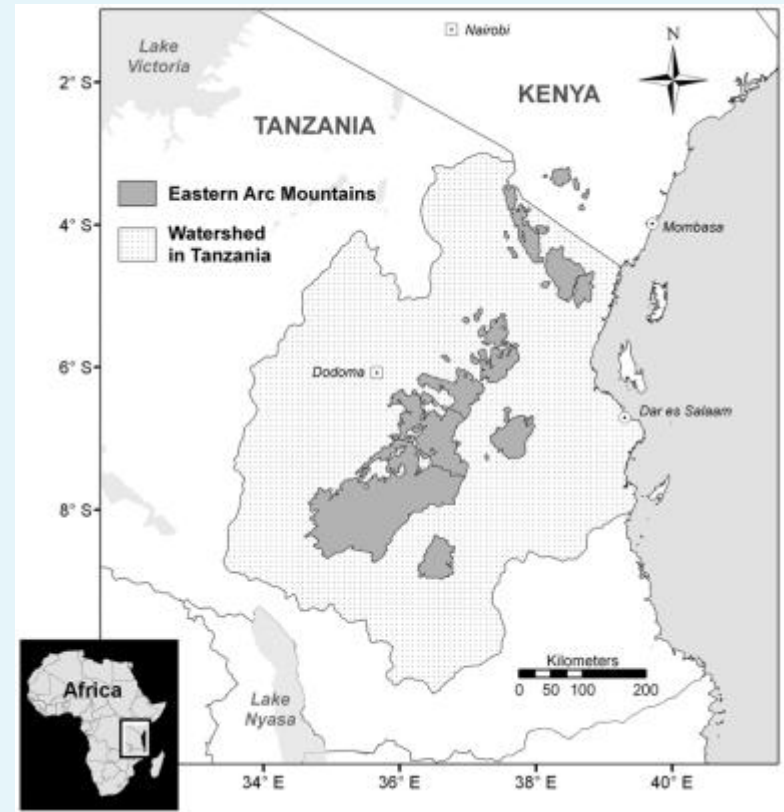
REDD+ beyond carbon workshop – 14 November 2012

Neil Burgess

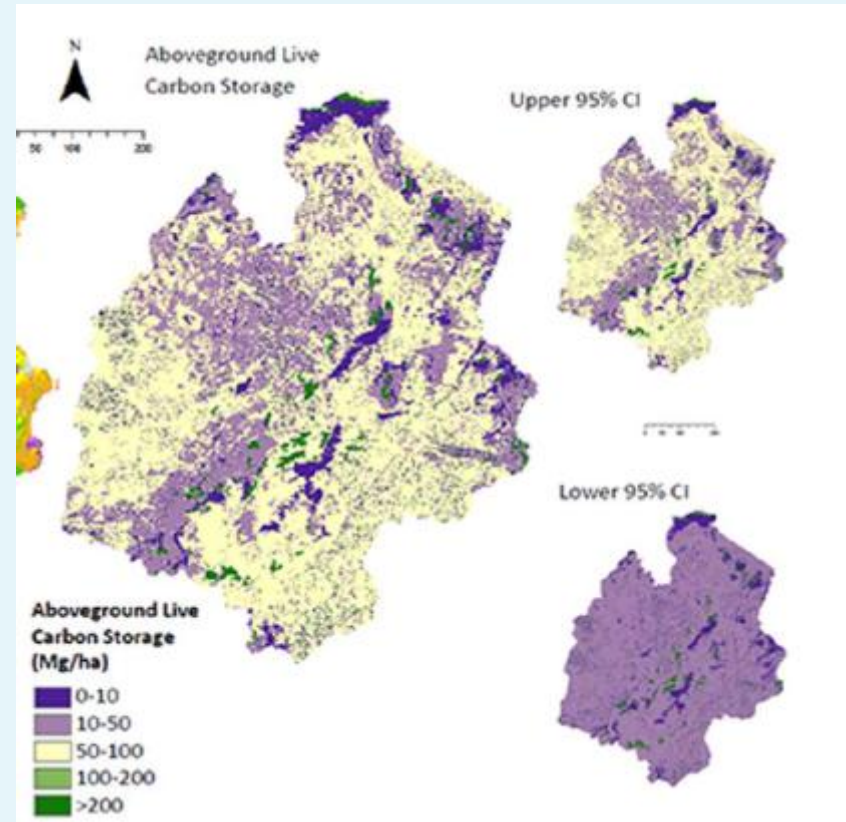
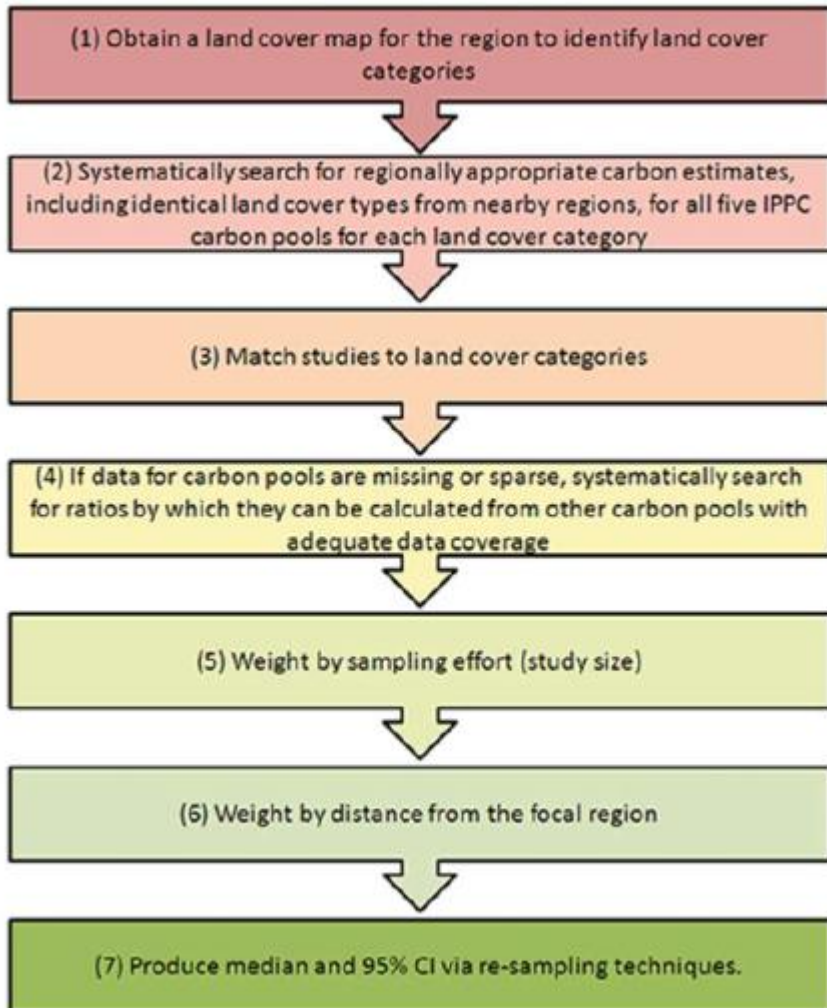
UNEP – World Conservation Monitoring Centre

1. Background

- 5 Year research programme in Tanzania
- Tanzanian Universities, WWF, Government, UK Universities
- Carbon mapped
- REDD co-benefits mapped out at national scale
- Regional scale scenarios developed
- Opportunity and management costs quantified
- Link to UN REDD moving forward



2. Carbon mapping



Willcock S, Phillips OL, Platts PJ, Balmford A, Burgess ND, et al. (2012) Towards Regional, Error-Bounded Landscape Carbon Storage Estimates for Data- Deficient Areas of the World. PLoS ONE 7(9): e44795. doi:10.1371/journal.pone.0044795

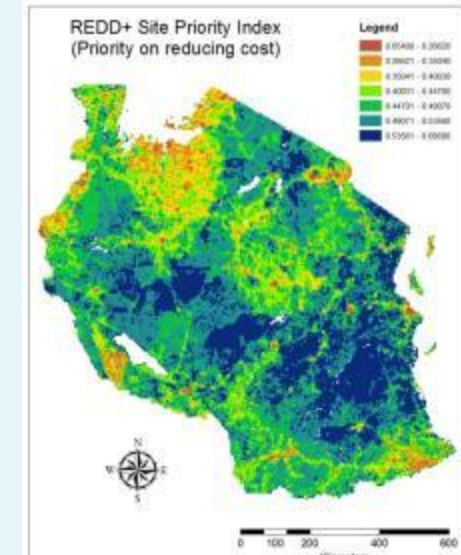
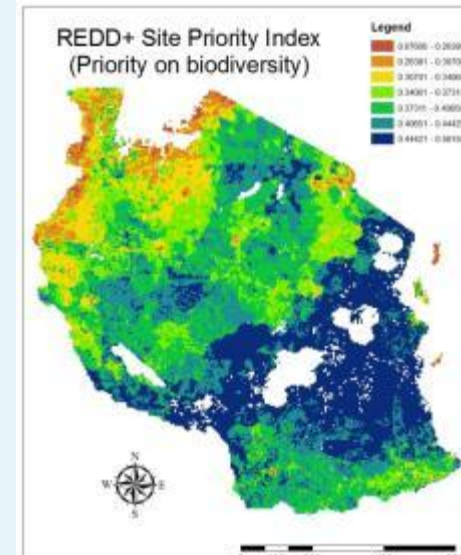
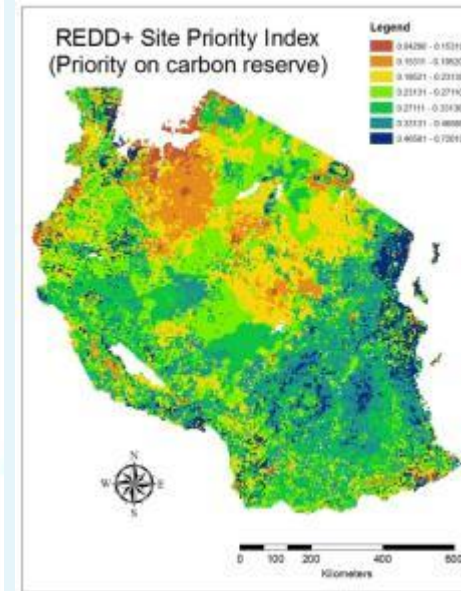
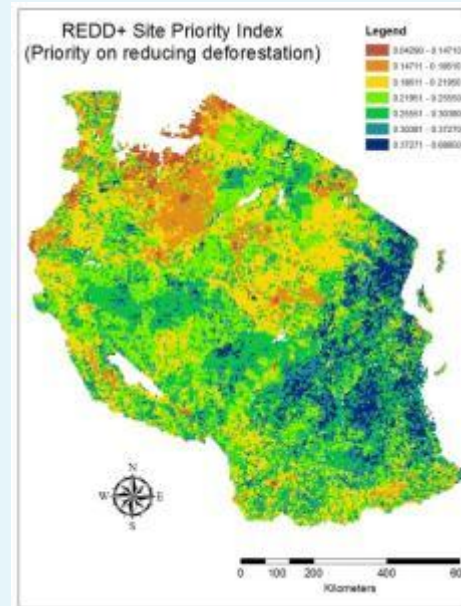
3. Co-benefit mapping

Compile GIS on

- Carbon
- Biodiversity
- Land prices
- Social costs
- Protected Areas
- Roads
- Population

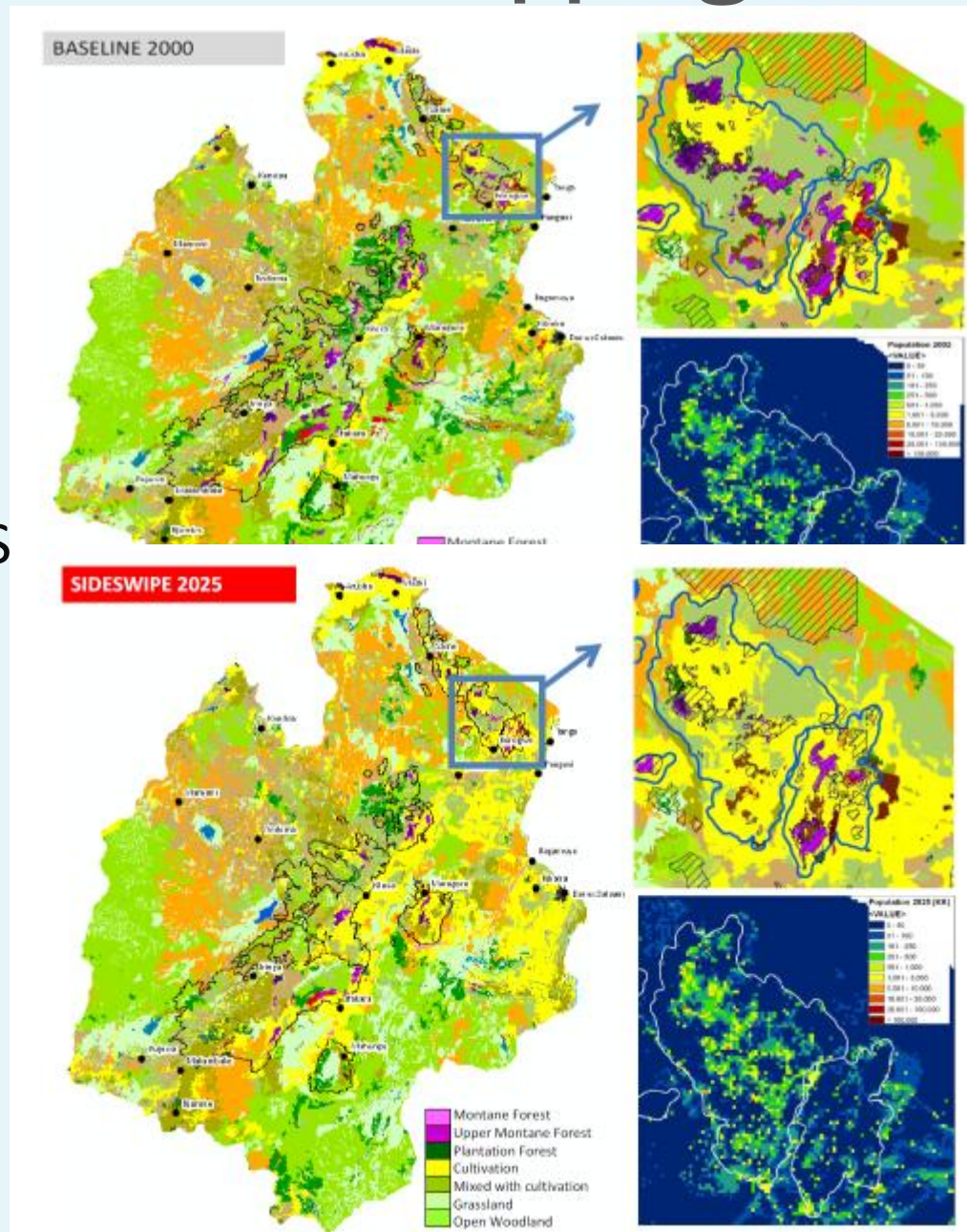
Develop scoring system

Apply scores to GIS and develop different maps of REDD+ priority with focus on different attributes of value



4 Scenario mapping

- Start from landcover map
- Develop scenarios
- Code scenarios as rules in GIS
- Build new landcover map
- Convert landcover to carbon
- Can be used for biodiversity and other ecosystem service outcomes

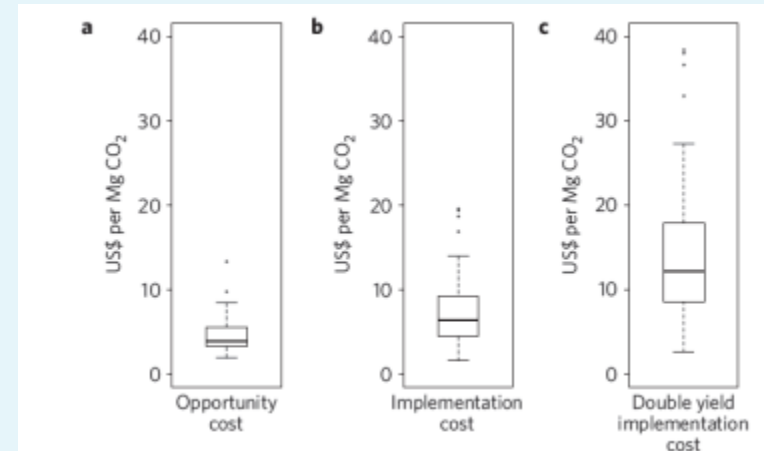
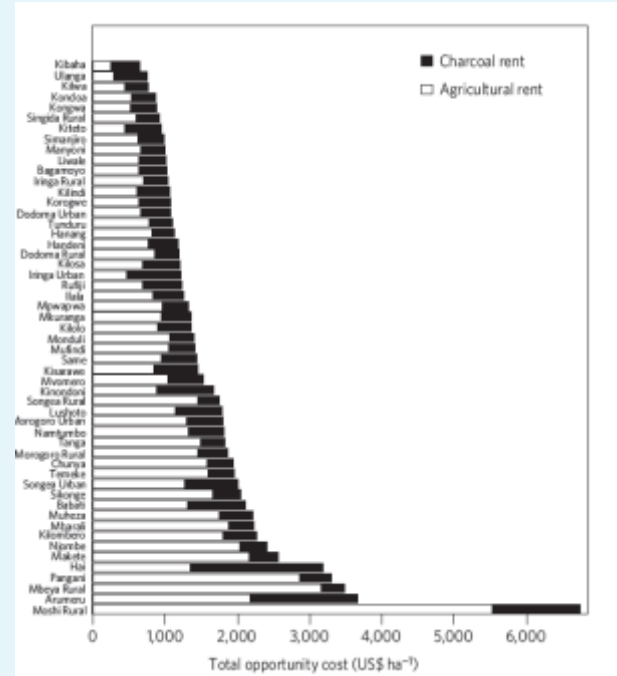


5. Opportunity and management costs

Data on

- 9 forest and woodland types
- 5 carbon pools
- agricultural yield and production data for 85% of area
- cost data for land, seed, fertilizer, labour, transport
- regional market data
- charcoal production data
- charcoal cost and profit data

Calculated opportunity cost to be offset by REDD+ if has hope to be economically sustainable



6. Conclusions

- **Carbon models can be developed from landcover and available plot data**
- **Confidence limits can be placed on these models**
- **Co-benefit maps and tradeoffs can be mapped from available data in GIS with simple weightings**
- **Landuse scenarios and future carbon can be calculated in GIS with input from national workshops**
- **Opportunity and implementation costs can be measured from national statistics and models can be developed indicating if REDD+ might be economically viable**

