Conservation Land-Use Planning in the Maringa-Lopori-Wamba Landscape, Democratic Republic of the Congo

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The Maringa-Lopori-Wamba (MLW) Landscape
Monitoring Forest Loss

Fire Density in MLW 2008
- High
- Low
- Roads
- Protected Areas

0 35 70 140 Kilometers
Analyses of land cover change underway to understand the extent of human encroachment into more remote areas.

Forest loss from the Decadal Forest Change Mapping (DFCM) program, SDSU and UMD

Distances from roads
Conservation Prioritization

Hunting Accessibility

Habitat Degradation

Threats to Biodiversity in MLW
A threat-based approach to conservation prioritization

Least-disturbed areas have a higher chance of containing unaltered, indigenous ecosystems (Noss 1983)
Conservation Prioritization

Conservation Prioritization in MLW

- Connectivity areas
- Core forest blocks

Corridor development
Improving a plan for sustainable agricultural expansion

Development of a Land-Use Plan

1-km buffer around existing roads

(Hypothetical, tailored according to spatial distribution of human populations and locations of conservation priority)
Development of a Land-Use Plan

Suitability for future agricultural expansion in MLW, 2015

Conservation Scenario 1

- **Orange**: Rural Development Zone: Proposed areas for future agricultural expansion (modeled to 2015)
- **Red**: Areas of existing agriculture and human settlement
- **Gray**: Protected areas and reserves
Development of a Land-Use Plan

Suitability for future agricultural expansion in MLW, 2015

Conservation Scenario 1

- Rural Development Zone: Proposed areas for future agricultural expansion (modeled to 2015)
- Areas of existing agriculture and human settlement
- Protected areas and reserves
- Wildlife connectivity areas