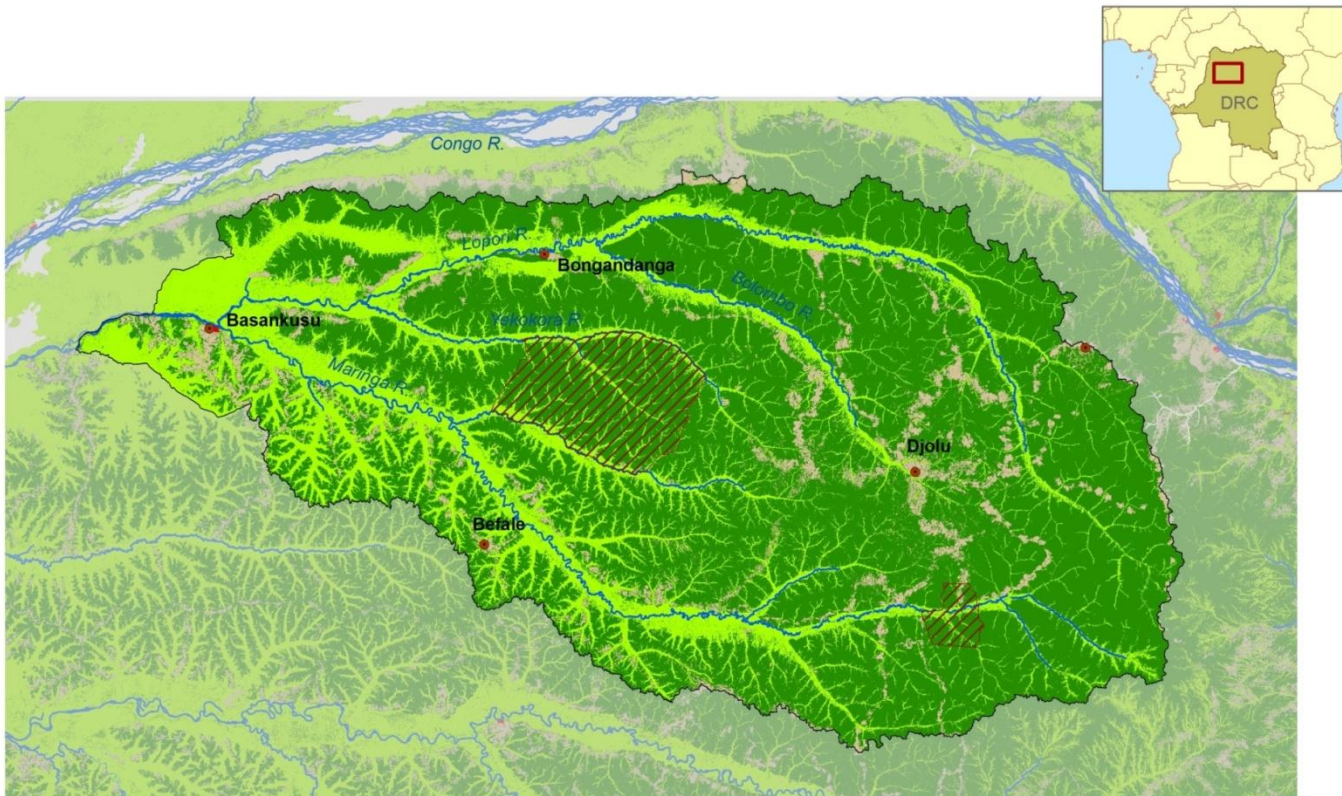








# **Conservation Land-Use Planning in the Maringa-Lopori-Wamba Landscape, Democratic Republic of the Congo**

**Janet Nackoney, Department of Geography  
University of Maryland**



# The Maringa-Lopori-Wamba (MLW) Landscape



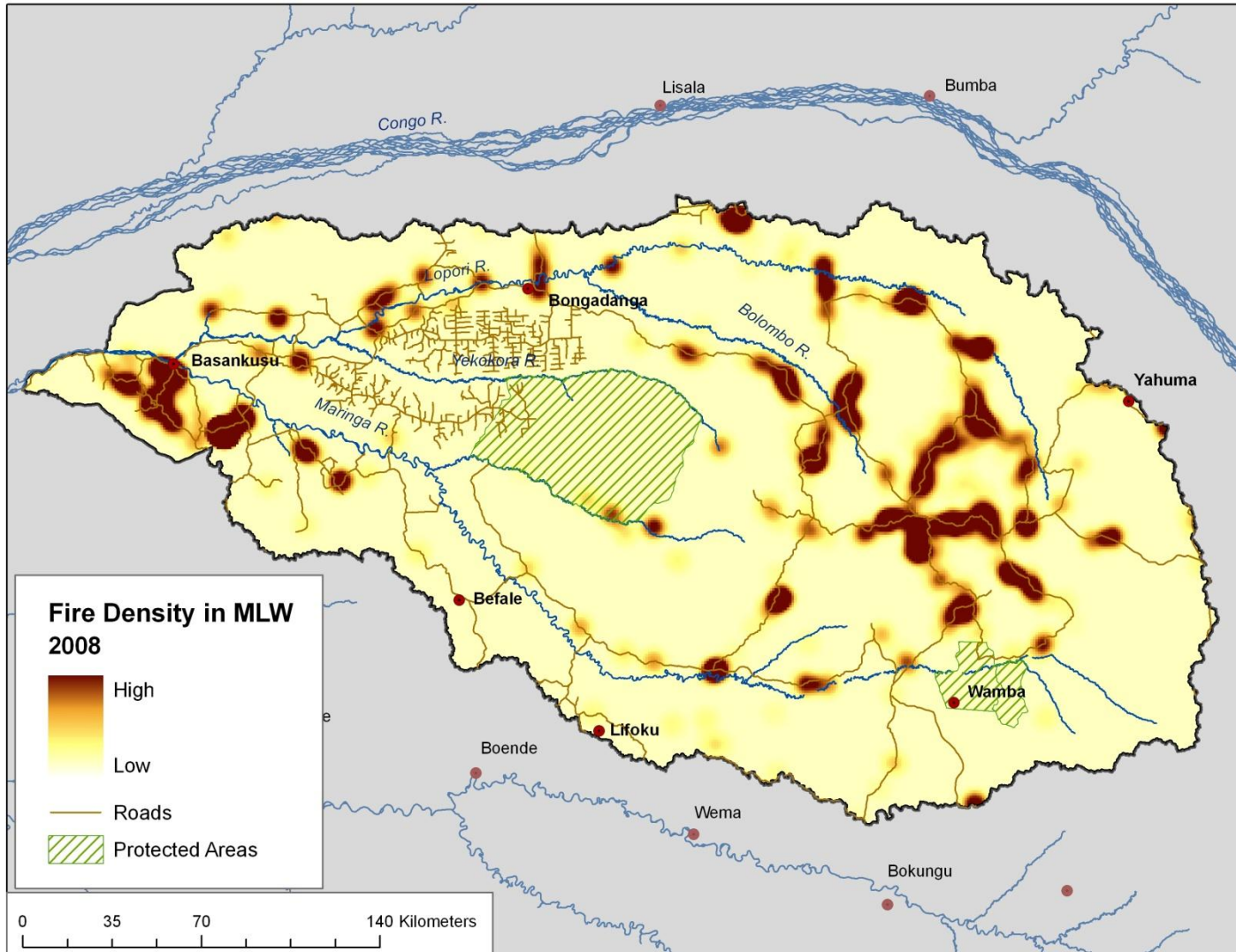
-  Protected Areas
-  Swamp forest
-  Dense moist semi-deciduous and evergreen forest
-  Agriculture and young secondary forest
-  Urban
-  Water

0 30 60 120 Kilometers



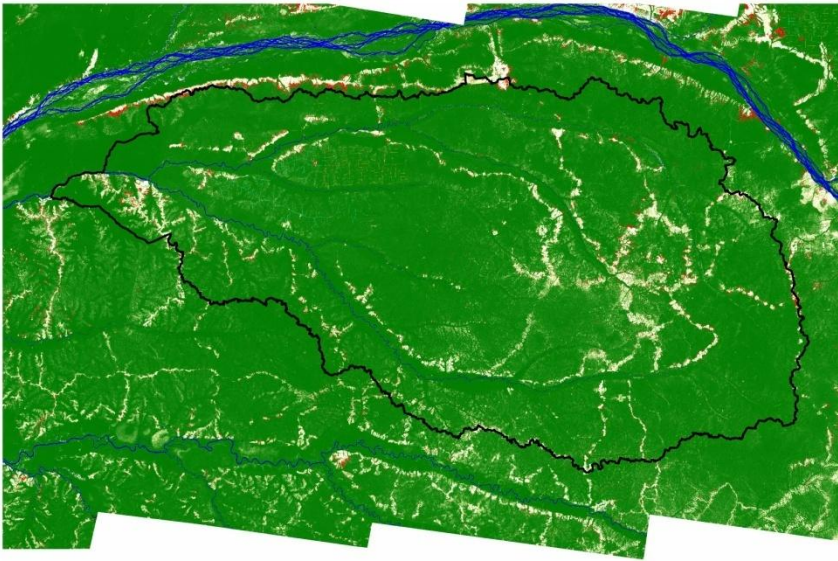


# Monitoring Forest Loss

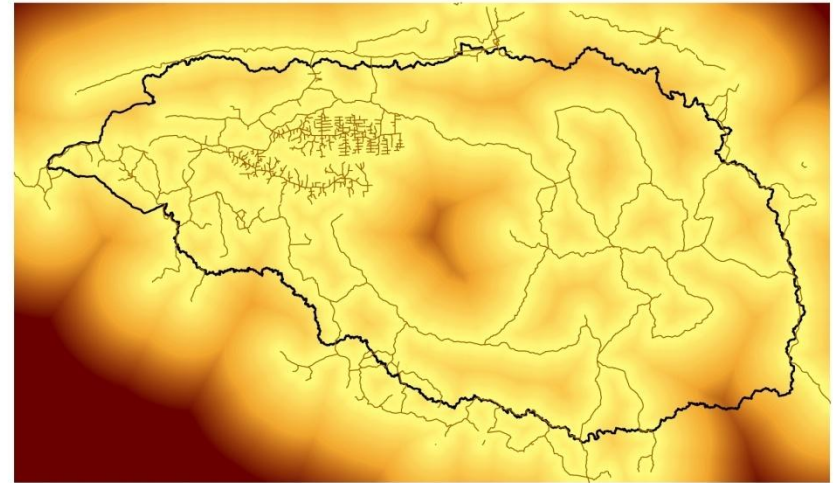


# Monitoring Forest Loss

Analyses of land cover change underway to understand the extent of human encroachment into more remote areas

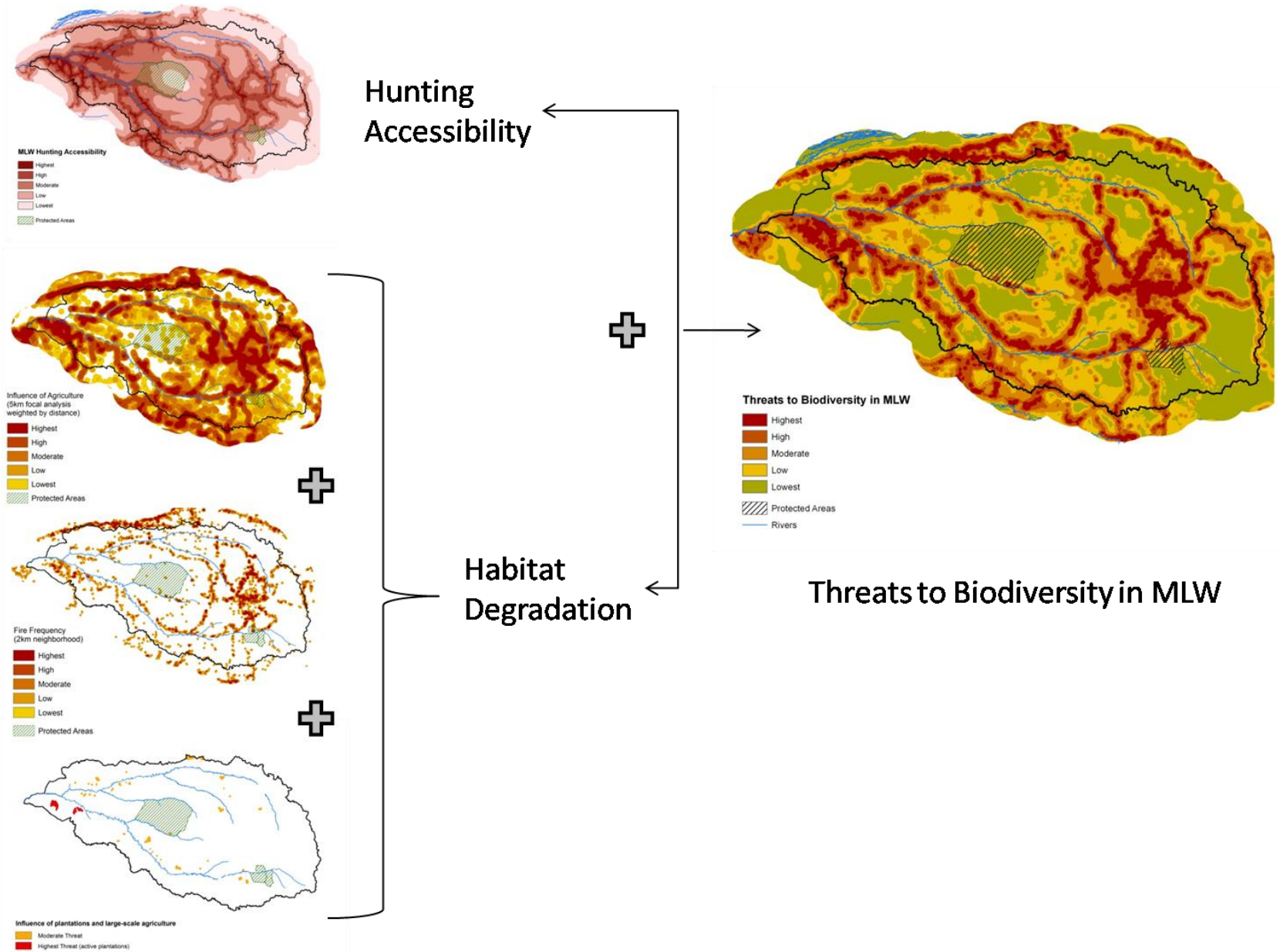


Forest loss from the Decadal Forest Change Mapping (DFCM) program, SDSU and UMD



Distances from roads

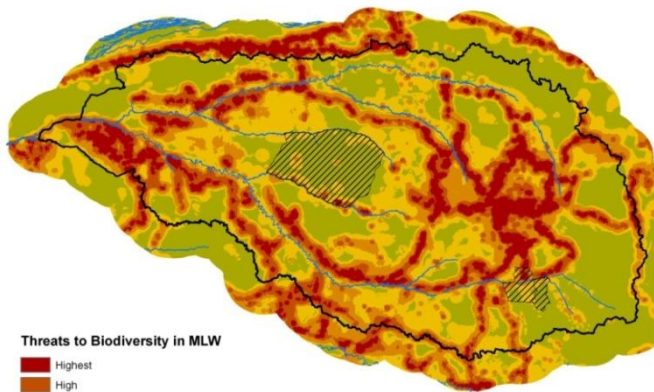
# Conservation Prioritization





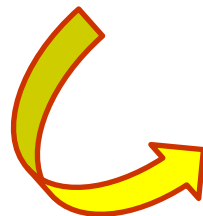
# Conservation Prioritization

A threat-based approach to conservation prioritization

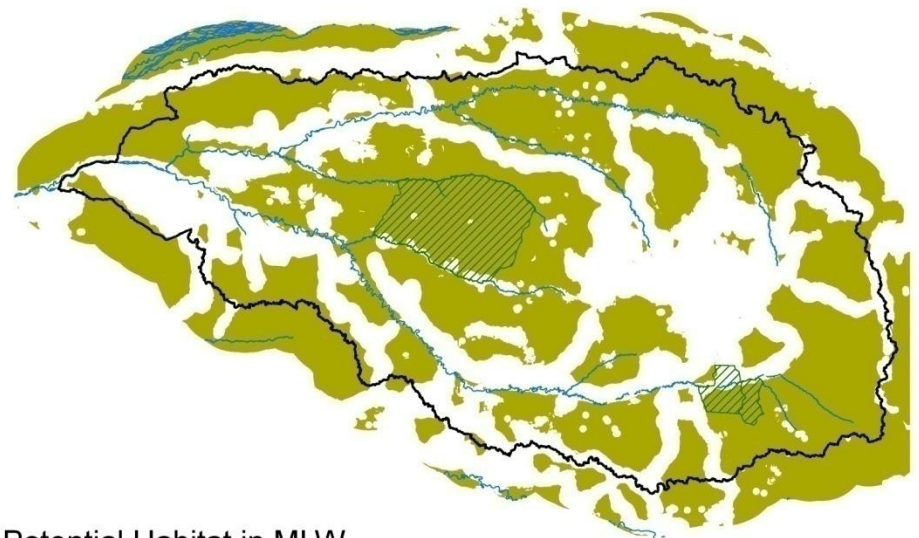


Threats to Biodiversity in MLW

- Highest
- High
- Moderate
- Low
- Lowest
- Protected Areas
- Rivers



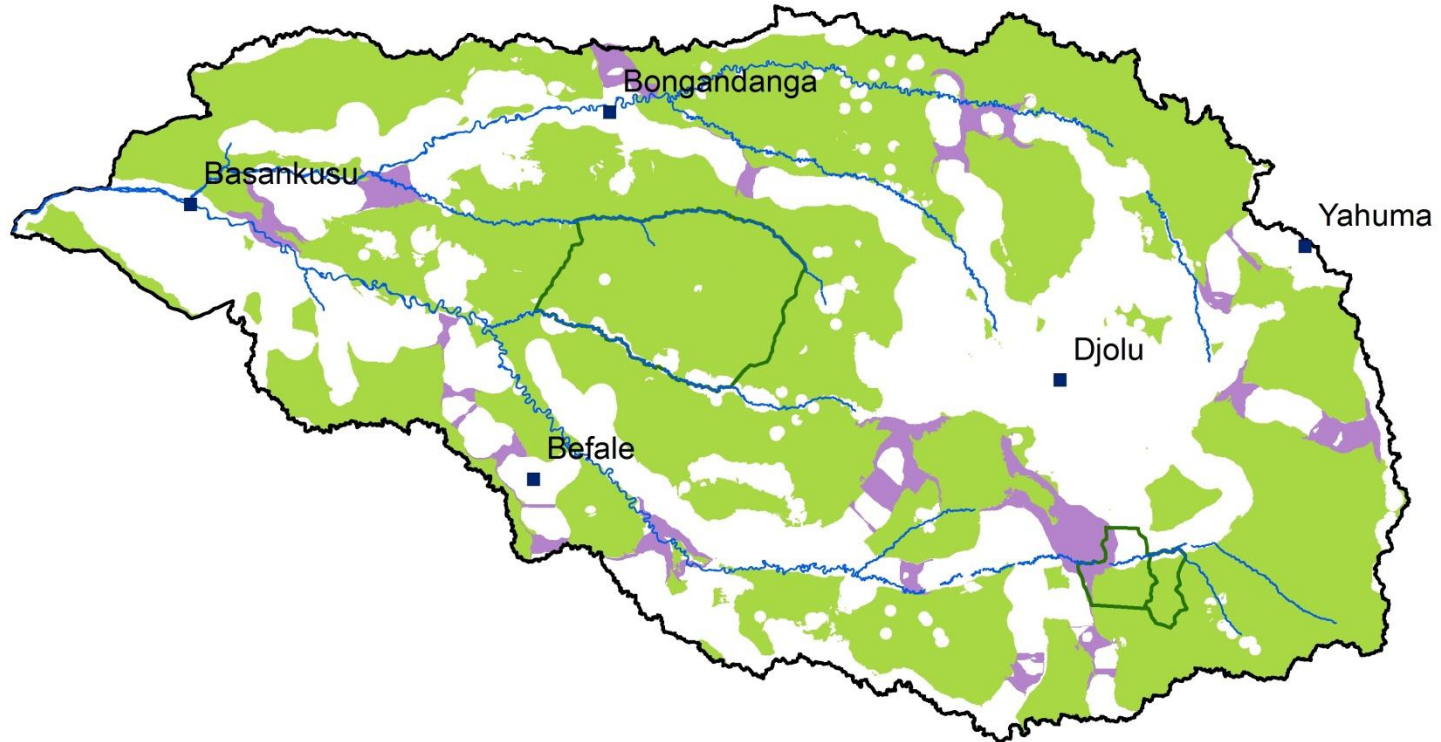
Least-disturbed areas have a higher chance of containing unaltered, indigenous ecosystems (Noss 1983)





Potential Habitat in MLW

- Least-disturbed forest blocks
- Protected Areas

# Conservation Prioritization



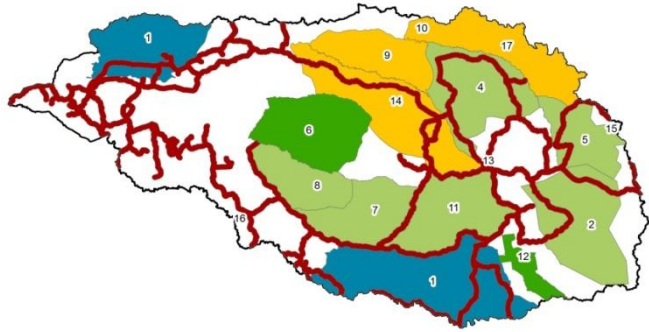
## Conservation Prioritization in MLW

-  Connectivity areas
-  Core forest blocks

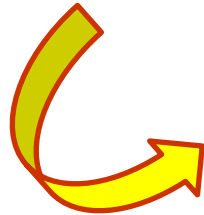
Corridor development

# Development of a Land-Use Plan

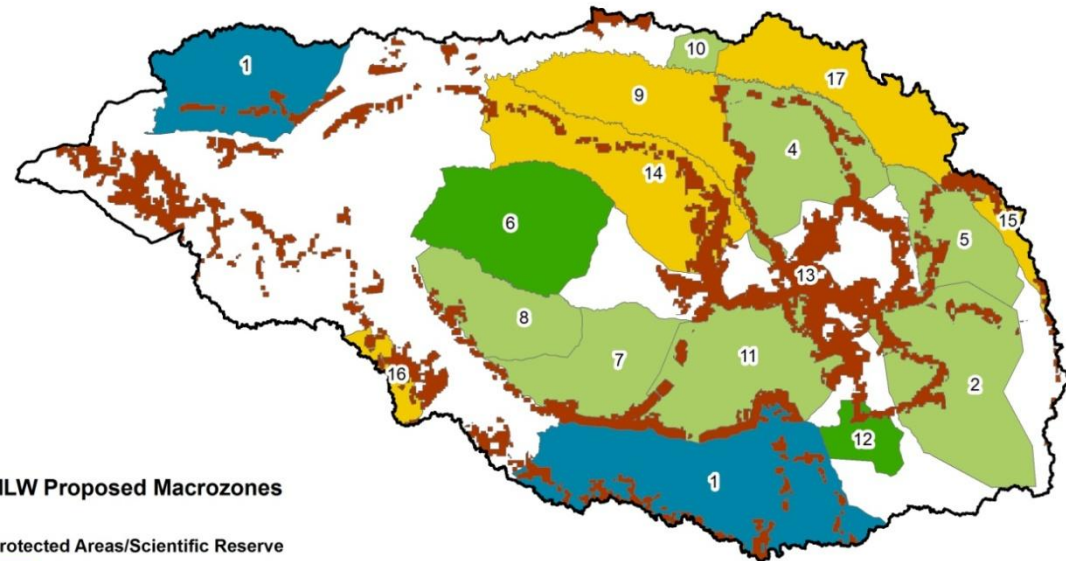
Improving a plan for sustainable agricultural expansion



1-km buffer around existing roads



(Hypothetical, tailored according to spatial distribution of human populations and locations of conservation priority)



## MLW Proposed Macrozones

### Protected Areas/Scientific Reserve

- Lomako Faunal Reserve (6)
- Extension- Luo Scientific Reserve (12)

### Rural Development Zone

- Agriculture (13)

### Humid Zone

- Wetlands (1)

### Community Forests

- Cadjobe CBNRMA (11)
- Corridor CBNRMA (7)
- Kokolopori (2)
- Lomako CBNRMA (8)
- Lopori Congo area (10)
- Yahuma area (5)
- Yala CBNRMA (4)

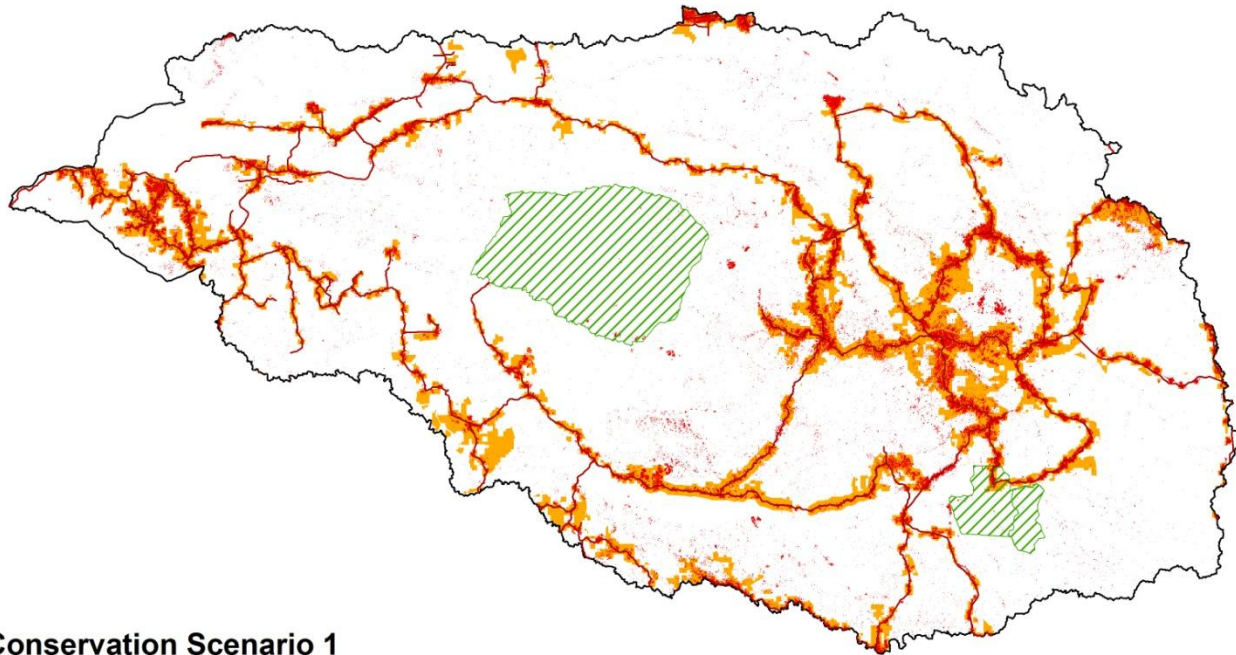
### Logging Concessions

- CFT (15)
- SEDAF (17)
- SIFORCO K7 (14)
- SIFORCO K2 (9)
- SOFORMA (16)






# Development of a Land-Use Plan

Suitability for future agricultural expansion in MLW, 2015

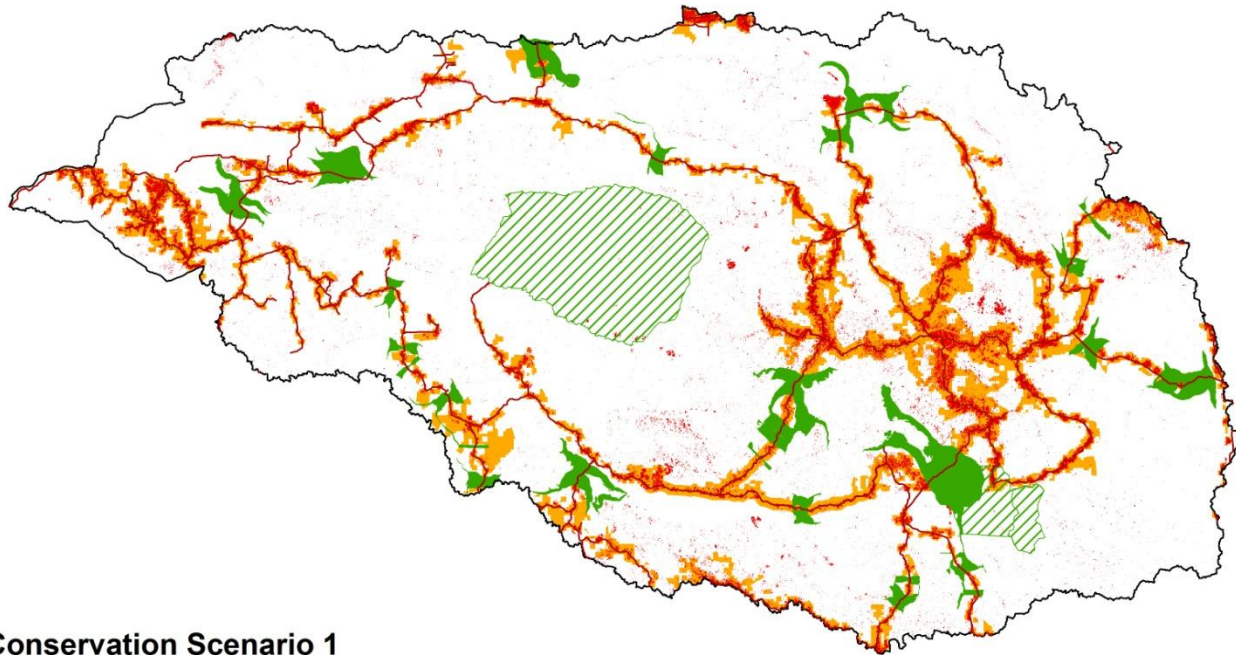


## Conservation Scenario 1





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

# 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