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# Biomass utilization for rural development around the Biosphere Reserve of Yangambi (DRC)

## Namibian Biomass Symposium



- MSc in bioscience engineering: forest and nature management
- Scientific collaborator at the RMCA (Belgium) and PhD student at the University of Gent (Belgium)



- Working in the DRC for the FORETS project (EU funded and implemented by CIFOR)

### Activities:

Research in forest ecology and management, tree growth analysis, wood anatomy

Management of Yangambi's new wood biology laboratory



# 1. The current situation in the DRC



More than 40 millions inhabitants live in rural areas



Only 1 % of rural households have access to electricity



# What are the available sources of renewable energy?

- Hydroelectric potential technically exploitable  
→ 774 000 GWh per year
- Solar energy potential is also significant (but cloud cover and regular rains)
- Wind potential is quite mediocre with speeds  $< 5\text{m/s}$









## 2. The FORETS project



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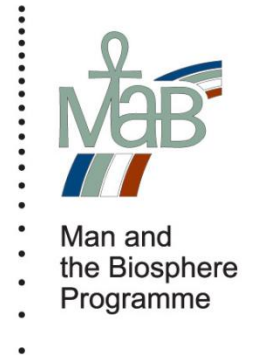


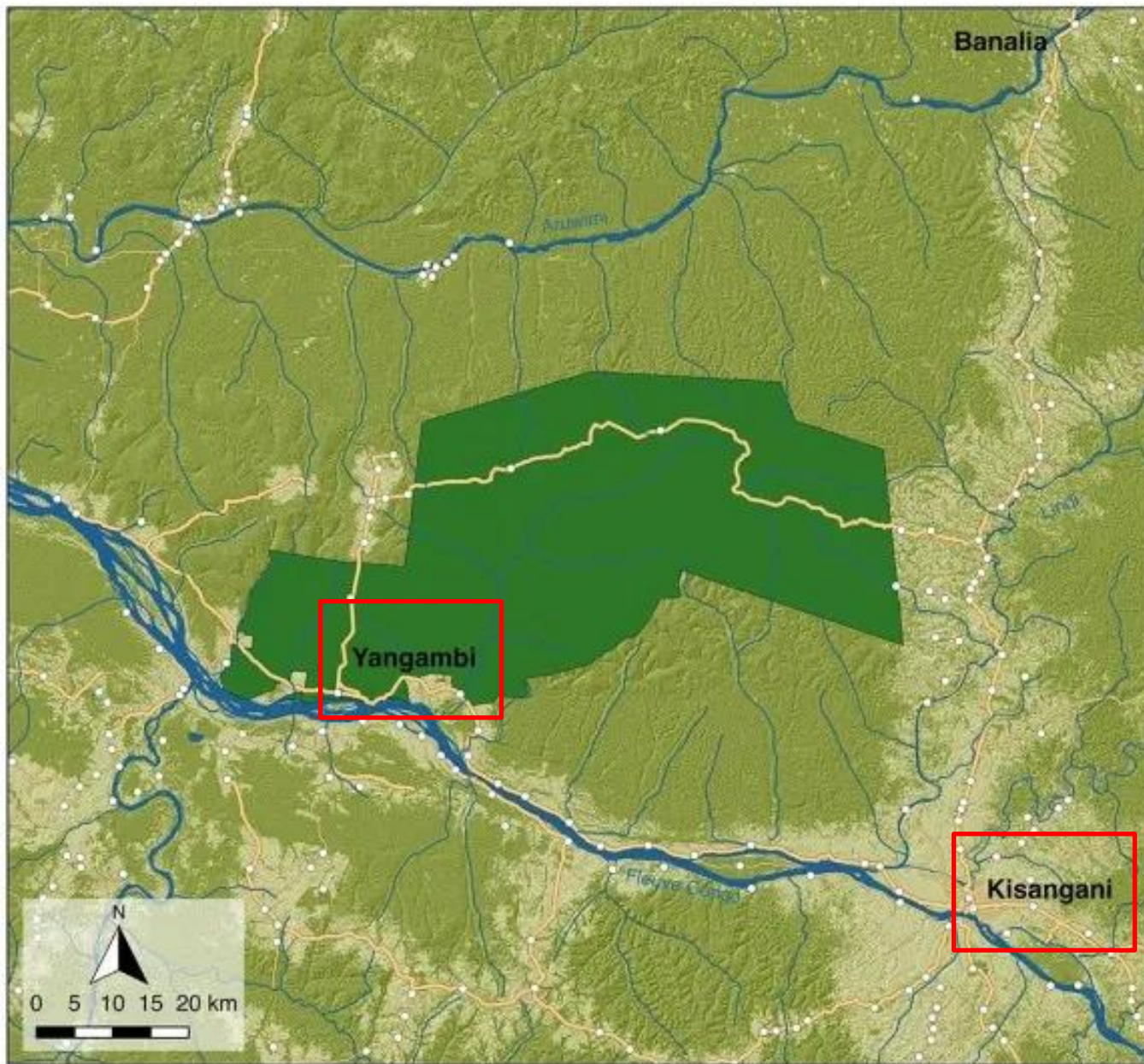
*Development, university training and scientific research for better management of natural resources (FORETS)*

The specific objectives are the conservation and the sustainable use of the biodiversity and ecosystem services alongside local economic development in the area.



This project, which is funded by the European Union, is led by CIFOR





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# Réserve de Biosphère de Yangambi

République Démocratique du  
Congo

Province de la Tshopo



## Légende

- Village
- Cours d'eau
- Route principale
- Route secondaire
- Réserve de Biosphère de Yangambi



# 3. Yangambi





# Two main issues

- High pressure on the Biosphere Reserve
- No access to electricity

→ How can we address those issues?



- help local communities living near the reserve manage natural resources more effectively
- Improve their livelihoods
- Provide an alternative source of fuelwood
- Provide electricity

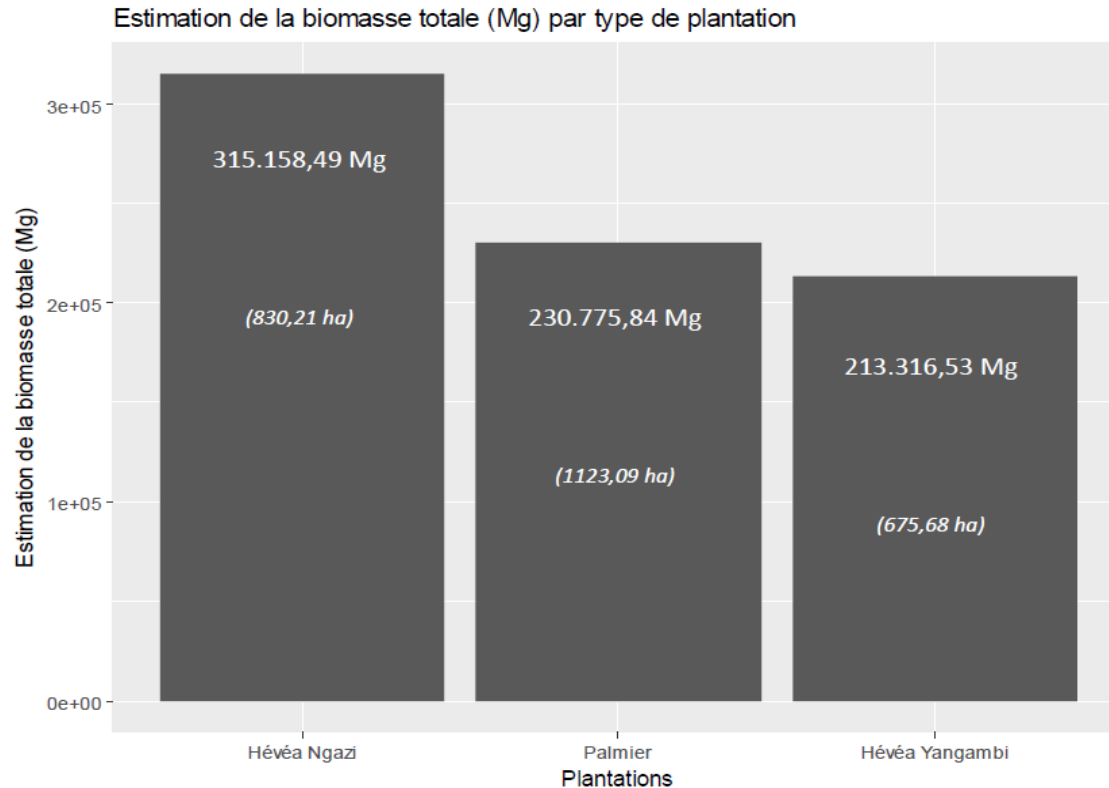




Biomass available and can create work while  
reducing pressure on the Reserve



# Available biomass in old plantations



- In Yangambi, **245 t/ha**
- Total area of **1 800 ha**



# Tree nursery



*Acacia auriculiformis* and native species



# Plantations



After 5 weeks:  
234.000 trees planted  
300 ha  
~400 workers



# Next steps

- Continue the tree nurseries
- Plant 600 ha per year
- Identify the adapted technology to provide power and heat



# Thank you for your attention

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