

# Uses and importance of wild fungi: traditional knowledge from the Tshopo province in the Democratic republic of the Congo

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# General context : Role and importance of fungi

- ❑ Wild fungi Play a key role in the functioning of natural ecosystems, especially in nutrient cycling and organic matter decomposition
- ❑ Mycorrhizal fungi increase plants productivity and their resistance against stresses
- ❑ Fungi are an important non timber forest product that directly or indirectly impact on human being subsistence



# Local context in the province of Tshopo

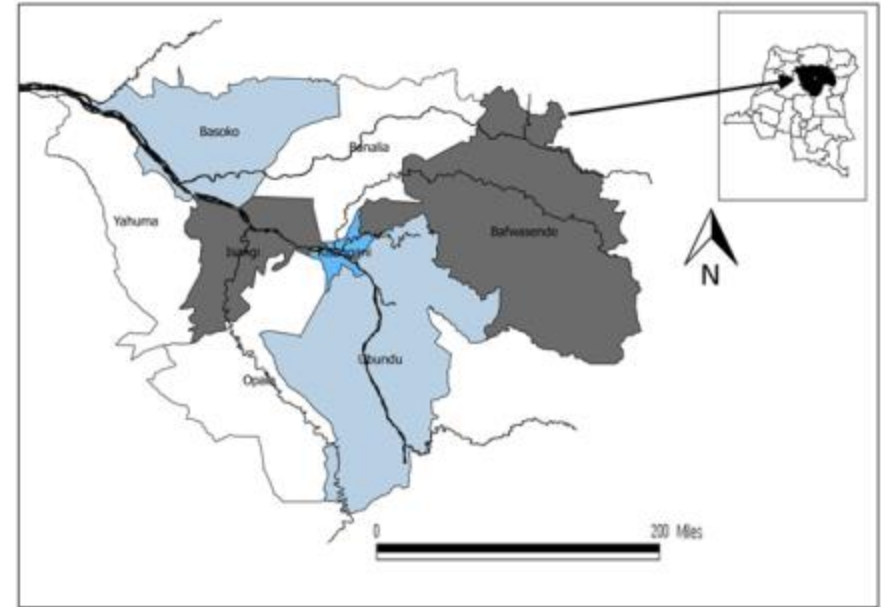
- Most of people involved in mushrooms harvest
- Constitute important food and source of income for local communities
- Source of proteins, vitamins, fats, carbohydrates, amino acids and minerals
- Provide chemical contents used as medicine



# Statement of the problem

Tshopo province is dominated by rainforests that host a high fungal diversity

Fungal resources constitute one of the main NTFPs locally used

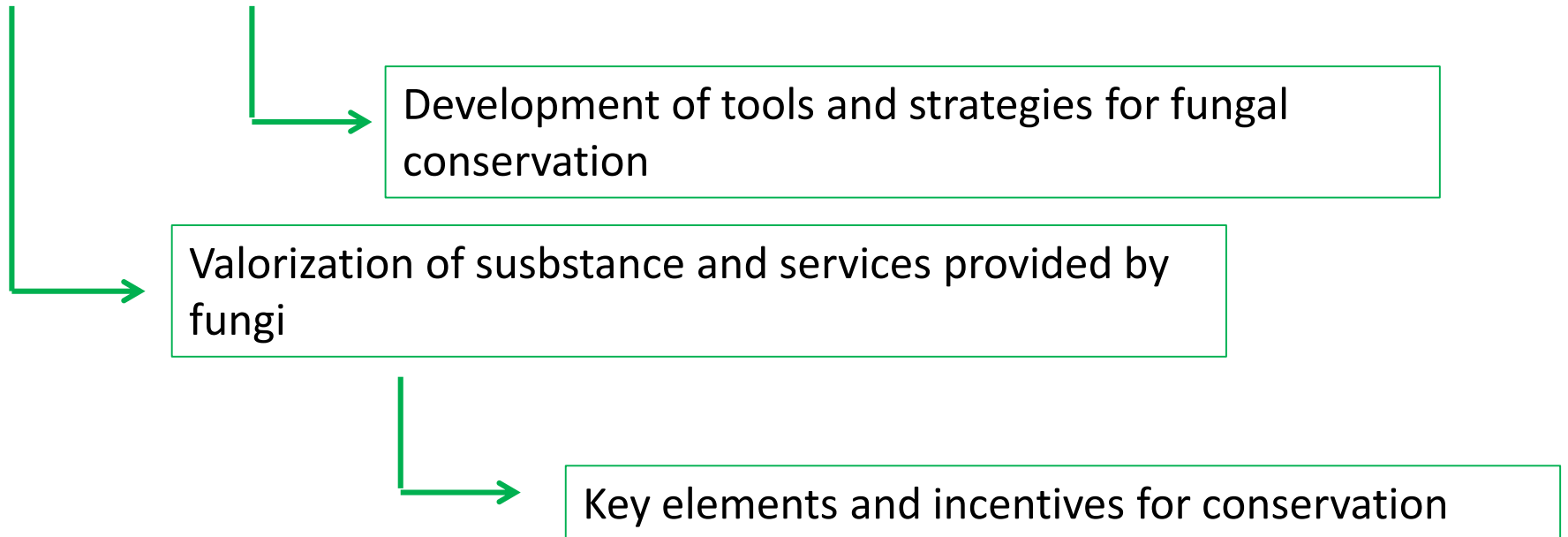


## However:

- Written documentation is extremely rare and inaccessible
  - Documentation on fungi is incomplete
- Knowledge transfer is oral
  - Existing knowledge is vast but fragile and prone to loss
  - Existing information is isolated, not shared

# Study significance and objectives

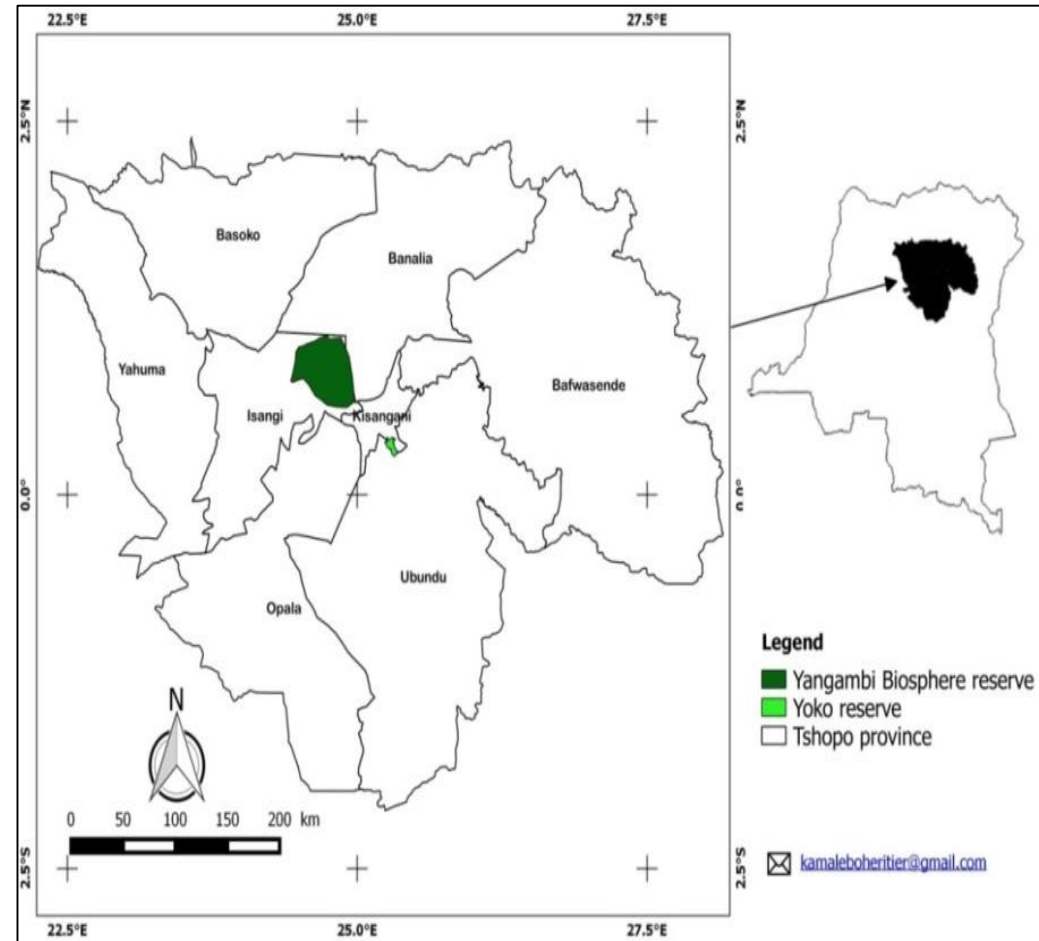
- ❑ Document the useful fungi and uses categories
- ❑ Assess the cultural significance



# Study area and data collection



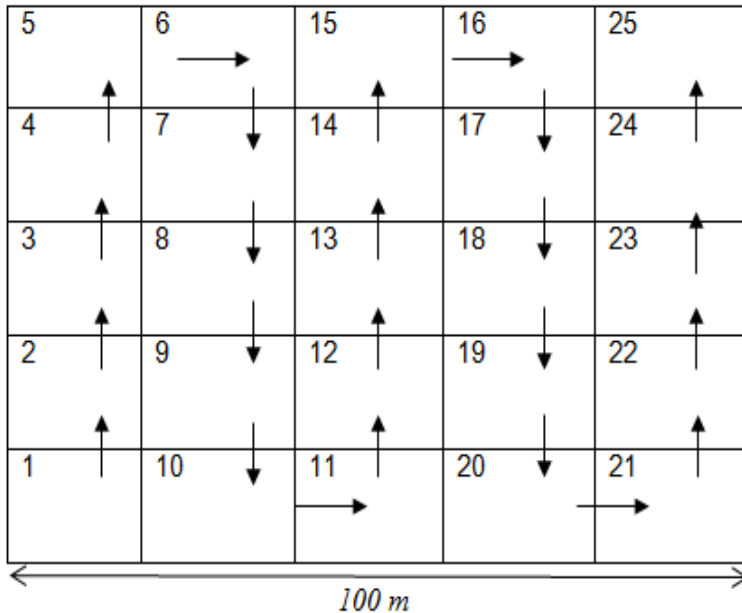
- Two main sites investigated
  - Man and biosphere reserve of Yangambi
  - Yoko reserve



# Fungal data collection



- Harvest of above ground fruiting bodies
- Plots of 100 x 100m, subdivided in 25 subplots of 20 x 20m.
- Presence of species recorded in each plot



# Ethnomycological surveys

## Data collection

- Data were collected using open and semi-structured interviews
- Data on locally known useful fungi, using photographs and/or fresh specimen





# Results

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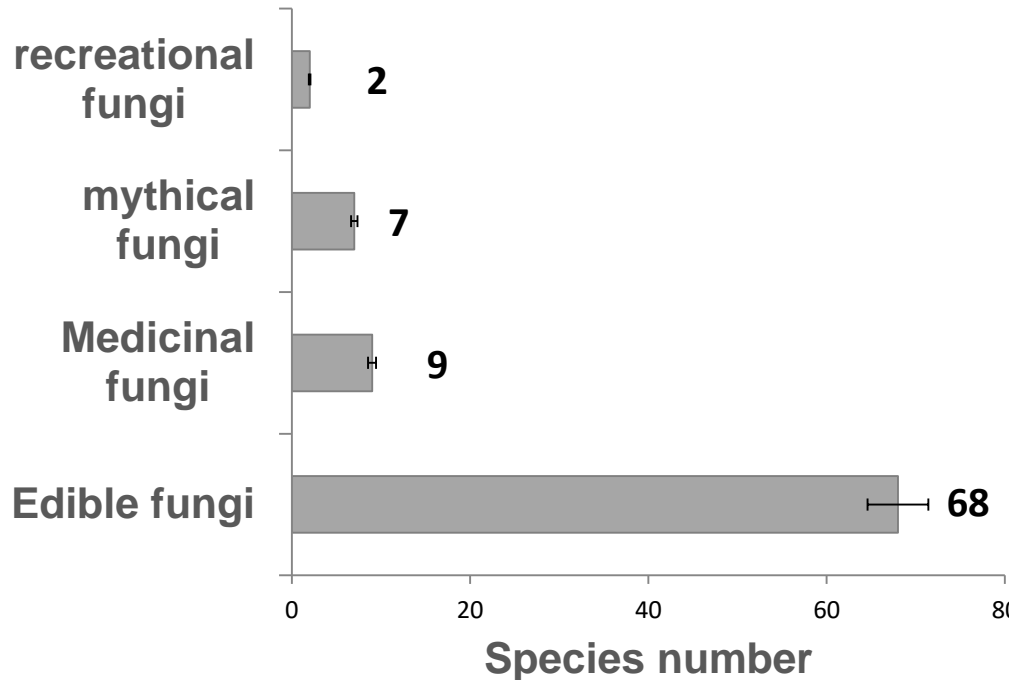
## Uses and importance of wild fungi: traditional knowledge from the Tshopo province in the Democratic Republic of the Congo

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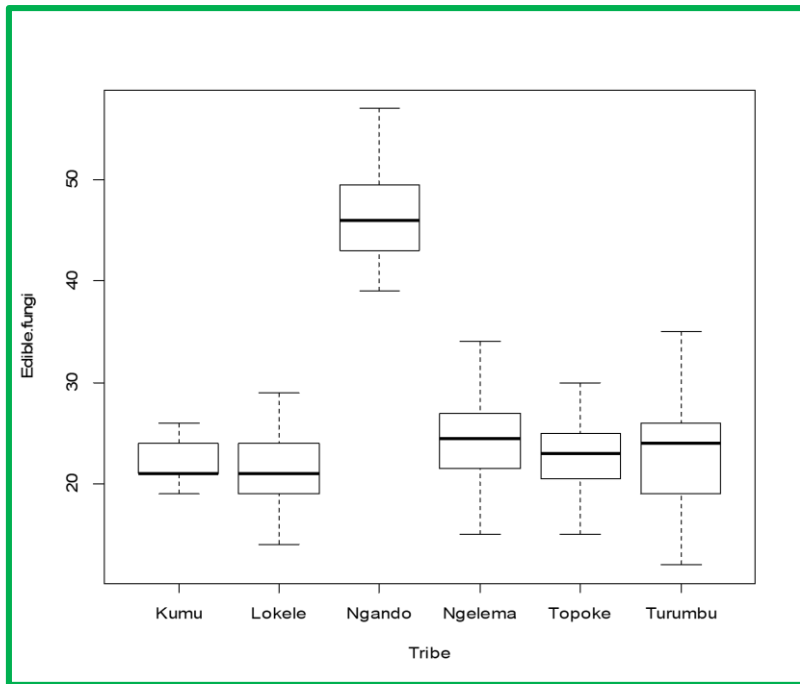
# Diversity of useful fungi

## □ Uses categories

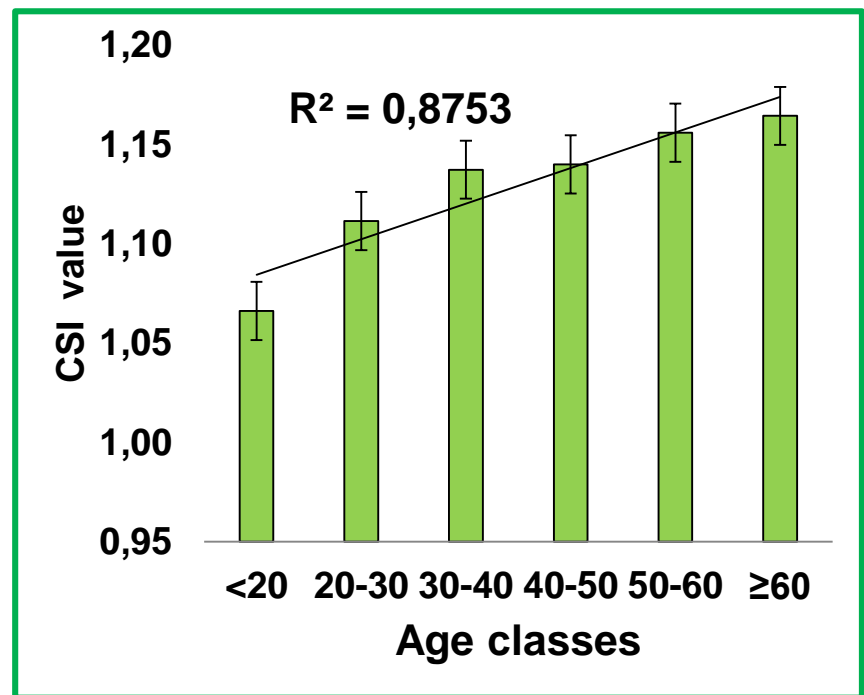
- 4 different categories of mushrooms uses
- Significant difference in the value of CS



# Traditional knowledge on mushrooms



- Cultural significance unequally shared between ethnic groups



- Mushrooms knowledge differently shared between age and gender

# Recreational purposes

- ❑ The sclerotium of *Pleurotus tuber-regium* is used by children to build tires of toy cars
- ❑ When playing in the villages, some children harvest the fruit body and throw to each other for amusement



# Most common edible fungi

- Lentinus squarrosulus*  
(Bengole)
- Schizophyllum commune*  
(Bukokola)
- Marasmius buzungolo*  
(Ndundo)
- Cantharellus longisporus*  
(Baolo ba ndei)
- Termitomyces* aff. *Robustus*  
(Limusula)



# Medicinal mushrooms

- ❑ *Daldinia eschscholtzii*: Spleen illness, wound
- ❑ *Pycnoporus sanguineus*: Otitis
- ❑ *Pleurotus tuber-regium*: Bronchitis, breastmilk stimulation, against bed watering
- ❑ *Ganoderma* sp: Sexual impotence
- ❑ *Schizophyllum commune*: Wound and breast inflammation



# Mythical aspects and believes on mushrooms



- ➡ *Cantharellus* aff. *densifolius*: Consumption brings luck
- ➡ *Lentinus squarrosulus*: Consumption brings luck
- ➡ *Pleurotus tuber regium*: Used against birds destroying rice field.
- ➡ *Russula* aff. *sesemoindu*: The harvest and consumption cause family quarrels
- ➡ *T. aff. robustus*: Children are not allowed to eat in fear of becoming orphans as the solitary species
- ➡ *Phallus indusiatus*: Used by ill-intentioned people to cause fight between married people.

# Observations

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- ❑ *Cantharellus* and *Termitomyces* species are mostly used by a specific ethnic group (Kumu people)
- ❑ Some people has taboos on some edible taxa (Kumu with *Russula* and *Auricularia* species considered as inedible taxa)
- ❑ Woody-decaying and saprotrophic fungi such as *Schizophyllum commune*, *Auricularia* spp., *Marasmius buzungolo*, *Lentinus squarrosulus*, etc.



# Conclusion

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- ❑ It is the availability, abundance and proximity of the resource that turns saprotrophic fungi from secondarized forests, fallow and farmland into the most attractive and preferred edible mushrooms
- ❑ The harder to obtain ectomycorrhizal fungi, represent an under-utilized food source

# Conclusion



- ❑ Proximity of urban centers (Melting pot) reduces cultural significance/importance on fungi
- ❑ Taboos on mushrooms probably generate mycophobia in some people

Many thanks to all for your attention

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**THANK  
YOU**

