

# Parasite biodiversity and trophic dynamics of mangrove fishes in a Senegalese MPA

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# Mangroves are in many places



... and are important for people

Income generation  
for coastal  
communities



Diverse habitat for many life  
forms including economically  
important species

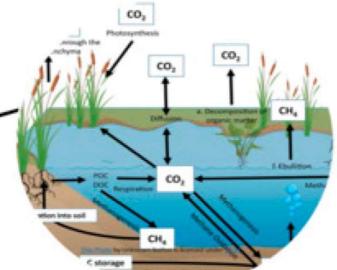


Buffer against coastal  
erosion and protection  
from storms

A source of timber  
for buildings and  
other uses



Blue carbon storage



Fodder for animals



Preserve water quality  
by pollutant filtration



Part of the  
ecosystem linked  
with coral reefs and  
seagrasses



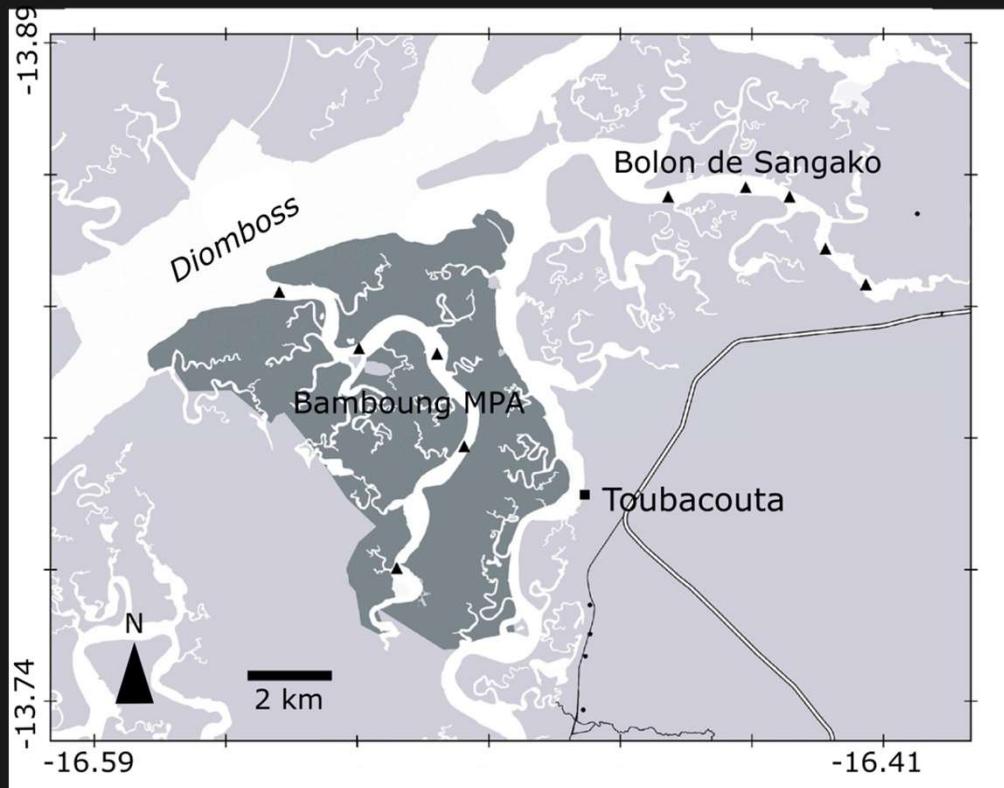
**What happens to host-parasite  
communities in mangrove ecosystems  
under fisheries pressure?**

# Our study system: the Saloum Delta

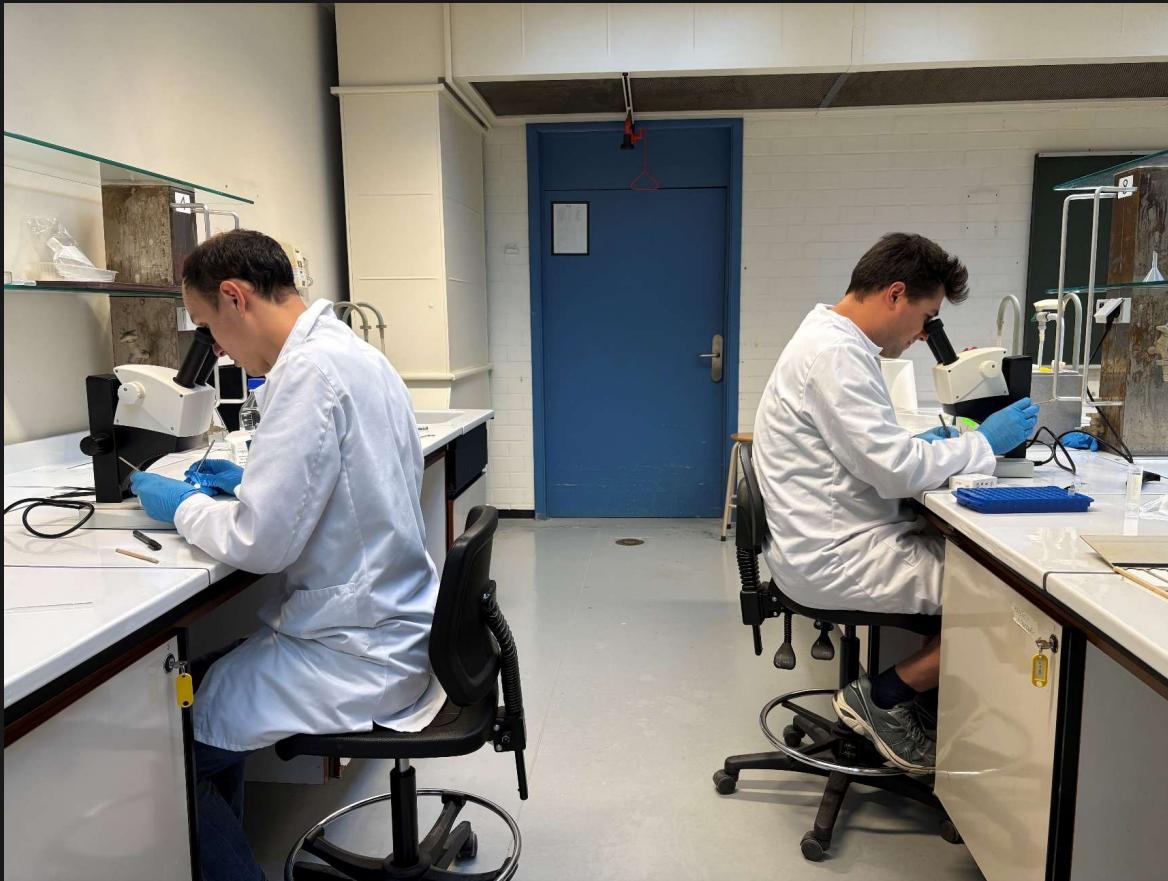
Fishing ban      vs.      fishing area



# Sampling and parasite screening



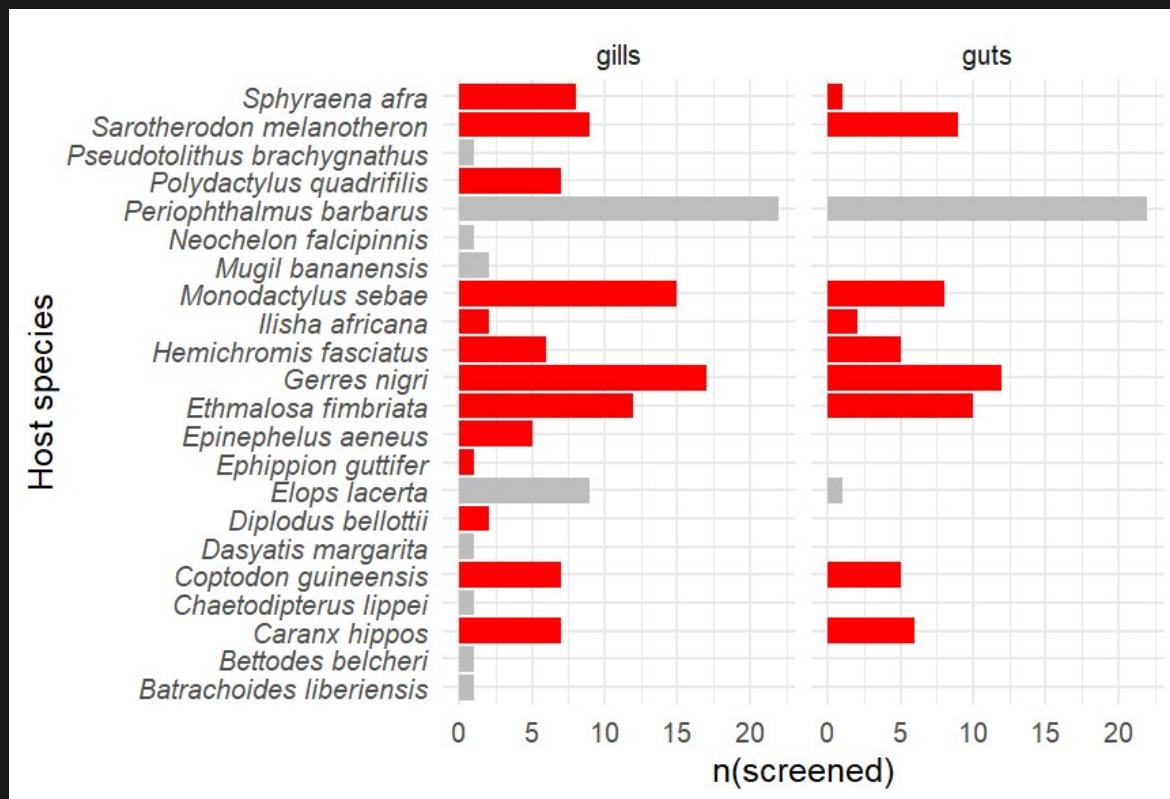
# Sampling and parasite screening



# Early results

105 gills and 72 guts  
screened of 22 fish species

7 target species

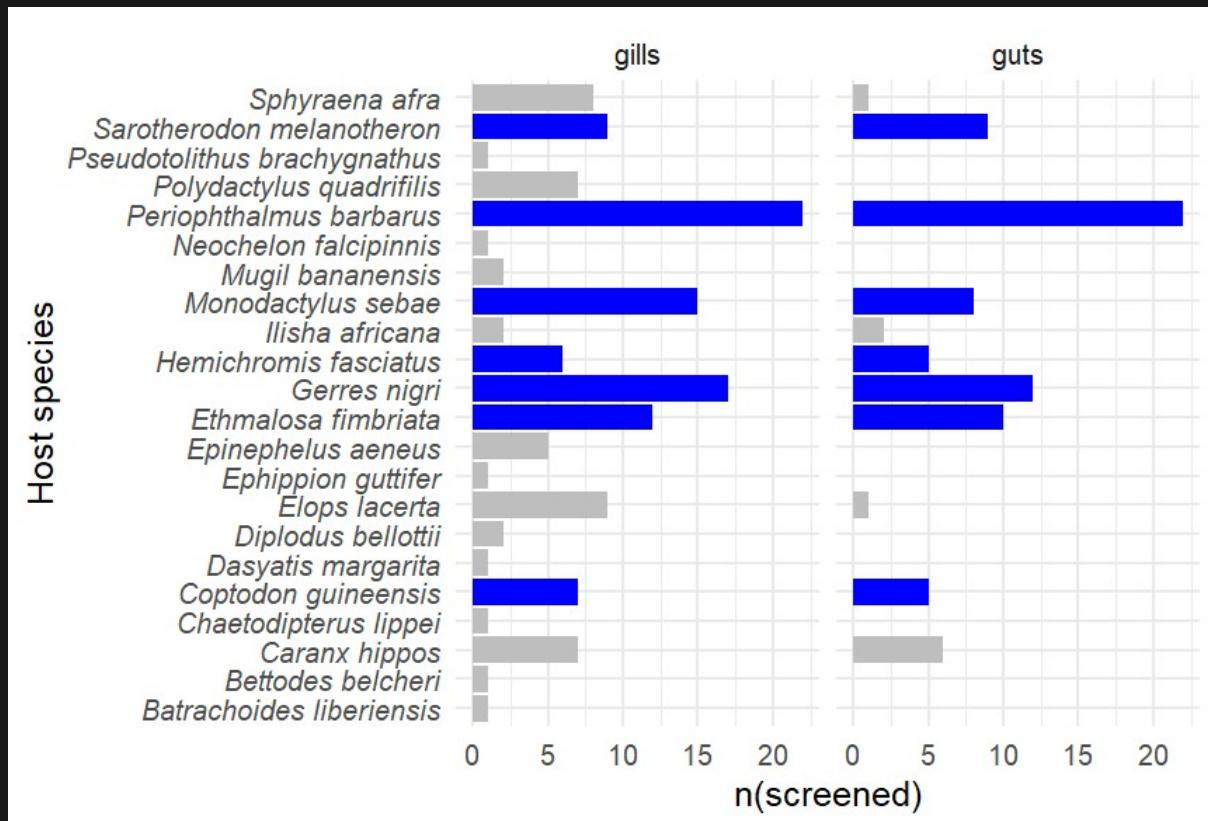


# Early results

**105 gills and 72 guts  
screened of 22 fish species**

**7 target species  
(omnivores &  
arthropodivores)**

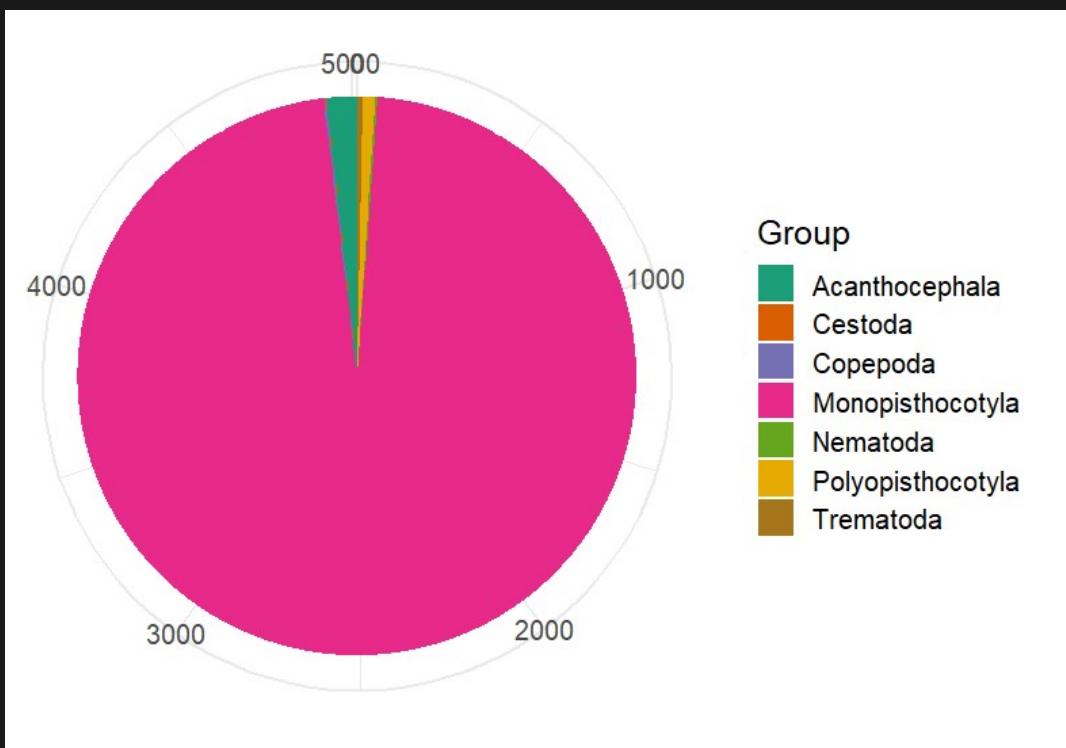
**5,000+ parasites**



# The parasites



# The parasites



*Cichlidogyrus digitatus*

# Reference library

**Barcode markers:**  
**18S + 28S rDNA**  
**ITS1 + ITS2**  
**COI mtDNA**

**~100 for 24 parasite species**



*Echinocephalus* sp.

# Work in progress



**First survey of host-parasite  
communities in mangrove forests**

**Additional sampling in 2024 and  
2025**

**How are parasites linked to host  
health?  
→ health indices  
→ metabarcoding of gut content**

# Thank you!



**Oumar Sadio**



**Lucas Van Passel**

**Maarten Vanhove**

**Farid Dahdouh-  
Guebas**

**Chelsea Wood**

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