37TH CONFERENCE OF THE INTERNATIONAL SCIENTIFIC COUNCIL FOR TRYPANOSOMIASIS RESEARCH AND CONTROL (ISCTRC)
15 – 19 September, 2025 Nairobi, Kenya

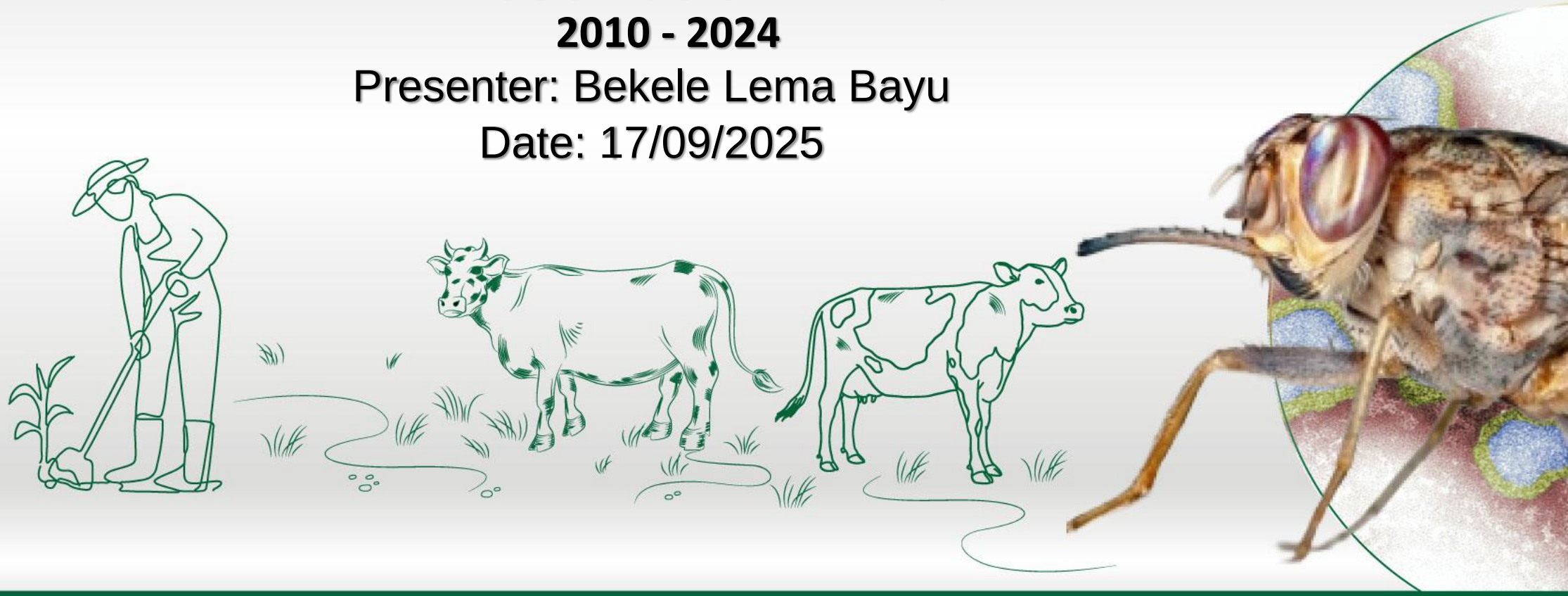
37E CONFÉRENCE DU CONSEIL SCIENTIFIQUE INTERNATIONAL POUR LA RECHERCHE ET LE CONTROLE SUR LA TRYPANOSOMIASE (CSIRCT)
15 – 19 septembre 2025, Nairobi, Kenya

UPDATING A NATIONAL ATLAS OF TSETSE FLIES AND AFRICAN ANIMAL TRYPANOSOMOSIS IN ETHIOPIA

2010 - 2024

Presenter: Bekele Lema Bayu

Date: 17/09/2025



Current Tsetse and Trypanosomiasis (T&T) situation

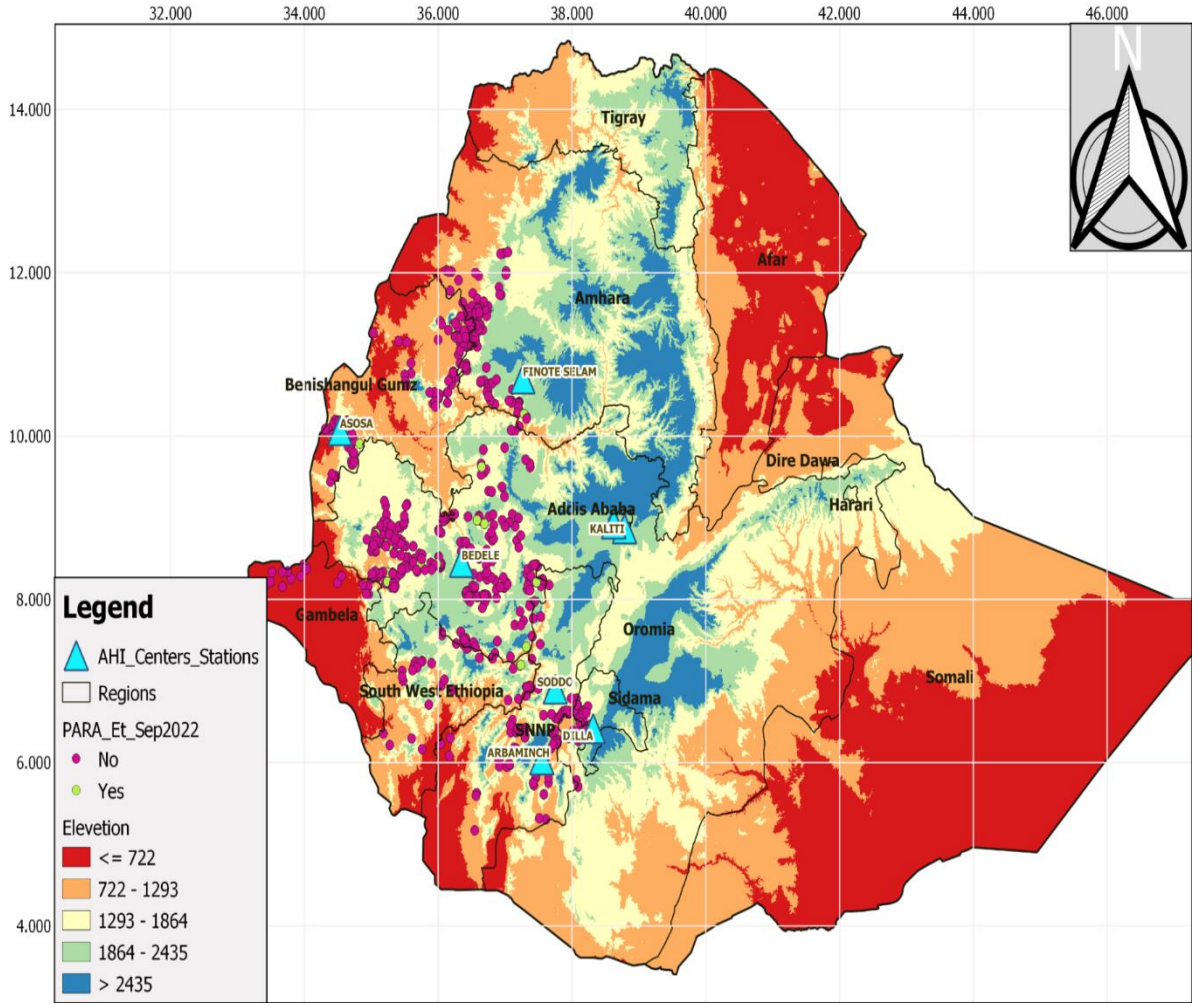
- An area estimated to 200,000km^2 (18% of the total land surface area) is affected by tsetse flies in Ethiopia
- Tsetse-transmitted trypanosomosis, **play significant role**:
  - direct loss through death of animals
  - indirect loss through reduced productivity and expensive disease control costs.
- Tsetse flies are economically important vectors not only from **veterinary** perspective but also from **public health** point of view in Ethiopia.

Importance of national atlas

- Enable evidence-based **decision making** in tsetse and AAT control and surveillance
  - hot-spots of transmission
  - priority areas for intervention
- Create a **safe digital repository for historical** and current epidemiological data
  - Avoid data losses
- Provide input data for **research** purposes
  - epidemiological studies
  - modelling

Important steps to develop the national atlas

- Build the data repository
- Process the data
- Build the database
- Generate maps
- Generate documentation and publications



Conti…

- The previous national data of tsetse flies and AAT was collected from 2010 to 2019 and the national atlas has been published with the support of **FAO in 2022** and created a broader initiative in Ethiopia.
- The **2nd edition**, including updated data for the period 2020–2024, has been organized and is ready for publication with the support of the **COMBAT project**.

Conti…

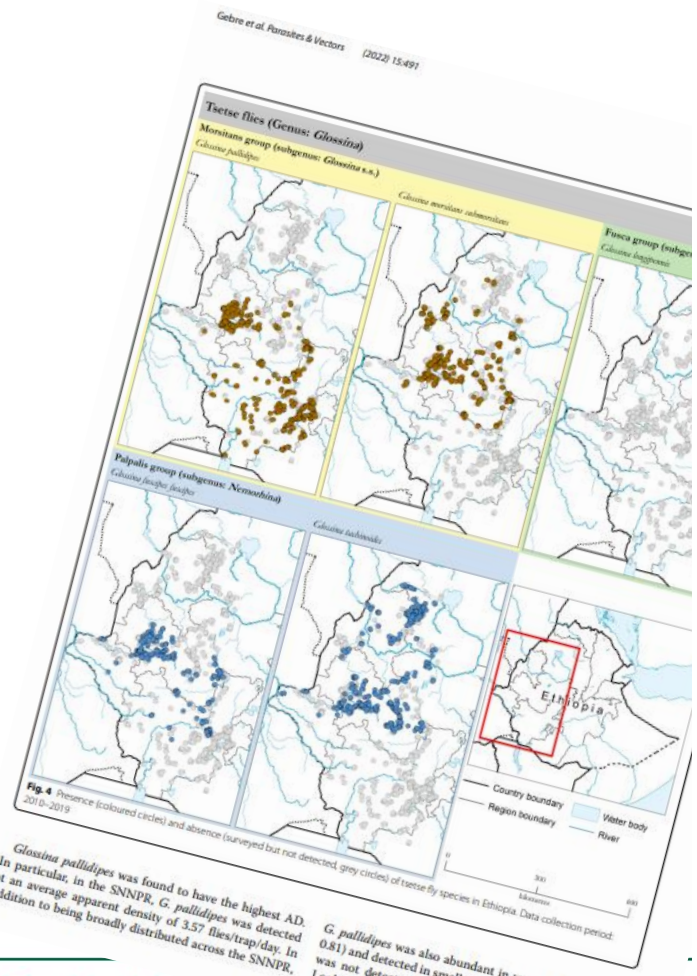
- Tsetse survey was carried out in 8052 trap sites in 2020-2024 and 14,498 in 2010-2019 presented a total of **22,550** using odour-baited traps
- Overall, **206,203** flies were caught (62,999 in 2020-2024 and 143,204 in 2010-2019), yielding an apparent density (AD) of 3.06 flies/trap/day.
- Over all species of *Glossina* were detected: *G. pallidipes* (55.29% of the catches, AD= 1.69), *G. tachinoides* (27.48%, AD= 0.84, *G. morsitans submorsitans* (11.07%, AD= 0.34), *G. fuscipes fuscipes* (6.13%, AD= 0.19) and *G. longipennis* (0.04 %, AD= 0.0012).
- ***G. pallidipes*** is the **most dominant *Glossina species* in the country**, followed by ***G. tachinoides*** as the second most dominant, and ***G. morsitans submorsitans*** as the third one.

Conti…

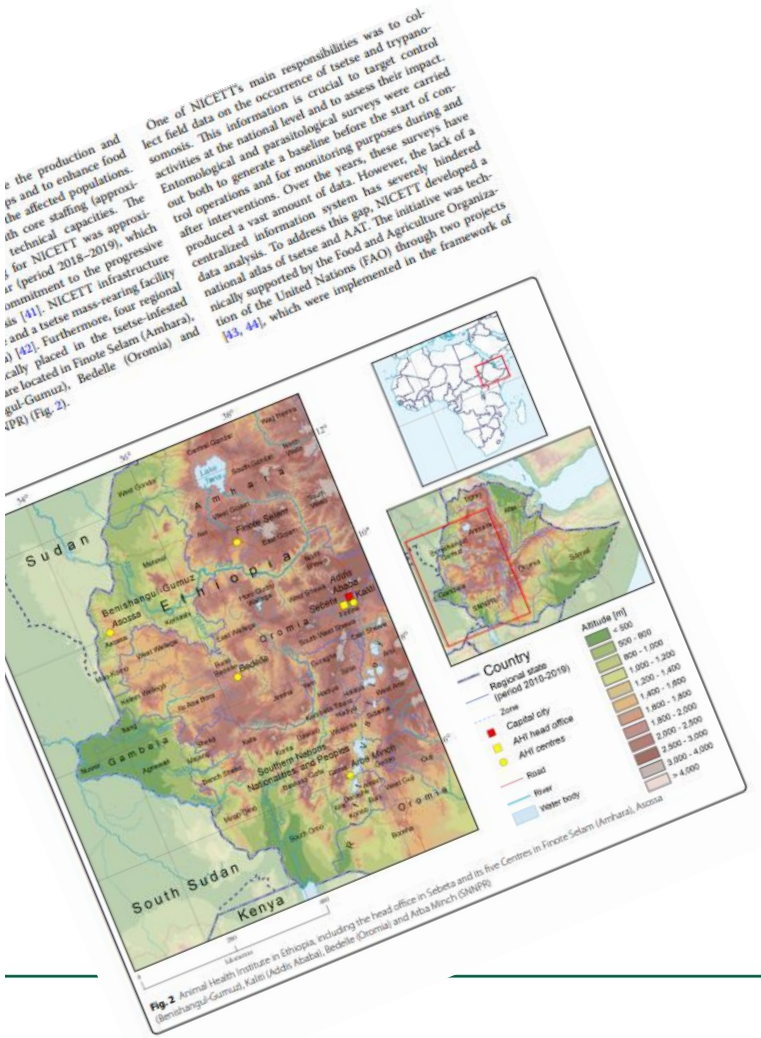
- A total of **149,945** animals (61,614 animals in 2020-2024 and 88,331 in 2010-2019) were tested for AAT.
- Of these, **7,107** animals were found to be infected that resulted an overall prevalence of 4.8%.
- Four species of trypanosome parasites detected were: *Trypanosoma congolense* accounted for the **highest number of infections** (65.5%), *T. vivax* (36.9%), *T. brucei* (2.2%) and *T. evansi* (0.07%), with the later *T. evansi* infections detected in camels.

1st edition of National atlas of tsetse flies and AAT

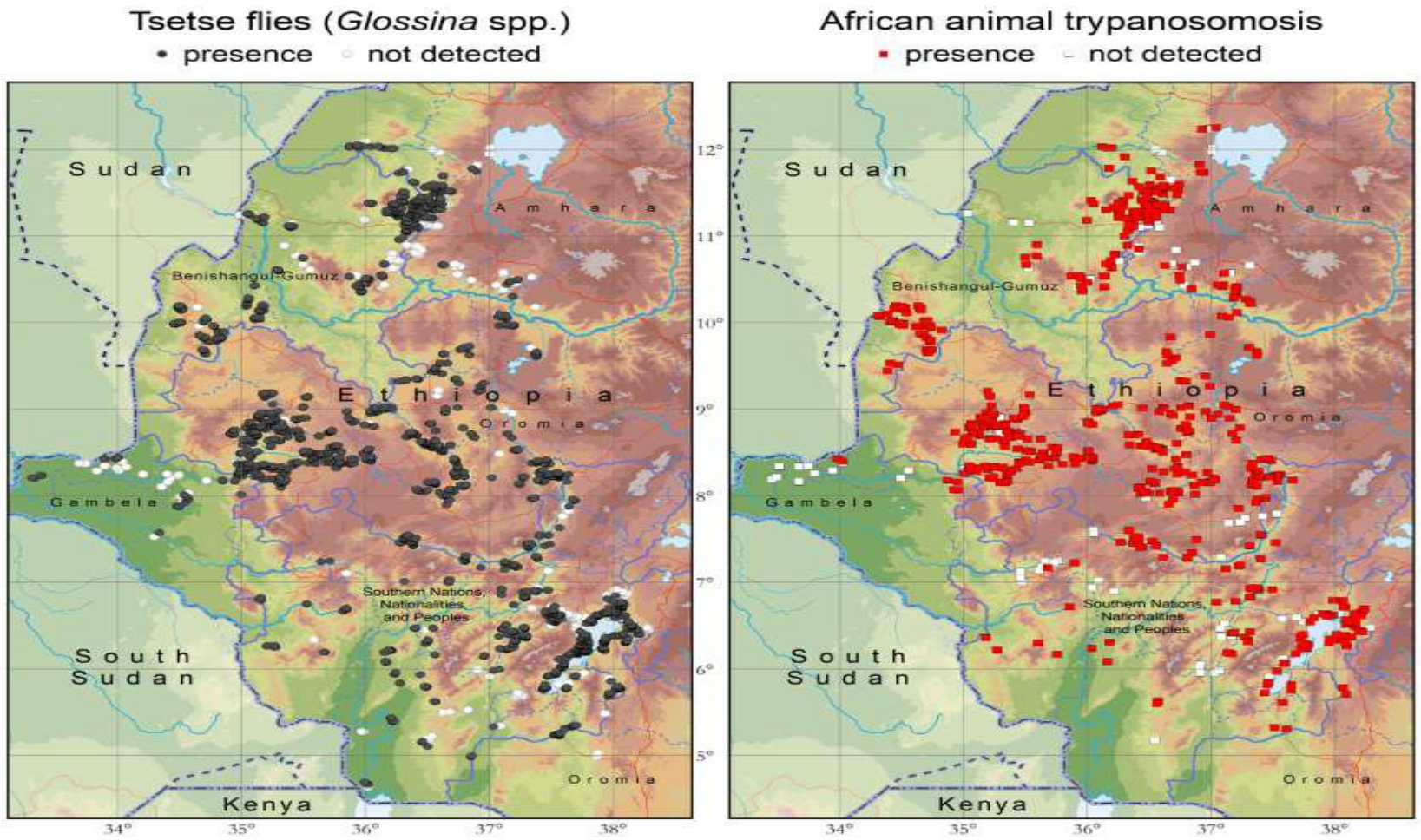
Gebre *et al. Parasites & Vectors (2022) 15:491*
https://doi.org/10.1186/s13071-022-05617-9





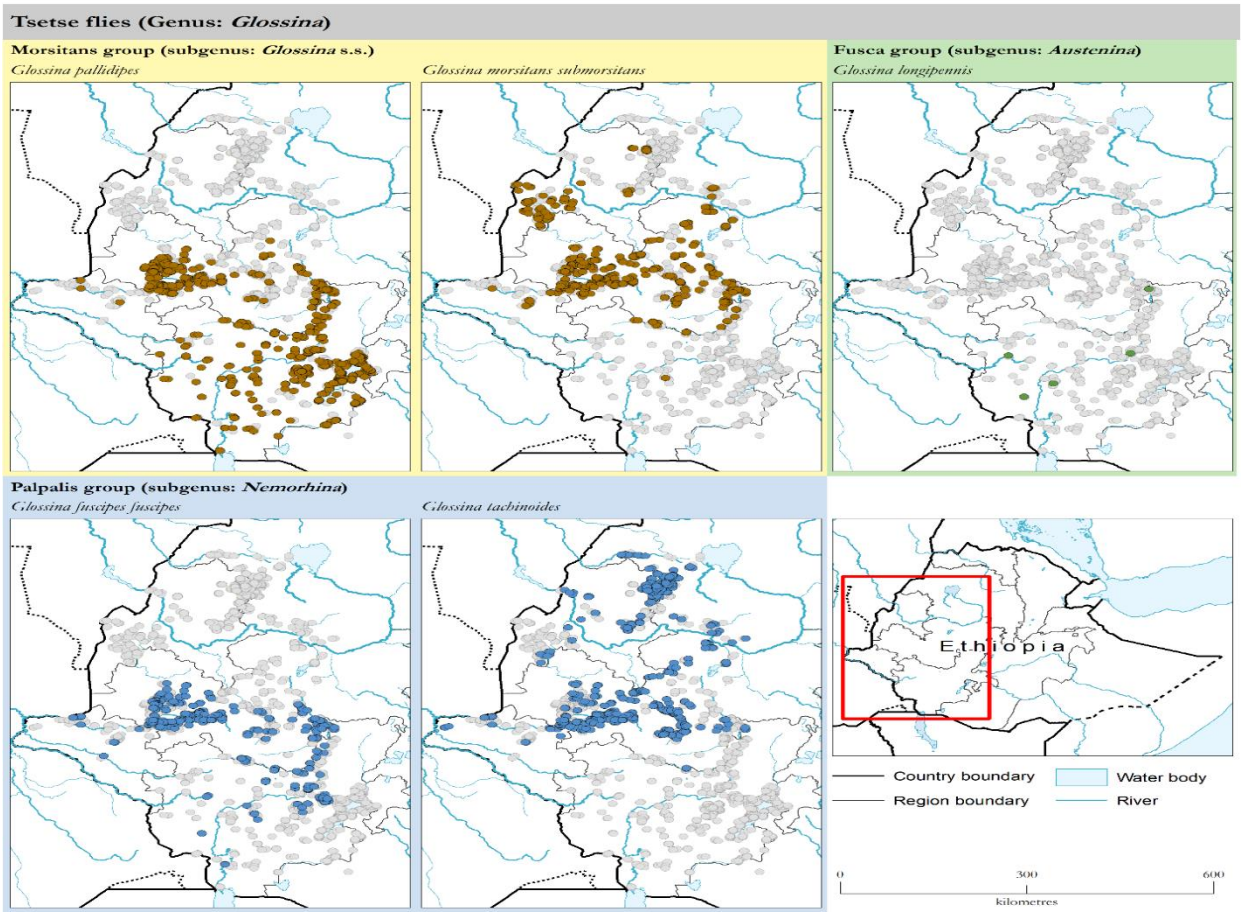


Distribution of Tsetse flies and AAT



Draft of the 2nd edition, Data collection period: 2010–2024

Journal: Parasite and Vectors



Conclusions:

- Comprehensive and detailed national information on the distribution of the disease and the vectors provides **crucial evidence to plan surveillance and monitor control activities** at the national level.
- The updating of the existing national data of AAT and tsetse species in Ethiopia was successfully carried from 2010 to 2024 for the effective planning and monitoring of sustainable interventions against tsetse and the disease.
- The AHI is committed to regularly and speedily updating the atlas in the future, to ensure that current information is available to control planners in the country.

Thank you | Merci | شكراً لك | Obrigado | Gracias | Asante

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