

NAHKIIRTEGA ARVESTAMINE PLANEERIMISPROTSES SIS

Maismaatuuleparkide ja elustiku vastastikused mõjud
2026, 16-17. märts Tartu

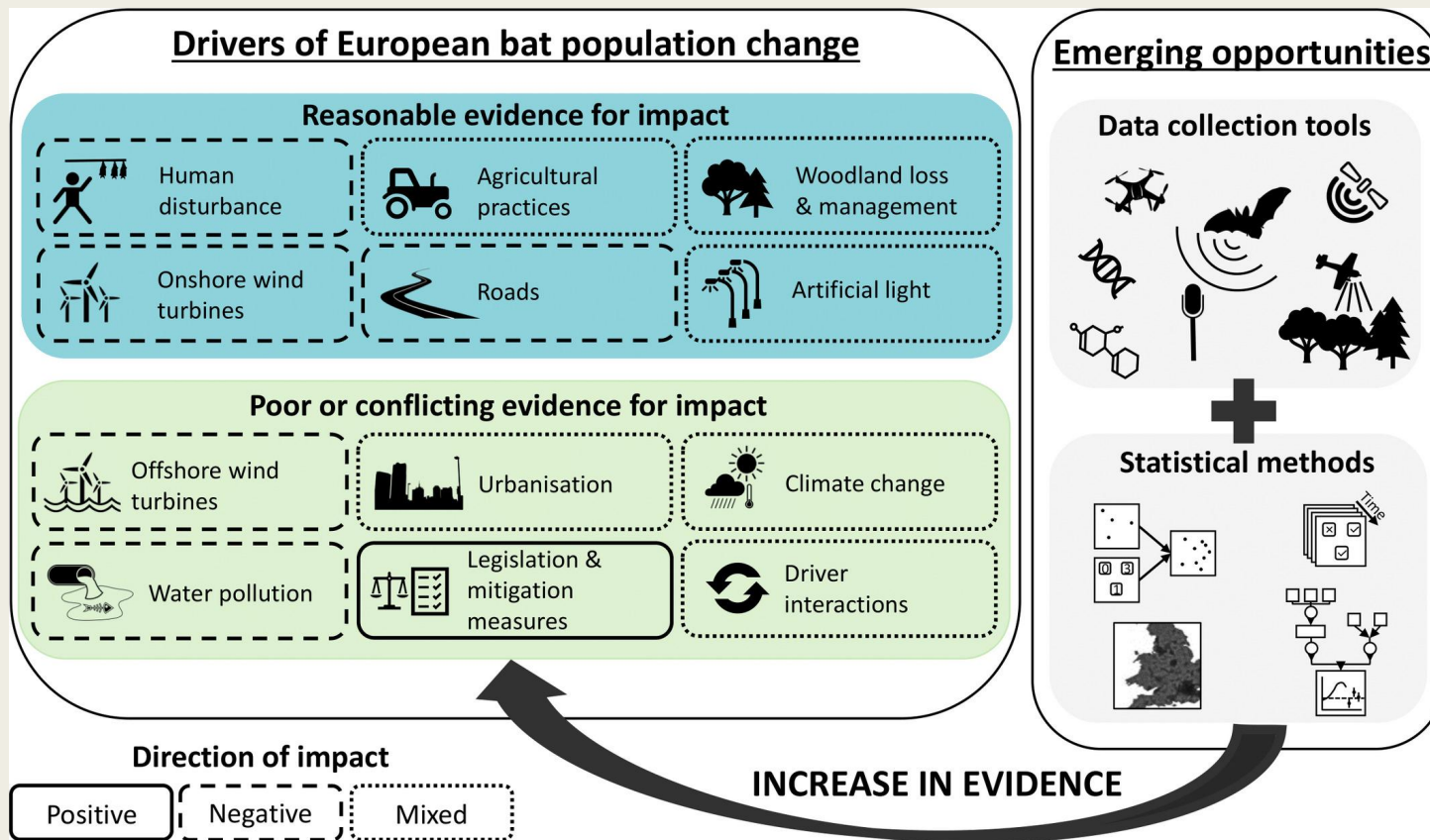
Oliver ja Rauno Kalda



Rahastanud Euroopa Liit
NextGenerationEU

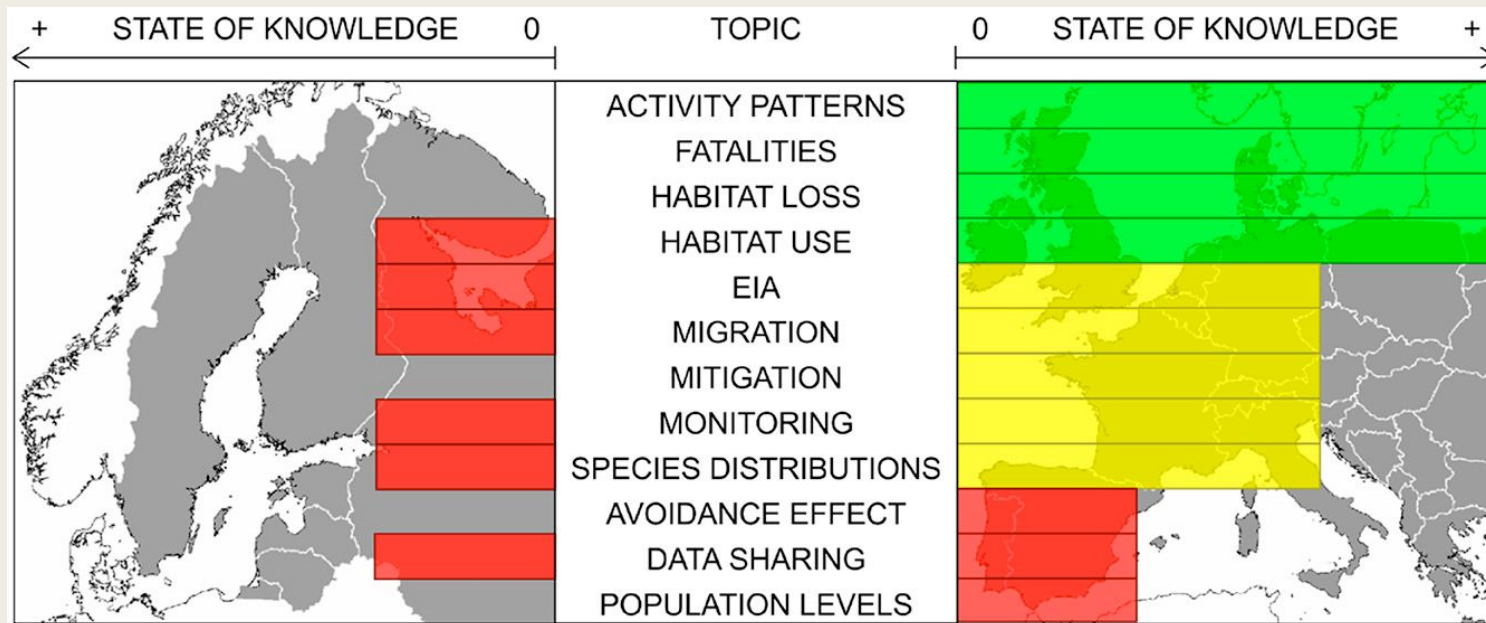


Eesti
tuleviku heaks



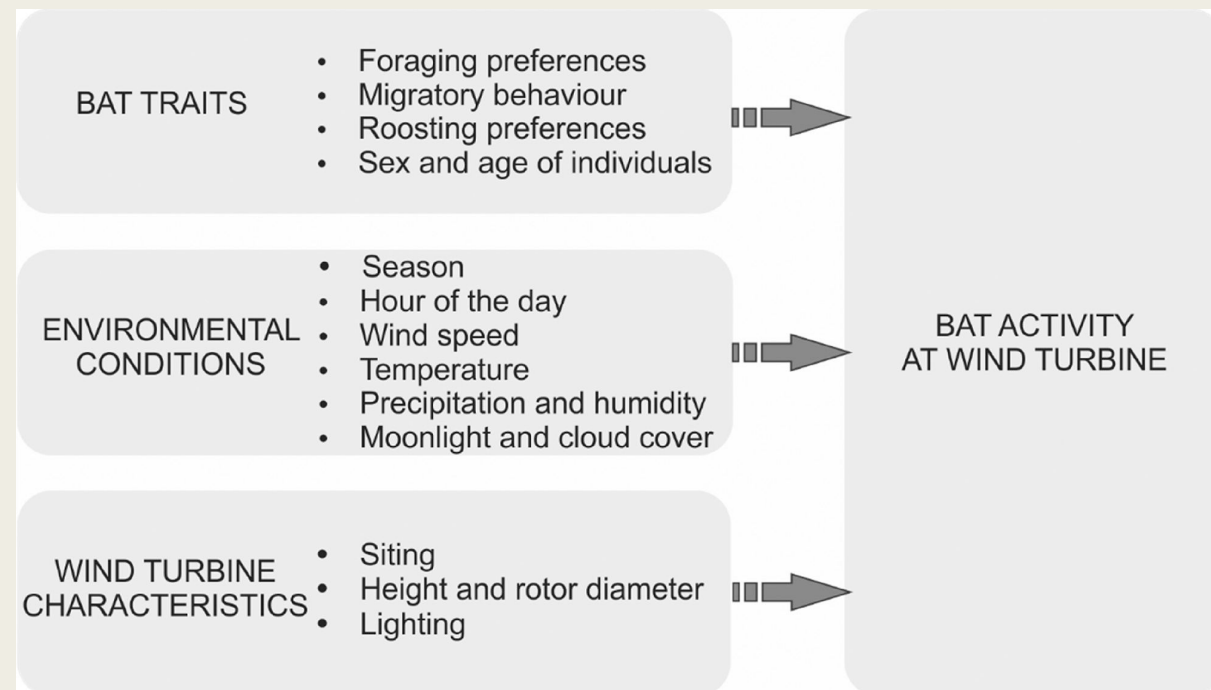
Miks nahkhiirtega arvestada?

- Otsene risk tuulikute tagajärjel hukkuda
- Potentsiaalne mõju arvukusele suur
- Aeglane sigivus
- Kaitse all nii Eestis kui rahvusvaheliselt
- Rändliikide puhul mõjud üleeuroopalised



Teadmised nahkhiirte ökoloogia kohta on piirkonniti erinevad

Environ. Sci. Technol. 2020, 54, 17, 10385–10398 Publication Date: August 24, 2020 <https://doi.org/10.3390/ani12030343>



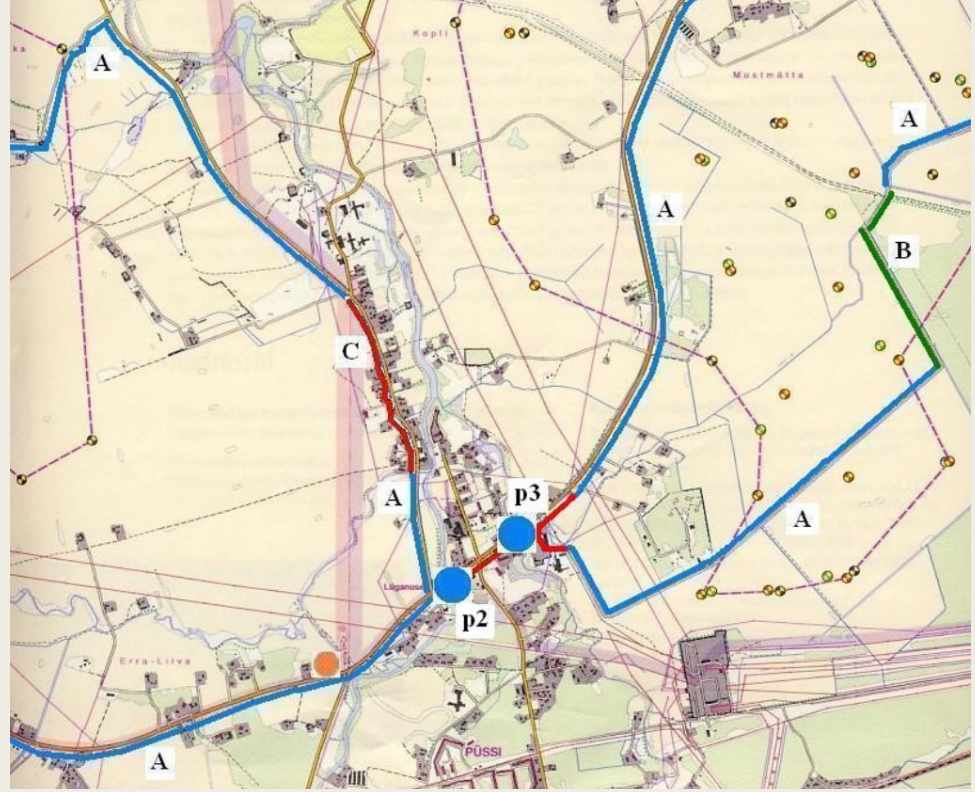
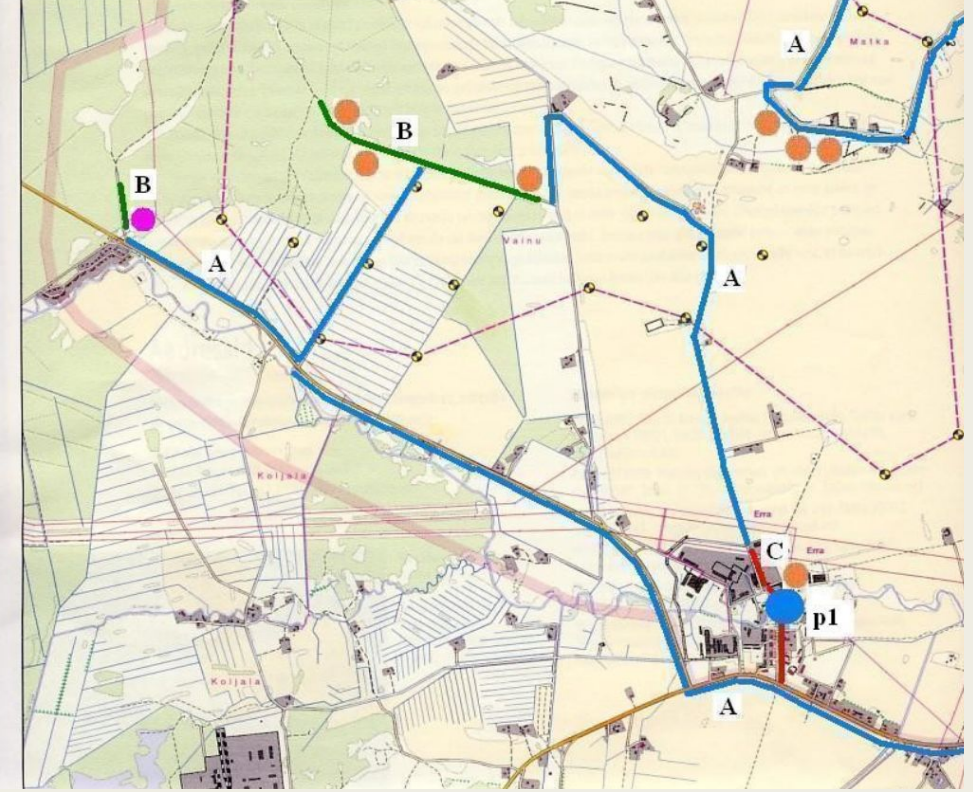
Bird and Bat Monitoring in Pakri Wind Resource Area

Progress Report
Covering period
April 2005 – October 2005

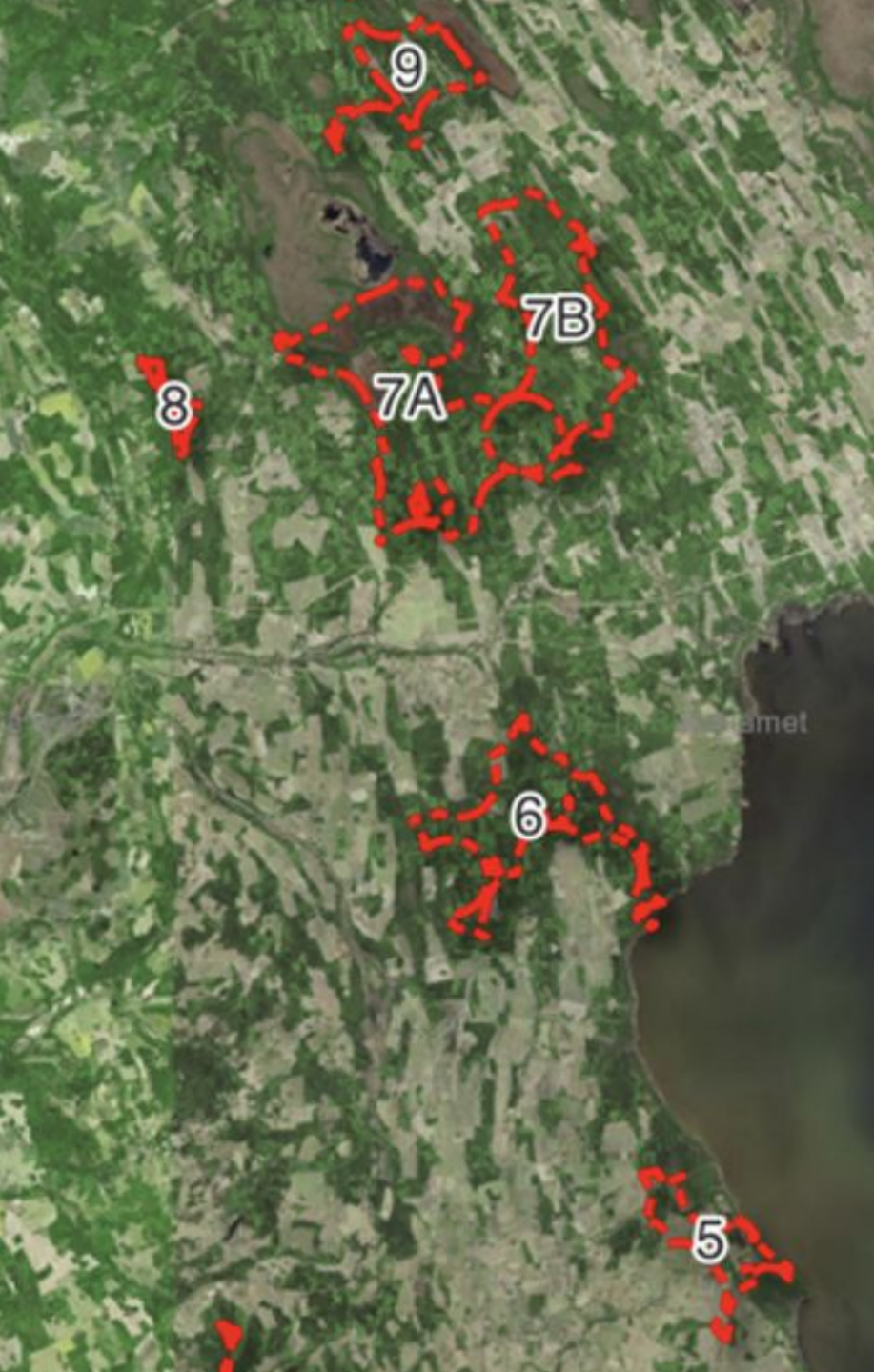


Report compiled by
Veljo Volke* and **Lauri Lutsar****

“In Estonia, no bird or bat research has been conducted in operating wind parks or planned sites by [redacted] 2005. Therefore, the present study is a pilot for testing and developing monitoring methods of bird/bat studies and compiling and testing bat research equipment.”



M.Masing 2007, Nahkhiirte detektor-uring nelja tuulepargi alal 2007. aasta suvel



Mõju hindamine nahkhiirtele

- Eurobatsi soovitused:
 - *Asukohavalik*
 - *Uuringud*
 - *Järeelseire*
 - *Leevendusmeetmed ->*

 - *Väldi -> minimeeri/leevenda -> kompenseeri*
(?)

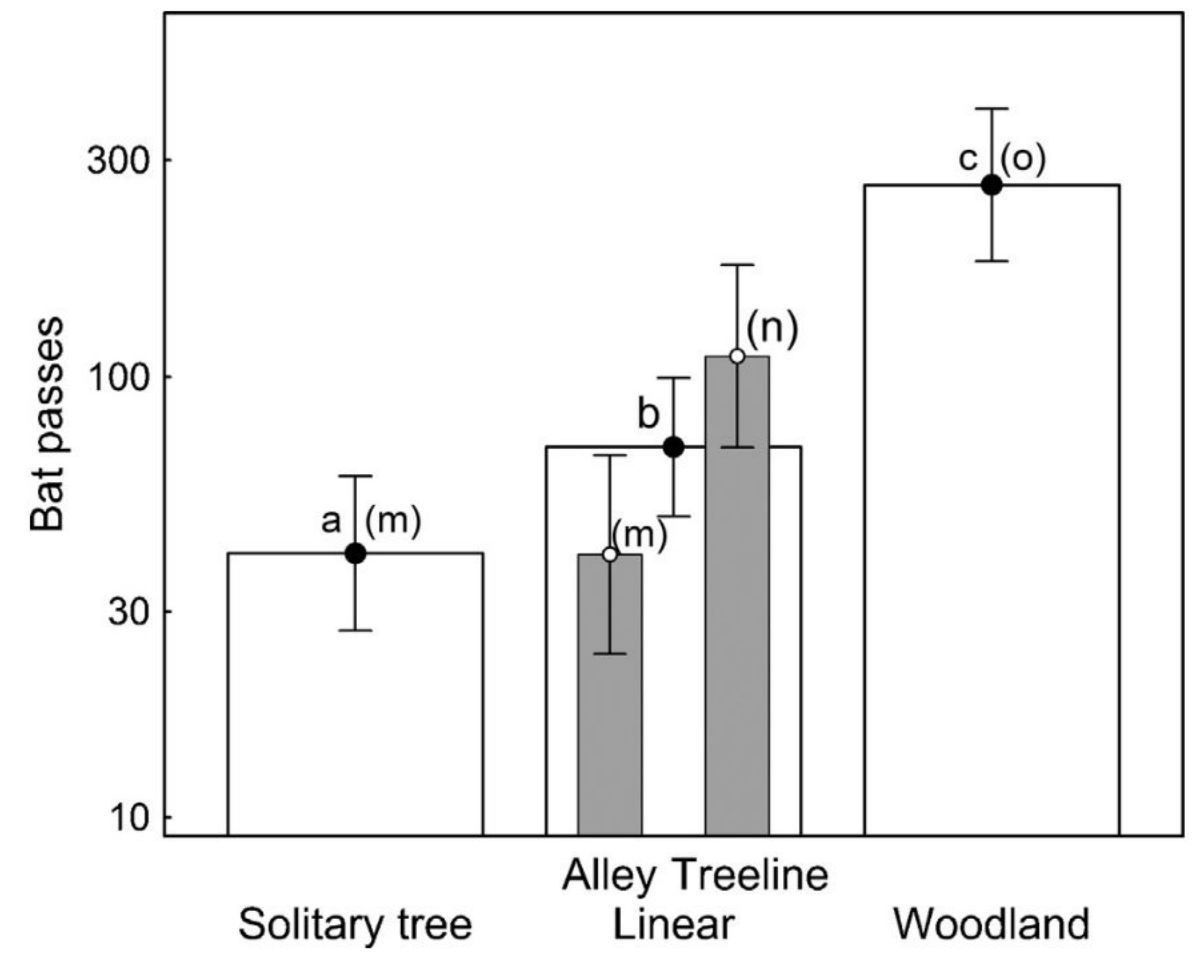
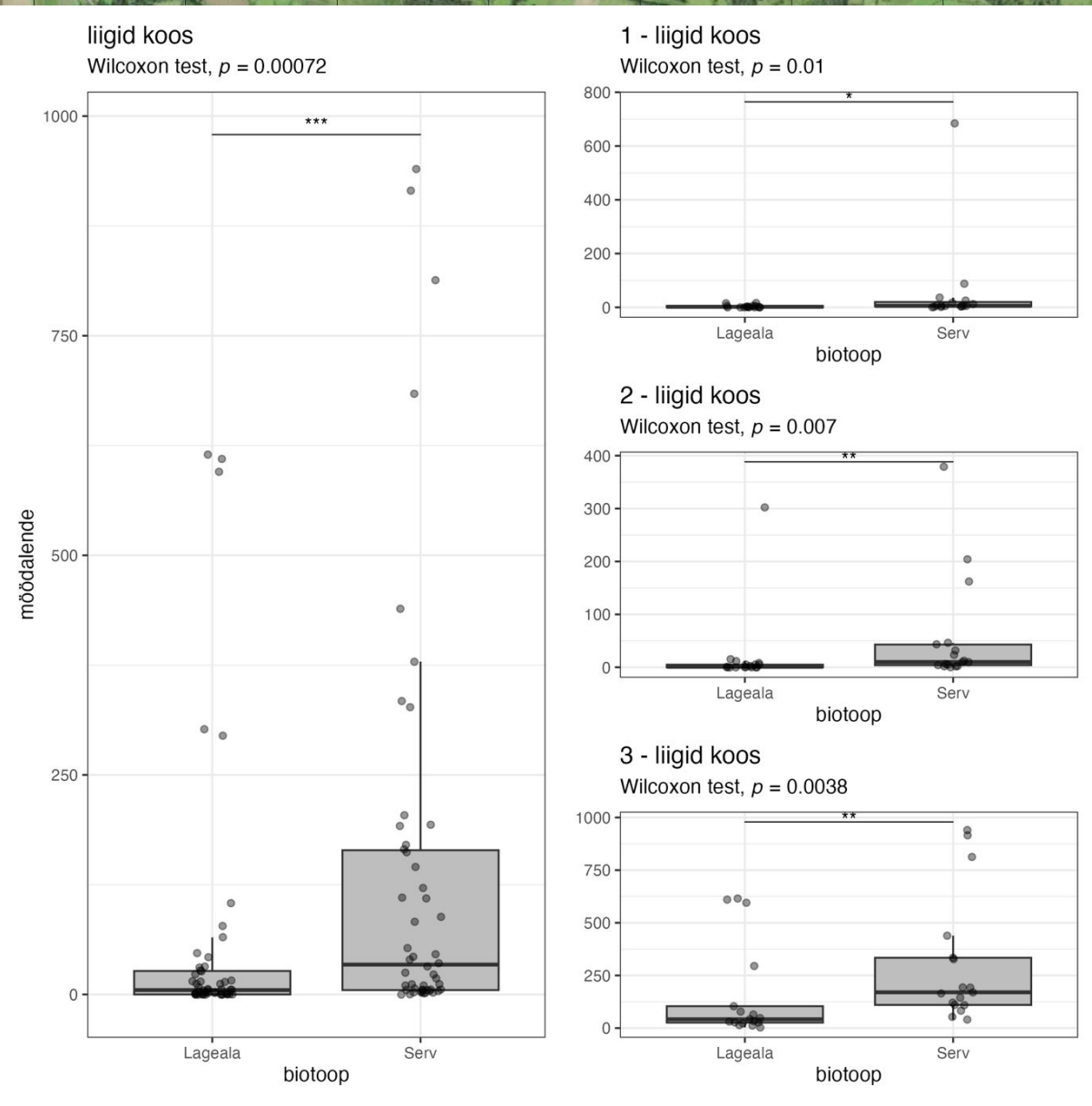
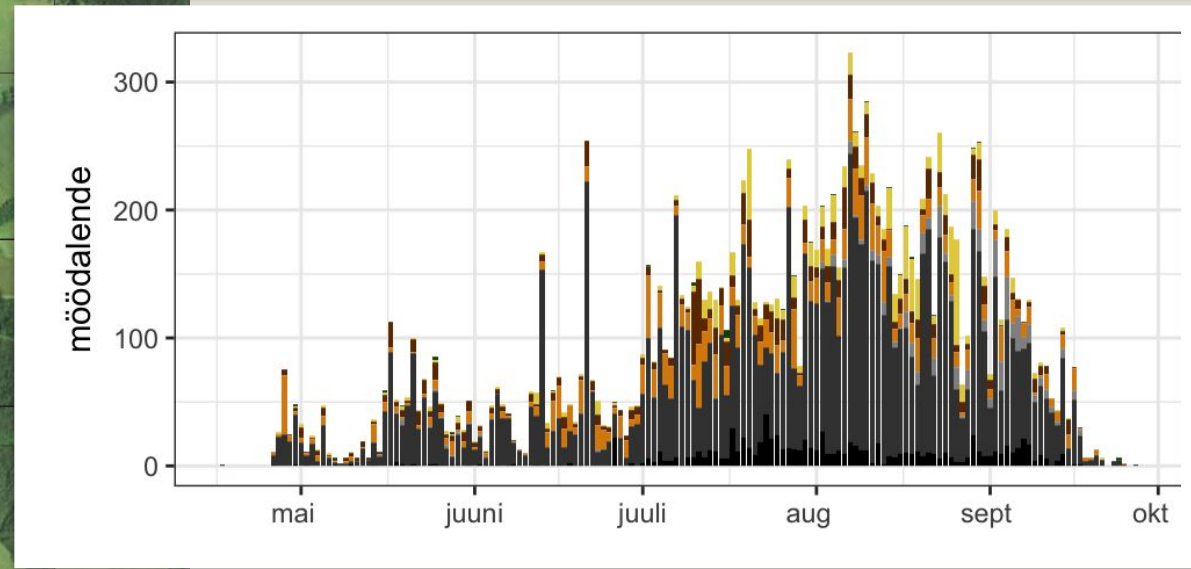
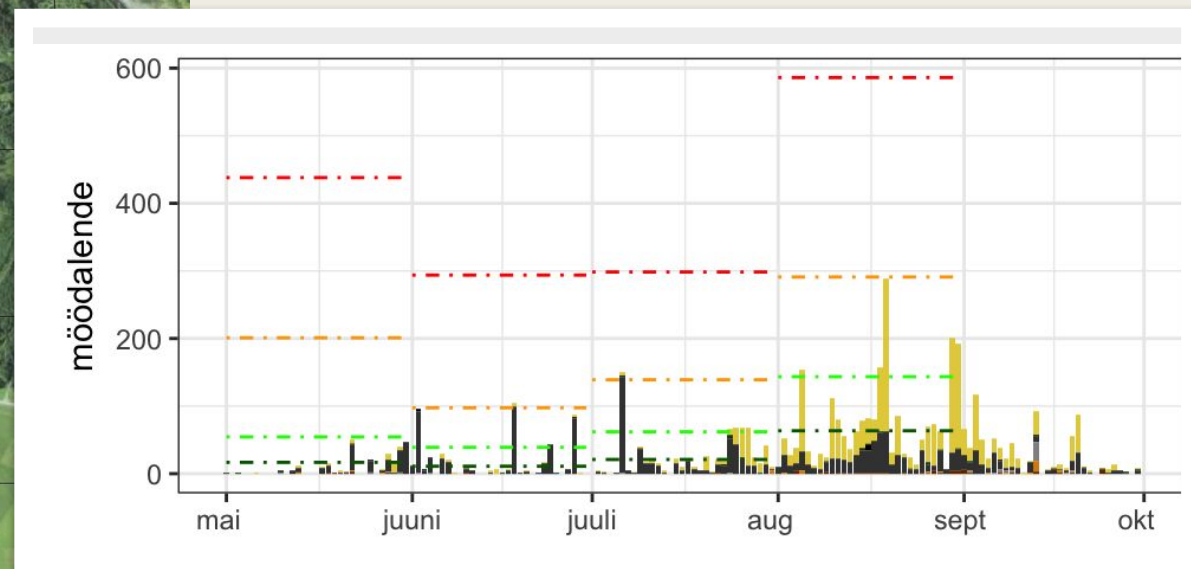
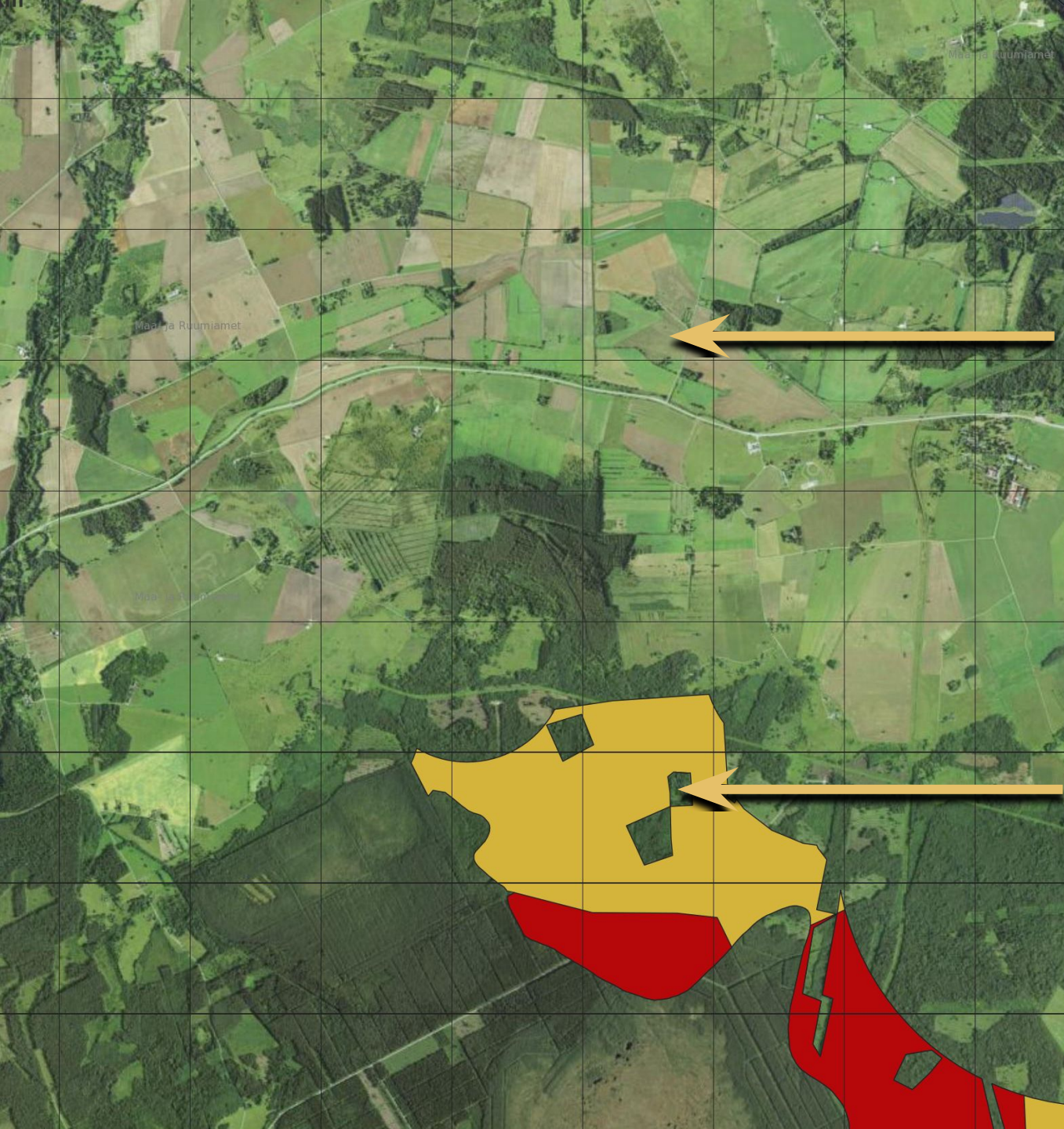
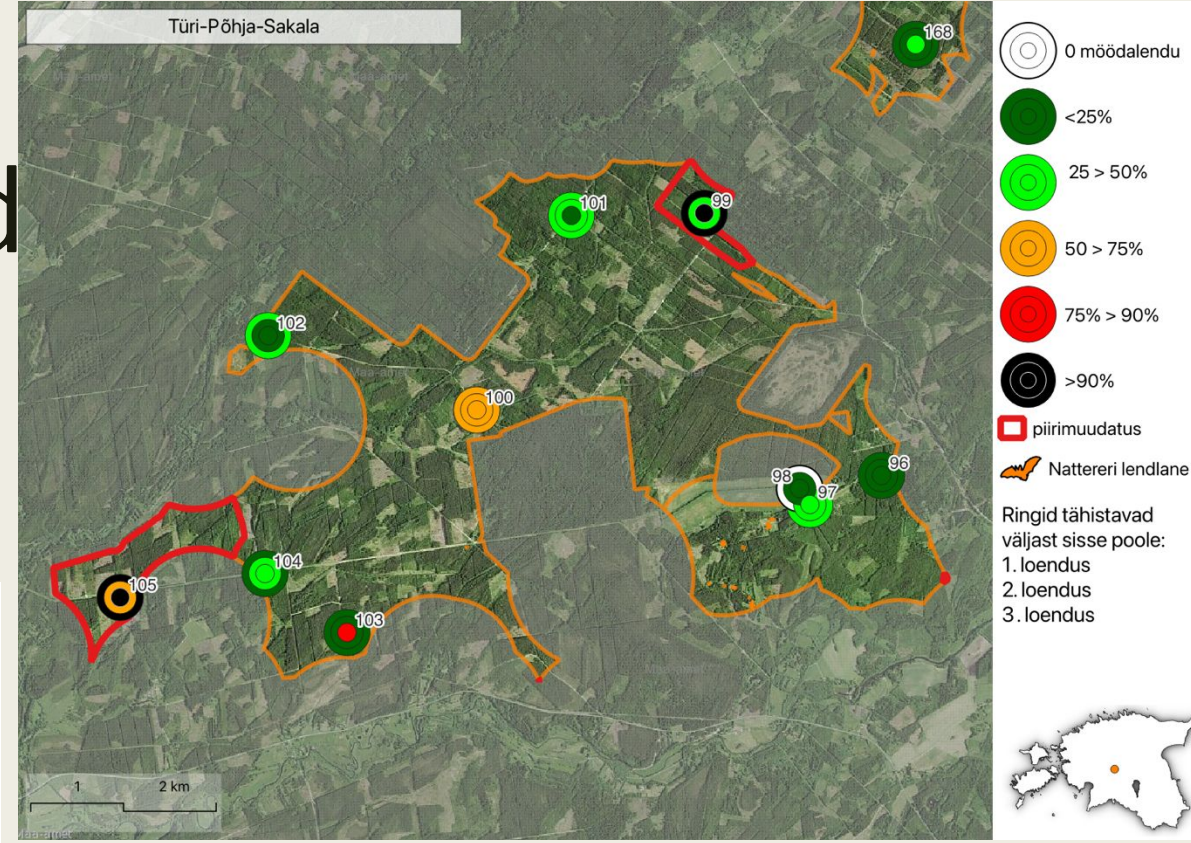
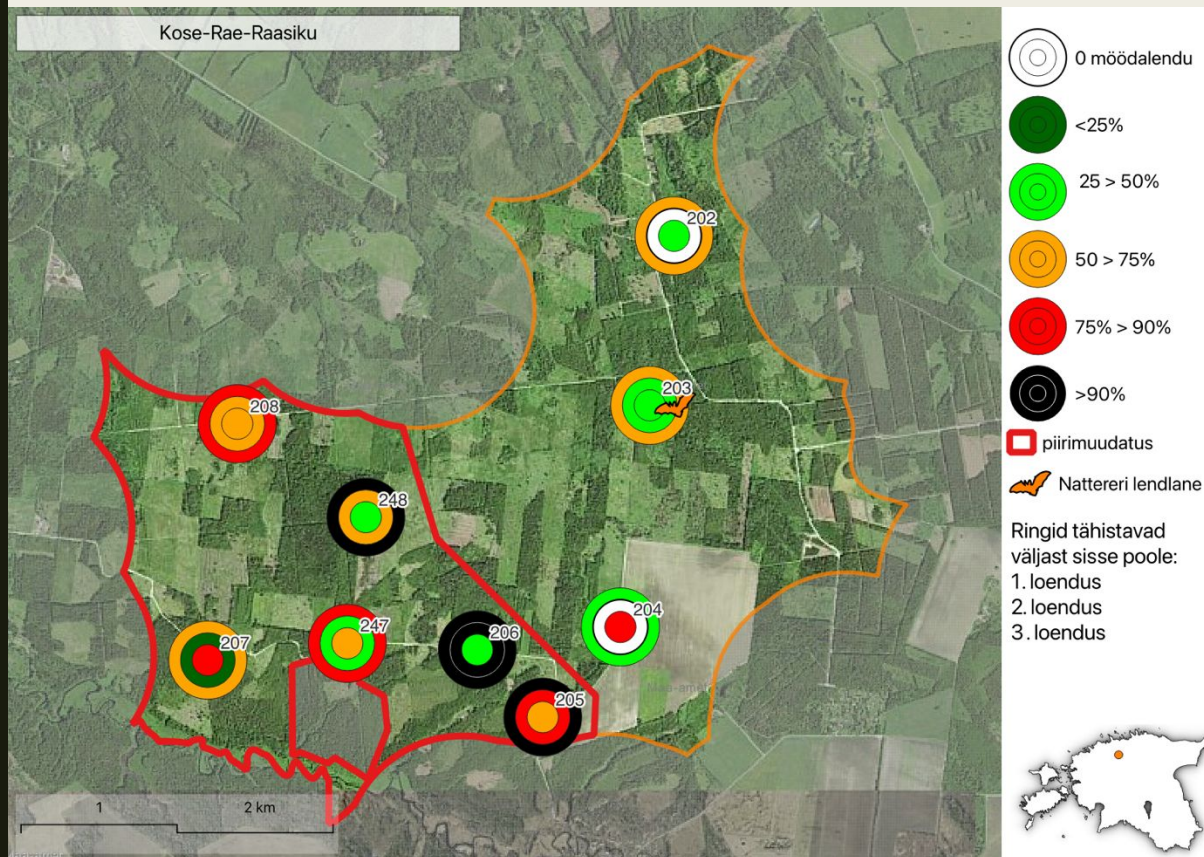


Fig. 5. Bat flight activity in habitat types. Whiskers denote 95% confidence intervals. Letters denote homogeneity groups of two sets of Fisher's LSD multiple comparisons: (i) a–c is comparison among three groups; (ii) m–o is comparison, where linear objects are divided in to two subgroups.



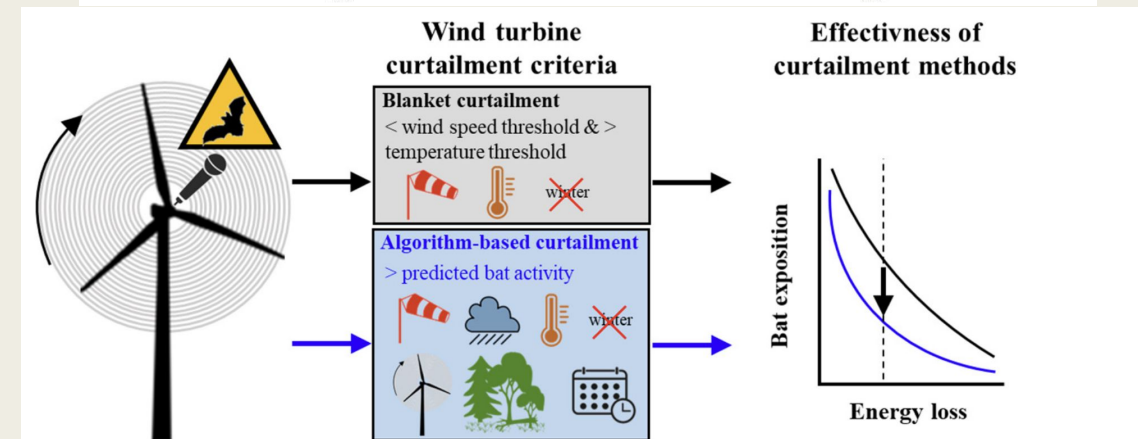
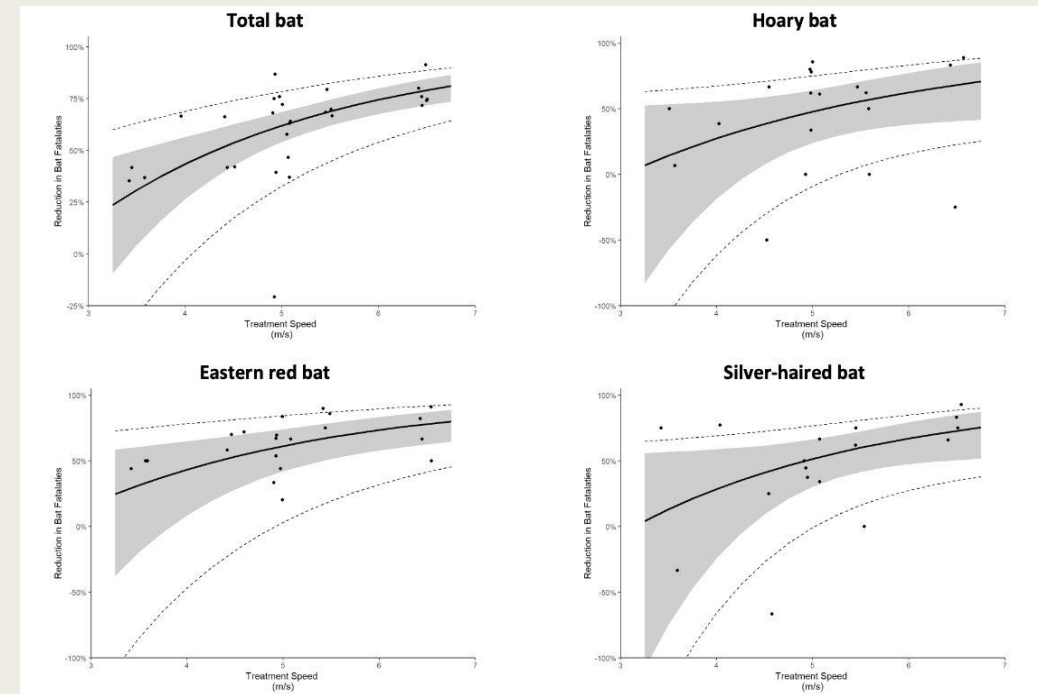
Metsad on erinevad



Kalda, Oliver, and Rauno Kalda. "Nahkhiirte Uuring Tuuleenergeetika Eelisarendusalade Leidmiseks Keskkonnaagentuurile.". 2023.

Tulemus

- Metsades mõjude leevendamise vajadus pigem sage
 - Asukohapiirngud - igale poole metsa tuuleparki rajada ei saa
 - Käitamispiirangud – tuulekiirus, fenoloogia jm parameetrid
- Ei saa välistada täiendavate leevendusmeetmete vajadust järeelseire tulemusel või ka leevendamist



Whitby, Michael D., Michael R. Schirmacher, and Winifred F. Frick. *The State of the Science on Operational Minimization to Reduce Bat Fatality at Wind Energy Facilities*. Bat Conservation International, 2021.

Tänaan kuulamast!