

WIEVIEL STÖRUNG IST GENUG ?



PD DR. SIMON THORN
22.04.2021

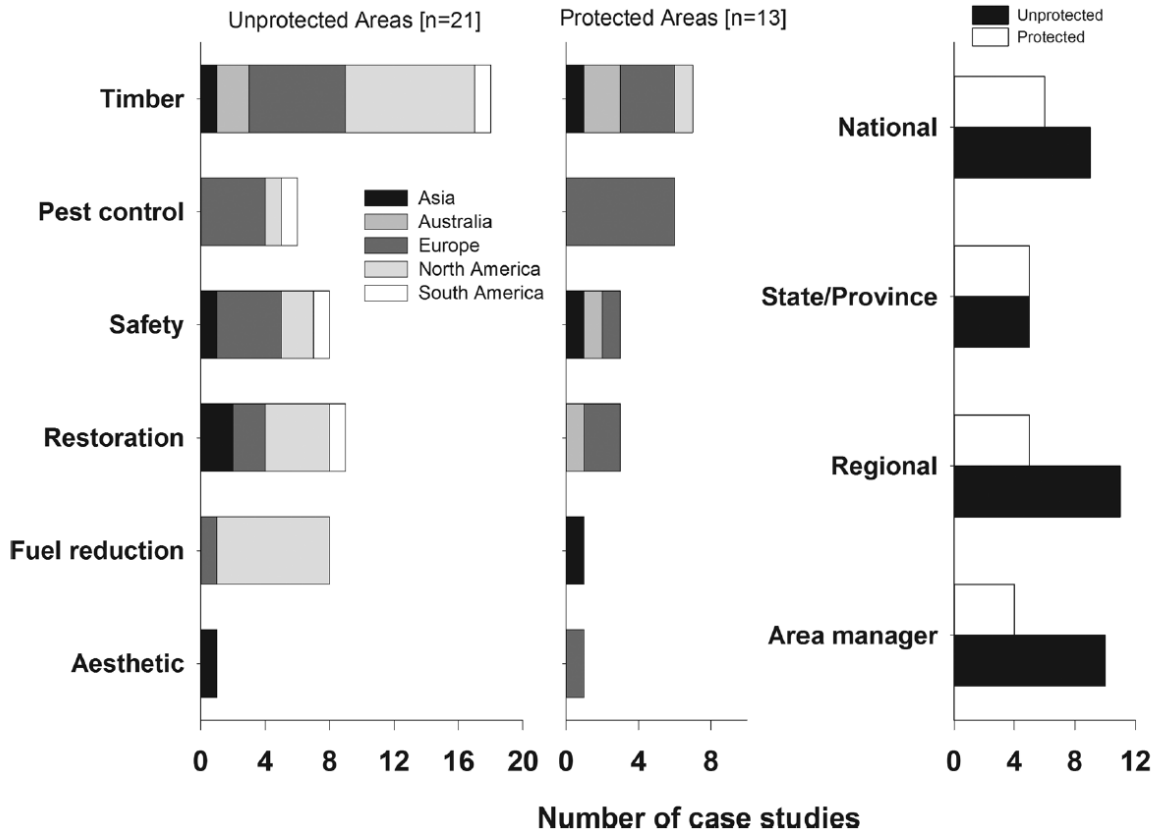


GRÜNDE FÜR SANITÄRHIEBE

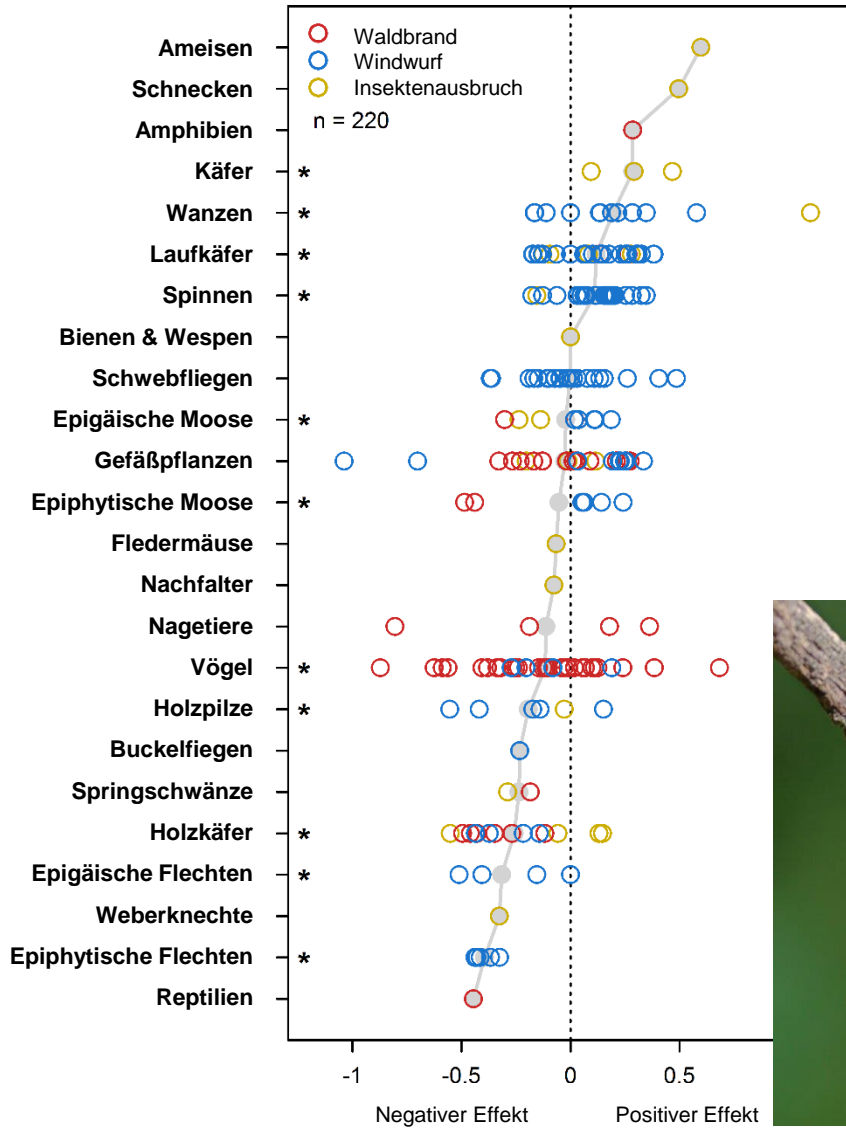


(a) Motivation for salvage logging

(b) Decision level [n=34]



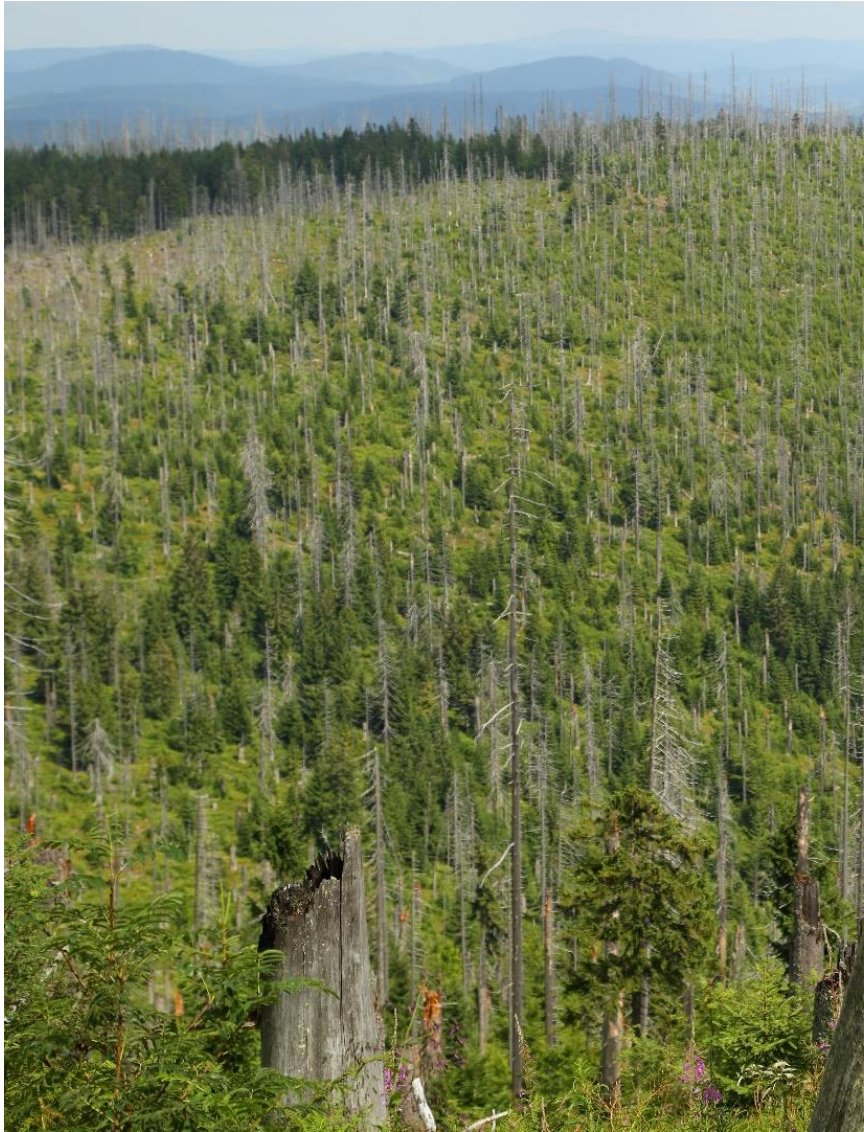
GEWINNER UND VERLIERER



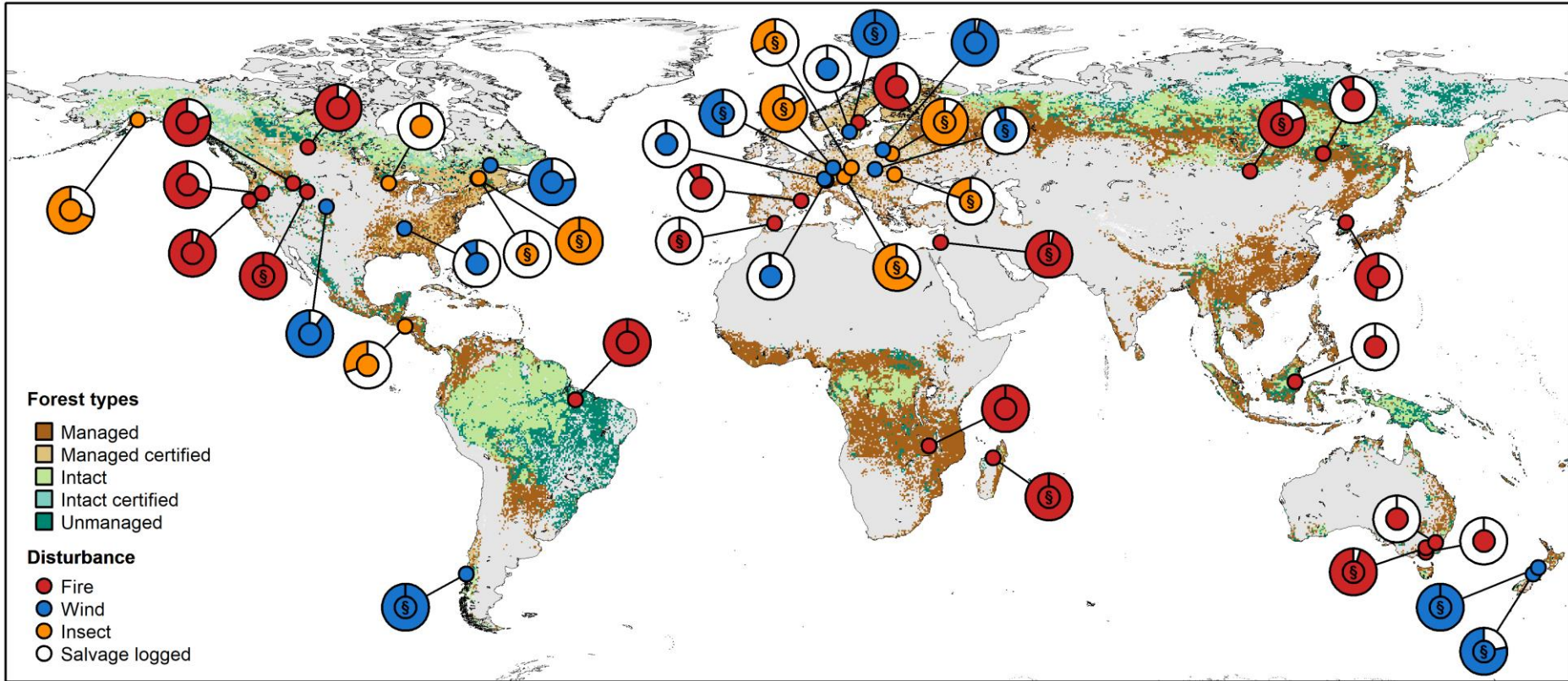
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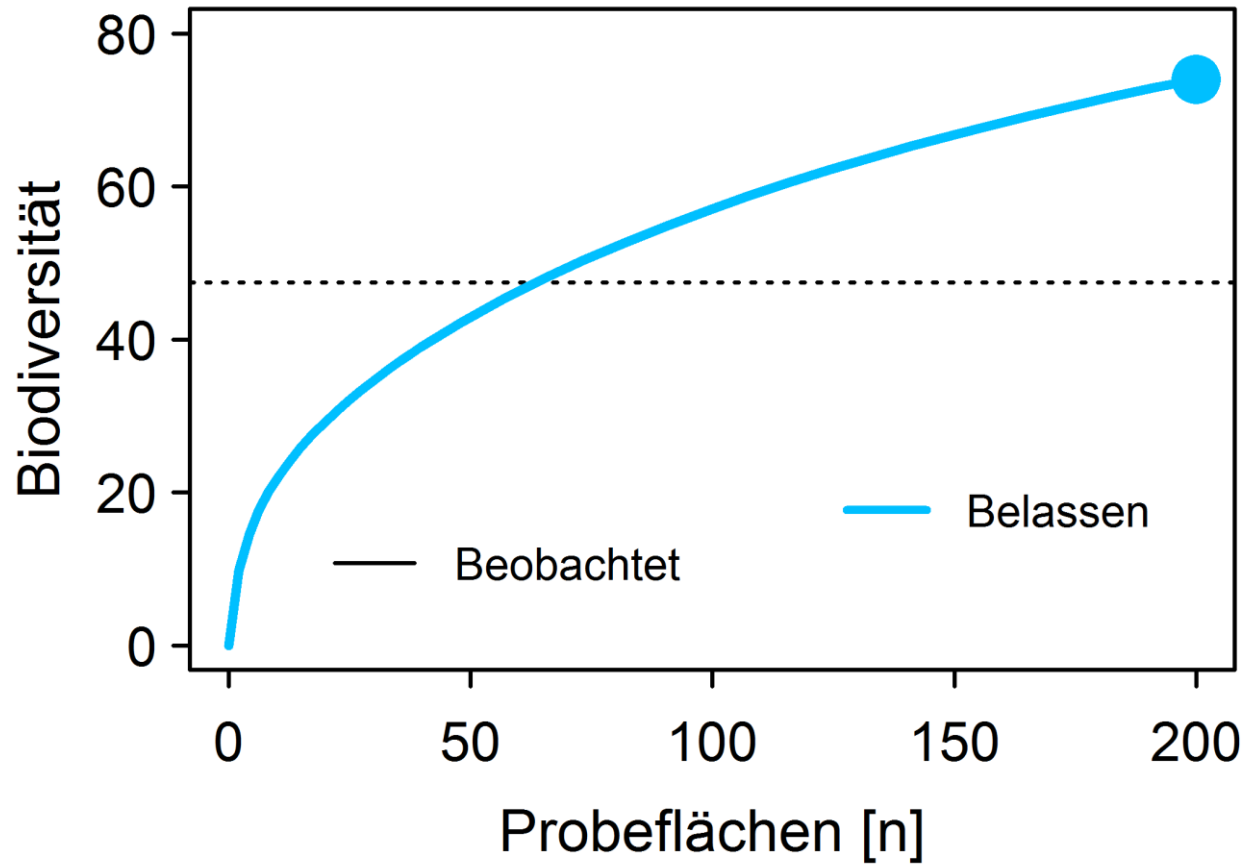
Alexander von Humboldt
Stiftung/Foundation



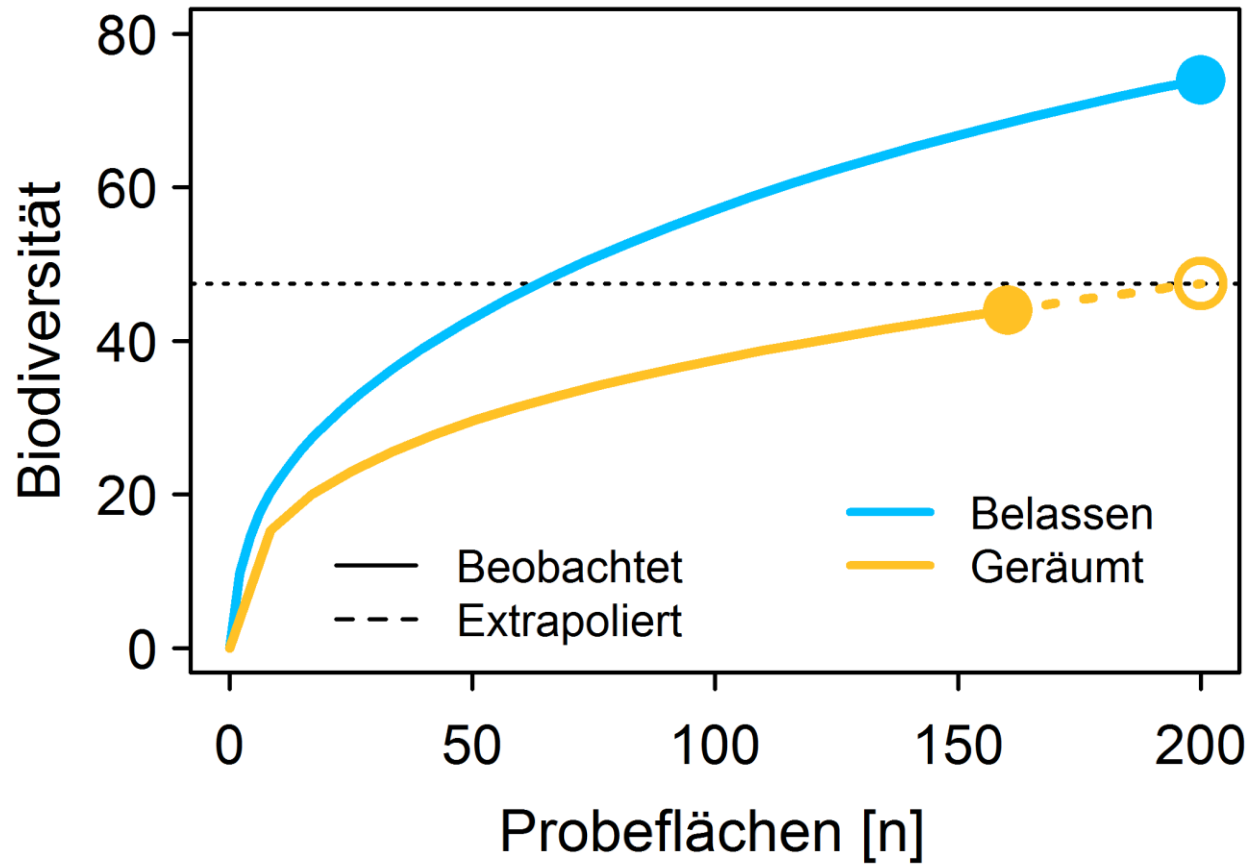
$$\begin{aligned}
 k_{rr} &= \sum_{i,j=1}^S d_{ij} z_i z_j I(Y_i=r, Y_j=r) / F_{rr} \\
 E(k_{rr}) &= \sum_{i,j=1}^S d_{ij} z_i z_j I(Y_i=r, Y_j=r) \\
 &= \sum_{i,j=1}^S d_{ij} z_i z_j \binom{T}{r} z_i^{r-1} (1-z_i)^{T-r} \binom{T}{r} z_j^{r-1} (1-z_j)^{T-r} \\
 &\approx \sum_{i,j=1}^S d_{ij} \left(\frac{r+1}{T-r}\right)^2 \binom{T}{r+1} z_i^{r+1} (1-z_i)^{T-r-1} z_j^{r+1} (1-z_j)^{T-r-1} \\
 &= \left(\frac{r+1}{T-r}\right)^2 E(k_{rr}) \\
 k_{rr} F_{rr} &= \\
 E(k_{rr}) &= \left(\frac{r+1}{T-r}\right)^2 E(F_{rr, r+1})
 \end{aligned}$$

$E(F_{rr}) = \sum_{i,j=1}^S d_{ij} P(Y_i=r, Y_j=r)$
 $= \sum_{i,j=1}^S d_{ij} \binom{T}{r} z_i^{r-1} (1-z_i)^{T-r} \binom{T}{r} z_j^{r-1} (1-z_j)^{T-r}$
 $= \sum_{i,j=1}^S d_{ij} \left(\frac{T}{r}\right)^2 z_i^{r-1} (1-z_i)^{T-r} z_j^{r-1} (1-z_j)^{T-r}$
 $= \left(\frac{T}{r}\right)^2 \sum_{i,j=1}^S d_{ij} z_i^{r-1} (1-z_i)^{T-r} z_j^{r-1} (1-z_j)^{T-r}$
 $= \left(\frac{T}{r}\right)^2 E(k_{rr})$
 $E(k_{rr}) = \frac{r}{T} E(F_{rr})$
 $E(F_{rr}) = \frac{T}{r} E(k_{rr})$
 $E(k_{rr}) = \frac{r}{T} \left(\frac{T}{r}\right)^2 E(k_{rr})$
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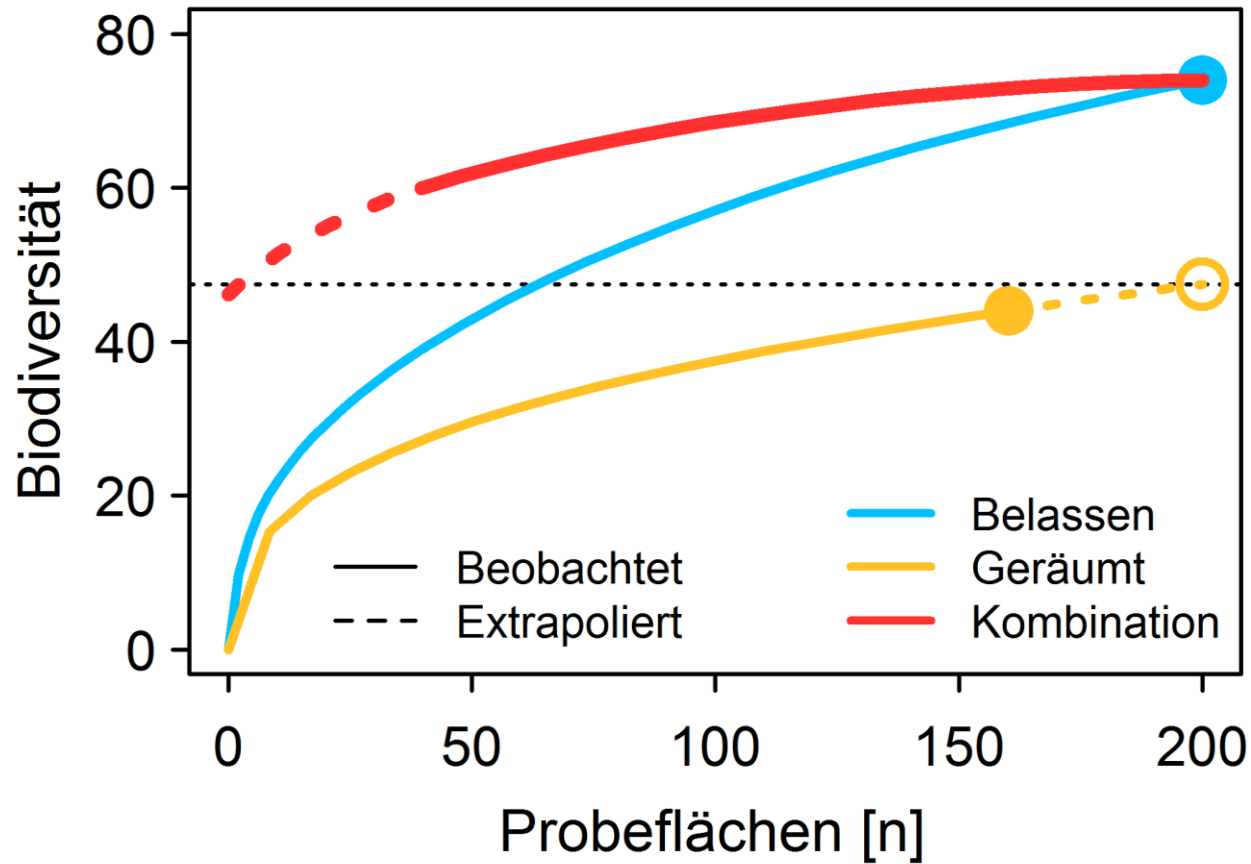
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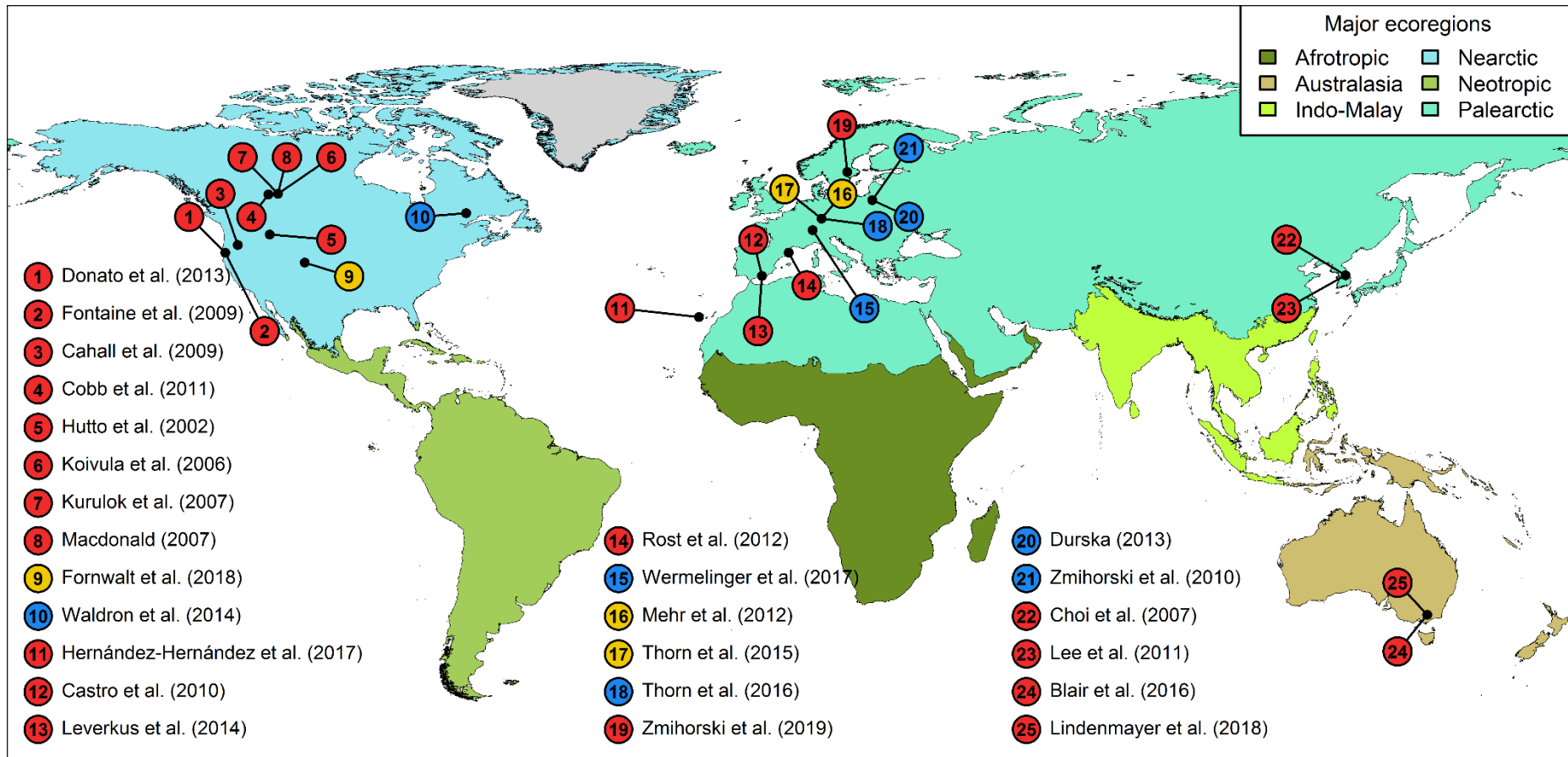
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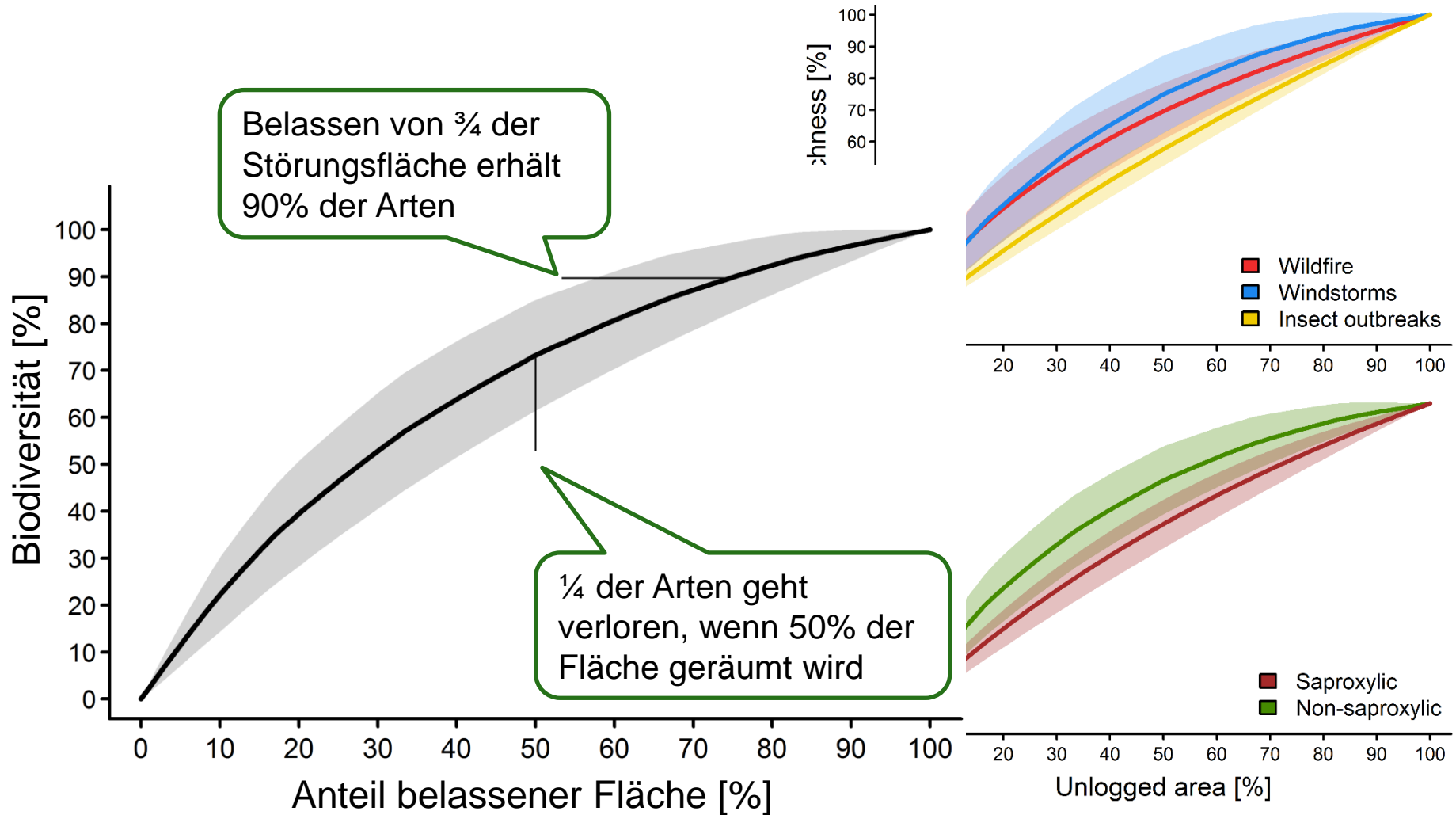
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VIELEN DANK !



VIELEN DANK FÜR IHRE AUFMERKSAMKEIT!



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