Impacts and considerations of conservation translocations for donor populations

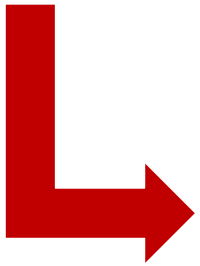
Franz Bairlein

Institute of Avian Research, Wilhelmshaven, Germany

https://aquaticwarbler.eu/about-species/

IUCN guidelines for reintroductions and other conservation translocations
(IUCN/SSC, 2013)

"If removal of individuals or propagules from a source population causes a reduction in its viability in the short term, the translocation objectives should include balancing this with the expected gain in viability of the destination population, so that the species has a greater overall viability than without the translocation, within a stated time period."



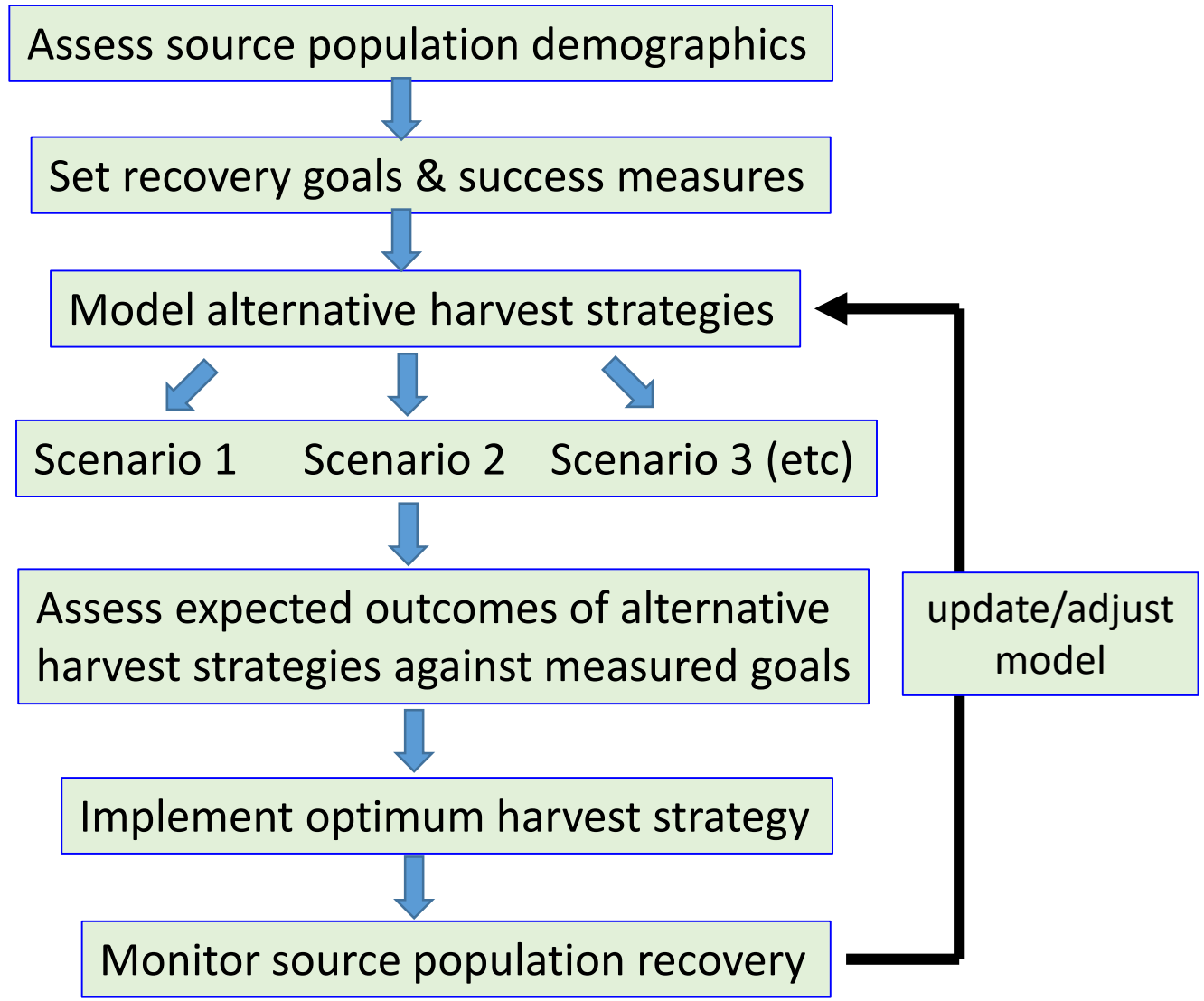
assess

effect of harvesting

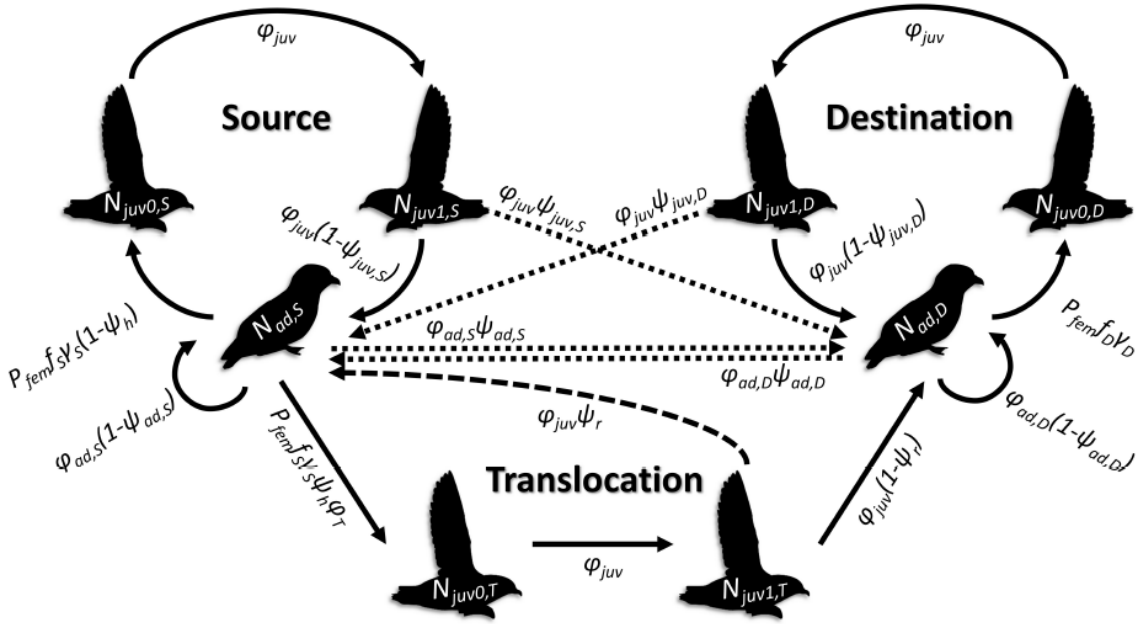
source population

A framework for the management of wild populations used as a source in conservation translocation programs

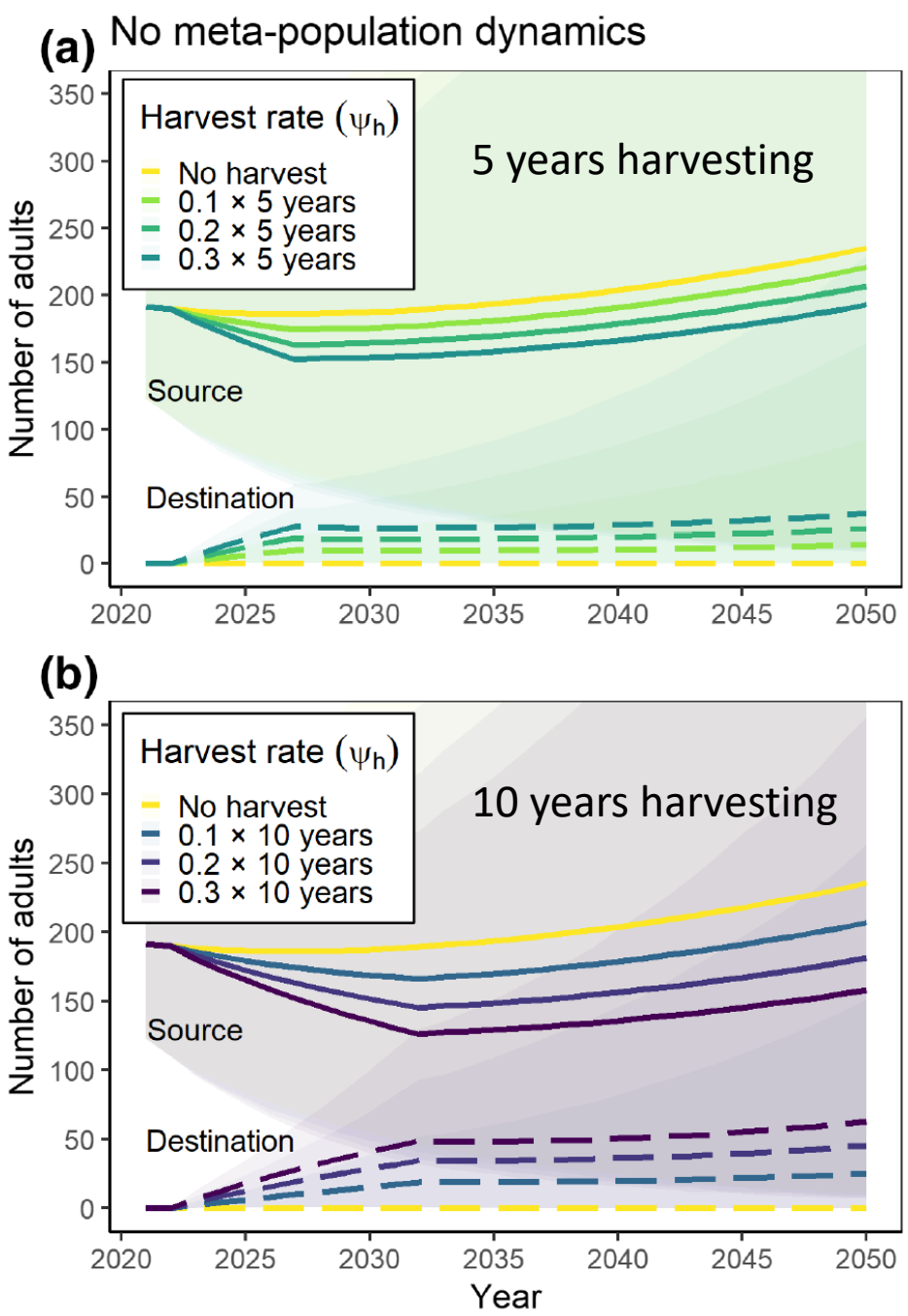
(Mitchell et al. 2021)



Codfish Island, New Zealand

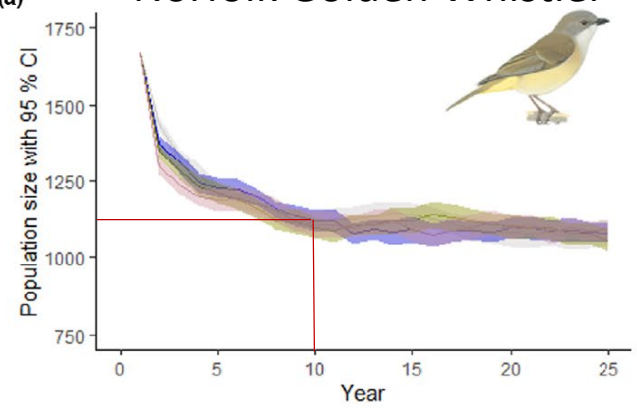


Fischer et al. 2022

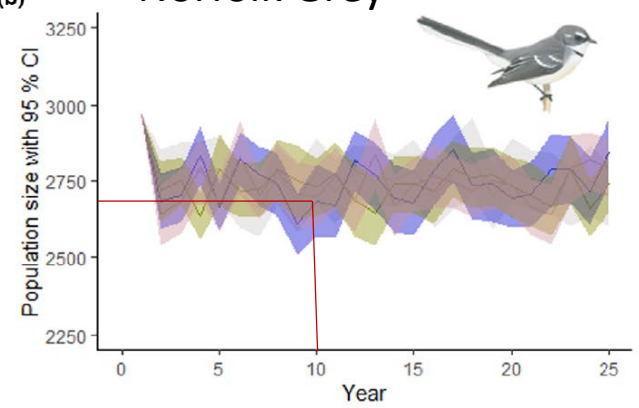


Norfolk Island, Australia

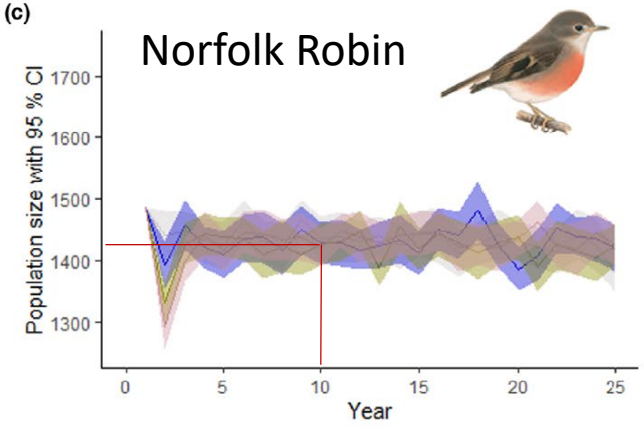
(a) Norfolk Golden Whistler



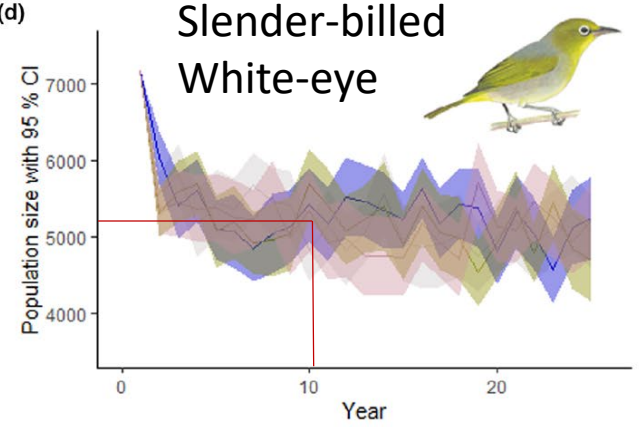
(b) Norfolk Grey



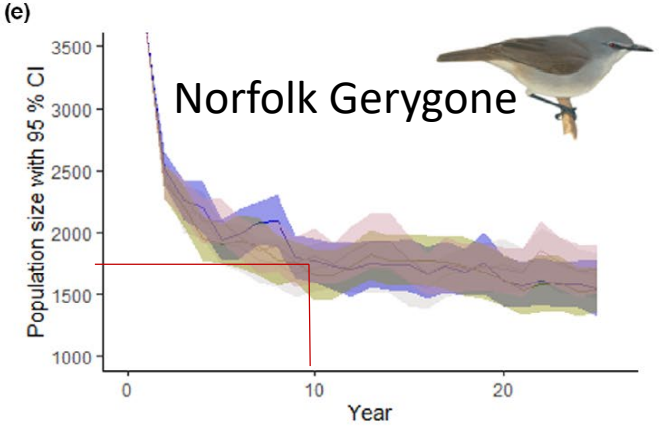
(c) Norfolk Robin

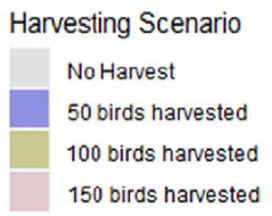


(d) Slender-billed White-eye



(e) Norfolk Gerygone

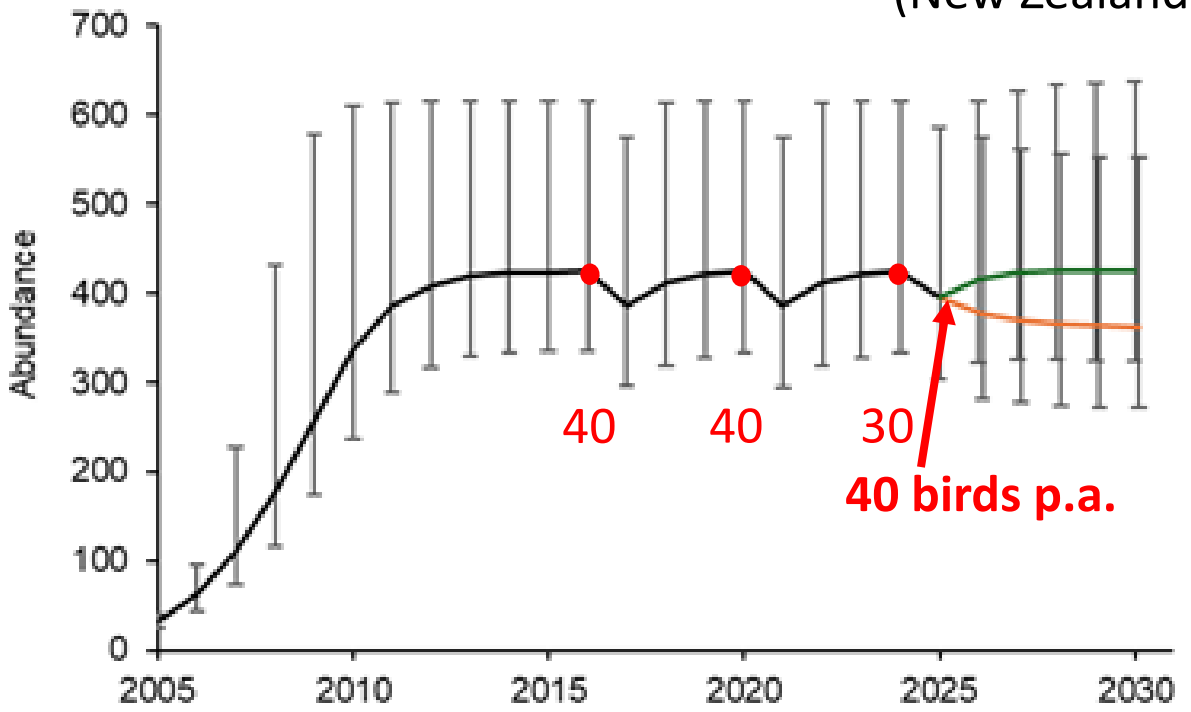




adult birds

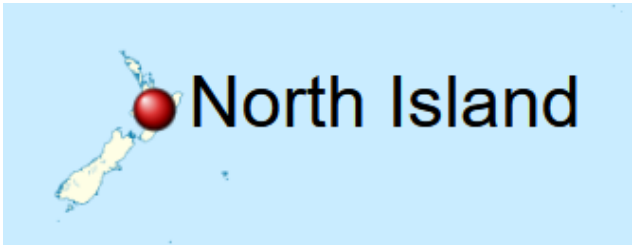
Mitchell et al. 2024

North Island Robin
(New Zealand)



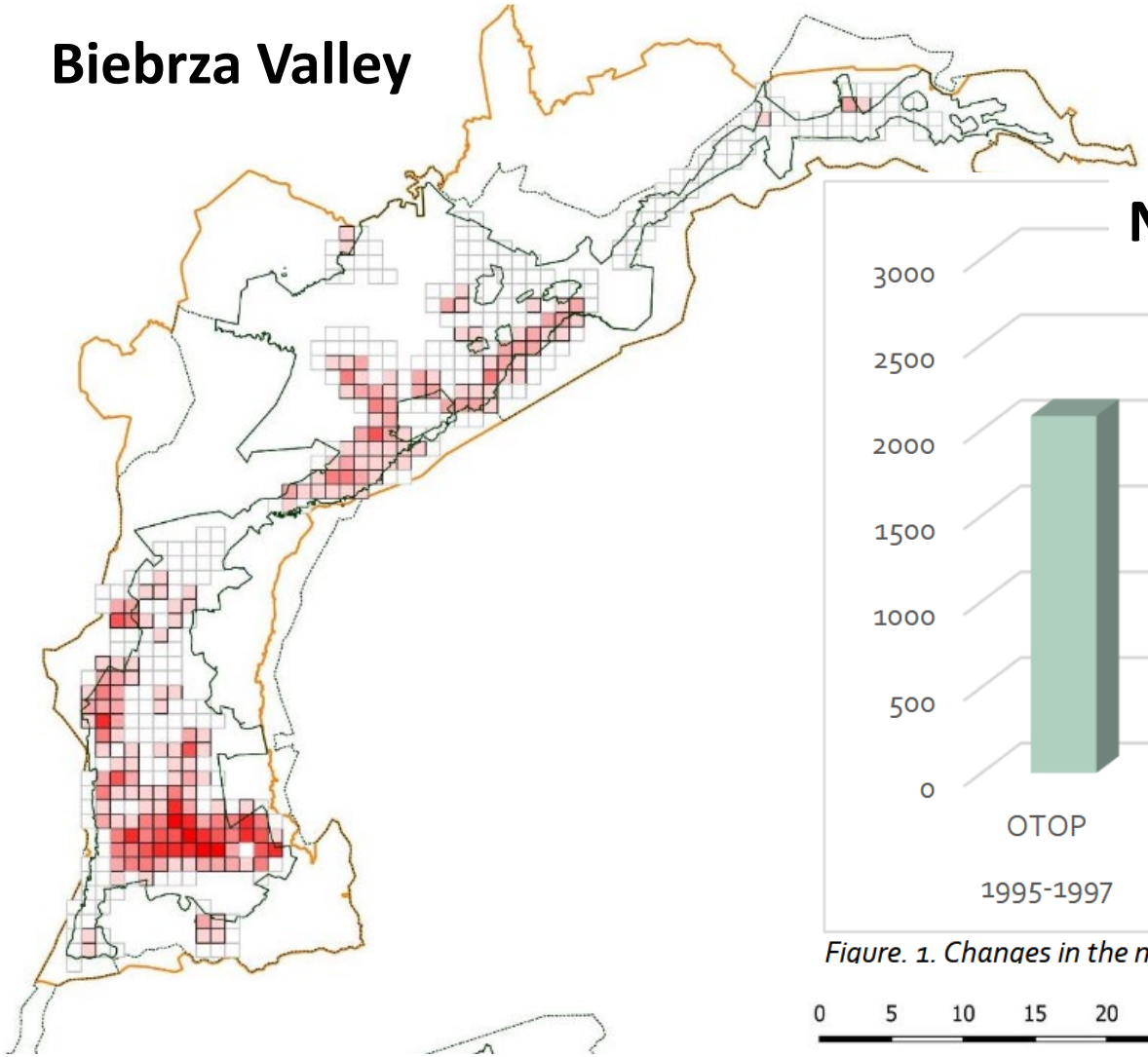
Dough Armstrong
(pers. comm.)

https://en.wikipedia.org/wiki/North_Island_robin



Impacts and considerations of conservation translocations for donor populations

Biebrza Valley



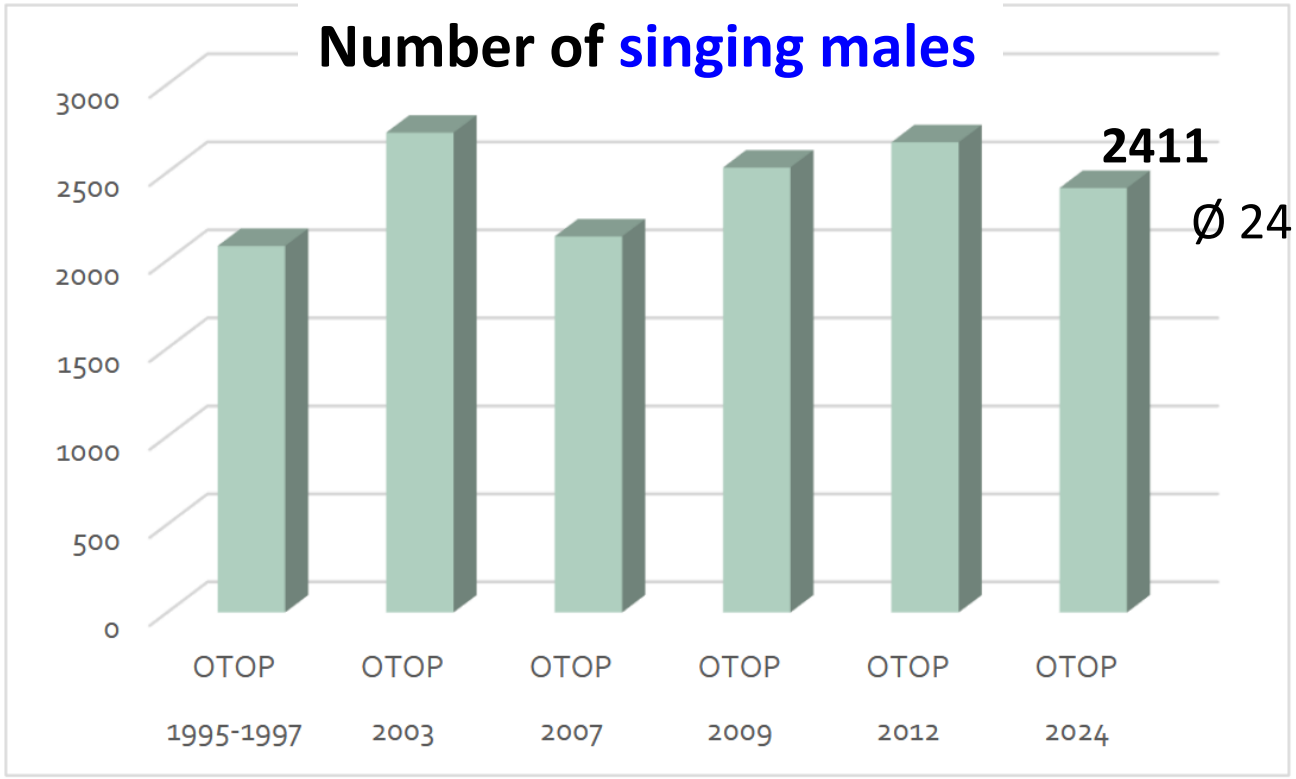


Figure. 1. Changes in the number of Aquatic Warblers in subsequent counts in the Biebrza Valley

from: Stasiak & Szczęch 2024

demographic parameters used (Stasiak 2025)

Number of singing males:	**2400**
Proportion of males in the population:	0,56
Proportion of females in the population:	0,44
Proportion of females starting a 2nd brood:	0,50
Number of fledged chicks per nest in 1st clutch:	3,15
Number of fledged chicks per nest in 2nd brood:	2,75
Proportion of males among chicks:	0,49
Average first year survival:	0,26
Annual survival of males:	0,67

+295 ♂/year (+12.3 %)

not considered:
- emigration/immigration
- density-dependent effects
- natural stochasticity/variation

Salewski et al. 2018
43 % return rate of color-ringed adult males

Foucher et al. 2018
annual survival males: **0.57±0.09**

demographic parameters used (Stasiak 2025)

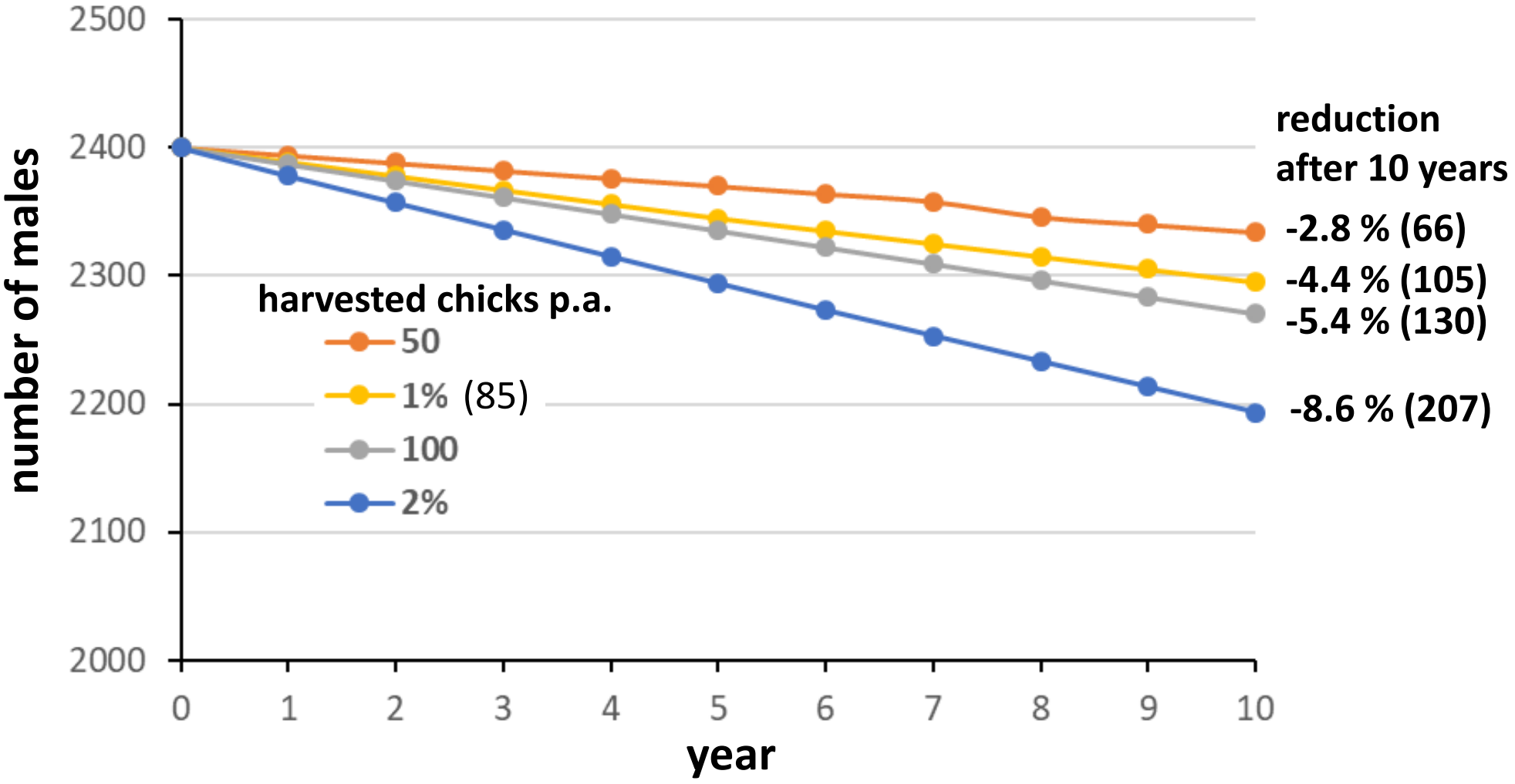
Number of singing males:	**2400**
Proportion of males in the population:	0,56
Proportion of females in the population:	0,44
Proportion of females starting a 2nd brood:	0,50
Number of fledged chicks per nest in 1st clutch:	3,15
Number of fledged chicks per nest in 2nd brood:	2,75
Proportion of males among chicks:	0,49
Average first year survival:	0,26
Annual survival of males:	0,55 ← stable population

not considered:
- emigration/immigration
- density-dependent effects
- natural stochasticity/variation

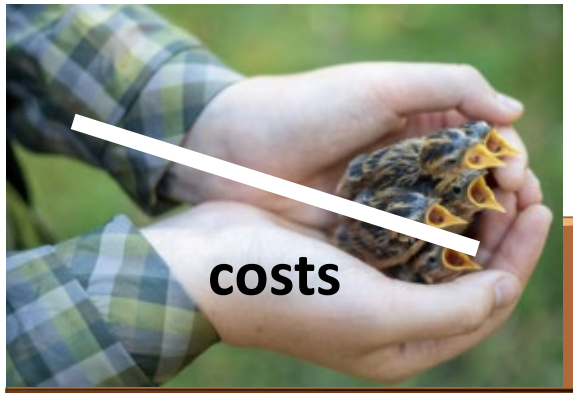
→ **harvest scenarios**

50 chicks/year
1 % (85)
100
2 %

Change in male population size under different harvesting scenarios



It‘s to us!



source population

new population

References

Fischer JH et al. (2022) Predicting harvest impact and establishment success when translocating highly mobile and endangered species. J Appl Ecol 59: 2071–2083.

Foucher J et al. (2018) Survival of Aquatic Warblers breeding in southeastern Poland. In: Tanneberger F, Kubacka J (ed; 2018). The Aquatic Warbler Conservation Handbook. Brandenburg State Office for Environment (LfU), Potsdam. Pp 68.

IUCN/SSC. 2013. Guidelines for Reintroductions and Other Conservation Translocations. Version 1.0. Gland, Switzerland: IUCN Species Survival Commission.

Mitchell WF et al. (2021) Are we adequately assessing the demographic impacts of harvesting for wild-sourced conservation translocations? Conservation Science and Practice. 2022;4:e569.

Mitchell WF et al. (2024) An a priori assessment of the impact of harvesting from five wild populations for conservation translocations. Ibis 166: 1280–1295.

Salewski V et al. (2019) Identifying migration routes and non-breeding staging sites of adult males of the globally threatened Aquatic Warbler *Acrocephalus paludicola.* Bird Conservation International 29:503–514.

Stasiak K, Szczęch R (2024) Population of Aquatic Warbler in Biebrza Valley in 2024. OTOP 2024, LIFE15 NAT/LT/001024 – LIFEMagniDucatusAcrola.

Stasiak K (2025) Demographic data presented at Life4AW Advisory Board Meeting.