



## PRACTICE ABSTRACT № 30

### Keywords

Agri-environment schemes, farmers' collectives, arable field bird species, farming landscapes

## Effects of agri-environmental measures (AEM) on cropland bird species in Dutch collective schemes

A study assessed the effects of Dutch AEMs on seven cropland bird species as well as total bird abundance and species richness of the 16 species targeted by the national policy (Fig. 1).

Field margins are successful in providing good breeding season habitat to four of seven species, as well as total bird abundance and species richness. Bird plots benefits are limited to one of seven species and total bird abundance.

Three of seven species do not benefit from the AEMs. It is likely that the vegetation of these AEMs develops too fast early in the season for these species, which have a preference for breeding on bare ground. Spatially clustered agri-environmental field margins and bird plots do not have a higher bird abundance than spatially isolated ones.

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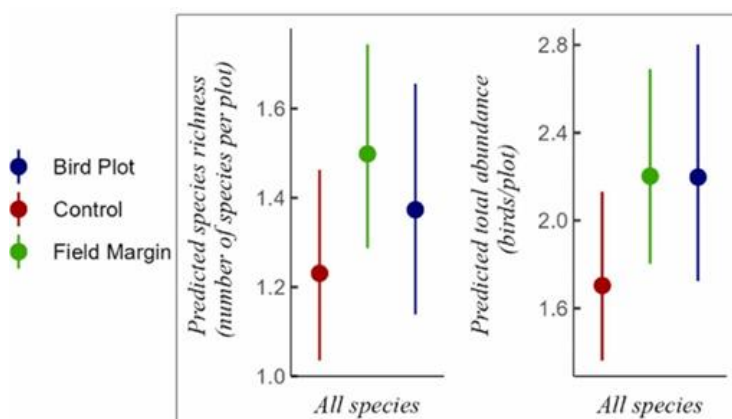


Fig. 1: Predicted total bird abundance and species richness per plot, for control plots, field margins and bird plots. Vertical bars correspond to 95% confidence intervals.

Source: Grondard et al. (2023).

## ADDITIONAL INFORMATION

To assess the effects of AEMs, we carried out a statistical analysis with bird monitoring data collected by four farmers collectives in the provinces of Groningen, Drenthe and Flevoland (Fig. 2). Bird abundance on agri-environmental field margins and bird plots was compared with bird abundance on control plots with conventional farming practices but otherwise similar characteristics. In order to correct for a potential selection bias (AEM plots could be established in preferential locations for target species compared to control plots), landscape factors known to potentially affect bird abundance were included in the statistical models.

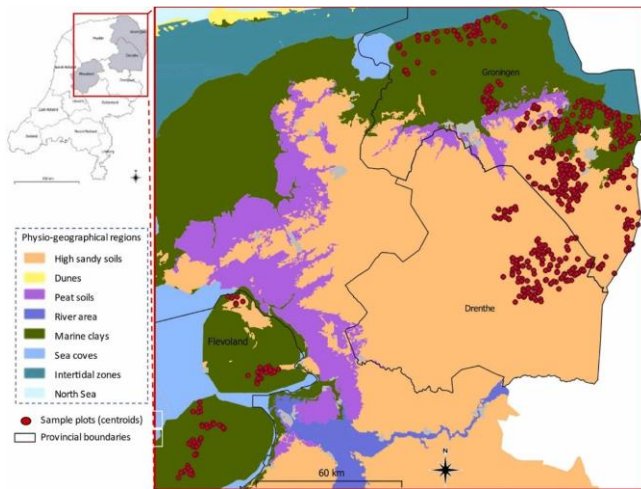


Fig. 2: Location of study plots. Source: Grondard et al. (2023).

Including landscape factors also allowed to analyse how the target species respond to different landscape characteristics. Moreover, a separate statistical analysis was carried out on agri-environmental field margins and bird plots only, to assess if spatially clustered AEM plots had a higher bird abundance than spatially isolated ones.

Detailed information is available in [Grondard et al., 2023. Effects of Dutch agri-environmental field margins and bird plots on cropland birds. Agriculture, Ecosystems & Environment 349.](#)

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Contracts2.0 aims to develop innovative contract-based solutions, which increase the motivation for farmers and land managers to produce more environmental public goods and allow them to reconcile the profitability of their farms with sustainability objectives. To do so, 28 research and practice partners closely cooperate to co-design and evaluate the novel contracts. Lessons learned from successfully tested contracts will also provide support for policy makers on local, national and EU-Level.

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### Research partners



### Action partners



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