

Change in Seabird Breeding Occupancy (10 km² Resolution)

Technical Appendix

Habitat Regulation 9A Wales Report (2019-2024)

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Executive summary

This appendix presents a visual summary of changes in breeding seabird occupancy across the UK, with relevance to seabird species of Wales. Distribution maps for Welsh breeding seabirds were derived from the Seabirds Count census of Britain and Ireland undertaken between 2015–2021 (Burnell *et al.*, 2023). Distribution is mapped at a 10 km² resolution to illustrate spatial patterns of change over a 20-year period.

Each map shows the distribution and change in occupancy for each of the 21 seabird species that breed in Wales, comparing current breeding distributions with historical baselines. The maps use a consistent colour scheme to indicate:

- Red squares: Areas previously occupied but now unoccupied (loss)
- Light blue squares: Areas with continued occupancy (no change)
- Dark blue squares: Newly occupied areas (gain)

The data reveal varied patterns across species. Some, such as Arctic Tern *Sterna paradisaea*, have maintained stable breeding distributions. Others, including Black-headed Gull *Chroicocephalus ridibundus*, show notable losses in previously occupied 10-km squares, particularly in inland upland habitats of Wales. Such declines mirror those of

other populations elsewhere in Britain. The reasons for such declines are unclear though Black-headed Gull colonies may be impacted by predation pressure by mammalian and avian species as well as changes in land use. In addition, Highly Pathogenic Avian Influenza (“bird flu”) outbreaks in 2023 and 2024 may have further reduced both population numbers and range. Other species like Mediterranean Gull *Ichthyaetus melanocephalus* have expanded their breeding range where colonisation of Britain, is probably a result of population level increase combined with range expansion in the 1960s from the species’ core Black Sea population (Burnell *et al.*, 2023).

Over the last two decades both Razorbill *Alca torda* and Common Guillemot *Uria aalge* have increased both breeding range and population numbers in Wales. The reasons for this are not fully understood though it may be a combination of higher annual adult survival rates and higher rates of productivity, showing that there has been sufficient food for these species in Wales, which hasn’t been the case in other parts of the UK. (Burnell *et al.*, 2023). The full impacts of the Highly Pathogenic Avian Influenza outbreaks in 2022 and 2023 on Welsh populations, particularly Common Guillemot is not fully known but numbers do seem to have carried on steadily increasing and productivity at Skomer seems to be ok.

These trends reflect ongoing ecological pressures and shifts in coastal and marine environments elsewhere in Wales.

These visualisations support broader assessments of species status, distributional trends, and habitat use, and are intended to inform conservation planning and reporting under the Habitats Regulations framework. Furthermore, the maps provide a clear and consistent format for understanding seabird occupancy change in Wales and contribute to the evidence base for future policy and management decisions, particularly the actions associated with the Wales Seabird Conservation Strategy (in draft).

Species Covered

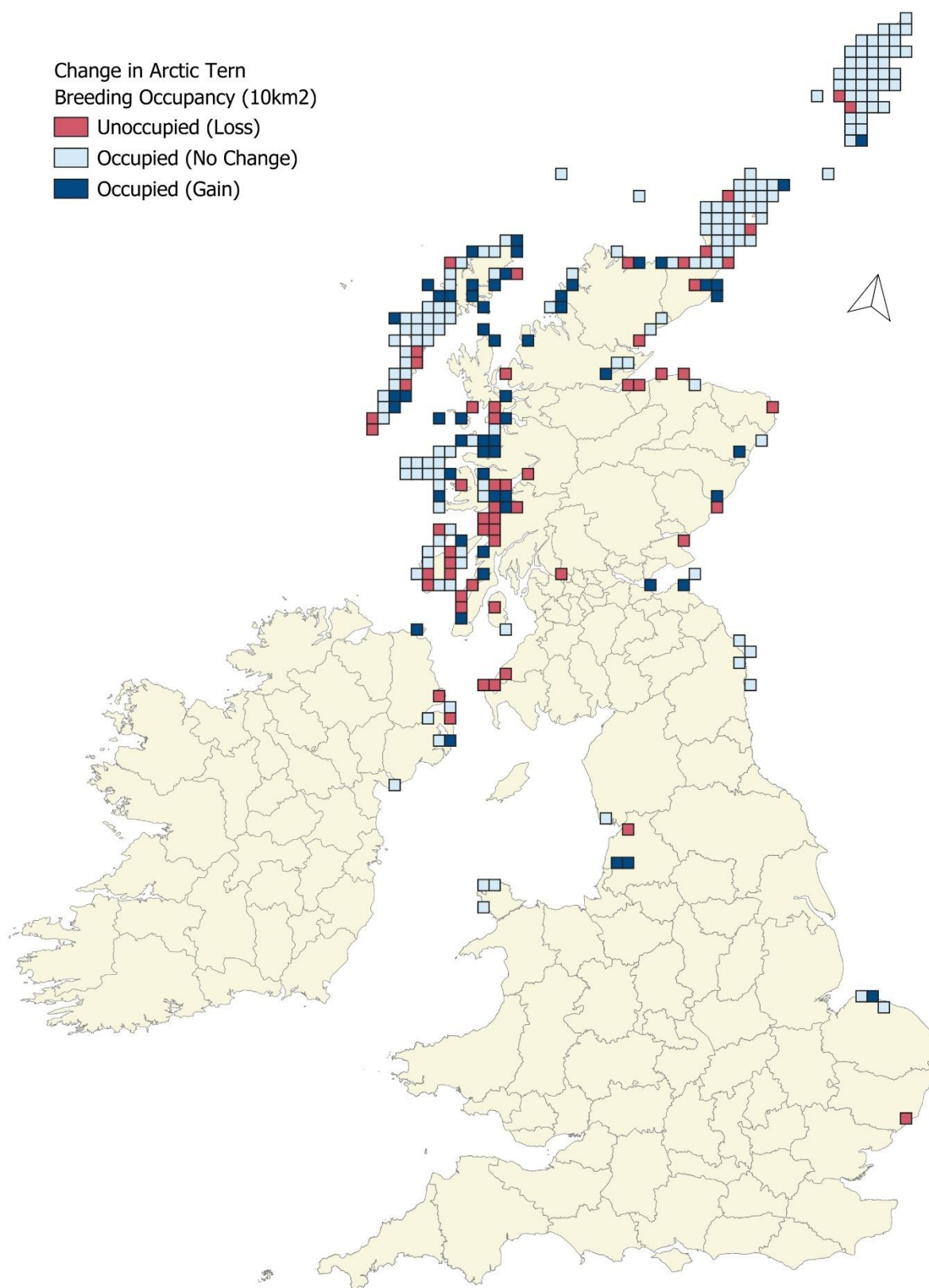
The following seabird species are included in this technical appendix:

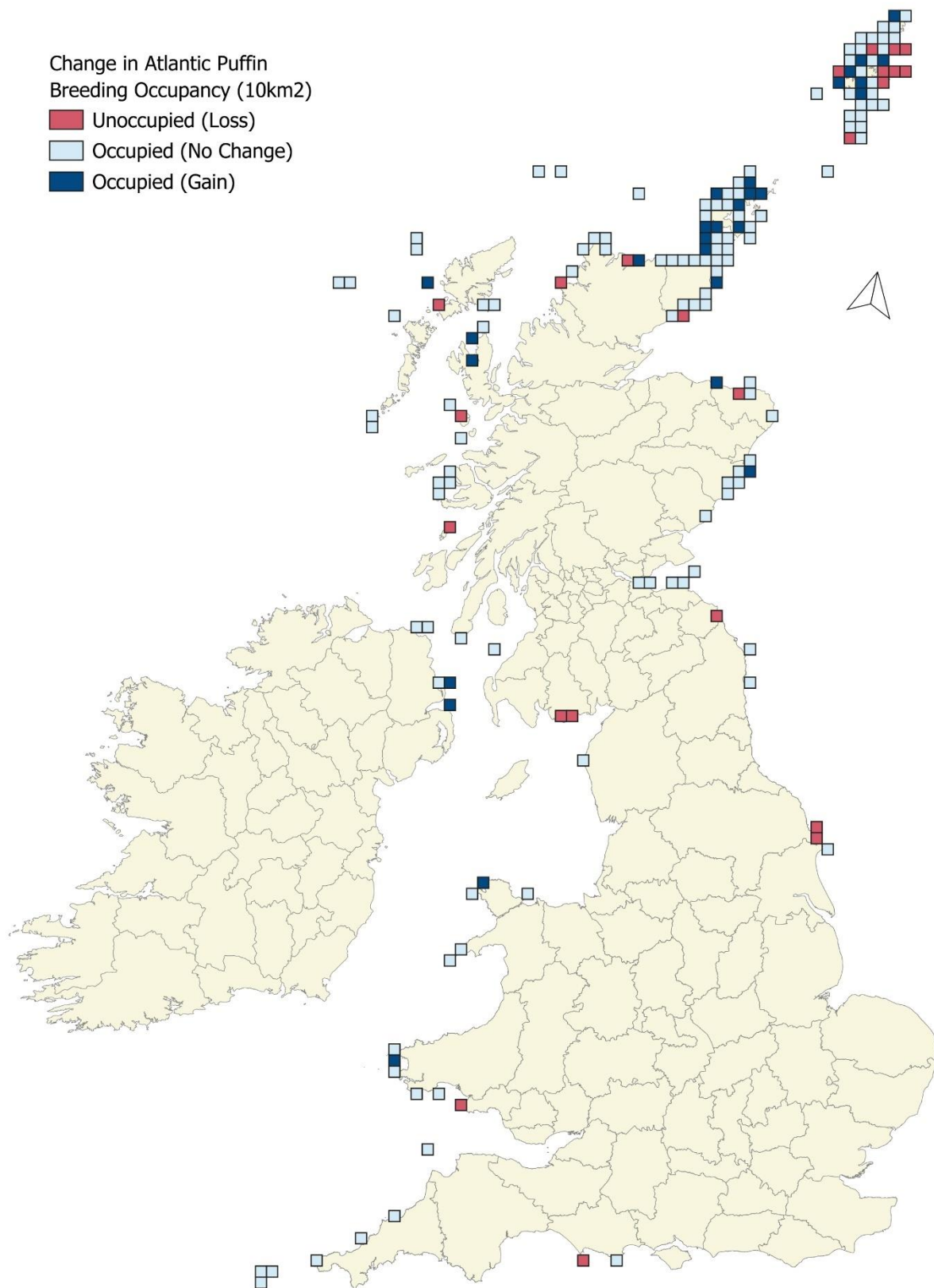
Arctic Tern *Sterna paradisaea*
Atlantic Puffin *Fratercula arctica*
Black Guillemot *Cephus grylle*
Black-headed Gull *Chroicocephalus ridibundus*
Black-legged Kittiwake *Rissa tridactyla*
Common Guillemot *Uria aalge*
Common Tern *Sterna hirundo*
European Shag *Gulosus aristotelis*
European Storm-Petrel *Hydrobates pelagicus*
Greater Black-backed Gull *Larus marinus*
Great Cormorant *Phalacrocorax carbo*
Herring Gull *Larus argentatus* (natural-nesting)
Lesser Black-backed Gull *Larus fuscus* (natural-nesting)

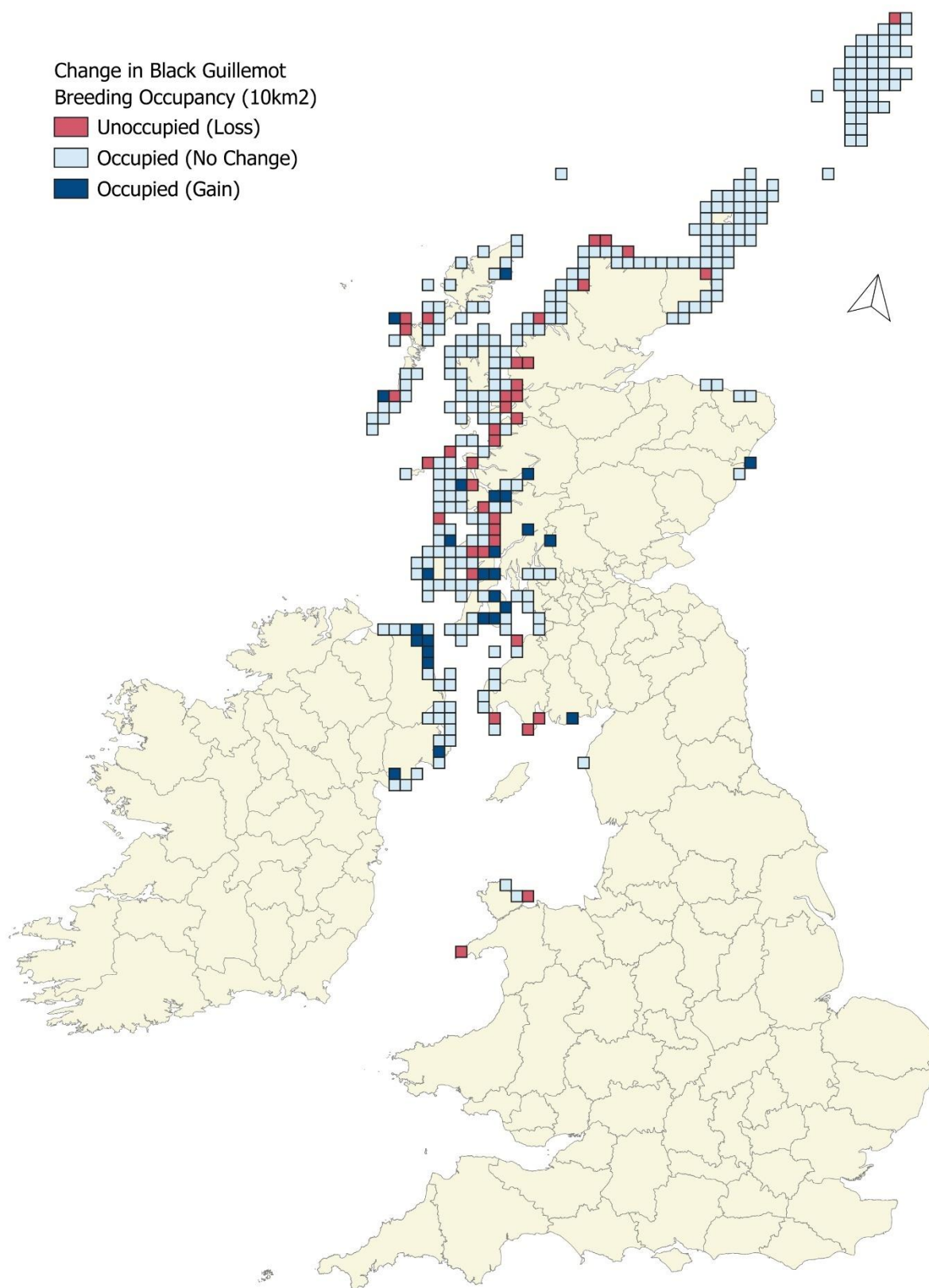
Little Tern *Sternula albifrons*
Manx Shearwater *Puffinus puffinus*
Mediterranean Gull *Ichthyaetus melanocephalus*
Northern Fulmar *Fulmarus glacialis*
Northern Gannet *Morus bassanus*
Razorbill *Alca torda*
Roseate Tern *Sterna dougallii*
Sandwich Tern *Thalasseus sandvicensis*

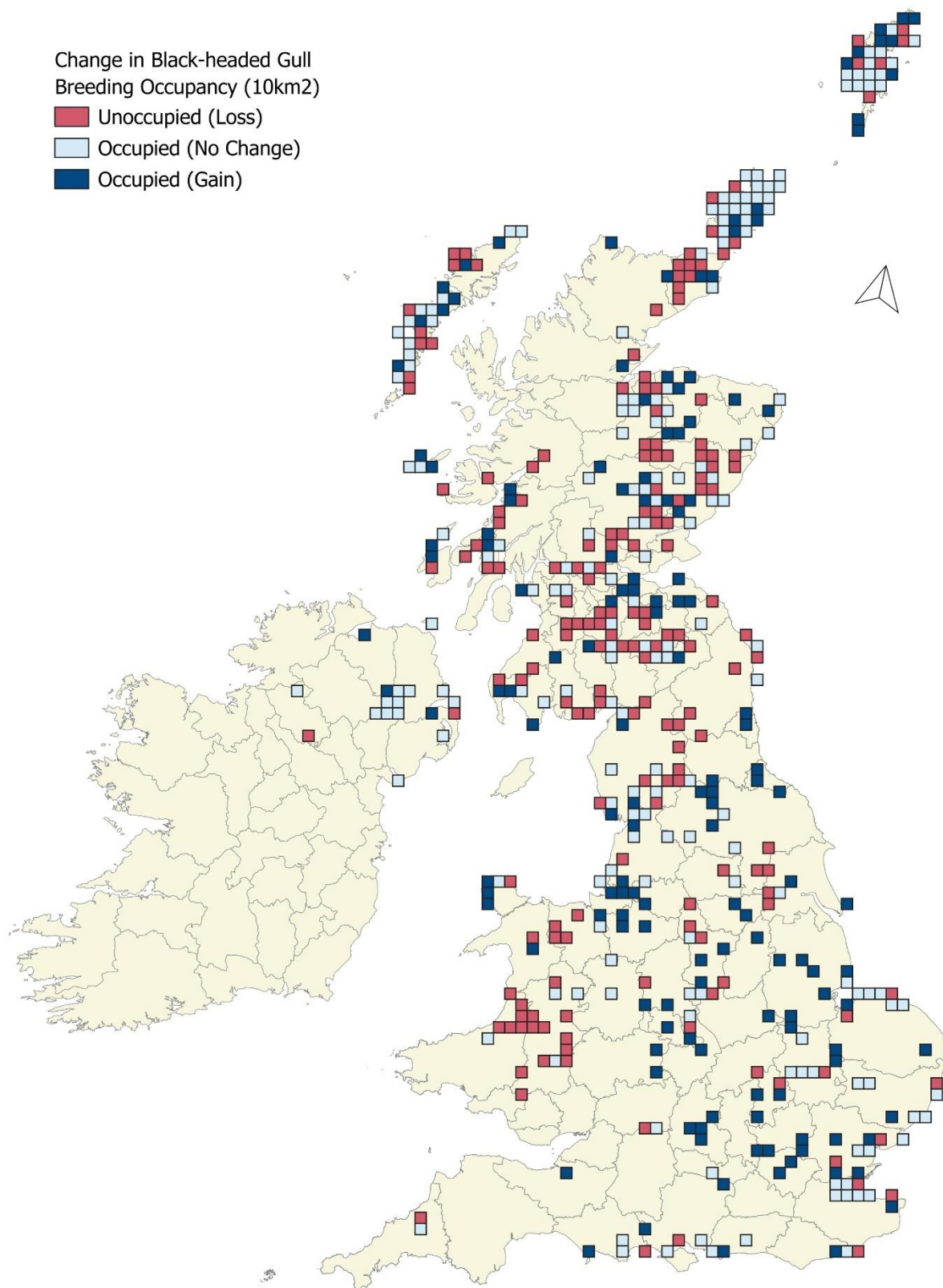
References

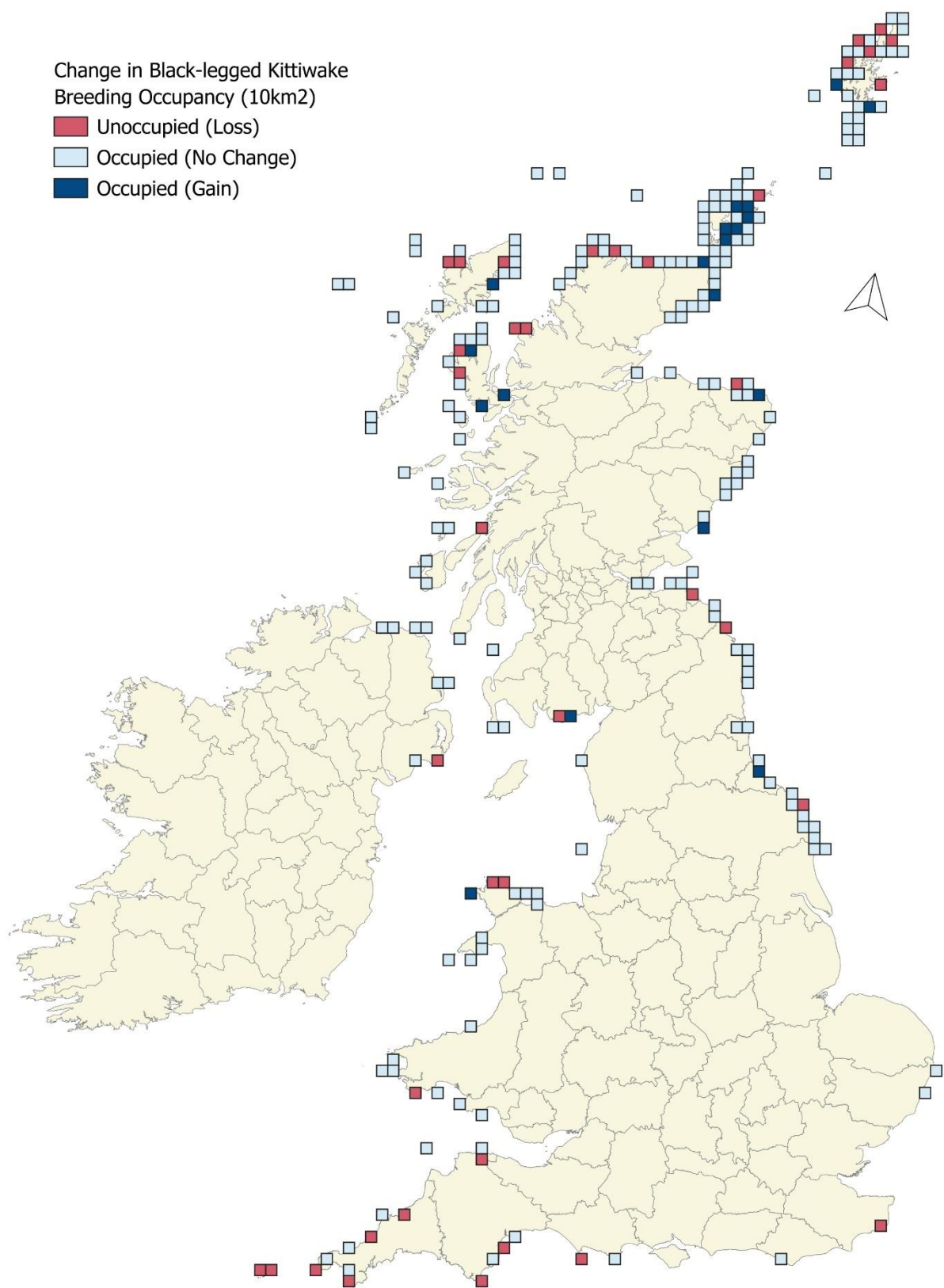
Burnell, D., Perkins, A.J., Newton, S.F., Bolton, M., Tierney, T.D. and Dunn, T.E. (2023). *Seabirds Count: A census of breeding seabirds in Britain and Ireland (2015–2021)*. Cerdanyola del Vallès: Lynx Nature Books.

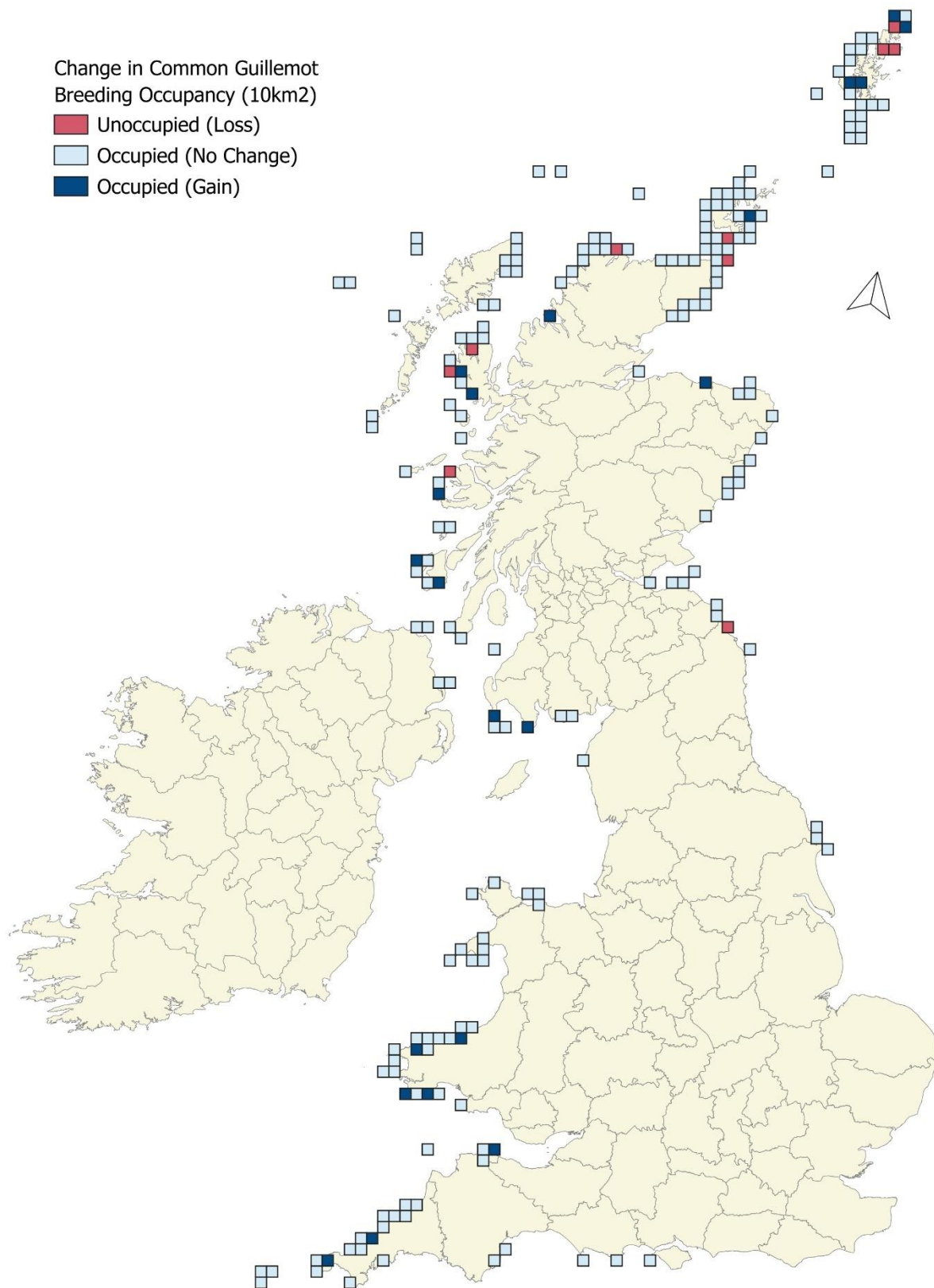


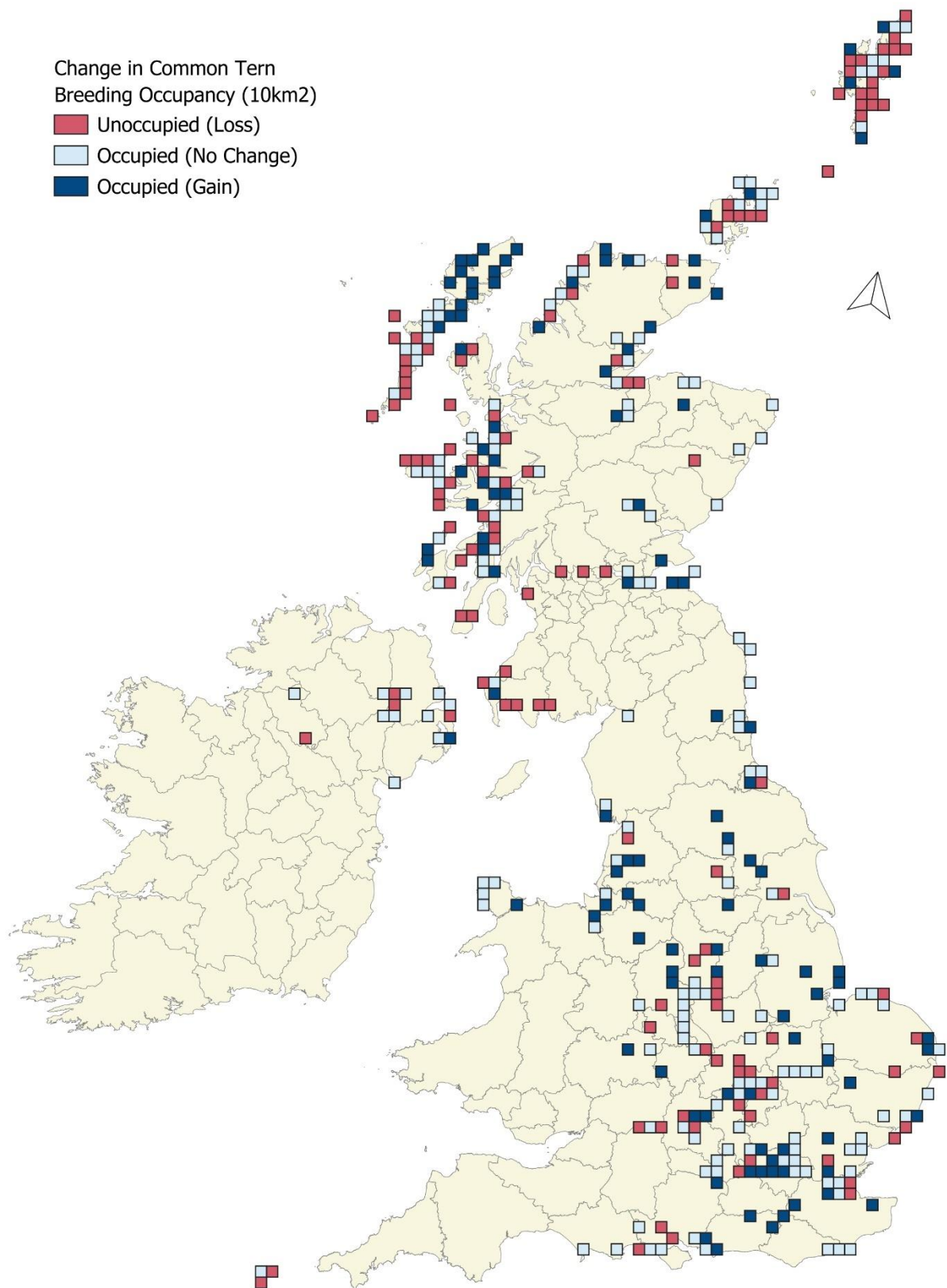


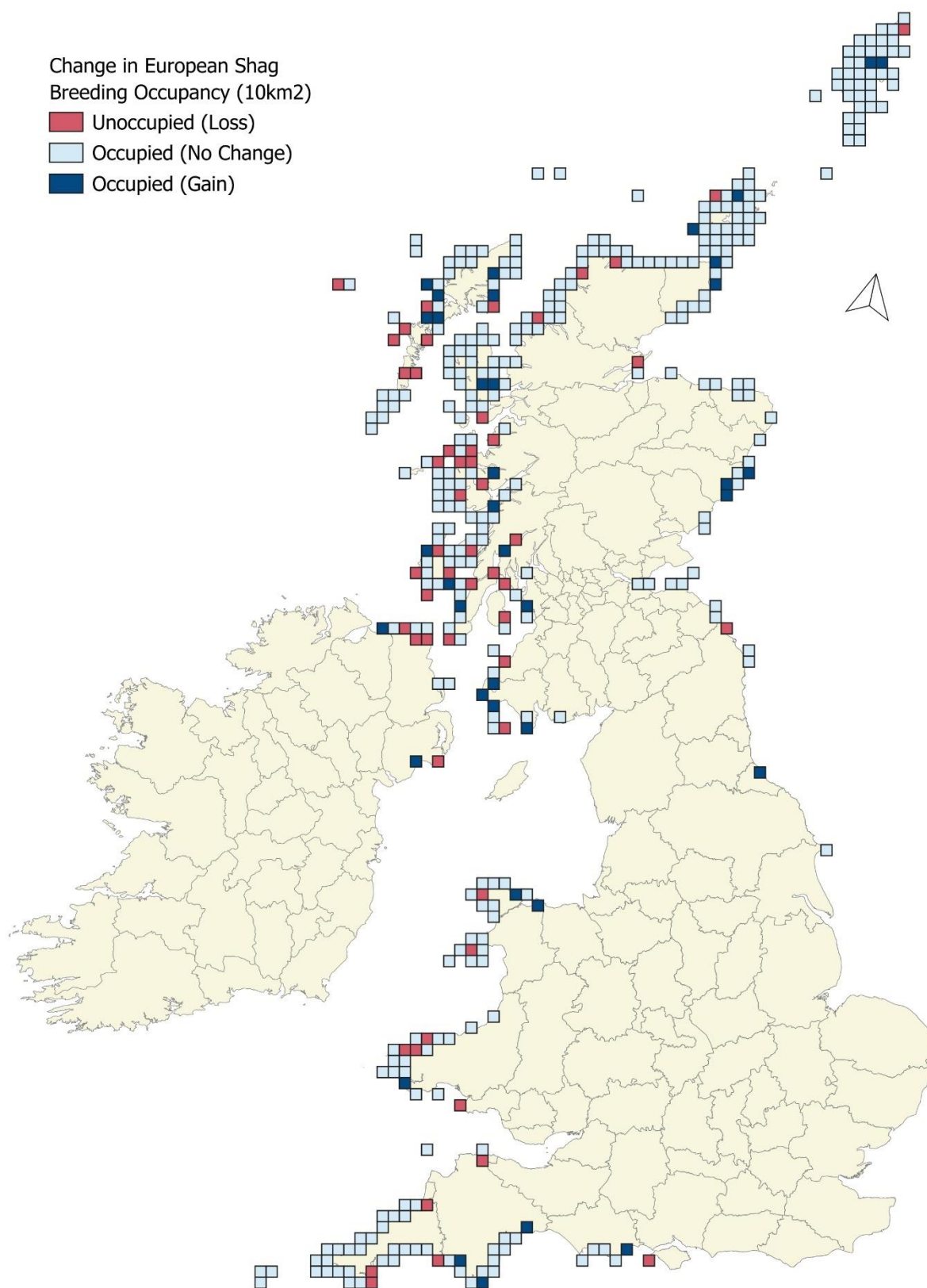


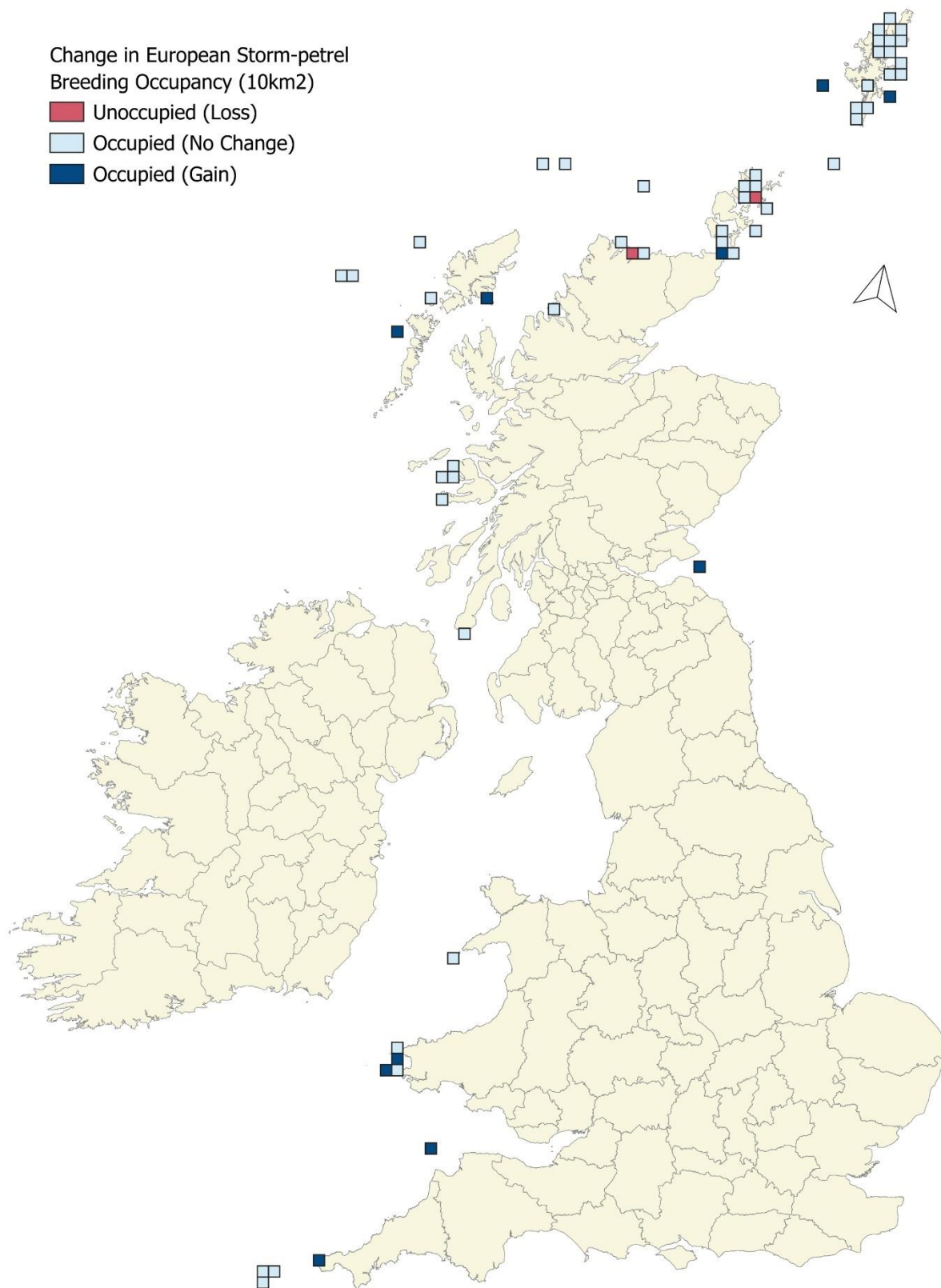


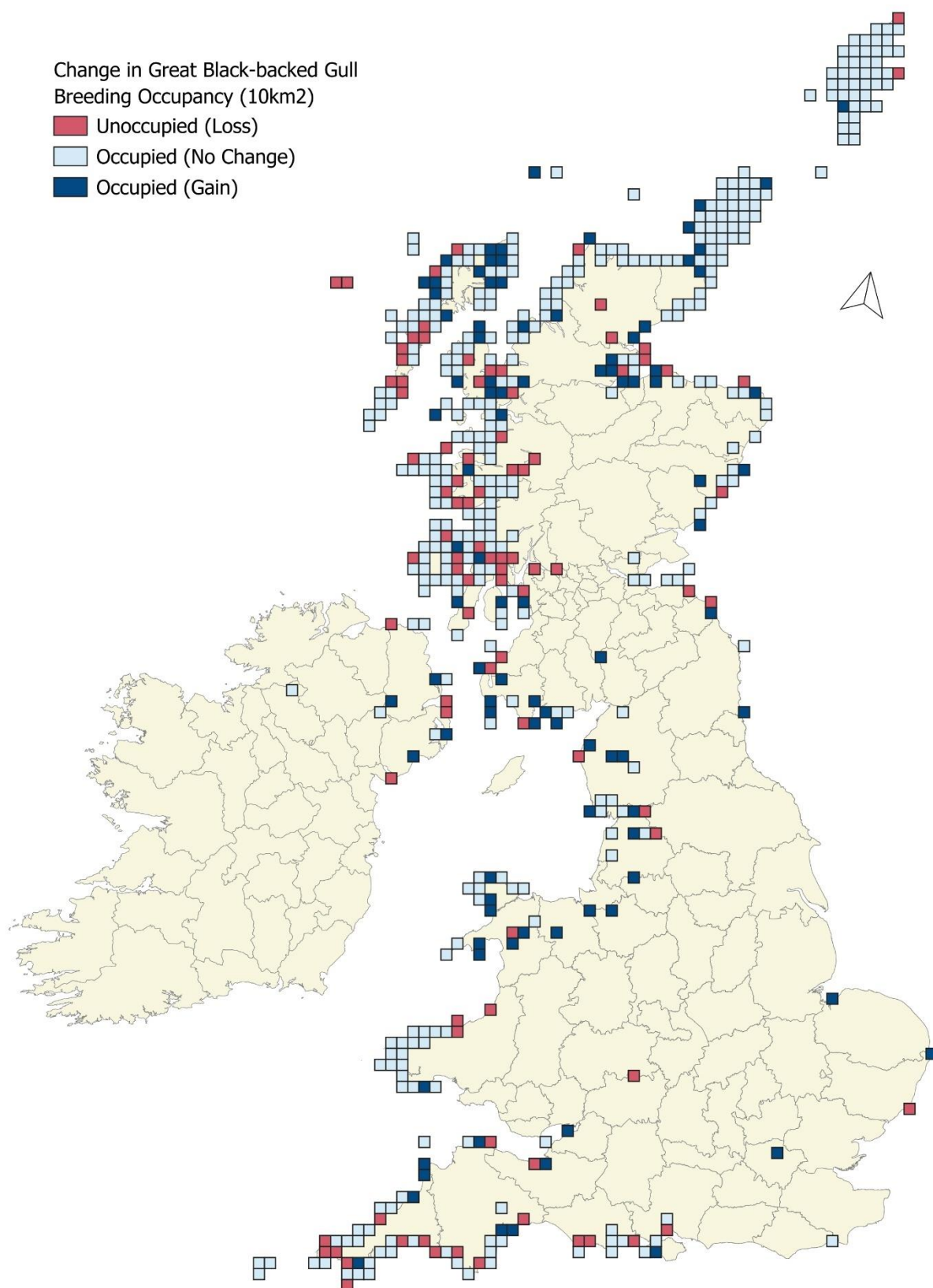


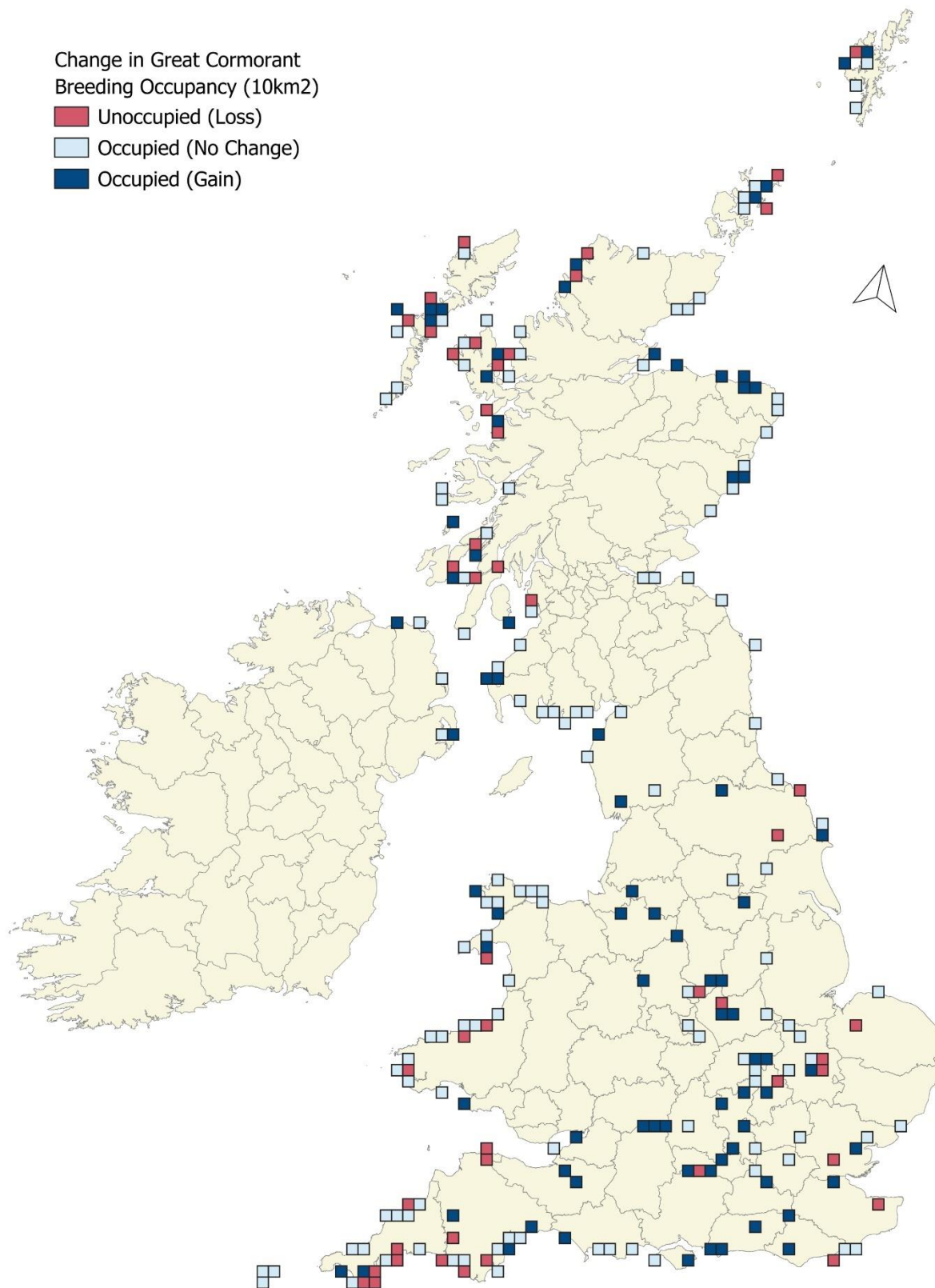


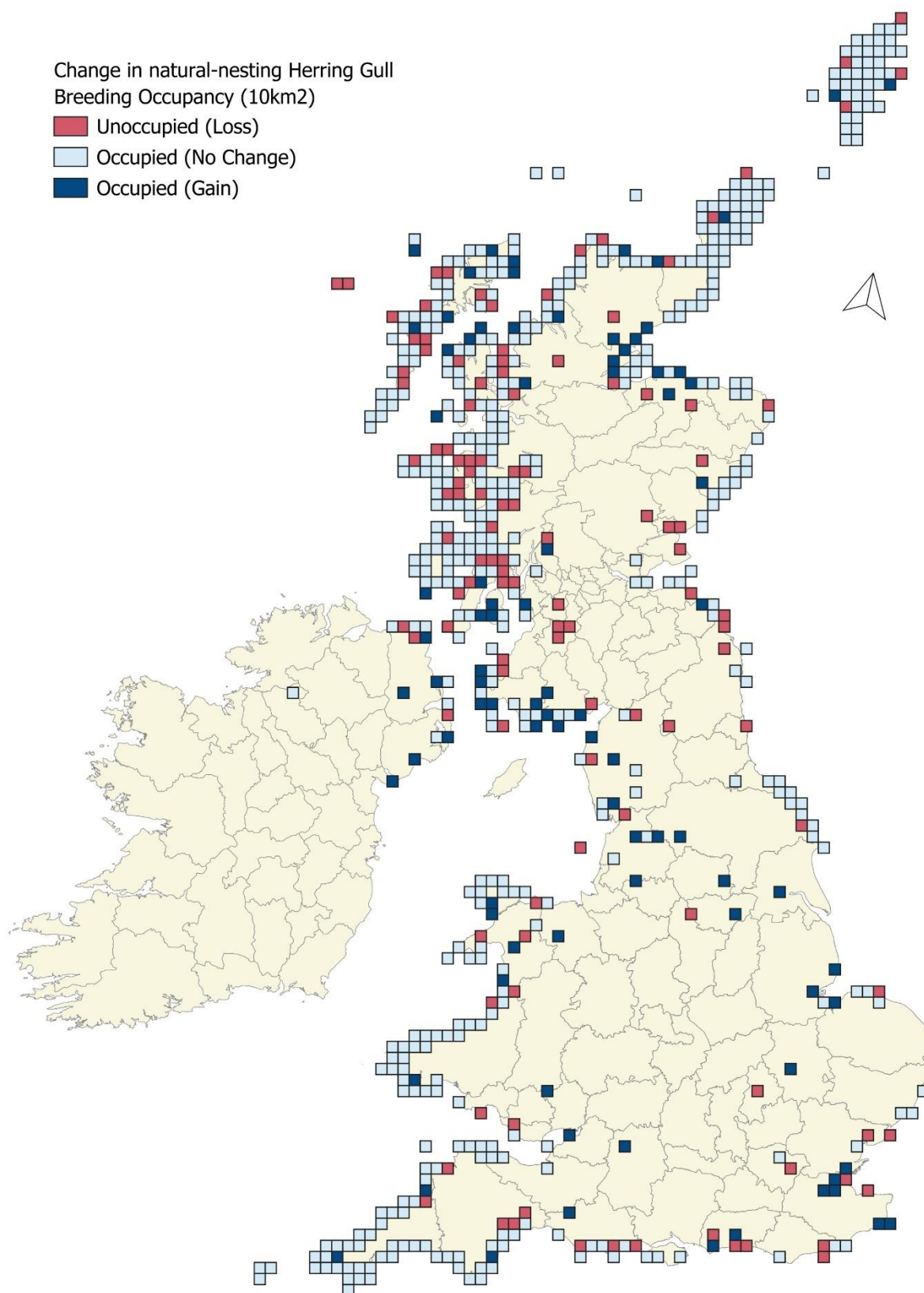






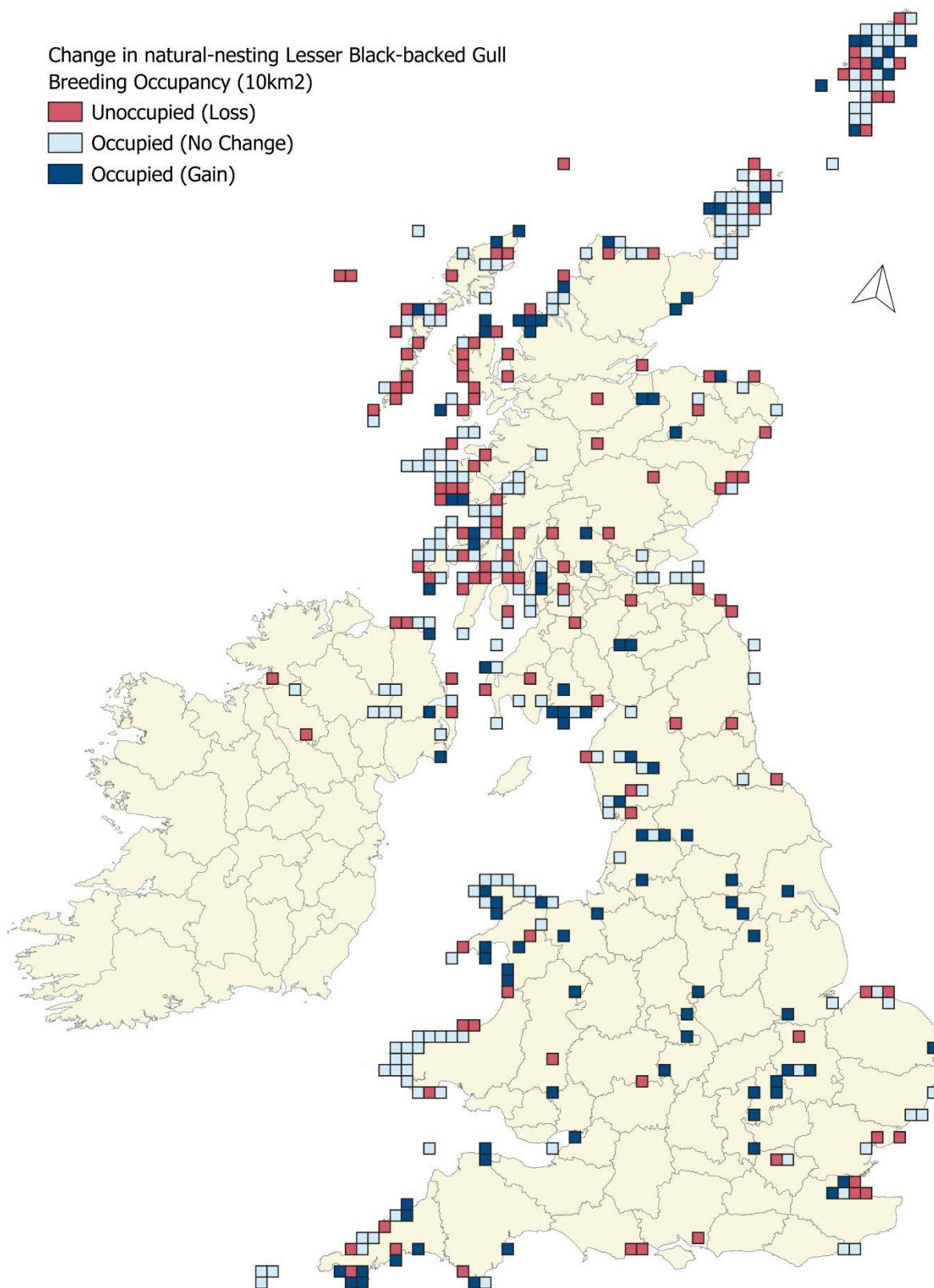


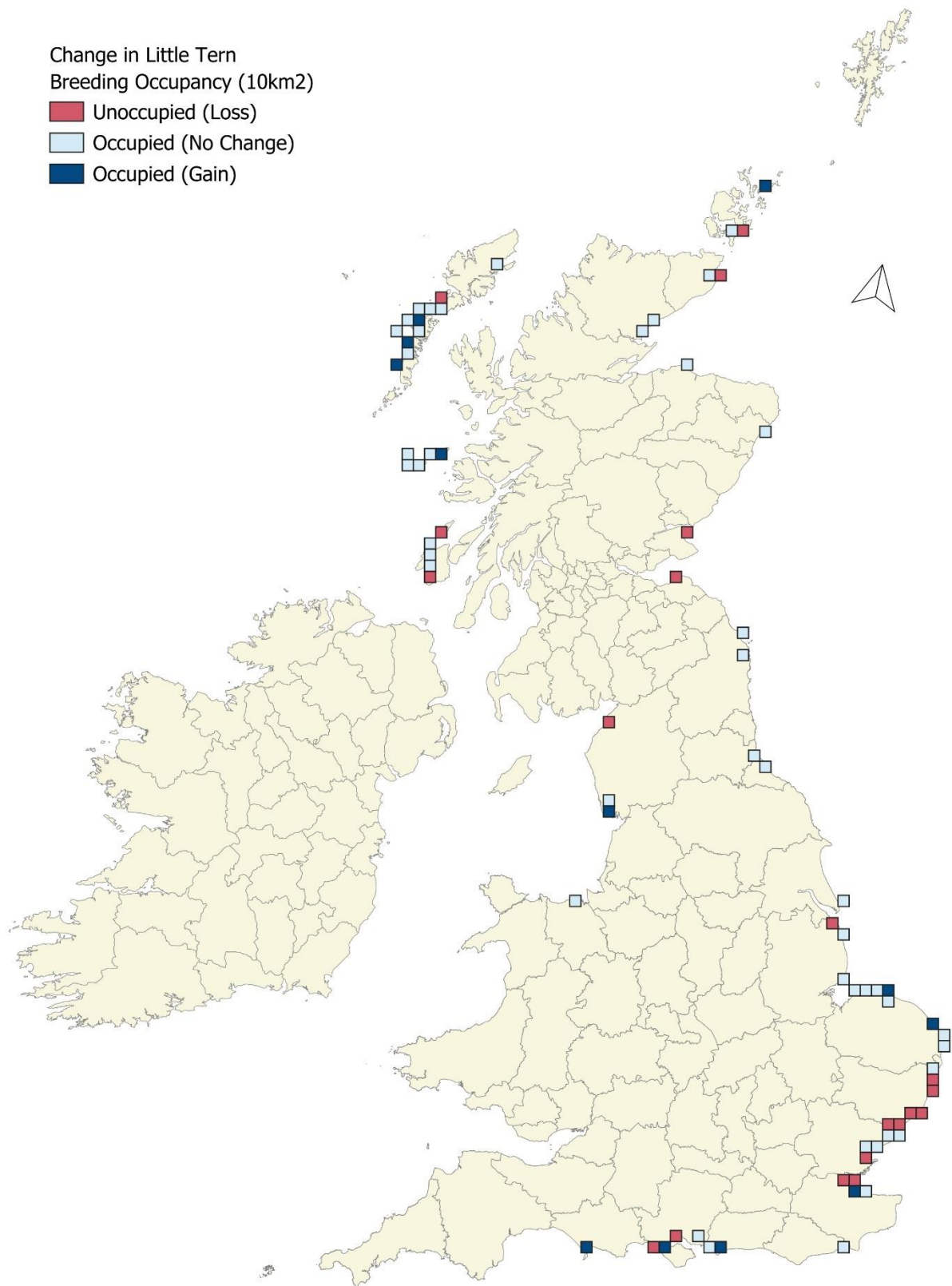


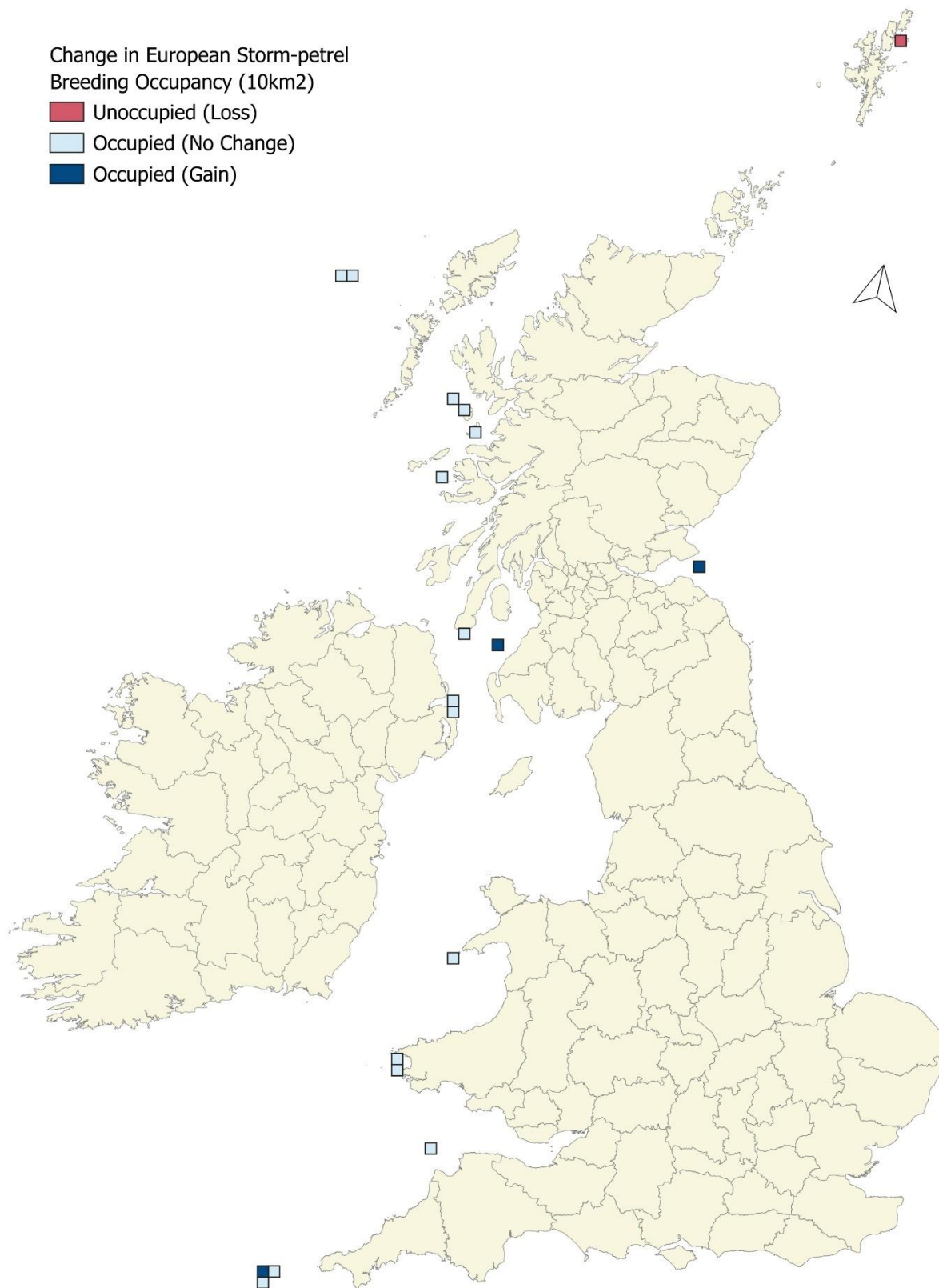


Change in natural-nesting Lesser Black-backed Gull
Breeding Occupancy (10km²)

- Unoccupied (Loss)
- Occupied (No Change)
- Occupied (Gain)

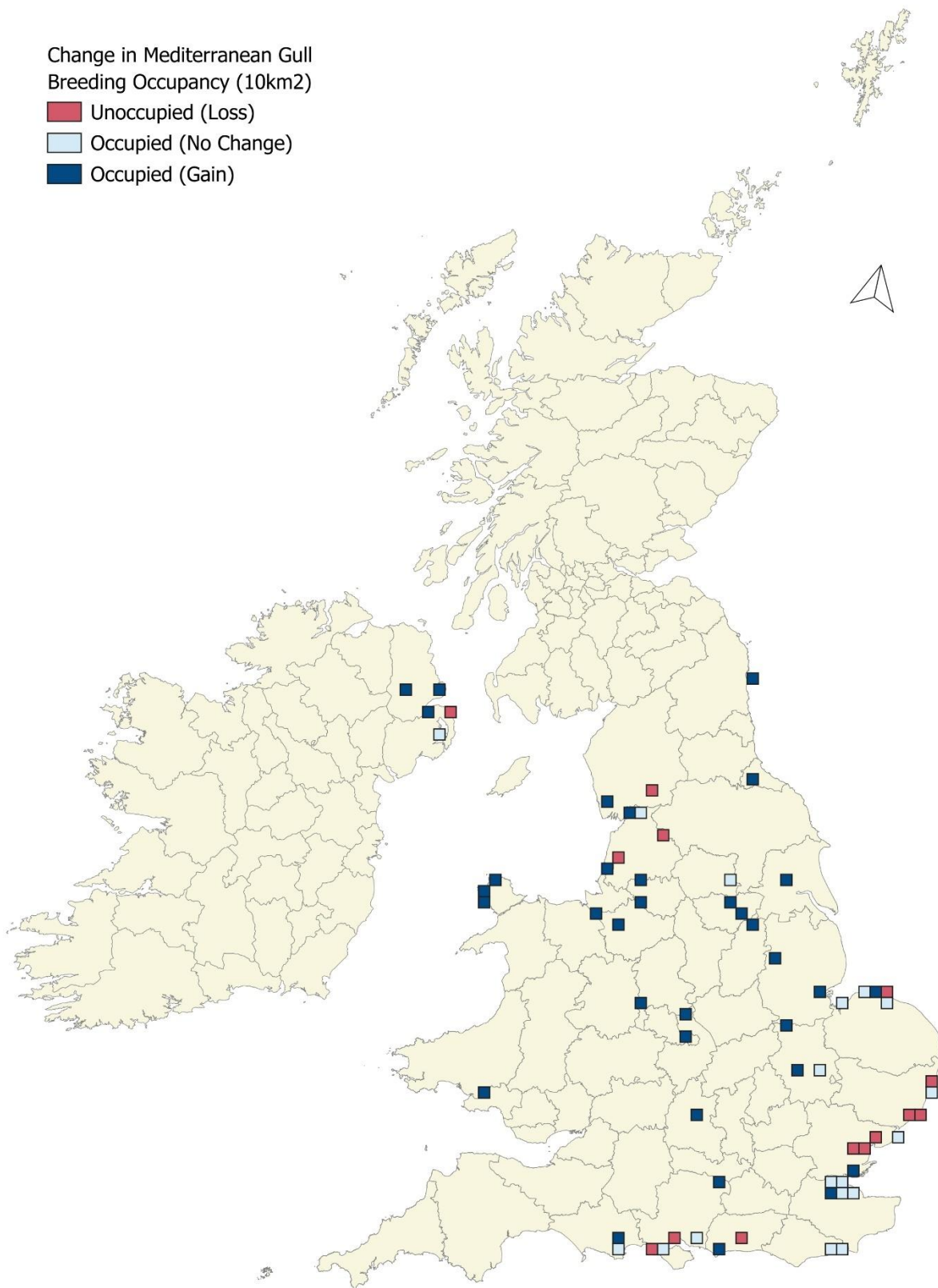


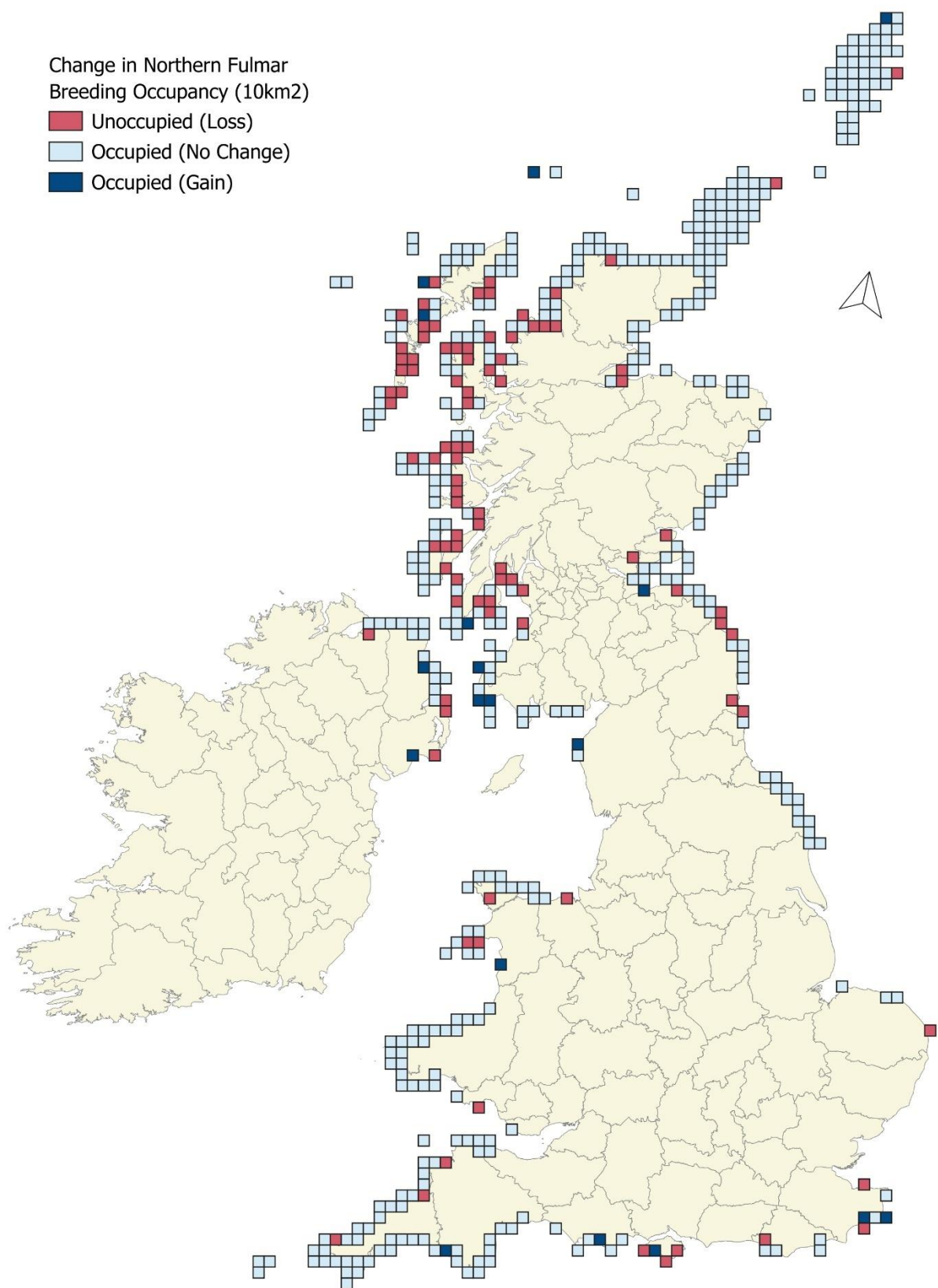


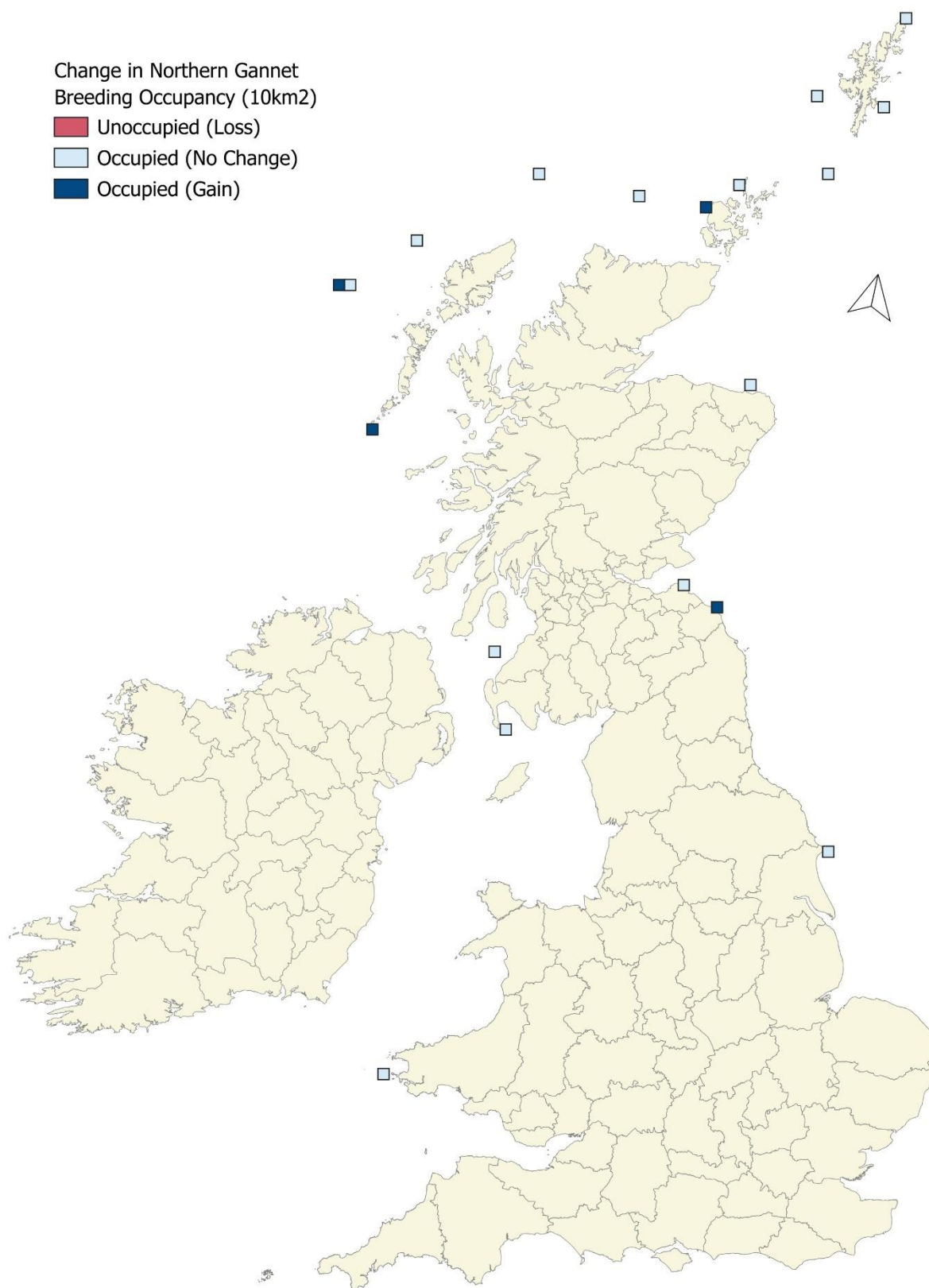


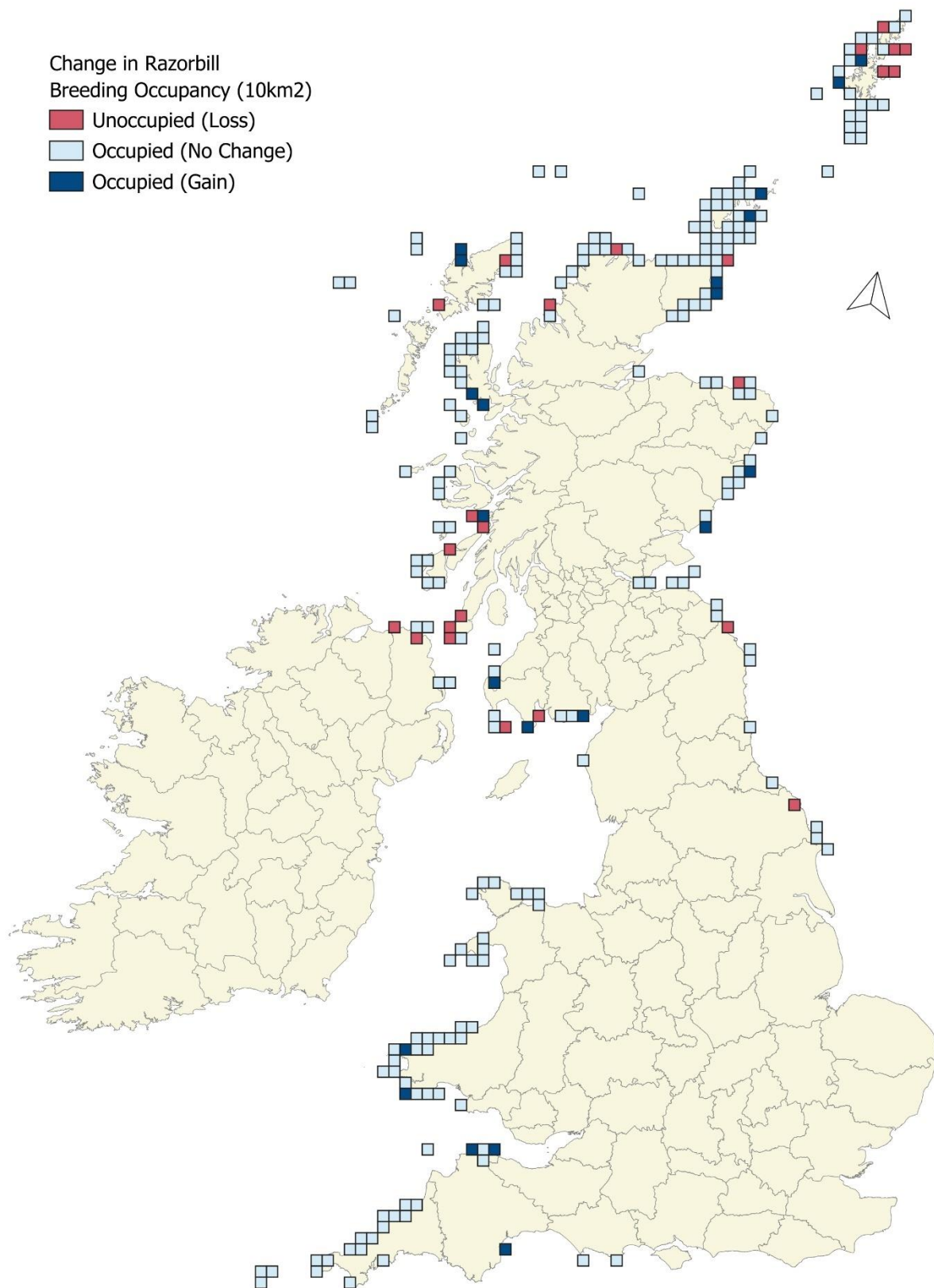
Change in Mediterranean Gull
Breeding Occupancy (10km²)

- Unoccupied (Loss)
- Occupied (No Change)
- Occupied (Gain)









Change in Roseate Tern
Breeding Occupancy (10km²)

- Unoccupied (Loss)
- Occupied (No Change)
- Occupied (Gain)

