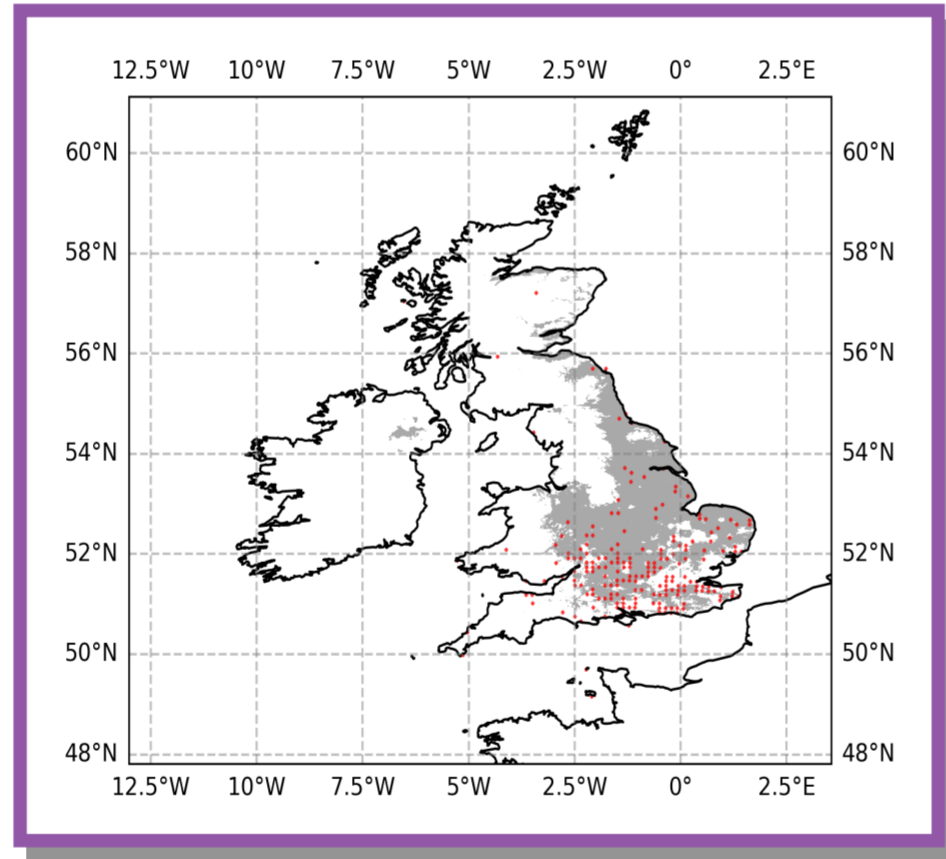


Reintroducing a plant species on the verge of extinction

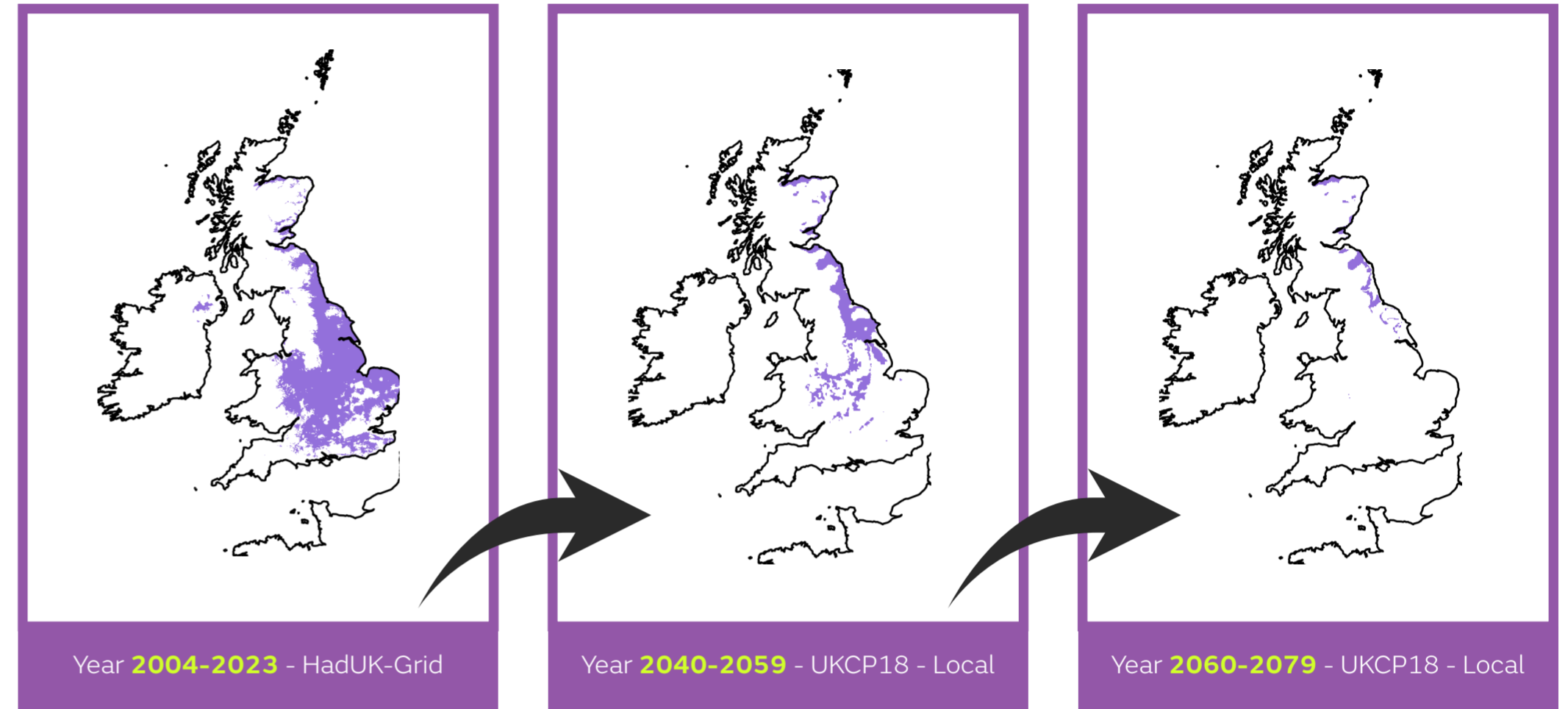
The Meadow Clary (*Salvia pratensis*) is a perennial species that flowers from late May to early July. It displays striking violet-blue and aromatic leaves. It is predominately found in unimproved pasture, hay meadows and grassy verges, but can occur on the fringes of scrub or woodland.

It is a species in decline, threatened with extinction and the Wildlife Trusts wanted to look at reintroducing the species to suitable sites. The staff at The Wildlife Trusts suspected that the distribution of the Meadow Clary across the UK is not just determined by local land management, but also local climatic conditions.

To inform reintroduction efforts, The Wildlife Trusts needed to understand which areas are likely to have suitable climatic conditions for reintroductions or introductions. The Met Office developed a series of climate suitability maps to help identify these priority areas.



This map shows survey records of the Meadow Clary from the Botanical Society of Britain and Ireland Plant Atlas 2020 (red dots), and the 2004-2023 HadUK-Grid climate suitability zone (grey). These point locations were used as a guide to adjust our climate suitability thresholds.



Developing the climate suitability maps

It was important for us to look at the climate suitability of regions now, but also in the future given projected changes to our climate. We used thresholds for two climate metrics – temperature and rainfall - with both historic weather observations data and future climate projections.

When looking at the three climate suitability maps above you can see that over time the area of climate suitability significantly reduces.

From 2004-2023, the area of suitability covers areas in the south-east, midlands and eastern coast of the UK. However, this area is reduced to the NE coast and certain areas in the midlands for 2040-2059 as well as a slight increase in area in NE Scotland, and further reduced over the NE coast for 2060-2079. This change is mostly associated to shifts in the mean average January and July temperatures which we have investigated as part of this study.

What does this mean for the Meadow Clary?

Drawing on this information, as well as other important factors when considering plant reintroductions such as soil type and aspect, the Wildlife Trusts can prioritise areas for reintroducing or introducing this important species. This gives the Meadow Clary the best chance of success in the future.

metoffice.gov.uk
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Working together to explore the interactions between climate and nature.