



STATISTICAL RELEASE

29 July 2010

WILD BIRD POPULATIONS: FARMLAND BIRDS IN ENGLAND 2009

Key results

- The unsmoothed farmland bird population index for England, covering 19 species, decreased by 5 per cent between 2008 and 2009. The index is now at its lowest recorded value, at 53 per cent lower than its 1966 starting value.
- The smoothed farmland bird index for England decreased by 3 per cent between 2008 and 2009, and the smoothed index is similarly at its lowest recorded value, at 53 per cent lower than its 1966 starting value.
- Twelve species (almost two-thirds of those included in the index) declined between 2008 and 2009 - Kestrel, Lapwing, Grey Partridge, Skylark, Starling, Greenfinch, Tree Sparrow, Yellow Wagtail, Linnet, Wood Pigeon, Corn Bunting and Rook. This decline was significant for the first six species listed. For many species, the decline between 2008 and 2009 is a continuation of downward trends evident over at least the last four or five years.
- Seven species increased between 2008 and 2009 – Goldfinch, Jackdaw, Reed Bunting, Stock Dove, Turtle Dove, Whitethroat and Yellowhammer. Most of these, for example Goldfinch and Jackdaw, have shown long-term upward trends.

Bird populations are considered to be a good indicator of the broad state of wildlife because birds occupy a wide range of habitats, they tend to be near or at the top of food chains and there is considerable long-term data on changes in bird populations which helps with the interpretation of shorter term fluctuations.

Indicators of wild bird populations are published on a yearly basis to show changes in the breeding and wintering populations of common bird species. A full statistical release including indices for farmland birds, woodland birds, water and wetland birds, seabirds and wintering water birds in England and the UK will be published in October 2010. Figures for farmland birds in England have been produced earlier this year to meet user needs.

The indicators presented in this statistical release use both unsmoothed indices and smoothed trends, both of which are relative to 1966 levels. The unsmoothed index represents the 'raw' data-series, whereas the method of smoothing, using a well-established statistical methodology, produces an underlying trend by reducing the short-term peaks and troughs resulting from weather and sampling variations.

Results

Figure 1: Populations of farmland birds in England, 1966 to 2009 (smoothed index)

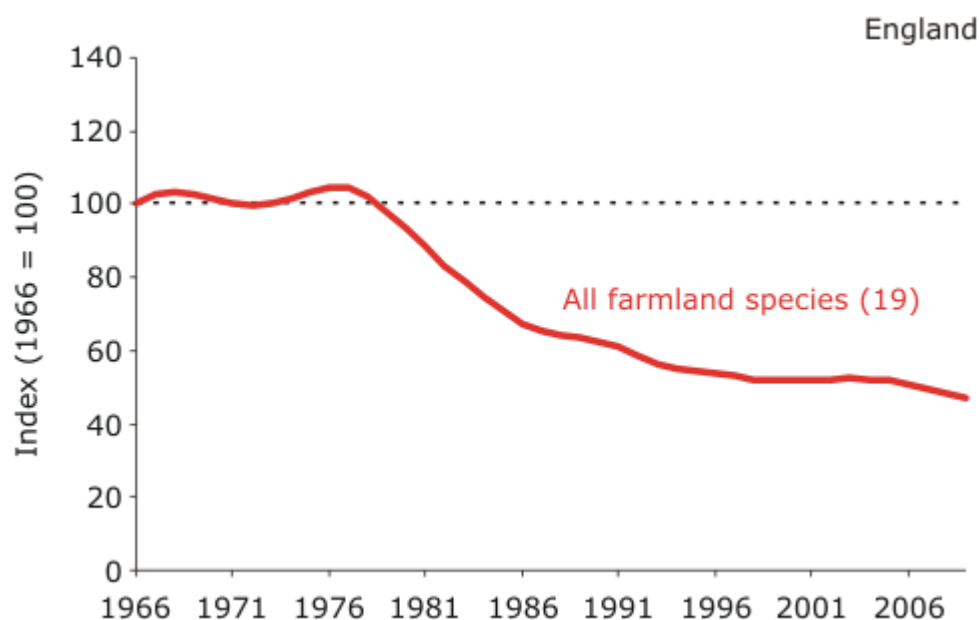


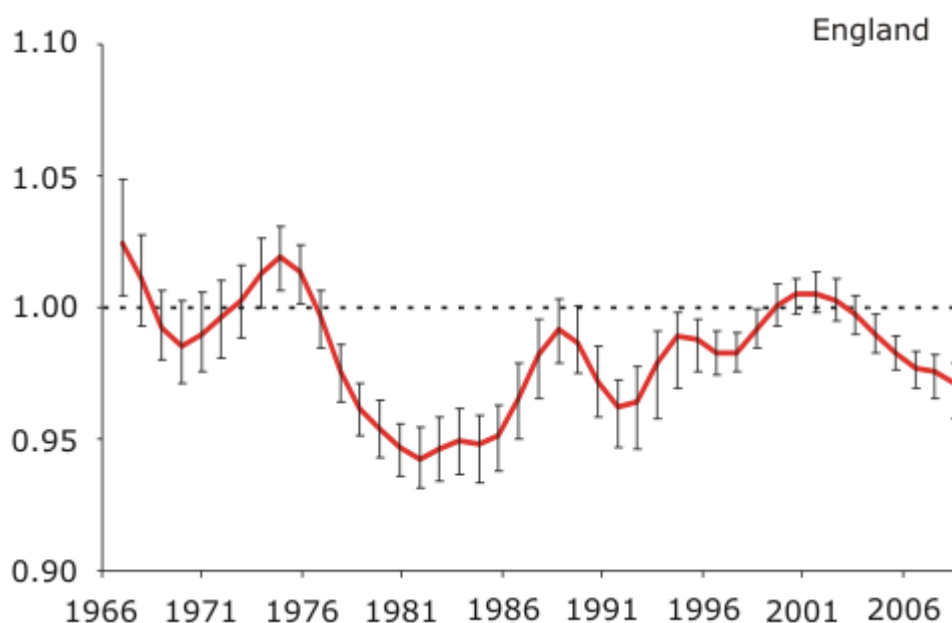
Figure 1 shows the smoothed farmland bird index for England (19 species), which is now 53 per cent below the 1966 starting level, its lowest recorded value. The index fluctuated, with no overall trend for the first ten years followed by a steep decline between 1976 and the late 1980s. The index has since declined at a slower rate, apart from a period of stability between 1999 and 2003.

The smoothed index decreased by 3 per cent between 2008 and 2009. However, it is important to note that the smoothing process used for estimating population trends may affect changes at the end of a time series, as these end values do not receive the dampening effect of data in subsequent years. It is not uncommon to see such results smoothed (and thus become exaggerated or conversely less extreme) in subsequent revisions.

The explanation for the decrease in farmland bird index, particularly this year, cannot be attributed to a single species or even a group of species. Twelve species (almost two-thirds of those included in the index) declined between 2008 and 2009, and this decline was statistically significant for the first six species listed. The 12 declining species are Kestrel, Lapwing, Grey Partridge, Skylark, Starling, Greenfinch, Tree Sparrow, Yellow Wagtail, Linnet, Wood Pigeon, Corn Bunting and Rook. With the exception of Kestrel, Wood Pigeon,

Greenfinch and Rook, populations of the declining species remain at much lower levels than in 1966 as a result of earlier declines. Seven species increased between 2008 and 2009 but this was only significant for two of these species, Whitethroat and Goldfinch. Most of these seven species have shown long-term increases, such as Goldfinch and Jackdaw. Yellowhammer and Stock Dove increased slightly between 2008 and 2009 after a long and short period of decline respectively. Reed Bunting is continuing to recover from a long-term decline (although remaining at a low level). Of the long-distance migrants, Yellow Wagtail continued their long-term decline, whereas Whitethroat continues to show signs of increase. Turtle Dove showed a small increase between 2008 and 2009, although this increase was not significant, and the overall trend for this migrant is one of long-term decline.

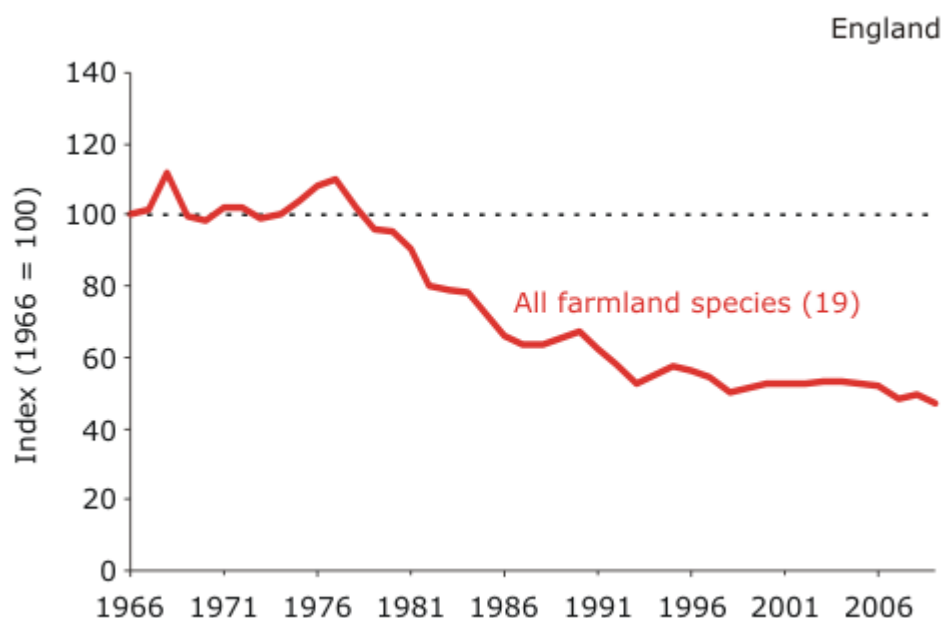
Figure 2: Annual change in the farmland bird indicator for England, 1966 to 2009



Note: The vertical 'error' bars show the lower and upper 95 per cent confidence limits.

Figure 2 shows the year-on-year changes in the smoothed England farmland bird index with associated 95 per cent confidence intervals. Values above 1 represent an increase since the previous year; values below 1 represent a decrease.

Figure 3: Populations of farmland birds in England, 1966 to 2009 (unsmoothed index)



The unsmoothed breeding farmland bird index for England (19 species) was 53 per cent lower in 2009 than its 1966 level. Following a period of relative stability between 2000 and 2006, the index decreased by seven per cent between 2006 and 2007 and then increased by three per cent between 2007 and 2008. The unsmoothed index decreased again, by 5 per cent, between 2008 and 2009.

Notes to Editors

1. The indices have been compiled in conjunction with the Royal Society for the Protection of Birds (RSPB), and the British Trust for Ornithology (BTO) based on the England population indices for 19 species. For 18 species, trends are modelled using data from the Common Birds Census (which ran from 1966 to 2000) and the Breeding Bird Survey (which has run from 1994 to the present). The trend for Rook is based on periodic Rook censuses between 1970 and 1996, and the Breeding Bird Survey thereafter.
2. Breeding Bird Survey data were provided by a Partnership jointly funded by the BTO, RSPB and JNCC (on behalf of CCW, NE, CNCC and SNH), with fieldwork conducted by BTO members and other volunteers.
3. The farmland bird population index for England is used as an indicator to monitor progress in the England Biodiversity Strategy (EBS).
4. A statistical release covering bird population indices for the UK and for England for farmland, woodland, water and wetland, seabird and wintering water birds will be published in October 2010.
5. For further information visit: www.defra.gov.uk/evidence/statistics/environment/

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End

Table 1: Populations of farmland birds in England: 1966 – 2009

Note: the index is set at 100 for 1966 and the subsequent figures give the relative size of the counts.

	All farmland species (19) smoothed	All farmland species (19) unsmoothed
1966	100	100
1967	102	102
1968	104	112
1969	103	100
1970	101	98
1971	100	102
1972	100	102
1973	100	99
1974	101	100
1975	103	104
1976	105	108
1977	104	110
1978	102	102
1979	98	96
1980	93	95
1981	88	90
1982	83	80
1983	79	79
1984	75	79
1985	71	72
1986	68	66
1987	65	63
1988	64	63
1989	63	65
1990	63	67
1991	61	62
1992	59	58
1993	56	53
1994	55	55
1995	55	57
1996	54	56
1997	53	54
1998	52	50
1999	52	52
2000	52	53
2001	52	53
2002	52	53
2003	52	53
2004	52	53
2005	52	52
2006	51	52
2007	50	48
2008	48	50
2009	47	47

Source: Royal Society for the Protection of Birds, British Trust for Ornithology, Defra

Notes: A list of species included in the indicator is given in Appendix 1.

Appendix 1: Species included in the farmland bird indicator

Declined between 2008 and 2009	Increased between 2008 and 2009
Corn Bunting Greenfinch Grey Partridge Kestrel Lapwing Linnet Rook Skylark Starling Tree Sparrow Woodpigeon Yellow Wagtail	Jackdaw Goldfinch Reed Bunting Stock Dove Turtle Dove Whitethroat Yellowhammer