Bird Trend Analyses in the Liverpool City Region

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Liverpool City Region contains three large wetland Special Protection Areas (SPA)

Background

- In April 2013, British Trust for Ornithology (BTO) was commissioned by Natural England to produce a report looking at Waterbird Population Trends in the:
- Mersey Estuary SPA,
- Mersey Narrows & North Wirral Foreshore pSPA (now full SPA) and
- Ribble & Alt Estuaries SPA.

Background

The study aimed to:

- Assess population trends of waterbird species in different parts of these SPAs
- Identify areas where species were increasing or declining compared to the rest of the site

Background

Species for which trends and analyses were undertaken:

Ribble & Alt Estuaries SPA	Mersey Estuary SPA	Mersey Narrows & North Wirral Foreshore pSPA*
Bewick's swan	Shelduck	Cormorant
Whooper swan	Wigeon	Oystercatcher
Shelduck	Teal	Grey plover
Wigeon	Pintail	Knot
Teal	Great crested grebe	Sanderling
Pintail	Golden plover	Dunlin
Common scoter	Grey plover	Bar-tailed godwit
Cormorant	Lapwing	Redshank
Oystercatcher	Dunlin	Turnstone
Ringed plover	Black-tailed godwit	Little gull
Golden plover	Curlew	Common tern
Grey plover	Redshank	
Lapwing		
Knot		
Sanderling		
Dunlin		
Black-tailed godwit		
Bar-tailed godwit		
Curlew		
Redshank		
Common tern		

WeBS

- The Wetland Bird Survey (WeBS) is the monitoring scheme for non-breeding waterbirds in the UK
- WeBS is a joint scheme of BTO, RSPB and JNCC in association with WWT
- WeBS is a long-running survey that records the number of all waterbird species on different geographical count units at monthly intervals.
- These data can be used to assess population trends in different parts of these sites.

Overview of Results

- Since the Bird Trends Analysis was carried out using data up to 2010/11, coverage of the Mersey has improved dramatically.
- A repeat would now show a different picture for the Mersey for many species

Overview of Results

- Matrices and pie charts were produced to show declines and increases of species
- Changes assessed over:
  - long term -15 years (1994/95 – 2009/10)
  - Medium term - 10 years (1999/00 – 2009/10)
  - Short term - 5 years (2004/05 – 2009/10)
- Broken down into:
  - a decline in numbers of at least 50%;
  - a decline in numbers of at least 25% but less than 50%;
  - a decline in numbers of less than 25% or an increase of less than 33%;
  - an increase in numbers of at least 33% but less than 100%;
  - an increase in numbers of at least 100%.

Overview of Results

Wildfowl

Sector		Bewick's Swan			Whooper Swan			Shelduck			Wigeon			Teal			Pintail			Common Scoter			Great Crested Grebe			Cormorant		
		Short-term	Medium-term	Long-term	Short-term	Medium-term	Long-term	Short-term	Medium-term	Long-term	Short-term	Medium-term	Long-term	Short-term	Medium-term	Long-term	Short-term	Medium-term	Long-term	Short-term	Medium-term	Long-term	Short-term	Medium-term	Long-term	Short-term	Medium-term	Long-term
57456	St Anne`s Beach																											
57455	Lytham Beach																											
57460	Warton Marsh																											
57453	Longton Marsh																											
57452	Hesketh Out-Marsh																											
57451	Banks Marsh East																											
57459	Banks Marsh Central																											
57458	Banks Marsh West																											
57457	Crossens Out-Marsh																											
46434	Marshside 2																											
46433	Marshside 1																											
46432	Marshside Sand Company																											
46431	Marshside Beach																											
46430	Ainsdale Beach																											
46418	Formby																											
46419	Hightown																											
UK9005103	**Ribble & Alt Estuaries SPA**																											
46407	Hale																											
45420	Ince Bank																											
45419	Manisty Bay																											
UK9005131	**Mersey Estuary SPA**																											
46476	Leasowe Bay and Islands																											
46475	Hoylake																											
46473	Red Rocks																											
UK9020287	**Mersey Narrows and North Wirral Foreshore pSPA**																											

>50% decline | 25-49% decline | <25% decline to 33% increase | 33-100% increase | >100% increase

Overview of Results

Waders

>50% decline | 25-49% decline | <25% decline to 33% increase | 33-100% increase | >100% increase

Overview of Results

Gulls and Terns

>50% decline | 25-49% decline | <25% decline to 33% increase | 33-100% increase | >100% increase

Overview of Results

Wildfowl

Sector		Bewick's Swan			Whooper Swan			Shelduck			Wigeon			Teal			Pintail			Common Scoter			Great Crested Grebe			Cormorant		
		Short-term	Medium-term	Long-term	Short-term	Medium-term	Long-term	Short-term	Medium-term	Long-term	Short-term	Medium-term	Long-term	Short-term	Medium-term	Long-term	Short-term	Medium-term	Long-term	Short-term	Medium-term	Long-term	Short-term	Medium-term	Long-term	Short-term	Medium-term	Long-term
UK9005103	Ribble/Alt SPA																											
UK9005131	Mersey Estuary SPA																											
UK9020287	Mersey Narrows pSPA																											
	Liverpool City Region SPAs																											
UK9013011	The Dee Estuary SPA																											
	EA North West Region																											

>50% decline | 25-49% decline | <25% decline to 33% increase | 33-100% increase | >100% increase

Overview of Results

Waders

>50% decline | 25-49% decline | <25% decline to 33% increase | 33-100% increase | >100% increase

Overview of Results

Gulls and Terns

Sector		Black-headed Gull			Little Gull			Common Gull			Lesser Black-backed Gull			Herring Gull			Great Black-backed Gull			Common Tern		
		Short-term	Medium-term	Long-term	Short-term	Medium-term	Long-term	Short-term	Medium-term	Long-term	Short-term	Medium-term	Long-term	Short-term	Medium-term	Long-term	Short-term	Medium-term	Long-term	Short-term	Medium-term	Long-term
UK9005103	Ribble/Alt SPA																					
UK9005131	Mersey Estuary SPA																					
UK9020287	Mersey Narrows pSPA																					
	Liverpool City Region SPAs																					

>50% decline | 25-49% decline | <25% decline to 33% increase | 33-100% increase | >100% increase

Overview of Results

Short Term

Medium Term

Ribble and Alt SPA

Long Term

Overview of Results

Short Term

Medium Term

All SPAs

Long Term

Overview of Results

Ribble and Alt SPA

Mersey Estuary SPA

Mersey Narrows and North Wirral Foreshore pSPA

All SPA/pSPAs combined

Overview of Results

Ribble and Alt SPA

Mersey Estuary SPA

Mersey Narrows and North Wirral Foreshore pSPA

All SPA/pSPAs combined

Conclusions

- WeBS counts provides a good understanding of internationally important bird populations
- We can study
- Species
- Sites
- Parts of sites
- Short medium and long term
- Can compare with regional with national and international trends

Limitations

- WeBS Counts are a snapshot and may under-represent birds on passage (e.g. Ringed Plover) and species such as gulls that roost on a site but may be absent during daytime WeBS counts.
- Curlew, Lapwing and Golden Plover feed inland so numbers hard to assess
- WeBS Counts not good at marine species
- Counting of Gulls and Terns is optional for WeBS and so data may not be available for trends
- Relies on volunteers

Total Mersey from 1973

Knowledge Gaps

- Some apparent declines on the Mersey are due to lack of coverage
- Important to invest in volunteers
- However, mostly the declines are real and often we don’t know why

WeBS

BTO
Looking out for birds

Pintail

20,000
18,000
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
-
60-61
61-62
62-63
63-64
64-65
65-66
66-67
67-68
68-69
69-70
70-71
71-72
72-73
73-74
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96-97
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99-00
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01-02
02-03
03-04
04-05
05-06
06-07
07-08
08-09
09-10
10-11
11-12
12-13
13-14

Pintail: UK annual
Index
Trend
index value
250
200
150
100
50
0
70/71
75/76
80/81
85/86
90/91
95/96
00/01
05/06
10/11
winter
www.bto.org/websonline

Teal

40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
-
60-61
62-63
64-65
66-67
68-69
70-71
72-73
74-75
76-77
78-79
80-81
82-83
84-85
86-87
88-89
90-91
92-93
94-95
96-97
98-99
00-01
02-03
04-05
06-07
08-09
10-11
12-13
14-15

Wigeon
20,000
18,000
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
-
60-61
62-63
64-65
66-67
68-69
70-71
72-73
74-75
76-77
78-79
80-81
82-83
84-85
86-87
88-89
90-91
92-93
94-95
96-97
98-99
00-01
02-03
04-05
06-07
08-09
10-11
12-13
14-15
Wigeon

Potential impact of Canada Geese on Wigeon

Knowledge Gaps

- So we have good data, but data allow cannot explain the reasons for change
- So need further work to understand cause and effect
- And what we can do

Gaps in Coverage

Acknowledgements

The *'Analysis of waterbird population trends in the Mersey Estuary SPA, Mersey Narrows & North Wirral Foreshore pSPA and Ribble & Alt Estuaries SPA'* report would not have been possible without the dedication of our teams of WeBS Counters.

A full copy of the report can be obtained from the BTO.

Thanks for listening