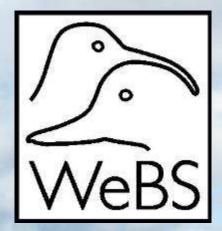
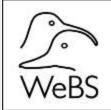
The Wetland Bird Survey

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What is the Wetland Bird Survey?

- The Wetland Bird Survey (WeBS) is the monitoring scheme for non-breeding waterbirds in the UK.
- Joint scheme of BTO, RSPB and the Joint Nature Conservation Committee (JNCC).





Organisation

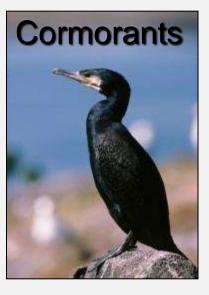


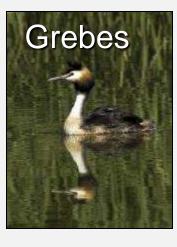
- BTO is responsible for all day-to-day running of WeBS – counters, data, reports etc.
- Partner organisations contribute via the WeBS Steering Group.
- Most importantly...
 - 3,000 (mostly volunteer counters across the UK).
 - WeBS regions organised by Local Organisers covering:
 - 108 regions in England;
 - 44 regions in Scotland;
 - 18 regions in Wales;
 - 16 regions in NI;
 - 4 regions in Channel Islands and 1 in Isle of Man.

What do we count? Waterbirds

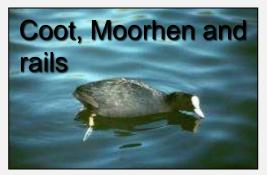








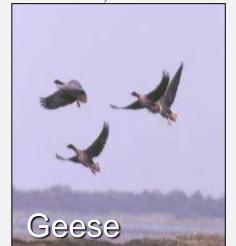


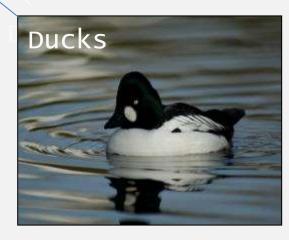




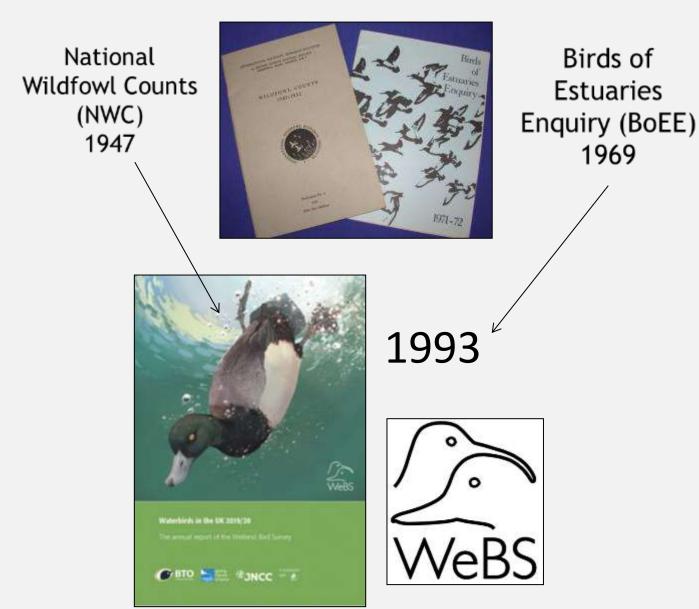


Gulls & Terns





The History of WeBS



Why monitor waterbirds?



- The UK holds internationally important populations of many waterbirds.
- Assess changes in numbers of wintering waterbirds in Constituent Countries in the UK, Special Protection Areas (SPAs) and Sites of Special Scientific Interest (SSSI).
- Important to be able to evaluate and assess potential threats:
 - Pollution, bird flu, land-claim, sea-level rise, docks and dredging, barrages, recreational disturbance, windfarms etc.

Wintering wildfowl in Britain













Population estimates of wintering waterbirds in Great Britain

Teresa Frost, Graham Austin, Richard Hearn, Stephen McAvoy, Anna Robinson, David Stroud, Ian Woodward and Simon Wotton



Common Shelducks. Todome todame and Eurasian Teals Ance crecco at Wallasse, Essex

Abstract This paper provides updated estimates of population size for wintering waterbirds in Great Britain using recent data and new analytical approaches for some species that use smaller inland waterbodies or the non-estuarine coast. These population estimates provide crucial baseline information that underprins the implementation of international conservation obligations, including the identification of wetlands of national importance. Overwinter population estimates are presented for 98 species or populations, including teven non-native populations and, for the first time, estimates for Cattle Egret Bubulous ibs, Glossy Ibis Plegeds fokinelius and Sandwich Tern Thalusseus sandvicensis. In addition, January-only population estimates are presented for the first time for 48 species or populations in order to support international population monitoring. There is an urgent need for a process to collate marine waterbird survey data, which currently is being collected commercially but remains unavailable for national syntheses.

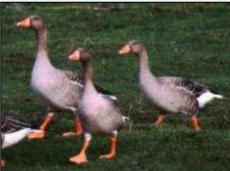
© British Birds 112 + Planch 2019 + 130-145

Wintering wildfowl in Britain



510,000

231,000





103,000





670,000



450,000

430,000





130,000



200,000

From Frost et al. British Birds 112, March 2019

Wintering waders in Britain



620,000





94,000

290,000



400,000



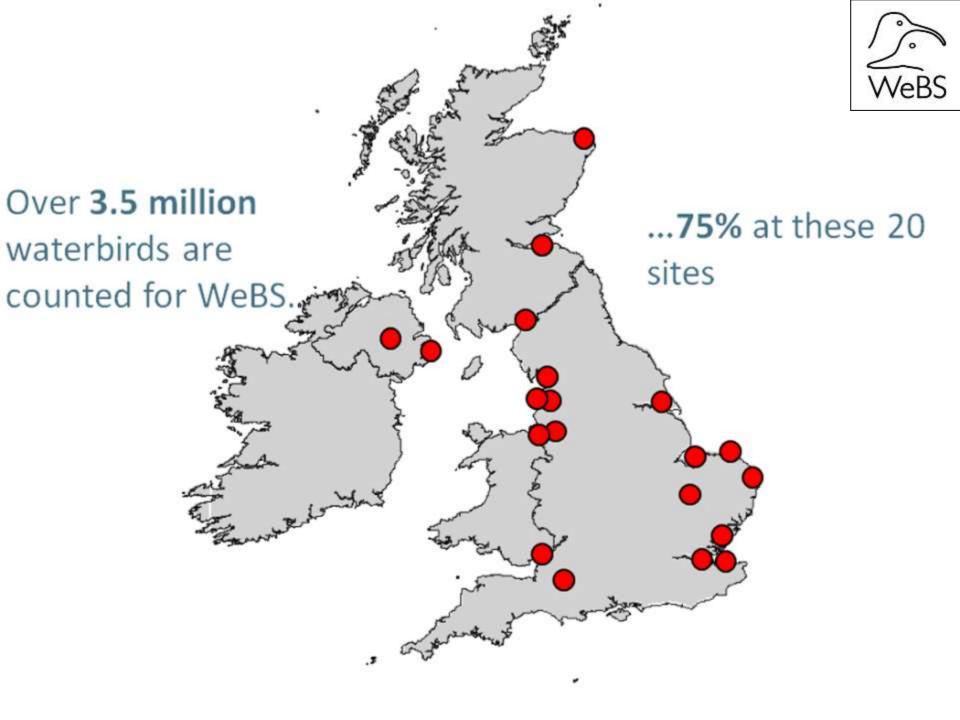
340,000





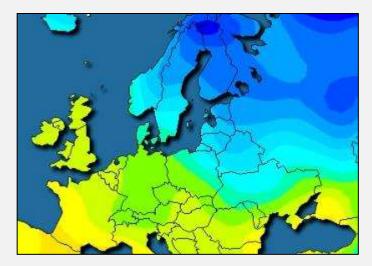
260,000

From Frost et al. British Birds 112, March 2019



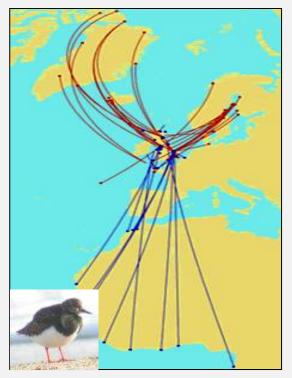
Why so many birds?





Relatively mild winter climate





Located on major migration routes

28% of the European estuarine resource

Uses of WeBS Data



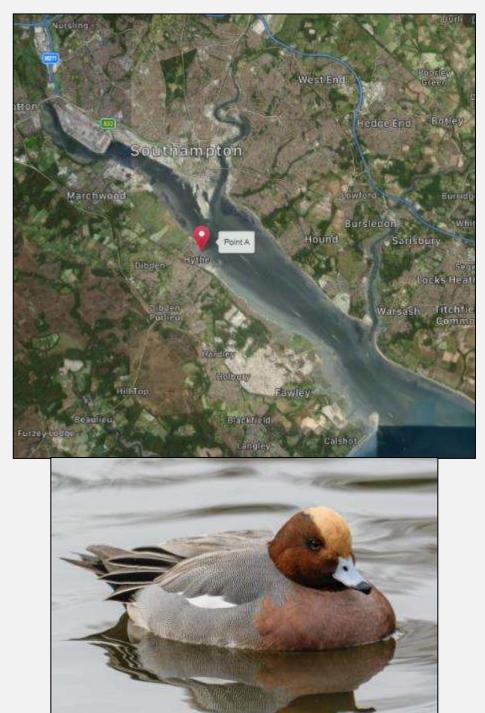
- Feed into international waterbird population estimates.
- Define statutory site boundaries e.g. SPA, SSSI.
- Monitoring and assessment of statutory sites.
- Inform prior to developments e.g.
 environmental impact assessments.
- Ensure protection of the most critical feeding areas.
 - Assist with mitigation following development.

Case study – Dibden Bay

Associated British Ports – build new container terminal opposite Southampton Water.

- WeBS data key.
- English Nature objected.
- Review & public enquiry Nov 2001–Dec 2002.
- Transport Minister rejected proposal.





How does WeBS work?



Low Tide Counts

- Coastal sites (SPAs).
- Winter (Nov-Feb).
- Relative distributions of feeding pairs.
- c20 estuaries per year.

Core Counts

- Monthly counts.
- Coastal and inland sites.
- Provides baseline population estimates and trends.
- c2,000 sites



Special Surveys

- Supplementary to complement other surveys:
 - Non-estuarine Coastal Waterbird Survey (NEWS).
 - Winter Gull Roost Survey (WinGS).



WeBS Core Counts- Aims

Monitors non-breeding waterbirds in the UK with the aims of:

1. Assess the size of non-breeding waterbird populations.

- 2. Assess trends in their numbers and distribution.
- 3. Assess the importance of individual sites for waterbirds.

Core Counts Methods



- Monthly pre-set date from July to June.
- At or near high tide.
- Large sites are divided into manageable count units.
- In 2016/17 counts were made on 5,032 count units at 2,771 sites.
- Observers record the number of every waterbird species present (gulls & terns optional).
- Record ice cover.
- Record count completeness (i.e. undercount due to poor weather or disturbance).

WeBS Low Tide Counts- Aims



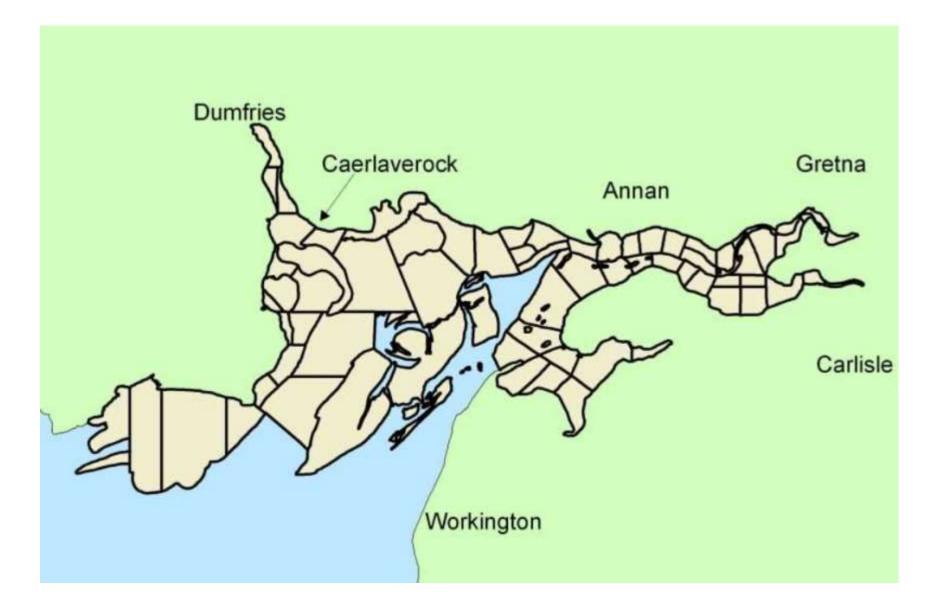
- Monitor distributions of waterbirds on estuarine sites.
- Monitor, assess and regularly update information on the relative importance of intertidal feeding areas of UK estuaries or wintering waterbirds.
- This complements the information gathered by WeBS Core Counts on estuaries.

WeBS Low Tide Counts - Methods



- c. 20 sites covered each winter.
- Covered on a cyclical basis.
- Four visits between November and February.
- No pre-set date.
- Counts carried out over four hour period across low tide.
- Observers record the number of each species.
- Estuaries split up into count sections.

Solway Estuary Low Tide Sections



WeBS

Distribution of Oystercatcher on the Solway



Distribution of Grey Plover on the Solway







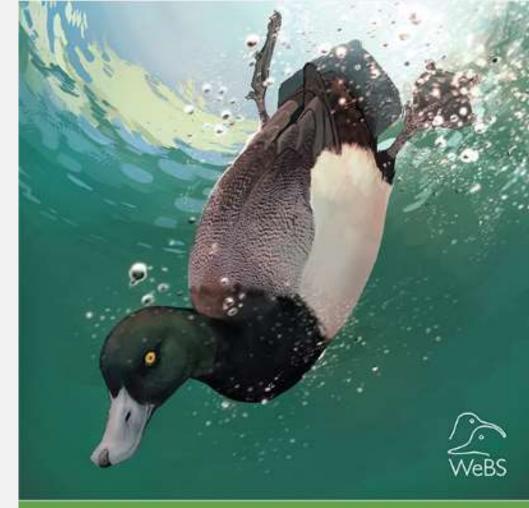
A periodic survey of the non-estuarine coastline of the UK and Ireland.

> 1985 1997/98 2006/07 2015/16



WeBS Report

- Produced annually.
- Sent out free to all WeBS counters.
- Species accounts and trends.
- Low tide accounts.



Waterbirds in the UK 2019/20

The annual report of the Wetland Bird Survey







Key Sites



Location 🖕	◀ 2015/16 🗍	2016/17 🝦	2017/18 🝦	2018/19 🝦	2019/20 է	Þ	Moving 5yr avg ∳	15/16- 19/20 5yr avg ♦
The Wash	345348	417457	382842	417911	422232		397158	397158
Ribble Estuary	161580	179128	179058	235780	201883		191485	191485
Morecambe Bay	184518	205594	186760	207613	147034		186303	186303
Dee Estuary (England and Wales)	146276	166409	177782	150498	145188		157230	157230
Thames Estuary	141643	133602	117310	150469	165410		141686	141686
Humber Estuary	130628	165763	149648	141703	114857		140519	140519
Solway Estuary	127250	158407	125597	132381	131188		134964	134964
North Norfolk Coast	106257	150436	106407	107972	148879		123990	123990
Breydon Water and Berney Marshes	114626	102553	99939	97272	141204		111118	111118
Somerset Levels	117885	88765	73651	117165	98843		99261	99261
Montrose Basin	101538	112010	96689	94422	87695		98470	98470
Mersey Estuary	107271	111891	95147	85817	72521		94529	94529
Blackwater Estuary	82988	102847	80438	80767	93723		88152	88152
Severn Estuary	92120	98844	86831	85546	64877		85643	85643
Forth Estuary	79917	80680	95562	71850	73851		80372	80372
Alt Estuary	87346	83838	71912	65200	67167		75092	75092
Inner Moray and Beauly Firths	59748	75213	65882	67755	81475		70014	70014
Ouse Washes	87704	65172	42281	95067	41403		66325	66325
Swale Estuary	61058	66040	62628	73273	66897		65979	65979
Strangford Lough	60700	62867	53703	65649	59653		60514	60514
Lindisfarne	41831	59468	69758	49041	72542		58528	58528
Dengie Flats	62344	63093	54170	43932	36481		52004	52004
Stour Estuary	54283	42780	37933	53091	38119		45241	45241
Cromarty Firth	43413	56092	44333	39037	38769		44328	44328
Loughs Neagh and Beg	38345	41980	35799	52644	46243		43002	43002

Monitoring change: populations





Pink- footed Goose Trend

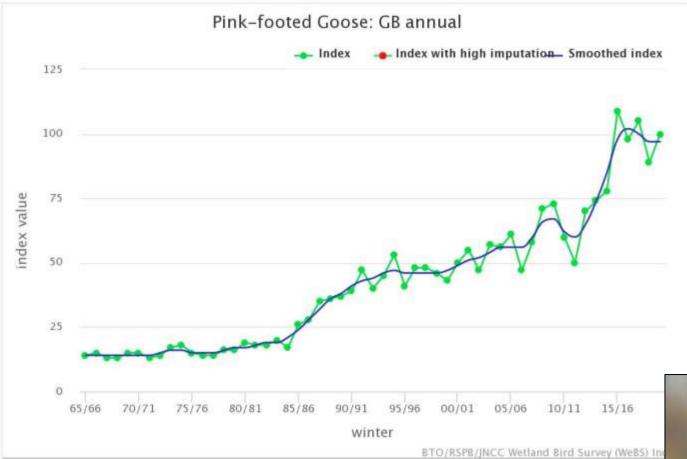






Photo: Chris Knights

Gadwall Trend







Photo: John Harding

Black-tailed Godwit Trend

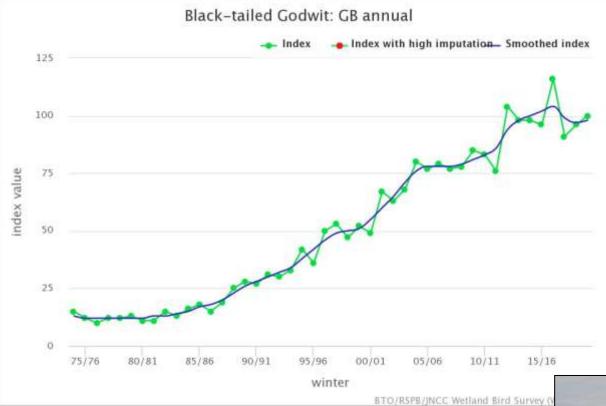




Photo: Adam Jones



Mallard Trend

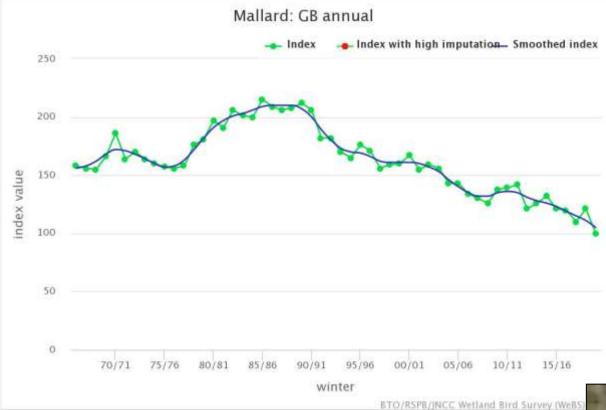






Photo: John Harding

Pochard Trend

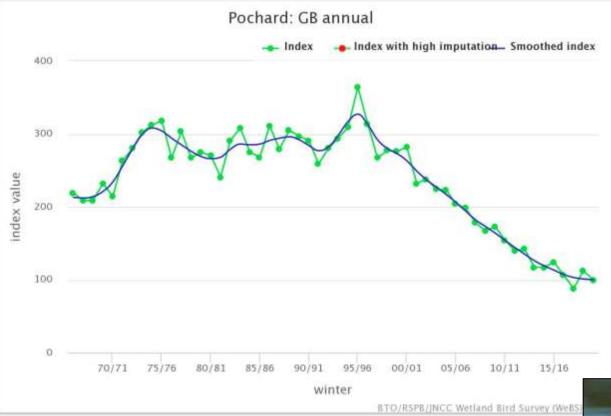






Photo: Neil Calbrade

Ruddy Duck Trend

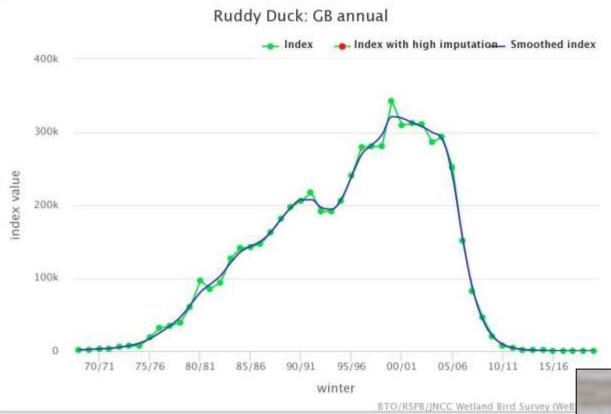




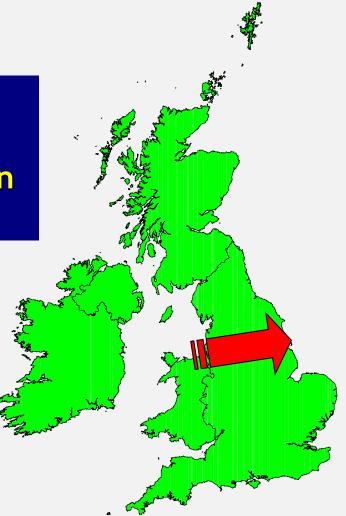


Photo: Chris Knights

Species shift



Some species now winter further east than 20 years ago

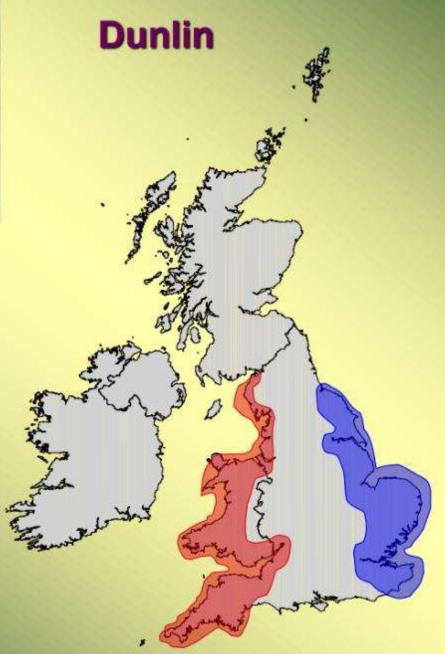






Choose West

Warmer climate Lower overwinter mortality





Colder climate Muddier, richer

Choose East

sediment

Nearer breeding grounds

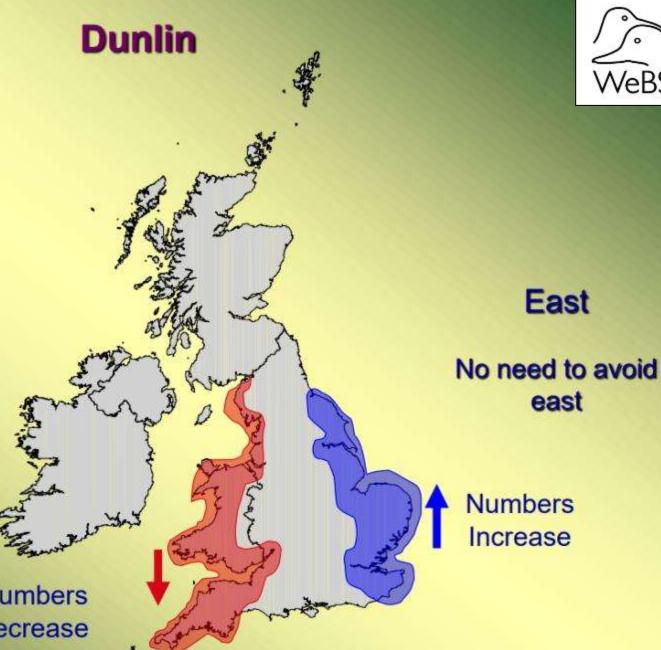


However, average winter temperature has increased

West

Lower mortality in cold winters

> **Numbers** decrease

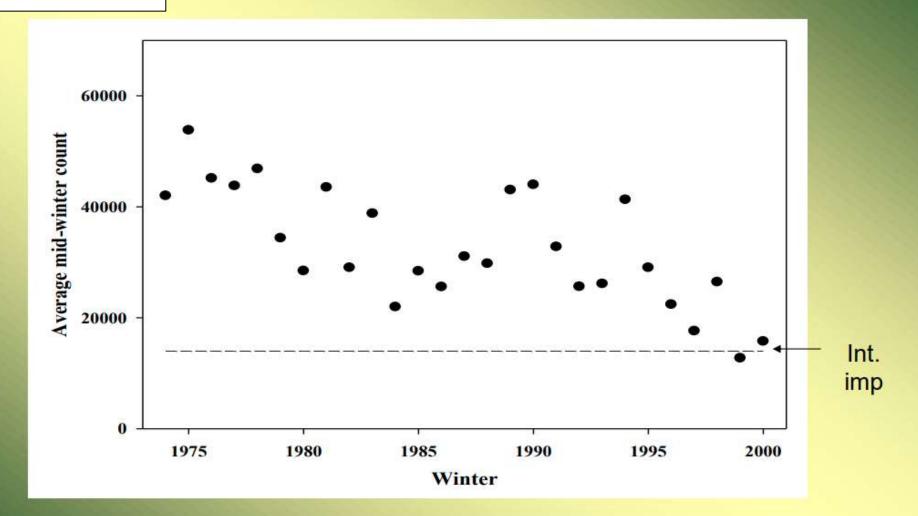


WeBS



Declines of Dunlin - Severn Estuary





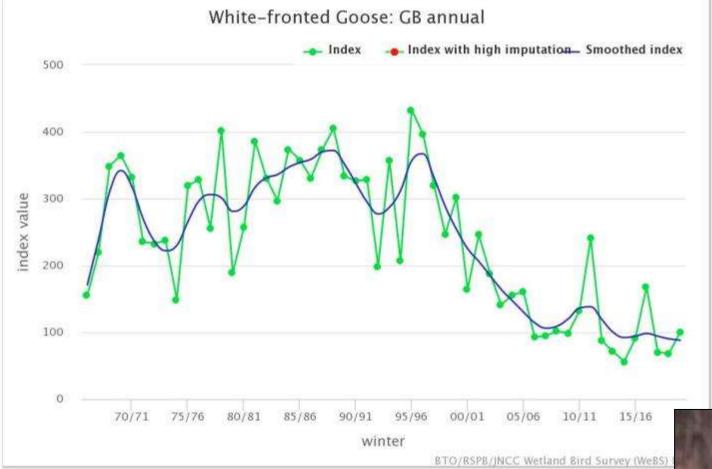
The obligation to "maintain the favourable status of species of conservation importance" may not be met

'Short-stopping'





White-fronted Goose- Decrease in Great Britain...



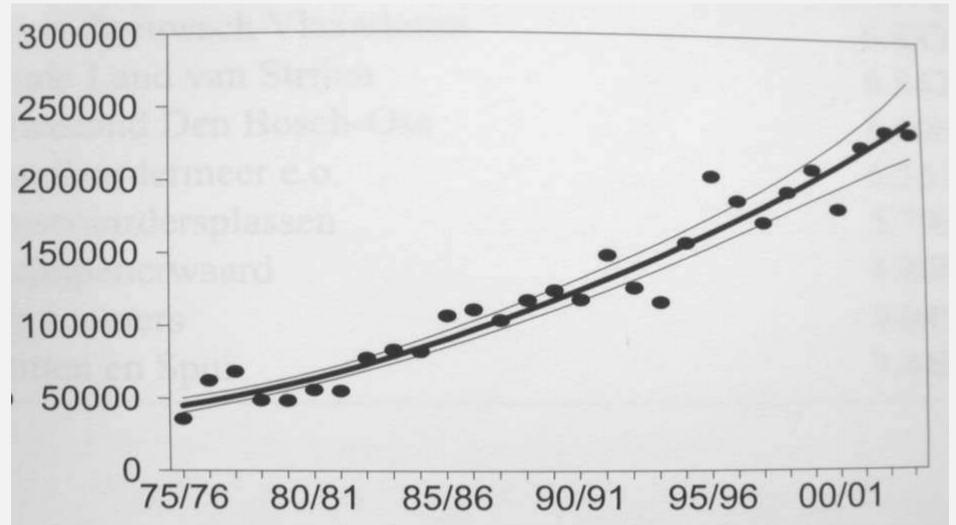




...but increase in the Netherlands



From Watervogels in Nederland 2003/2004 van Roomen, M. *et al.* 2005





Oystercatcher (38 km)

Knot (77 km)

Bar-tailed Godwit (89 km)

Redshank (30 km)

From Maclean et al. 2008. Global Change Biology 14, 2489-2500

The Future of WeBS

- Currently, good coverage of larger sites.
- Increase coverage of smaller sites and across a range of habitats, e.g. rivers, lochans and ponds.





Why is this important?











The Wetland Bird Survey

Do you want to make your bird watching count?

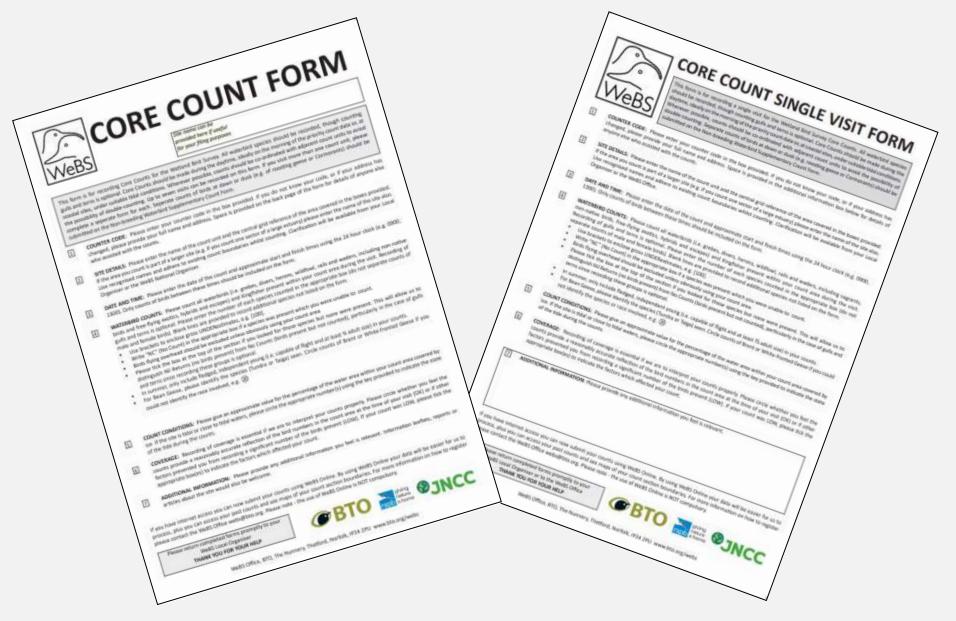


How YOU can help

NON-BREEDING WATERBIRD SUPPLEMENTARY COUNT FORM

The North is for recording course of selector two drawing senerated species. Philli Core Course are made during depone and thus may miss for assingle, large numbers of peaks gaft, Conversion or Generatien which rense to the same are and are assenged at other excertion. This have placed for another and examination and her recents of assertion in faith, og instru to press. County and math of pay a few "serget" spaces along it may often be impressing to saved the latter species using the one papertally in dark or down. and these gasters will have been executive all adequately by Wald's Core or Low Talk Coloris. Sig to sever data for he recorded on the Rows. If pice with more than one court and planes complete a separate how for each COUNTER CODE. Passes other plan control code in the loss provided. If plus the net know plant code, at if your addition. his that put place provide your full same and unitses. Finant previous impairs of practice who who maximal with the course it. the additional informations have (specified F). SITE DETAILS: Press ever the tank of the cost and and the control god televolue of the even control is the locate 31 presented. If the press pro-concerve part of a larger wire (e.g. if prior concer uses sectors of a larger esteary) please sector the name of He pite pites, the reception names and athent to assume to an facandaries while country. Carllopton will be available from point Local Degenities' to Pantonal Degenites DATE THE AND HETHOD. These scene ine data of the most and approximate start and both down using the 24 hour mines for 2 (2002, 1902). Cody to serve in a born warmout makes stream about the restanded on the South. Phase technical of the source, was of recently brits made to men to this? It g iff games galls or Constantenal in' a during court planets of evaluate counting at high jobs during dhe the shauld he recorded to the tone toward. 31 WATENEIND COUNTS: "Record within their barries of the larger spectral life threas you specificly would be record through the supplementary second inthe life last others > Plana and the bits of the top of the section F score of the target species and present. The well also us to disriguist half Rename the lattic present from the County Marth present for any uncounted · Una brankeni in anilina gree UADSRenneares, t.g. 2105 Brith Sping manifold provide his president united absorbing prior prior (court area. Write "NC" (RA: Court) to the appropriate bits. If a sphere: was present which are, were available to court. "House "2" (Arm) I you have hand a target species but vanue wie present when you made the source In summary new seconds Radged, independence young C.s. capable of RgM and phases. "A solid site) is your assess-Penne identify the root of gir Book Street or White Statead Game rates that Name with these of these metion 7 pen. cloudd him therich the rack insulted, by \$52 COUNT CONSTITUTE Prov get is approximate which for the personney of the worked within proc create proc. sciential by ms. If the use is sold at since its tidal element please onche dhe appropriate monitority in induzine the same of the same starrage the country using the key provided. COVERAGE: Recording of converge to assertial 2 we are to interpret and ensuit property Place circle adapted you had the a., county provide a reasonably accurate reflection of the lord surpleary is the main area in the one of your sign (CE) to if other factors privated any, busy tracpeting a applyces survive of the best presses (LOW). If your tours was LOR please lot the ADDITIONAL INFORMATION. Factor printle sits other abbiened bilinmetric any her a relevant information leafers. reports in articles about Me any social data by selliness. SAFETY Conversion could have not thermalines in a position safeth model place them, or national A straight The survey or gammers do not take any responsible to highly for any actions and addressed processing from the attention of constants. Plana veryou compound hows, promptly to pour Local to Haisand Organise THANK FOU FOR YOUR HELF

Submitting Counts



WeBS Online

- Went live in May 2007.
- Over 2,000 users.
- Over 70% of all counts.
- Encourage supplementary counts.





WeBS Online - Advantages

•

WeBS

- Less inputting:
 - Saves time/resources.
 - Fewer errors.

- Observer can retrieve own data:
 - Acts as recording software.
 - Also available for Bird Clubs and County Recorders who can download data for reports.

Explore Data

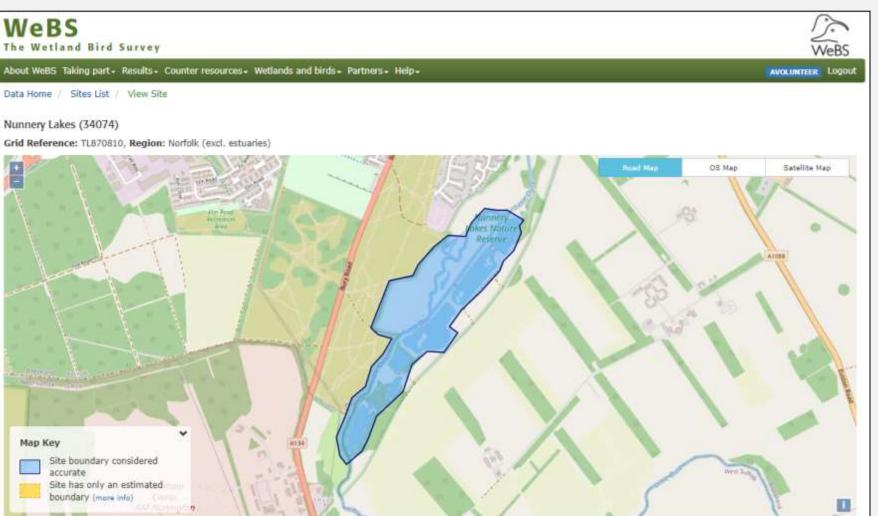
Please use the form below to specify the records you're interested in, then click the 'Search' button at the bottom of the page. You can download a PDF to help you work with downloads from this part of WeBS Online.

Region	Your sites only (no region selected) Salect a region
Survey Type	Come County Low Tide Count: Casual/Roost Counts
Site	Include all locations
	 Select individual locations
	Include other sites/sectors from same top-level sites as the selected locations
Species	Include all waterbirds
	Include all species
	O Select Individual species
Date Range	Include all years
	Select Individual WeBS years
	Select years
	 Select individual calendar years
	 Select specific start/end date
Months	Include all months
	 Select individual months
Export Format	Excel (.xlsx) O CSV

WeBS Online - Advantages

- Less inputting.
- Observer can retrieve own data.
- Map allows exact count area to be defined.

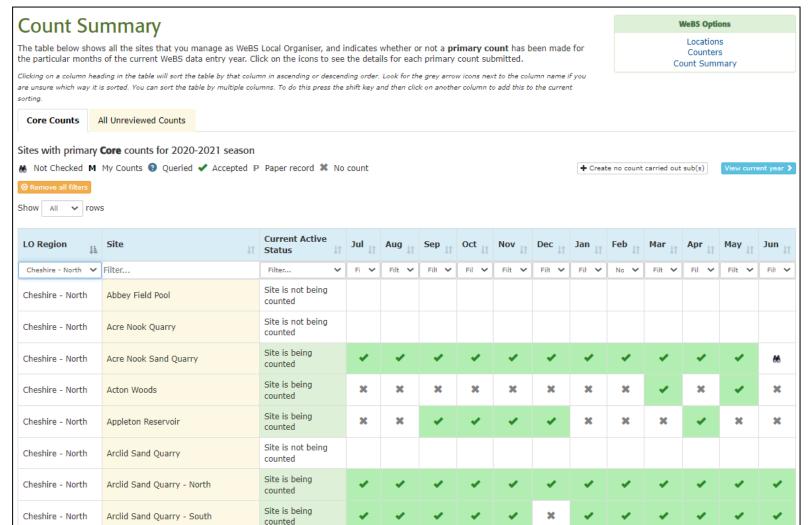




WeBS Online - Advantages

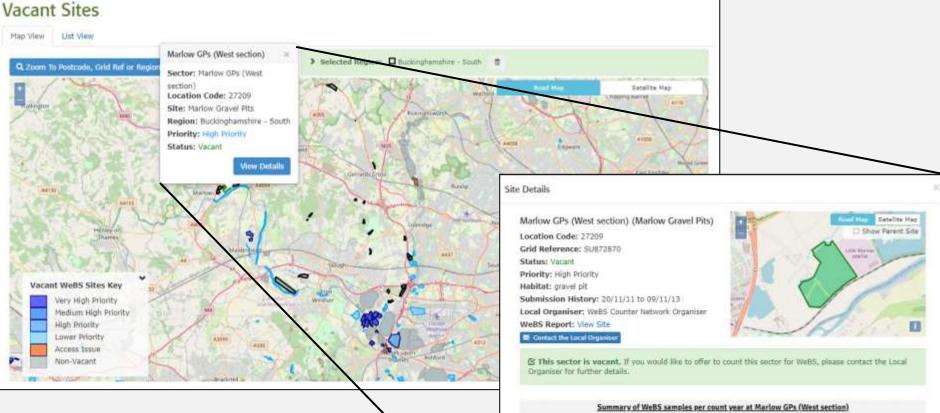
- Less inputting.
- Observer can retrieve own data.

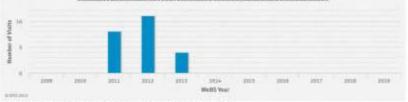
- Map allows exact count area to be defined.
- Local Organiser can ensure full coverage.



How to get involved in WeBS

- Find vacant sites and contact the Local Organiser in your area through the Vacant Sites map.
- Decide how you want to submit your counts.
- GET COUNTING!





Note: Each WellS year runs from July through to June of the subsequent year





THANK YOU FOR LISTENING!

ANY QUESTIONS?



For more information:www.bto.org/webswebs@bto.org