The assessment of trends and population sizes of a selection of waterbird species and populations from the coastal East Atlantic Flyway for Conservation Status Report 6 of The African Eurasian Waterbird Agreement

Wadden Sea Flyway Initiative, Wetlands International & Birdlife International

Working draft, version 2 November 2014

Marc van Roomen<sup>1</sup> Erik van Winden<sup>1</sup> Tom Langendoen<sup>2</sup>

<sup>1</sup> Sovon, Dutch Centre for Field Ornithology, Nijmegen, The Netherlands
<sup>2</sup> Wetlands International, Wageningen, The Netherlands

Contact: Marc van Roomen (marc.vanroomen@sovon.nl)

Colofon

van Roomen, M., van Winden, E. & T. Langendoen 2014. The assessment of trends and population sizes of a selection of waterbird species and populations from the coastal East Atlantic Flyway for Conservation Status Report 6 of The African Eurasian Waterbird Agreement. Wadden Sea Flyway Initiative, Wetlands International & Birdlife International.

# **Table of contents**

1. Material and methods

1.1 Material

1.2 Allocation of counts to populations

1.3 Population trends

1.4 Population sizes

2. Species and populations with assessments

2.1 Summary of results

2.2 Greater Comorant, lucides, West Africa

2.3 Lesser Flamingo, West Africa

2.4 Grey Plover, East Atlantic Flyway

2.5 Greater Ringed Plover, psammodroma

2.6 Bar-tailed Godwit, taymyrensis.

2.7 Knot, canutus

2.8 Sanderling, East Atlantic Flyway

2.9 Little Stint, South Europe, West Africa

2.10 Curlew Sandpiper, West Africa

2.11 Dunlin, West Africa

2.12 Grey-headed Gull, West Africa

2.13 Slender-billed Gull, West Africa

2.14 Caspian Tern, West Africa

Appendix

Additional Species and populations with results of the winter counts

# 1.Material and methods

#### 1.1 Material

#### Wintering

In principle counts of waterbirds from January have been used. In a few cases counts from the beginning of February have been included as well when a count from January was missing.

In 2013 and especially 2014 an extra effort was made to count coastal sites on the Atlantic seaboard of Africa. This through a cooperation between the Wadden Sea Flyway Initiative (WSFI) and the Conservation Migratory Bird Project (CMB, as coordinated by BirdLife International). Data collected contributed to the International Waterbird Census (IWC) as coordinated by Wetlands International and the Import Bird Areas (IBA) project as coordinated by Birdlife International.

In addition to the data already hold in the IWC database, older data from grey literature from coastal sites in West Africa were added to the database by a project made possible through the WSFI and carried out by the University of Dakar.

For European countries data from the IWC database was used for trend calculations.

For European countries estimates of total wintering population sizes were used as presently reported by countries for the EU Birds Directive art 12 reporting and BiE3 project. For most wintering waterbird species these estimates are based on the January counts in these countries which also contribute to the IWC.

In addition to material mentioned also literature and expert judgment was used for missing data for the total estimates of population sizes.

#### 1.2 Allocation of counts to populations

Based on the distribution limits of a population during wintering data from sites and countries were allocated to specific (flyway) populations. This allocation was done on the basis of literature (Scott & Rose 1996, Delany et al, 2009, the maps in the CSN tool and expert knowledge). Choices needed to be made to allocate pure for wintering distribution from the maps which depicts the distribution from a whole yearly cycle (summed distribution during breeding, migration and wintering).

#### **1.3 Population trends**

#### Wintering

Based on the likely consistency of the counted site boundaries through the years and the availability of counts over the years, a selection of the available data from the Atlantic coast of Africa was made for trend calculations. Data from 127 sites/sub-sites were selected, covering a good selection of parts of the important sites along the coast and as far as possible including sites from the different countries. However for several sites data is only available for recent years and these sites could presently not been used for the trend analyses.

For coastal Europe about 3000 sites were available. However depending on the population under review a rather changing amount of sites from Europe were included in the calculations (relatively large amount of sites with Eurasian Curlew and small amount with Curlew Sandpiper for instance).

The programme Uindex (Bell 1995) was used to account for missing counts (imputing) in the dataset per species/population. When possible, the imputing for Europe, Morocco – Sierra Leone, and Liberia -South Africa were performed in different strata.

Resulting yearly data points consisting of to much imputing (more than 70-90% imputing, depending on the population) were excluded before further trend calculations.

For the trend calculations the programme Trendspotter (Soldaat et al .2007) was used to assess trends.

#### **1.4 Population sizes**

#### Wintering

For the populations wintering in Africa in principle an estimate of the population size in the period 2010-2014 was made. As a basis all sites from the African Atlantic coast were used. However for this, clustering of sites was sometimes needed and excluding some as well to avoid having the same sites under different names in the dataset or having sites wich large overlapping parts as two different sites in the dataset which would cause overestimation. For the remaing sites (n=701) the average number per species for 2010-2014 was calculated and these averages were summed per country. For certain sites and countries older data, literature or expert judgement was used as the present data from 2010-2014 was only representing a small proportion of the tatal numbers present.

For Europe the wintering data as reported for art 12 and BiE 3 was used, mainly giving averages for 2008-2012.

Based on the allocation of countries to populations, country wintering totals were summed to reach total population sizes. For waders the results of 2010-2014 were compared with similar estimates from Smit & Piersma 1989 and Stroud et al 2006.

# 2. Species and populations with assessments

#### 2.1 Summary of results

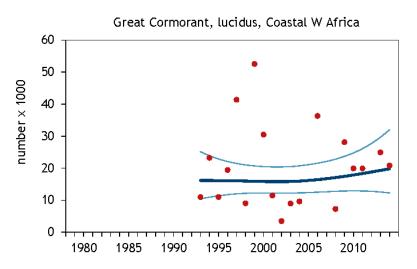
**Table 1.** List of species and populations included. As well if the assessment is based on wintering of breeding numbers (W/B), the old (short term) trend based on WPE5, the new (short term) trend (2003 - 2012 or 2014) from present study, the lower limit of the old population size based on WPE5 and the new lower limit of the population size from present study.

| Population Name <sup>i</sup>   | Winter<br>/Breed<br>ing | Trend<br>old | Trend<br>new | Pop size old | Pop size new |
|--|-------------------------|--------------|--------------|--------------|--------------|
| Phalacrocorax carbo lucidus, Coastal<br>West Africa                              | W                       | STA          | UNC/STA      | 35.000       | 40.000       |
| Phoeniconaias minor, West Africa   | W                       | STA          | INC          | 15.000       | 25.000       |
| Pluvialis squatarola, W Siberia &<br>Canada/W Europe & W Africa                  | W                       | DEC?         | STA          | 250.000      | 200.000      |
| Charadrius hiaticula psammodroma,<br>Canada, Greenland & Iceland/W & S<br>Africa | W                       | DEC          | UNC/STA      | 240.000      | 240.000      |
| Limosa lapponica taymyrensis,<br>Western Siberia/West & South-west<br>Africa     | W                       | DEC?         | DEC          | 600.000      | 500.000      |
| Calidris canutus canutus, Northern<br>Siberia/West & Southern Africa             | W                       | DEC?         | DEC          | 400.000      | 250.000      |
| Calidris alba, East Atlantic Europe,<br>West & Southern Africa (win)             | W                       | INC?         | INC          | 120.000      | 220.000      |
| Calidris minuta, N Europe/S Europe,<br>North & West Africa                       | W                       | INC?         | DEC          | 300.000      | 300.000      |
| Calidris ferruginea, Western<br>Siberia/West Africa                              | W                       | INC          | DEC          | 1.000.000    | 350.000      |
| Calidris alpina schinzii, Iceland & Greenland/NW and West Africa                 | W                       | STA          | STA          | 940.000      | 730.000      |
| Larus cirrocephalus poiocephalus,<br>West Africa                                 | W                       | STA          | UNC          | 30.000       | 25.000       |
| Larus genei, West Africa (bre)   | W                       | STA          | STA          | 22.500       | 20.000       |
| Sterna caspia caspia, West Africa<br>(bre)                                       | W                       | STA          | INC          | 45.000       | 50.000       |

#### 2.2 Phalacrocorax carbo lucidus, Coastal West Africa

#### Trend data

#### Wintering



| species, population                        | From | until | annual<br>rate of<br>change | Trend |
|--|------|-------|-----------------------------|-------|
| Great Cormorant, lucidus, Coastal W Africa |      | 2014  | 1,0                         | STA   |
| Great Cormorant, lucidus, Coastal W Africa |      | 2014  | 2,1                         | UNC   |

#### **Trend interpretation**

Trend analyses indicate unclear trend because of large scatter of data points, overall stable development.

#### wintering

|               | Great Cormorant lucidus | Comments          |
|---------------|-------------------------|-------------------|
| period        | 2010s                   |                   |
| Mauritania    | 24.838                  |                   |
| Senegal       | 6.736                   |                   |
| Gambia        | 77                      |                   |
| Guinee-Bissau | 566                     |                   |
| Guinee        | 0                       |                   |
| Sierra leone  | 0                       |                   |
| Total         | 32.217                  | rounded to 40.000 |
| WPE5          | 35.000 - 35.000         |                   |

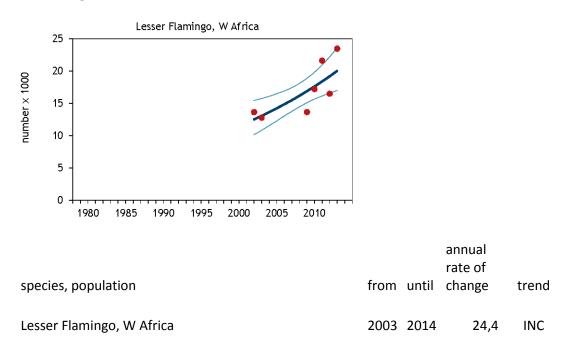
### Population size interpretation

Based on the IWC counts in 2010 – 2014, 32.217 Great Cormorants lucidus were counted in West-Africa. Based on expert opinion of completeness this counted number was raised to an estimate of 40.000.

#### 2.3 Phoeniconaias minor, West Africa

#### Trend data

Wintering



#### **Trend interpretation**

Increasing trend on the basis of trend analyses

#### **Population size data,** Wintering

|               | Lesser Flamingo | Comments          |
|---------------|-----------------|-------------------|
| period        | 2010s           |                   |
| Mauritania    | 4.661           |                   |
|               |                 |                   |
|               |                 |                   |
| Senegal       | 6.773           |                   |
| Gambia        | 0               |                   |
| Guinee-Bissau | 399             |                   |
| Guinee        | 11.614          |                   |
| Sierra leone  | 0               |                   |
| Total         | 23.447          | rounded to 25.000 |
| WPE5          | 20.000          |                   |

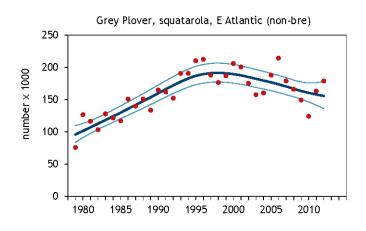
#### Population size interpretation

23.447 were counted, rounded to 25.000

## 2.4 Pluvialis squatarola, W Siberia & Canada/W Europe & W Africa

## Trend data

Wintering



### Wintering

|   |          | annual    |       |
|---|----------|-----------|-------|
|   |          | rate of   |       |
| species, population                           | from uni | il change | Trend |
| Grey Plover, squatarola, E Atlantic (non-bre) | 1979 202 | .2 1,5    | INC   |
| Grey Plover, squatarola, E Atlantic (non-bre) | 1988 202 | .2 0,2    | STA   |
| Grey Plover, squatarola, E Atlantic (non-bre) | 2003 202 | .2 -1,8   | STA   |

# **Trend interpretation**

Trend analyses indicate stable trend.

## Population size data, Wintering

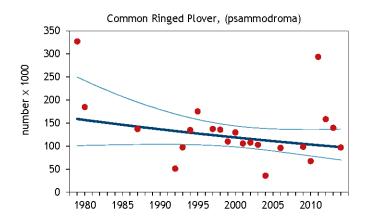
| Population size | Grey Plover | 0      |        | comments   |
|-----------------|-------------|--------|--------|--|
| Period          | 1980s       | 1990s  | 2010s  |  |
| Norway          | 0           | 0      | 0      |  |
| Sweden          | 0           | 3      | 0      |  |
| Denmark         | 100         | 500    | 200    |  |
| Germany         | 2000        | 9875   | 10500  |  |
| Netherlands     | 9700        | 27000  | 25010  |  |
| Belgium         | 100         | 470    | 257    |  |
| UK              | 21300       | 49347  | 43000  |  |
| Ireland         | 1200        | 5000   | 2850   |  |
| France          | 17300       | 24800  | 30500  |  |
| Spain           | 3600        | 5799   | 8381   |  |
| Portugal        | 6800        | 7969   | 7649   |  |
| Morocco         | 4000        | 6328   | 4936   |  |
| Mauritania      | 19300       | 15880  | 19107  |  |
| Senegal         | 800         | 4783   | 2214   |  |
| Gambia          | 100         | 100    | 50     |  |
| Guinee-Bissau   | 56700       | 39100  | 15448  | estimates based on extrapolations from sample counts     |
| Guinee          | 24500       | 28000  | 21000  | 2010s based on Trolliet & Fouquet 2004, 1980s questimate |
| Sierra leone    | 6000        | 7232   | 4798   |  |
| Liberia         | 300         | 300    | 300    | •  |
| Ivory Coast     | 30          | 32     |        | 2010s questimate   |
| Ghana           | 900         | 1510   | 1000   | 1980s en 2010s questimates                               |
| Тодо            | 155         | 75     | 235    |  |
| Benin           | 32          | 39     | 24     |  |
| Algeria         | 10          | 11     | 10     |  |
| Mali            | 10          | 10     | 10     | based on Zwarts et al 2009                               |
| Niger           | 0           | 0      | 0      | based on Brouwer & Mullié 2001                           |
| Total           | 174937      | 234163 | 197509 | rounded to 200.000                                       |
| WPE5            |             |        | 250000 |  |

**Population size interpretation** 197.509 individuals were counted at the wintering grounds. Rounded to 200.000.

### 2.5 Charadrius hiaticula psammodroma, Canada, Greenland & Iceland/W & S Africa

#### Trend data

#### wintering



|                                     |      |       | annual  |       |
|-------------------------------------|------|-------|---------|-------|
|                                     |      |       | rate of |       |
| species, population                 | from | until | change  | Trend |
| Common Ringed Plover, (psammodroma) | 1979 | 2014  | -1,7    | STA   |
| Common Ringed Plover, (psammodroma) | 2003 | 2014  | -1,4    | STA   |

### Trend interpretation

Stable trend from 2003 according to trend analyses.

# wintering

|                       | Common Ringed<br>Plover- |            |           |   |
|-----------------------|--------------------------|------------|-----------|---|
|                       | psammodroma              |            |           | Comments  |
| period                | 1980s                    | 1990s      | 2010s     |   |
| Morocco               | 4300                     | 19842      | 19915     |   |
| Mauritania            | 122200                   | 60648      | 63664     |   |
| Senegal               | 3000                     | 9061       | 6386      |   |
| Gambia                | 200                      | 750        | 217       |   |
| Guinee-Bissau         | 57400                    | 26300      | 27188     | estimates based on<br>extrapolations from sample<br>counts    |
| Guinee                | 70000                    | 68000      | 71000     | 2010s based on Trolliet &<br>Fouquet 2004, 1980s questimate   |
| Ciarra la ana         | 2400                     | 640        | 624.4     | 2010s partly based on van der<br>Winden et al 2005 and recent |
| Sierra leone          | 3400                     | 648        | 6314      | counts  |
| Liberia               | 800                      | 750        | 775       | 2010s questimate  |
| Ivory Coast           | 1                        | 2          | 0         | 2010  |
| Ghana                 | 3800                     | 6159       | 4980      | 2010s questimate  |
| Togo                  | 100<br>150               | 115<br>226 | 66<br>107 |   |
| Benin<br>Nigeria      | 0                        | 228        | 0         |   |
| Cameroon              | 1000                     | 1500       | 418       |   |
| Gabon                 | 2180                     | 2187       | 2172      | 2010s questimate  |
| Congo                 | 9                        | 9          | 9         |   |
| Democratic Rep. Congo | 9                        | 9          | 9         |   |
| Angola                | 300                      | 550        | 500       | 2010's questimate   |
| Namibia               | 575                      | 800        | 350       |   |
| South Africa          | 3000                     | 5500       | 2500      | 2010s questimate  |
| Total                 | 272424                   | 203056     | 206569    | rounded and raised to 240.000                                 |
| WPE5                  |                          |            | 285000    |   |

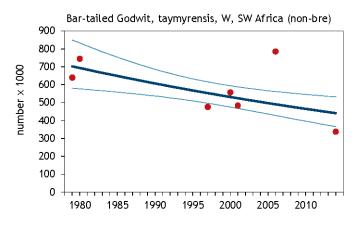
# Population size interpretation

206.569 were counted during January counts. Based on presumed underestimations raised to 240.000 birds.

#### 2.6 Limosa lapponica taymyrensis, Western Siberia/West & South-west Africa

#### **Trend data**

#### wintering



|  |      |       | annual<br>rate of |       |
|--|------|-------|-------------------|-------|
| species, population                                    | from | until | change            | Trend |
| Bar-tailed Godwit, taymyrensis, W, SW Africa (non-bre) | 1979 | 2014  | -1,3              | DEC   |
| Bar-tailed Godwit, taymyrensis, W, SW Africa (non-bre) | 2003 | 2014  | -1,3              | DEC   |

#### **Trend interpretation**

Estimated decline based on wintering counts for the period of 2003-2014, also long-term decline for the period of 1979-2014.

### Wintering

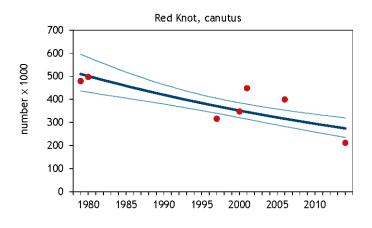
| whitering             | Bar-tailed Gotwit- |        |        |   |
|-----------------------|--------------------|--------|--------|---|
|                       | taymyrensis        |        |        |   |
| Period                | 1980s              | 1990s  | 2010s  | comments  |
| Tunisia               | 2100               | 791    | 1450   | 2010's questimate   |
| Morocco               | 3000               | 7765   | 6962   |   |
| Mauritania            | 542200             | 348994 | 281193 |   |
| Senegal               | 2500               | 3811   | 5434   |   |
| Gambia                | 300                | 400    | 279    |   |
| Guinee-Bissau         | 155600             | 108700 | 128661 | estimates based on<br>extrapolations from sample<br>counts              |
| Guinee                | 30000              | 35000  | 64000  | 2010s based on Trolliet & Fouquet 2004, 1980s questimate                |
| Sierra leone          | 3000               | 2776   | 3189   | 2010s partly based on van<br>der Winden et al 2005 and<br>recent counts |
|                       |                    |        |        | 1980s en 2010s  |
| Liberia               | 100                | 50     | 75     | questimates   |
| Ivory Coast           | 0                  | 0      | 0      | 2010s questimate  |
| Ghana                 | 170                | 304    | 230    | 1980s en 2010s<br>questimates   |
| Тодо                  | 130                | 133    | 130    | 2010's questimate   |
| Benin                 | 0                  | 0      | 2      |   |
| Nigeria               | 0                  | 0      | 0      |   |
| Cameroon              | 3                  | 0      | 6      |   |
| Gabon                 | 5000               | 5087   | 5000   | 2010's questimate   |
| Congo                 | 0                  | 0      | 0      |   |
| Democratic Rep. Congo | 0                  | 0      | 0      |   |
| Angola                | 500                | 500    | 250    | 2010's questimate   |
| Namibia               | 3000               | 3000   | 1767   |   |
| South Africa          | 300                | 400    | 255    |   |
| Total                 | 745803             | 516920 | 497433 | rounded to 500.000  |
| WPE5                  |                    |        | 600000 |   |

**Population size interpretation** 497.433 individuals counted in the wintering range. Rounded to 500.000 individuals.

### 2.7 Calidris canutus canutus, Northern Siberia/West & Southern Africa

### Trend data

Wintering



|                     |      |       | annual  |       |
|---------------------|------|-------|---------|-------|
|                     |      |       | rate of |       |
| species, population | From | until | change  | trend |
| Red Knot, canutus   | 1979 | 2014  | -1,8    | DEC   |
| Red Knot, canutus   | 2003 | 2014  | -1,8    | DEC   |

#### **Trend interpretation**

Estimated decline since 2003 and also since 1979.

# wintering

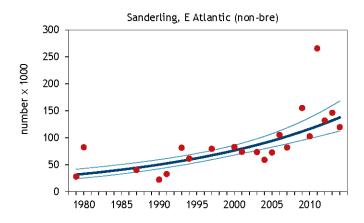
|                 | Red knot canutus |        |        |                                     |
|-----------------|------------------|--------|--------|-------------------------------------|
| period          | 1980s            | 1990s  | 2010s  | comments                            |
| Morocco         | 2500             | 9211   | 801    |                                     |
| Mauritania      | 364300           | 259358 | 195765 |                                     |
| Senegal         | 800              | 3910   | 950    |                                     |
| Gambia          | 200              | 0      | 0      |                                     |
|                 |                  |        |        |                                     |
|                 |                  |        |        | estimates based on extrapolations   |
| Guinee-Bissau   | 143800           | 31300  | 44749  | from sample counts                  |
|                 |                  |        |        |                                     |
|                 |                  |        |        | 2010s based on Trolliet & Fouquet   |
| Guinee          | 8000             | 8000   | 4560   | 2004, 1980s questimate              |
|                 |                  |        |        | 2010s based on van der Winden et al |
| Sierra leone    | 2000             | 2000   | 2000   | 2005                                |
| Liberia         | 100              | 100    | 100    | 2010s questimate                    |
| Ivory Coast     | 0                | 0      | 0      |                                     |
| Ghana           | 50               | 74     | 62     | 2010s questimate                    |
| Тодо            | 0                | 0      | 0      |                                     |
| Benin           | 0                | 0      | 0      |                                     |
| Nigeria         | 0                | 0      | 0      |                                     |
| Cameroon        | 0                | 0      | 0      |                                     |
| Gabon           | 365              | 365    | 367    | 2010s questimate                    |
| Congo           | 0                | 0      | 0      |                                     |
| Democratic Rep. |                  |        |        |                                     |
| Congo           | 0                | 0      | 0      |                                     |
| Angola          | 200              | 200    | 50     | 2010s questimate                    |
| Namibia         | 500              | 500    | 24     |                                     |
| South Africa    | 6000             | 6000   | 187    |                                     |
| Total           | 528815           | 321018 | 249614 | rounded to 250.000                  |
| WPE5            |                  |        | 400000 |                                     |

**Population size interpretation** 249.614 individuals at the wintering grounds. Rounded to 250.000 birds.

### 2.8 Calidris alba, East Atlantic Europe, West & Southern Africa (win

## Trend data

#### wintering



|                                  | annua             | al rate |       |
|----------------------------------|-------------------|---------|-------|
| species, population              | from until of cha | ange    | Trend |
| Sanderling, E Atlantic (non-bre) | 1979 2014         | 4,3     | INC   |
| Sanderling, E Atlantic (non-bre) | 2003 2014         | 4,3     | INC   |

#### **Trend interpretation**

Trend analyses indicate increasing trend.

# Population size data, wintering

|               | Sanderling |        |        |                                   |
|---------------|------------|--------|--------|-----------------------------------|
| period        | 1980s      | 1990s  | 2010s  | comments                          |
| Norway        | 0          | 0      | 0      |                                   |
| Sweden        | 0          | 3      | 0      |                                   |
| Denmark       | 200        | 300    | 326    |                                   |
| Germany       | 1600       | 1184   | 3600   |                                   |
| Netherlands   | 4000       | 4000   | 10660  |                                   |
| Belgium       | 600        | 350    | 333    |                                   |
| UK            | 13800      | 23236  | 17000  |                                   |
| Ireland       | 2000       | 2750   | 5280   |                                   |
| France        | 3000       | 8000   | 24900  |                                   |
| Italy         | 100        | 150    | 401    |                                   |
| Spain         | 1300       | 1332   | 4765   |                                   |
| Portugal      | 200        | 440    | 3728   |                                   |
| Tunisia       | 300        | 3000   | 1600   |                                   |
| Morocco       | 2100       | 4081   | 1030   |                                   |
| Mauritania    | 21200      | 21580  | 53618  |                                   |
| Senegal       | 7300       | 3591   | 5993   |                                   |
| Gambia        | 500        | 500    | 181    |                                   |
|               |            |        |        | estimates based on                |
|               |            |        |        | extrapolations from sample        |
| Guinee-Bissau | 10800      | 24300  | 35000  | counts                            |
|               |            |        |        | 2010s based on Trolliet &         |
| Guinee        | 10000      | 10000  | 15300  | Fouquet 2004, 1980s<br>questimate |
| Guillee       | 10000      | 10000  | 19900  | 2010s partly based on van der     |
|               |            |        |        | Winden et al 2005 and recent      |
| Sierra leone  | 8000       | 8056   | 3124   | counts                            |
| Liberia       | 300        | 300    | 300    | 2010s questimate                  |
| Ivory Coast   | 50         | 50     | 52     |                                   |
| Ghana         | 4700       | 4716   | 4700   | 1980s & 2010s questimate          |
| Тодо          | 1500       | 1500   | 1516   | 1980s & 1990s questimate          |
| Benin         | 24         | 24     | 10     |                                   |
|               |            |        |        | rounded and accounting for        |
| Total         | 93574      | 123443 | 193418 | underestimates 220.000            |
| WPE5          |            |        | 120000 |                                   |

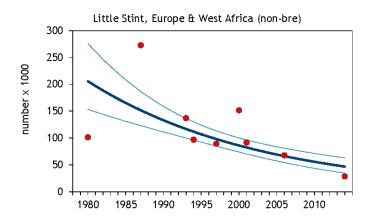
#### Population size interpretation

193,418 individuals at the wintering areas in the 2010s. Rounded and raised to 220.000.

#### 2.9 Calidris minuta, N Europe/S Europe, North & West Africa

#### **Trend data**

#### Wintering



|  |      |       | annual<br>rate of |       |
|--|------|-------|-------------------|-------|
| species, population                          | from | until | change            | Trend |
| Little Stint, Europe & West Africa (non-bre) | 1980 | 2014  | -4,3              | DEC   |
| Little Stint, Europe & West Africa (non-bre) | 2003 | 2014  | -4,3              | DEC   |

#### **Trend interpretation**

Wintering numbers show a rapid decrease in the short-term (2003-2014) and long term (1980-2014).

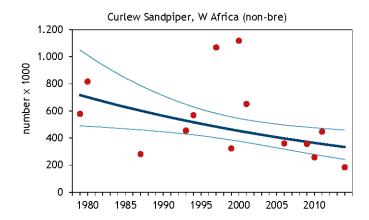
|               | Little Stint |        |        |   |
|---------------|--------------|--------|--------|---|
| Period        | 1980s        | 1990s  | 2010s  | comments  |
| France        | 300          | 1500   | 900    | 2010's questimate   |
| Spain         | 1600         | 8630   | 13533  |   |
| Portugal      | 400          | 1309   | 422    |   |
| Italy         | 12500        | 3000   | 1881   |   |
| Tunisia       | 22900        | 8297   | 16000  | 2010's questimate   |
| Algeria       | 2300         | 237    | 1269   | 2010's questimate   |
| Morocco       | 2000         | 17092  | 25471  |   |
| Mauritania    | 30600        | 15306  | 27637  |   |
| Senegal       | 15000        | 20549  | 7603   |   |
| Gambia        | 500          | 500    | 796    |   |
| Guinee-Bissau | 123000       | 59700  | 11835  | estimates based on<br>extrapolations from sample<br>counts              |
| Guinee        | 8930         | 8500   | 9360   | 2010s based on Trolliet &<br>Fouquet 2004, 1980s questimate             |
| Sierra leone  | 2300         | 2808   | 1800   | 2010s partly based on van der<br>Winden et al 2005 and recent<br>counts |
| Liberia       | 200          | 200    | 200    | 1980s en 2010s questimates  |
| Ivory Coast   | 14           | 19     | 9      |   |
| Ghana         | 12000        | 12353  | 12000  | 2010's questimate   |
| Тодо          | 11           | 11     | 11     |   |
| Benin         | 72           | 56     | 88     |   |
| Nigeria       | 100          | 199    | 14     |   |
| Cameroon      | 20           | 20     | 2      |   |
| Gabon         | 13042        | 13087  | 12997  | 2010's questimate   |
| Mali          | 100000       | 100000 | 100000 | based on Zwarts et al 2009  |
| Niger         | 27000        | 27000  | 27000  | based on Brouwer & Mullié 2001  |
| Burkina Faso  |              |        |        |   |
| Totaal        | 374789       | 300373 | 270828 | rounded and raised to 300.000   |
| WPE5          |              |        | 300000 |   |

**Population size interpretation** 270,828 individuals at the wintering areas. Rounded and raised to 300.000.

## 2.10 Calidris ferruginea, Central Siberia/SW Asia, E & S Africa

#### **Trend data**

### Wintering



|                                      |      |       | annual  |       |
|--------------------------------------|------|-------|---------|-------|
|                                      |      |       | rate of |       |
| species, population                  | from | until | change  | trend |
| Curlew Sandpiper, W Africa (non-bre) | 1979 | 2014  | -2,2    | DEC   |
| Curlew Sandpiper, W Africa (non-bre) | 2003 | 2014  | -2,2    | DEC   |

#### **Trend interpretation**

Decrease in the short-term (2003-2014) and long term (1979-2014).

#### Population size data, wintering

| i opulation si | ize uata, winter ing |        |         |  |
|----------------|----------------------|--------|---------|--|
|                | Curlew Sandpiper     |        |         |  |
| period         | 1980s                | 1990s  | 2010s   | Comments   |
| Spain          | 1200                 | 952    | 935     | 1980s questimate   |
| Portugal       | 400                  | 143    | 397     | 1980s questimate   |
| Italy          | 0                    | 5      | 0       |  |
| Tunisia        | 5100                 | 7100   | 6100    |  |
| Algeria        | 0                    | 0      | 0       |  |
| Morocco        | 200                  | 769    | 485     | 2010's questimate  |
| Mauritania     | 157700               | 238802 | 61511   |  |
| Senegal        | 7500                 | 16981  | 3739    |  |
| Gambia         | 200                  | 3000   | 192     |  |
| Guinee-Bissau  | 249300               | 326500 | 129857  | estimates based on<br>extrapolations from sample<br>counts                       |
| Guinee         | 94000                | 94000  | 100000  | 1980s & 2010s questimate   |
| Sierra leone   | 30000                | 30072  | 25000   | 2010s partly based on van der<br>Winden et al 2005 and recent<br>counts          |
| Liberia        | 700                  | 650    | 680     | 1980s en 2010s questimates   |
| Ivory Coast    | 0                    | 0      | 0       |  |
| Ghana          | 19000                | 19503  | 19000   | 1980s & 2010s questimate   |
| Тодо           | 2                    | 2      | 2       |  |
| Benin          | 100                  | 24     | 181     | 1980s questimate   |
| Mali           | 0                    | 0      | 0       |  |
| Burkina Faso   | 0                    | 0      | 0       |  |
| totaal         | 565402               | 738503 | 348079  | rounded and raised 350.000 -<br>450.000, range because of<br>large uncertainties |
| WPE5           |                      |        | 1000000 |  |

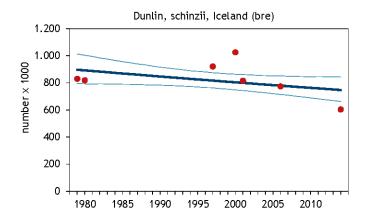
#### Population size interpretation

Only 348,079 individuals in the 2010s. Rounded and raised to an estimate of 350.000-450.000 because of large uncertainties at several countries. This represents much lower numbers than the earlier estimates reviewed by Delany et al. (2009).

### 2.11 Calidris alpina schinzii, Iceland & Greenland/NW and West Africa

#### **Trend data**

#### wintering



|                                 |      |       | annual  |       |
|---------------------------------|------|-------|---------|-------|
|                                 |      |       | rate of |       |
| species, population             | from | until | change  | Trend |
| Dunlin, schinzii, Iceland (bre) | 1979 | 2014  | -0,5    | STA   |
| Dunlin, schinzii, Iceland (bre) | 2003 | 2014  | -0,5    | STA   |

#### **Trend interpretation**

Stable on the short term (2003-2014), and stable on the long term (1979-2014).

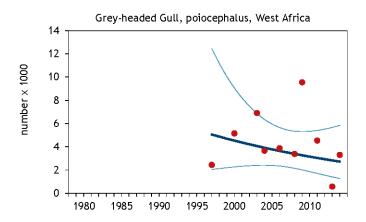
|               | Dundin    |        |        |   |
|---------------|-----------|--------|--------|---|
|               | Dunlin-   |        |        |   |
|               | schinzii- |        |        |   |
|               | Iceland   |        |        |   |
| period        | 1980s     | 1990s  | 2010s  | comments  |
| Mauritania    | 779200    | 948776 | 722860 |   |
| Senegal       | 800       | 827    | 1667   |   |
| Gambia        | 10000     | 200    | 1      |   |
| Guinee-Bissau | 1800      | 710    | 363    | estimates based on<br>extrapolations from<br>sample counts  |
| Guinee        | 129       | 129    | 129    | 2010s based on<br>Trolliet & Fouquet<br>2004, 1980s &1990s<br>questimate                                  |
| Sierra leone  | 30        | 30     | 30     | 2010s partly based on<br>van der Winden et al<br>2005 and recent<br>counts, 1980s and<br>1990s questimate |
|               |           |        |        | rounded and raised to   |
| Total         | 791959    | 950672 | 725050 | 730.000-800.000   |
| WPE5          |           |        | 950000 |   |

**Population size interpretation** 725,305 individuals counted in the 2010s. Rounded and raised to 730.000 – 800.000.

# 2.12 Larus cirrocephalus poiocephalus, West Africa

## Trend data

#### Wintering



|   | annual                  |  |
|---|-------------------------|--|
|   | rate of                 |  |
| species, population                         | from until change trend |  |
| Grey-headed Gull, poiocephalus, West Africa | 1997 2014 -3,6 UNC      |  |
| Grey-headed Gull, poiocephalus, West Africa | 2003 2014 -3,6 UNC      |  |

# Trend interpretation

unclear trend on the basis of trend analyses.

# Wintering

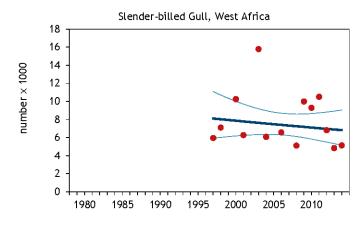
|               | Grey-headed Gull |  |
|---------------|------------------|--|
| period        | 2010s            | comments                                 |
| Mauritania    | 106              |  |
| Senegal       | 13687            |  |
| Gambia        | 5707             |  |
| Guinee-Bissau | 1055             |  |
| Guinee        | 1305             |  |
| Sierra leone  | 80               |  |
| Liberia       | 0                |  |
| Ivory Coast   | 0                |  |
| Ghana         | 0                |  |
| Mali          | 400              | Zwarts et al 2009                        |
| Niger         | 588              | Brouwer & Mullié<br>2001                 |
| Chad          | 500              | questimate                               |
| Total         | 23428            | rounded and raised to<br>25.000 - 30.000 |
| WPE5          | 30000            |  |

**Population size interpretation** 23.428 individuals counted in Januari. Rounded and raised to an estimate of 25.000 -30.000.

### 2.13 Larus genei, West Africa (bre)

## Trend data

#### wintering



|                                  |      |       | annual<br>rate of |       |
|----------------------------------|------|-------|-------------------|-------|
| species, population              | from | until | change            | trend |
| Slender-billed Gull, West Africa | 1997 | 2014  | -1,0              | STA   |
| Slender-billed Gull, West Africa | 2003 | 2014  | -1,0              | STA   |

# **Trend interpretation**

Stable trend on the basis of trend analyses.

#### wintering

|               | Slender-billed Gull |                       |
|---------------|---------------------|-----------------------|
| Period        | 2010s               | comments              |
| Morocco       | 158                 |                       |
| Mauritania    | 5462                |                       |
| Senegal       | 9686                |                       |
| Gambia        | 1457                |                       |
| Guinee-Bissau | 567                 |                       |
| Guinee        | 2                   |                       |
|               |                     | rounded and raised to |
| Total         | 17332               | 20.000                |
| WPE5          | 22500               |                       |

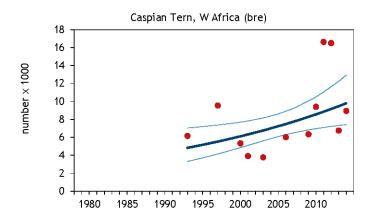
#### Population size interpretation

17.332 individuals counted in January, rounded to 20.000. This wintering number is rather close to the breeding estimate; Keijl *et al.* (2001) population estimate of 7,500 pairs (22,500 birds).

# 2.14 Sterna caspia caspia, West Africa (bre)

## Trend data

Wintering



|                              |      |       | annual  |       |
|------------------------------|------|-------|---------|-------|
|                              |      |       | rate of |       |
| species, population          | from | until | change  | trend |
| Caspian Tern, W Africa (bre) | 1993 | 2014  | 3,4     | INC   |
| Caspian Tern, W Africa (bre) | 2003 | 2014  | 3,4     | INC   |

### **Trend interpretation**

increasing trend on the basis of trend analyses.

# Wintering

|               | Caspian Tern |                       |
|---------------|--------------|-----------------------|
| Period        | 2010s        | Comments              |
| Mauritania    | 7622         |                       |
| Senegal       | 11582        |                       |
| Gambia        | 1901         |                       |
| Guinee-Bissau | 21267        |                       |
| Guinee        | 3700         |                       |
| Sierra leone  | 70           |                       |
| Liberia       | 50           |                       |
| Ivory Coast   | 162          |                       |
| Ghana         | 0            |                       |
| Тодо          | 94           |                       |
| Benin         | 0            |                       |
|               |              | rounded and raised to |
| Total         | 46448        | 50.000                |
| WPE5          | 53000        |                       |

# Population size interpretation

46.448 individuals counted in January, rounded to 50.000.

# References

- Delany, S., Scott, D., Helmink, A., Dodman, T., Flink, S., Stroud, D., & Haanstra, L. (2009). *An Atlas of Wader Populations in Africa and Western Eurasia*. Wageningen: Wetlands International.
- Stroud, D., Davidson, N., West, R., Scott, D., Haanstra, L., Thorup, O., . . . Delany, S. (2004). Status of migratory wader populations in Africa and Western Eurasia in the 1990s.

Smit & Piersma 1989

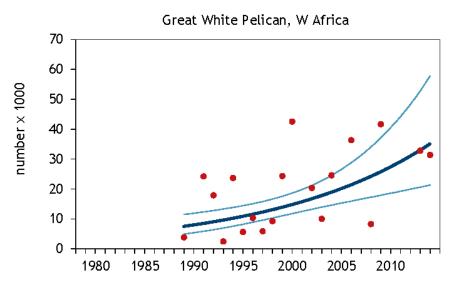
# Appendix

**Summary.** Additional species and populations with data about wintering numbers counted during the 2010-2014 period and results of trend calculations (period 2003-2014) on the basis of Januari counts.

| Population Name <sup>ii</sup>  | Trend | Counted Nr |
|--|-------|------------|
| Pelecanus onocrotalus, West Africa   | INC   | (51.128)   |
| Egretta gularis gularis, West Africa   | INC   | (15.375)   |
| Platalea leucorodia leucorodia, West<br>Europe/West Mediterranean & West<br>Africa       | INC   | (18.647)   |
| Phoenicopterus roseus, West Africa   | STA   | (110.500)  |
| Haematopus ostralegus ostralegus,<br>South & West Europe & NW Africa                     |       | (901.581)  |
| Recurvirostra avosetta, Western<br>Europe & North-west Africa (bre)                      | INC   | (79.095)   |
| Charadrius alexandrinus<br>alexandrinus, West Europe & West<br>Mediterranean/West Africa | STA   | (51.189)   |
| Numenius phaeopus<br>phaeopus/islandicus,  | INC   | (131.865)  |
| Numenius arquata arquata,<br>Europe/Europe, North & West Africa                          | STA   | (549.185)  |
| Tringa erythropus, N<br>Europe/Southern Europe, North &<br>West Africa                   | STA   | (17.090)   |
| Tringa totanus totanus, Northern<br>Europe (breeding)                                    | STA   | (137.107)  |
| Tringa nebularia, Northern<br>Europe/SW Europe, NW & West<br>Africa                      | INC   | (35.307)   |
| Arenaria interpres interpres,<br>Northern Europe/West Africa                             | STA   | (28.089)   |
| Sterna nilotica nilotica, Western<br>Europe/West Africa                                  |       | (33.178)   |
| Sterna sandvicensis sandvicensis,<br>Western Europe/West Africa                          |       | (33.592)   |
| Sterna maxima albidorsalis, West<br>Africa (bre)   |       | (62.816)   |
| Sterna hirundo hirundo, wintering  |       | (51.206)   |
| Sterna albifrons albifrons/guineae, wintering  |       | (1.166)    |
| Sterna balaenarum, Namibia & South<br>Africa/Atlantic coast to Ghana                     | UNC   | (507)      |
| Chlidonias niger niger, Europe &<br>Western Asia/Atlantic coast of Africa                |       | (37.877)   |
| Rynchops flavirostris, Coastal West<br>Africa & Central Africa                           |       | (3.992)    |

#### Pelecanus onocrotalus, West Africa

Trend data, winter



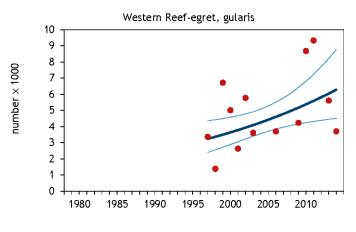
|                               |      |       | annual<br>rate of |       |
|-------------------------------|------|-------|-------------------|-------|
| species, population           | from | until | change            | Trend |
| Great White Pelican, W Africa | 1989 | 2014  | 6,4               | INC   |
| Great White Pelican, W Africa | 2003 | 2014  | 6,4               | INC   |

# Population size data, winter

|               | Great White Pelican | Comments   |
|---------------|---------------------|--|
| Period        | 2010s               |  |
| Mauritania    | 16239               |  |
| Senegal       | 28951               |  |
| Gambia        | 162                 |  |
| Guinee-Bissau | 355                 |  |
| Guinee        | 716                 |  |
|               |                     | 2010s partly based on van<br>der Winden et al 2005 and |
| Sierra leone  | 458                 | recent counts  |
| Mali          | 2000                | From Zwarts et al 2009                                 |
| Total         | 48881               |  |
| WPE5          | 60000               |  |

# Egretta gularis gularis, West Africa

# Trend data, Wintering



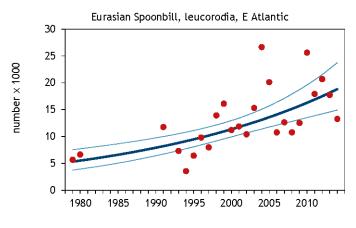
|                             |      |       | annual<br>rate of |       |
|-----------------------------|------|-------|-------------------|-------|
| species, population         | from | until | change            | Trend |
| Western Reef-egret, gularis | 1997 | 2014  | 4,0               | INC   |
| Western Reef-egret, gularis | 2003 | 2014  | 4,0               | INC   |

# Population size data, wintering

|               | Western Reef-egret | Comments  |
|---------------|--------------------|---|
| period        | 2010s              |   |
| Morocco       | 3                  |   |
| Mauritania    | 2172               |   |
| Senegal       | 4599               |   |
| Gambia        | 182                |   |
| Guinee-Bissau | 1526               |   |
| Guinee        | 2000               | 2010s partly based on<br>Trolliet & Fouquet 2004 and<br>recent counts,  |
| Sierra leone  | 3656               | 2010s partly based on van<br>der Winden et al 2005 and<br>recent counts |
| Liberia       | 50                 | Questimate  |
| Ivory Coast   | 53                 |   |
| Ghana         | 544                |   |
| Тодо          | 150                | Questimate  |
| Benin         | 189                |   |
| Nigeria       | 150                | Questimate  |
| Cameroon      | 120                |   |
| Gabon         | 9                  |   |
| Mali          | 250                | based on Zwarts et al 2009  |
| total         | 15652              |   |
| WPE5          | 55000              |   |

#### Platalea leucorodia leucorodia, West Europe/West Mediterranean & West Africa

#### Trend data, Wintering



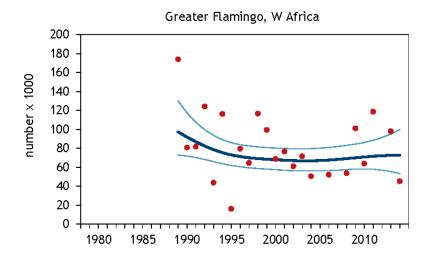
|  |      |       | annual  |       |
|--|------|-------|---------|-------|
|  |      |       | rate of |       |
| species, population                        | from | until | change  | Trend |
| Eurasian Spoonbill, leucorodia, E Atlantic | 1979 | 2014  | 3,7     | INC   |
| Eurasian Spoonbill, leucorodia, E Atlantic | 2003 | 2014  | 3,7     | INC   |

NB wintering trend excludes P. l. balsaci on Banc d'Arguin

|               | Eurasian<br>Spoonbill | Comments          |
|---------------|-----------------------|-------------------|
| period        | 2010s                 |                   |
| France        | 530                   |                   |
| Spain         | 2500                  |                   |
| Portugal      | 2520                  |                   |
| Morocco       | 384                   |                   |
| Mauritania    | 9813                  | excluding balsaci |
| Senegal       | 2563                  |                   |
| Gambia        | 0                     |                   |
| Guinee-Bissau | 0                     |                   |
| total         | 18310                 |                   |
| WPE5          | 11300                 |                   |

#### Phoenicopterus roseus, West Africa

### Trend data, wintering



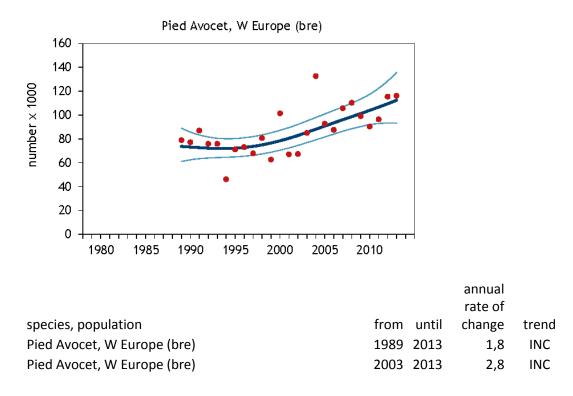
|                            |      |       | annual<br>rate of |       |
|----------------------------|------|-------|-------------------|-------|
|                            |      |       | fute of           |       |
| species, population        | From | until | change            | trend |
| Greater Flamingo, W Africa | 1989 | 2014  | -1,2              | STA   |
| Greater Flamingo, W Africa | 2003 | 2014  | 0,8               | STA   |

|               | Greater Flamingo | Comments |
|---------------|------------------|----------|
| Period        | 2010s            |          |
| Mauritania    | 64078            |          |
| Senegal       | 15904            |          |
| Gambia        | 14               |          |
| Guinee-Bissau | 4477             |          |
| Guinee        | 13097            |          |
| Sierra leone  | 25               |          |
| Mali          | 0                |          |
| Niger         | 0                |          |
| Total         | 97595            |          |
| WPE5          | 70000            |          |

# Haematopus ostralegus ostralegus

|               | Oystercatcher |         |        |                   |
|---------------|---------------|---------|--------|-------------------|
| period        | 1980s         | 1990s   | 2010s  | comments          |
|               |               |         |        | 2010's based on   |
|               |               |         |        | van de Pol et al  |
| Iceland       | 3000          | 3000    | 2400   | 2014              |
|               |               |         |        | 1980's and 1990's |
| Norway        | 460           | 460     | 460    | questimates       |
| Sweden        | 50            | 50      | 50     | 2010s questimate  |
| Denmark       | 16100         | 29000   | 43000  |                   |
| Germany       | 175000        | 221879  | 205000 |                   |
| Netherlands   | 307300        | 290000  | 179883 |                   |
| Belgium       | 600           | 2250    | 1425   | 2010 questimate   |
| UK            | 279500        | 350834  | 340000 |                   |
| Ireland       | 32500         | 50000   | 45480  |                   |
| France        | 40000         | 44500   | 51381  |                   |
| Italy         | 15            | 15      | 15     | 2010s questimate  |
| Spain         | 1500          | 1985    | 3155   |                   |
| Portugal      | 400           | 893     | 894    |                   |
| Algeria       | 70            | 70      | 70     | 2010s questimate  |
| Tunisia       | 2900          | 2035    | 2035   | 2010s questimate  |
| Morocco       | 1400          | 2481    | 2102   |                   |
| Mauritania    | 8200          | 5084    | 9338   |                   |
| Senegal       | 2500          | 6090    | 3509   |                   |
| Gambia        | 300           | 50      | 10     |                   |
| Guinee-Bissau | 2400          | 7100    | 11040  |                   |
| Guinee        | 1000          | 1000    | 230    |                   |
| Sierra leone  | 100           | 100     | 104    |                   |
| totaal        | 875295        | 1018876 | 901581 |                   |

#### Recurvirostra avosetta, Western Europe & North-west Africa (bre)



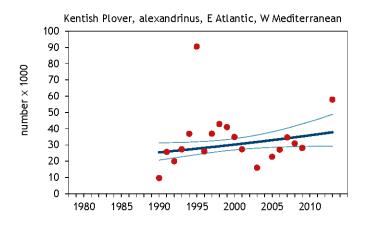
| Рор | oulation size data | , wintering |  |
|-----|--------------------|-------------|--|
|     |                    |             |  |

|               | Pied Avocet |       |       |   |
|---------------|-------------|-------|-------|---|
| Period        | 1980s       | 1990s | 2010s | comments  |
| Germany       | 500         | 38    | 0     |   |
| Netherlands   | 700         | 1000  | 3359  |   |
| Belgium       | 0           | 150   | 200   |   |
| UK            | 500         | 2152  | 7500  |   |
| Ireland       | 0           | 0     | 0     |   |
| France        | 16500       | 17700 | 20188 |   |
| Spain         | 5100        | 13987 | 11791 |   |
| Portugal      | 12600       | 11189 | 8469  |   |
| Morocco       | 2900        | 6590  | 16780 |   |
| Mauritania    | 2500        | 1853  | 709   |   |
| Senegal       | 12500       | 4121  | 2606  |   |
| Gambia        | 100         | 500   | 24    |   |
| Guinee-Bissau | 300         | 700   | 1127  | estimates based on extrapolations from sample counts                    |
| Guinee        | 5000        | 16000 | 5602  | 2010s based on Trolliet & Fouquet 2004, 1980s questimate                |
| Sierra leone  | 600         | 600   | 609   | 2010s partly based on van der<br>Winden et al 2005 and recent<br>counts |

| Total | 59800 | 76580 | 78964 |  |
|-------|-------|-------|-------|--|
| WPE5  |       |       | 73000 |  |

#### Charadrius alexandrinus alexandrinus, West Europe & West Mediterranean/West Africa

#### Trend data, Wintering



### Wintering

|   |      |       | annual<br>rate of |       |
|---|------|-------|-------------------|-------|
| species, population                             | from | until | change            | trend |
| Kentish Plover, alexandrinus, E Atlantic, W Med | 1990 | 2013  | 1,7               | INC   |
| Kentish Plover, alexandrinus, E Atlantic, W Med | 2003 | 2013  | 1,7               | INC   |

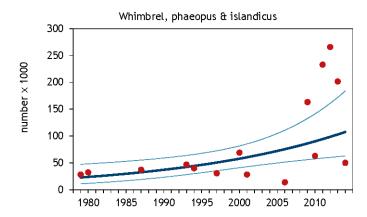
| <b>Population</b> | size | data. | wintering |
|-------------------|------|-------|-----------|
| i opulation       | JILC | uuu,  | whitering |

|               | Kentish Plover | Kentish Plover | Kentish Plover | comments   |
|---------------|----------------|----------------|----------------|--|
| period        | 1980s          | 1990s          | 2010s          |  |
| Netherlands   | 0              | 0              | 1              |  |
| Belgium       | 0              | 0              | 0              |  |
| UK            | 0              | 1              | 0              |  |
| Ireland       | 0              | 0              | 0              |  |
| France        | 300            | 250            | 1405           |  |
| Spain         | 4100           | 4500           | 7352           |  |
| Portugal      | 1100           | 2982           | 3742           |  |
| Italy         | 2300           | 3000           | 2650           |  |
| Tunisia       | 13500          | 9286           | 11000          |  |
| Algeria       | 1000           | 1000           | 1000           |  |
| Morocco       | 3600           | 5000           | 13523          |  |
| Mauritania    | 18500          | 7000           | 6902           |  |
| Senegal       | 3000           | 4000           | 1192           |  |
| Gambia        | 100            | 250            | 3              |  |
| Guinee-Bissau | 18600          | 9000           | 1564           | estimates based on<br>extrapolations from sample<br>counts |
| Guinee-Bissau | 18600          | 9000           | 1564           | 2010s based on Trolliet &                                  |
|               |                |                |                | Fouquet 2004, 1980s  |
| Guinee        | 2000           | 3500           | 500            |  |

| Sierra leone | 142   | 216   | 68    | 2010s partly based on van der<br>Winden et al 2005 and recent<br>counts |
|--------------|-------|-------|-------|---|
| Liberia      | 100   | 50    | 75    | questimate  |
| Ivory Coast  | 0     | 0     | 0     |   |
| Ghana        | 100   | 6     | 207   | 19802 questimate  |
| Тодо         | 2     | 2     | 2     |   |
| Benin        | 8     | 4     | 12    |   |
| total        | 68452 | 50047 | 51198 |   |
| WPE5         |       |       | 66000 |   |

Numenius phaeopus islandicus, Iceland, Faroes & Scotland/West Africa

Numenius phaeopus phaeopus, Northern Europe/West Africa

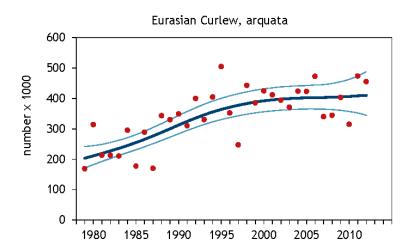


|                                     |      |       | annual  |       |
|-------------------------------------|------|-------|---------|-------|
|                                     |      |       | rate of |       |
| species, population                 | from | until | change  | trend |
| Whimbrel, phaeopus, NE Europe (bre) | 1979 | 2014  | 4,5     | INC   |
| Whimbrel, phaeopus, NE Europe (bre) | 2003 | 2014  | 4,6     | INC   |

|               | Whimbrel | Whimbrel | Whimbrel | comments   |
|---------------|----------|----------|----------|--|
| period        | 1980s    | 1990s    | 2010s    |  |
| Spain         | 400      | 152      | 896      |  |
| Portugal      | 200      | 151      | 442      |  |
| Tunisia       | 300      | 342      | 300      |  |
| Morocco       | 600      | 204      | 182      |  |
| Mauritania    | 18600    | 15695    | 42412    |  |
| Senegal       | 2300     | 4950     | 3834     |  |
| Gambia        | 1000     | 300      | 99       |  |
| Guinee-Bissau | 41500    | 22000    | 34284    | estimates based on<br>extrapolations from<br>sample counts     |
| Guinee        | 36000    | 36000    | 36000    | 2010s based on Trolliet &<br>Fouquet 2004, 1980s<br>questimate |
| Sierra leone  | 4000     | 1288     | 7073     | 2010s based on van der<br>Winden et al 2005                    |
| Liberia       | 1200     | 1200     | 1200     | 2010s questimate   |
| Ivory Coast   | 15       | 22       | 5        |  |
| Ghana         | 300      | 465      | 383      | 2010s questimate   |
| Тодо          | 100      | 133      | 79       |  |
| Benin         | 240      | 141      | 339      |  |

| Nigeria  | 40     | 40    | 42     |                         |
|----------|--------|-------|--------|-------------------------|
|          |        |       |        | partly based on van der |
| Cameroon | 1000   | 2000  | 222    | Waard et al 2007        |
|          |        |       |        | 1980s & 2010s           |
| Gabon    | 4000   | 4100  | 4065   | questimate              |
| totaal   | 111795 | 89183 | 131856 |                         |
| WPE5     |        |       | 870000 |                         |

## Numenius arquata arquata, Europe/Europe, North & West Africa



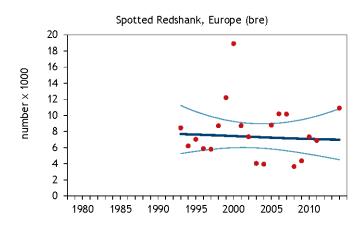
|                          |      |       | annual<br>rate of |       |
|--------------------------|------|-------|-------------------|-------|
| species, population      | from | until | change            | trend |
| Eurasian Curlew, arquata | 1979 | 2012  | 2,2               | INC   |
| Eurasian Curlew, arquata | 2003 | 2012  | 0,3               | STA   |

|  | <b>Population</b> | size | data, | Wintering |
|--|-------------------|------|-------|-----------|
|--|-------------------|------|-------|-----------|

|               | Curlew | Curlew | Curlew | comments   |
|---------------|--------|--------|--------|--|
| period        | 1980s  | 1990s  | 2010s  |  |
| Norway        | 0      | 0      | 0      |  |
| Sweden        | 125    | 125    | 125    |  |
| Denmark       | 1200   | 2500   | 15300  |  |
| Germany       | 40000  | 88481  | 100000 |  |
| Netherlands   | 61600  | 130000 | 179291 |  |
| Belgium       | 900    | 5000   | 15166  |  |
| UK            | 91200  | 130703 | 150000 |  |
| Ireland       | 100000 | 25500  | 27830  |  |
| France        | 16100  | 18500  | 36056  |  |
| Spain         | 2000   | 3075   | 4629   |  |
| Portugal      | 1800   | 2467   | 1218   |  |
| Italy         | 4000   | 2000   | 6207   |  |
| Algeria       | 100    | 72     | 80     |  |
| Morocco       | 1000   | 946    | 308    |  |
| Mauritania    | 8000   | 6689   | 4004   |  |
| Senegal       | 200    | 1166   | 417    |  |
| Gambia        | 100    | 50     | 4      |  |
| Guinee-Bissau | 8200   | 9300   | 4148   | estimates based on<br>extrapolations from<br>sample counts |

|              |        |        |        | 2010s based on Trolliet & |
|--------------|--------|--------|--------|---------------------------|
|              |        |        |        | Fouquet 2004, 1980s       |
| Guinee       | 3940   | 3940   | 3940   | questimate                |
|              |        |        |        | 2010s partly based on van |
| Sierra leone | 460    | 460    | 463    | der Winden et al 2005     |
| total        | 340925 | 430974 | 549185 |                           |
| WPE5         |        |        | 840000 |                           |

## Tringa erythropus, N Europe/Southern Europe, North & West Africa

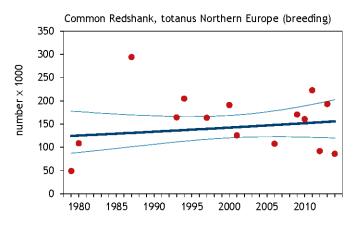


|                                |      |       | annual<br>rate of |       |
|--------------------------------|------|-------|-------------------|-------|
| species, population            | from | until | change            | trend |
| Spotted Redshank, Europe (bre) |      |       |                   |       |
| Spotted Redshank, Europe (bre) | 1993 | 2014  | -0,5              | STA   |
| Spotted Redshank, Europe (bre) | 2003 | 2014  | -0,5              | STA   |

|               | Spotted Redshank |       |       |                             |
|---------------|------------------|-------|-------|-----------------------------|
| period        | 1980s            | 1990s | 2010s | comments                    |
| France        | 100              | 250   | 316   |                             |
| Italy         | 1100             | 700   | 900   | 2010s questimate            |
| Spain         | 100              | 1160  | 632   |                             |
| Portugal      | 100              | 48    | 80    |                             |
| Greece        | 46               | 46    | 46    | 2010s questimate            |
| Albania       | 200              | 200   | 200   | 2010s questimate            |
| Tunisia       | 1300             | 125   | 713   | 2010s questimate            |
| Algeria       | 100              | 146   | 123   | 2010s questimate            |
| Morocco       | 300              | 64    | 18    |                             |
| Mauritania    | 200              | 216   | 46    |                             |
| Senegal       | 800              | 87    | 228   |                             |
| Gambia        | 200              | 10    | 0     |                             |
| Guinee-Bissau | 100              | 0     | 275   |                             |
| Guinee        | 56               | 50    | 61    |                             |
| Sierra leone  | 0                | 0     | 0     |                             |
| Liberia       | 0                | 0     | 0     |                             |
| Ivory Coast   | 3                | 1     | 5     |                             |
| Ghana         | 5770             | 8314  | 7000  | 1980s & 2010s<br>questimate |
| Тодо          | 67               | 33    | 101   |                             |
| Benin         | 88               | 149   | 27    |                             |

|          |       |       |       | 1980s & 2010s      |
|----------|-------|-------|-------|--------------------|
| Nigeria  | 1659  | 1659  | 1659  | questimate         |
|          |       |       |       | 1980s & 2010s      |
| Cameroon | 100   | 100   | 100   | questimate         |
|          |       |       |       | based on Zwarte et |
| Mali     | 4557  | 4557  | 4557  | al 2009            |
| totaal   | 16946 | 17915 | 17088 |                    |
| WPE5     |       |       | 85000 |                    |

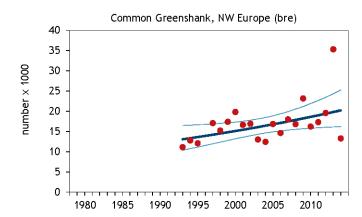
#### Tringa totanus totanus, Northern Europe (breeding)



| species, population                      | from | until | annual<br>rate of<br>change | trend |
|--|------|-------|-----------------------------|-------|
|  | nom  | untii | change                      | uenu  |
| Common Redshank, totanus Northern Europe |      |       |                             |       |
| (breeding)                               | 1979 | 2014  | 0,7                         | STA   |
| Common Redshank, totanus Northern Europe |      |       |                             |       |
| (breeding)                               | 2003 | 2014  | 0,7                         | STA   |
|  |      |       |                             |       |

|               | Redshank-<br>totanus |        |        |   |
|---------------|----------------------|--------|--------|---|
| period        | 1980s                | 1990s  | 2010s  | comments  |
| Spain         | 5000                 | 3308   | 6740   |   |
| Portugal      | 4700                 | 4575   | 3321   |   |
| Morocco       | 6600                 | 2253   | 1687   |   |
| Mauritania    | 50800                | 107279 | 69292  |   |
| Senegal       | 1500                 | 1550   | 1666   |   |
| Gambia        | 100                  | 10     | 27     |   |
| Guinee-Bissau | 82600                | 38400  | 21780  | estimates based on extrapolations<br>from sample counts     |
| Guinee        | 36000                | 48000  | 24270  | 2010s based on Trolliet & Fouquet<br>2004, 1980s questimate |
| Sierra leone  | 8000                 | 8000   | 8315   | 2010s partly based on van der<br>Winden et al 2005          |
| total         | 195300               | 213375 | 137098 |   |
| WPE5          |                      |        | 240000 |   |

## Tringa nebularia, Northern Europe/SW Europe, NW & West Africa



## Trend data, wintering

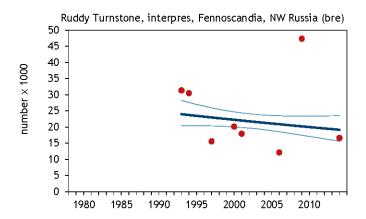
|                                    |      |       | annual  |       |
|------------------------------------|------|-------|---------|-------|
|                                    |      |       | rate of |       |
| species, population                | from | until | change  | trend |
| Common Greenshank, NW Europe (bre) | 1993 | 2014  | 2,1     | INC   |
| Common Greenshank, NW Europe (bre) | 2003 | 2014  | 2,1     | INC   |

.

|               | Greenshank |       |       |  |
|---------------|------------|-------|-------|--|
| period        | 1980s      | 1990s | 2010s | comments   |
| Denmark       | 0          | 0     | 0     |  |
| Germany       | 0          | 4     | 2     |  |
| Netherlands   | 0          | 5     | 44    |  |
| UK            | 400        | 455   | 770   |  |
| Ireland       | 400        | 667   | 890   |  |
| France        | 100        | 122   | 328   |  |
| Italy         | 500        | 150   | 325   | 2010s questimate                                 |
| Albania       | 62         | 62    | 62    | 2010s questimate                                 |
| Spain         | 200        | 517   | 3428  |  |
| Portugal      | 100        | 189   | 568   |  |
| Tunisia       | 700        | 118   | 409   | 2010s questimate                                 |
| Algeria       | 39         | 39    | 39    | 2010s questimate                                 |
| Morocco       | 400        | 169   | 68    |  |
| Mauritania    | 1300       | 4252  | 7101  |  |
| Senegal       | 2300       | 1241  | 746   |  |
| Gambia        | 200        | 200   | 62    |  |
|               |            |       |       | estimates based on<br>extrapolations from sample |
| Guinee-Bissau | 3800       | 1400  | 2388  | counts   |

| Guinee       | 5900  | 8300  |        | 2010s based on Trolliet & Fouguet 2004,            |
|--------------|-------|-------|--------|--|
| Guinee       |       | 0500  | 5005   | 10040012004,                                       |
| Sierra leone | 1257  | 680   |        | 2010s partly based on van<br>der Winden et al 2005 |
| Liberia      | 3000  | 3000  | 3000   | 1980s & 2010's questimate                          |
| Ivory Coast  | 15    | 6     | 24     |  |
| Ghana        | 3300  | 5279  | 4290   | 1980s & 2010's questimate                          |
| Тодо         | 87    | 87    | 87     | 1980s & 2010's questimate                          |
| Benin        | 279   | 411   | 146    |  |
| Nigeria      | 49    | 79    | 18     |  |
| Mali         | 3000  | 3000  | 3000   |  |
| Niger        | 2000  | 2000  | 2000   |  |
| Burkina Faso |       |       |        |  |
| total        | 29388 | 32433 | 35294  |  |
| WPE5         |       |       | 230000 |  |

### Arenaria interpres interpres, Northern Europe/West Africa



|  |      |       | annual  |       |
|--|------|-------|---------|-------|
|  |      |       | rate of |       |
| species, population                                    | from | until | change  | trend |
| Ruddy Turnstone, interpres, Fennoscan, NW Russia (bre) | 1993 | 2014  | -1,1    | STA   |
| Ruddy Turnstone, interpres, Fennoscan, NW Russia (bre) | 2003 | 2014  | -1,1    | STA   |

|               | Turnstone-Scan/Rus |       |       |  |
|---------------|--------------------|-------|-------|--|
| period        | 1980s              | 1990s | 2010s | comments   |
| Spain         | 1000               | 1039  | 1800  |  |
| Portugal      | 900                | 958   | 3000  |  |
| Italy         | 50                 | 50    | 50    |  |
| Tunisia       | 500                | 1164  | 832   | 2010's questimate  |
| Algeria       | 0                  | 0     | 0     |  |
| Morocco       | 600                | 1590  | 996   |  |
| Mauritania    | 12000              | 7702  | 14247 |  |
| Senegal       | 1500               | 1000  | 710   |  |
| Gambia        | 400                | 250   | 80    |  |
| Guinee-Bissau | 14900              | 7900  |       | estimates based on<br>extrapolations from sample<br>counts |
| Guinee        | 5500               | 5500  |       | 2010s based on Trolliet &<br>Fouquet 2004,                 |
| Sierra leone  | 700                | 700   |       | 2010s partly based on van der<br>Winden et al 2005         |
| Liberia       | 0                  | 0     | 0     |  |
| Ivory Coast   | 0                  | 0     | 0     |  |

| Ghana  | 170   | 230   | 200   | 2010s questimate |
|--------|-------|-------|-------|------------------|
| Тодо   | 6     | 6     | 6     |                  |
| Benin  | 13    | 10    | 16    |                  |
| totaal | 38239 | 28099 | 27039 |                  |
| WPE5   |       |       | 73000 |                  |

## Sterna nilotica nilotica, Western Europe/West Africa

|               | Gull-billed Tern |              |
|---------------|------------------|--------------|
| Period        | 2010s            | comments     |
| Spain         | 5                |              |
| Portugal      | 0                |              |
| Morocco       | 0                |              |
| Mauritania    | 1552             |              |
| Senegal       | 1677             |              |
| Gambia        | 77               |              |
| Guinee-Bissau | 17610            |              |
| Guinee        | 5309             |              |
| Sierra leone  | 776              |              |
| Liberia       | 300              |              |
| Ivory Coast   | 1000             |              |
| Ghana         | 0                |              |
| Тодо          | 0                |              |
| Benin         | 7                |              |
| Nigeria       | 0                |              |
| Cameroon      | 3                |              |
|               |                  | Zwarts et al |
| Mali          | 4000             | 2009         |

|        |       | Brouwer &   |
|--------|-------|-------------|
| Niger  | 863   | Mullié 2001 |
| Totaal | 33178 |             |
| WPE5   | 17500 |             |

### Sterna sandvicensis sandvicensis, Western Europe/West Africa

|               | Sandwich Tern |          |
|---------------|---------------|----------|
| Period        | 2010s         | comments |
| UK            | 24            |          |
| Ireland       | 1             |          |
| France        | 700           |          |
| Italy         |               |          |
| Spain         | 1800          |          |
| Portugal      | 316           |          |
| Algeria       | 0             |          |
| Morocco       | 752           |          |
| Mauritania    | 2235          |          |
| Senegal       | 2282          |          |
| Gambia        | 526           |          |
| Guinee-Bissau | 10375         |          |
| Guinee        | 3368          |          |
| Sierra leone  | 1169          |          |
| Liberia       | 150           |          |
| Ivory Coast   | 177           |          |
| Ghana         | 500           |          |
| Тодо          | 1170          |          |
| Benin         | 69            |          |
| Nigeria       | 50            |          |

| Cameroon              | 36     |  |
|-----------------------|--------|--|
| Gabon                 | 539    |  |
| Congo                 | 150    |  |
| Democratic Rep. Congo | 100    |  |
| Angola                | 137    |  |
| Namibia               | 4263   |  |
| South Africa          | 2705   |  |
| Total                 | 33592  |  |
| WPE5                  | 168000 |  |

# Sterna maxima albidorsalis, West Africa (bre)

|                       | Royal Tern |          |
|-----------------------|------------|----------|
| period                | 2010s      | comments |
| Morocco               | 2          |          |
| Mauritania            | 882        |          |
| Senegal               | 2212       |          |
| Gambia                | 1246       |          |
| Guinee-Bissau         | 7711       |          |
| Guinee                | 25541      |          |
| Sierra leone          | 3004       |          |
| Liberia               | 150        |          |
| Ivory Coast           | 168        |          |
| Ghana                 | 524        |          |
| Тодо                  | 300        |          |
| Benin                 | 373        |          |
| Nigeria               | 3000       |          |
| Cameroon              | 4837       |          |
| Gabon                 | 8555       |          |
| Congo                 | 3000       |          |
| Democratic Rep. Congo | 1000       |          |
| Angola                | 300        |          |
| Namibia               | 11         |          |
| total                 | 62816      |          |
| WPE5                  | 225000     |          |

## Sterna hirundo hirundo, wintering

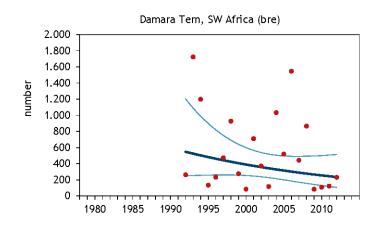
|                       | Common Tern |          |
|-----------------------|-------------|----------|
| Period                | 2010s       | comments |
| UK                    | 2           |          |
| Ireland               | 0           |          |
| Spain                 | 46          |          |
| Portugal              | 0           |          |
| Morocco               | 0           |          |
| Mauritania            | 43          |          |
| Senegal               | 89          |          |
| Gambia                | 16          |          |
| Guinee-Bissau         | 3371        |          |
| Guinee                | 556         |          |
| Sierra leone          | 2689        |          |
| Liberia               | 5           |          |
| Ivory Coast           | 5           |          |
| Ghana                 | 500         |          |
| Тодо                  | 0           |          |
| Benin                 | 3           |          |
| Nigeria               | 0           |          |
| Cameroon              | 1           |          |
| Gabon                 | 113         |          |
| Democratic Rep. Congo | 100         |          |
| Angola                | 470         |          |
| Namibia               | 22519       |          |

| South Africa | 20677   |  |
|--------------|---------|--|
| Total        | 51206   |  |
| WPE5         | 1250000 |  |

### Sterna albifrons albifrons, Eastern Atlantic (bre) & Sterna albifrons guineae

|               | Little Tern albifrons |          |
|---------------|-----------------------|----------|
| period        | 2010s                 | comments |
| France        | 0                     |          |
| Spain         | 4                     |          |
| Portugal      | 2                     |          |
| Morocco       | 0                     |          |
| Mauritania    | 1160                  |          |
| Senegal       | 1985                  |          |
| Gambia        | 157                   |          |
| Guinee-Bissau | 8017                  |          |
| Guinee        | 2902                  |          |
| Sierra leone  | 5117                  |          |
| Liberia       | 80                    |          |
| Ivory Coast   | 81                    |          |
| Ghana         | 655                   |          |
| Тодо          | 18                    |          |
| Benin         | 18                    |          |
| Nigeria       | 500                   |          |
| Cameroon      | 533                   |          |
| Gabon         | 61                    |          |
| Mali          | 350                   |          |
| Niger         | 170                   |          |
| total         | 21810                 |          |

#### Sterna balaenarum, Namibia & South Africa/Atlantic coast to Ghana



### Trend data, wintering

|                              |      |       | annual  |       |
|------------------------------|------|-------|---------|-------|
|                              |      |       | rate of |       |
| species, population          | from | until | change  | trend |
| Damara Tern, SW Africa (bre) | 1992 | 2012  | -4,2    | UNC   |
| Damara Tern, SW Africa (bre) | 2003 | 2012  | -4,2    | UNC   |

### Population size data

|              | Damara Tern | comments |
|--------------|-------------|----------|
| Period       | 2010s       |          |
| Angola       | 160         |          |
| Namibia      | 339         |          |
| South Africa | 8           |          |
| total        | 507         |          |
| WPE5         | 14000       |          |

# Chlidonias niger niger, Europe & Western Asia/Atlantic coast of Africa

|                       | Black Tern |          |
|-----------------------|------------|----------|
| Period                | 2010s      | comments |
| France                | 0          |          |
| Spain                 | 2          |          |
| Morocco               | 2          |          |
| Mauritania            | 41         |          |
| Senegal               | 695        |          |
| Gambia                | 0          |          |
| Guinee-Bissau         | 321        |          |
| Guinee                | 73         |          |
| Sierra leone          | 2704       |          |
| Liberia               | 100        |          |
| Ivory Coast           | 100        |          |
| Ghana                 | 227        |          |
| Тодо                  | 729        |          |
| Benin                 | 4882       |          |
| Nigeria               | 1000       |          |
| Cameroon              | 690        |          |
| Gabon                 | 5111       |          |
| Congo                 | 50         |          |
| Democratic Rep. Congo | 50         |          |
| Angola                | 100        |          |
| Namibia               | 21000      |          |
| South Africa          | 0          |          |
| Total                 | 37877      |          |
| WPE5                  | 750000     |          |

# Rynchops flavirostris, Coastal West Africa & Central Africa

|               | African |          |
|---------------|---------|----------|
|               | Skimmer |          |
| Period        | 2010s   | Comments |
| Senegal       | 0       |          |
| Gambia        | 0       |          |
| Guinee-Bissau | 0       |          |
| Guinee        | 368     |          |
| Sierra leone  | 240     |          |
| Liberia       | 0       |          |
| Ivory Coast   | 4       |          |
| Ghana         | 2       |          |
| Тодо          | 0       |          |
| Benin         | 0       |          |
| Nigeria       | 0       |          |
| Cameroon      | 1888    |          |
| Gabon         | 890     |          |
| Congo         | 600     |          |
| Total         | 3992    |          |
| WPE5          | 10000   |          |