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## FIFTH MEETING OF THE STANDING COMMITTEE

24 – 25 June 2008, Bonn, Germany

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### **Report on the Conservation Status of Migratory Waterbirds in the Agreement Area, 4<sup>th</sup> edition**

#### INTRODUCTION

According to Paragraph 7.4 of the AEWA Action Plan the Agreement Secretariat, in coordination with the Technical Committee and the Parties, shall prepare a series of international reviews necessary for the implementation of the Action Plan, including, *inter alia*, a Report on the Conservation Status of Migratory Waterbirds in the Agreement Area (aka Conservation Status Report – CSR).

The CSR has been produced for each session of the Meeting of the Parties so far. Its fourth edition includes the calculation of trends of some populations for the first time as well as a new feature – the Red List Index of the AEWA species, calculated by BirdLife International.

CSR4 like the previous editions was compiled by Wetlands International. It was approved by the Technical Committee at its 8<sup>th</sup> meeting in March 2008. Conclusions from this report served as a basis for draft Resolution 4.6.

#### ACTION REQUESTED FROM THE STANDING COMMITTEE

The Standing Committee is requested to approve the 4<sup>th</sup> edition of the Report on the Conservation Status of Migratory Waterbirds in the Agreement Area for submission to the 4<sup>th</sup> session of the Meeting of the Parties.

AGREEMENT ON THE CONSERVATION OF  
AFRICAN-EURASIAN MIGRATORY WATERBIRDS

**Report on the Conservation Status of Migratory  
Waterbirds in the Agreement Area**

Fourth Edition  
Final Draft



Draft Report prepared by Wetlands International

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## Key findings of the 2008 Conservation Status Report

### State of knowledge

- In the entire AEWA region, estimates are now available for 98% of the 522 waterbird populations covered by the Agreement. This is satisfactory, but the quality of many of the estimates remains low. Population trend estimates (whether decreasing, stable or increasing) are available for 69% of these populations.
- The quantity and quality of waterbird population estimates and trends in 2008 was considerably higher in Europe, and particularly in northern and western Europe, than in the rest of the AEWA region.
- Overall the trend status of waterbirds in the Agreement area worsened between 1999 and 2006. The state of knowledge of waterbird trends improved considerably, however, and the number of populations for which there is no estimated population trend decreased from 41% in 1999 to 29% in 2008. The result of this is that the proportion of known populations that was estimated to be increasing declined from 25% in 1999 to 21% in 2008, the proportion estimated to be stable increased from 33% to 37%, and the proportion estimated to be decreasing stayed at about the same level, decreasing from 42 to 41%.
- A total of 92 populations that showed a decreasing trend in both 1999 and 2008 are still considered to be decreasing. By comparison, only 47 populations that were increasing in 1999 were still considered to be increasing in 2008.
- Improvements in the quality of IWC data allowed the first comprehensive trend analysis of IWC data from the East Mediterranean/Black Sea region and revealed that many more populations in this region are in decline than in other parts of the Europe.

### Priority Geographic areas

- The quality of population estimates is high for non-breeding waterbirds in northern western and central Europe. In most other regions, there is a need to improve the quality of estimates, and this need is greatest in the Asian and sub-Saharan African portions of the AEWA region.
- In the AEWA region as a whole, of populations covered by the Agreement with known trends, nearly twice as many show decreasing trends (41%) as increasing trends (22%). In the part of the Agreement Area in Asia, the situation is much worse: only 11% of populations are known to be increasing, but five times as many, fully 55% of populations are known to be decreasing. 42% of population trends in Asia remain unknown, however, and the need to improve knowledge of population trends is greatest in this part of the AEWA region, where the proportion of decreasing populations is also the highest.
- Altogether, 30 of the 34 AEWA Globally Threatened or Near Threatened species are found in Africa, 17 in the part of the Agreement Area in Asia and only 14 in Europe. Africa holds the highest proportion of populations recognised as being Globally Threatened – 11.5% of all AEWA populations occurring there are Globally Threatened or Near Threatened.

### Status of different waterbird groups

- A Red List Index (RLI) prepared by BirdLife International shows that, overall, AEWA species are less threatened than all birds (i.e. RLI values are greater), but between 1988 and 2008 their status has deteriorated faster (i.e. the RLI slope is steeper).
- The AEWA region holds 19 species which are Globally Threatened according to IUCN Criteria, and a further 15 which are Near Threatened. The four most endangered species covered by the Agreement, appearing in the Critically Endangered category, are Northern Bald Ibis, Siberian Crane, Sociable Lapwing and Slender-billed Curlew. There are five species in the Endangered category: Bank Cormorant, Madagascar Pond Heron, Red-breasted Goose, White-headed Duck and White-winged Flufftail. The nine most endangered species in AEWA thus each belong to a different family.

- Families with a high proportion (100% to 35%) of unknown population trends are, in descending order, as follows: thick-knees, divers, plovers, crakes & rails, coursers & pratincoles, gulls & terns, herons & egrets.
- Families with a high proportion of their populations (50% or more) showing decreasing trends are, in descending order, as follows: penguins, boobies, shoebill, skimmers, oystercatchers, coursers & pratincoles, crakes & rails, cranes, grebes, plovers, and divers.
- Families in both categories (i.e. having a high proportion of populations with unknown trends, and a high proportion of those with known trends in decline) are perhaps most in need of baseline information: divers, plovers, crakes & rails, and coursers & pratincoles.

### **Causes of population changes**

- Our ability to describe the distribution, numbers and population trends of waterbirds is improving steadily, but our ability to explain them remains limited. This report is largely descriptive and in future it may be possible to include information on the causes of changing population status and trends.

### **Priorities for further Conservation work**

The high number of populations whose trends were still unknown or decreasing in 2006, and the relatively low numbers that were stable or increasing give considerable cause for concern. Preparation of this report has identified or confirmed a number of priorities that should be addressed by AEWA.

#### **1. Enhance the quality and quantity of monitoring and surveillance of waterbirds**

The largest single source of data on waterbird numbers, distribution and trends for AEWA is the International Waterbird Census (IWC). In order to produce more data of higher quality that better serves the needs of AEWA, the following improvements in IWC are needed:

- Expansion of IWC into a representative set of sites in all countries in the AEWA region.
- Counts at times of year other than January, to allow monitoring of waterbirds during migration and breeding seasons.
- Special surveys of species not well monitored by IWC methodology, especially cryptic species, nocturnal species, colonially nesting species and species with dispersed distributions.

Additional monitoring is also needed to obtain an understanding of the biological processes that underly population changes in each species. This should involve:

- Internationally coordinated monitoring of productivity of a wide selection of species. A relatively high proportion of waterbird populations have centres of breeding distribution in Arctic and Boreal Russia, and the inclusion of Russia in AEWA processes should remain a high priority.
- Internationally coordinated monitoring of mortality of as many species as possible, including hunting mortality, and making use of data derived from bird ringing.

Better understanding of the migrations and movements of waterbirds is also needed, requiring:

- Full analyses of existing ringing data and their use in preparation of flyway atlases for all waterbird species in the AEWA region; as well as enhancement of bird ringing programmes wherever necessary.
- Satellite telemetry studies of selected species.

#### **2. Improve knowledge of the causes of changes in waterbird status and trends**

An improved understanding of causes of change in waterbird numbers will be gained by:

- Systematic, comprehensive literature reviews.
- Improved analyses of data derived from waterbird counting and ringing. This will include the use of GIS to allow spatial analysis of bird count and movement data in relation to land use, climate and many other relevant datasets.
- Work on habitat use by waterbirds. The inclusion of habitat data in a GIS directory of count sites will

allow better understanding of ecological processes influencing waterbird demography. Habitat types that are currently inadequately covered by waterbird survey work include offshore marine areas, wetlands in arid regions, grasslands and steppes, and African swamps.

- Increasing numbers of waterbirds can indicate underlying environmental problems as well as decreasing ones, and research into the species and habitats involved should be a priority.

Implementation of these priorities will require large-scale capacity development in most countries in the AEWA region.

## EXECUTIVE SUMMARY

It is a requirement of AEWA that at each of its ordinary sessions, the Meeting of the Parties shall consider actual and potential changes in the conservation status of migratory waterbirds. The purpose of this report is to provide this information, which comprises the basic material for operation, updating and evaluation of the Agreement.

**Population estimates.** Estimates have now been made for 98% of the populations covered by the Agreement, 510 out of 522. This is satisfactory, but the quality of many of the estimates remains low, and improvement of these should be a priority. Altogether, 22 waterbird families are included in the Agreement. The family with the most populations is the ducks, geese and swans which comprises 25% of all 522 populations in the Agreement area. The next highest proportions of populations are found in gulls & terns with 15% of populations, and sandpipers and allies with 13%. About one in six populations covered by the Agreement is rather small: overall, 82 populations, 16% of those covered by the Agreement, fall into the smallest population size category of 10,000 or fewer individuals. Six families have more than 30% of their populations in the lowest population category: Shoebill, divers, cranes, oystercatchers, and storks, ibises & spoonbills.

**Population trends by family and region.** Population trend information is now available for 370 out of the 522 populations covered by the Agreement (71%). In the entire AEWA region, 29% of the 522 populations are lacking information on population trends. In Africa, the proportion of populations lacking trend information is 28%, in Asia 42%, and in Europe the proportion is 23%. Waterbird population trends are thus considerably better known in Europe, and considerably less well known in Asia than in the other regions. There is a strong need to obtain trend estimates for the many populations still lacking this information, and to improve the quality of trend information available for most populations..

In the AEWA region as a whole, of populations covered by the Agreement with known trends, nearly twice as many show decreasing trends as increasing trends. Altogether, 41% of populations with known trends are decreasing, 37% are estimated to be stable and only 21 % are increasing. A similar pattern in population trends to this overall picture is shown in Africa and Europe, but in Asia the situation is much worse: only 11% of populations are known to be increasing, but five times as many, fully 55% of populations are known to be decreasing. More data on waterbird population trends in Asia are needed, and research into the causes of all population trends, but especially the relatively high proportion of decreasing populations in the Asian portion of the AEWA region, should also be an urgent priority.

Families with especially poorly known population trends, having between 0% and 45%, of populations for which trend estimates are available are as follows: thick-knees, divers and plovers. Altogether, eleven families (half of all families) have half or more of estimated populations (with known trends) showing a decreasing trend, as follows: penguins, boobies, Shoebill, skimmers, oystercatchers, coursers & pratincoles, cranes, crakes & rails, grebes, plovers and divers. Sandpipers & allies, with 49%, also very nearly qualify for this category. Divers, plovers and crakes & rails are rather poorly known overall and a high proportion of decreasing populations amongst known forms indicates three families in urgent need of study.

Increasing trends are far less prevalent, and nine out of 22 families (36%) covered by the Agreement altogether lack increasing populations. The family with the highest proportion of known populations that are estimated to be increasing is pelicans, with 43% of populations showing this trend. Four families have 33% of their populations showing increasing trends: grebes, cormorants, herons & egrets and oystercatchers.

Overall, the trend status of waterbirds in the Agreement area worsened between 1999 and 2008. The state of knowledge of waterbird trends improved considerably, however, and the number of populations for which there is no estimated population trend decreased from 41% in 1999 to 29% in 2008. The result of this is that the proportion of known populations that was estimated to be increasing declined from 25% in 1999 to 21% in 2006, the proportion estimated to be stable increased from 33% to 37%, and the proportion estimated to be decreasing stayed at about the same level, decreasing from 42% to 41%. A total of 92 populations that showed a decreasing trend in 1999 are still considered to be decreasing in 2008. By comparison, only 46 populations that were increasing in 1999 were still considered to be increasing in 2008.

**Analysis of population trends in Europe using IWC data.** The results of an analysis of population trends of 67 waterbird species in five regions of Europe and North Africa are presented in preliminary form in Annex 4. Detailed interpretation of these data is beyond the scope of this report. Many waterbird populations are

increasing, but these increases can be a response to adverse environmental effects such as eutrophication of wetlands and farmland and the impacts of climate change.

Many populations are apparently decreasing, and analysis revealed that the region where decreases are predominant is the East Mediterranean/Black Sea region. Some of the most numerous and widespread European species appear to be in long-term decline, for example Mallard *Anas platyrhynchos* in North-west Europe and the East Mediterranean/Black Sea regions, Common Pochard *Aythya ferina* in North-west Europe, West Mediterranean and East Mediterranean/Black Sea regions, and Common Coot *Fulica atra* in the Baltic/Nordic, North-west Europe and East Mediterranean regions. Species apparently decreasing in both the Baltic/Nordic and East Mediterranean/Black Sea regions include Mute Swan *Cygnus olor*, Common Goldeneye *Bucephala clangula* and Common Redshank *Tringa totanus*. Species decreasing in both West Mediterranean and East Mediterranean/Black Sea are Tufted Duck *Aythya fuligula* and Red-crested Pochard *Netta rufina*. Great Crested Grebe *Podiceps cristatus* is decreasing in Central Europe and the East Mediterranean/Black Sea region, and Purple Sandpiper *Calidris maritima* is decreasing throughout its European wintering range in the Baltic/Nordic and North-west Europe regions. Three Gull species are also showing widespread decreases, Common Gull *Larus canus* in North-west and Central Europe, Herring Gull, *Larus argentatus* in North-west Europe and West Mediterranean, and Great Black-backed Gull, *Larus marinus*, throughout its European range in Baltic/Nordic and North-west Europe.

**Globally Threatened species.** The Agreement includes 34 species (divided into 54 populations) which are recognised by BirdLife International as being Globally Threatened or Near Threatened.

Together, 30 of the 34 AEWA Globally Threatened or Near Threatened species are found in Africa, 17 in Asia and only 14 in Europe. Africa holds the highest proportion of populations recognised as being Globally Threatened – 11.5% of all AEWA populations occurring there are Globally Threatened or Near Threatened. Europe holds the lowest proportion with 6.7% of populations in these categories. The proportion of Globally Threatened and Near Threatened populations in Asia, at 10.5% is comparable to that found in Africa. The four most endangered species covered by the Agreement, appearing in the Critically Endangered category are Northern Bald Ibis, Siberian Crane, Sociable Lapwing and Slender-billed Curlew. There are five species in the Endangered category: Bank Cormorant, Madagascar Pond Heron, Red-breasted Goose, White-headed Duck and White-winged Flufftail. The nine most endangered species in AEWA thus each belong to a different family, and only two of them, Red-breasted Goose and White-headed Duck, occur regularly in Europe.

**A Red List Index (RLI)** prepared by BirdLife International shows that, overall, AEWA species are less threatened than all birds (i.e. RLI values are greater), but their status has deteriorated faster (i.e. the RLI slope is steeper). The former result is perhaps not surprising given that migrants overall tend to be less threatened than non-migrants. The latter result indicates that this subset of migrants is being particularly impacted by threatening processes, in particular the loss and degradation of their wetland habitats.

**Table 1.** Presents population estimates and trends for all 522 populations of 235 waterbird species now included in the agreement. The estimates and trends presented in the first (1999) second (2002) and third (2007) editions of the report are also included, together with revisions proposed by means of this report. In total, updates have been included for 30 of the 522 populations currently included in the Agreement. Changes in waterbird population boundaries since the Third Edition of the Conservation Status Report involve a new division of populations of White-tailed Plover *Charadrius marginatus* in Africa and Common Redshank *Tringa totanus* in Europe, and recognition of an additional population of Purple Sandpiper *Calidris maritima*.

**Table 2.** lists populations of seabirds agreed in 2005 as being potentially appropriate for inclusion the Agreement. The list has been extensively reviewed and updated for this edition of the report (Annex 5).

## INTRODUCTION

In Article II of the Agreement on the Conservation of African-Eurasian Migratory Waterbirds, Parties agree, as a fundamental principle, to take co-ordinated measures to maintain migratory waterbird species in a favourable conservation status or to restore them to such a status. To this end, the Parties agree to apply within the limits of their national jurisdiction a number of general conservation measures prescribed in Article III of the Agreement, as well as a number of more specific actions determined in the Action Plan appended to the Agreement. While in the great majority of cases, successful implementation of the conditions and provisions of the Agreement can only be accomplished by the Parties themselves, either at national level or through bilateral or multi-lateral co-operative programmes, there are several areas in which a broad international approach is required. This is especially the case with respect to the compilation of international reviews of the conservation status of the waterbird species covered by the Agreement.

If the populations of migratory waterbirds are to be conserved effectively, it is essential that reliable information is available on their current status. This will include information on the size of the various populations, their breeding ranges, wintering distributions and migration routes, and the long-term trends in their population levels. It is a requirement of the Agreement (Article VI, paragraph 8) that at each of its ordinary sessions, the Meeting of the Parties shall consider actual and potential changes in the conservation status of migratory waterbirds and the habitats important for their survival, as well as the factors which may affect them. In paragraph 7.4, the Action Plan calls for the preparation of reports on the status and trends of populations covered by the Agreement, and in paragraph 7.5, requires that these reports be updated at intervals of not more than three years. Such information provides the basic material for operation, updating and evaluation of the Agreement. The need for regular reviews of the conservation status of the species of waterbirds covered by the Agreement is therefore evident.

### Fourth Edition

This fourth edition of the AEWA Conservation Status Report, published in 2008, closely follows the third edition in including a number of differences in approach from the first two editions (Appendix 2). Delegates at MoP 2 in Bonn (2002) expressed a need for a report with a higher analytical content. They also asked for more accessible summaries of the conservation status of waterbirds in the Agreement Area, and requested the Technical Committee to review possibilities. A small working group in the Technical Committee drafted a proposal for modifications to the format that was approved by the full Committee. This was made available in 2005 at AEWA MOP3 in Dakar, Senegal, as document AEWA/Inf. 3.1., which followed these recommendations as far as possible.

The report presents information in the form of tables and graphs, with interpretive texts. The information presented is based on information included in the Wetlands International publication *Waterbird Population Estimates - Fourth Edition*, published in 2006. This information was updated in 2008 following a major analysis of IWC data (see Annex 4.), together with consultation of 26 additional new sources.

The report is divided into four sections, with three summary tables and five annexes:

**Section 1.** summarises the numerical and geographical distribution of waterbird families included in the Agreement. The proportion of populations belonging to each family group in the AEWA region as a whole and each of Africa, Asia and Europe is presented,

**Section 2.** summarises the population estimates. Tables and graphs show the number of AEWA waterbird populations in each family in each of five population size categories in the AEWA region as a whole and in each of Africa, Asia and Europe.

**Section 3.** summarises the estimated trends in abundance of the populations. Pie charts illustrate the proportion of waterbird populations in the AEWA region as a whole and in each of Africa, Asia and Europe showing each trend tendency. Tables summarise this information according to each family group. Estimated trends presented in the first AEWA Conservation Status Report in 1999 are compared with those presented in the current, fourth edition in 2008 by means of interpreted tables.

**Section 4.** focuses on Globally Threatened species. The proportion of AEWA waterbird populations in each IUCN Red List category in the AEWA region as a whole and each of Africa, Asia and Europe is shown, and more detailed graphs show the proportion of populations of Globally Threatened and Near Threatened AEWA

species from each family in each threat category. A **Red List Index** (RLI) prepared by BirdLife International compares the proportion of AEWA species that are threatened with all bird species, and compares the rate of change in the index for the two groups.

**Table 1.** presents population estimates and trends for all 522 populations of 235 waterbird species now included in the Agreement. The estimates and trends presented in the first (1999), second (2002) and third (2006) editions of the report are also included, together with revisions proposed by means of this report. The sources which are the basis of the proposed revisions are given in a list at the end of Table 2, and a brief justification is given for each proposed change. In total, updates have been included for 30 (6%) of the 522 populations currently included in the Agreement.

**Table 2.** presents the population sizes and trends of 33 populations of 21 species proposed for inclusion in the Agreement subject to discussion by delegates at MoP4. This table has been extensively revised for this edition

**Table 3.** has been extracted from the Second Edition of the AEWA Conservation Status Report (2002) and presents information on species of waterbird considered inappropriate for inclusion in the Agreement at that time.

**Annex 1.** is a table listing species of waterbird occurring in the Agreement area but considered inappropriate for inclusion in the Agreement.

**Annex 2.** presents a brief history of the AEWA Conservation Status Report.

**Annex 3.** is a summary of the methods used to compile Table 1.

**Annex 4.** is a summary on graphs and tables of the analysis of population trends of 67 waterbird species in Europe based on IWC data

**Annex 5.** is a separate report which provides a basis for the update of Table 2, titled *Population sizes and status of tropical and sub-tropical seabird populations proposed for inclusion in the African-Eurasian Migratory Waterbird Agreement in 2005, and of additional candidate species.*

This fourth edition of the Conservation Status Report, being produced within a year of the third edition, has been thoroughly updated but many sections remain little changed. The principal additions have been results of an analysis of waterbird population trends in Europe, presented in Annex 4, and updates of Table 1 and Table 2 from new sources that became available during 2007.

## **SECTION 1**

### **Geographical distribution of waterbird families and populations included in the Agreement**

#### **Division of populations into families**

Figure 1a shows the percentage of the 522 waterbird populations included in the Agreement belonging to each of 22 families. In future, consideration might be given to merging groups of closely related families to form fewer, larger groups for analysis. For example, boobies might be merged with pelicans, Shoebill with storks, ibises and spoonbills, Crab Plover with oystercatchers, stilts and avocets, thick-knees with coursers and pratincoles, and gulls & terns with skimmers. Reducing the disproportionately large size of the two biggest families in the Agreement area, the swans, geese and ducks, and the Sandpipers & allies, into smaller groups based on their genera, might also be considered. In this report, for the sake of simplicity and ease of justification, each family is treated separately.

#### **Geographic division of the AEWA region for comparison of patterns**

The populations included in AEWA are by definition migratory, and many of them have a wide geographical distribution. Care is therefore needed when dividing the AEWA region into areas for the purposes of comparison. Whatever division is used, a high proportion of species have populations in two or more regions, and these overlaps in geographical range cause strong similarities between regions in observed patterns of phenomena. For the purposes of this report, three broad divisions of the AEWA region have been used: Africa, Asia and Europe.

#### **Proportion of populations in each waterbird family in the entire AEWA region**

Altogether, 22 waterbird families are included in the Agreement. It is clear from Figure 1a that the family with the most populations is the ducks, geese and swans which comprises 25% of all 522 populations in the Agreement area. The next highest proportion of populations are found in gulls & terns with 15% of populations, sandpipers and allies with 13%, plovers with 9% and herons & egrets with 9%. The smallest families, comprising single populations (0.2% of populations in the Agreement area), are penguins, boobies, Shoebill, Crab Plover, and skimmers. The remaining families, which comprise between 4.8% and 0.4% of the populations in the Agreement area are: storks, ibises & spoonbills, cranes & rails, cranes, grebes, cormorants, coursers & pratincoles, stilts & avocets, flamingos, pelicans, divers, oystercatchers and thick-knees.

#### **Proportion of populations in each waterbird family in Africa**

A total of 384 out of the 522 waterbird populations included in the Agreement are found in Africa. Figure 1b shows that Africa holds the highest diversity of families in the three areas into which the AEWA region has been divided, and every family except divers is represented. Three families hold 16% to 17% of waterbird populations: gulls & terns, ducks, geese & swans, and sandpipers & allies. The next highest proportion of populations are found in plovers (12%), and herons & egrets (10%), followed by storks, ibises & spoonbills (5.5%) and cranes & rails (5%). The remaining 14 families each include between 0.3% and 3.1% of the African populations included in the Agreement.

#### **Proportion of populations in each waterbird family in Asia**

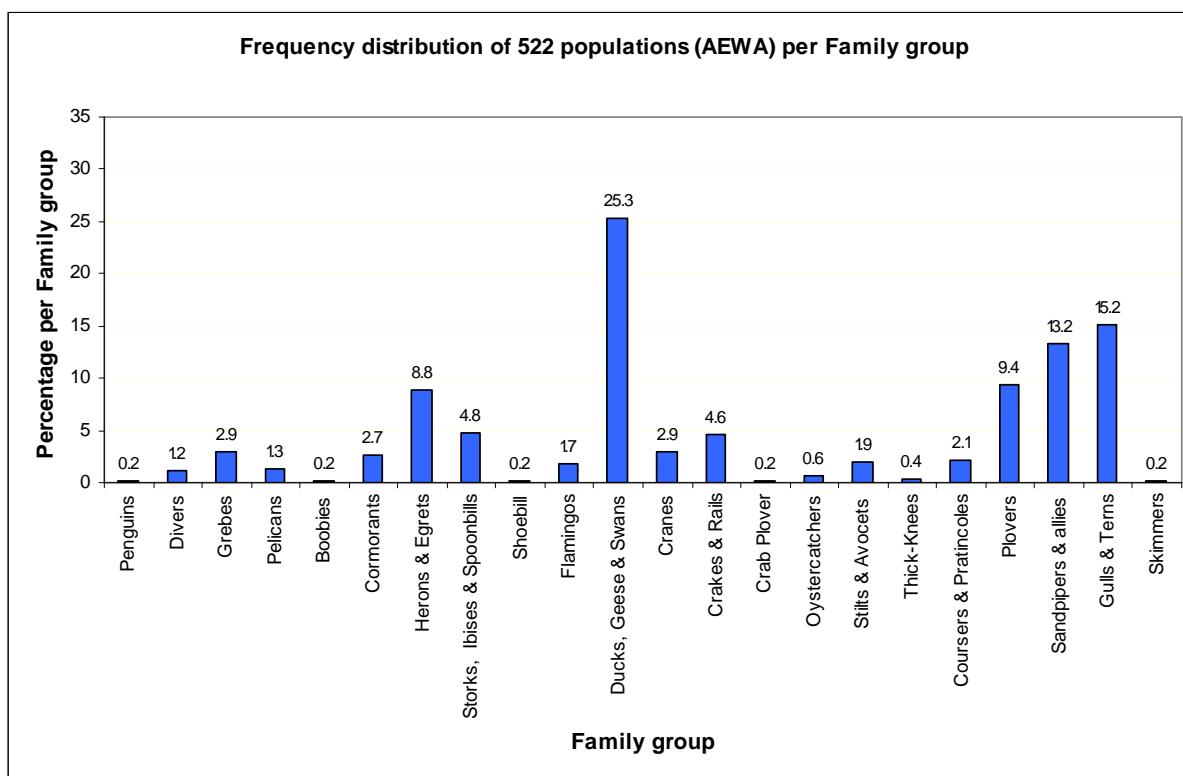
A total of 200 out of the 522 waterbird populations included in the Agreement are found in the (relatively small) part of Asia covered by the Agreement. Figure 1c shows that Asia holds 17 out of the 22 families that occur in the AEWA region. The Agreement includes five families which are not found in Asia: penguins, boobies, Shoebill, thick-knees and skimmers. The species of thick-knee found in Western Asia is not included in the Agreement. Of the 17 families in Asia, the highest proportion (28%) of populations is found in the ducks, geese and swans family. The next highest proportions of populations are found in sandpipers and allies (18.5%), gulls & terns (16%), and plovers (10.5%). The remaining 13 families each include between 0.5% and 4.5% of the Asian populations included in the Agreement.

#### **Proportion of populations in each waterbird family in Europe**

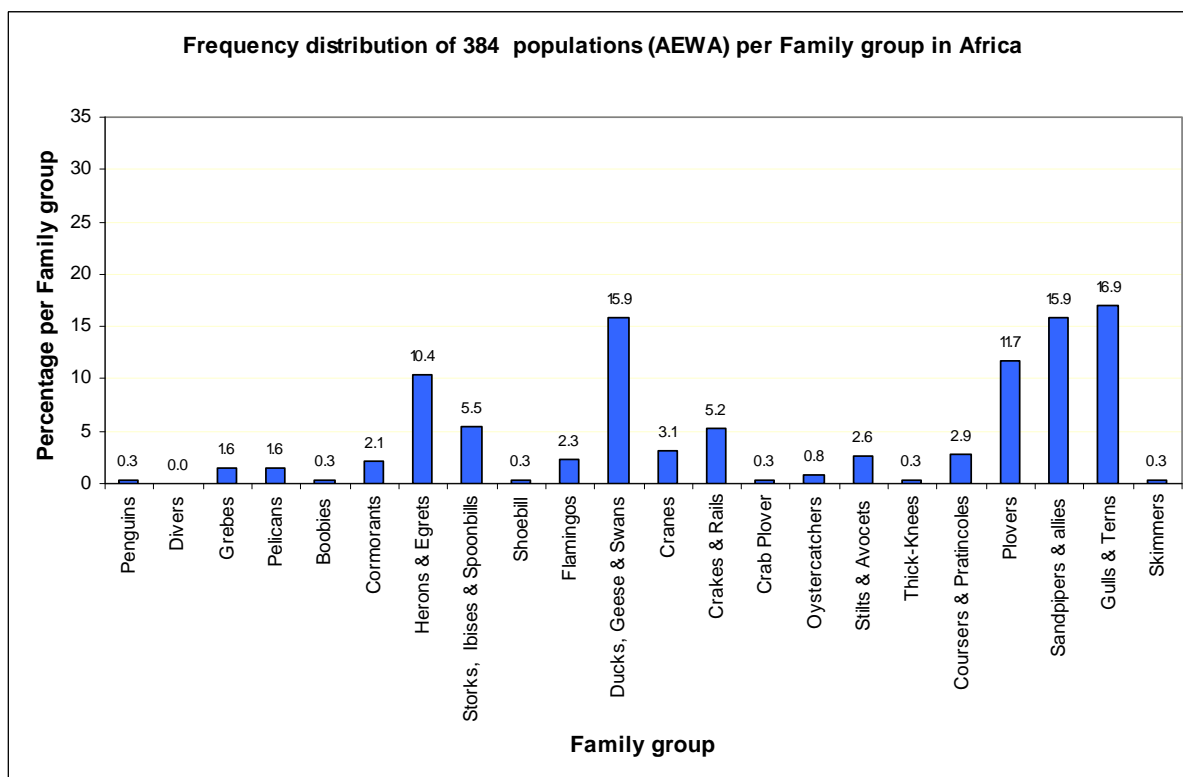
A total of 314 out of the 522 waterbird populations included in the Agreement are found in Europe. Figure 1d shows that Europe holds 16 out of the 22 families that occur in the AEWA region. The Agreement includes six families which are not found in Europe: penguins, boobies, Shoebill, Crab Plover, thick-knees and skimmers. The one species of thick-knee found in Europe is not included in the Agreement. The proportion of populations found in each family is similar in Europe to Asia. Of the 16 families in Europe, the highest proportion (30%) of populations is found in the ducks, geese and swans family. The next highest proportions

of populations are found in sandpipers and allies (20%), gulls & terns (14%) , herons & egrets (7%) and plovers (7%). The remaining 11 families each include between 0.6% and 3.8% of the European populations included in the Agreement.

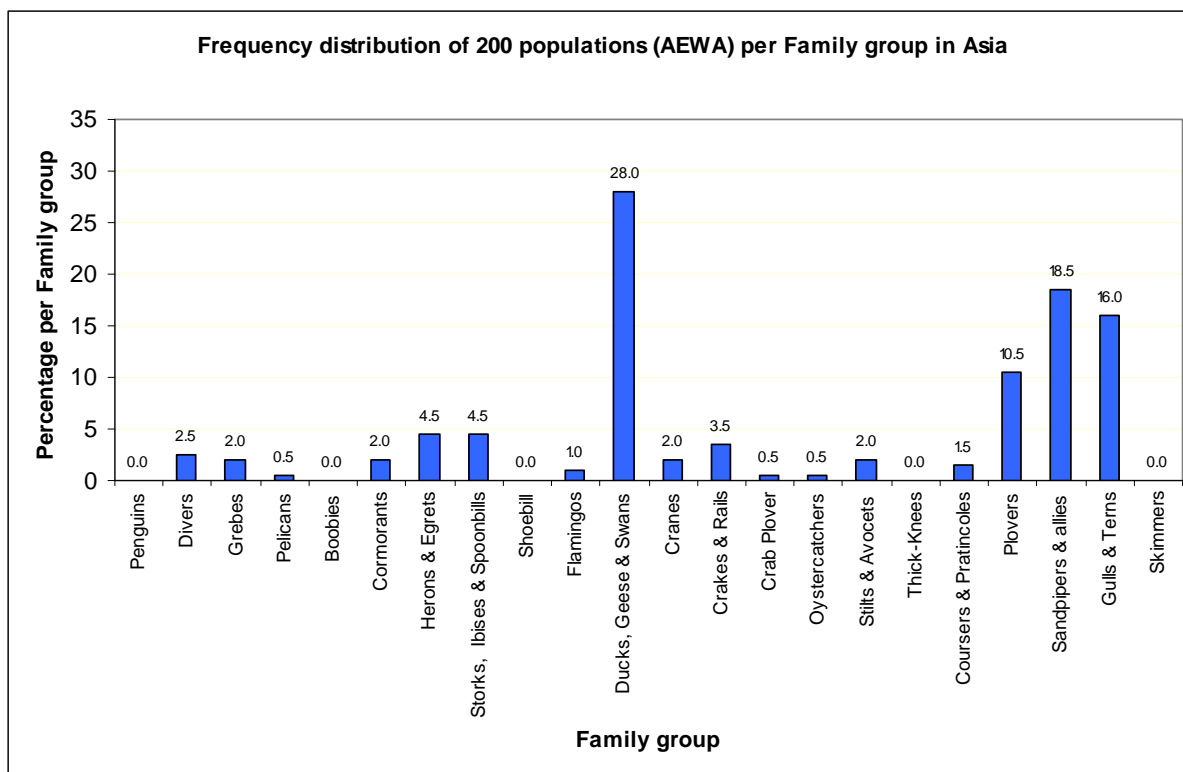
**Figure 1.** Proportion of AEWA populations in each family group  
**1a.** Entire AEWA Region



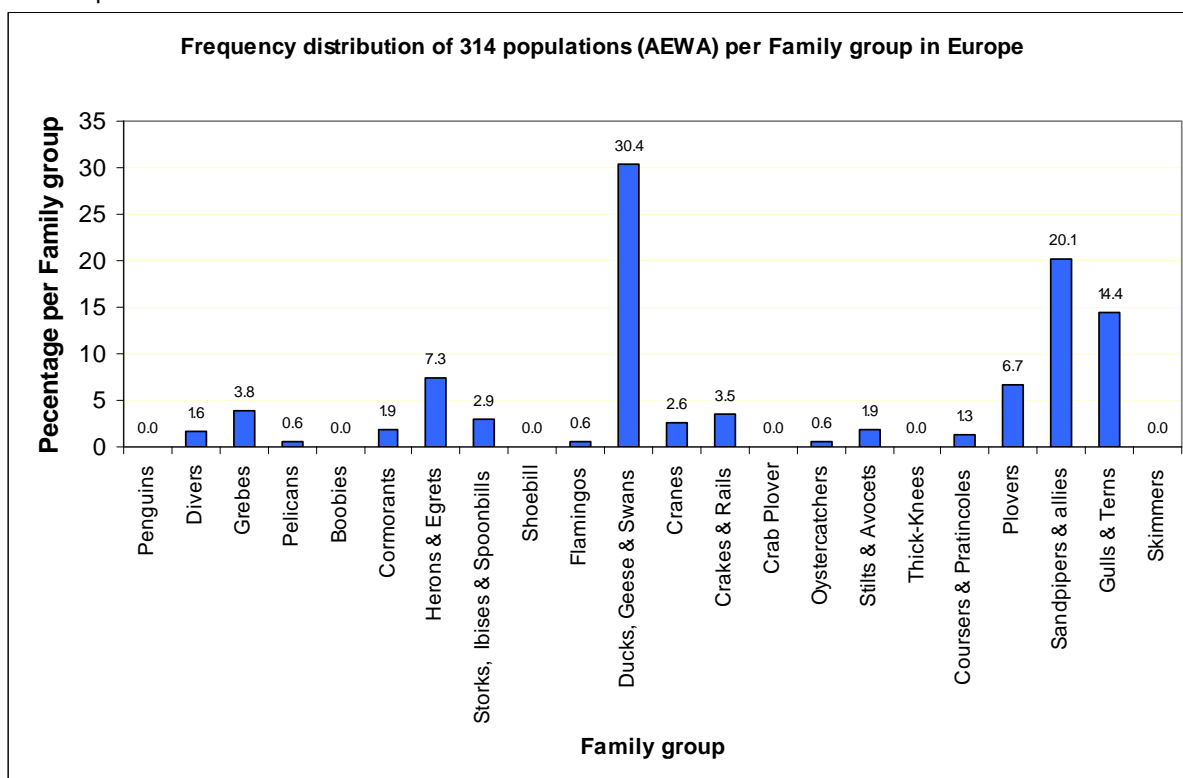
**1b.** Africa



### 1c. Asia



### 1d. Europe



## **SECTION 2**

### **Population Estimates**

Figures 2a and 2b, and 3a to 3f summarise the sizes of waterbird populations in each family covered by the Agreement. Estimates have now been made for most of the populations covered by the agreement, 510 out of 522. The twelve populations for which estimates are missing comprise one diver, five crakes and rails, two plovers, three sandpipers and allies and one gull & tern. The overall frequency distribution of population estimates for populations covered by the agreement is shown in Figure 3a, and is broken down by family in Figures 2a and 2b, and 3b to 3f.

#### **Population estimates below 10,001 (Figure 3b)**

Overall, 82 populations, 16% of those covered by the Agreement, fall into the smallest population size category of less than 10,001 (Figure 3a). The family with the highest number of populations in this category, 22, is ducks, geese and swans. This is, however by far the largest family, and 22 populations only represent 17% of the populations in this family. This is almost identical to the overall percentage of the 522 populations covered by AEWA with populations below 10,001. Nine families have a higher proportion than this of their populations in the lowest population category. Shoebill, one of the six families comprising a single population, has an estimate below 10,000, and so has 100% of its “populations” in this smallest category. Other families with over 30% of their populations estimated to be below 10,001 are divers (three out of 6 populations, 50%), cranes (6 out of 15 populations, 40%), Oystercatchers (one out of three populations, 33%), and storks, ibises & spoonbills (eight out of 25 populations, 32%). Families having between 30% and 17% of their populations in this category are pelicans, grebes, crakes & rails and coursers & pratincoles.

#### **Population estimates between 10,001 and 25,000 (Figure 3c)**

A total of 57 populations, 11% of those covered by the Agreement, fall into this small size category (Figure 3a). Two of the of the six families comprising a single population, thick-knees and skimmers, have estimates in this range, and so have 100% of their “populations” in this category. Other families with 20% or more of their populations estimated to be between 10,001 and 25,000 are grebes (five out of 15 populations, 33%), coursers & pratincoles (three out of 11 populations, 27%), and stilts & avocets (two out of 10 populations, 20%).

#### **Population estimates between 25,001 and 100,000 (Figure 3d)**

Altogether, 148 populations, 28% of those covered by the Agreement, fall into this size category (Figure 3a). One of the six families comprising a single population, Crab Plover, has an estimate in this range, and so has 100% of its “populations” in this category. A total of nine families have more than 30% of their populations estimated to be between 25,001 and 100,000, as follows: stilts & avocets (seven out of 10 populations, 70%), Pelicans (four out of seven populations, 57%), flamingos (five out of nine populations, 56%) cranes (seven out of 15 populations, 47%), coursers & pratincoles (five out of 11 populations, 45%), herons & egrets (19 out of 46 populations, 41%), plovers (19 out of 49 populations, 39%) cormorants (five out of 14 populations, 36%), and storks, ibises & spoonbills (eight out of 25 populations, 32%).

#### **Population estimates between 100,001 and 1,000,000 (Figure 3e)**

Altogether, 179 populations, 34% of those covered by the Agreement, fall into this size category (Figure 3a). Four of the five families with the highest number of populations have a high proportion of their populations in this size category, making it the category with the most populations overall. Two of the of the six families comprising a single population, penguins and boobies, have estimates in this range, and so have 100% of their “populations” in this category. Other families with 33% or more of their populations estimated to be between 100,001 and 1,000,000 are oystercatchers (two out of three populations, 67%), sandpipers & allies (34 out of 69 populations, 49%), cormorants (six out of 14 populations, 43%), ducks, geese & swans (51 out of 132 populations, 39%), gulls & terns (30 out of 79 populations, 38%), herons & egrets (17 out of 46 populations, 37%), and divers (two out of 6 populations, 33%).

#### **Population estimates above 1,000,000 (Figure 3f)**

Overall, 44 populations, 8% of those covered by the Agreement, fall into this highest population size category (Figure 3a). Only eight of the 22 families covered by the agreement include populations which are this big. The family with the highest proportion of populations in this category is crakes and rails (six out of 24 populations, 25%) followed by sandpipers and allies (15 out of 69, 22%). Nine populations of gulls & terns and ten populations of ducks, geese & swans, each representing eleven percent of the populations in their respective families, also fall into this category. Single populations of each of the following families complete

the list of these large populations: herons & egrets, storks ibises & spoonbills, flamingos and plovers.

**Figure 2a. AEWA Waterbird population sizes by family: The number of populations in each family in each of five size categories**

Family	Population estimates					lacking estimate	Number of populations
	< 10,001	10,001 - 25,000	25,001 - 100,000	100,001 - 1,000,000	>1,000,000		
Penguins	0	0	0	1	0	0	1
Divers	3	0	0	2	0	1	6
Grebes	4	5	2	4	0	0	15
Pelicans	2	0	4	1	0	0	7
Boobies	0	0	0	1	0	0	1
Cormorants	1	2	5	6	0	0	14
Heron & Egrets	6	3	19	17	1	0	46
Storks, Ibises & Spoonbills	8	3	8	5	1	0	25
Shoebill	1	0	0	0	0	0	1
Flamingos	0	1	5	2	1	0	9
Ducks, Geese & Swans	22	13	36	51	10	0	132
Cranes	6	1	7	1	0	0	15
Crakes & Rails	5	1	0	7	6	5	24
Crab Plover	0	0	1	0	0	0	1
Oystercatchers	1	0	0	2	0	0	3
Stilts & Avocets	0	2	7	1	0	0	10
Thick-Knees	0	2	0	0	0	0	2
Coursers & Pratincoles	2	3	4	2	0	0	11
Plovers	4	9	19	14	1	2	49
Sandpipers & allies	4	1	13	34	15	3	70
Gulls & Terns	12	11	16	30	9	1	79
Skimmers	0	1	0	0	0	0	1
<b>Total</b>	<b>81</b>	<b>58</b>	<b>146</b>	<b>181</b>	<b>44</b>	<b>12</b>	<b>522</b>

**Figure 2b. AEWA Waterbird population sizes by family: The proportion (%) of populations in each family in each of five size categories**

Family	Population estimates					lacking estimate	Number of populations
	< 10,001	10,001 - 25,000	25,001 - 100,000	100,001 - 1,000,000	>1,000,000		
Penguins	0	0	0	100	0	0	100
Divers	50	0	0	33	0	17	83
Grebes	27	33	13	27	0	0	100
Pelicans	29	0	57	14	0	0	100
Boobies	0	0	0	100	0	0	100
Cormorants	7	14	36	43	0	0	100
Heron & Egrets	13	7	41	37	2	0	100
Storks, Ibises & Spoonbills	32	12	32	20	4	0	100
Shoebill	100	0	0	0	0	0	100
Flamingos	0	11	56	22	11	0	100
Ducks, Geese & Swans	17	10	27	39	8	0	100
Cranes	40	7	47	7	0	0	100
Crakes & Rails	21	4	0	29	25	21	79
Crab Plover	0	0	100	0	0	0	100
Oystercatchers	33	0	0	67	0	0	100
Stilts & Avocets	0	20	70	10	0	0	100
Thick-Knees	0	100	0	0	0	0	100
Couriers & Pratincoles	18	27	36	18	0	0	100
Plovers	8	18	39	29	2	4	96
Sandpipers & allies	6	1	19	49	22	3	97
Gulls & Terns	15	14	20	38	11	1	99
Skimmers	0	100	0	0	0	0	100
<b>Average</b>	16	11	28	35	8	2	98

**Figure 3. AEWA Waterbird population sizes by family: The proportion (%) of populations in each family in each of five size categories.**

Figure 3a

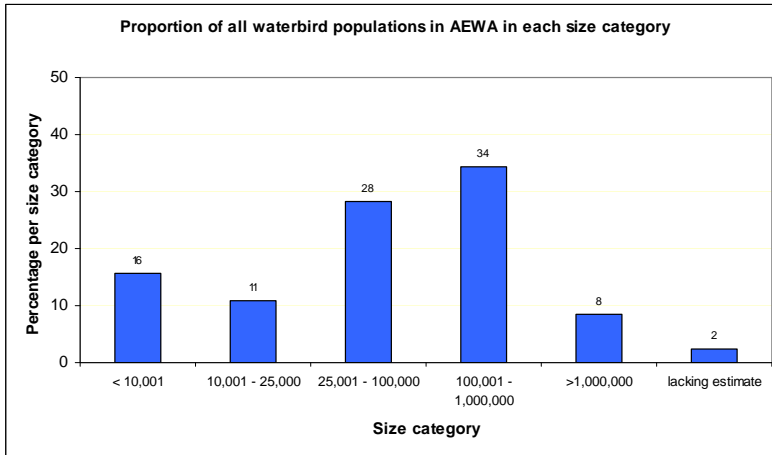


Figure 3b

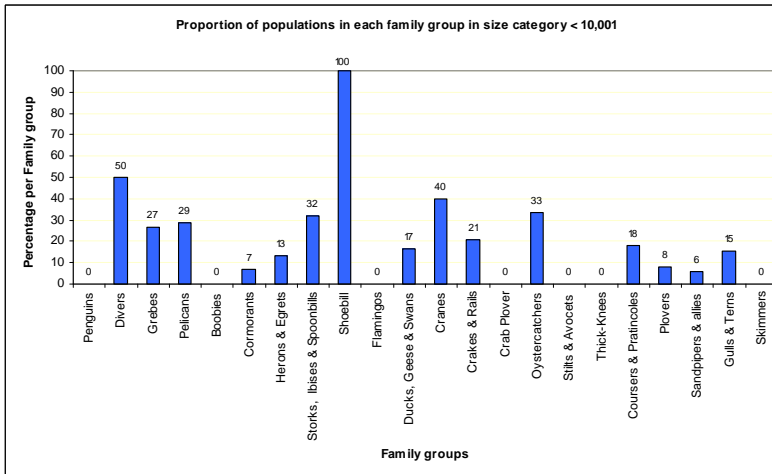


Figure 3c

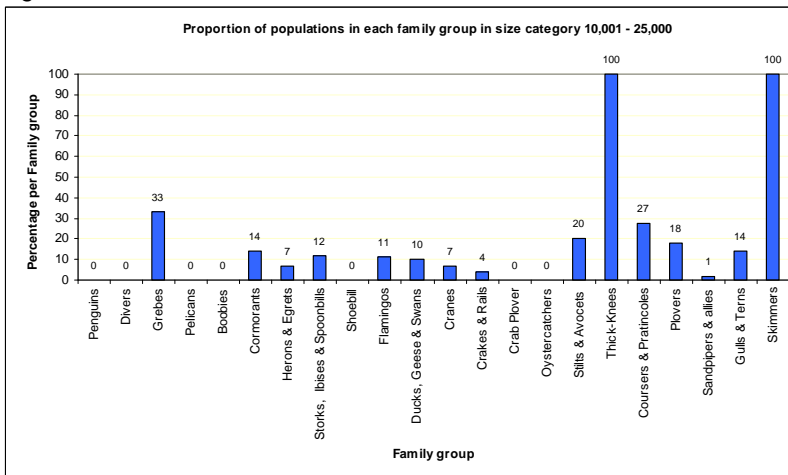


Figure 3d

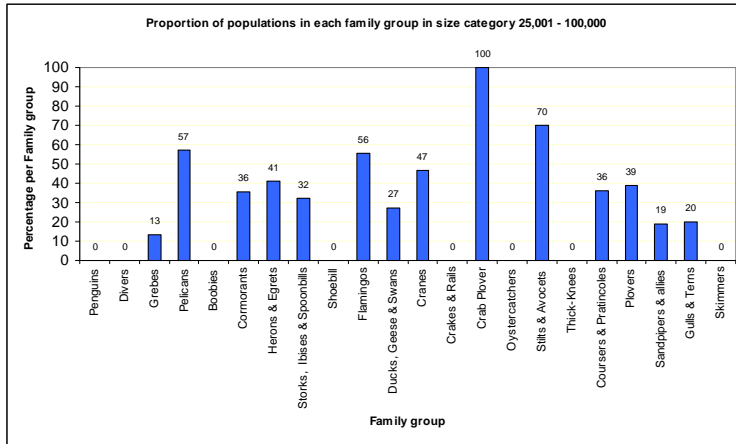


Figure 3e

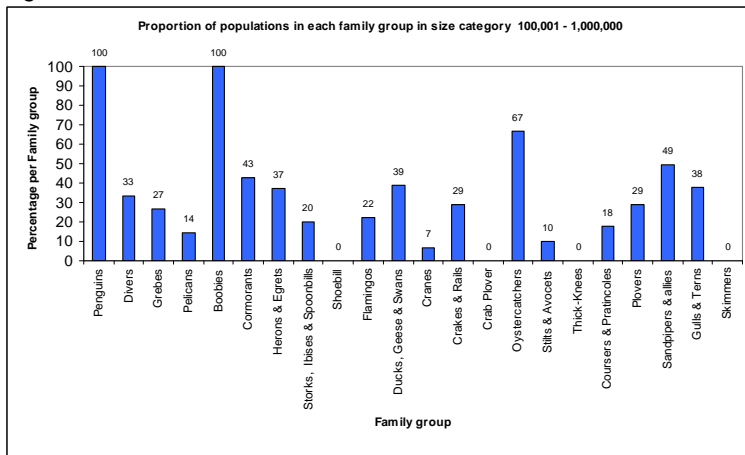
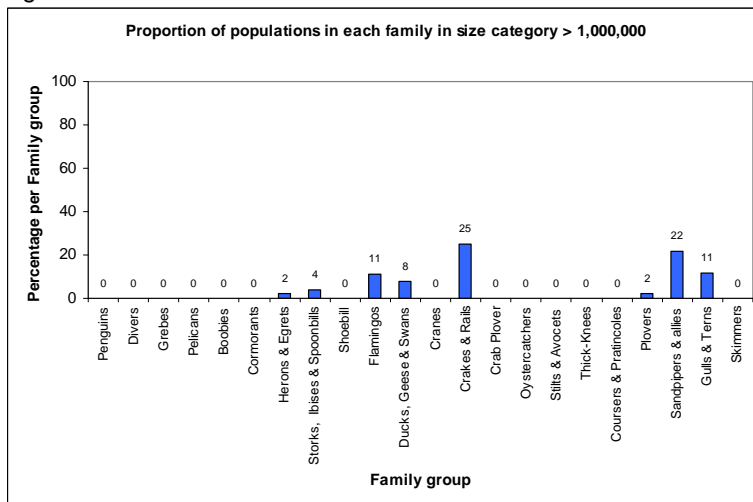


Figure 3f



## SECTION 3

### Population Trend Estimates

Population trend information is now available for 370 out of the 522 populations covered by the Agreement (71%). Figures 4a to 4e summarise the estimated population trends shown by waterbird populations in the AEWA region as a whole, and separately in Africa, Asia and Europe. Figures 5a and 5b summarise this trend information by family.

#### Summary of population trends by region

Figure 4a, and figures 4b to 4e show the proportion of waterbirds covered by the Agreement that are decreasing, stable or increasing in the AEWA region as a whole, and in each of Africa, Asia and Europe. The figures also show the proportion of populations for which no information is available on trends in numbers. In the entire AEWA region, 29% of the 522 populations are lacking this information. In Africa, the proportion of the 384 populations lacking trend information is 28%, in Asia 42% of the 200 populations are lacking trend data, and in Europe the proportion is 23% of 314 populations. Waterbird population trends are thus considerably better known in Europe, and considerably less well known in Asia than in the other regions.

When comparing the number of populations covered by the Agreement whose trends are increasing, stable or decreasing between regions, the portion of the population with unknown trends has been disregarded, to allow comparison of percentages representative of the populations. Each pair of pie charts comprising figures 4b to 4e represent first the proportion of populations showing each trend, including those for which no trend information is available, to allow comparison of the state of knowledge of waterbird trends in the different parts of the AEWA region. The right hand chart of each pair shows only the known trends, to allow comparison of the proportion of populations in each region whose trends are decreasing, stable or increasing.

In the AEWA region as a whole, of populations covered by the Agreement with known trends, nearly twice as many show decreasing trends as increasing trends. Altogether 29% of populations show a decreasing trend, and this translates to 41% of populations with known trends. 26% of populations are estimated to be stable, equivalent to 36% of populations with known trends. And only 15 % of populations are increasing, which is 21% of populations with known trends.

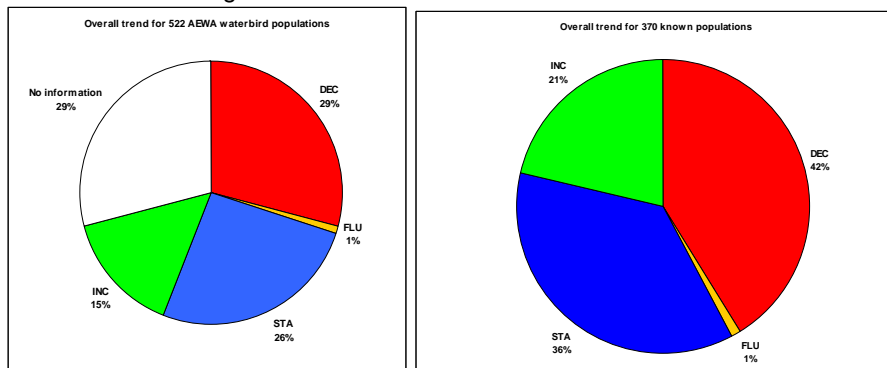
The highest proportion, of increasing populations, 23%, is found in Europe, but nearly twice as many European populations, 44%, show a decreasing trend. In Africa, only 19% of populations are increasing, and well over twice as many, 41% are decreasing. The situation is much more serious in the Asian part of the AEWA region, where only 11% of populations are known to be increasing, but five times as many, fully 55% of populations are known to be decreasing. The number of known populations in the Asian part of the AEWA region, 115, is, however, smaller than the number in any other area, and the proportion of populations for which trend information is available, 58% is also the smallest. The unfavourable population trends in the Asian portion of the AEWA region is, nevertheless, considerable cause for concern, and the fact that almost twice as many populations in the AEWA region as a whole are decreasing than increasing indicates that a great deal of work remains to be done throughout the region to halt and reverse these trends.

Figure 4a

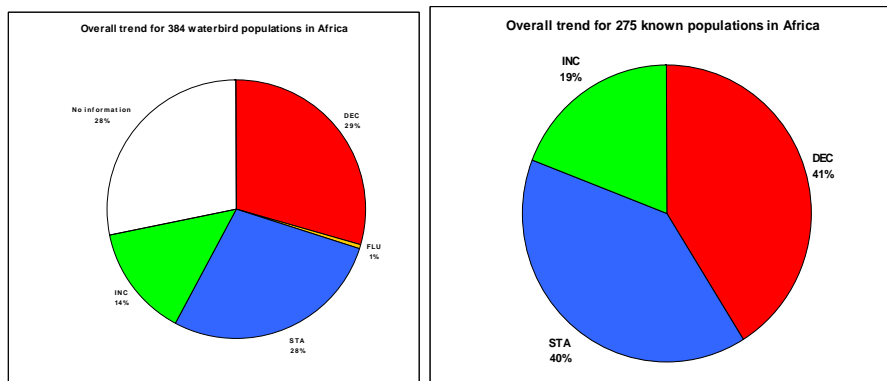
	All populations					Known populations			
	Number of populations	No trend	DEC	STA	INC	Number of populations	DEC	STA	INC
<b>AEWA Region</b>	522	29%	29%	26%	15%	370	41%	37%	21%
<b>Africa</b>	384	28%	29%	28%	14%	275	41%	40%	19%
<b>Asia</b>	200	42%	31%	19%	7%	115	55%	34%	11%
<b>Europe</b>	314	23%	33%	25%	18%	238	44%	33%	23%

Note : Many populations occur in two or more regions

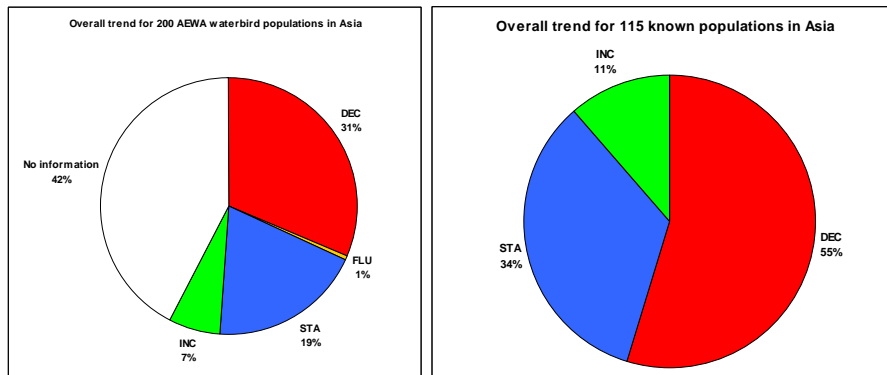
**Figure 4.** The proportion (%) of AEWA waterbird populations in each trend category  
**4b. Entire AEWA region**



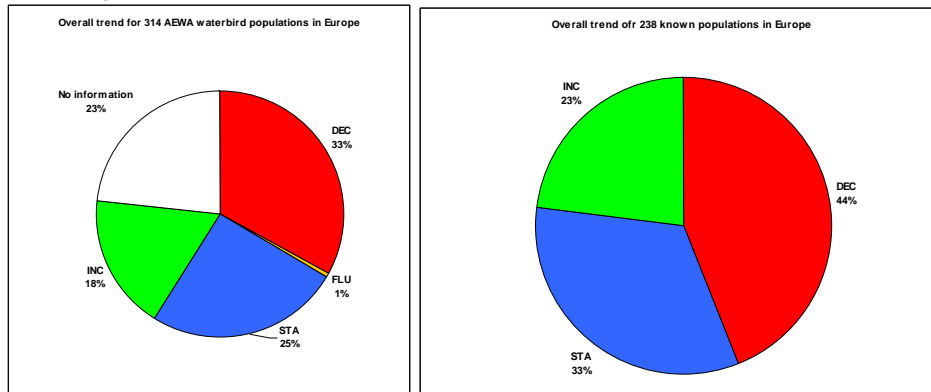
#### 4c. Africa



#### 4d. Asia



#### 4e. Europe



### Summary of population trends by family

Figures 5a and 5b give a summary of the number and proportion of populations in each of the waterbird families covered by the Agreement which are estimated to have Increasing, Stable or Decreasing population trends. A majority of families is relatively well-known, having more than 70% of populations for which trend estimates are available. One family, thick-knees is represented by only one population which has an unknown trend, so that 100% of "populations" in this family are lacking trends. Two other families, divers and plovers, are especially poorly known, having just 33% and 45%, respectively, of populations for which trend estimates are available. Four further families have between 50% and 70% of populations for which trend estimates are available, namely, herons & egrets, crakes & rails, coursers & pratincoles and gulls & terns. These are large families with a below-average state of knowledge about their population trends, and obtaining missing trend information for the populations in these families could be a priority for future work.

Altogether, eleven families have half or more of estimated populations (with known trends) showing a decreasing trend, as follows: penguins (one out of one, 100%), boobies (one out of one, 100%), Shoebill (one out of one, 100%) skimmers (one out of one, 100%), oystercatchers (two out of three, 67%), coursers & pratincoles (four out of six, 67%), cranes (eight out of 13, 62%), crakes & rails (eight out of 13, 62%), grebes (7 out of 12, 58%), plovers (12 out of 22, 55%), divers (one out of two, 50%) and sandpipers and allies (25 out of 51, 49%). Plovers are rather poorly known overall (trend estimates being available for only 45% of populations) and the fact that 55% of known populations are decreasing indicates a gap in information that needs to be addressed.

Increasing trends are far less prevalent, and nine out of 22 families (36%) covered by the Agreement altogether lack increasing populations (Figure 5b), as follows: penguins, divers, boobies, Shoebill, crakes & rails, Crab Plover, thick-knees, coursers & pratincoles, skimmers. The family with the highest proportion of known populations that are estimated to be increasing is pelicans, with three out of seven populations (43%) showing this trend. This is followed by four families which have 33% of their populations showing increasing trends: Grebes (four out of 12), Cormorants (four out of 12), herons & egrets (10 out of 30) and oystercatchers (one out of three). It is perhaps noteworthy that the three families with the highest proportion of increasing populations are largely piscivorous.

**Figure 5a.** AEWA waterbird population trends by family. The number of populations in each family showing each of four trend tendencies

Family group	Population trend estimates					
	DEC	FLU	STA	INC	Lacking Trend	Total with known trend
Penguins	1	0	0	0	0	1
Divers	1	0	1	0	4	2
Grebes	7	0	1	4	3	12
Pelicans	2	0	2	3	0	7
Boobies	1	0	0	0	0	1
Cormorants	3	0	5	4	2	12
Herons & Egrets	12	0	8	10	16	30
Storks, Ibises & Spoonbills	9	0	9	4	3	22
Shoebill	1	0	0	0	0	1
Flamingos	1	0	5	2	1	8
Ducks, Geese & Swans	44	1	36	27	24	108
Cranes	8	0	2	3	2	13
Crakes & Rails	8	1	4	0	11	13
Crab Plover	0	0	1	0	0	1
Oystercatchers	2	0	0	1	0	3
Stilts & Avocets	0	0	5	2	3	7
Thick-Knees	0	0	0	0	2	0
Coursers & Pratincoles	4	0	2	0	5	6
Plovers	12	0	7	3	27	22
Sandpipers & allies	25	0	24	2	19	51
Gulls & Terns	11	1	23	14	30	49
Skimmers	1	0	0	0	0	1
<b>Total</b>	<b>153</b>	<b>3</b>	<b>135</b>	<b>79</b>	<b>152</b>	<b>370</b>

**Figure 5b.** AEWA waterbird population trends by family. The proportion (percent) of populations in each family showing each of six trend tendencies.

Family group	Percentage of known populations showing each trend					
	DEC	FLU	STA	INC	% Lacking Trend	% with known trend
Penguins	100	0	0	0	0	100
Divers	50	0	50	0	67	33
Grebes	58	0	8	33	20	80
Pelicans	29	0	29	43	0	100
Boobies	100	0	0	0	0	100
Cormorants	25	0	42	33	14	86
Herons & Egrets	40	0	27	33	35	65
Storks, Ibises & Spoonbills	41	0	41	18	12	88
Shoebill	100	0	0	0	0	100
Flamingos	13	0	63	25	11	89
Ducks, Geese & Swans	41	1	33	25	18	82
Cranes	62	0	15	23	13	87
Crakes & Rails	62	1	37	0	46	54
Crab Plover	0	0	100	0	0	100
Oystercatchers	67	0	0	33	0	100
Stilts & Avocets	0	0	71	29	30	70
Thick-Knees	0	0	0	0	100	0
Coursers & Pratincoles	67	0	33	0	45	55
Plovers	55	0	32	14	55	45
Sandpipers & allies	49	0	47	4	27	73
Gulls & Terns	23	2	47	29	39	61
Skimmers	100	0	0	0	0	100
<b>Total</b>	<b>41</b>	<b>1</b>	<b>36</b>	<b>21</b>	<b>29</b>	<b>70</b>

### Changes in trends 1999-2008

Direct comparison of estimated population trends between the successive editions of the AEWA Conservation Status Report is difficult. For most populations, international monitoring remains insufficiently detailed and consistent to allow the calculation of reliable and statistically valid population trends. Calculated estimates of population trends are available for increasing numbers of ducks, geese, swans and waders (Anatidae, Charadriidae, and Scolopacidae) and some other families in Europe (Annex 4) but improvements in the quality of monitoring, and so in the quality of available data, for other families and other parts of the AEWA region are only developing slowly. Trend data for a majority of populations are thus based on numerous sources of varying reliability covering a variety of different reporting periods and geographic regions.

Despite these caveats, comparison of trends reported in the original edition of the *Report on the status of waterbird populations in the Agreement Area* (Wetlands International 1999) with those reported in the 2008 edition is of considerable interest. For the purposes of comparison, a process of simplification and clarification in the reported trend data has been adopted. The clearest and most frequently expressed population trends are Increasing (abbreviated to INC), Stable (abbreviated to STA) and Decreasing (abbreviated to DEC). The most frequently occurring trend category of all is Unknown (abbreviated to ?). For the purposes of comparison, all other reported trend categories were simplified to one of these four, as follows:

The three Fluctuating populations (abbreviated to FLU) were treated as Stable because fluctuating

populations are not known to be increasing or decreasing overall, and Stable maintains the neutral status of these populations. For populations given a category which is a combination of others, for example STA/INC, the first appearing code has usually been used because this is considered to be the prevalent population trend. An important exception to this treatment of such populations was made where an apparent change in status would otherwise be lost. For example, a population defined as STA/INC in 1999 and STA in 2008 has probably declined in status, and the 1999 status has therefore been simplified to INC to reflect the estimated decline. This last refinement in definition, which is only relevant when comparing trends, was not adopted in the previous section summarising population trends, and is the main reason for any small discrepancies in population totals between the two sections. For populations which have been split since 1999, the original status has been retrospectively used for both split populations. For populations lacking a trend estimate in 1999, (or not covered by the Agreement in 1999) but for which a trend was presented in the second edition of the *Report on the status of waterbird populations in the Agreement Area* (Wetlands International 2002), the 2002 trend has been used. All these cases occur only infrequently and are not considered to have much influence on the overall results.

When making comparisons between 1999 and 2008, it is important to separate changes in trend category which are a result of better information from changes which are a result of genuine changes in numbers. This is straightforward for populations which had an unknown category in either 1999 or 2006 because all changes from unknown to known are by definition a result of better knowledge. For populations with known trend categories, it has not been possible to refer to all sources and check whether changes were the result of improved knowledge or of genuine changes in numbers, but a high proportion of these changes probably reflect genuine changes in trend categories of populations.

Figure 6 summarises changes in reported population trends in all populations covered by The Agreement between 1999 and 2008.

**Figure 6a. Trend categories of migratory waterbird populations in the AEWA region: 1999 compared with 2008.** The three populations classified as “Fluctuating” in 2008 are excluded.

	1999	%	% known	2008	%	% known
<b>INC</b>	76	15	25	79	15	21
<b>STA</b>	103	20	33	138	26	37
<b>DEC</b>	131	25	42	153	29	41
<b>?</b>	212	41		152	29	

It is clear from Figure 6a that overall the trend status of waterbirds in the Agreement area worsened between 1999 and 2006. The state of knowledge of waterbird trends improved considerably, however, and the number of populations for which there is no estimated population trend decreased from 212 (41%) in 1999 to 152 (29%) in 2008. Of the 57 additional populations for which trend information became available between 1999 and 2008, three were increasing, 32 were stable and 22 were decreasing. The result of this is that the proportion of known populations that was estimated to be increasing declined from 25% in 1999 to 21% in 2008, the proportion estimated to be stable increased from 33% to 37%, and the proportion estimated to be decreasing went down from 42% to 41%.

**Figure 6b. Changes in trend categories of migratory waterbird populations in the AEWA region between 1999 and 2008**

	INC in 2008		STA in 2008		DEC in 2008		? In 2008	
<b>INC in 1999</b>	INC-INC	47	INC-STA	17	INC-DEC	11	INC-?	0
<b>STA in 1999</b>	STA-INC	16	STA-STA	68	STA-DEC	22	STA-?	7
<b>DEC in 1999</b>	DEC-INC	3	DEC-STA	26	DEC-DEC	92	DEC-?	7
<b>? In 1999</b>	?-INC	13	?-STA	27	?-DEC	28	?-?	138

Figure 6b demonstrates how many populations in each trend category in 1999 were in the same or different categories in 2008. A clear majority of populations, 345 out of 522 (66%) have not changed their trend category between 1999 and 2008. These appear with grey shading in Figure 6b. Of these, 138 populations

(40%) had unknown trends in both years, 92 populations (27%) showed a decreasing trend in both years, 68 (20%) showed a stable trend in both years and 47 (14%) showed an increasing trend in both years. The high number of populations whose trends were still unknown or decreasing in 2008, and the relatively low numbers that were stable or increasing gives considerable cause for concern.

Populations whose trend category was unknown appear with orange shading in figures 6b and 6c. Of the 206 populations with unknown trends in 1999, 138 (67%) remained unknown in 2008. Of the remaining 68 (33%) populations, 28 showed a decreasing trend in 2008, a further 27 were estimated to be stable, and just 13 were estimated to be increasing. A total of 14 populations for which trend estimates were available in 1999 had unknown trends in 2008. These were mostly populations of species such as seaducks for which trend estimates made in the early 1990s were considered by a species expert to be unsafe in 2006.

A total of 95 populations whose categories were known in both 1999 and 2008, and whose category changed between the two years can be said to have experienced either negative or positive changes in category (Figure 6c). Changes in trend category that are considered to be negative involve 17 populations that were considered to be increasing in 1999 but only stable in 2008, 11 that were increasing in 1999 but decreasing in 2008, and 22 populations that were stable in 1999 but decreasing in 2008. These are shaded red in Figures 6b and 6c. Changes in trend category that are considered to be positive involve 16 populations that were considered to be stable in 1999 but increasing in 2008, three that were decreasing in 1999 but increasing in 2008, and 26 populations that were decreasing in 1999 but stable in 2008. These are shaded green in Figures 6b and 6c. The number of negative changes in category, 50, was only slightly higher than the number of positive changes, 45, but this is misleading as a reflection of actual changes taking place in populations. A total of 92 populations that showed a decreasing trend in both 1999 and 2006 are still considered to be decreasing, even though their trend category has not changed. By comparison, only 47 populations that were increasing in 1999 were still considered to be increasing in 2008.

**Figure 6c. Summary of Figure 6b according to type of change in category**

Changes in trend category		Changes in knowledge	
Negative change in category	50	? - decreasing	28
Same category	207	? - stable	27
Positive change in category	45	? - increasing	13
		Increasing - ?	0
		Stable - ?	7
		Decreasing - ?	7
		? - ?	138

The variable quality of population trend data and the small number of populations in many families make it difficult to meaningfully summarise changes in trend over time by family. An attempt at such an analysis for this report was unsuccessful, but may provide the basis for similar work in future.

## SECTION 4

### Globally Threatened Species

The Agreement includes 34 species (divided into 54 populations) which are recognised as being Globally Threatened or Near Threatened by BirdLife International, which maintains the global Red List for birds on behalf of IUCN. Globally Threatened status is assessed at species level, and in the summary that follows, patterns are described at species level as well as at the more detailed level of biogeographic populations preferred in the earlier analyses. The threat categories recognised by IUCN are as follows: LC, Least Concern (i.e., not Globally Threatened); NT, Near Threatened; VU, Vulnerable; EN, Endangered; CR, Critically Endangered. The category EW (Extinct in the Wild) is not relevant, because extinct species are not included in AEWA, and DD (Data Deficient) is no longer applicable to any of the AEWA species according to the criteria, although one species, Black-winged Pratincole, which formerly fell into this category has been upgraded to Near Threatened.

#### Geographical breakdown of occurrence of Globally Threatened species

Figure 7a shows the number of species and populations in the AEWA region as a whole, and in each of Africa, Asia and Europe, which fall into each IUCN threat category.

**Figure 7a.**

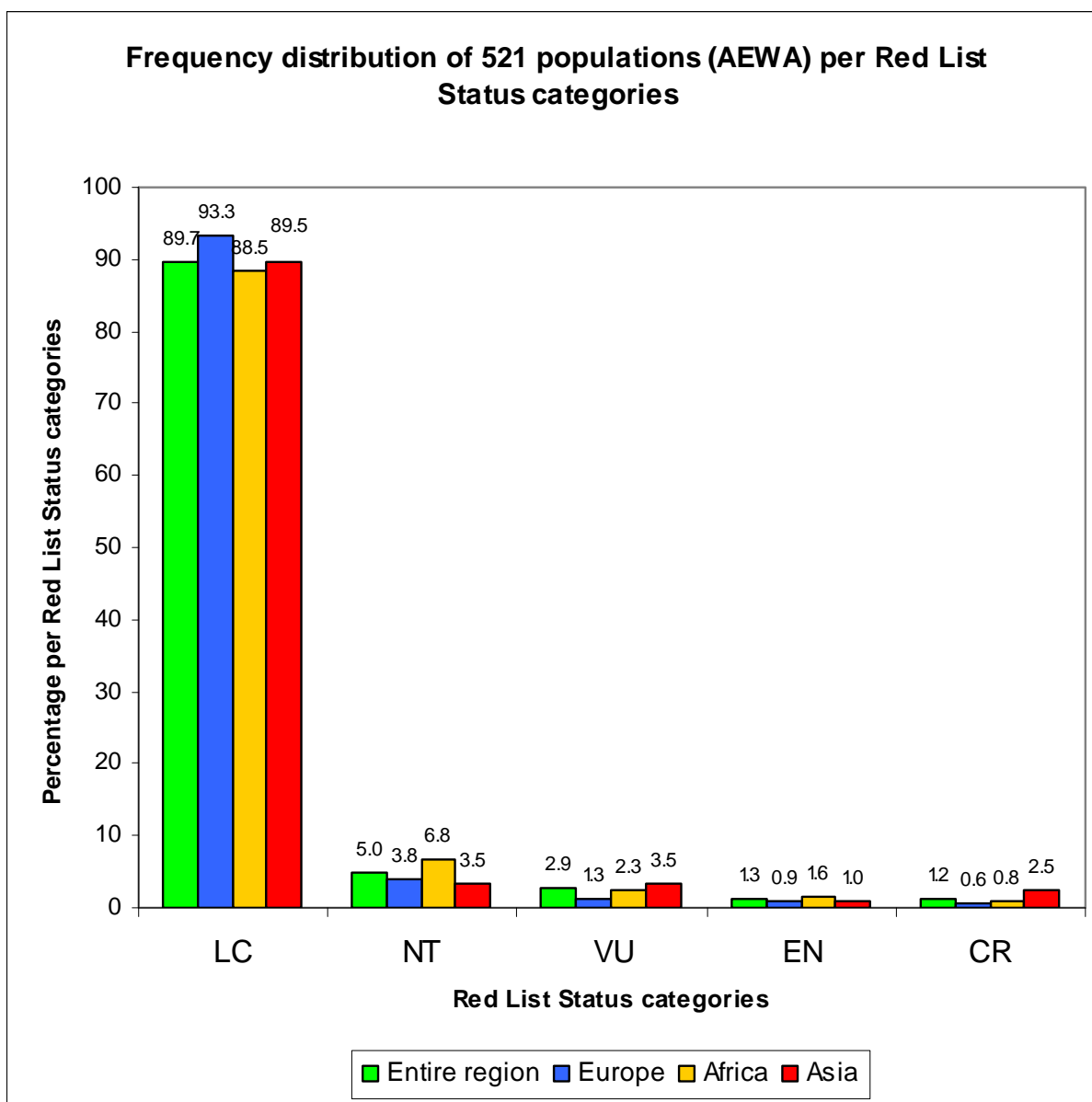
**Number of AEWA Globally Threatened waterbird species (and populations) in each IUCN threat category in the AEWA region as a whole, and in each of Africa, Asia and Europe.**

	No. Globally Threatened species	No. Globally Threatened populations	% of pops globally Threatened	NT	VU	EN	CR
<b>AEWA region</b>	34	54	10.3%	15 (26)	11 (15)	4 (7)	4 (6)
<b>Africa</b>	30	44	11.5%	15 (26)	8 (9)	4 (6)	3 (3)
<b>Asia</b>	17	21	10.5%	6 (7)	5 (7)	2 (2)	4 (5)
<b>Europe</b>	14	21	6.7%	6 (12)	4 (4)	2 (3)	2 (2)

Together, 30 of the 34 AEWA Globally Threatened or Near Threatened species are found in Africa, 17 in Asia and only 14 in Europe. The large geographical area of Africa, and its extension into the tropics accounts for the relatively high number of species found there. Conversely, Europe is smaller and predominantly temperate. Africa holds the highest proportion of populations recognised as being Globally Threatened – 11.5% of all AEWA populations occurring there are Globally Threatened or Near Threatened. Europe holds the lowest proportion, 6.7% of populations, in these categories. The proportion of Globally Threatened and Near Threatened populations in Asia, at 10.5% is comparable to that found in Africa. Asia has more species than Africa in the highest threat category, Critically Endangered (four versus three) despite the much smaller number of populations occurring in Asia (which is due in turn to the smaller size and latitudinal extent of the portion of Asia in the AEWA region). This means that that while a similar proportion of AEWA populations in Asia and Africa are Globally Threatened, those occurring in Asia are, on average more threatened than those in Africa.

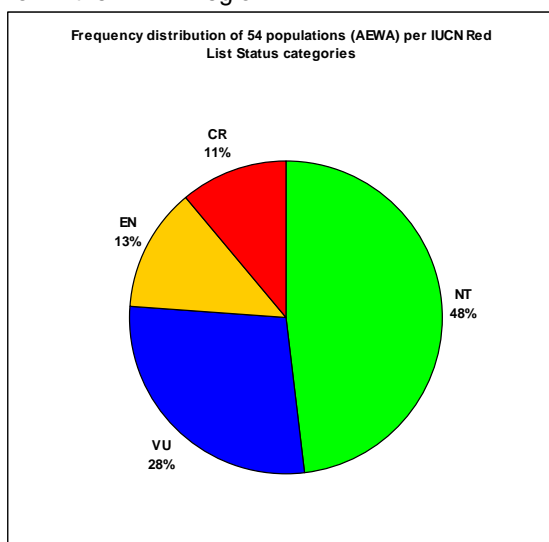
Figure 7b summarises and compares the proportions of Red List categories of all waterbird populations in the Agreement area, and separately in Africa, Asia and Europe. The predominance of LC in every region is clear, as is the smaller proportion of Globally Threatened species Europe compared with Africa and Asia. Figures 7c to 7f focus on the four categories with the highest level of threat: Critically Endangered, Endangered, Vulnerable and Near Threatened. Despite the rather small numbers of populations, the proportions of populations in the different categories in each region are broadly similar. The most anomalous group is the unexpectedly high proportion of Critically Endangered populations in Asia. This is, however, compensated by an unexpectedly low proportion of populations in the Endangered category.

**Figure 7b.** Proportion of AEWA waterbird populations in each Red List category in the AEWA region as a whole, and in each of Europe, Africa and Asia.

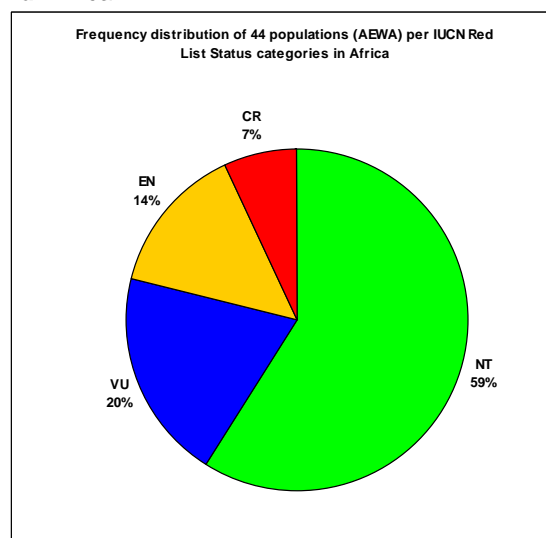


**Figures 7c.-7f** Proportion of populations of IUCNRed Listed AEWA species in each IUCN Red List category

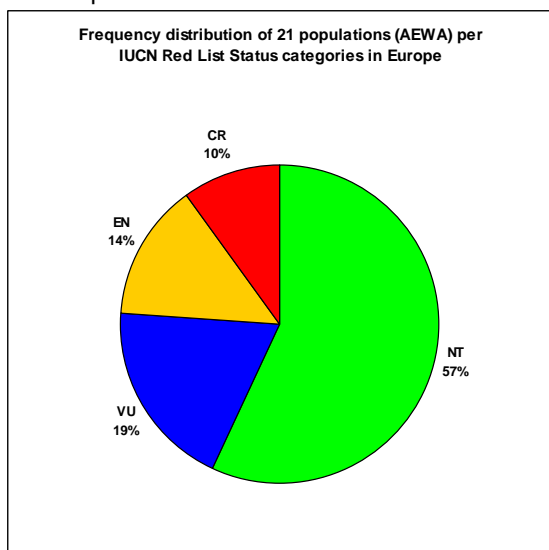
**7c. Entire AEWA region**



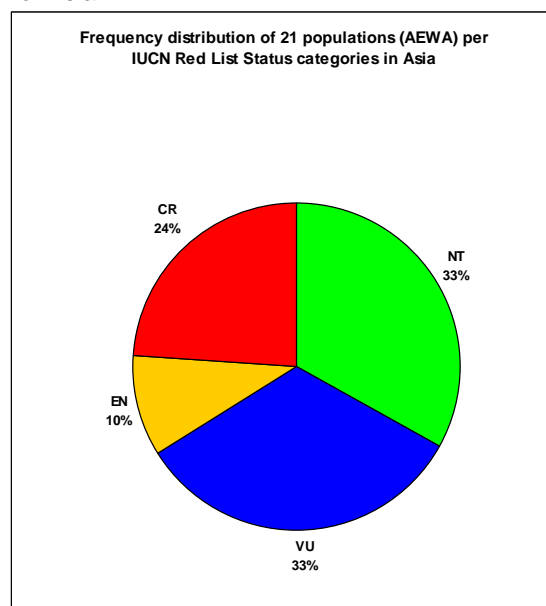
**7d. Africa**



**7f. Europe**



**7e. Asia**



## Occurrence of Globally Threatened species by family

Figure 8a lists the Globally Threatened species and populations in the Agreement area and provides summary information about their distribution and status. The four most endangered species covered by the Agreement, appearing in the Critically Endangered category are Northern Bald Ibis, Siberian Crane, Sociable Lapwing and Slender-billed Curlew. There are also five species in the Endangered category: Bank Cormorant, Madagascar Pond Heron, Red-breasted Goose, White-headed Duck and White-winged Flufftail. The nine most endangered species in AEWA thus each belong to a different family, and only two, Red-breasted Goose and White-headed Duck, occur regularly in Europe.

It is clear from Figure 8a that a considerable majority of Globally Threatened and Near Threatened species has a decreasing population trend. Overall, 37 out of the 54 populations (69%) are decreasing, and only five (9%) are increasing. One region, Asia, has no Globally Threatened populations which are increasing at all.

Figures 8b to 8e summarise the occurrence of Globally Threatened populations included in the Agreement by family. The proportion of Globally Threatened species occurring in each threat category in each family is illustrated by four bars representing the proportions of Near Threatened, Vulnerable, Endangered and Critically Endangered populations found in each family. The proportions represented by the sum of all the bars in each chart add up to 100.

In the AEWA region as a whole, the 54 Globally Threatened populations are found in 15 of the 22 waterbird families covered by the Agreement. In Africa, all 15 of these families also have Globally Threatened populations, but in Asia, Globally Threatened populations are found in 10 families, and in Europe in only seven (Figures 8a to 8d).

The proportion of Globally Threatened species in each family in the entire AEWA region is similar to the overall distribution of families in the region (Figure 1a) and the families with the most Globally Threatened populations are often those with the most populations altogether, notably Ducks geese & swans, and Sandpipers and allies. In Africa, Asia and Europe, separately, the number of Globally Threatened populations is small and comparison with overall patterns is difficult, but the highest numbers of Globally Threatened populations are mainly found in the families with highest number of populations (compare Figures 8c to 8e with 1b to 1d).

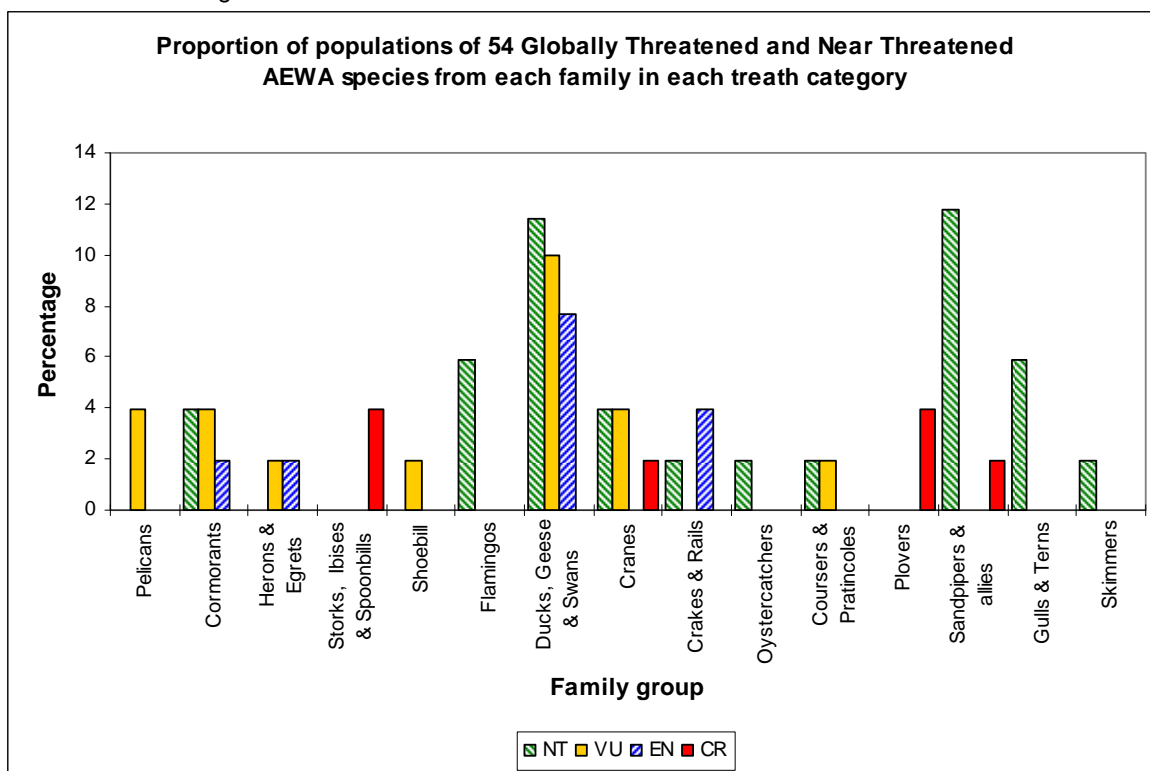
**Figure 8a. Globally Threatened and Near Threatened species covered by AEWA in 2007.** See introduction to Table 1 (p. 32) for explanation of population estimate and trend codes.

Species	English name	Red List status	Subspecies/ Population	Africa	Europe	Asia	Population Estimate	Trend
<b>Geronticus eremita</b>	<b>Northern Bald Ibis</b>	CR	Morocco	X			227	DEC
		CR	SW Asia			X	7	DEC
<b>Grus leucogeranus</b>	<b>Siberian Crane</b>	CR	Western			X	4	DEC
<b>Vanellus gregarius</b>	<b>Sociable Lapwing</b>	CR	SW Asia & NE Africa non-br	X	X	X	400-1,200	DEC
		CR	S Asia (non-bre)			X	200-600	DEC
<b>Numenius tenuirostris</b>	<b>Slender-billed Curlew</b>	CR	Medit. basin (non-br)	X	X	X	<50	DEC
<b>Phalacrocorax neglectus</b>	<b>Bank Cormorant</b>	EN	SW Africa	X			11,100	DEC
<b>Ardeola idae</b>	<b>Madagascar Pond-Heron</b>	EN	Madagascar	X			2,000-6,000	DEC
<b>Branta ruficollis</b>	<b>Red-breasted Goose</b>	EN	NC Russia to E Europe		X	X	38,500	DEC
<b>Oxyura leucocephala</b>	<b>White-headed Duck</b>	EN	Spain, Morocco	X	X		2,500	INC
		EN	Algeria, Tunisia	X			400-600	STA
		EN	E Mediterranean, SW Asia		X	X	5,000-10,000	DEC
<b>Sarothrura ayresi</b>	<b>White-winged Flufftail</b>	EN	Ethiopia	X			450-650	DEC
		EN	Southern Africa	X			235	DEC

<b>Pelecanus crispus</b>	<b>Dalmatian Pelican</b>	<b>VU</b>	Black Sea, Medit. (non-bre)	X	X		4,350-4,800	INC
		<b>VU</b>	SW, S Asia (non-bre)			X	6,000-9,000	DEC
<b>Phalacrocorax nigrogularis</b>	<b>Socotra Cormorant</b>	<b>VU</b>	Arabian coast			X	270,000	DEC
		<b>VU</b>	Gulf of Aden	X		X	60,000	STA
<b>Egretta vinaceigula</b>	<b>Slaty Egret</b>	<b>VU</b>	Southern Africa	X			3,000-5,000	DEC
<b>Balaeniceps rex</b>	<b>Shoebill</b>	<b>VU</b>	C Africa	X			5,000-8,000	DEC
<b>Anser erythropus</b>	<b>Lesser White-fr Goose</b>	<b>VU</b>	N Europe, W Siberia (bre)		X	X	8,000-13,000	DEC
<b>Marmaronetta angustirostris</b>	<b>Marbled Teal</b>	<b>VU</b>	W Mediterranean, W Africa	X	X		3,000-5,000	FLU
		<b>VU</b>	E Mediterranean	X		X	1,000	DEC
		<b>VU</b>	SW Asia (non-bre)			X	5,000-15,000	DEC
<b>Polysticta stelleri</b>	<b>Steller's Eider</b>	<b>VU</b>	N Norway, SE Baltic (non-br)		X	X	10,000-15,000	DEC
<b>Grus paradisea</b>	<b>Blue Crane</b>	<b>VU</b>	South Africa	X			25,500	STA
<b>Grus carunculatus</b>	<b>Wattled Crane</b>	<b>VU</b>	C-S Africa	X			<7,550	DEC
<b>Glareola ocularis</b>	<b>Madagascar Pratincole</b>	<b>VU</b>	Madagascar	X			5,000-10,000	DEC
<b>Phalacrocorax coronatus</b>	<b>Crowned Cormorant</b>	<b>NT</b>	SW Africa	X			8,700	STA
<b>Phalacrocorax capensis</b>	<b>Cape Cormorant</b>	<b>NT</b>	Southern Africa	X			300,000	DEC
<b>Phoenicopus minor</b>	<b>Lesser Flamingo</b>	<b>NT</b>	W Africa	X			15,000-25,000	STA
		<b>NT</b>	E Africa	X			1,500,000-2,500,000	DEC
		<b>NT</b>	S Africa	X			55,000-65,000	STA
<b>Aythya nyroca</b>	<b>Ferruginous Duck</b>	<b>NT</b>	N & W Africa (non-bre)	X	X		2,400-2,600	DEC
		<b>NT</b>	E Europe, E Medit., Black S.	X	X	X	36,000-54,000	DEC
		<b>NT</b>	SW Asia & NE Africa(non-br)	X	X	X	C	DEC
<b>Oxyura maccoa</b>	<b>Maccoa Duck</b>	<b>NT</b>	Ethiopian Highlands	X			500-2,000	DEC
		<b>NT</b>	Eastern Africa	X			1,500	DEC
		<b>NT</b>	Southern Africa	X			7,000-8250	
<b>Balearica pavonina</b>	<b>Black Crowned Crane</b>	<b>NT</b>	pavonina	X			15,000	DEC
		<b>NT</b>	ceciliae	X			28,000-55,000	DEC
<b>Crex crex</b>	<b>Corncrake</b>	<b>NT</b>	Sub-Saharan Africa (non-br)	X	X	X	E	DEC
<b>Haematopus moquini</b>	<b>African Black Oystercatcher</b>	<b>NT</b>	SE Africa	X			5,000-6,000	INC
<b>Glareola nordmanni</b>	<b>Black-winged Pratincole</b>	<b>NT</b>	E Europe - Central Asia	X	X	X	29,000-45,000	DEC
<b>Gallinago media</b>	<b>Great Snipe</b>	<b>NT</b>	Scandinavia (bre)	X	X		18,000-51,000	STA
		<b>NT</b>	W Siberia, NE Europe (bre)	X	X	X	D	DEC
<b>Limosa limosa</b>	<b>Black-tailed Godwit</b>	<b>NT</b>	limosa, W Europe (bre)	X	X		162,000-183,000	DEC
		<b>NT</b>	limosa, E Europe (bre)	X	X		90,000-165,000	DEC
		<b>NT</b>	limosa, W Asia (bre)	X	X	X	C	
		<b>NT</b>	islandica	X	X		47,000	INC
<b>Larus leucophthalmus</b>	<b>White-eyed Gull</b>	<b>NT</b>	Red Sea	X		X	37,000-44,000	STA
<b>Larus audouinii</b>	<b>Audouin's Gull</b>	<b>NT</b>	Mediterranean (bre)	X	X		57,600	INC
<b>Sterna balaenarum</b>	<b>Damara Tern</b>	<b>NT</b>	SW Africa (bre)	X			14,000	STA
<b>Rynchops flavirostris</b>	<b>African Skimmer</b>	<b>NT</b>	East & Southern Africa	X			8,000-12,000	DEC

**Figures 8b to 8e.** Proportion of populations of Globally Threatened and Near Threatened AEWA species from each family in each threat category

**8b. Entire AEWA region**



**Figure 8c. Africa**

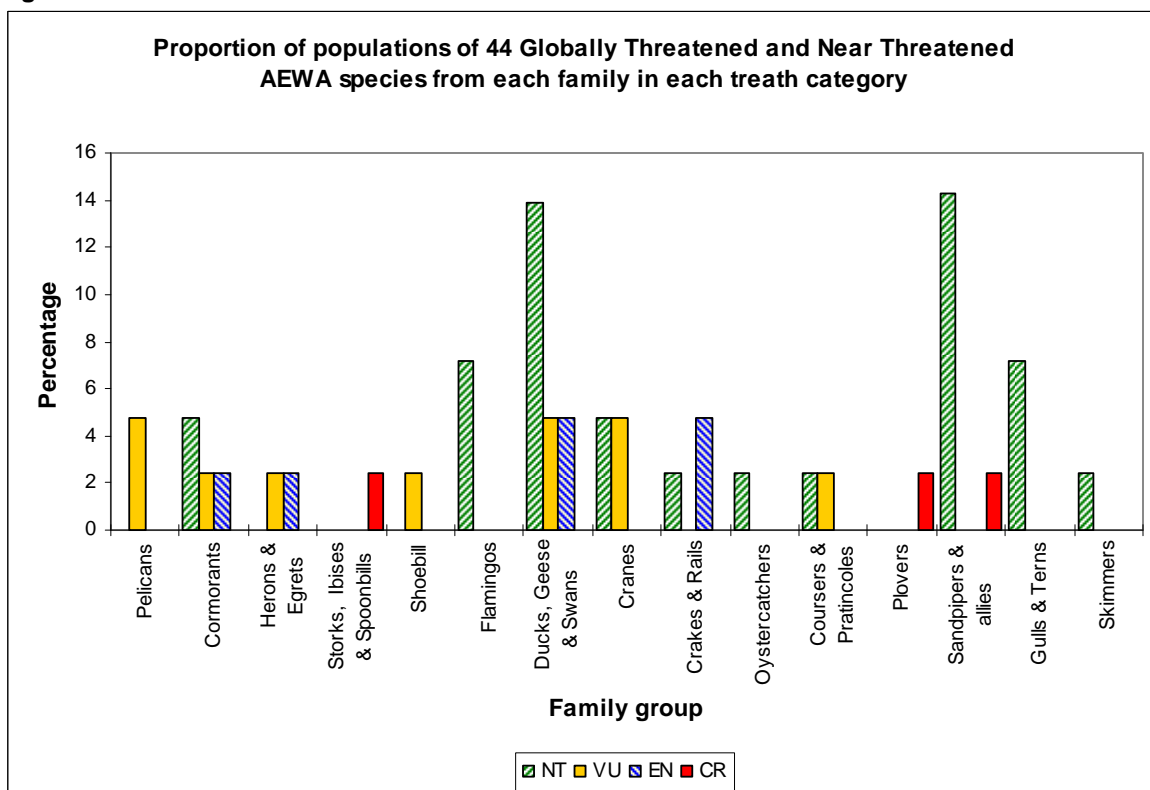


Figure 8d. Asia

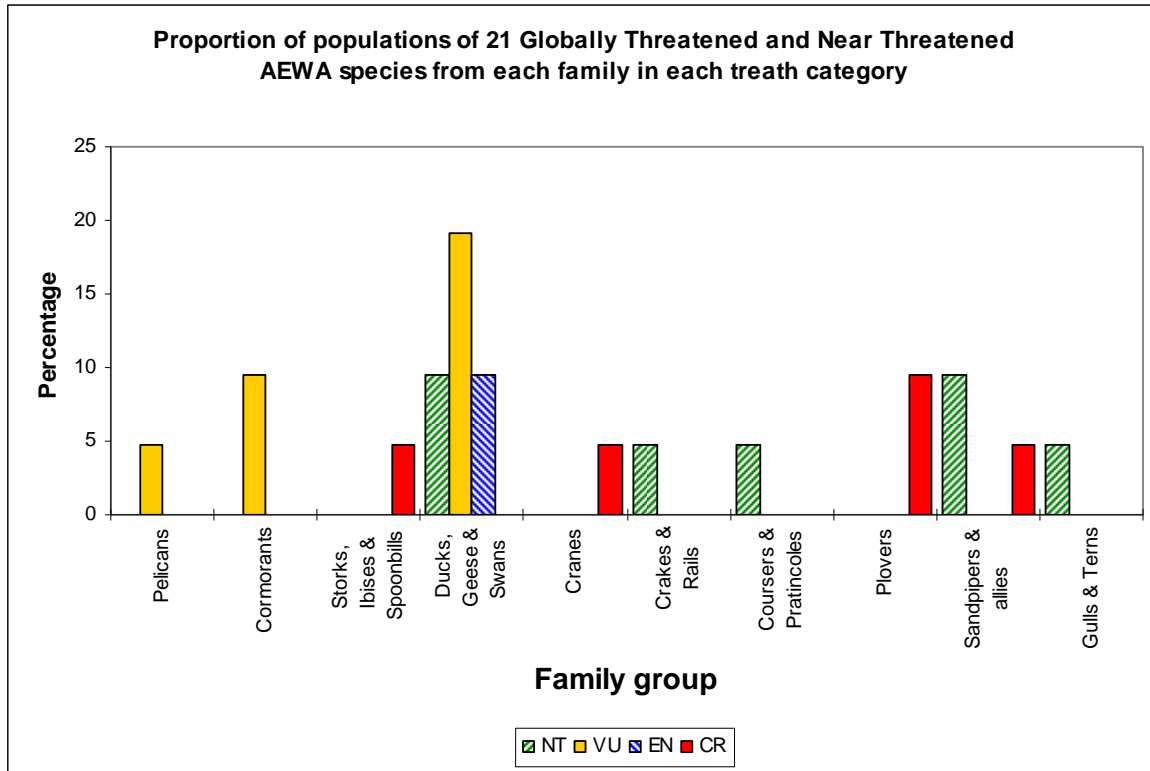
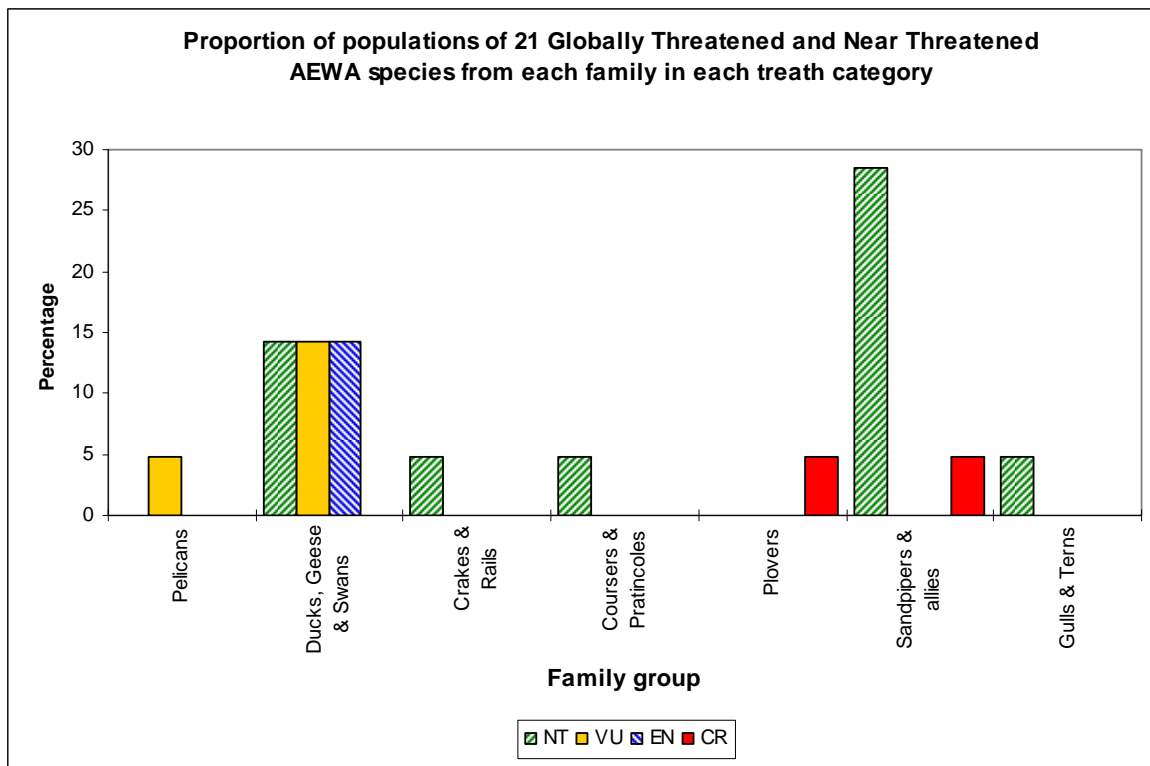


Figure 8e. Europe





# A Red List Index for species listed on the Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA)

Report to UNEP/AEWA Secretariat

Stuart Butchart  
BirdLife International  
February 2008

## INTRODUCTION

### IUCN Red List Index

The IUCN Red List is widely recognised as the most authoritative and objective system for classifying species by their risk of extinction (see, e.g. Regan *et al.* 2005, de Grammont and Cuarón, 2006, Rodrigues *et al.* 2006). It uses quantitative criteria based on population size, rate of decline, and area of distribution to assign species to categories of relative extinction risk (IUCN 2001). The criteria are clear and comprehensive but are sufficiently flexible to deal with uncertainty (Akçakaya *et al.* 2000). The assessments are not simply based on expert opinion; they must be supported with detailed documentation of the best available data, with justifications, sources, and estimates of uncertainty and data quality (IUCN 2005). Red List Authorities (e.g. BirdLife International for birds) are appointed to organise independent scientific review and to ensure consistent categorisation between species, groups, and assessments. A Red List Standards and Petitions Subcommittee monitors the process and resolves challenges and disputes to listings. A coordinated global program is overseen by partner organisations including the IUCN Species Survival Commission, BirdLife International, NatureServe, and the Center for Applied Biodiversity Science at Conservation International.

The Red List Index (RLI) has been developed as an indicator of trends in the status of biodiversity. It is based on the movement of species through the categories of the IUCN Red List (Butchart *et al.* 2004, 2005, 2007). The RLI shows changes in the overall threat status (extinction risk) of sets of species, with RLI values relating to the proportion of species expected to remain extant in the near future without additional conservation action.

As well as monitoring global trends for different taxonomic groups, the RLI can be disaggregated to compare trends for suites of species in different biogeographic regions, ecosystems, habitats, taxonomic subgroups or relevant to different international treaties. Here, we present an RLI for species listed on the Agreement on the Conservation of African-Eurasian Migratory Waterbirds (hereafter, AEWA).

## METHODS

### Calculating the RLI

The RLI is calculated from the number of species in each Red List category (Least Concern, Near Threatened, Vulnerable, Endangered, Critically Endangered), and the number changing categories between assessments as a result of genuine improvement or deterioration in status (category changes owing to improved knowledge or revised taxonomy are excluded). The original methodology was described in detail in Butchart *et al.* (2004, 2005), and revised in Butchart *et al.* (2007): the latter is used here. An RLI value is calculated as follows:

$$RLI_t = 1 - \frac{\sum W_{c(t,s)}}{W_{EX} \cdot N}$$

where  $W_{c(t,s)}$  is the weight of category  $c$  for species  $s$  at time  $t$ , which ranges from 1 for Near Threatened to 5 for Extinct ( $W_{EX}$ ), and  $N$  is the number of assessed (non-data deficient) species. Put simply, the number of species in each Red List category is multiplied by the category weight, these products are summed, divided

by the maximum possible product (the number of species multiplied by the maximum weight), and subtracted from one. This produces an index that ranges from 0 to 1 (see below).

These conditions are met by back-casting all non-genuine category changes to the year of first assessment (1988 for birds). In other words, for birds, we assume that species should have been classified at their current Red List category since 1988, apart from those species for which genuine category changes have occurred, in which case they are assigned to appropriate time periods, corresponding to the dates in which all species were reassessed (see Collar and Andrew 1988, Collar *et al.* 1994, BirdLife International 2000, BirdLife International 2004, BirdLife International 2008). To determine these genuine cases, all category changes during 1988–2008 were assigned a ‘reason for change’, allowing genuine ones to be distinguished from those resulting from improved knowledge or taxonomic revisions (see Butchart *et al.* 2004, 2005, 2007 for further details).

The RLI was calculated for 234 species on Appendix II of AEWA ([http://www.unep-awea.org/documents/agreement\\_text/species-overview.htm](http://www.unep-awea.org/documents/agreement_text/species-overview.htm)). One additional taxon is listed on the Appendix, but not recognised taxonomically by BirdLife International and hence IUCN (its taxonomic status is ‘under review’ by the BirdLife Taxonomic Working Group): Heuglin’s Gull *Larus heuglini* and is thus not included. However, there is no evidence that this taxon has undergone a genuine status change during 1988–2008, so its omission makes no difference to the RLI.

### Interpreting the RLI

RLI values relate to the proportion of species expected to remain extant in the near future without conservation action. An RLI value of 1.0 equates to all species being categorised as Least Concern, and hence that none are expected to go extinct in the near future. An RLI value of zero indicates that all species have gone Extinct. A downwards trend in the graph line (i.e. decreasing RLI values) means that the expected rate of species extinctions is increasing i.e. that the rate of biodiversity loss is increasing. A horizontal graph line (i.e. unchanging RLI values) means that the expected rate of species extinctions is unchanged. An upward trend in the graph line (i.e. increasing RLI values) means that there is a decrease in expected future rate of species extinctions (i.e. a reduction in the rate of biodiversity loss).

## RESULTS

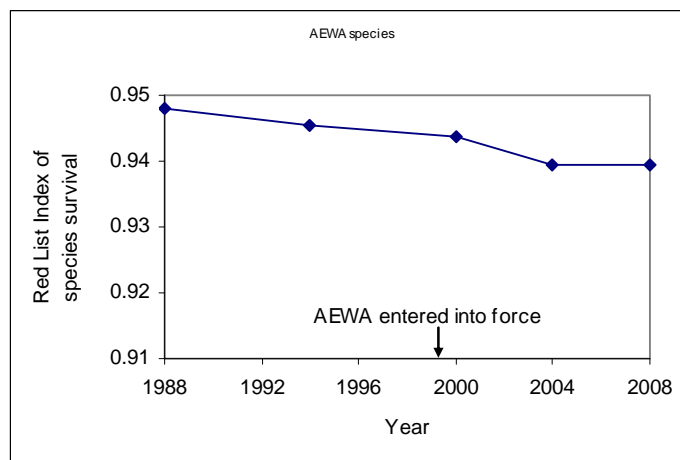
Of the 234 species listed by AEWA and recognised taxonomically by BirdLife International/IUCN, four are listed by BirdLife on the 2008 IUCN Red List as Critically Endangered, five are Endangered, 12 are Vulnerable, 16 are Near Threatened and 197 are Least Concern. The previous section of this report used the Red List as it stood in 2007, which caused minor discrepancies: two additional species are recognised in the Vulnerable category and one in the Near Threatened category in 2008 compared with 2007.

During 1988–2008, there were 12 genuine status changes among these taxa, involving 11 species (see Appendix). Ten species deteriorated in status sufficiently to qualify for a higher threat category, while one (Dalmatian Pelican *Pelecanus crispus*) improved in status during 1994–2000 (and was downlisted from Vulnerable to Near Threatened), but then deteriorated again during 2000–2004 (owing to different reasons: see Appendix) and was uplisted to Vulnerable.

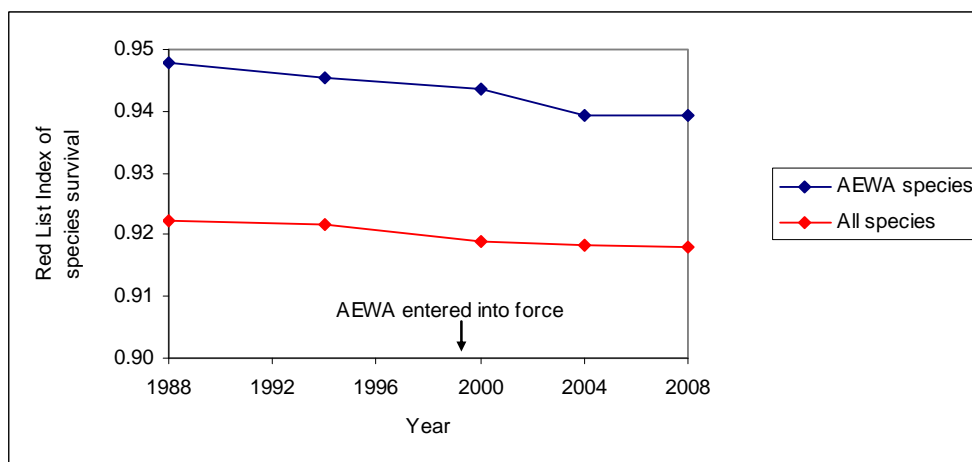
The RLI for all AEWA species shows the net effect and timing of these changes by plotting the overall extinction risk of this set of species over 1988–2008 (Fig. 1). It can be compared to the RLI for all bird species (Fig 2.). This shows that, overall, AEWA species are less threatened than all birds (i.e. RLI values are greater), but their status has deteriorated faster (i.e. the RLI slope is steeper). The former result is perhaps not surprising given that migrants overall tend to be less threatened than non-migrants (Kirby *et al.* in prep.). The latter result indicates that this subset of migrants is being particularly impacted by threatening processes, in particular the loss and degradation of their wetland habitats.

The flattening of the graph during 2004–2008 is no cause for complacency. It may partly represent an artefact of delays in knowledge. In the next few years, further deteriorations in the status of some AEWA species during 2004–2008 may be reported, leading to them being uplisted to higher categories of threat, and hence driving a decline in the RLI slope for this period.

**Figure 1.** Red List Index of species survival for AEWA species (n=234 species recognised by BirdLife International and IUCN), showing the proportion of species expected to remain extant in the near future without additional conservation action. An RLI value of 1.0 equates to all species being categorised as Least Concern, and hence that none are expected to go extinct in the near future. An RLI value of zero indicates that all species have gone Extinct.



**Figure 2.** Red List Index of species survival for AEWA species (n=234 species recognised by BirdLife International and IUCN) and for all bird species (n=9,922 non-Data Deficient species) showing the proportion of species expected to remain extant in the near future without additional conservation action. An RLI value of 1.0 equates to all species being categorised as Least Concern, and hence that none are expected to go extinct in the near future. An RLI value of zero indicates that all species have gone Extinct.



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## Appendix

Table of AEWA species undergoing genuine status changes during 1988-2008.

Species	Period	Inferred category at start of period	Inferred category at end of period	Notes
Madagascar Pond-heron <i>Ardeola idae</i>	1988-1994	VU	EN	This species's population has been in long-term decline, with the current minimum estimate of 2,000 mature individuals qualifying the species as Endangered under criterion C2. The population is assumed to have fallen below the threshold of 2,500 mature individuals during 1988-1994, and hence would have qualified as Vulnerable in 1988.
Black Crowned-crane <i>Balearica pavonina</i>	1988-1994	LC	NT	The rate of population decline of this species is estimated to have approached 30% over ten years during 1988-1994 owing to habitat loss, hunting and other threats, qualifying the species for uplisting from Least Concern to Near Threatened under criterion A2 by 1994.
African Skimmer <i>Rynchops flavirostris</i>	1988-1994	LC	NT	The population size of this species is suspected to have declined during 1988-1994 to 15,000-25,000 birds (and hence approaching the thresholds for Vulnerable under criteria C1 and C2) owing to a number of threats, qualifying the species for uplisting from Least Concern to Near Threatened by 1994.
White-headed Duck <i>Oxyura leucocephala</i>	1994-2000	VU	EN	The population of this species underwent a rapid population decline during 1991-2001 in Turkey (10,927 birds in 1991 to 653 in 2001) and further east (eg Turkmenistan), outweighing increases in Spain (in particular) plus Israel, Syria, Greece, Bulgaria and Romania. The overall trend is negative, and the decline is suspected to have exceeded 50% over ten years during 1994-2000, qualifying the species for uplisting from Vulnerable to Endangered under criterion A2 by 2000.
Dalmatian Pelican <i>Pelecanus crispus</i>	1994-2000	VU	NT	During the early and mid-1990s, the global population appeared to increase, owing largely to increases in Greece as a consequence of protection of a key breeding colony (with increases also occurring in Bulgaria). The species would therefore have qualified for downlisting from Vulnerable to Near Threatened during 1994-2000. However, the status of eastern populations then deteriorated during late 1990s and early 2000s, owing to political changes and

				breakdown of law enforcement, and these declines outweighed increases in south-east Europe (in Montenegro to Romania and Turkey), giving a global decline that exceeded 30% over ten years (and hence qualified the species as Vulnerable again) during 2000-2004.
Bank Cormorant <i>Phalacrocorax neglectus</i>	1994-2000	VU	EN	The rate at which the population of this species is declining is suspected to have exceeded 50% over three generations (22 years) during 1994-2000 owing to a number of threats (e.g. steep declines were recorded on Mercury and Ichaboe Islands owing to a decreased abundance of goby off central Namibia from 1994 onwards), qualifying the species for uplisting from Vulnerable to Endangered under criterion A2 by 2000.
Eurasian Curlew <i>Numenius arquata</i>	1994-2000	LC	NT	The population decline of this species is suspected to have approached 30% over three generations (15 years) during 1994-2000, leading to the species qualifying as Near Threatened by 2000. This was largely driven by declines in Europe (including the key population in the UK), but also partly as a consequence of large scale habitat changes following the collapse of the Soviet Union in 1991 (e.g. a substantial decrease in state livestock numbers in Kazakhstan led to significantly higher and denser vegetation in many areas of long-grass and forest steppe).
Red-breasted Goose <i>Branta ruficollis</i>	2000-2004	VU	EN	The population increased from the late 1970s to a peak of 88,425 individuals in 2000. Since then it declined to 32,100 individuals in 2005, with the 5-year average decline exceeding 50% during 2000-2004, qualifying the species for uplisting to Endangered under criterion A2. During 1988-2000 it would have qualified as Vulnerable under criterion B2. Drivers of declines are a combination of hunting, habitat loss and other threats.
Steller's Eider <i>Polysticta stelleri</i>	2000-2004	NT	VU	Alaskan populations of this species declined from 137,904 individuals in 1992 to 77,329 individuals in 2003. Given the proportion of the global population they form, the global population decline rate would have exceeded 30% over three generations (12 years) in 2000, qualifying the species for uplisting from Near Threatened to Vulnerable under criterion A2 in 2000.
Dalmatian Pelican <i>Pelecanus crispus</i>	2000-2004	NT	VU	During the early and mid-1990s, the global population appeared to increase, owing largely to increases in Greece as

				a consequence of protection of a key breeding colony (with increases also occurring in Bulgaria). The species would therefore have qualified for downlisting from Vulnerable to Near Threatened during 1994-2000. However, the status of eastern populations then deteriorated during late 1990s and early 2000s, owing to political changes and breakdown of law enforcement, and these declines outweighed increases in south-east Europe (in Montenegro to Romania and Turkey), giving a global decline that exceeded 30% over ten years (and hence qualified the species as Vulnerable again) during 2000-2004.
Sociable Lapwing <i>Vanellus gregarius</i>	2000-2004	EN	CR	The rate of population decline was suspected to have exceeded 80% over ten years during 2000-2004, on the basis of surveys showing very steep recent declines that were projected to continue, leading to uplisting from Endangered to Critically Endangered under criteria A3; A4 by 2004.
Black-tailed Godwit <i>Limosa limosa</i>	2000-2004	LC	NT	This species declined by 14-33% between 1990 and 2005. Taking the upper value, the decline rate would have exceeded 25% (the approximate threshold for NT) during the period 2000-2004. These declines were largely driven by trends in Europe, outweighing apparently stable trends in Central Asia and increases in Iceland.



**TABLE 1**  
**POPULATION SIZES AND TRENDS OF WATERBIRD SPECIES INCLUDED IN THE AGREEMENT**

**KEY TO COLUMN HEADINGS**

**Population**

The migratory populations of the waterbird species covered under this Agreement. These populations may be the entire population of a species, the entire population of a distinct subspecies, a discrete biogeographical population of a monotypic species or of a subspecies, or that 'population' of birds which breeds and/or spends the boreal winter in one or more of the major sub-regions of the African-Eurasian region. For an explanation of the ways in which populations are listed, see section 2.1 in the second (2002) edition of this report, which is included in this edition as Annex 3.

**Population size**

Population estimates given in the column headed 'CSR 1999' are taken from the first edition of the *Report on the Conservation Status of Migratory Waterbirds in the Agreement Area* (Wetlands International 2000). Those in the second column, headed 'CSR 2002' are taken from the second edition of the *Report on the Conservation Status of Migratory Waterbirds in the Agreement Area* (Wetlands International 2002).

In all cases, the numerical estimates are given as number of individuals, although in many cases the estimates have been derived from numbers of breeding pairs. In these latter estimates, the total number of individuals has been obtained by multiplying the number of breeding pairs by a factor of three to allow for the non-breeding element of the population. For many species and populations, only a rough indication of population size is available. In these cases, the size of the population is given in one of five categories:

- A: Less than 10,000 individuals
- B: 10,000-25,000 individuals
- C: 25,000-100,000 individuals
- D: 100,000-1,000,000 individuals
- E: Over 1,000,000 individuals

Throughout the table, blank fields mean that no information is available

**Trends**

Information on trends usually refers to the period since 1990. Brackets are used to indicate either that there is some doubt about the trend, or that a particular trend has been reported in only a part of the species' range, and may not be applicable throughout most of its range. The trends given in the column headed 'Trend 1999' are taken from the first edition of the *Report on the Conservation Status of Migratory Waterbirds in the Agreement Area*. Those in the second column, headed 'Trend 2002' are taken from the second edition of the *Report on the Conservation Status of Migratory Waterbirds in the Agreement Area* (Wetlands International 2002).

INC	-	Increasing	DEC	-	Decreasing
STA	-	Stable	?	-	Unknown

**Sources**

Sources of information included since the 2006 edition of this report are numbered in the table, and listed at the end.

**Justification of changes**

**A short explanation is given justifying the reasons for the proposed changes to each population.**

All information which has not appeared in earlier editions of this table is shaded in this edition.

Population	CSR 1999	CSR 2002	CSR 3 2006	Proposed revision 2008	Source 2008 revision	Trend 1999	Trend 2002	Trend 2006	Proposed trend 2008	Source 2008 trend	Justification of changes
<b>SPHENISCIDAE</b>											
<i>Spheniscus demersus</i>											
- <i>Southern Africa</i>	-	180,000	180,000	<b>180,000</b>			DEC	<b>DEC</b>	<b>DEC</b>		
<b>GAVIIDAE</b>											
<i>Gavia stellata</i>											
- Northwestern Europe (win)	D	183,000-420,000	150,000-450,000	<b>150,000-450,000</b>		DEC	DEC	<b>DEC</b>	<b>DEC</b>		
- Caspian, Black Sea & E Med (win)	?	?	?	?		?	?	?	?		
<i>Gavia arctica</i>											
- <i>arctica</i> N Europe & Western Siberia/Europe	120,000	360,000-690,000	250,000-500,000	<b>250,000-500,000</b>		STA	DEC	<b>DEC</b>	<b>DEC</b>		
<i>Gavia arctica suschkini</i>											
- Central Siberia/Caspian	?	?	?	?		?	?	?	?		
<i>Gavia immer</i>											
- Europe (win)	5,000	5,000	5,000	<b>5,000</b>		?	?	?	?		
<i>Gavia adamsii</i>											
- Northern Europe (win)	A/B	A	A	<b>A</b>		?	?	?	?		
<b>PODICIPEDIDAE</b>											
<i>Tachybaptus ruficollis</i>											
- <i>ruficollis</i> Europe & Northwest Africa	D	230,000-450,000	300,000-510,000	<b>300,000-510,000</b>		STA	STA	<b>STA</b>	<b>INC</b>	<b>24</b>	24: Increasing in all parts of Europe except central Europe, where 10 year trend is decreasing
<i>Podiceps cristatus cristatus</i>											
- Northwest & Western Europe	D	368,000-579,000	290,000-420,000	<b>290,000-420,000</b>			INC	<b>DEC</b>	<b>DEC</b>		24: Increasing in Baltic, decreasing in Central Europe, Stable in NW Europe
- Black Sea & Mediterranean (win)	D	>600,000	580,000-870,000	<b>580,000-870,000</b>			INC	<b>DEC</b>	<b>DEC</b>		24: Increasing in W Mediterranean, decreasing in E Mediterranean/Black Sea
- Caspian & Southwest	10,000	10,000	10,000	<b>10,000</b>			?	?	?		

Population	CSR 1999	CSR 2002	CSR 3 2006	Proposed revision 2008	Source 2008 revision	Trend 1999	Trend 2002	Trend 2006	Proposed trend 2008	Source 2008 trend	Justification of changes
Asia (win)											
<i>Podiceps cristatus infuscatus</i>											
- Eastern Africa (Ethiopia to N Zambia)	<1,000	<1,000	<1,000	<1,000			DEC	DEC	DEC		
- Southern Africa	A	A	A	A			INC	INC	INC		
<i>Podiceps grisegena grisegena</i>											
- Northwestern Europe (win)	C	C	42,000-60,000	42,000-60,000		STA	STA	DEC	DEC		
- Black Sea & Mediterranean (win)	C	C	41,000-107,000	41,000-107,000		?	STA	DEC	DEC		
- Caspian (win)	15,000	15,000	15,000	15,000		?	?	?	?		
<i>Podiceps auritus auritus</i>											
- NW Europe (large billed)	5,000	2,600-4,100	4,600-6,800	4,600-6,800		STA/IN C	STA/IN C	STA	STA		
- NE Europe (small billed)	C	C	14,200-26,000	14,200-26,000		(DEC)	(STA)	DEC	DEC		
- Caspian & South Asia (win)	B	B	B	B		?	?	?	?		
<i>Podiceps nigricollis nigricollis</i>											
- Europe/S & W Europe & N Africa	100,000	117,000-450,000	159,000-268,000	159,000-268,000		(STA)	STA/IN C	DEC	DEC		24: increasing in NW & Central Europe; decreasing in West Mediterranean and East Mediterranean/Black Sea
- Western Asia/SW & South Asia	25,000	25,000	25,000	25,000		INC	INC	INC	INC		
<i>Podiceps nigricollis gurneyi</i>											
- Southern Africa	B/C	10,000-20,000	10,000-20,000	10,000-20,000		INC	INC	INC	INC		
<b>PELECANIDAE</b>											
<i>Pelecanus onocrotalus</i>											
- Southern Africa	-	18,000	30,000	30,000		-	(STA)	INC	INC		
- West Africa	30,000	60,000	60,000	60,000		?	STA	INC	INC		

Population	CSR 1999	CSR 2002	CSR 3 2006	Proposed revision 2008	Source 2008 revision	Trend 1999	Trend 2002	Trend 2006	Proposed trend 2008	Source 2008 trend	Justification of changes
- Eastern Africa	-	150,000	140,000	<b>140,000</b>		-	STA	<b>STA</b>	<b>STA</b>		
- Europe & Western Asia (bre)	70,000	20,000-33,000	20,000-33,000	<b>20,000-33,000</b>		DEC	DEC	<b>DEC</b>	<b>DEC</b>		
<i><b>Pelecanus rufescens</b></i>											
- Tropical Africa & SW Arabia	D	50,000-100,000	50,000-100,000	<b>50,000-100,000</b>		STA	STA	<b>STA</b>	<b>STA</b>		
<i><b>Pelecanus crispus</b></i>											
- Black Sea & Mediterranean (win)	2,000-3,000	2,300-3,200	4,350-4,800	<b>4,350-4,800</b>		STA	STA	<b>INC</b>	<b>INC</b>		
- SW Asia & S Asia (win)	10,000-13,000	10,000-12,500	6,000-9,000	<b>6,000-9,000</b>		STA	STA	<b>DEC</b>	<b>DEC</b>		
<b>SULIDAE</b>											
<i><b>Sula (Morus) capensis</b></i>											
- Southern Africa	-	346,000	346,000	<b>468,000</b>	<b>3</b>	-	DEC	<b>DEC</b>	<b>DEC</b>		
<b>PHALACROCORACIDAE</b>											
<i><b>Phalacrocorax coronatus</b></i>											
- Coastal Southwest Africa	5,330	8,700	8,700	<b>8,700</b>		?	STA	<b>STA</b>	<b>STA</b>		
<i><b>Phalacrocorax pygmeus</b></i>											
- Black Sea & Mediterranean	25,000	23,000-37,000	23,000-37,000	<b>23,000-37,000</b>		STA/INC	STA/INC	<b>STA/INC</b>	<b>STA/INC</b>		24: Increase in 1990s levelled off in 2000s, when range expanded into Central Europe
- Southwestern Asia	C	C	C	<b>C</b>		?	?	?	?		
<i><b>Phalacrocorax neglectus</b></i>											
- Coastal Southwest Africa	18,000	9,700	11,100	<b>11,100</b>		?	DEC	<b>DEC</b>	<b>DEC</b>		
<i><b>Phalacrocorax carbo carbo</b></i>											
- Northwest Europe	120,000	114,000	120,000	<b>120,000</b>		INC	INC	<b>INC</b>	<b>INC</b>		
<i><b>Phalacrocorax carbo sinensis</b></i>											
- Northern & Central Europe	200,000	275,000-340,000	380,000-405,000	<b>380,000-405,000</b>		INC	INC	<b>INC</b>	<b>INC</b>		24: Increasing Northern Europe, stable Central Europe

Population	CSR 1999	CSR 2002	CSR 3 2006	Proposed revision 2008	Source 2008 revision	Trend 1999	Trend 2002	Trend 2006	Proposed trend 2008	Source 2008 trend	Justification of changes
- Black Sea & Mediterranean	100,000	>130,000-160,000	350,000-450,000	<b>350,000-450,000</b>		INC	INC	INC	INC		
- West & Southwest Asia	100,000	100,000	100,000	<b>100,000</b>		?	?	?	?		
<i>Phalacrocorax carbo lucidus</i>											
Coastal West Africa			35,000	<b>35,000</b>				STA	STA		
Central & Eastern Africa	D	135,000-535,000	200,000-500,000	<b>200,000-500,000</b>		?	STA	STA	STA		
- Southern Africa	B	11,000-13,000	13,000	<b>13,000</b>		?	STA	STA	STA		
<i>Phalacrocorax nigrogularis</i>											
Persian Gulf & Arabian Sea	500,000-1,000,000	450,000-750,000				(DEC)	DEC				
Arabian Coast			270,000	<b>270,000</b>				DEC	DEC		
Gulf of Aden, Socotra, Arabian Sea			60,000	<b>60,000</b>				STA/IN C	STA/IN C		
<i>Phalacrocorax capensis</i>											
	550,000	216,000	300,000	<b>300,000</b>		?	DEC	DEC	DEC		
<b>ARDEIDAE</b>											
<i>Egretta ardesiaca</i>											
- Sub-Saharan Africa	B/C	B/C	C	<b>C</b>		DEC	DEC	STA	STA		
<i>Egretta vinaceigula</i>											
- South-central Africa	5,000-10,000	3,000-5,000	3,000-5,000	<b>3,000-5,000</b>		DEC	DEC	DEC	DEC		
<i>Egretta garzetta garzetta</i>											
- Sub-Saharan Africa	?	100,000-500,000	200,000-500,000	<b>200,000-500,000</b>		?	?	?	?		
- Europe, Black Sea & Med/W & C Africa	100,000-150,000	140,000-210,000				INC	INC				

Population	CSR 1999	CSR 2002	CSR 3 2006	Proposed revision 2008	Source 2008 revision	Trend 1999	Trend 2002	Trend 2006	Proposed trend 2008	Source 2008 trend	Justification of changes
W Europe, NW Africa			125,000-143,000	<b>125,000-143,000</b>				<b>INC</b>	<b>INC</b>		
C&E Europe, Black Sea, E Mediterranean			44,000-72,400	<b>44,000-72,400</b>				<b>STA</b>	<b>STA</b>		
- Western Asia/SW Asia, NE & E Africa	C	C	C	<b>C</b>		?	?	?	?		
<i>Egretta gularis gularis*</i>											
- West Africa	?	B/C	B/C	<b>B/C</b>		?	(STA)	<b>STA</b>	<b>STA</b>		
<i>Egretta gularis schistacea*</i>											
- NE Africa & Red Sea	?	B/C	B/C	<b>B/C</b>		?	?	?	?		
- SW Asia & South Asia	17,000	17,000	17,000	<b>17,000</b>		?	?	?	?		
<i>Egretta dimorpha*</i>											
- Coastal Eastern Africa	?	10,000	10,000	<b>10,000</b>		?	STA	<b>STA</b>	<b>STA</b>		
<i>Ardea cinerea cinerea</i>											
- Subsaharan Africa	?	D	D	<b>D</b>		?	STA	<b>STA</b>	<b>STA</b>		
- Europe & North Africa (bre)	400,000-500,000	480,000-600,000				INC	INC				
N & W Europe			263,000-286,000	<b>263,000-286,000</b>				<b>INC</b>	<b>INC</b>		
C & E Europe			189,000-256,000	<b>189,000-256,000</b>				<b>INC</b>	<b>INC</b>		24: Hardly increasing in Baltic and E Mediterranean
- West & SW Asia (bre)	B/C	C/D	C/D	<b>C/D</b>		?	STA/D EC	?	?		
<i>Ardea melanocephala</i>											
- Subsaharan Africa	D/E	100,000-500,000	100,000-500,000	<b>100,000-500,000</b>		INC	INC	<b>INC</b>	<b>INC</b>		
<i>Ardea purpurea purpurea</i>											
- Tropical Africa	C	75,000-100,000	75,000-100,000	<b>75,000-100,000</b>		?	STA	<b>STA</b>	<b>STA</b>		
- W Europe & W Mediterranean/W Africa	B	12,000-13,200	11,500-12,100	<b>11,500-12,100</b>		DEC	DEC	<b>DEC</b>	<b>DEC</b>		
- E Europe & SW Asia/Subsaharan Africa	D	D	135,000-300,000	<b>135,000-300,000</b>		(DEC)	DEC	<b>DEC</b>	<b>DEC</b>		

Population	CSR 1999	CSR 2002	CSR 3 2006	Proposed revision 2008	Source 2008 revision	Trend 1999	Trend 2002	Trend 2006	Proposed trend 2008	Source 2008 trend	Justification of changes
<i>Casmerodius albus albus</i>											
- W, C & SE Europe/Black Sea & Med	7,000-17,000	12,000-22,500	38,800-54,300	<b>38,800-54,300</b>		STA/INC	INC	<b>INC</b>	<b>INC</b>		
- West Asia/Southwest Asia	B/C	C	C	<b>C</b>		?	(INC)	<b>(INC)</b>	<b>(INC)</b>		
<i>Casmerodius albus melanorhynchos</i>											
- Subsaharan Africa & Madagascar	C	100,000-500,000	100,000-500,000	<b>100,000-500,000</b>		?	STA	<b>STA</b>	<b>STA</b>		
<i>Mesophoyx intermedia brachyrhyncha</i>											
- Subsaharan Africa	?	C	C	<b>C</b>		?	STA	<b>STA</b>	<b>STA</b>		
<i>Bubulcus ibis ibis</i>											
- Southern Africa	D	D	D	<b>D</b>		?	INC	<b>INC</b>	<b>INC</b>		
- Tropical Africa	E	E	E	<b>E</b>		?	?	?	?		
- SW Europe & NW Africa	>250,000	300,000-450,000				INC	INC				
SW Europe			250,000-310,000	<b>250,000-310,000</b>				<b>INC</b>	<b>INC</b>		
NW Africa			100,000-150,000	<b>100,000-150,000</b>				<b>INC</b>	<b>INC</b>		
- East Mediterranean & SW Asia	A/B	A/B	B/C	<b>B/C</b>		?	?	<b>INC</b>	<b>INC</b>		
<i>Ardeola ralloides ralloides</i>											
- Med., Black S. & N Africa/Subs. Africa	-	40,000-70,000				-	DEC				
SW Europe, NW Africa (bre)			2,700-5,600	<b>2,700-5,600</b>				<b>INC</b>	<b>INC</b>		
C & E Europe/Black Sea & E Mediterranean (bre)			42,000-76,000	<b>42,000-76,000</b>				<b>DEC</b>	<b>DEC</b>		
- West & SW Asia/Subsaharan Africa <sup>2</sup>	-	C	C	<b>C</b>		-	?	?	?		
<i>Ardeola ralloides paludivaga</i>											

Population	CSR 1999	CSR 2002	CSR 3 2006	Proposed revision 2008	Source 2008 revision	Trend 1999	Trend 2002	Trend 2006	Proposed trend 2008	Source 2008 trend	Justification of changes
- Subsaharan Africa & Madagascar	C	100,000-500,000	300,000-600,000	<b>300,000-600,000</b>		?	STA	<b>STA</b>	<b>STA</b>		
<i>Ardeola idae</i>											
- Madagascar & Aldabra/Cen & E Africa	5,000	2,000-6,000	2,000-6,000	<b>2,000-6,000</b>		DEC	DEC	<b>DEC</b>	<b>DEC</b>		
<i>Ardeola rufiventris</i>											
- Tropical Eastern & Southern Africa	B/C	B/C	B/C	<b>B/C</b>		?	?	?	?		
<i>Nycticorax nycticorax</i>											
- Subsaharan Africa & Madagascar	C	C/D	C/D	<b>C/D</b>		?	STA	<b>STA</b>	<b>STA</b>		
- Europe & NW Africa/Med & Africa	100,000-200,000	150,000-230,000				DEC	DEC				
W Europe, NW Africa (bre)			61,000-97,000	<b>61,000-97,000</b>				<b>DEC</b>	<b>DEC</b>		
C & E Europe, Black Sea, E Mediterranean (bre)			92,100-138,000	<b>92,100-138,000</b>				<b>DEC</b>	<b>DEC</b>		
- Western Asia/SW Asia & NE Africa	C	C	C	<b>C</b>		?	?	?	?		
<i>Ixobrychus minutus</i>											
- Europe & N Africa/Subsaharan Africa	D	D				DEC	DEC				
W Europe, NW Africa/Subsaharan Africa			11,900-17,900	<b>11,900-17,900</b>				<b>DEC</b>	<b>DEC</b>		
C & E Europe, Black Sea & E Mediterranean/Subsaharan Africa			110,000-325,000	<b>110,000-325,000</b>				<b>DEC</b>	<b>DEC</b>		
- West & SW Asia/Subsaharan Africa	C	C	C	<b>C</b>		?	?	?	?		
<i>Ixobrychus minutus payesii</i>											
- Subsaharan Africa	?	C	C	<b>C</b>		?	?	?	?		
<i>Ixobrychus sturmii</i>											

Population	CSR 1999	CSR 2002	CSR 3 2006	Proposed revision 2008	Source 2008 revision	Trend 1999	Trend 2002	Trend 2006	Proposed trend 2008	Source 2008 trend	Justification of changes
- Subsaharan Africa	B/C	C	C	C		?	?	?	?		
<i>Botaurus stellaris stellaris</i>											
- Europe (bre)	C	C				DEC	DEC				
W Europe, NW Africa (bre)			5,850-6,700	5,800-6,700				DEC	DEC		
C & E Europe, Black Sea & E Mediterranean (bre)			53,800-124,200	53,800-124,200				DEC	DEC		
- Southwestern Asia (win)	A/B	A/B	C	C		?	?	?	?		
<i>Botaurus stellaris capensis</i>											
- Southern Africa	?	5,000	5,000	5,000		?	DEC	DEC	DEC		
<b>CICONIIDAE</b>											
<i>Mycteria ibis</i>											
- Subsaharan Africa (excl. Madagascar)	C	50,000-100,000	75,000-100,000	75,000-100,000		STA	STA	STA	STA		
- Madagascar			<1,000	<1,000				DEC	DEC		
<i>Anastomus lamelligerus lamelligerus</i>											
- Subsaharan Africa	C/D	400,000-800,000	300,000-500,000	300,000-500,000		STA	STA	STA	STA		
<i>Ciconia nigra</i>											
- Southern Africa	<1,500	2,850-4,740	1,560-4,050	1,560-4,050		STA	STA	(STA)	(STA)		
- SW Europe/West Africa	1,000	1,300-1,370	1,300-1,370	1,300-1,370		STA/INC	INC	INC	INC		
- Central & E Europe/Subsaharan Africa	20,000-30,000	19,500-28,000	19,500-28,000	19,500-28,000		?	DEC	DEC	DEC		
<i>Ciconia abdimii</i>											
- Subsaharan Africa & SW Arabia	D	300,000-600,000	300,000-600,000	300,000-600,000		STA	(DEC)	DEC	DEC		
<i>Ciconia episcopus microscelis</i>											
Sub-Saharan Africa	C	B/C	B/C	B/C		?	?	?	?		

Population	CSR 1999	CSR 2002	CSR 3 2006	Proposed revision 2008	Source 2008 revision	Trend 1999	Trend 2002	Trend 2006	Proposed trend 2008	Source 2008 trend	Justification of changes
<i>Ciconia ciconia ciconia</i>											
- Southern Africa	30	24	20	20		INC	STA	STA	STA		
W Europe & NW Africa/Subsaharan Africa	100,000	93,000	93,000	93,000		STA/INC	INC	INC	INC		
- Central & E Europe/Subsaharan Africa	400,000	390,000-400,000	390,000-400,000	390,000-400,000		DEC	STA	STA	STA		
- West Asia/Southwest Asia	C	B	B	B		?	DEC	DEC	DEC		
<i>Leptoptilos crumeniferus</i>											
- Subsaharan Africa	100,000	100,000-300,000	200,000-500,000	200,000-500,000		INC	INC	INC	INC		
<b>BALAENICIPITIDAE</b>											
<i>Balaeniceps rex</i>											
- Central Tropical Africa	12,000-15,000	5,000-10,000	5,000-8,000	5,000-8,000		?	DEC	DEC	DEC		
<b>THRESKIORNITHIDAE</b>											
<i>Plegadis falcinellus falcinellus</i>											
- Subsaharan Africa (bre)	?	1.0-2.0 million	1.0-2.0 million	1.0-2.0 million		?	?	?	?		
- Black Sea & Med/West Africa	40,000-50,000	49,000-57,000	48,000-66,000	48,000-66,000		DEC	DEC	DEC	DEC		
- Southwestern Asia/E Africa	C	C	C	C		?	?	?	?		
<i>Geronticus eremita</i>											
- Morocco	200	190	22 7	22 7		DEC	STA	DEC	DEC		
- Southwestern Asia	>27	>27	7	7		DEC	DEC	DEC	DEC		
<i>Threskiornis aethiopicus aethiopicus</i>											
- Subsaharan Africa	D	200,000-450,000	200,000-450,000	200,000-450,000		STA	STA	STA	STA		
- Iraq & Iran	200	200	200	200		DEC	DEC	DEC	DEC		

Population	CSR 1999	CSR 2002	CSR 3 2006	Proposed revision 2008	Source 2008 revision	Trend 1999	Trend 2002	Trend 2006	Proposed trend 2008	Source 2008 trend	Justification of changes
<i>Platalea leucorodia leucorodia</i>											
- West Europe/W Medit. & West Africa	6,500	9,945	11,300	<b>11,300</b>		INC	INC	INC	INC		
- C & SE Europe/Med & Tropical Africa	5,000-15,000	11,670	11,670	<b>11,670</b>		DEC	DEC	DEC	DEC		
<i>Platalea leucorodia archeri</i>											
- Red Sea & Somalia	500-1,500	1,250	1,500-2,250	<b>1,500-2,250</b>		?	?	DEC	DEC		
<i>Platalea leucorodia balsaci</i>											
- Coastal West Africa (Mauritania)	5,000-6,000	7,000	6,000-7,000	<b>6,000-7,000</b>		?	STA	STA	STA		
<i>Platalea leucorodia major</i>											
- W Asia/SW & S Asia	23,000	23,000	23,000	<b>23,000</b>		?	?	?	?		
<i>Platalea alba</i>											
- Sub-Saharan Africa	A/B	B/C	B/C	<b>B/C</b>		?	STA	STA	STA		
- Madagascar			1,000-5,000	<b>1,000-5,000</b>				?	?		
<b>PHOENICOPTERIDAE</b>											
<i>Phoenicopterus roseus</i>											
- West Africa	40,000	40,000	45,000-95,000	<b>45,000-95,000</b>		?	STA	INC	INC		
- Eastern Africa	35,000	35,000	35,000	<b>35,000</b>		DEC	STA	STA	STA		
- Southern Africa (to Madagascar)	55,000	65,000-87,000	65,000-87,000	<b>65,000-87,000</b>		DEC	STA	STA	STA		
- Western Mediterranean	80,000	100,000	100,000-165,000	<b>100,000-165,000</b>		INC	INC	INC	INC		
East Mediterranean, SW & S Asia	500,000	290,000				STA	STA				
East Mediterranean			60,000	<b>60,000</b>				STA	STA		
SW & S Asia			240,000	<b>240,000</b>				?	?		
<i>Phoenicopterus minor</i>											
- West Africa	15,000	15,000	15,000-25,000	<b>15,000-25,000</b>		STA	STA	STA	STA		

Population	CSR 1999	CSR 2002	CSR 3 2006	Proposed revision 2008	Source 2008 revision	Trend 1999	Trend 2002	Trend 2006	Proposed trend 2008	Source 2008 trend	Justification of changes
- Eastern Africa	4,000,000	2.0-4.0 million	1.5-2.5 million	1.5-2.5 million		DEC	DEC	DEC	DEC		
- Southern Africa (to Madagascar)	40,000	55,000-65,000	55,000-65,000	55,000-65,000		DEC	STA	STA	STA		
<b>ANATIDAE</b>											
<i>Dendrocygna bicolor</i>											
- West Africa (Senegal to Chad)	100,000	100,000	50,000-100,000	50,000-100,000		?	?	?	?		
- Eastern & Southern Africa	200,000-500,000	150,000-350,000	150,000-350,000	150,000-350,000		?	?	?	?		
<i>Dendrocygna viduata</i>											
- West Africa (Senegal to Chad)	250,000	250,000-500,000	600,000-700,000	600,000-700,000		INC	INC	INC	INC		
- Eastern & Southern Africa	1.0-2.0 million	D	D	D		INC	INC	INC	INC		
<i>Thalassornis leuconotus leuconotus</i>											
- West Africa	1,000	<1,000	<500	<500		DEC	DEC	DEC	DEC		
- Eastern & Southern Africa	10,000-25,000	10,000-25,000	10,000-25,000	10,000-25,000		STA	STA	STA	STA		
<i>Oxyura leucocephala</i>											
- West Mediterranean (Spain & Morocco)	1,200	2,000-4,500	2,500	2,500		INC	INC	INC	INC		
- Algeria & Tunisia	400	400	400-600	400-600		STA	STA	STA	STA		
- E Mediterranean, Turkey & SW Asia	8,000-15,000	8,000-15,000	5,000-10,000	5,000-10,000		DEC	DEC	DEC	DEC		
<i>Oxyura maccoa</i>											
- Eastern Africa	15,000-25,000	1,500				DEC	DEC				
- Ethiopian Highlands			500-2,000	500-2,000				DEC	DEC		
- E Africa			1,500	1,500				DEC	DEC		

Population	CSR 1999	CSR 2002	CSR 3 2006	Proposed revision 2008	Source 2008 revision	Trend 1999	Trend 2002	Trend 2006	Proposed trend 2008	Source 2008 trend	Justification of changes
- Southern Africa	15,000-25,000	A	7,000-8,250	<b>7,000-8,250</b>		INC	INC	<b>INC</b>	<b>INC</b>		
<i>Cygnus olor</i>											
- NW Mainland & Central Europe	210,000	210,000	250,000	<b>250,000</b>		INC	INC	<b>INC</b>	<b>INC</b>		24: Increasing strongly in NW & Central Europe; decreasing in Baltic/Nordic
- Black Sea	45,000	45,000	45,000	<b>45,000</b>		INC	INC	<b>INC</b>	<b>DEC</b>		24: Improved data quality allows identification of a decrease
- W & Central Asia/Caspian	250,000	250,000	250,000	<b>250,000</b>		INC	INC	<b>INC</b>	<b>INC</b>		
<i>Cygnus cygnus</i>											
- Iceland/UK & Ireland	16,000	20,900	20,900	<b>20,900</b>		?	INC	<b>INC</b>	<b>INC</b>		
- NW Mainland Europe	59,000	59,000	59,000	<b>59,000</b>		INC	INC	<b>INC</b>	<b>INC</b>		
- N Europe & W Sib/B Sea & E Med	17,000	17,000	17,000	<b>12,000</b>	<b>24</b>	DEC	DEC	<b>DEC</b>	<b>DEC</b>		24: Steep decrease since mid 1990s apparently continuing
- W & Cent Siberia/Caspian	20,000	20,000	20,000	<b>20,000</b>		DEC	DEC	<b>DEC</b>	<b>DEC</b>		
<i>Cygnus columbianus bewickii</i>											
- W Siberia & NE Europe/NW Europe	29,000	29,000	20,000	<b>20,000</b>		INC	DEC	<b>DEC</b>	<b>DEC</b>		
- Northern Siberia/Caspian	500	500	1,000	<b>1,000</b>		?	?	?	?		
<i>Anser brachyrhynchus</i>											
- E Greenland & Iceland/UK	250,000	241,000	270,000	<b>270,000</b>		INC	INC	<b>INC</b>	<b>INC</b>		
- Svalbard/NW Europe	37,000	37,000	42,000	<b>42,000</b>		INC	STA	<b>INC</b>	<b>INC</b>		
<i>Anser fabalis fabalis</i>											
- NE Europe/NW Europe	100,000	100,000	70,000-90,000	<b>70,000-90,000</b>		STA	STA	<b>DEC</b>	<b>DEC</b>		
- W & C Sib/Turkmenistan to W China	-	?	5,000	<b>5,000</b>		-	?	<b>DEC?</b>	<b>DEC?</b>		
<i>Anser fabalis rossicus</i>											
- W & C Siberia/NE & SW Europe	600,000	600,000	600,000	<b>600,000</b>		?	?	?	?		
<i>Anser albifrons albifrons</i>											
- NW Siberia & NE Europe/NW Europe	600,000	600,000	1,000,000	<b>1,000,000</b>		INC	(INC)	<b>STA</b>	<b>STA</b>		

Population	CSR 1999	CSR 2002	CSR 3 2006	Proposed revision 2008	Source 2008 revision	Trend 1999	Trend 2002	Trend 2006	Proposed trend 2008	Source 2008 trend	Justification of changes
- Western Siberia/Central Europe	100,000	100,000	10,000-40,000	<b>10,000-40,000</b>		DEC	DEC	<b>DEC</b>	<b>DEC</b>		
- Western Siberia/Black Sea & Turkey	650,000	650,000	350,000-700,000	<b>350,000-700,000</b>		(STA)	STA	<b>STA</b>	<b>STA</b>		
- Northern Siberia/Caspian & Iraq	15,000	15,000	15,000	<b>15,000</b>		DEC	DEC	<b>DEC</b>	<b>DEC</b>		
<i>Anser albifrons flavirostris</i>											
- Greenland/Ireland & UK	33,000	30,000	27,000	<b>24,800</b>	<b>26</b>	INC	STA	<b>DEC</b>	<b>DEC</b>		
<i>Anser erythropus</i>											
- N Europe & W Sib/B Sea & Caspian	15,000	8,000-13,000	8,000-13,000	<b>8,000-13,000</b>		DEC	DEC	<b>DEC</b>	<b>DEC</b>		
<i>Anser anser anser</i>											
- Iceland/UK & Ireland	80,000	89,100	87,200	<b>87,200</b>		DEC	(STA)	<b>(STA)</b>	<b>(STA)</b>		
- NW Europe/SW Europe	200,000	400,000	500,000	<b>500,000</b>		INC	INC	<b>INC</b>	<b>INC</b>		
- Central Europe/N Africa	25,000	25,000	25,000	<b>25,000</b>		INC	INC	<b>INC</b>	<b>INC</b>		
<i>Anser anser rubrirostris</i>											
- Black Sea & Turkey	85,000	85,000	85,000	<b>85,000</b>		?	?	?	?		
- Western Siberia/Caspian & Iraq	>100,000	>100,000	250,000	<b>250,000</b>		INC	INC	<b>INC</b>	<b>INC</b>		
<i>Branta leucopsis</i>											
- E Greenland/Scotland & Ireland	40,000	54,100	56,400	<b>56,400</b>		INC	INC	<b>INC</b>	<b>INC</b>		
- Svalbard/SW Scotland	23,000	23,000	27,000	<b>27,000</b>		INC	INC	<b>INC</b>	<b>INC</b>		
- Russia/Germany & Netherlands	267,000	360,000	420,000	<b>420,000</b>		INC	INC	<b>INC</b>	<b>INC</b>		
<i>Branta bernicla bernicla</i>											
- Western Siberia/Western Europe	300,000	190,000	200,000	<b>200,000</b>		INC/ST A	DEC	<b>DEC</b>	<b>DEC</b>		
<i>Branta bernicla hrota</i>											
- Svalbard/Denmark & UK	5,000	5,000	7,000	<b>7,000</b>		STA	STA	<b>INC</b>	<b>INC</b>		
- Canada & Greenland/Ireland	20,000	20,000	26,400	<b>26,400</b>		STA	STA	<b>STA</b>	<b>STA</b>		
<i>Branta ruficollis</i>											

Population	CSR 1999	CSR 2002	CSR 3 2006	Proposed revision 2008	Source 2008 revision	Trend 1999	Trend 2002	Trend 2006	Proposed trend 2008	Source 2008 trend	Justification of changes
- Northern Siberia/Black Sea & Caspian	70,000	88,000	38,500	<b>38,500</b>		STA/INC	INC	DEC	DEC		
<i>Alopochen aegyptiacus</i>											
- West Africa	10,000-25,000	10,000-25,000	5,000-10,000	<b>5,000-10,000</b>		?	DEC	DEC	DEC		
- Eastern & Southern Africa	200,000-500,000	200,000-500,000	200,000-500,000	<b>200,000-500,000</b>		?	STA	STA	STA		
<i>Tadorna ferruginea</i>											
- Northwest Africa	3,000	3,000	3,000	<b>3,000</b>		DEC	DEC	DEC	DEC		
- E Mediterranean & Black Sea/NE Africa	20,000	20,000	20,000	<b>20,000</b>		DEC	DEC	DEC	DEC		
- Western Asia & Caspian/Iran & Iraq	35,000	35,000	50,000	<b>50,000</b>		INC	INC	INC	INC		
<i>Tadorna cana</i>											
- Southern Africa	42,000	42,000	50,000	<b>50,000</b>		STA	STA	INC	INC		
<i>Tadorna tadorna</i>											
- Northwestern Europe	300,000	300,000	300,000	<b>300,000</b>		INC	STA	STA	STA		
- Black Sea & Mediterranean	75,000	75,000	75,000	<b>75,000</b>		STA/DEC	DEC	DEC	DEC		24: Increasing in W Mediterranean, decreasing in E Mediterranean/Black Sea
- Western Asia/Caspian & Middle East	80,000	80,000	80,000	<b>80,000</b>		INC	INC	INC	INC		
<i>Plectropterus gambensis gambensis</i>											
- West Africa	50,000	100,000	50,000-100,000	<b>50,000-100,000</b>		DEC	STA	STA	STA		
- Eastern Africa (Sudan to Zambia)	200,000-300,000	200,000-300,000	200,000-300,000	<b>200,000-300,000</b>		STA	STA	STA	STA		
<i>Plectropterus gambensis niger</i>											
- Southern Africa	50,000-100,000	50,000-100,000	50,000-100,000	<b>50,000-100,000</b>		STA	INC	INC	INC		
<i>Sarkidiornis melanotos melanotos</i>											

Population	CSR 1999	CSR 2002	CSR 3 2006	Proposed revision 2008	Source 2008 revision	Trend 1999	Trend 2002	Trend 2006	Proposed trend 2008	Source 2008 trend	Justification of changes
- West Africa	50,000	50,000-100,000	50,000-80,000	<b>50,000-80,000</b>		STA	STA	DEC	DEC		
- Southern & Eastern Africa	500,000-1,000,000	100,000-500,000	100,000-500,000	<b>100,000-500,000</b>		STA	STA	STA	STA		
<i>Nettapus auritus</i>											
- West Africa	20,000-30,000	<10,000	<10,000	<b>&lt;10,000</b>		?	DEC	DEC	DEC		
- Southern & Eastern Africa	100,000-250,000	100,000-250,000	100,000-250,000	<b>100,000-250,000</b>		?	?	?	?		
<i>Anas capensis</i>											
Eastern Africa (Rift Valley)	A/B	5,000-15,000	5,750-7,000	<b>5,750-7,000</b>		STA	DEC	STA	STA		
Lake Chad Basin			<500	<b>&lt;500</b>				DEC	DEC		
- Southern Africa (N to Angola & Zambia)	100,000-250,000	100,000-250,000	100,000-250,000	<b>100,000-250,000</b>		INC	INC	INC	INC		
<i>Anas strepera strepera</i>											
- Northwestern Europe	30,000	50,000	60,000	<b>60,000</b>		INC	INC	INC	INC		
- NE Europe/Black Sea & Med	75,000-150,000	75,000-150,000	75,000-150,000	<b>75,000-150,000</b>		DEC	DEC	(STA)	(STA)		
- W Siberia/SW Asia & NE Africa	130,000	130,000	130,000	<b>130,000</b>		?	?	?	?		
<i>Anas penelope</i>											
- W Siberia & NE Europe/NW Europe	1,250,000	2,000,000	1,500,000	<b>1,500,000</b>		INC	INC	STA	STA		
- W Siberia & NE Europe/B Sea & Med	560,000	300,000	300,000	<b>300,000</b>		DEC	DEC	DEC	DEC		24: Strong decrease in E Mediterranean/Black Sea, moderate increase in W Mediterranean
- Western Siberia/SW Asia & NE Africa	250,000	250,000	250,000	<b>250,000</b>		DEC	DEC	DEC	DEC		
<i>Anas platyrhynchos platyrhynchos</i>											
- Northwestern Europe	5,000,000	4,500,000	4,500,000	<b>4,500,000</b>		STA	DEC	DEC/STA	DEC	24	
- N Europe/Western	1,000,000	1,000,000	1,000,000	<b>1,000,000</b>		INC	(STA)	(STA)	INC	24	

Population	CSR 1999	CSR 2002	CSR 3 2006	Proposed revision 2008	Source 2008 revision	Trend 1999	Trend 2002	Trend 2006	Proposed trend 2008	Source 2008 trend	Justification of changes
Mediterranean											
- E Europe/Black Sea & E Mediterranean	2,250,000	2,000,000	2,000,000	<b>2,000,000</b>		DEC	DEC	(STA)	DEC	24	
- Western Siberia/SW Asia	800,000	800,000	800,000	<b>800,000</b>		?	?	?	?		
<i>Anas undulata undulata</i>											
- Southern Africa	>100,000	>100,000	>100,000	<b>&gt;100,000</b>		STA	STA	STA	STA		
<i>Anas clypeata</i>											
- NW & Central Europe (win)	40,000	40,000	40,000	<b>40,000</b>		STA	(STA)	STA	STA		
- W Sib, NE & E Eur/S Eur & W Africa	450,000	450,000	450,000	<b>450,000</b>		(DEC)	?	STA	STA		24: Increasing W Mediteranean, Decreasing E Mediterranean
- W Siberia/SW Asia, NE & E Africa	400,000	400,000	400,000	<b>400,000</b>		DEC	(DEC)	(DEC)	(DEC)		
<i>Anas erythrorhyncha</i>											
- Southern Africa	500,000-1,000,000	500,000-1,000,000	500,000-1,000,000	<b>500,000-1,000,000</b>		STA	STA	STA	STA		
- Eastern Africa	100,000-300,000	100,000-300,000	100,000-300,000	<b>100,000-300,000</b>		STA	STA	STA	STA		
- Madagascar	15,000-25,000	15,000-25,000	15,000-25,000	<b>15,000-25,000</b>		DEC	DEC	DEC	DEC		
<i>Anas acuta</i>											
- Northwestern Europe	60,000	60,000	60,000	<b>60,000</b>		DEC	DEC	STA	STA		
- W Sib, NE & E Eur/S Eur & W Africa	1,200,000	1,000,000	750,000	<b>750,000</b>		DEC	DEC	DEC	DEC		24: Increasing W Mediteranean, Decreasing E Mediterranean
- W Siberia/SW Asia & Eastern Africa	700,000	700,000	700,000	<b>700,000</b>		?	?	?	?		
<i>Anas querquedula</i>											
- W Siberia & Europe/West Africa	2,000,000	2.0-3.3 million	2.0 million	<b>2.0 million</b>		DEC	DEC	DEC	DEC		
- W Siberia/SW Asia, NE & East Africa	100,000-200,000	100,000-200,000	100,000-200,000	<b>100,000-200,000</b>		?	?	?	?		
<i>Anas crecca crecca</i>											
- Northwestern Europe	400,000	400,000	500,000	<b>500,000</b>		INC	STA	INC	INC		

Population	CSR 1999	CSR 2002	CSR 3 2006	Proposed revision 2008	Source 2008 revision	Trend 1999	Trend 2002	Trend 2006	Proposed trend 2008	Source 2008 trend	Justification of changes
- W Siberia & NE Europe/B Sea & Med	750,000-1.375 million	1,000,000	750,000-1.375 million	750,000-1.375 million		STA	(STA)	(STA)	(STA)		24: Increasing W Mediteranean, Decreasing E Mediterranean
- W Siberia/SW Asia & NE Africa	1,500,000	1,500,000	1,500,000	<b>1,500,000</b>		DEC	DEC	DEC	DEC		
<i>Anas hottentota</i>											
- Lake Chad Basin	5,000-10,000	<1,000	1,000-5,000	<b>1,000-5,000</b>		DEC	DEC	DEC	DEC		
- Eastern Africa (south to N Zambia)	100,000-300,000	C	C	C		STA	STA	STA	STA		
- Southern Africa (north to S Zambia)	C	C	C	C		STA	STA	STA	STA		
<i>Marmaronetta angustirostris</i>											
- W Mediterranean/W Med & West Africa	3,000	3,000-5,000	3,000-5,000	<b>3,000-5,000</b>		DEC	?	FLU	FLU		
- Eastern Mediterranean	1,000	1,000	1,000	<b>1,000</b>		DEC	DEC	DEC	DEC		
- Southwestern Asia	5,000-15,000	5,000-15,000	5,000-15,000	<b>5,000-15,000</b>		DEC	DEC	DEC	DEC		
<i>Netta rufina</i>											
- SW & Cent Europe/W Mediterranean	25,000	50,000	50,000	<b>50,000</b>		INC	INC	INC	INC		24: Trends of rapid increase in Central Europe and decrease in W Mediterranean levelled off in 2000s
- Black Sea & E Mediterranean	50,000	20,000-43,500	20,000-43,500	<b>20,000-43,500</b>		DEC	DEC	DEC	DEC		
- Western & Central Asia/SW Asia	200,000	250,000	250,000	<b>250,000</b>		STA	(STA)	(STA)	(STA)		
<i>Netta erythrophthalma brunnea</i>											
- Southern & Eastern Africa	30,000-70,000	30,000-70,000	30,000-70,000	<b>30,000-70,000</b>		STA	STA	STA	STA		
<i>Aythya ferina</i>											
- NE Europe/NW Europe	350,000	350,000	350,000	<b>300,000</b>		DEC	STA	DEC	DEC		24: Continuing long-term decrease
- Central & NE Europe/B Sea & Medit.	1,000,000	1,100,000	1,000,000	<b>800,000</b>		DEC	INC	DEC	DEC		24: Continuing long-term decrease
- Western Siberia/SW Asia	350,000	350,000	350,000	<b>350,000</b>		(DEC)	(DEC)	(DEC)	(DEC)		

Population	CSR 1999	CSR 2002	CSR 3 2006	Proposed revision 2008	Source 2008 revision	Trend 1999	Trend 2002	Trend 2006	Proposed trend 2008	Source 2008 trend	Justification of changes
<i>Aythya nyroca</i>											
- W Mediterranean/North & West Africa	2,000-3,000	2,000-3,000	2,400-2,600	<b>2,400-2,600</b>		DEC	DEC	<b>DEC</b>	<b>DEC</b>		
- E Europe/E Medit. & Sahelian Africa	10,000-50,000	40,000-65,000	36,000-54,000	<b>36,000-54,000</b>		DEC	DEC	<b>DEC</b>	<b>DEC</b>		
- Western Asia/SW Asia & NE Africa	5,000	C	C	<b>C</b>		DEC	?	<b>DEC</b>	<b>DEC</b>		
<i>Aythya fuligula</i>											
- Northwestern Europe (win)	1,000,000	1,200,000	1,200,000	<b>1,200,000</b>		INC	INC	<b>STA</b>	<b>STA</b>		
- Central Europe, Black Sea & Med (win)	600,000	700,000	700,000	<b>600,000</b>	<b>24</b>	INC	INC	<b>STA</b>	<b>DEC</b>	<b>24</b>	24: Decreasing in Central Europe, West Mediterranean, and East Mediterranean/Black Sea
- W Siberia/SW Asia & NE Africa	200,000	200,000	200,000	<b>200,000</b>		?	?	?	?		
<i>Aythya marila marila</i>											
- Northern Europe/Western Europe	310,000	310,000	310,000	<b>310,000</b>		?	STA	<b>STA</b>	<b>STA</b>		
- W Siberia/Black Sea & Caspian	100,000-200,000	100,000-200,000	100,000-200,000	<b>100,000-200,000</b>		?	?	?	?		
<i>Somateria mollissima mollissima</i>											
- Baltic, Denmark & Netherlands	1,350,000-1,700,000	850,000-1,200,000	760,000	<b>760,000</b>		STA	DEC	<b>DEC</b>	<b>DEC</b>		
- Norway & Russia	300,000-550,000	360,000-540,000	300,000-550,000	<b>300,000-550,000</b>		STA	STA	<b>STA</b>	<b>STA</b>		
<i>Somateria mollissima borealis</i>											
- Svalbard & Franz Joseph (bre)	40,000-80,000	40,000-80,000	40,000-80,000	<b>40,000-80,000</b>		STA	STA	<b>STA</b>	<b>STA</b>		
<i>Somateria spectabilis</i>											
- E Greenland, NE Europe & W Siberia	300,000	300,000	300,000	<b>300,000</b>		(STA)	STA	<b>STA</b>	<b>STA</b>		
<i>Polysticta stelleri</i>											

Population	CSR 1999	CSR 2002	CSR 3 2006	Proposed revision 2008	Source 2008 revision	Trend 1999	Trend 2002	Trend 2006	Proposed trend 2008	Source 2008 trend	Justification of changes
- Western Siberia/NE Europe	40,000	30,000-50,000	10,000-15,000	<b>10,000-15,000</b>		INC	STA/INC	DEC	DEC		
<i>Clangula hyemalis</i>											
- Iceland & Greenland	150,000	100,000-150,000	100,000-150,000	<b>100,000-150,000</b>		STA	STA	STA	STA		
- Western Siberia/North Europe	4,600,000	4,600,000	4,600,000	<b>4,600,000</b>		STA	STA	STA	STA		
<i>Melanitta nigra nigra</i>											
- W Siberia & N Eur/W Eur & NW Africa	1,600,000	1,600,000	1,600,000	<b>1,600,000</b>		STA	STA	STA	STA		
<i>Melanitta fusca fusca</i>											
- W Siberia & N Europe/NW Europe	1,000,000	1,000,000	1,000,000	<b>1,000,000</b>		STA	STA	STA	STA		
- Black Sea & Caspian	1,500	1,500	1,500	<b>1,500</b>		?	?	?	?		
<i>Bucephala clangula clangula</i>											
- NW & Central Europe (win)	300,000	400,000	1 million – 1.3 million	<b>1 million – 1.3 million</b>		INC	INC	STA	STA		
- NE Europe/Adriatic	75,000	75,000	200,000	<b>200,000</b>		?	?	?	?		
- W Siberia & NE Europe/Black Sea	20,000	20,000	60,000	<b>60,000</b>		?	?	?	?		
- Western Siberia/Caspian	25,000	25,000	D	<b>D</b>		?	?	?	?		
<i>Mergellus albellus</i>											
- NW & Central Europe (win)	25,000-30,000	40,000	40,000	<b>40,000</b>		STA	INC	?	STA	24	24: Trend close to stable in both NW and Central Europe
- NE Eur/Black Sea & E Mediterranean	35,000	35,000	35,000	<b>35,000</b>		?	?	?	?		24: Improving data quality suggests decreasing trend
- Western Siberia/SW Asia	30,000	30,000	30,000	<b>30,000</b>		(DEC)	(DEC)	?	?		
<i>Mergus serrator serrator</i>											
- NW & Central Europe (win)	145,000	170,000	170,000	<b>170,000</b>		STA	INC	?	?		
- NE Europe/Black Sea & Med	50,000	50,000	50,000	<b>50,000</b>		?	?	?	?		
- Western Siberia/SW &	<10,000	<10,000	<10,000	<b>&lt;10,000</b>		?	?	?	?		

Population	CSR 1999	CSR 2002	CSR 3 2006	Proposed revision 2008	Source 2008 revision	Trend 1999	Trend 2002	Trend 2006	Proposed trend 2008	Source 2008 trend	Justification of changes
Cent Asia											
<i>Mergus merganser merganser</i>											
- NW & Central Europe (win)	200,000	250,000	266,100	<b>266,100</b>		STA	INC	?	?		
- NE Europe/Black Sea	10,000	10,000	10,000	<b>10,000</b>		?	?	?	?		
- Western Siberia/Caspian	20,000	20,000	20,000	<b>20,000</b>		?	?	?	?		
<b>GRUIDAE</b>											
<i>Balearica pavonina pavonina</i>											
- West Africa (Senegal to Chad)	11,500-17,500	15,000	15,000	<b>15,000</b>		DEC	DEC	DEC	DEC		
<i>Balearica pavonina ceciliae</i>											
- Eastern Africa (Sudan to Uganda)	55,000-60,000	25,000-55,000	28,000-55,000	<b>28,000-55,000</b>		DEC	DEC	DEC	DEC		
<i>Balearica regulorum regulorum</i>											
- S Africa (N to Angola & S Zimbabwe)	<10,000	8,000-12,000	7,000-9,000	<b>7,000-9,000</b>		DEC	STA	STA	STA		
<i>Balearica regulorum gibbericeps</i>											
- Eastern Africa (Kenya to Mozambique)	75,000-85,000	50,000-65,000	43,000-55,000	<b>43,000-55,000</b>		DEC	DEC	DEC	DEC		
<i>Grus leucogeranus</i>											
- Iran (win)	9	3	4	<b>4</b>		STA	DEC	DEC	DEC		
<i>Grus virgo</i>											
- Black Sea (Ukraine)/NE Africa	500	450-510	600-750	<b>600-750</b>		DEC	DEC	STA	STA		
- Turkey (bre)	<100	60-90	30-60	<b>30-60</b>		?	DEC	DEC	DEC		
- Kalmykia/NE Africa	30,000-35,000	30,000-35,000	60,000-75,000	<b>60,000-75,000</b>		STA	STA/INC	INC	INC		
<i>Grus paradisea</i>											

Population	CSR 1999	CSR 2002	CSR 3 2006	Proposed revision 2008	Source 2008 revision	Trend 1999	Trend 2002	Trend 2006	Proposed trend 2008	Source 2008 trend	Justification of changes
- Extreme Southern Africa	21,000	20,000-21,000	>25,500	>25,500		DEC	STA	STA	STA		
<i>Grus carunculatus</i>											
- Central & Southern Africa	13,000-15,000	8,000	<7,550	<7,550		DEC	DEC	DEC	DEC		
<i>Grus grus</i>											
- Northwest Europe/Iberia & Morocco	60,000-70,000	75,000	150,000	150,000		INC	INC	INC	INC		
- NE & Central Europe/North Africa	>60,000	70,000	90,000	90,000		STA/INC	DEC	INC	INC		
- E Eur/Turkey, Mid. East & NE Africa	35,000	35,000	35,000	35,000		DEC	DEC	DEC	DEC		
- Turkey & Georgia (bre)	200-500	300-900	200-500	200-500		DEC	DEC	DEC	DEC		
- Western Siberia/South Asia	55,000	70,000	70,000	70,000		DEC	?	?	?		
<b>RALLIDAE</b>											
<i>Sarothrura elegans elegans</i>											
- NE, Eastern & Southern Africa	?	?	?	?		?	?	(STA)	(STA)		
<i>Sarothrura elegans reichenovi</i>											
- S West Africa to Central Africa	?	?	?	?		?	?	?	?		
<i>Sarothrura boehmi</i>											
- Central Africa	?	?	A	A		?	DEC	DEC	DEC		
<i>Sarothrura ayresi</i>											
- Ethiopia & Southern Africa <sup>4</sup>	<1,000	700				?	DEC				
Ethiopia			450-650	450-650				DEC	DEC		
Southern Africa			235	235				DEC	DEC		
<i>Rallus aquaticus aquaticus</i>											

Population	CSR 1999	CSR 2002	CSR 3 2006	Proposed revision 2008	Source 2008 revision	Trend 1999	Trend 2002	Trend 2006	Proposed trend 2008	Source 2008 trend	Justification of changes
- Europe & North Africa	D	390,000-1,170,000	D	D		STA	STA	DEC	DEC		
<i>Rallus aquaticus korejewi</i>											
- Western Siberia/Southwest Asia	?	?	?	?		?	?	?	?		
<i>Rallus caerulescens</i>											
- Southern & Eastern Africa	?	?	?	?		?	?	?	?		
<i>Crexopsis egregia</i>											
- Sub-Saharan Africa	?	?	?	?		?	?	?	?		
<i>Crex crex</i>											
- Europe & West Asia/Sub-Saharan Africa	D	3.4-6.0 million	E	E		DEC	DEC	DEC	DEC		
<i>Amaurornis flavirostris</i>											
- Sub-Saharan Africa	E	E	E	E		?	?	?	?		
<i>Porzana parva parva</i>											
- Western Eurasia/Africa	C/D	D	D	D		DEC	DEC	DEC	DEC		
<i>Porzana pusilla intermedia</i>											
- Europe (bre)	B	10,000-20,000	2,000-10,000	2,000-10,000		DEC	STA/D EC	?	?		
<i>Porzana porzana</i>											
- Europe/Africa	D	D	D	D		DEC	DEC	FLU	FLU		
<i>Aenigmatolimnas marginalis</i>											
- Sub-Saharan Africa	?	?	A/B	A/B		(DEC)	DEC	DEC	DEC		
<i>Porphyrio alleni</i>											
- Sub-Saharan Africa	?	?	C/D	C/D		?	?	?	?		
<i>Gallinula chloropus chloropus</i>											
- Europe & North Africa	E	2.6-4.5 million	>2.7-5.1 million	>2.7-5.1 million		STA	STA	STA	STA		24: Increases in Baltic, NW & Central Europe offset by decreases in W & E Mediterranean/Black Sea
- West & Southwest Asia	D	D	D	D		?	?	?	?		
<i>Gallinula angulata</i>											

Population	CSR 1999	CSR 2002	CSR 3 2006	Proposed revision 2008	Source 2008 revision	Trend 1999	Trend 2002	Trend 2006	Proposed trend 2008	Source 2008 trend	Justification of changes
- Subsaharan Africa	?	C/D	C/D	C/D		?	?	?	?		
<i>Fulica cristata</i>											
- Subsaharan Africa	D/E	D/E	D	D		?	?	?	?		
- Spain & Morocco	A	5,000-10,000	5,000	5,000		?	?	DEC	DEC		
- Madagascar			2,000-6,000	2,000-6,000				DEC	DEC		
<i>Fulica atra atra</i>											
- Northwest Europe (win)	1.5 million	1.75 million	1.75 million	1.75 million		STA	INC	STA	STA		
- Black Sea & Mediterranean (win)	2.5 million	2.5 million	2.5 million	2.5 million		(STA)	(INC)	?	?		24: Increasing W Mediterranean, decreasing in E Mediterranean/Black Sea
- Southwest Asia (win)	2.0 million	2.0 million	2.0 million	2.0 million		?	?	?	?		
<b>DROMADIDAE</b>											
<i>Dromas ardeola</i>											
- NW Indian Ocean, Red Sea & Gulf	43,000	43,000	60,000-80,000	60,000-80,000		?	(STA)	(STA)	(STA)		
<b>HAEMATOPODIDAE</b>											
<i>Haematopus ostralegus ostralegus</i>											
- Europe/S & W Europe & NW Africa	1,000,000	1,020,000	1,020,000	820,000	15	INC	INC	DEC	DEC	15	Decrease estimated in 15 not apparent in 24
<i>Haematopus ostralegus longipes</i>											
- SE Eur & W Asia/SW Asia & NE Africa	25,000	100,000-200,000	100,000-200,000	100,000-200,000		?	(STA)	(DEC)	(DEC)		
<i>Haematopus moquini</i>											
- Coastal Southern Africa	4,780	4,800	5,000-6,000	5,000-6,000		?	STA	INC	INC		
<b>RECURVIROSTRIDAE</b>											
<i>Himantopus himantopus himantopus</i>											

Population	CSR 1999	CSR 2002	CSR 3 2006	Proposed revision 2008	Source 2008 revision	Trend 1999	Trend 2002	Trend 2006	Proposed trend 2008	Source 2008 trend	Justification of changes
- Subsaharan Africa (excluding south)	?	D	100,000-200,000	<b>100,000-200,000</b>		?	?	?	?		
- Southern Africa ('meridionalis')	-	15,000-30,000	15,000-30,000	<b>15,000-30,000</b>		-	INC	<b>INC</b>	<b>INC</b>		
- SW Europe & NW Africa/W Africa	40,000	71,000-82,000	71,000-82,000	<b>71,000-82,000</b>		STA	STA	<b>STA</b>	<b>STA</b>		24: Increasing in W Mediterranean
- Central Europe & E Medit./N-C Africa	30,000-60,000	23,000-44,000	40,000-60,000	<b>40,000-60,000</b>		STA	?	<b>STA?</b>	<b>STA?</b>		24: Decreasing in E Mediterranean
- W, C & SW Asia/SW Asia & NE Africa	B	20,000-50,000	30,000-70,000	<b>30,000-70,000</b>		?	?	?	?		
<i>Recurvirostra avosetta</i>											
- Southern Africa	10,000-20,000	19,300	19,300	<b>19,300</b>		INC	(INC)	<b>INC?</b>	<b>INC?</b>		
- Eastern Africa	?	C	C	<b>C</b>		?	?	?	?		
- Western Europe & NW Africa (bre)	67,000	73,000	73,000	<b>73,000</b>		INC	STA	<b>STA</b>	<b>STA</b>		24: Increasing in NW Europe, stable in W Mediteranean
- SE Europe, Black Sea & Turkey (bre)	C	47,000	47,000	<b>47,000</b>		(DEC)	STA/D EC	<b>STA/DEC?</b>	<b>STA/DEC?</b>		24: Decreasing in E Mediterranean/Black Sea
- W & SW Asia/Eastern Africa	B	B	B	<b>B</b>		?	(STA)	<b>STA?</b>	<b>STA?</b>		
<b>BURHINIDAE</b>											
<i>Burhinus senegalensis</i>											
- West Africa	?	B	B	<b>B</b>		?	?	?	?		
<i>Burhinus senegalensis inornatus</i>											
- Northeast & Eastern Africa	?	B	B	<b>B</b>		?	?	?	?		
<b>GLAREOLIDAE</b>											
<i>Pluvianus aegyptius</i>											
- West & Eastern Africa	?	B				?	?				
West Africa			20,000-50,000	<b>20,000-50,000</b>				<b>STA</b>	<b>STA</b>		

Population	CSR 1999	CSR 2002	CSR 3 2006	Proposed revision 2008	Source 2008 revision	Trend 1999	Trend 2002	Trend 2006	Proposed trend 2008	Source 2008 trend	Justification of changes
East Africa			A/B	A/B				DEC	DEC		
Lower Congo basin			A	A				?	?		
<i>Glareola pratincola pratincola</i>											
- W Europe & NW Africa/West Africa	16,000-20,000	18,000-19,500	18,000-19,500	18,000-19,500		?	STA	STA	STA		
- Black Sea & E Med/E Sahel zone	B	16,000-31,000	16,000-32,000	16,000-32,000		DEC	DEC	DEC	DEC		
- SW Asia/SW Asia & NE Africa	B/C	B/C	B/C	B/C		?	?	?	?		
<i>Glareola nordmanni</i>											
- SE Europe & W Asia/Southern Africa	D	29,000-45,000	29,000-45,000	136,000-180,000	23	DEC	DEC	DEC	DEC	23	Better information based on extensive surveys of breeding areas in Kazakhstan
<i>Glareola ocularis</i>											
- Madagascar/East Africa	?	A/B	5,000-10,000	5,000-10,000		?	?	DEC	DEC		
<i>Glareola nuchalis nuchalis</i>											
- Eastern & Central Africa	?	C	C	C		DEC	?	?	?		
<i>Glareola nuchalis liberiae</i>											
- West Africa	?	B/C	>100,000	100,000-200,000	3	?	?	?	?		
<i>Glareola cinerea cinerea</i>											
- SE West Africa & Central Africa	?	B/C	B	B		?	?	?	?		
<b>CHARADRIIDAE</b>											
<i>Pluvialis apricaria apricaria</i>											
- Britain, Ireland, DK, Ger & Baltic (bre)	70,000	69,000	140,000-210,000	140,000-210,000		DEC	DEC	DEC	DEC		
<i>Pluvialis apricaria altifrons</i>											
- Iceland & Faroes/E Atlantic coast	750,000	930,000	930,000	930,000		(STA)	(STA)	(STA)	(STA)		
- N Europe/W Europe & NW Africa	1,000,000	645,000-954,000	500,000-1,000,000	500,000-1,000,000		STA	STA	STA	STA		

Population	CSR 1999	CSR 2002	CSR 3 2006	Proposed revision 2008	Source 2008 revision	Trend 1999	Trend 2002	Trend 2006	Proposed trend 2008	Source 2008 trend	Justification of changes
- Northern Siberia/Caspian & Asia Minor	?	?	?	?		?	?	?	?		
<i>Pluvialis fulva</i>											
- N-C Siberia/S & SW Asia, NE Africa	C/D	50,000-100,000	50,000-100,000	<b>50,000-100,000</b>		?	?	?	?		
<i>Pluvialis squatarola</i>											
- W Siberia /W Europe & W Africa	168,000	247,000	247,000	<b>247,000</b>		INC	INC	<b>DEC</b>	<b>DEC</b>		
- C & E Siberia/SW Asia, E & S Africa	50,000	90,000	90,000	<b>90,000</b>		?	?	?	?		
<i>Charadrius hiaticula hiaticula</i>											
- N Europe/Europe & North Africa	47,500	73,000	73,000	<b>73,000</b>		INC	INC	<b>DEC</b>	<b>DEC</b>		24: Long term decrease apparently levelling off
<i>Charadrius hiaticula psammodytes</i>											
- Can, Greenl. & Iceland/W & S Africa	195,000	190,000	190,000	<b>190,000</b>		?	(DEC)	<b>DEC</b>	<b>DEC</b>		
<i>Charadrius hiaticula tundrae</i>											
- NE Eur & Sib/SW Asia, E & S Africa	200,000	145,000-280,000	D	<b>D</b>		?	?	?	?		
<i>Charadrius dubius curonicus</i>											
- Europe & NW Africa/W Africa	D	180,000-290,000	200,000-300,000	<b>200,000-300,000</b>		STA	(STA)	<b>STA?</b>	<b>STA?</b>		
- West & SW Asia/Eastern Africa	?	?	?	?		?	?	?	?		
<i>Charadrius pecuarius pecuarius</i>											
- Southern & E & NE Africa	?	50,000-100,000	100,000-400,000	<b>100,000-400,000</b>		?	?	?	?		
- West Africa	-	10,000-20,000	20,000-50,000	<b>20,000-50,000</b>		-	?	?	?		
<i>Charadrius tricollaris</i>											

Population	CSR 1999	CSR 2002	CSR 3 2006	Proposed revision 2008	Source 2008 revision	Trend 1999	Trend 2002	Trend 2006	Proposed trend 2008	Source 2008 trend	Justification of changes
<i>tricoloris</i>											
- Southern & Eastern Africa	?	40,000-100,000	70,000-130,000	<b>70,000-130,000</b>		?	INC	<b>INC</b>	<b>INC</b>		
<i>Charadrius forbesi</i>											
- West & Central Africa	?	B/C	B/C	<b>B/C</b>		?	?	?	?		
<i>Charadrius pallidus pallidus</i>											
- Southern Africa	6,000-7,000	11,200	11,200	<b>11,000-16,000</b>	<b>20</b>	STA	STA	<b>STA</b>	<b>STA</b>		As counts fluctuate, sometimes over 11,200, this range is more appropriate.
<i>Charadrius pallidus venustus</i>											
- Eastern Africa	B	4,000-5,000	4,000-5,000	<b>6,500</b>	<b>20</b>	?	?	?	?		A coordinated census in January 2005 resulted in a more accurate and precise estimate
<i>Charadrius alexandrinus alexandrinus</i>											
- West Europe & W Med/West Africa	67,000	62,000-70,000	62,000-70,000	<b>62,000-70,000</b>		DEC	DEC	<b>DEC</b>	<b>DEC</b>		24: Small NW Europe population increasing
- Black Sea & E Medit./E Sahel	C	32,000-49,000	32,000-49,000	<b>32,000-49,000</b>		DEC	(DEC)	<b>DEC</b>	<b>DEC</b>		
- SW & Cen Asia/SW Asia & NE Africa	C/D	C	C	<b>C</b>		?	?	?	?		
<i>Charadrius marginatus mechowii</i>											
Southern & Eastern Africa	?	25,000-35,000				?	?				
Inland Eastern to Southern Africa			10,000-15,000					?	?		
Inland East & Central Africa				<b>10,000-15,000</b>	<b>1</b>						Treated as <i>mechowii/tenellus</i> .
West to West-central Africa	?	10,000-15,000	10,000-15,000			?	?	?	?		
<i>West Africa</i>				<b>10,000-15,000</b>	<b>1</b>						Range does not include parts of Central Africa.

Population	CSR 1999	CSR 2002	CSR 3 2006	Proposed revision 2008	Source 2008 revision	Trend 1999	Trend 2002	Trend 2006	Proposed trend 2008	Source 2008 trend	Justification of changes
<i>Charadrius mongolus pamirensis</i>											
- West-central Asia/SW Asia & E Africa	>30,000	>30,000	30,000-50,000	<b>100,000-150,000</b>	<b>1</b>	?	?	?	?		Previous estimates excluded birds wintering in Pakistan & India
<i>Charadrius leschenaultii columbinus</i>											
- Turkey & SW Asia/E. Med & Red Sea	A	A	A	<b>A</b>		?	?	?	?		
<i>Charadrius leschenaultii crassirostris</i>											
- Caspian & SW Asia/Arabia & NE Africa	65,000	C	C	<b>C</b>		?	?	?	?		
<i>Charadrius leschenaultii leschenaultii</i>											
- Central Asia/Eastern & Southern Africa	-	B	25,000-50,000	<b>25,000-50,000</b>		-	?	?	?		
<i>Charadrius asiaticus</i>											
Central Asia/ E & southern Africa	B/C	B/C	40,000-55,000	<b>40,000-55,000</b>		DEC	(DEC)	(DEC)	(DEC)		
<i>Eudromias morinellus</i>											
- Europe/NW Africa	D	39,000-110,000	40,000-120,000	<b>40,000-120,000</b>		DEC	STA/D EC	(STA/D EC)	(STA/D EC)		
- Asia/Middle East	B/C	B/C	B/C	<b>B/C</b>		?	?	?	?		
<i>Vanellus vanellus</i>											
- Europe/Europe & N Africa	7 million	2.8-4.0 million	5.1-8.4 million	<b>5.1-8.4 million</b>		DEC	DEC	<b>DEC</b>	<b>DEC</b>		
- Western Asia/SW Asia	C/D	1.6-2.9 million	C/D	<b>C/D</b>		?	?	?	?		
<i>Vanellus spinosus</i>											
- Black Sea & Mediterranean (bre)	C	C	C	<b>C</b>		INC	INC	<b>INC</b>	<b>INC</b>		
<i>Vanellus albiceps</i>											

Population	CSR 1999	CSR 2002	CSR 3 2006	Proposed revision 2008	Source 2008 revision	Trend 1999	Trend 2002	Trend 2006	Proposed trend 2008	Source 2008 trend	Justification of changes
- West & Central Africa	?	10,000-20,000	30,000-70,000	<b>30,000-70,000</b>		?	?	STA	STA		
<i>Vanellus senegallus senegallus</i>											
- West Africa	?	C	25,000-60,000	<b>25,000-60,000</b>		?	?	?	?		
<i>Vanellus senegallus solitaneus</i>											
- Southwest Africa	?	C	B/C	<b>B/C</b>		?	?	?	?		
<i>Vanellus senegallus lateralis</i>											
- Eastern & Southeastern Africa	?	C	C	<b>C</b>		?	?	STA	STA		
<i>Vanellus lugubris</i>											
- Southern West Africa	-	5,000-20,000	5,000-20,000	<b>5,000-20,000</b>		-	(DEC)	?	?		
- Central & Eastern Africa	?	20,000-50,000	20,000-50,000	<b>20,000-50,000</b>		?	DEC	?	?		
<i>Vanellus melanopterus minor</i>											
- Southern Africa	?	2,000-3,000	2,000-3,000	<b>2,000-3,000</b>		(DEC)	DEC	DEC	DEC		
<i>Vanellus coronatus coronatus</i>											
- Eastern & Southern Africa	?	200,000-400,000	400,000-900,000	<b>400,000-900,000</b>		?	(INC)	?	?		
- Central Africa	?	?	A/B	<b>A/B</b>		?	?	?	?		
<i>Vanellus coronatus xerophilus</i>											
- Southwest Africa	?	?	B/C	<b>B/C</b>		?	?	INC	INC		
<i>Vanellus superciliosus</i>											
- West & Central Africa	?	A/B	A/B	<b>A/B</b>		?	?	?	?		
<i>Vanellus gregarius</i>											
- SE Europe & Western Asia/NE Africa	A	400-1,200	400-1,200	<b>16,000</b>	<b>19</b>	DEC	DEC	DEC	DEC		Intensive surveys of breeding areas in Kazakhstan in 2005-2007 revealed the scale of earlier under-estimates

Population	CSR 1999	CSR 2002	CSR 3 2006	Proposed revision 2008	Source 2008 revision	Trend 1999	Trend 2002	Trend 2006	Proposed trend 2008	Source 2008 trend	Justification of changes
- Central Asian Republics/NW India	<1,000	200-600	200-600	<b>200-600</b>		DEC	DEC	<b>DEC</b>	<b>DEC</b>		
<i>Vanellus leucurus</i>											
- SW Asia/SW Asia & NE Africa	B/C	B	B	<b>B</b>		(INC)	(DEC)	<b>(DEC)</b>	<b>(DEC)</b>		
- Central Asian Republics/South Asia	B/C	B/C	B/C	<b>B/C</b>		?	(INC)	<b>(INC)</b>	<b>(INC)</b>		
<b>SCOLOPACIDAE</b>											
<i>Scolopax rusticola</i>											
- Europe/S & W Europe & North Africa	>15 million	21-25 million	10-25 million	<b>10-25 million</b>		STA	STA	<b>STA</b>	<b>STA</b>		
- Western Siberia/SW Asia (Caspian)	?	?	?	<b>?</b>		?	?	<b>?</b>	<b>?</b>		
<i>Gallinago stenura</i>											
- N Siberia/South Asia & Eastern Africa	C/D	C/D	C/D	<b>C/D</b>		?	?	<b>?</b>	<b>?</b>		
<i>Gallinago media</i>											
- Scandinavia/probably West Africa	18,000-51,000	18,000-51,000	18,000-51,000	<b>18,000-51,000</b>		STA	STA	<b>STA</b>	<b>STA</b>		
- W Siberia & NE Europe/SE Africa	D	D	D	<b>D</b>		DEC	(DEC)	<b>(DEC)</b>	<b>(DEC)</b>		
<i>Gallinago gallinago gallinago</i>											
- Europe/S & W Europe & NW Africa	>20,000, 000	E	>2.5 million	<b>&gt;2.5 million</b>		DEC	DEC	<b>DEC/STA</b>	<b>DEC/STA</b>		
- W Siberia/SW Asia & Africa	E	>1.5 million	>1.5 million	<b>&gt;1.5 million</b>		?	?	<b>?</b>	<b>?</b>		
<i>Gallinago gallinago faeroeensis</i>											
- Iceland, Faroes & N Scotland/Ireland	750,000	570,000	570,000	<b>570,000</b>		STA	(STA)	<b>(STA)</b>	<b>(STA)</b>		
<i>Lymnocyrtus minimus</i>											

Population	CSR 1999	CSR 2002	CSR 3 2006	Proposed revision 2008	Source 2008 revision	Trend 1999	Trend 2002	Trend 2006	Proposed trend 2008	Source 2008 trend	Justification of changes
- N Europe/S & W Europe & W Africa	C/D	D/E	E	E		DEC	STA	STA	STA		
- W Siberia/SW Asia & NE Africa	?	?	?	?		?	?	?	?		
<i>Limosa limosa limosa</i>											
- Western Europe/NW & West Africa	350,000	148,000-183,000	162,000-183,000	162,000-183,000		DEC	DEC	DEC	DEC		
- Eastern Europe/Central & Eastern Africa	D	93,000-173,000	90,000-165,000	90,000-165,000		DEC	DEC	DEC	DEC		
- W-cen. Asia/SW Asia & Eastern Africa	C	C	C	C		?	?	?	?		
<i>Limosa limosa islandica</i>											
- Iceland/Western Europe	65,000	35,000	47,000	47,000		INC	INC	INC	INC		
<i>Limosa lapponica lapponica</i>											
- N Europe/Western Europe	115,000	120,000	120,000	120,000		STA/D EC	STA	STA	STA		
<i>Limosa lapponica taymyrensis</i>											
- W Siberia/West & Southwest Africa	700,000	520,000	600,000	600,000		?	DEC	DEC?	DEC?		
<i>Limosa lapponica taymyrensis</i>											
- Cen Siberia/S & SW Asia & E Africa	C/D	100,000-150,000	100,000-150,000	100,000-150,000		?	?	?	?		
<i>Numenius phaeopus phaeopus</i>											
- Northern Europe/West Africa	-	156,000-298,000	190,000-340,000	190,000-340,000		-	?	(STA)	(STA)		
- West Siberia/Southern & Eastern Africa	?	D	D	D		?	?	?	?		
<i>Numenius phaeopus islandicus</i>											
- Iceland, Faroes & Scotland/West Africa	-	610,000	600,000-750,000	600,000-750,000		-	STA	(STA)	(STA)		

Population	CSR 1999	CSR 2002	CSR 3 2006	Proposed revision 2008	Source 2008 revision	Trend 1999	Trend 2002	Trend 2006	Proposed trend 2008	Source 2008 trend	Justification of changes
<i>Numenius phaeopus alboaxillaris</i>											
- SW Asia/Eastern Africa	A	A	A	A		DEC	?	DEC	DEC		
<i>Numenius tenuirostris</i>											
- Cen Siberia/Mediterranean & SW Asia	50-270	<50	<50	<50		DEC	DEC	DEC	DEC		
<i>Numenius arquata arquata</i>											
- Europe/Europe, North & West Africa	348,000	420,000	700,000-1,000,000	700,000-1,000,000		STA/IN C	STA/IN C	DEC	DEC		
<i>Numenius arquata orientalis</i>											
- W Siberia/SW Asia, E & S Africa	C	C	C	C		(DEC)	(DEC)	(DEC)	(DEC)		
<i>Numenius arquata suschkini</i>											
- SE Europe & SW Asia (bre)	-	?	?	?		-	(DEC)	DEC	DEC		
<i>Tringa erythropus</i>											
- N Europe/S Europe, N & W Africa	75,000-150,000	77,000-131,000	60,000-120,000	60,000-120,000		(STA)	(STA)	(STA)	(STA)		
- W Siberia/SW Asia, NE & East Africa	B/C	B/C	B/C	B/C		?	?	?	?		
<i>Tringa totanus totanus</i>											
- NW Europe/W Europe, NW & W Africa	177,000	222,500	250,000			DEC	DEC	DEC			
- Northern Europe (breeding)				200,000-300,000	1				STA	1	
- Central & East Europe/E Med & Africa	D	223,000-464,000	223,000-464,000			DEC	DEC	DEC			
- Central & Eastern Europe (breeding)				570,000-870,000	1				DEC	1	
<i>Tringa totanus britannica</i>											
- Britain & Ireland/Britain, Ireland, France	-	124,000-127,000	95,000-135,000	95,000-135,000		-	DEC	DEC	DEC		

Population	CSR 1999	CSR 2002	CSR 3 2006	Proposed revision 2008	Source 2008 revision	Trend 1999	Trend 2002	Trend 2006	Proposed trend 2008	Source 2008 trend	Justification of changes
<i>Tringa totanus ussuriensis</i>											
- West Asia/SW Asia, NE & E Africa	?	213,000-326,000	D	<b>D</b>		?	?	?	?		
<i>Tringa totanus robusta</i>											
- Iceland & Faroes/Western Europe	150,000-300,000	64,500	150,000-400,000	<b>150,000-400,000</b>		STA/IN C	STA/IN C	(STA/IN C)	(STA/IN C)		
<i>Tringa stagnatilis</i>											
- Eastern Europe/West & Central Africa	C/D	21,000-52,000	14,000-40,000	<b>14,000-40,000</b>		?	?	(DEC)	(DEC)		
- W Asia/SW Asia, E & S Africa	C	C	50,000-100,000	<b>50,000-100,000</b>		?	?	?	?		
<i>Tringa nebularia</i>											
- N Europe/SW Europe, NW & W Africa	D	234,000-395,000	190,000-270,000	<b>190,000-270,000</b>		STA	STA	<b>STA</b>	<b>STA</b>		
- Western Siberia/SW Asia, E & S Africa	C/D	D	D	<b>D</b>		?	?	?	?		
<i>Tringa ochropus</i>											
- N Europe/S & W Europe, West Africa	D/E	1.0-1.9 million	1.0-2.4 million	<b>1.0-2.4 million</b>		STA/IN C	STA/IN C	<b>STA</b>	<b>STA</b>		
- W Siberia/SW Asia, NE & E Africa	?	D/E	D/E	<b>D/E</b>		?	?	?	?		
<i>Tringa glareola</i>											
- NW Europe/West Africa	E	855,000-1,220,000	900,000-1,200,000	<b>900,000-1,200,000</b>		DEC	DEC	<b>STA</b>	<b>STA</b>		
- NE Europe & W Siberia/E & S Africa	D/E	>2 million	>2 million	>2 million		?	(STA)	(STA)	(STA)		
<i>Xenus cinereus</i>											
- NE Eur & W Sib/SW Asia, E & S Africa	44,000	D	D	<b>D</b>		(STA)	(STA)	(STA)	(STA)		
<i>Actitis hypoleucos</i>											
- W & Central Europe/West Africa	E	1.4-2.0 million	1.5-2.0 million	<b>1.5-2.0 million</b>		STA	STA	(DEC)	(DEC)		

Population	CSR 1999	CSR 2002	CSR 3 2006	Proposed revision 2008	Source 2008 revision	Trend 1999	Trend 2002	Trend 2006	Proposed trend 2008	Source 2008 trend	Justification of changes
- E Europe & W Siberia/C, E & S Africa	(E)	E	E	E		?	(STA)	(STA)	(STA)		
<i>Arenaria interpres interpres</i>											
- NE Can & Greenl/W Eur & NW Africa	>80,000	100,000-200,000	100,000-200,000	100,000-200,000		(INC)	INC	DEC	STA	24	24: Decreases in NW Europe and W Mediterranean have levelled off
- Northern Europe/West Africa	50,000-100,000	46,000-119,000	45,000-120,000	45,000-120,000		STA	STA	DEC	DEC		
- W & Cen Siberia/SW Asia, E & S Africa	C	100,000	100,000	100,000		?	?	?	?		
<i>Calidris tenuirostris</i>											
- E Siberia/SW Asia & W South Asia	A	2,000-5,000	2,000-5,000	2,000-5,000		?	?	?	?		
<i>Calidris canutus canutus</i>											
- N Siberia/Western & Southern Africa	260,000	340,000	400,000	400,000		DEC	DEC	?	(DEC)	15	
<i>Calidris canutus islandica</i>											
- NE Canada & Greenland/West Europe	400,000	450,000	450,000	380,000	24	(STA)	DEC	DEC	DEC		
<i>Calidris alba</i>											
- E Atlantic, W & S Africa (win)	123,000	123,000	123,000	123,000		STA	STA/IN C	STA/IN C	STA/IN C		
- SW Asia, E & S Africa (win)	120,000	140,000	150,000	150,000		?	(STA)	(STA)	(STA)		
<i>Calidris minuta</i>											
- N Europe/Europe, North & West Africa	211,000	200,000	>200,000	>200,000		STA	(DEC)	(DEC)	(DEC)		
- Western Siberia/SW Asia, E & S Africa	1,000,000	1,000,000	1,000,000	D/E	1	?	?	?	?		
<i>Calidris temminckii</i>											
- Fennoscandia/North & West Africa	?	39,000-80,000	39,000-80,000	30,000-55,000	1	?	?	?	DEC?	1	
- NE Eur & W Sib/SW Asia & E Africa	?	(E)	D/E	D/E		?	?	?	?		

Population	CSR 1999	CSR 2002	CSR 3 2006	Proposed revision 2008	Source 2008 revision	Trend 1999	Trend 2002	Trend 2006	Proposed trend 2008	Source 2008 trend	Justification of changes
<i>Calidris maritima maritima</i>											
- North & W Europe (excl. Iceland) (win)	50,500	50,000-100,000	50,000-100,000			STA	STA	STA			
N Europe & W Siberia (breeding)				50,000-100,000	1				(STA)	1	
NE Canada & N Greenland (breeding)				20,000-30,000	1				(DEC)	1, 24	
<i>Calidris alpina alpina</i>											
- NE Eur & NW Sib/W Eur & NW Africa	1,373,000	1,330,000	1,330,000	1,330,000		DEC	STA	STA	STA		
<i>Calidris alpina centralis</i>											
- Central Siberia/SW Asia & NE Africa	150,000	300,000	500,000	500,000		?	?	?	?		
<i>Calidris alpina schinzii</i>											
- Iceland & Greenland/NW and W Africa	800,000	940,000-960,000	940,000-960,000	940,000-960,000		STA	STA	STA	STA		
- U.K. & Ireland/SW Eur & NW Africa	33,000-36,000	23,000-26,000	23,000-26,000	23,000-26,000		DEC	DEC	DEC	DEC		
- Baltic/SW Europe & NW Africa	-	3,600-4,700	3,300-4,100	3,300-4,100		-	DEC	DEC	DEC		
<i>Calidris alpina arctica</i>											
- NE Greenland/West Africa	15,000	21,000-45,000	21,000-45,000	21,000-45,000		STA	(STA)	(STA)	(STA)		
<i>Calidris ferruginea</i>											
- Western Siberia/West Africa	436,000	740,000	1,000,000	1,000,000		STA	INC	INC	INC		
- Central Siberia/SW Asia, E & S Africa	310,000	330,000	400,000	400,000		STA	STA	STA	STA		
<i>Limicola falcinellus falcinellus</i>											
- Northern Europe/SW Asia & Africa	40,000-60,000	61,000-64,000	61,000-64,000	61,000-64,000		(DEC)	?	DEC	DEC		
<i>Philomachus pugnax</i>											
- N Europe & W Siberia/West Africa	E	E	1.0 million-	1.0 million-		DEC	DEC	DEC	DEC		

Population	CSR 1999	CSR 2002	CSR 3 2006	Proposed revision 2008	Source 2008 revision	Trend 1999	Trend 2002	Trend 2006	Proposed trend 2008	Source 2008 trend	Justification of changes
			1.5 million	<b>1.5 million</b>							
- Northern Siberia/SW Asia, E & S Africa	D/E	E	E	<b>E</b>		?	(DEC)	<b>(DEC)</b>	<b>(DEC)</b>		
<i>Phalaropus lobatus</i>											
- Western Eurasia/Arabian Sea	D/E	E	E	<b>E</b>		(STA)	?	?	?		
<i>Phalaropus fulicarius</i>											
- Can & Greenland/Atlantic coast Africa	?	920,000	1,000,000	<b>1,000,000</b>		?	?	<b>DEC</b>	<b>DEC</b>		
<b>LARIDAE</b>											
<i>Larus leucophthalmus</i>											
- Red Sea & nearby coasts	20,000	20,000	37,000-44,000	<b>37,000-44,000</b>		STA	STA	<b>STA</b>	<b>STA</b>		
<i>Larus hemprichii</i>											
- Red Sea, Gulf, Arabia & Eastern Africa	D	150,000-300,000	150,000-300,000	<b>150,000-300,000</b>		?	?	<b>(INC)</b>	<b>(INC)</b>		
<i>Larus canus canus</i>											
- NW & C Europe/Atlantic & Medit.	1,600,000	1.3-2.1 million	1.2-2.25 million	<b>1.2-2.25 million</b>		DEC	DEC	<b>(DEC)</b>	<b>(DEC)</b>		
<i>Larus canus heinei</i>											
- NE Eur & W Sib/Black Sea & Caspian	C	D	E	<b>E</b>		?	(INC)	<b>(INC)</b>	<b>(INC)</b>		
<i>Larus audouinii</i>											
- Mediterranean/N & W coasts of Africa	40,000	57,600	57,600	<b>57,600</b>		INC	INC	<b>INC</b>	<b>INC</b>		
<i>Larus marinus</i>											
- North & Western Europe	480,000	420,000-510,000	330,000-540,000	<b>330,000-540,000</b>		INC	STA	<b>INC</b>	<b>STA</b>	24	
<i>Larus dominicanus vetula</i>											
- Coastal Southern Africa	?	69,000	70,000	<b>70,000</b>		?	INC	<b>INC</b>	<b>INC</b>		
<i>Larus hyperboreus hyperboreus</i>											

Population	CSR 1999	CSR 2002	CSR 3 2006	Proposed revision 2008	Source 2008 revision	Trend 1999	Trend 2002	Trend 2006	Proposed trend 2008	Source 2008 trend	Justification of changes
- North Atlantic	200,000	135,000-360,000	135,000-360,000	<b>135,000-360,000</b>		STA	STA	<b>STA</b>	<b>STA</b>		
<i>Larus hyperboreus leucereutes</i>											
Canada Greenland & Iceland (bre)			D	<b>D</b>				?	?		
<i>Larus glaucooides glaucooides</i>											
- Greenland/Iceland & NW Europe	C/D	90,000-300,000	90,000-300,000	<b>90,000-300,000</b>		STA	STA	<b>STA</b>	<b>STA</b>		
<i>Larus argentatus argentatus</i>											
- North & Northwest Europe	1,400,000	1.1-1.5 million	1.7-3.6 million	<b>1.7-3.6 million</b>		INC	INC	<b>INC</b>	<b>STA</b>	<b>24</b>	
<i>Larus argentatus argenteus</i>											
- Iceland & Western Europe	1,300,000	1,090,000	560,000-620,000	<b>560,000-620,000</b>		?	(STA)	<b>DEC</b>	<b>DEC</b>		
<i>Larus heuglini</i>											
- NE Eur & W Sib/W Asia & NE Africa	?	?	?	?		?	?	?	?		
<i>Larus (heuglini) barabensis</i>											
- Southwest Siberia/Southwest Asia	?	?	?	?		?	?	?	?		
<i>Larus armenicus</i>											
- Armenia, E Turkey & NW Iran	45,000-60,000	69,000-75,000	69,000-75,000	<b>69,000-75,000</b>		STA	?	?	?		
<i>Larus cachinnans cachinnans</i>											
- Black S. & W Asia/SW Asia, NE Africa	C/D	D	D	<b>D</b>		?	(INC)	<b>INC</b>	<b>INC</b>		
<i>Larus cachinnans michahellis</i>											
- Mediterranean, Iberia & Morocco	350,000	475,000-585,000	630,000-768,000	<b>630,000-768,000</b>		INC	INC	<b>INC</b>	<b>INC</b>		
<i>Larus fuscus fuscus</i>											

Population	CSR 1999	CSR 2002	CSR 3 2006	Proposed revision 2008	Source 2008 revision	Trend 1999	Trend 2002	Trend 2006	Proposed trend 2008	Source 2008 trend	Justification of changes
- NE Eur/Black Sea, SW Asia & E Africa	200,000-300,000	156,000-228,000	56,000	<b>56,000</b>		?	DEC	<b>DEC</b>	<b>DEC</b>		
<i>Larus fuscus graellsii</i>											
- Western Europe/Med & West Africa	400,000-500,000	525,000	530,000-570,000	<b>530,000-570,000</b>		INC	INC	<b>INC</b>	<b>INC</b>		
<i>Larus fuscus intermedius</i>											
S Scandinavia, Germany, Netherlands, Ebro Delta, Spain			325,000-440,000	<b>325,000-440,000</b>				<b>INC</b>	<b>INC</b>		
<i>Larus ichthyaetus</i>											
- Black Sea & Caspian/SW Asia	70,000-120,000	72,000-120,000	D	<b>D</b>		INC	INC	<b>INC</b>	<b>INC</b>		
<i>Larus cirrocephalus poiocephalus</i>											
- West Africa	?	30,000	30,000	<b>30,000</b>		?	?	?	?		
Coasts & rivers of E & S Africa			200,000-400,000	<b>200,000-400,000</b>				?	?		
- Southern Africa (excluding Madagascar)	?	(B)				?	INC				
<i>Larus hartlaubii</i>											
- Coastal Southwest Africa	25,000	32,000-33,000	30,000	<b>30,000</b>		?	STA/INC	<b>INC</b>	<b>INC</b>		
<i>Larus ridibundus</i>											
- W Europe/W Europe, W Med, W Africa	>5,000,000	5.6-7.3 million	3.7-4.8 million	<b>3.7-4.8 million</b>		(STA)	INC	<b>DEC</b>	<b>DEC</b>		
- E Europe/Black Sea & E Mediterranean	D	1.3-1.7 million	770,000-1,800,000	<b>770,000-1,800,000</b>		(STA)	INC	?	<b>STA</b>	<b>24</b>	
- West Asia/SW Asia & NE Africa	250,000	250,000	250,000	<b>250,000</b>		?	?	?	?		
<i>Larus genei</i>											
- West Africa (bre)	20,000	22,500	22,500	<b>22,500</b>		INC	INC	<b>STA</b>	<b>STA</b>		
- Black Sea & Mediterranean (bre)	120,000-240,000	123,000-237,000	140,000-205,000	<b>140,000-205,000</b>		(INC)	INC	<b>STA</b>	<b>STA</b>		24: Increasing W Mediterranean, stable or possibly decreasing East Mediterranean/Black Sea

Population	CSR 1999	CSR 2002	CSR 3 2006	Proposed revision 2008	Source 2008 revision	Trend 1999	Trend 2002	Trend 2006	Proposed trend 2008	Source 2008 trend	Justification of changes
- W, SW & S Asia (bre)	150,000	150,000	150,000	150,000		INC	INC	INC	INC		
<i>Larus melanocephalus</i>											
- W Europe, Med & NW Africa	D	570,000-1,110,000	360,000-960,000	360,000-960,000		INC	INC	STA	STA		
<i>Larus minutus</i>											
- Cen & E Europe/SW Europe & W Med.	60,000-90,000	66,000-102,000	72,000-174,000	72,000-174,000		STA/INC	(STA)	INC	INC		
- W Asia/E Med, Black Sea & Caspian	(C)	C	C	C		?	?	?	?		
<i>Xema sabini sabini</i>											
- Canada & Greenland/SE Atlantic	?	?	300,000-600,000	300,000-600,000		?	?	?	?		
<i>Sterna nilotica nilotica</i>											
- Western Europe/West Africa	12,000	9,500-10,800	14,000-21,000	14,000-21,000		DEC	DEC	STA	STA		
- Black Sea & E Medit./Eastern Africa	?	14,000-39,000	24,000-52,000	24,000-52,000		DEC	DEC	DEC	DEC		
- West & Central Asia/SW Asia	B	B	B	B		?	?	?	?		
<i>Sterna caspia caspia</i>											
- Southern Africa (bre)	1,500	5,000	2,000	2,000		STA	(INC)	STA	STA		
- West Africa (bre)	15,000	40,500	45,000-60,000	45,000-60,000		(DEC)	INC	STA	STA		
- Europe (bre)	5,000-7,000	5,400-7,800	8,000-11,000	8,000-11,000		DEC	DEC	INC	INC		
- Caspian (bre)	10,000	9,000-16,500	9,000-16,500	9,000-16,500		DEC	(DEC)	?	?		
<i>Sterna maxima albidorsalis</i>											
- West Africa (bre)	75,000	129,000	225,000	225,000		STA	STA/INC	STA/INC	STA/INC		
<i>Sterna bengalensis bengalensis</i>											

Population	CSR 1999	CSR 2002	CSR 3 2006	Proposed revision 2008	Source 2008 revision	Trend 1999	Trend 2002	Trend 2006	Proposed trend 2008	Source 2008 trend	Justification of changes
- Persian Gulf/Southern Asia	150,000-180,000	150,000-180,000	150,000-180,000	<b>150,000-180,000</b>		?	?	?	?		
<i>Sterna bengalensis par</i>											
- Red Sea/Eastern Africa	C	C	40,000-47,000	<b>40,000-47,000</b>		?	?	STA	STA		
- S Mediterranean/NW & W Africa coasts	4,000	4,000	4,000	<b>4,000</b>		STA	STA	STA	STA		
<i>Sterna bergii bergii</i>											
- Southern Africa (Angola – Mozambique)	20,000	20,000	20,000	<b>20,000</b>		?	(STA)	(STA)	(STA)		
<i>Sterna bergii (enigma)</i>											
- Madagascar & Mozambique/S Africa	-	8,000-10,000	7,500-10,000	<b>7,500-10,000</b>		-	?	?	?		
<i>Sterna bergii thalassina</i>											
- Tanzania, Seychelles, Chagos	1,200	2,550-4,500	1,300-1,700	<b>1,300-1,700</b>		?	?	?	?		
<i>Sterna bergii velox</i>											
- Red Sea & NE Africa	C	C	C	<b>20,000</b>	<b>3</b>	?	?	?	?		5,300 pairs in the Red Sea & NE Africa, plus 3,500 pairs in Saudi Arabia in the 1990s.
<i>Sterna sandvicensis sandvicensis</i>											
- Western Europe/West Africa	150,000	159,000-171,000	166,000-171,000	<b>166,000-171,000</b>		INC	INC	STA	STA		
- Black Sea & Mediterranean (bre)	130,000	44,000-73,000	61,000-197,000	<b>61,000-197,000</b>		(DEC)	DEC	FLU	FLU		
- West & Central Asia/SW & South Asia	110,000	110,000	110,000	<b>110,000</b>		?	?	?	?		
<i>Sterna dougallii dougallii</i>											
- Southern Africa	400	750	750-780	<b>750-780</b>		DEC	INC				
- East Africa	38,000	26,000	25,500	<b>25,500</b>		?	?	?	?		
- Europe (bre)	5,000	4,800-5,400	5,400-5,700	<b>5,400-5,700</b>		DEC	DEC	INC	INC		
<i>Sterna dougallii arideensis</i>											

Population	CSR 1999	CSR 2002	CSR 3 2006	Proposed revision 2008	Source 2008 revision	Trend 1999	Trend 2002	Trend 2006	Proposed trend 2008	Source 2008 trend	Justification of changes
- Madagascar, Seychelles & Mascarenes	3,600	10,000-15,000	12,000-15,000	<b>12,000-15,000</b>		?	(DEC)	<b>DEC</b>	<b>DEC</b>		
<i>Sterna dougallii bangsi</i>											
- North Arabian Sea (Oman)	?	<600	<600	<b>&lt;600</b>		?	?	?	?		
<i>Sterna vittata vittata</i>											
- Subantarctic islands/S Africa	3,000-6,000	3,000-6,000	>6,700	<b>6,700-8,000</b>	<b>22, 23</b>	?	?	?	?		Breeding estimate of 2,215 pairs (6,645 individuals); wintering estimate of 8,000.
<i>Sterna vittata tristanensis</i>											
- Tristan da Cunha & Gough/S Africa	2,500	2,500	2,400-4,500	<b>2,400-4,500</b>		?	?	?	?		
<i>Sterna hirundo hirundo</i>											
- Southern & Western Europe (bre)	180,000	170,000-200,000	170,000-210,000	<b>170,000-210,000</b>		(STA)	(STA)	<b>STA</b>	<b>STA</b>		
- Northern & Eastern Europe (bre)	600,000	460,000-820,000	630,000-1,500,000	<b>630,000-1,500,000</b>		(STA)	(STA)	<b>STA</b>	<b>STA</b>		
- Western Asia (bre)	C/D	C/D	C/D	<b>C/D</b>		?	?	?	?		
<i>Sterna paradisaea</i>											
- Western Eurasia (bre)	E	1.3-2.3 million	E	<b>E</b>		(STA)	STA/D EC	?	?		
<i>Sterna albifrons albifrons</i>											
- Eastern Atlantic (bre)	34,000	31,000-37,500	42,500-55,500	<b>42,500-55,500</b>		STA/IN C	STA	<b>DEC</b>	<b>DEC</b>		
- Black Sea & East Mediterranean (bre)	70,000-120,000	63,500-127,000	63,500-112,500	<b>63,500-112,500</b>		DEC	DEC	<b>DEC</b>	<b>DEC</b>		
- Caspian (bre)	B	B	B	<b>B</b>		?	?	?	?		
<i>Sterna albifrons guineae</i>											
- West Africa (bre)	?	?	2,000-3,000	<b>2,000-3,000</b>		?	?	?	?		
<i>Sterna saundersi</i>											
- W South Asia, Red Sea, Gulf & E Africa	40,000	40,000	40,000	<b>40,000</b>		?	?	?	?		
<i>Sterna balaenarum</i>											

Population	CSR 1999	CSR 2002	CSR 3 2006	Proposed revision 2008	Source 2008 revision	Trend 1999	Trend 2002	Trend 2006	Proposed trend 2008	Source 2008 trend	Justification of changes
- Namibia & S Africa/Atlantic to Ghana	13,500	13,500	14,000	<b>14,000</b>		(DEC)	(INC)	<b>STA</b>	<b>STA</b>		
<i>Sterna repressa</i>											
- W S Asia, Red Sea, Gulf & E Africa	600,000	600,000	600,000	<b>600,000</b>		DEC	DEC	<b>DEC</b>	<b>DEC</b>		
<i>Chlidonias hybridus hybridus</i>											
- Western Europe & NW Africa (bre)	20,000-30,000	21,500-31,000	16,300-39,800	<b>16,300-39,800</b>		DEC	DEC	<b>STA</b>	<b>STA</b>		
- Black Sea & E Mediterranean (bre)	50,000-80,000	80,000-120,000	98,000-108,000	<b>98,000-108,000</b>		STA/INC	STA/INC	<b>STA</b>	<b>STA</b>		
- Caspian (bre)	C	C	C	<b>C</b>		?	?	?	?		
<i>Chlidonias hybridus sclateri</i>											
- Eastern Africa (Kenya & Tanzania)	?	A	10,000-15,000	<b>10,000-15,000</b>		?	?	?	?		
- Southern Africa (to Malawi & Zambia)	?	B	5,000-15,000	<b>5,000-15,000</b>		?	?	?	?		
<i>Chlidonias leucopterus</i>											
- E Europe & W Asia/Africa	200,000-250,000	3,000,000	3,000,000	<b>3,000,000</b>		DEC	?	<b>(STA)</b>	<b>(STA)</b>		
<i>Chlidonias niger niger</i>											
- Europe & Asia/Atlantic coast of Africa	200,000	200,000-350,000	500,000-1,000,000	<b>500,000-1,000,000</b>		DEC	STA/DEC	<b>DEC</b>	<b>DEC</b>		
<b>RYNCHOPIDAE</b>											
<i>Rynchops flavirostris</i>											
- Coastal West Africa	?	<5,000				?	DEC				
- Central Africa	?	B				?	DEC				
Central & coastal West Africa			7,000-13,000	<b>7,000-13,000</b>				<b>DEC</b>	<b>DEC</b>		
- Eastern & Southern Africa	?	B	8,000-12,000	<b>8,000-12,000</b>		?	DEC	<b>DEC</b>	<b>DEC</b>		

**TABLE 2: POPULATION SIZES AND TRENDS OF WATERBIRD SPECIES PROPOSED in 2005 FOR INCLUSION IN THE AGREEMENT**

Population	Estimate 2005	Proposed revision 2008	Source 2008 revision	Trend 2005	Proposed trend 2008	Source 2008 trend	Justification of changes
<b><i>Phaethon aethereus</i> Red-billed Tropicbird</b>							
<i>aethereus</i> - South Atlantic	<9,000	<b>2,000</b>	17	?	<b>STA</b>	11	Breeding pairs: ca. 86 in St Helena, 555 in Ascension
<i>mesonauta</i> – Cape Verde & Senegal	300	<b>400</b>	5, 13, 3	?	<b>DEC</b>	5	Population includes ca. 30 pairs at Iles de la Madeleine, Senegal. Expected continuing decline in Cape Verde.
<i>indicus</i> - Persian Gulf, Gulf of Aden, Red Sea	(<1000)	<b>3,000</b>	14, 3	?	<b>STA</b>	14	800 pairs estimated; nest site inaccessibility suggests the population is fairly secure.
<b><i>Phaethon rubricauda</i> Red-tailed Tropicbird</b>							
<i>rubricauda</i> - Western Indian Ocean	(A)	<b>20,000</b>	10, 21, 18, 3	?	<b>STA</b>	3	Breeding pairs: ca. 2,200 in Seychelles, 500-1,000 in Mauritius and 3,500 on Europa
<b><i>Phaethon lepturus</i> White-tailed Tropicbird</b>							
<i>lepturus</i> - Western Indian Ocean	7,500	<b>17,000-22,000</b>	9, 12, 3	?	<b>STA</b>	3	Breeding pairs: ca. 5,000 in Seychelles, 500-1,000 in Mauritius, plus other smaller colonies.
<i>europae</i> - Europa		<b>1,500-3,000</b>	9		<b>STA</b>	3	500-1,000 pairs on Europa.
<i>ascensionis</i> –Ascension & Gulf of Guinea islands		<b>4,500</b>	17, 11, 7, 12		<b>STA</b>	3	Over 1,000 pairs at Ascension, ca. 1,000 pairs in São Tomé & Príncipe, and ca. 50 pairs on Annóbon.
<b><i>Sula (Morus) bassana</i> Northern Gannet</b>	675,000	<b>675,000</b>		?	<b>?</b>		

Population	Estimate 2005	Proposed revision 2008	Source 2008 revision	Trend 2005	Proposed trend 2008	Source 2008 trend	Justification of changes
<b><i>Sula dactylatra</i> Masked Booby</b>							
<i>dactylatara</i> – St Helena and Ascension		4,000	17, 16, 3, 25		DEC	11	1,350 pairs on Ascension, 200 birds on St Helena.
<i>melanops</i> – W Indian Ocean, Red Sea and Gulf of Aden	(A)	30,000-35,000	3	DEC	DEC		Breeding pair estimates: ca. 9,000 in Seychelles, ca. 500 on Latham, 250 in Mauritius, 250 on Tromelin; breeds also in Comoros.
<b><i>Fregata minor</i> Great Frigatebird</b>							
<i>aldabrensis</i> - W Indian Ocean	(A)	15,000	21, 3, 9	?	DEC	21, 3, 9	4,000 pairs on Aldabra and 700-1,100 on Europa; widespread declines in the Indian Ocean.
<b><i>Fregata ariel</i> Lesser Frigatebird</b>							
<i>iredalei</i> – W Indian Ocean	(A)	20,000	21, 3, 9	?	STA	21, 3, 9	6,000 pairs on Aldabra; also breeds on Cargados Carajos.
<b><i>Catharacta skua</i> Great Skua</b>	40,800	40,800		?	?		
<b><i>Stercorarius longicaudus</i> Long-tailed Skua</b>							
<i>Longicaudus</i>	(C/D)	(C/D)		?	?		
<b><i>Rissa tridactyla</i> Black-legged Kittiwake</b>							
<i>tridactyla</i>	E	E		?	?		
<b><i>Sterna anaethetus</i> Bridled Tern</b>							
<i>melanopterus</i> – W Africa	1,500	1,500		DEC	DEC		
<i>fuligula</i> – Red Sea, Persian Gulf, Arabian Sea to W India	390,000	750,000-1,050,000	3		?		At least 250,000 pairs in the Red Sea, Gulf of Aden and Arabian Gulf.
<i>antarctica</i> – W Indian Ocean	(C)	10,000-	3	?	?		Around 3,600 breeding pairs,

Population	Estimate 2005	Proposed revision 2008	Source 2008 revision	Trend 2005	Proposed trend 2008	Source 2008 trend	Justification of changes
		15,000					but some information gaps.
<b><i>Sterna fuscata</i> Sooty Tern</b>							
<i>fuscata</i> – Gulf of Guinea & S. Atlantic		900,000	3, 2		?		Estimate of 300,000 breeding pairs, mostly from Ascension and Tinhasas.
<i>nubilosa</i> –Western Indian Ocean	(D/E)	13,500,000	3, 2	?	?		Close to 3,000,000 pairs in Seychelles, and large colonies also at several other sites.
<b><i>Anous stolidus</i> Brown Noddy</b>							
<i>plumbeigularis</i> – Red Sea & Gulf of Aden	75,000	75,000		?	?		
<b><i>Anous minutus</i> Black Noddy</b>							
<i>atlanticus</i> – Atlantic Islands, Gulf of Guinea	120,000-180,000	90,000-150,000	3, 2	?	?		
<b><i>Anous tenuirostris</i> Lesser Noddy</b>							
<i>tenuirostris</i> –Seychelles, Mascarenes	(B/C)	1,050,000-1,350,000	3, 2	?	?		
<b><i>Alle alle</i> Little Auk</b>							
<i>alle</i> High Arctic, Baffin Is – Novaya Zemlya	36,000,000-39,000,000	36,000,000-39,000,000		?	?		
<b><i>Uria aalge</i> Common Guillemot</b>							
<i>aalge</i> – E North America, Greenland, Iceland, Faeroes, Scotland, S Norway, Baltic	(D)	(D)		?	?		
<i>albionis</i> Ireland, S Britain, France, Iberia, Helgoland	(D)	(D)		?	?		
<i>hyperborea</i> Svalbard, N Norway to Novaya Zemlya	(D)	(D)		?	?		

Population	Estimate 2005	Proposed revision 2008	Source 2008 revision	Trend 2005	Proposed trend 2008	Source 2008 trend	Justification of changes
<b><i>Uria lomvia</i> Brunnich's Guillemot</b>							
<i>lomvia</i> – E North America, Greenland, E to Severnaya Zemlya	9,000,000-12,000,000	<b>9,000,000-12,000,000</b>		?	?		
<b><i>Alca torda</i> Razorbill</b>							
<i>torda</i> E North America, Greenland, E to Baltic & White Seas	240,000	<b>240,000</b>		?	?		
<i>islandica</i> Iceland, Faeroes, Britain, Ireland, Helgoland, NW France	1,950,000	<b>1,950,000</b>		?	?		
<b><i>Cepphus grylle</i> Black Guillemot</b>							
<i>grylle</i> Baltic Sea	(B/C)	<b>(B/C)</b>		?	?		
<i>mandtii</i> Arctic E North America to Greenland, Jan Mayen & Svalbard E through Siberia to Alaska	(C)	<b>(C)</b>		?	?		
<i>arcticus</i> N America, S Greenland, Britain, Ireland, Scandinavia, White Sea	(C)	<b>(C)</b>		?	?		
<i>islandicus</i> Iceland	50,000	<b>50,000</b>		?	?		
<i>faeroeensis</i> Faeroes	(B/C)	<b>(B/C)</b>		?	?		
<b><i>Fratercula arctica</i> Atlantic Puffin</b>							
<i>arctica</i> Hudson bay & Maine E to S Greenland, Iceland, Bear Is, Norway to S Novaya Zemlya	E	<b>E</b>		?	?		
<i>naumanni</i> NE Canada, N Greenland, to Jan Mayen, Svalbard, N Novaya Zemlya	E	<b>E</b>		?	?		
<i>grabae</i> Faeroes, S Norway & Sweden, Britain, Ireland, NW France	13,500,000	<b>13,500,000</b>		?	?		

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**TABLE 3****SPECIES OF WATERBIRDS OCCURRING IN THE AGREEMENT AREA BUT CONSIDERED INAPPROPRIATE FOR INCLUSION IN THE AGREEMENT****KEY TO COLUMN HEADINGS**

1. The species is not migratory, as defined in the Bonn Convention. Species which are entirely or almost entirely confined to a single Range State are indicated with a double asterisk (\*\*).
2. The species occurs in the Agreement Area only as a vagrant or rare straggler from another region.
3. Only a very small part of the total range of the species lies within the Agreement Area. The region therefore has very little significance for the species.
4. The species is more properly regarded as a seabird, breeding on rocky or sandy sea coasts, cliffs, offshore islands etc., and spending the non-breeding season exclusively in marine environments.

The species is otherwise unusual in its habitat requirements, occurring in desert, grassland, heathland or forest, and is at no time dependent on wetland habitats.

The species has been artificially introduced in the Agreement Area.

	1	2	3	4	5	6
<i>Tachybaptus rufolavatus</i>	**					
<i>Tachybaptus pelzelni</i>	**					
<i>Podilymbus podiceps</i>		*				
<i>Phalacrocorax africanus</i>	*					
<i>Phalacrocorax auritus</i>		*				
<i>Phalacrocorax aristotelis</i>	*			*		
<i>Anhinga rufa</i>	*					
<i>Egretta tricolor</i>		*				
<i>Egretta caerulea</i>		*				
<i>Egretta thula</i>		*				
<i>Ardea humbloti</i>	**					
<i>Ardea goliath</i>	*					
<i>Ardeola grayii</i>	*		*			
<i>Ardeola bacchus</i>		*				
<i>Butorides striatus</i>	*					
<i>Butorides virescens</i>		*				
<i>Gorsachius leuconotus</i>	*					
<i>Tigriornis leucolophus</i>	*					
<i>Ixobrychus exilis</i>		*				
<i>Ixobrychus eurhythmus</i>		*				
<i>Botaurus lentiginosus</i>		*				
<i>Scopus umbretta</i>	*					
<i>Ephippiorhynchus senegalensis</i>	*					
<i>Bostrychia hagedash</i>	*					
<i>Bostrychia carunculata</i>	**					
<i>Bostrychia olivacea</i>	*					

	1	2	3	4	5	6
<i>Bostrychia bocagei</i>	**					
<i>Bostrychia rara</i>	*					
<i>Geronticus calvus</i>	*					
<i>Lophotibis cristata</i>	**					
<i>Oxyura jamaicensis</i>						*
<i>Anser indicus</i>						*
<i>Anser caerulescens</i>		*				
<i>Anser rossii</i>		*				
<i>Branta canadensis</i>		*				*
<i>Cyanochen cyanopterus</i>	**					
<i>Pteronetta hartlaubii</i>	*					
<i>Nettapus coromandelianus</i>		*				
<i>Aix sponsa</i>						*
<i>Aix galericulata</i>						*
<i>Anas americana</i>		*				
<i>Anas falcata</i>		*				
<i>Anas formosa</i>		*				
<i>Anas bernieri</i>	**					
<i>Anas rubripes</i>		*				
<i>Anas melleri</i>	**					
<i>Anas sparsa</i>	*					
<i>Anas discors</i>		*				
<i>Anas smithii</i>	*					
<i>Aythya valisineria</i>		*				
<i>Aythya collaris</i>		*				
<i>Aythya innotata</i>	**					
<i>Aythya affinis</i>		*				
<i>Somateria fischeri</i>		*				
<i>Histrionicus histrionicus</i>	*					
<i>Melanitta perspicillata</i>		*				
<i>Bucephala islandica</i>	*					
<i>Bucephala albeola</i>		*				
<i>Lophodytes cucullatus</i>		*				
<i>Grus canadensis</i>		*				
<i>Grus monacha</i>		*				
<i>Sarothrura pulchra</i>	*					
<i>Sarothrura rufa</i>	*					
<i>Sarothrura lugens</i>	*					
<i>Sarothrura affinis</i>	*					
<i>Sarothrura insularis</i>	**					
<i>Sarothrura watersi</i>	**					
<i>Himantornis haematopus</i>	*					
<i>Canirallus oculus</i>	*					
<i>Canirallus kioloides</i>	**					
<i>Rallus madagascariensis</i>	**					
<i>Rougetius rougetii</i>	**					
<i>Dryolimnas cuvieri</i>	**					
<i>Amauornis phoenicurus</i>		*				
<i>Amauornis olivieri</i>	**					
<i>Porzana carolina</i>		*				
<i>Porphyrio porphyrio</i>	*					
<i>Porphyrio martinicus</i>		*				

<i>Fulica americana</i>		*				
<i>Podica senegalensis</i>	*					
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<i>Actophilornis africanus</i>	*					
<i>Actophilornis albinucha</i>	**					
<i>Microparra capensis</i>	*					
<i>Hydrophasianus chirurgus</i>			*			
<i>Rostratula benghalensis</i>	*					
<i>Haematopus meadewaldoi</i>	**					
<i>Burhinus oedicephalus</i>					*	
<i>Burhinus vermiculatus</i>	*					
<i>Burhinus capensis</i>	*				*	
<i>Rhinoptilus africanus</i>	*				*	
<i>Rhinoptilus chalcopterus</i>					*	
<i>Rhinoptilus cinctus</i>					*	
<i>Cursorius cursor</i>					*	
<i>Cursorius rufus</i>					*	
<i>Cursorius temminckii</i>					*	
<i>Glareola maldivarum</i>		*				
<i>Glareola lactea</i>		*				
<i>Pluvialis dominica</i>		*				
<i>Charadrius semipalmatus</i>		*				
<i>Charadrius vociferus</i>		*				
<i>Charadrius thoracicus</i>	**					
<i>Charadrius sanctaehelenae</i>	**					
<i>Vanellus crassirostris</i>	*					
<i>Vanellus armatus</i>	*					
<i>Vanellus tectus</i>	*					
<i>Vanellus melanocephalus</i>	**					
<i>Vanellus indicus</i>	*		*			
<i>Gallinago solitaria</i>		*				
<i>Gallinago megala</i>		*				
<i>Gallinago nigripennis</i>	*					
<i>Gallinago macrodactyla</i>	**					
<i>Limosa haemastica</i>		*				
<i>Numenius borealis</i>		*				
<i>Numenius minutus</i>		*				
<i>Bartramia longicauda</i>		*				
<i>Tringa melanoleuca</i>		*				
<i>Tringa flavipes</i>		*				
<i>Tringa solitaria</i>		*				
<i>Tringa macularia</i>		*				
<i>Tringa brevipes</i>		*				
<i>Catoptrophorus semipalmatus</i>		*				
<i>Limnodromus griseus</i>		*				
<i>Limnodromus scolopaceus</i>		*				
<i>Limnodromus semipalmatus</i>			*			
<i>Calidris pusilla</i>		*				
<i>Calidris mauri</i>		*				
<i>Calidris ruficollis</i>			*			
<i>Calidris subminuta</i>			*			
<i>Calidris minutilla</i>		*				
<i>Calidris fuscicollis</i>		*				
<i>Calidris bairdii</i>		*				

<i>Calidris melanotos</i>		*				
<i>Calidris acuminata</i>		*				
<i>Micropalama himantopus</i>		*				
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<i>Tryngites subruficollis</i>		*				
<i>Steganopus tricolor</i>		*				
<i>Larus delawarensis</i>		*				
<i>Larus brunnicephalus</i>		*				
<i>Larus philadelphia</i>		*				
<i>Larus atricilla</i>		*				
<i>Larus pipixcan</i>		*				
<i>Pagophila eburnea</i>				*		
<i>Rhodostethia rosea</i>			*	*		
<i>Sterna elegans</i>		*				
<i>Sterna sumatrana</i>		*				
<i>Sterna forsteri</i>		*				
<i>Sterna aleutica</i>		*				

## ANNEX 1

### Species of waterbirds occurring in the Agreement Area but considered inappropriate for inclusion in The Agreement

#### PODICIPEDIDAE

Alaotra Grebe *Tachybaptus rufolavatus*

Endemic to Madagascar; confined to Lake Alaotra and now probably extinct as a result of hunting, habitat destruction, and competition and hybridisation with *T. ruficollis*.

Madagascar Little Grebe *Tachybaptus pelzelinii*

Endemic to Madagascar, where the population may number fewer than 5,000 individuals.

Pied-billed Grebe *Podilymbus podiceps*

Vagrant to Europe from North America.

#### PHALACROCORACIDAE

Long-tailed Cormorant *Phalacrocorax africanus*

Two subspecies occur: the nominate subspecies occurs throughout Africa south of the Sahara; *P. a. pictilis* is confined to Madagascar. All populations appear to be sedentary or dispersive. Some populations show local seasonal movements related to rainfall (e.g. in Congo), but no long-distance migrations are known.

Double-crested Cormorant *Phalacrocorax auritus*

Vagrant to Europe from North America.

European Shag *Phalacrocorax aristotelis*

Invariably a marine species of rocky coasts. Three subspecies occur: the nominate race breeds in Iceland and on the Atlantic coast of Europe; *P. a. desmarestii* breeds in the central Mediterranean; and *P. c. riggenbachi* breeds on the coast of Morocco. All populations are mainly sedentary, with the northernmost populations showing some post-breeding dispersal (e.g. from extreme north-western Russia to northern Norway). Populations of *desmarestii* appear to be entirely sedentary.

#### ANHINGIDAE

African Darter *Anhinga rufa*

Mainly sedentary; apparently subject to some local movements, but these have yet to be documented.

#### ARDEIDAE

Tricolored Heron *Egretta tricolor*

Vagrant to the Western Palearctic from North America.

Little Blue Heron *Egretta caerulea*

Vagrant to the Western Palearctic from North America.

Snowy Egret *Egretta thula*

Vagrant to Europe from North America.

Madagascar Heron *Ardea humbloti*

Endemic to Madagascar.

Goliath Heron *Ardea goliath*

Largely sedentary, with some post-breeding dispersal.

Indian Pond-Heron *Ardeola grayii*

Extralimital; a scarce visitor to the Arabian Peninsula and Persian Gulf from south-eastern Iran and the Indian Subcontinent.

Chinese Pond-Heron *Ardeola bacchus*

Vagrant to Europe from eastern Asia.

Striated Heron *Butorides striatus*

Largely sedentary, with some post-breeding dispersal.

Green Heron *Butorides virescens*

Vagrant to Europe from North America.

White-backed Night-Heron *Gorsachius leuconotus*

A forest heron; apparently sedentary.

White-crested Bittern *Tigriornis leucolophus*

A secretive forest bittern; apparently sedentary.

Least Bittern *Ixobrychus exilis*  
Vagrant to Europe from North America.  
Schrenck's Bittern *Ixobrychus eurhythmus*  
Vagrant to Europe from eastern Asia.  
American Bittern *Botaurus lentiginosus*  
Vagrant to Europe from North America.

### SCOPIDAE

Hamerkop *Scopus umbretta*  
Largely sedentary, with some wet-season dispersal to seasonal ponds in semi-arid areas. No evidence of regular migration anywhere.

### CICONIIDAE

Saddle-billed Stork *Ephippiorhynchus senegalensis*  
Largely sedentary and probably territorial. Some nomadic movements within large expanses of swamp, but no migrations known.

### THRESKIORNITHIDAE

Hadada Ibis *Bostrychia hagedash*  
Apparently sedentary throughout its extensive range.  
Wattled Ibis *Bostrychia carunculata*  
Endemic to the highlands of Ethiopia.  
Olive Ibis *Bostrychia olivacea*  
A rather secretive forest ibis; sedentary.  
Dwarf Olive Ibis *Bostrychia bocagei*  
Endemic to Sao Tome; rare.  
Spot-breasted Ibis *Bostrychia rara*  
A forest ibis; sedentary.  
Bald Ibis *Geronticus calvus*  
Confined as a breeding species to the highlands of South Africa, Lesotho and Swaziland. Mainly sedentary, but subject to local movements (up to 18 km) outside the breeding season. The present population of 8,000-10,000 individuals has remained relatively stable since 1970, after a long period of decline.  
White-winged Ibis *Lophotibis cristata*  
Endemic to Madagascar.

### ANATIDAE

Ruddy Duck *Oxyura jamaicensis*  
Introduced into Western Europe from North America.  
Bar-headed Goose *Anser indicus*  
Introduced into Western Europe from Central Asia; possibly also a vagrant.  
Snow Goose *Anser caerulescens*  
Vagrant to Europe and Africa from North America.  
Ross's Goose *Anser rossii*  
Vagrant to Europe from North America.  
Canada Goose *Branta canadensis*  
Widely introduced into Europe from North America; also a vagrant.  
Blue-winged Goose *Cyanochen cyanopterus*  
Endemic to the highlands of Ethiopia.  
Hartlaub's Duck *Pteronetta hartlaubii*  
Sedentary along rivers and streams in forested areas of West and Central Africa.  
Cotton Pygmy-goose *Nettapus coromandelianus*  
Very scarce winter visitor to the Arabian Peninsula from South Asia.  
Wood Duck *Aix sponsa*  
Introduced into Western Europe from North America.  
Mandarin Duck *Aix galericulata*  
Introduced into Western Europe from eastern Asia.

American Wigeon *Anas americana*

Vagrant to Europe and Africa from North America.

Falcated Duck *Anas falcata*

Vagrant to Europe and the Middle East from eastern Asia.

Baikal Teal *Anas formosa*

Vagrant to Europe from eastern Asia.

Madagascar Teal *Anas bernieri*

Endemic to Madagascar, where threatened with extinction.

American Black Duck *Anas rubripes*

Vagrant to Europe from North America.

Meller's Duck *Anas melleri*

Endemic to Madagascar.

African Black Duck *Anas sparsa*

Sedentary and territorial with a permanent home range. A species of rivers, streams and mountain bogs.

Blue-winged Teal *Anas discors*

Vagrant to Europe and Africa from North America.

Cape Shoveler *Anas smithii*

Confined to Southern Africa. Largely sedentary, with some irregular movements but no clear pattern of migration.

Canvasback *Aythya valisineria*

Vagrant to Europe from North America.

Ring-necked Duck *Aythya collaris*

Vagrant to Europe and Africa from North America.

Madagascar Pochard *Aythya innotata*

Endemic to Madagascar. Formerly considered as 'probably extinct', this species was rediscovered in 2006.

Lesser Scaup *Aythya affinis*

Vagrant to Europe from North America.

Spectacled Eider *Somateria fischeri*

Vagrant to Western Siberia and northern Norway from north-eastern Asia (east of the Lena Delta).

Harlequin Duck *Histrionicus histrionicus*

Primarily a North American and East Asian species, confined in the Agreement Area to Greenland and Iceland where the populations are resident. There is some movement of birds to adjacent coasts in winter.

Surf Scoter *Melanitta perspicillata*

Vagrant to Europe from North America.

Barrow's Goldeneye *Bucephala islandica*

A North American species, confined in Agreement Area to Iceland, where the population of about 800 pairs is resident.

Bufflehead *Bucephala albeola*

Vagrant to Europe from North America.

Hooded Merganser *Lophodytes cucullatus*

Vagrant to Europe from North America.

## GRUIDAE

Sandhill Crane *Grus canadensis*

Vagrant to Europe from North America.

Hooded Crane *Grus monacha*

Vagrant to Europe from eastern Asia.

## RALLIDAE

White-spotted Flufftail *Sarothrura pulchra*

A sedentary forest rail. Four subspecies have been described.

Red-chested Flufftail *Sarothrura rufa*

Sedentary. Three subspecies have been described.

Chestnut-headed Flufftail *Sarothrura lugens*

Sedentary. Two subspecies have been described.  
 Striped Flufftail *Sarothrura affinis*  
 Sedentary. Two subspecies have been described.  
 Madagascar Flufftail *Sarothrura insularis*  
 Endemic to Madagascar where locally abundant.  
 Slender-billed Flufftail *Sarothrura watersi*  
 Endemic to Madagascar where apparently very rare and local.  
 Nkulengu Rail *Himantornis haematopus*  
 A sedentary rail of lowland rain forest, occasionally occurring in mangroves.  
 Grey-throated Rail *Canirallus oculus*  
 Sedentary. An uncommon and secretive rail of lowland rain forest in West and Central Africa.  
 Madagascar Wood Rail *Canirallus kiolooides*  
 Endemic to Madagascar. Two subspecies have been described.  
 Madagascar Rail *Rallus madagascariensis*  
 Endemic to eastern Madagascar.  
 Rouget's Rail *Rougetius rougetii*  
 Confined to the highlands of Ethiopia and Eritrea; sedentary.  
 White-throated Rail *Dryolimnas cuvieri*  
 Endemic to Madagascar (*D. c. cuvieri*) and Aldabra (*D. c. aldabranus*).  
 White-breasted Waterhen *Amauornis phoenicurus*  
 Vagrant to the Arabian Peninsula from southern Asia.  
 Sakalava Rail *Amauornis olivieri*  
 Endemic to Madagascar; rare.  
 Sora *Porzana carolina*  
 Vagrant to Europe from North America.  
 Purple Swampphen *Porphyrio porphyrio*  
 Sedentary over most of its very extensive range; sometimes moves locally after breeding in Northwest Africa and Egypt. Four subspecies are relevant: the nominate race in Southwest Europe and Northwest Africa; *madagascariensis* in Madagascar, Egypt and Africa south of the Sahara; *seistanicus* in eastern Turkey and northern and eastern Iran; and *poliocephalus* in Iraq.  
 Purple Gallinule *Porphyrio martinicus*  
 Vagrant to Europe from North America.  
 American Coot *Fulica americana*  
 Vagrant to Europe from North America.

#### HELIORNITHIDAE

African Finfoot *Podica senegalensis*  
 Highly localised and apparently sedentary. Four subspecies are generally recognised.

#### JACANIDAE

African Jacana *Actophilornis africanus*  
 Mainly sedentary, but may undertake dispersive or nomadic movements in response to drought.  
 Madagascar Jacana *Actophilornis albinucha*  
 Endemic to Madagascar.  
 Lesser Jacana *Microparra capensis*  
 Apparently sedentary, unless forced to move by drought.  
 Pheasant-tailed Jacana *Hydrophasianus chirurgus*  
 Mainly extralimital; a scarce winter visitor to the Arabian Peninsula from southern Asia.

#### ROSTRATULIDAE

Greater Painted-snipe *Rostratula benghalensis*  
 Mainly sedentary but performs irregular movements in response to rainfall or drought.

#### HAEMATOPODIDAE

Canary Island Oystercatcher *Haematopus meadewaldoi*  
 Endemic to the Canary Islands; extinct.

## BURHINIDAE

Eurasian Thick-knee *Burhinus oedicnemus*

A bird of dry grasslands, heathlands and semi-desert.

Water Thick-knee *Burhinus vermiculatus*

Largely sedentary, making only local movements related to changes in water level.

Spotted Thick-knee *Burhinus capensis*

A bird of savanna, open woodland, cultivated land, semi-arid scrub and stony hillsides. Mainly sedentary.

## GLAREOLIDAE

Double-banded Courser *Rhinoptilus africanus*

A bird of flat, stony and gravelly desert and semi-desert plains; mainly sedentary.

Bronze-winged Courser *Rhinoptilus chalcopterus*

A bird of *Acacia* and other savanna, bushveld and thorn scrub. Migratory.

Three-banded Courser *Rhinoptilus cinctus*

A bird of dry mopane and miombo woodland, thorn savanna and scrub and other dry, open woodlands. Mainly sedentary, but migratory in southernmost part of range.

Cream-coloured Courser *Cursorius cursor*

A bird of desert and semi-desert. Migratory.

Burchell's Courser *Cursorius rufus*

A bird of desert, semi-desert and overgrazed grasslands. Highly nomadic.

Temminck's Courser *Cursorius temminckii*

A bird of semi-arid bush savanna, bushveld and short grasslands. Migratory in some areas.

Oriental Pratincole *Glareola maldivarum*

Vagrant to Europe from eastern Asia.

Small Pratincole *Glareola lactea*

Vagrant to Iran and the Arabian Peninsula from southern Asia.

## CHARADRIIDAE

American Golden Plover *Pluvialis dominica*

Vagrant to Europe and Africa from North America.

Semipalmated Plover *Charadrius semipalmatus*

Vagrant to Europe from North America.

Killdeer *Charadrius vociferus*

Vagrant to Europe from North America.

Madagascar Plover *Charadrius thoracicus*

Endemic to Madagascar where restricted to coastal grassy areas in the southwest.

St Helena Plover *Charadrius Sanctaehelenae*

Endemic to St Helena.

Long-toed Lapwing *Vanellus crassirostris*

Three subspecies have been described: *crassirostris* around Lake Chad and in Sudan, Uganda and Kenya; *hybrida* from Tanzania and eastern Democratic Republic of Congo to Malawi; and *leucopterus* from southern Democratic Republic of Congo, Zambia and Malawi to South Africa. *V. c. hybrida* is regarded by some authors as merely the intergrades between *crassirostris* and *leucopterus*. The species appears to be largely sedentary throughout its range.

Blacksmith Plover *Vanellus armatus*

Largely sedentary, but subject to local movements in some parts of its range in relation to the rains.

Black-headed Lapwing *Vanellus tectus*

Largely sedentary throughout its range, with some local movements in Mauritania, Mali and Nigeria during the rains.

Spot-breasted Lapwing *Vanellus melanocephalus*

Endemic to the highlands of Ethiopia.

Red-wattled Lapwing *Vanellus indicus*

Mainly extralimital, occurring throughout southern Asia west to north-central Iraq and extreme south-eastern Turkey; also in Oman and the United Arab Emirates. Mainly sedentary.

## SCOLOPACIDAE

Solitary Snipe *Gallinago solitaria*

Vagrant to eastern Iran and central Saudi Arabia from Central Asia.

Swinhoe's Snipe *Gallinago megala*

Vagrant to Europe from eastern Asia.

African Snipe *Gallinago nigripennis*

Largely sedentary, but subject to local movements often associated with drying of temporary floods, and an altitudinal migrant in some areas.

Madagascar Snipe *Gallinago macrodactyla*

Endemic to Madagascar where uncommon.

Hudsonian Godwit *Limosa haemastica*

Vagrant to Europe from North America.

Eskimo Curlew *Numenius borealis*

Former vagrant to Europe from North America.

Little Curlew *Numenius minutus*

Vagrant to Europe from eastern Asia.

Upland Sandpiper *Bartramia longicauda*

Vagrant to Europe from North America.

Greater Yellowlegs *Tringa melanoleuca*

Vagrant to Europe and Africa from North America.

Lesser Yellowlegs *Tringa flavipes*

Vagrant to Europe and Africa from North America.

Solitary Sandpiper *Tringa solitaria*

Vagrant to Europe from North America.

Spotted Sandpiper *Tringa macularia*

Vagrant to Europe from North America.

Grey-tailed Tattler *Tringa brevipes*

Vagrant to Europe from eastern Asia.

Willet *Catoptrophorus semipalmatus*

Vagrant to Europe from North America.

Short-billed Dowitcher *Limnodromus griseus*

Vagrant to Europe from North America.

Long-billed Dowitcher *Limnodromus scolopaceus*

Vagrant to Europe and Africa from North America.

Asian Dowitcher *Limnodromus semipalmatus*

Vagrant to the United Arab Emirates, Yemen and Kenya from eastern Asia.

Semipalmated Sandpiper *Calidris pusilla*

Vagrant to Europe from North America.

Western Sandpiper *Calidris mauri*

Vagrant to Europe from North America.

Rufous-necked Stint *Calidris ruficollis*

Mainly extralimital breeding in Northeast Asia and wintering in Southeast Asia and Australasia.

Recorded as a vagrant or very scarce passage migrant on the East African coast, and as a regular winter visitor in very small numbers to South Africa.

Long-toed Stint *Calidris subminuta*

Mainly extralimital breeding in Northeast Asia and wintering in Southeast Asia and Australasia. Rare winter visitor to the Arabian Peninsula; vagrant to Europe and eastern Africa.

Least Sandpiper *Calidris minutilla*

Vagrant to Europe from North America.

White-rumped Sandpiper *Calidris fuscicollis*

Vagrant to Europe and Africa from North America.

Baird's Sandpiper *Calidris bairdii*

Vagrant to Europe and Africa from North America.

Pectoral Sandpiper *Calidris melanotos*

Vagrant to Europe and Africa from North America.  
 Sharp-tailed Sandpiper *Calidris acuminata*  
 Vagrant to Europe and the Arabian Peninsula from eastern Asia.  
 Stilt Sandpiper *Micropalama himantopus*  
 Vagrant to Europe from North America.  
 Buff-breasted Sandpiper *Tryngites subruficollis*  
 Vagrant to Europe, Africa and the Arabian Peninsula from North America.  
 Wilson's Phalarope *Steganopus tricolor*  
 Vagrant to Europe, Africa and the Arabian Peninsula from North America.

## **LARIDAE**

Ring-billed Gull *Larus delawarensis*  
 Vagrant to Europe and Africa from North America.  
 Brown-headed Gull *Larus brunnicephalus*  
 Mainly extralimital, breeding in Central Asia and wintering in southern and Southeast Asia. A very rare winter visitor to the southern Persian Gulf and Arabian Sea; vagrant to the Near East.  
 Bonaparte's Gull *Larus philadelphia*  
 Vagrant to Europe from North America.  
 Laughing Gull *Larus atricilla*  
 Vagrant to Europe and Africa from North America.  
 Franklin's Gull *Larus pipixcan*  
 Vagrant to Europe and Africa from North America.  
 Ivory Gull *Pagophila eburnea*  
 A marine species. Breeds in the high Arctic (Greenland, Svalbard, Russia) and winters mainly in Arctic waters within drift ice and along the edge of the pack-ice. A vagrant further south in Europe.  
 Ross's Gull *Rhodostethia rosea*  
 Breeds on the tundra of north-eastern Siberia between the Khroma and Kolyma Rivers (120° to 160°E). The winter distribution is poorly known, but is presumed to be along the edge of the pack-ice in the Arctic Ocean. Only a vagrant to Northwest Europe.  
 Elegant Tern *Sterna elegans*  
 Vagrant to Europe from the Americas.  
 Black-naped Tern *Sterna sumatrana*  
 Vagrant to South Africa and Mozambique from Southeast Asia.  
 Forster's Tern *Sterna forsteri*  
 Vagrant to Europe from North America.  
 Aleutian Tern *Sterna aleutica*  
 Vagrant to Europe from North America.

## **ANNEX 2**

### **History of the AEWA Conservation Status Report**

#### **The first edition of the AEWA Conservation Status report (1999)**

The first report on the status and trends of waterbird populations covered by the Agreement was compiled by Wetlands International and presented as an information document (AEWA Inf. 1.1.) at the First Session of the Meeting of the Parties in Cape Town, South Africa, in November 1999. The final version of this document, entitled *Report on the Conservation Status of Migratory Waterbirds in the Agreement Area*, was subsequently published by the AEWA Secretariat as Technical Series No.1 (Wetlands International 2000). The report was intended to serve two purposes; firstly to fulfil the requirement in paragraph 7.4 of the Action Plan for an international review of the status and trends of the populations included in the Action Plan, and secondly to provide the necessary information to facilitate amendment of the Action Plan to include all populations of waterbirds covered by the Agreement at that time (a total of 170 species). The report also considered a number of species and populations of waterbirds occurring in the Agreement Area but not listed in Annex 2 to the Agreement, in an attempt to identify any additional migratory populations which had an unfavourable conservation status and would be appropriate for inclusion in the Agreement and Action Plan.

#### **The second edition of the AEWA Conservation Status report (2002)**

The second edition of this *Report on the Conservation Status of Migratory Waterbirds in the Agreement Area* was prepared as an information document for the Second Session of the Meeting of the Parties held in Bonn, Germany, in September 2002. Like its predecessor, this report summarised the present status and trends of all waterbird populations covered by the Agreement on the basis of the latest available information (a total of 369 populations of 170 species). It also summarised the status and trends of an additional 134 populations of waterbirds that were under consideration for inclusion in the Agreement and Action Plan. Eighteen of these populations belonged to species that were already included in Annex 2 to the Agreement. The remaining 116 populations belonged to an additional 65 species which had been proposed for inclusion.

#### **Third Edition (2006 -2007)**

The third edition of the AEWA Conservation Status Report, published in 2007, included a number of differences in approach from the first two editions (Appendix 2). Delegates at MoP 2 in Bonn (2002) expressed a need for a report with a higher analytical content. They also asked for more accessible summaries of the conservation status of waterbirds in the Agreement Area, and requested the Technical Committee to review possibilities. A small working group in the Technical Committee drafted a proposal for modifications to the format that was approved by the full Committee. This was made available in 2005 at AEWA MOP3 in Dakar, Senegal, as document AEWA/Inf. 3.1., which followed these recommendations as far as possible. The timing of the 2005 contract did not, however, allow preparation of a full report, and the third edition of this report was completed in 2006. Following inclusion of amendments made by the Technical Committee in November 2006, the final draft was published in early 2007.

### **STATUS AND TRENDS OF WATERBIRD POPULATIONS**

#### **First edition**

The first edition of the *Report on the Conservation Status of Migratory Waterbirds in the Agreement Area* provided information on the sizes and trends of 360 migratory populations of all 170 species listed in Annex 2 to the Agreement, and also included some information on the migratory populations of a further 50 species of waterbirds that were considered to be appropriate for inclusion in the Agreement. This information was based to a large extent on the second edition of *Waterfowl Population Estimates* (Rose & Scott 1997), but included a number of more recent estimates and trends taken from *The EBCC Atlas of European Breeding Birds* (Hagemeijer & Blair 1997), *The Atlas of Southern African Birds* (Harrison *et al.* 1997), *Goose Populations of the Western Palearctic* (Madsen *et al.* 1999) and various other published and unpublished sources available

up until mid-1999.

## **Second edition**

The second edition updated the information given in the first edition of the status report on the basis of the most recently available information. This information was being compiled by Wetlands International for the third edition of *Waterbird Population Estimates*, (WPE3) which was published in October 2002. Much of the new information for WPE3 was derived from the results of the International Waterbird Census (IWC) co-ordinated by Wetlands International, new material provided by Wetlands International's Specialist Groups, and direct input from Wetlands International's extensive network of contacts. Other major sources of new information included *Threatened Birds of the World* (BirdLife International 2000), *European Bird Populations: Estimates and trends* (BirdLife International/European Bird Census Council 2000), *Important Bird Areas in Africa and associated islands* (Fishpool & Evans 2001), and four publications on waterbird numbers in preparation at that time: *Waterbird Population Estimates in Africa* (Dodman 2002), *Status of Migratory Wader Populations in Africa and Western Eurasia in the 1990s* (Stroud et al. 2004), *Breeding Waders in Europe 2000* (Thorup 2005), and *Results from the International Waterbird Census in the Western Palearctic and Southwest Asia in 1997, 1998 and 1999* (Gilissen et al. 2002).

As the compilation of the second edition of the report pre-dated the finalisation of WPE3 by some months, some discrepancies arose between the estimates and trends given in the second edition of this report and those given in WPE3.

The second edition was divided into three sections. The first section reviewed the current status of all 360 populations of waterbirds included in the Action Plan<sup>1</sup>. The second section reviewed the current status of a further 65 species and 134 populations of waterbirds that had been proposed for inclusion in the Agreement and Action Plan. The third section drew attention to the remaining species of waterbirds (of the traditional 'waterbird' families) that had been recorded in the Agreement Area, but were considered inappropriate for inclusion in the Agreement.

## ANNEX 3

### Explanation of methods used to list populations in Table 1

Extracted from second edition of this report.

#### WATERBIRD SPECIES INCLUDED IN THE AGREEMENT

In the species accounts that follow, the introductory text describing the subspecies and populations is taken from the first edition of this status report, with some updating in the light of improved understanding. The sequence and composition of families follow *Handbook of the Birds of the World*, Vols. 1 and 3 (del Hoyo *et al.* 1992 & 1996), while the taxonomic treatment at species level and scientific nomenclature generally follow Sibley and Monroe (1990 & 1993). Each migratory population occurring within the Agreement Area is listed with an estimate of population size (or range category) followed by an indication of recent trends, where known. Unless otherwise stated, population sizes and trends are identical to those given in the third edition of *Waterbird Population Estimates*.

Populations are listed in one of four ways:

When the breeding grounds and the wintering areas of a population are well known and these are widely separated, the breeding grounds are given first, followed by a slash (/), followed by the wintering areas e.g. Western Siberia/Western Europe for the single population of *Branta bernicla bernicla*.

When the population has been identified largely or wholly on the basis of its distribution during the boreal winter, and the breeding grounds are either poorly known or overlap extensively with those of other wintering populations (as is the case in many ducks wintering in Western Eurasia), the population is described only by its winter distribution, and this is indicated the word '(wintering)' in the text and with the abbreviation '(win)' in table 1.

Similarly, when a population has been identified largely or wholly on the basis of its breeding distribution, and the wintering grounds are either poorly known or overlap extensively with those of other breeding populations (as is the case in many herons and shorebirds breeding in Western Eurasia and wintering widely in Sub-Saharan Africa), the population is described only by its breeding distribution, and this is indicated with the word '(breeding)' in the text and the abbreviation '(bre)' in table 1.

When there is a considerable amount of overlap between breeding and wintering ranges (*i.e.* when some individuals remain throughout the breeding range year round) or when both breeding and non-breeding ranges are poorly known (e.g. in many Afrotropical species), the population is described by its entire range.

Estimates of population size are given in two ways: either as the number of individuals present in the population (a 'best-guess figure' or a minimum-maximum range) or as being in one of five size categories, A to E. These size categories are as follows:

A:	Less than 10,000
B:	10,000-25,000
C:	25,000-100,000
D:	100,000-1,000,000
E:	Over 1,000,000

In a relatively small number of cases (e.g. some species of Rallidae), it is impossible to give even a rough indication of total population size.

The section **Changes in status** summarises recent information on population trends. It should be noted that in many cases, the change in status is merely the result of improved knowledge of population trends, and does not reflect any real change in the long-term trend of the population concerned.

The section **Comments** includes a note on those species which are currently listed as globally

threatened or near-threatened. It includes information on listing in the Appendices to the Bonn Convention, and draws attention to any special action plans or management plans that have been produced in recent years. This section also includes a discussion of any recent changes in population limits which have been necessary because of improved understanding of migration routes.

Finally, this section includes recent information on population size, especially when there appears to have been a major change since 1999, when the first edition of this status report was prepared. Again it should be noted that in many cases, the new population estimate is derived from better census data, and does not imply that there has been any significant change in population size. Whenever the new estimate is believed to reflect a real change in population size, this is clearly stated.

## ANNEX 4

### Analysis of waterbird population trends in Europe, 1974-2005, based on data from the International Waterbird Census (IWC)

#### The International Waterbird Census and TRIM

The International Waterbird Census (IWC) has been coordinated in Europe, North Africa and parts of West and Central Asia (a region roughly equivalent to the Western Palearctic) by Wetlands International and its predecessor organisation IWRB since 1967. The long time-series and consistent coverage of many sites from year to year allow analysis and estimation of population trends for over 60 species, mostly in Europe. In Sub-Saharan Africa the Census was established in 1991 and large-scale population trend analyses will soon become possible.

The program TRIM (TRends and Indices for Monitoring data) (Pannekoek & van Strien 1998, <http://www.cbs.nl/en-GB/menu/themas/natuur-milieu/methoden/trim/default.htm>) was used to calculate the population trend estimates presented here. TRIM uses log-linear Poisson regression to model population trends based on the site-based time series count data in the IWC database. Missing values which arise in years when a site is not counted are “imputed” using data from other sites in the same year. In such a large dataset covering about 20,000 sites over 30 years or more, there are a lot of missing values, and trend analyses are only presented for species where missing values account for fewer than half the data in a geographic area used in the analysis.

#### Methods

For the purposes of this analysis, the Western Palearctic was divided into six areas, shown in Figure 1., as follows:

1. North-west Europe: Belgium, France (excluding Mediterranean), Germany (excluding Bavaria), Iceland, Ireland, The Netherlands, UK.
2. Baltic/Nordic: Belarus, Estonia, Finland, Latvia, Lithuania, Norway, Poland, Russia, Sweden.
3. Central Europe: Austria, Czech Republic, Germany (Bavaria), Hungary, Slovakia, Switzerland.
4. West Mediterranean: Algeria, France (Mediterranean), Italy, Morocco, Portugal, Spain, Tunisia.
5. East Mediterranean/Black Sea: Albania, Bosnia-Herzegovina, Bulgaria, Croatia, Cyprus, Egypt, Georgia, Greece, Israel, Lebanon, Libya, Macedonia, Moldova, Romania, Serbia, Slovenia, Syria, Turkey, Ukraine.
6. South-west Asia: Armenia, Azerbaijan, Bahrain, Kuwait, Kazakhstan, Kyrgyzstan, Iran, Iraq, Jordan, Oman, Qatar, Saudi Arabia, Tajikistan, Turkmenistan, UAE, Uzbekistan, Yemen.

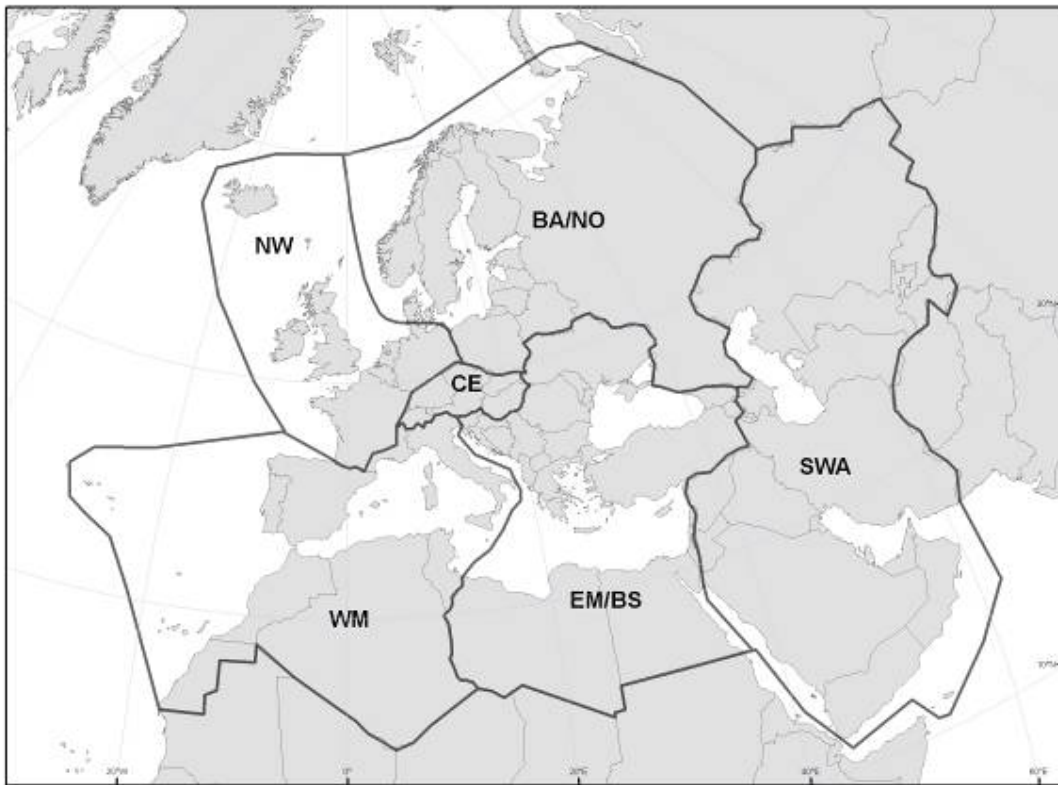
The quality of IWC data is highest in regions 1, 2 and 3, and trend analyses are presented for the most species in these three regions. Data quality is good enough for trend analyses of many species in regions 4 and 5, but is not yet sufficiently high for any analyses in region 6. The quality and quantity of data submitted to the IWC database has increased over time, and for some species and regions, it is possible to present a 10-year trend, covering the years 1996 to 2005, when calculation of a longer-term trend is impossible. Long-term trends, from 1974 to 2005 have been calculated for most of the ducks, but for other groups of waterbirds, data quality are generally only sufficient after 1990. Trends are thus presented for a number of time periods, depending on data quality. Population trends are presented on the graphs as indices relative to a base year, which was set at 1996. All the indices thus have a value of 1 for 1996, and an index value of 2 represents a doubling of the population relative to the level in 1996, and a value of 0.5 represents a population at half the 1996 level.

A small table adjacent to each of the graphs provides a summary of the basis for the population trend presented on the graph. These tables list the number of sites in the region that were used in the analysis by TRIM, the number of years over which the trend was calculated, and the number of counts that were used to calculate the trend, separated into observed zero counts, observed positive counts and missing counts. The number of missing counts indicates the completeness of the dataset, and analyses were not included if the number of missing counts exceeded the number of observed counts. Finally, the overall slope of the trend graph is presented for the 10-year period 1996 to 2005, and in addition, if appropriate, for the longest time period available. A slope value of 1 represents a perfectly stable population and values above 1 indicate a positive population trend, and below 1 a negative trend.

### Interpretation of the population trend data

The population graphs presented in this Annex are the most objective and rigorous attempt yet made to assess population trends of waterbirds in the AEWA region at such an extensive geographical scale, but they should nevertheless be interpreted with considerable caution. The analyses divide the Western Palearctic into standard regions which rarely conform to the boundaries of biogeographic populations. The use of standardised time periods for the calculation of the slopes of population trajectories (comprising 10-year medium-term trends and the longest time series available for long-term trends) allows comparison between trends of different populations, but may result in neglect of the most biologically meaningful change points. Finally, changes in the number of birds counted in January do not necessarily represent actual changes which might be taking place in the population as a whole. For example, increases in numbers of Northern Lapwing, Eurasian Golden Plover and Eurasian Curlew counted in winter do not correspond with decreases recorded during the breeding season, and it has been suggested that these species are changing their habitat use, moving from inland sites, often on farmland, that are not included in surveys, to coastal sites of which a high proportion are included in counts. Changes in numbers of birds counted can also represent shifts in the geographical ranges of populations rather than actual changes in numbers. These shifts may be related to climate change, and it seems likely, for example, that the widespread increases in numbers of sandpipers of the genus *Tringa* revealed in this analysis are a result of increasing numbers of these largely trans-Saharan migrant species stopping for the winter in southern and western Europe. These are some of the reasons why apparently obvious trends revealed in the graphs and tables in this section have not always been included in Table 1.

**Figure 1: Regions used for TRIM analysis of IWC data**

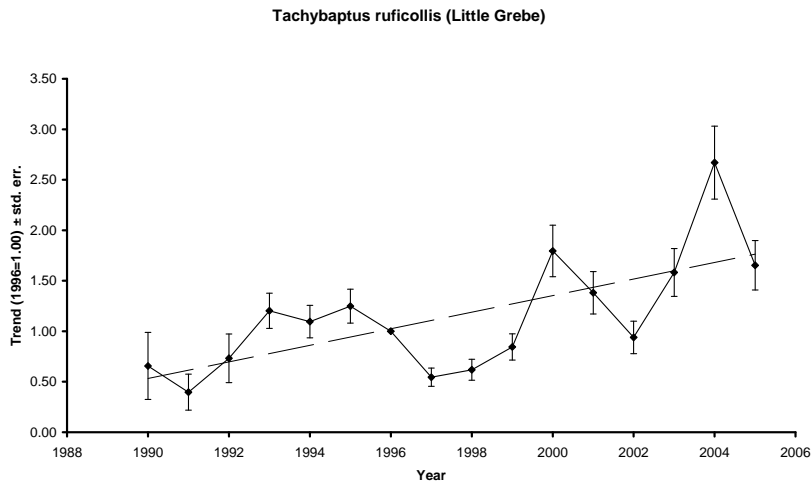


The graphs and tables that follow were produced by running TRIM (Trends and Indices for Monitoring data, Pannekoek & van Stiein 2002) on waterbird count data selected from the IWC database.

See pages 103-104 for notes on interpreting the graphs

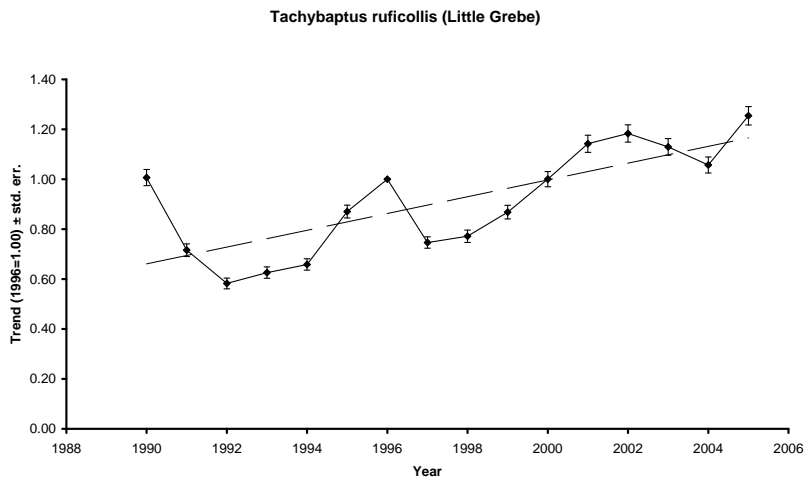
## *Tachybaptus ruficollis* Little Grebe

### Baltic/Nordic



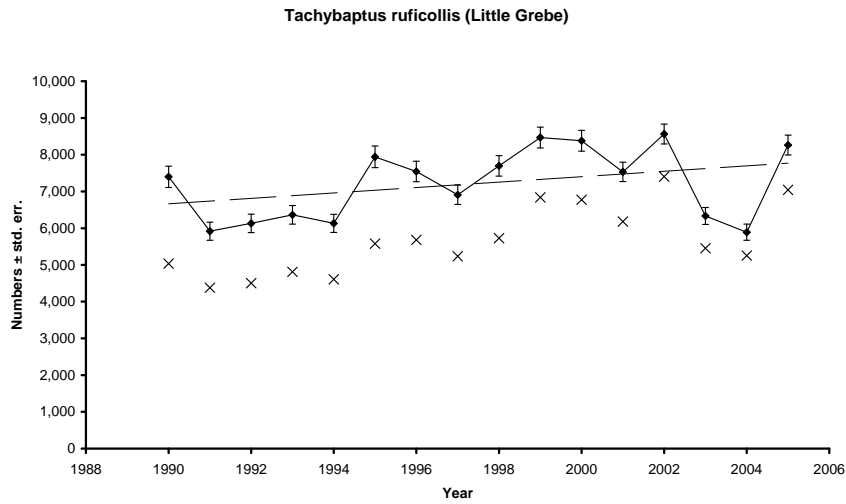
Number of sites	78
Number of years	16
Number of observed zero counts	517
Number of observed positive counts	443
Number of missing counts	288
Overall slope 1990-2005	1.0731
Overall slope 1996-2005	1.1269

### NW Europe



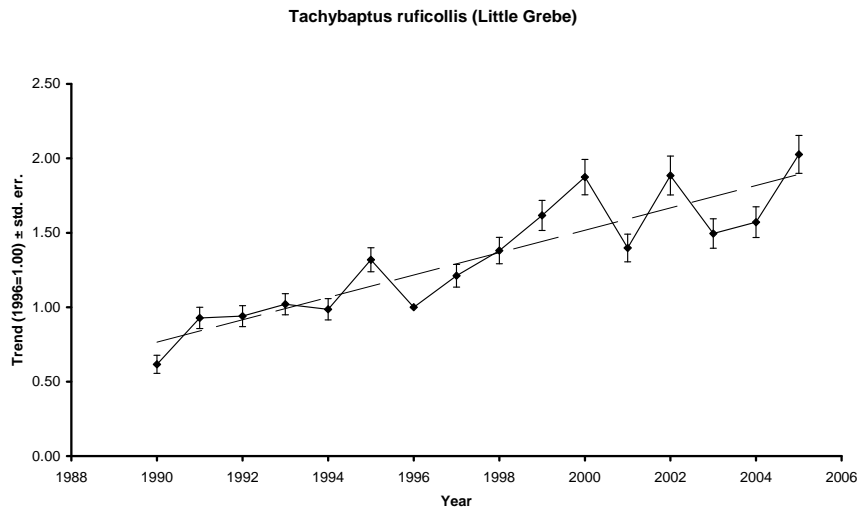
Number of sites	1996
Number of years	16
Number of observed zero counts	8918
Number of observed positive counts	14621
Number of missing counts	8397
Overall slope 1990-2005	1.0384
Overall slope 1996-2005	1.0469

## Central Europe



Number of sites	468
Number of years	16
Number of observed zero counts	1087
Number of observed positive counts	4068
Number of missing counts	2333
Overall slope 1990-2005	1.0101
Overall slope 1996-2005	0.9906

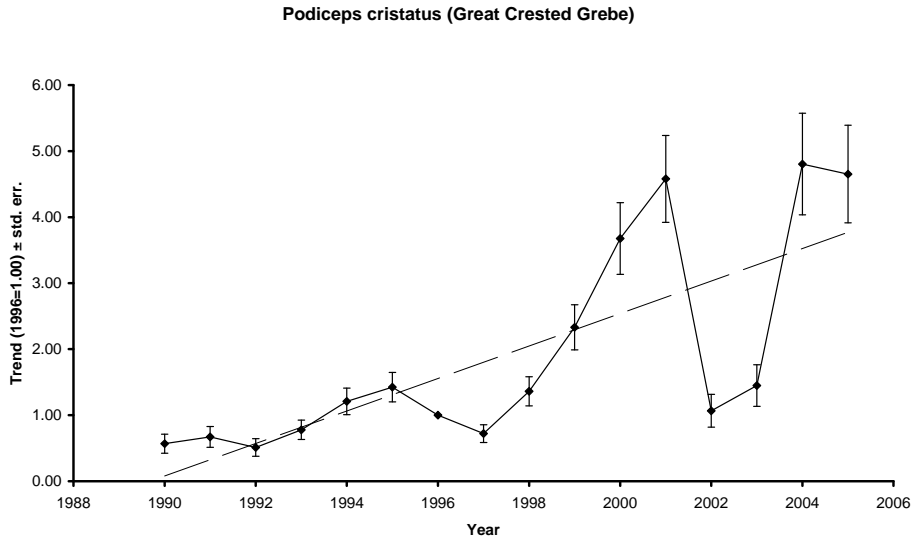
## West Mediterranean



Number of sites	983
Number of years	16
Number of observed zero counts	3235
Number of observed positive counts	6324
Number of missing counts	6169
Overall slope 1990-2005	1.0619
Overall slope 1996-2005	1.0464

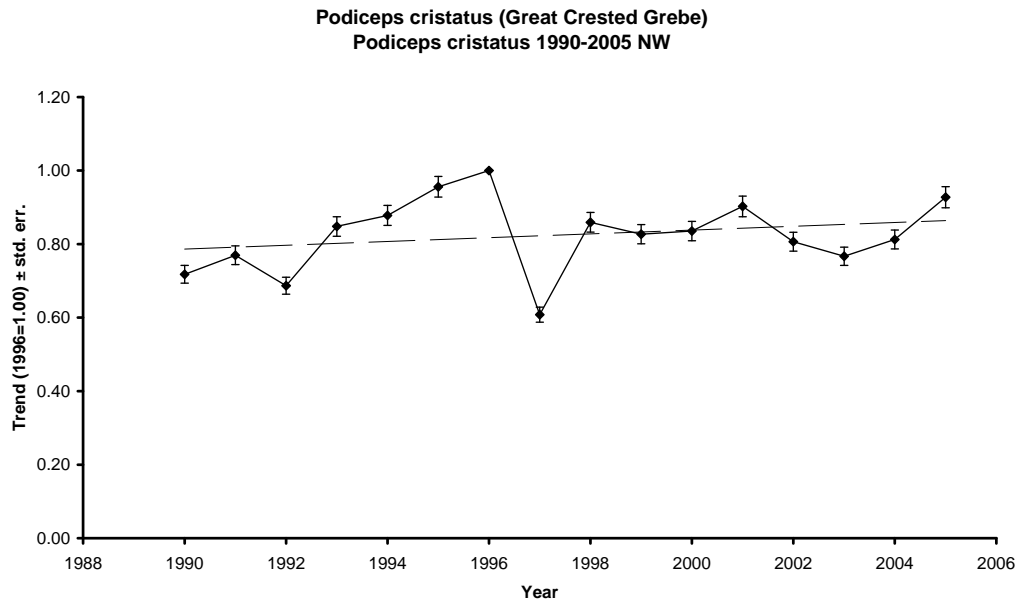
## *Podiceps cristatus* Great Crested Grebe

### Baltic/Nordic



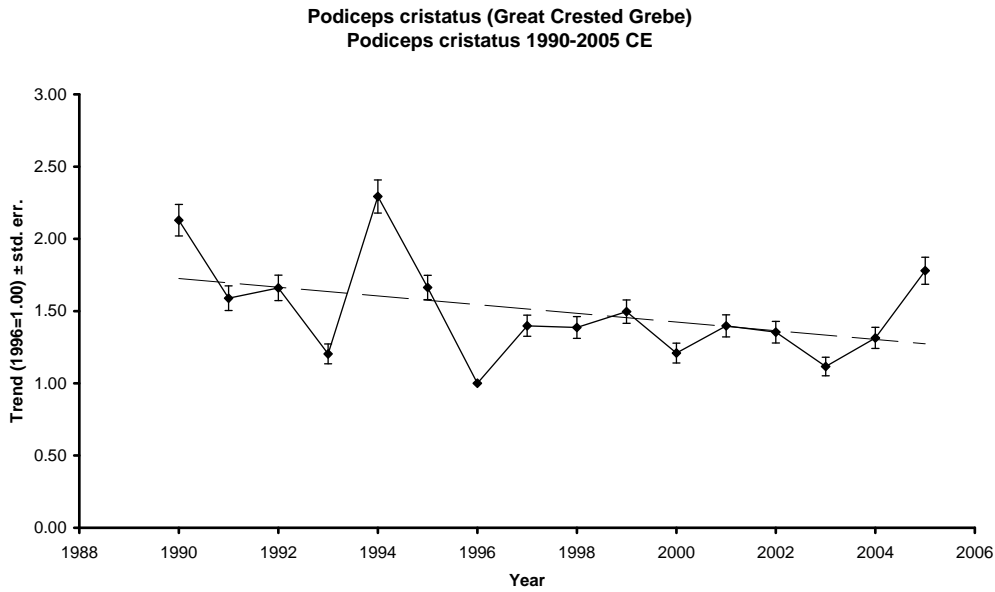
Number of sites	199
Number of years	16
Number of observed zero counts	1488
Number of observed positive counts	1141
Number of missing counts	555
Overall slope 1990-2005	1.1396
Overall slope 1996-2005	1.1630

### NW Europe



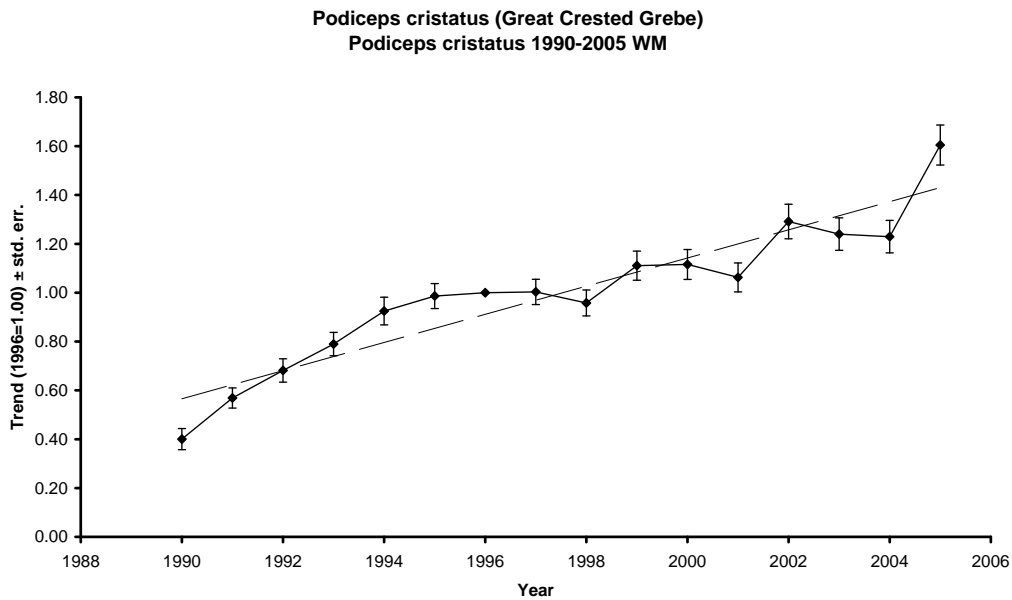
Number of sites	2304
Number of years	16
Number of observed zero counts	7430
Number of observed positive counts	19098
Number of missing counts	10336
Overall slope 1990-2005	1.0067
Overall slope 1996-2005	1.0032

## Central Europe



Number of sites	280
Number of years	16
Number of observed zero counts	1202
Number of observed positive counts	2405
Number of missing counts	873
Overall slope 1990-2005	0.9820
Overall slope 1996-2005	1.0252

## West Mediterranean

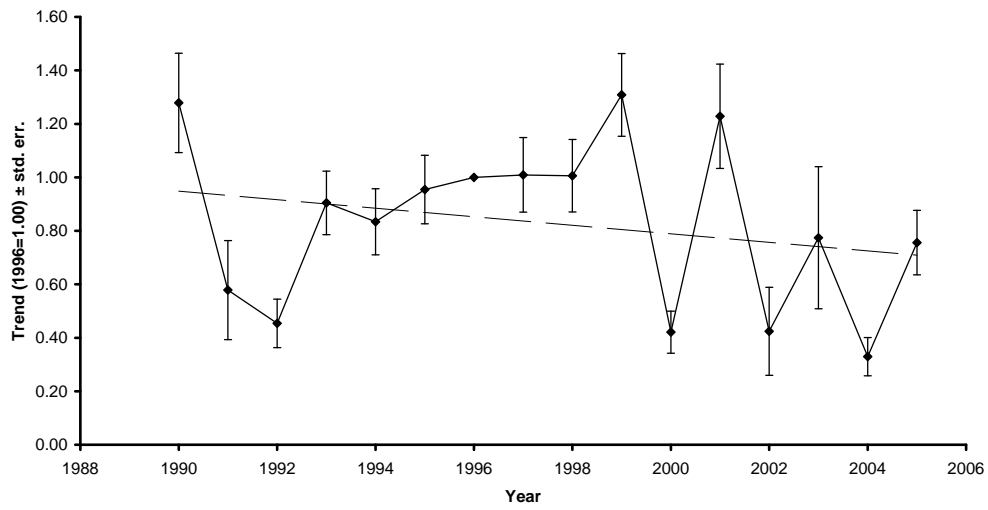


Number of sites	705
Number of years	16
Number of observed zero counts	1996
Number of observed positive counts	5055
Number of missing counts	4229
Overall slope 1990-2005	1.0669
Overall slope 1996-2005	1.0432

See pages 103-104 for notes on interpreting the graphs

# East Mediterranean/Black Sea

*Podiceps cristatus* (Great Crested Grebe)

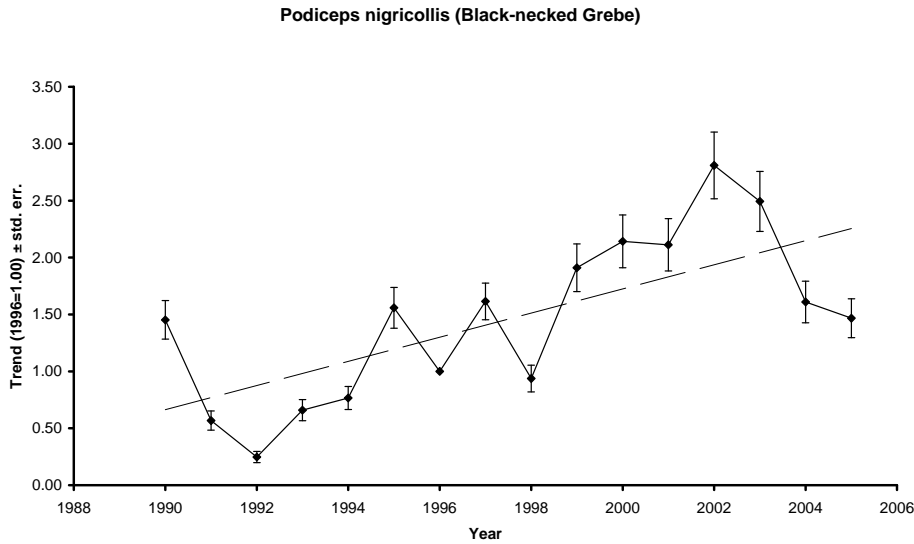


Number of sites	193
Number of years	16
Number of observed zero counts	379
Number of observed positive counts	1140
Number of missing counts	1569
Overall slope 1990-2005	0.9756
Overall slope 1996-2005	0.9269

See pages 103-104 for notes on interpreting the graphs

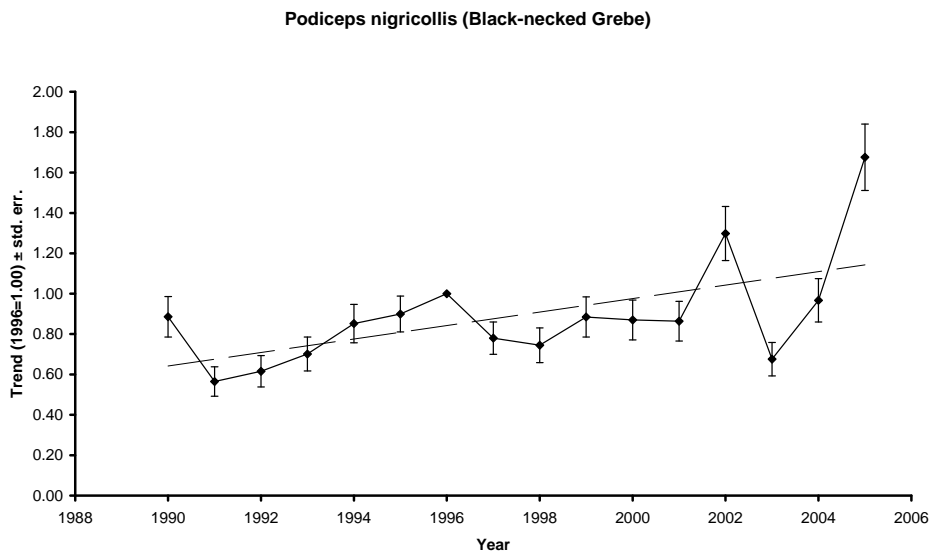
## *Podiceps nigricollis* Black-necked Grebe

### NW Europe



Number of sites	91
Number of years	16
Number of observed zero counts	636
Number of observed positive counts	717
Number of missing counts	103
Overall slope 1990-2005	1.0954
Overall slope 1996-2005	1.0593

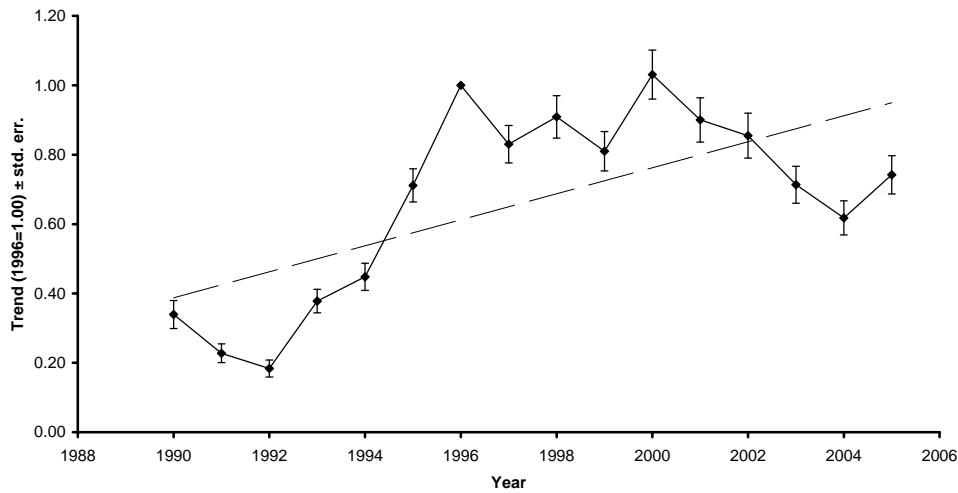
### Central Europe



Number of sites	41
Number of years	16
Number of observed zero counts	212
Number of observed positive counts	434
Number of missing counts	10
Overall slope 1990-2005	1.0338
Overall slope 1996-2005	1.0437

## West Mediterranean

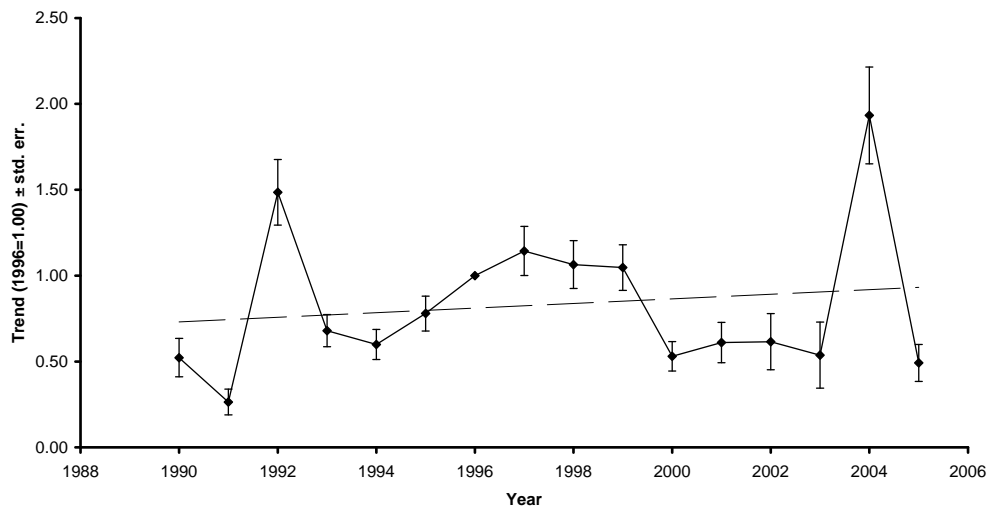
### *Podiceps nigricollis* (Black-necked Grebe)



Number of sites	288
Number of years	16
Number of observed zero counts	1252
Number of observed positive counts	1955
Number of missing counts	1401
Overall slope 1990-2005	1.0821
Overall slope 1996-2005	0.9621

## East Mediterranean/Black Sea

### *Podiceps nigricollis* (Black-necked Grebe)

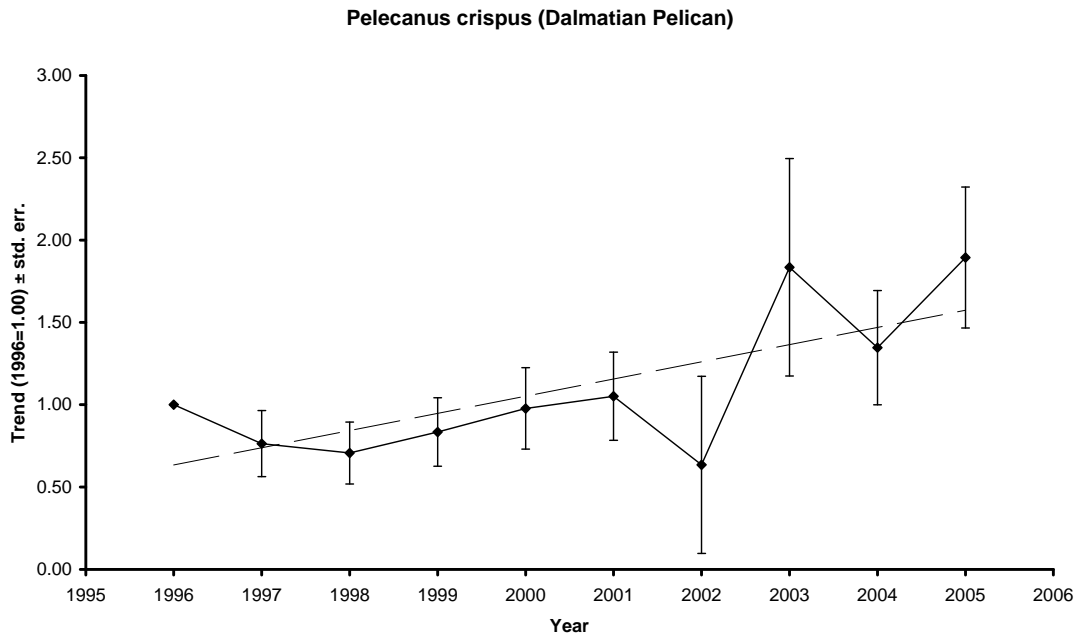


Number of sites	146
Number of years	16
Number of observed zero counts	307
Number of observed positive counts	927
Number of missing counts	1102
Overall slope 1990-2005	1.0162
Overall slope 1996-2005	0.9455

See pages 103-104 for notes on interpreting the graphs

## *Pelecanus crispus* Dalmatian Pelican

East Mediterranean/Black Sea

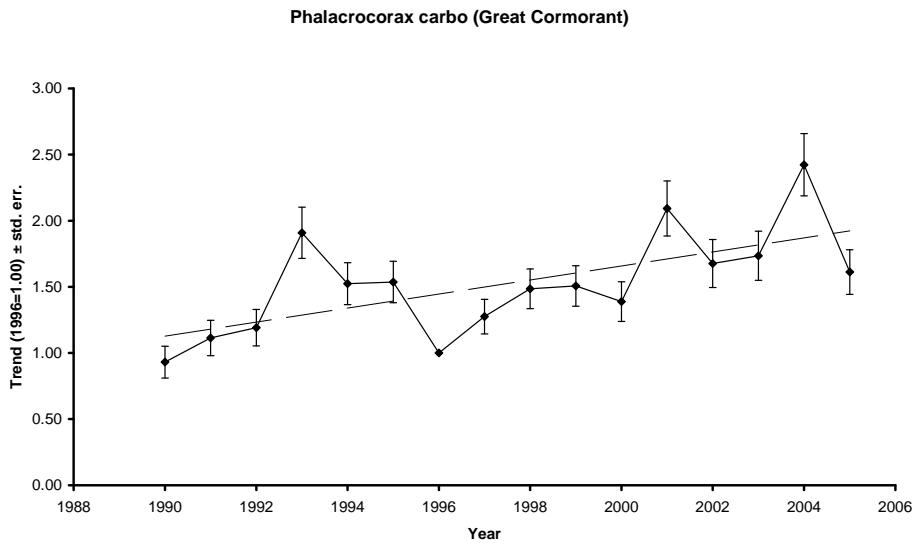


Number of sites	31
Number of years	10
Number of observed zero counts	46
Number of observed positive counts	169
Number of missing counts	95
Overall slope 1996-2005	1.0867

See pages 103-104 for notes on interpreting the graphs

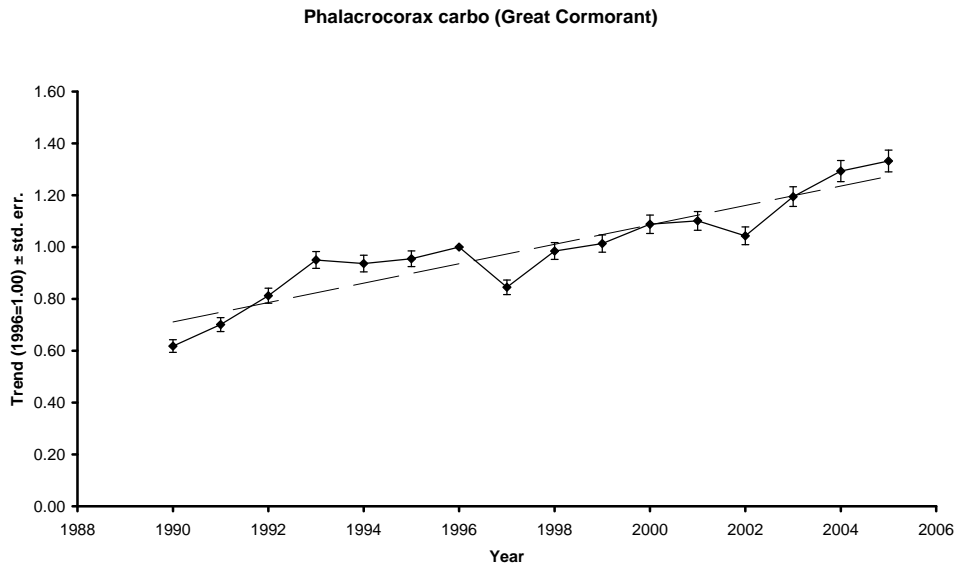
## *Phalacrocorax carbo* Great Cormorant

### Baltic/Nordic



Number of sites	608
Number of years	16
Number of observed zero counts	2692
Number of observed positive counts	4721
Number of missing counts	2315
Overall slope 1990-2005	1.0361
Overall slope 1996-2005	1.0771

### NW Europe

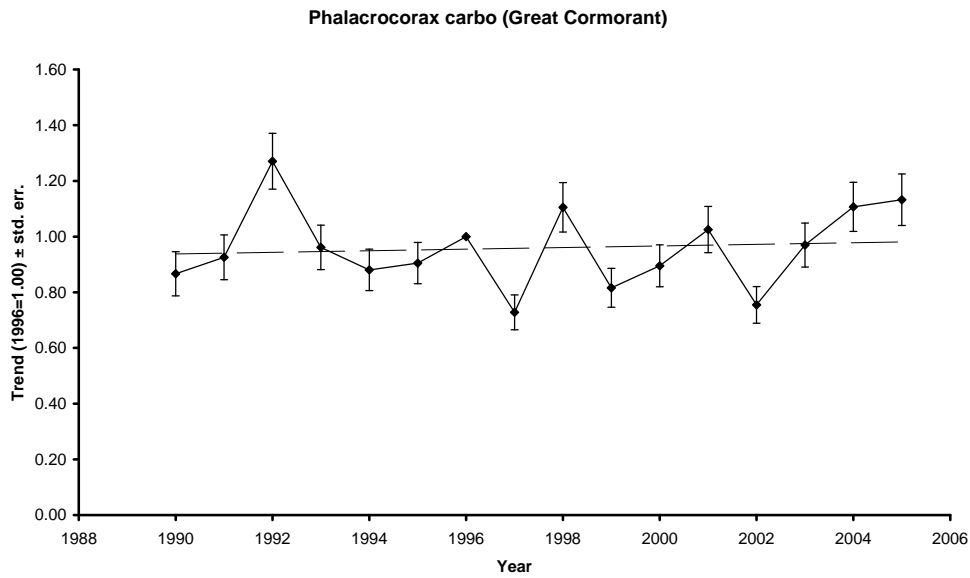


Number of sites	2853
Number of years	16
Number of observed zero counts	10621
Number of observed positive counts	22086
Number of missing counts	12941
Overall slope 1990-2005	1.0397

See pages 103-104 for notes on interpreting the graphs

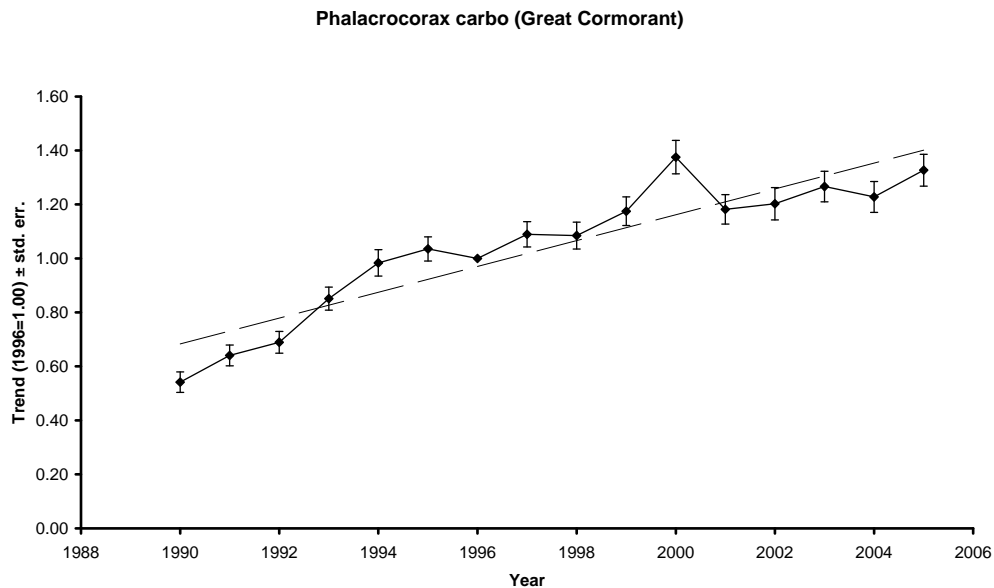
Overall slope 1996-2005	1.0417
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## Central Europe



Number of sites	498
Number of years	16
Number of observed zero counts	1490
Number of observed positive counts	3876
Number of missing counts	2602
Overall slope 1990-2005	1.0028
Overall slope 1996-2005	1.0175

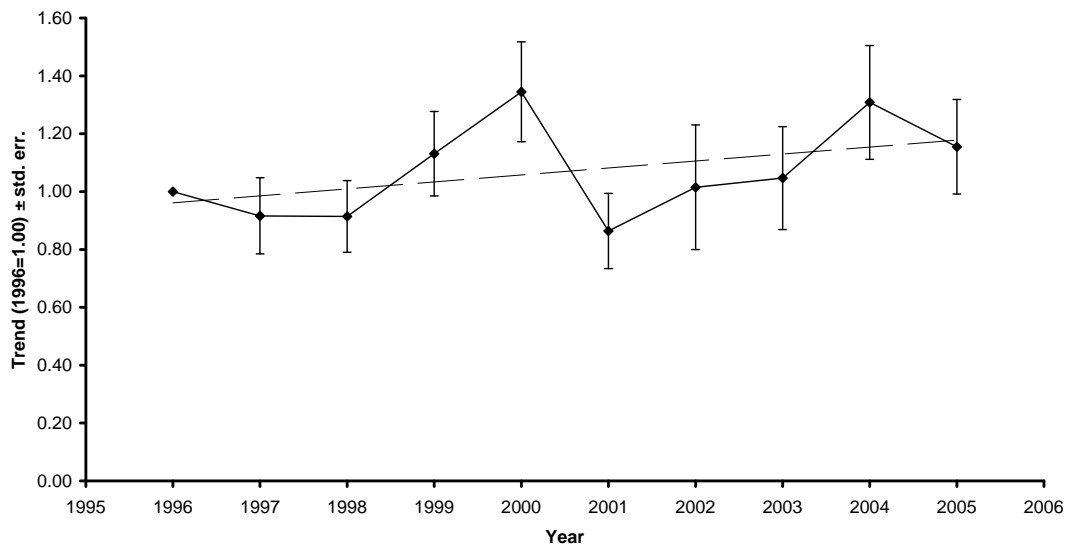
## West Mediterranean



Number of sites	1199
Number of years	16
Number of observed zero counts	2499
Number of observed positive counts	8337
Number of missing counts	8348
Overall slope 1990-2005	1.0523
Overall slope 1996-2005	1.0256

# East Mediterranean/Black Sea

## Phalacrocorax carbo (Great Cormorant)

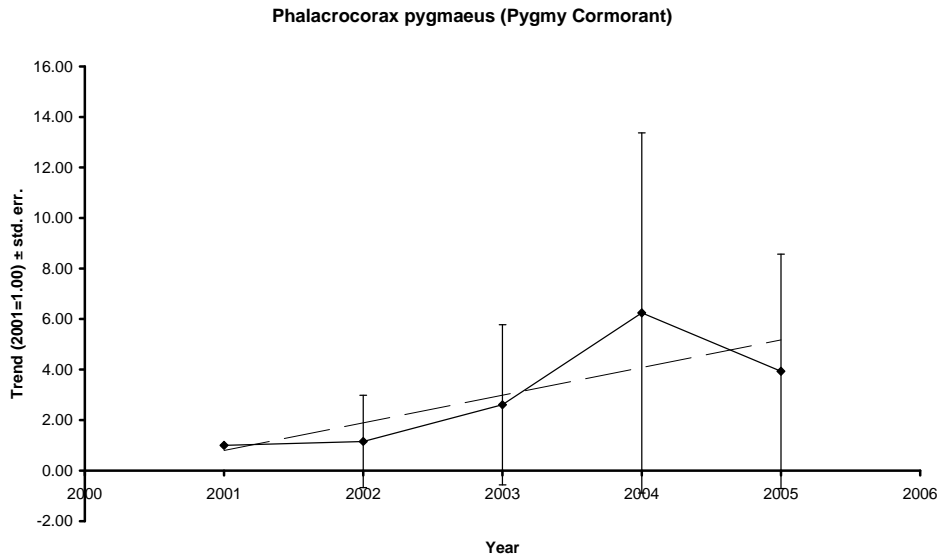


Number of sites	193
Number of years	10
Number of observed zero counts	165
Number of observed positive counts	975
Number of missing counts	790
Overall slope 1996-2005	1.0226

See pages 103-104 for notes on interpreting the graphs

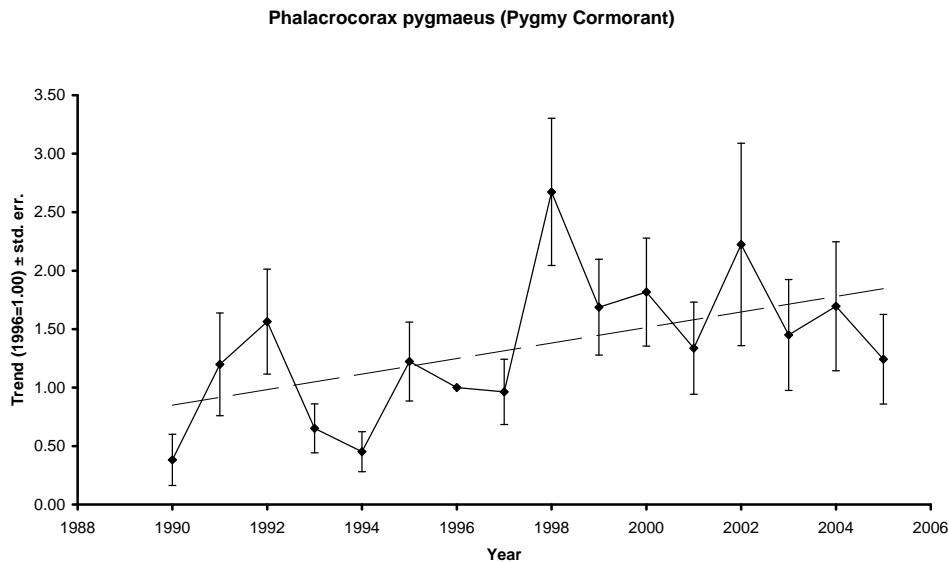
## *Phalacrocorax pygmaeus* Pygmy Cormorant

### Central Europe



Number of sites	4
Number of years	5
Number of observed zero counts	3
Number of observed positive counts	15
Number of missing counts	2
Overall slope 2001-2005	1.5399

### East Mediterranean/Black Sea

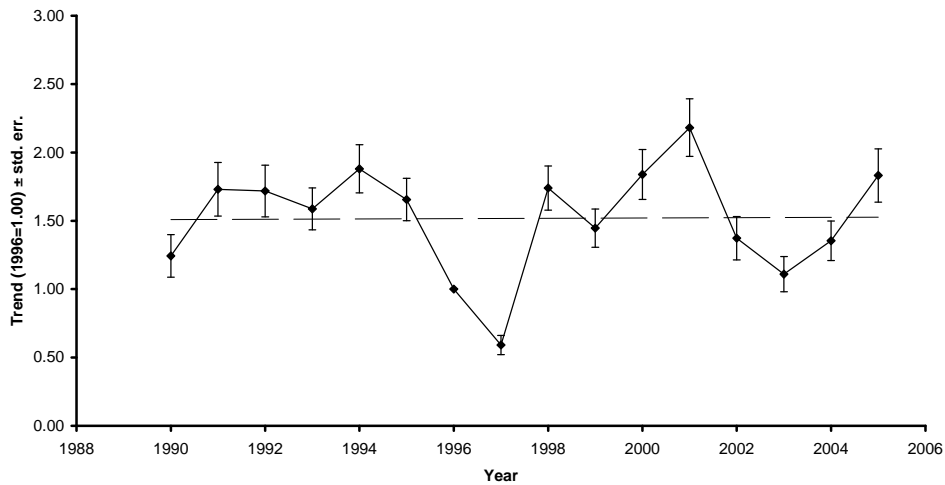


Number of sites	102
Number of years	16
Number of observed zero counts	283
Number of observed positive counts	563
Number of missing counts	786
Overall slope 1990-2005	1.0678
Overall slope 1996-2005	1.0108

## *Ardea cinerea* Grey Heron

### Baltic/Nordic

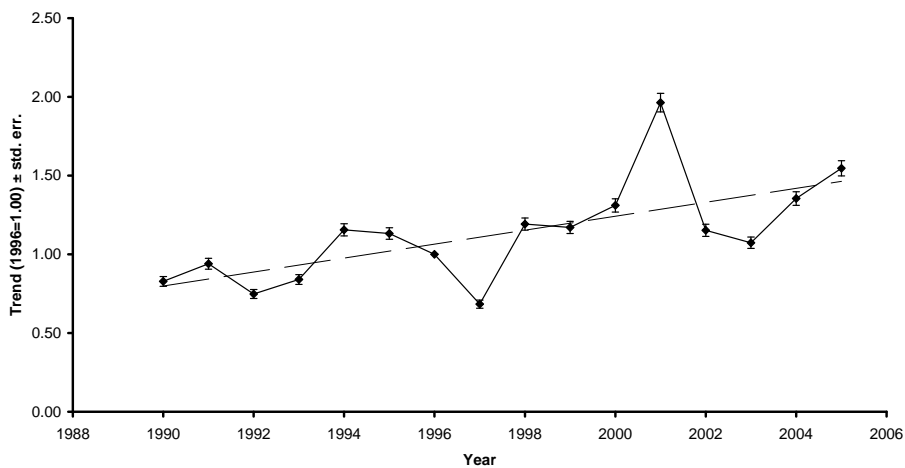
*Ardea cinerea* (Grey Heron)



Number of sites	419
Number of years	16
Number of observed zero counts	2506
Number of observed positive counts	2580
Number of missing counts	1618
Overall slope 1990-2005	1.0004
Overall slope 1996-2005	1.0609

### NW Europe

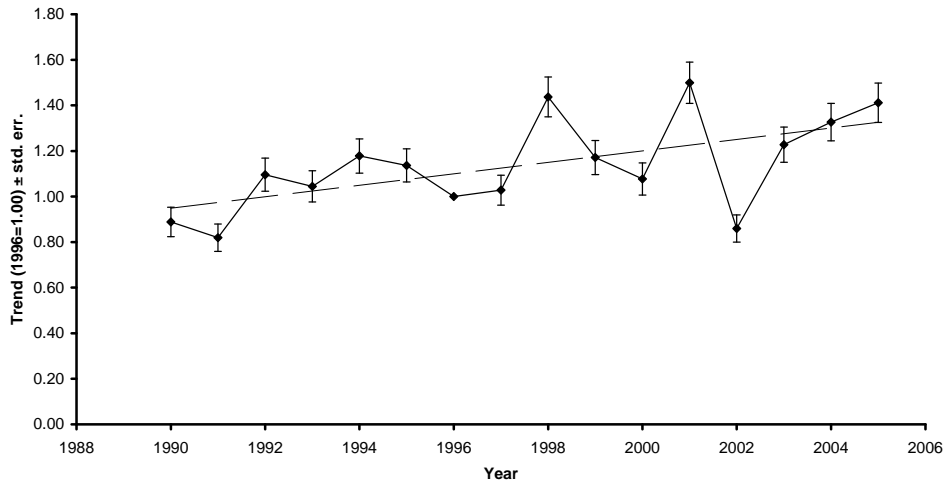
*Ardea cinerea* (Grey Heron)



Number of sites	3063
Number of years	16
Number of observed zero counts	12890
Number of observed positive counts	21773
Number of missing counts	14345
Overall slope 1990-2005	1.0397
Overall slope 1996-2005	1.0509

## Central Europe

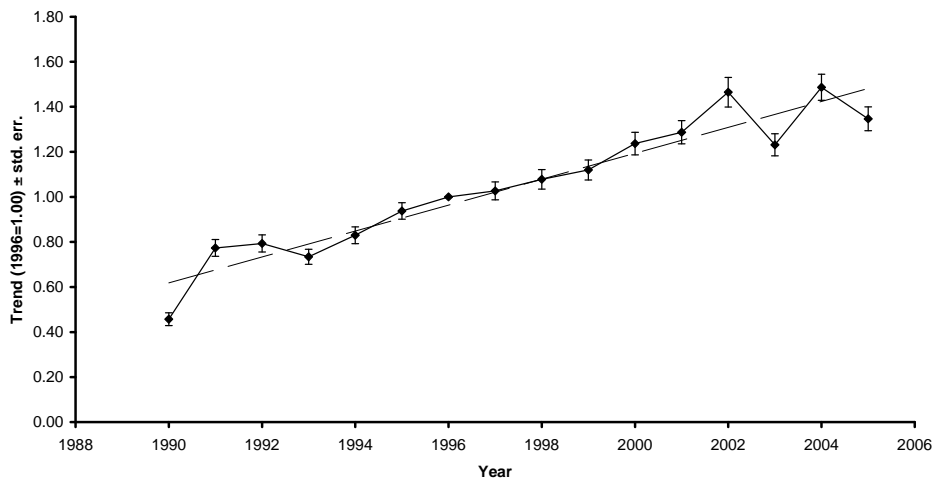
*Ardea cinerea* (Grey Heron)



Number of sites	612
Number of years	16
Number of observed zero counts	1797
Number of observed positive counts	4211
Number of missing counts	3784
Overall slope 1990-2005	1.0222
Overall slope 1996-2005	1.0222

## West Mediterranean

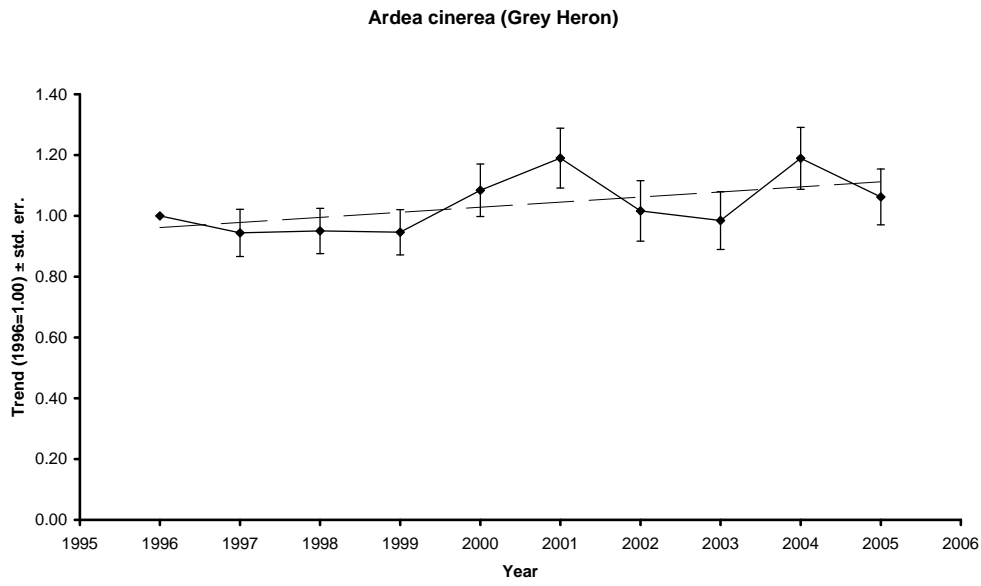
*Ardea cinerea* (Grey Heron)



Number of sites	1431
Number of years	16
Number of observed zero counts	2900
Number of observed positive counts	9657
Number of missing counts	10339
Overall slope 1990-2005	1.0615
Overall slope 1996-2005	1.0499

See pages 103-104 for notes on interpreting the graphs

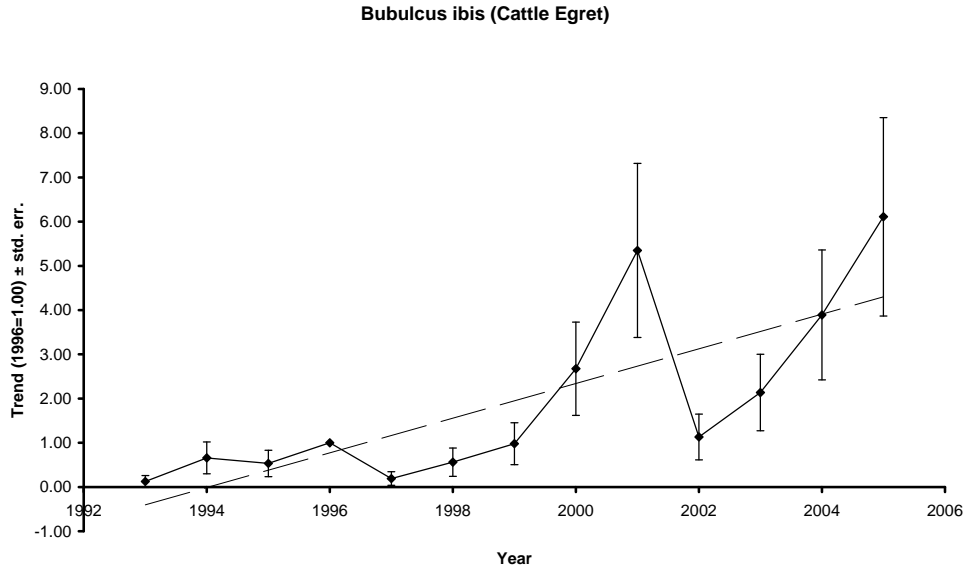
## East Mediterranean/Black Sea



Number of sites	185
Number of years	10
Number of observed zero counts	174
Number of observed positive counts	891
Number of missing counts	785
Overall slope 2001-2005	1.0165

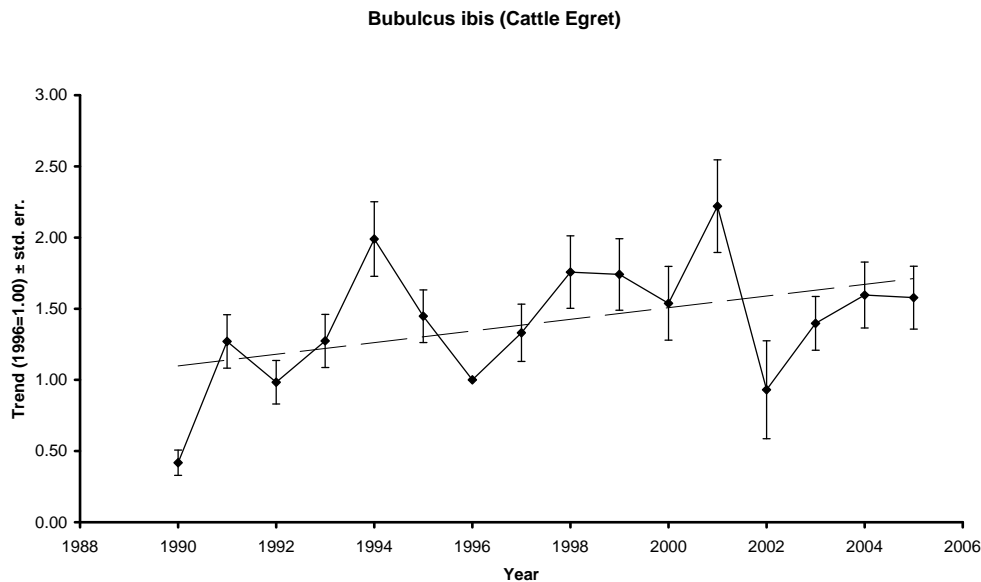
## *Bubulcus ibis* Cattle Egret

### NW Europe



Number of sites	25
Number of years	13
Number of observed zero counts	117
Number of observed positive counts	168
Number of missing counts	40
Overall slope 1993-2005	1.2899

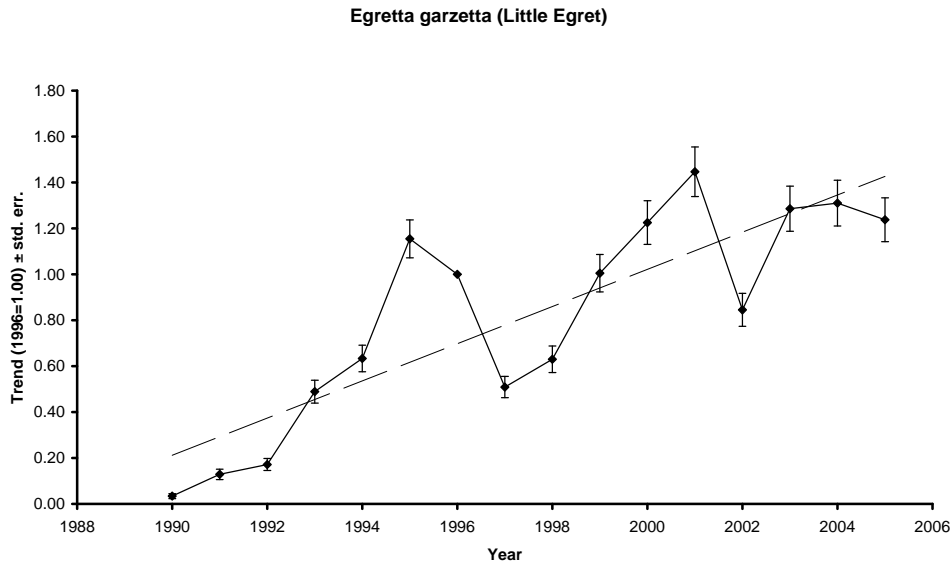
### West Mediterranean



Number of sites	259
Number of years	16
Number of observed zero counts	1181
Number of observed positive counts	1354
Number of missing counts	1609
Overall slope 1990-2005	1.0403
Overall slope 1996-2005	1.0208

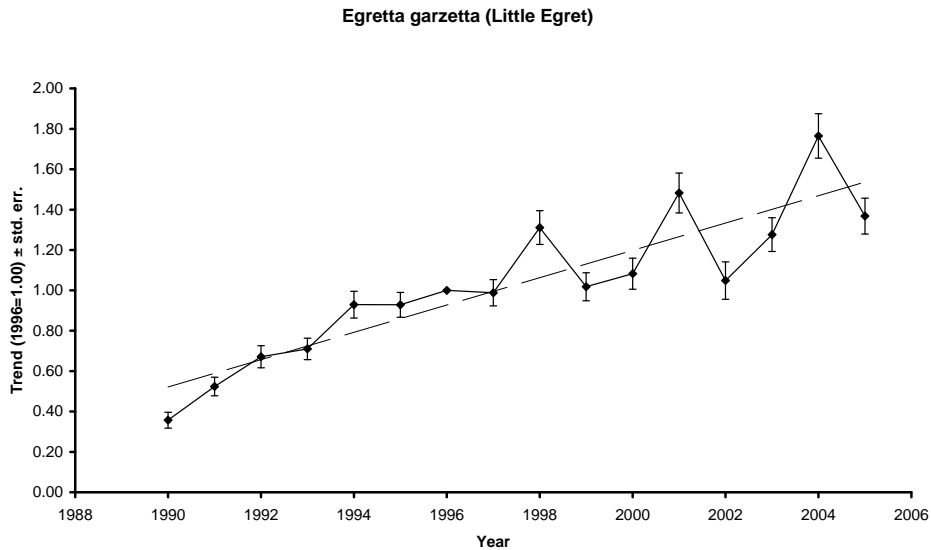
## *Egretta garzetta* Little Egret

### NW Europe



Number of sites	201
Number of years	16
Number of observed zero counts	1284
Number of observed positive counts	1517
Number of missing counts	415
Overall slope 1990-2005	1.1878
Overall slope 1996-2005	1.0744

### West Mediterranean

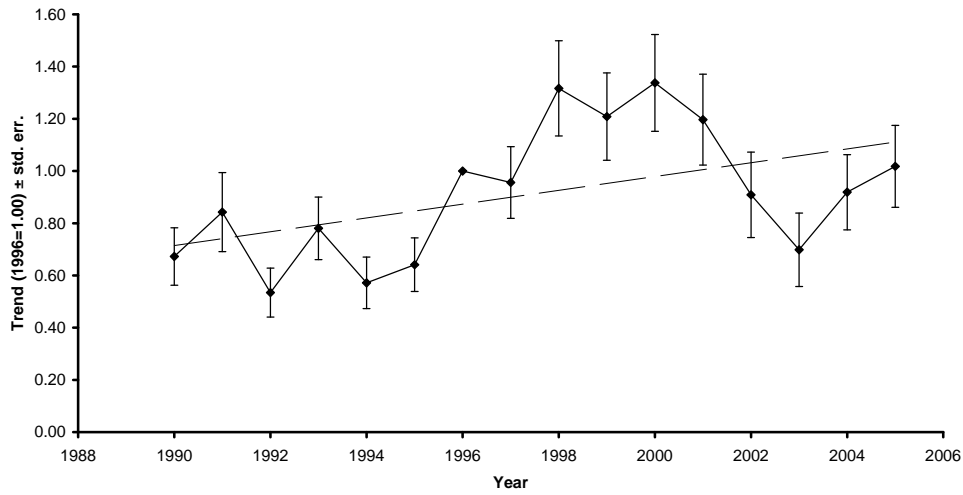


Number of sites	599
Number of years	16
Number of observed zero counts	1783
Number of observed positive counts	3813
Number of missing counts	3988
Overall slope 1990-2005	1.0779
Overall slope 1996-2005	1.0530

See pages 103-104 for notes on interpreting the graphs

## East Mediteranean/Black Sea

*Egretta garzetta* (Little Egret)

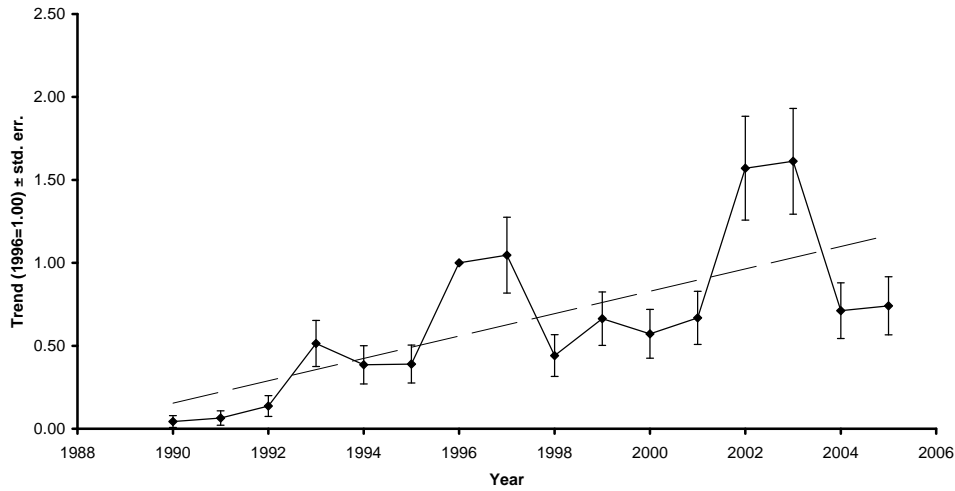


Number of sites	82
Number of years	16
Number of observed zero counts	138
Number of observed positive counts	556
Number of missing counts	618
Overall slope 1990-2005	1.0316
Overall slope 1996-2005	0.9826

## *Botaurus stellaris* Eurasian Bittern

### NW Europe

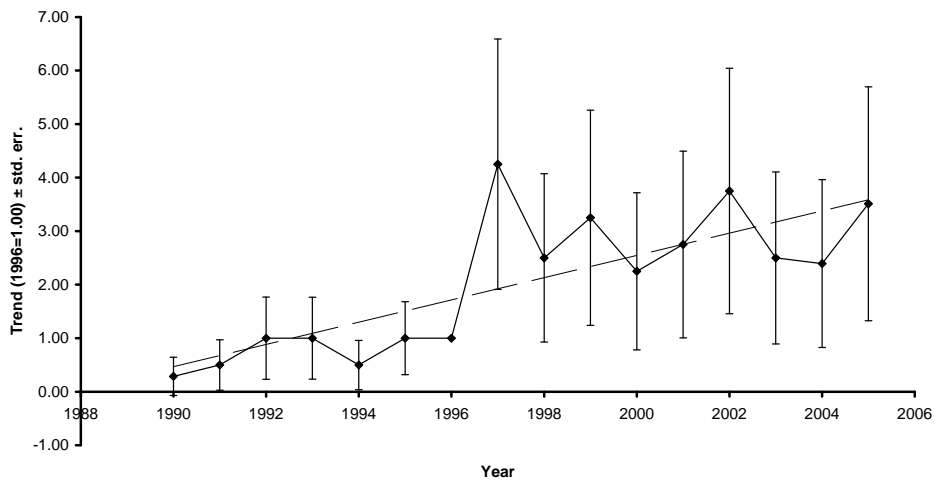
*Botaurus stellaris* (Eurasian Bittern)



Number of sites	62
Number of years	16
Number of observed zero counts	569
Number of observed positive counts	323
Number of missing counts	100
Overall slope 1990-2005	1.1831
Overall slope 1996-2005	1.0212

### Central Europe

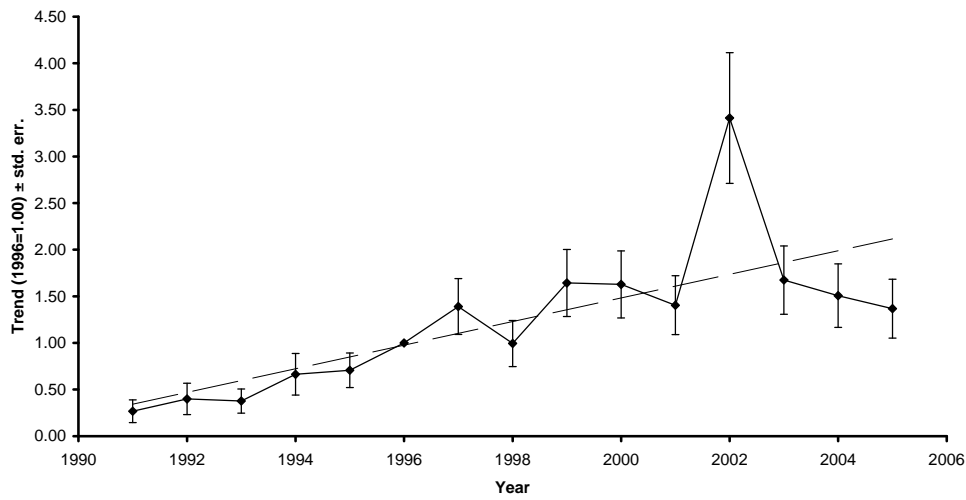
*Botaurus stellaris* (Eurasian Bittern)



Number of sites	13
Number of years	16
Number of observed zero counts	134
Number of observed positive counts	70
Number of missing counts	4
Overall slope 1990-2005	1.1556
Overall slope 1996-2005	1.0821

## West Mediterranean

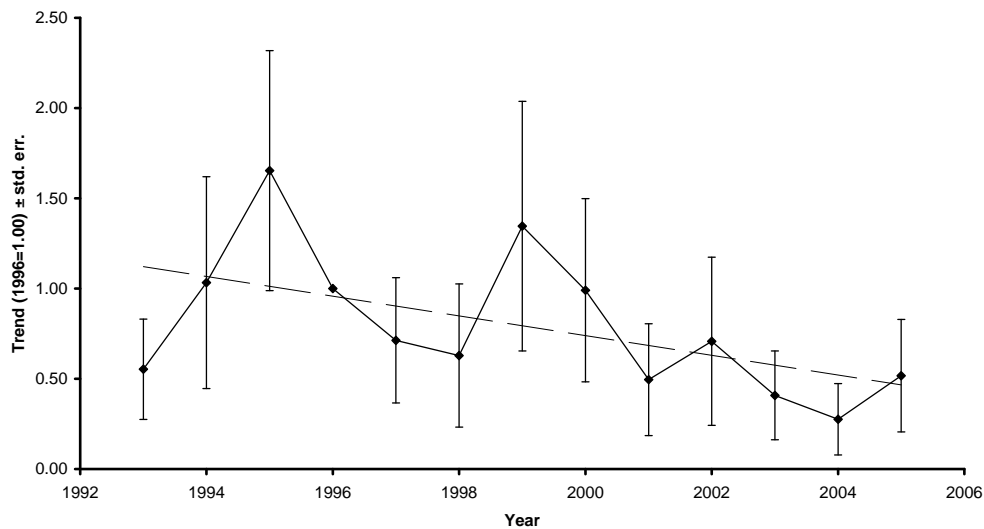
### *Botaurus stellaris* (Eurasian Bittern)



Number of sites	82
Number of years	15
Number of observed zero counts	453
Number of observed positive counts	470
Number of missing counts	307
Overall slope 1990-2005	1.1398
Overall slope 1996-2005	1.0538

## East Mediterranean/Black Sea

### *Botaurus stellaris* (Eurasian Bittern)

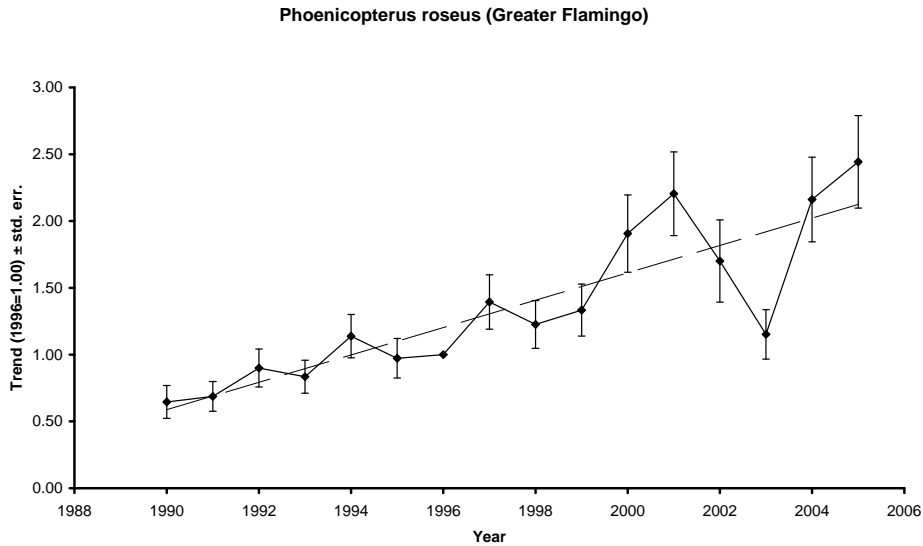


Number of sites	24
Number of years	13
Number of observed zero counts	106
Number of observed positive counts	81
Number of missing counts	125
Overall slope 1990-2005	0.9266
Overall slope 1996-2005	0.8922

See pages 103-104 for notes on interpreting the graphs

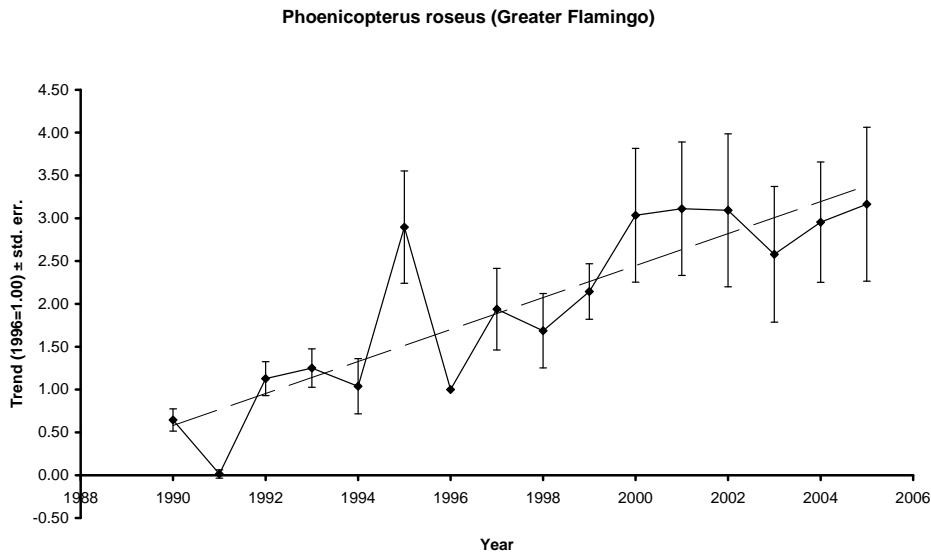
## *Phoenicopterus roseus* Greater Flamingo

### West Mediterranean



Number of sites	161
Number of years	16
Number of observed zero counts	587
Number of observed positive counts	989
Number of missing counts	1000
Overall slope 1990-2005	1.0807
Overall slope 1996-2005	0.872

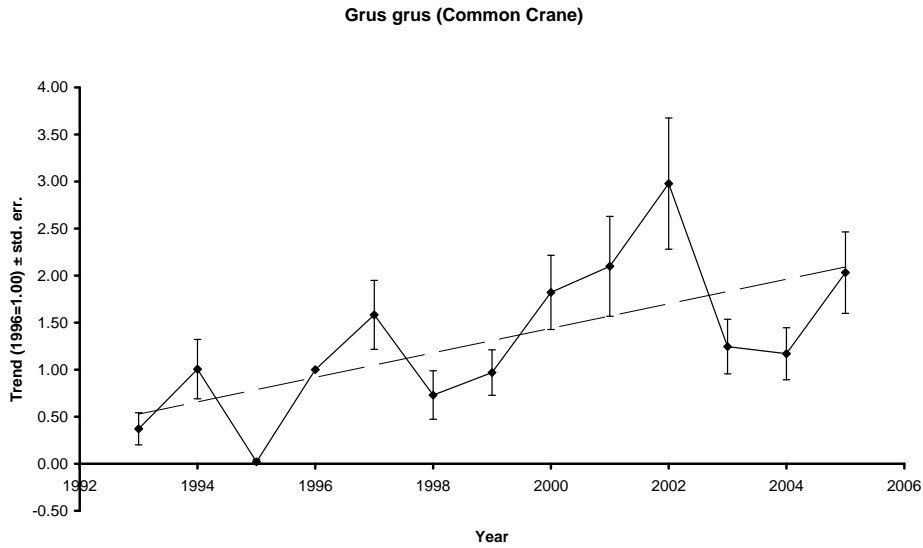
### East Mediterranean/Black Sea



Number of sites	46
Number of years	16
Number of observed zero counts	146
Number of observed positive counts	279
Number of missing counts	311
Overall slope 1990-2005	1.1997
Overall slope 1996-2005	1.1144

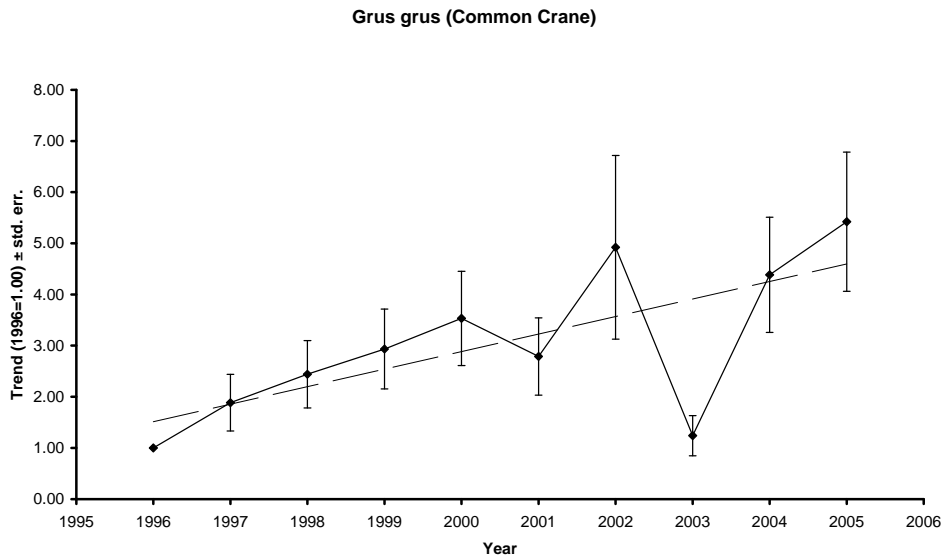
## *Grus grus* Common Crane

### NW Europe



Number of sites	12
Number of years	13
Number of observed zero counts	44
Number of observed positive counts	96
Number of missing counts	16
Overall slope 1993-2005	1.1916
Overall slope 1996-2005	1.0644

### West Mediterranean



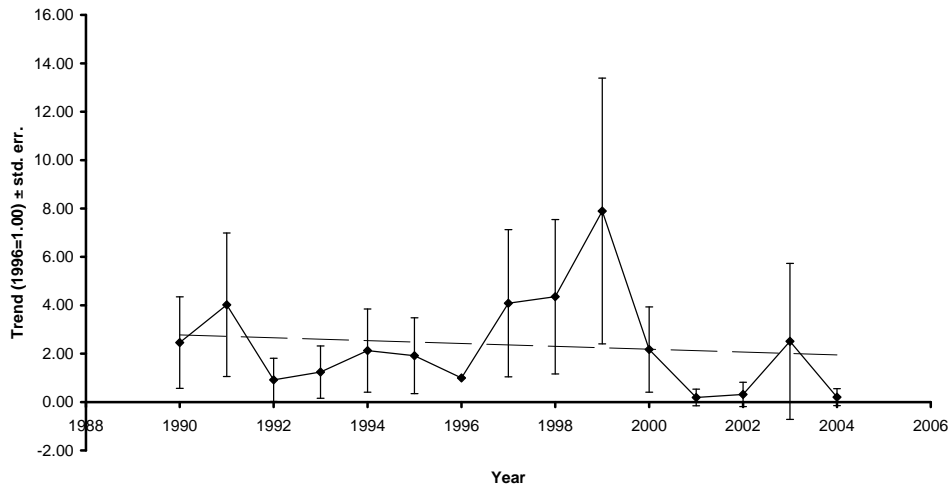
Number of sites	49
Number of years	10
Number of observed zero counts	150
Number of observed positive counts	248
Number of missing counts	92
Overall slope 1996-2005	1.1229

See pages 103-104 for notes on interpreting the graphs

See pages 103-104 for notes on interpreting the graphs

## East Mediterranean/Black Sea

**Grus grus (Common Crane)**

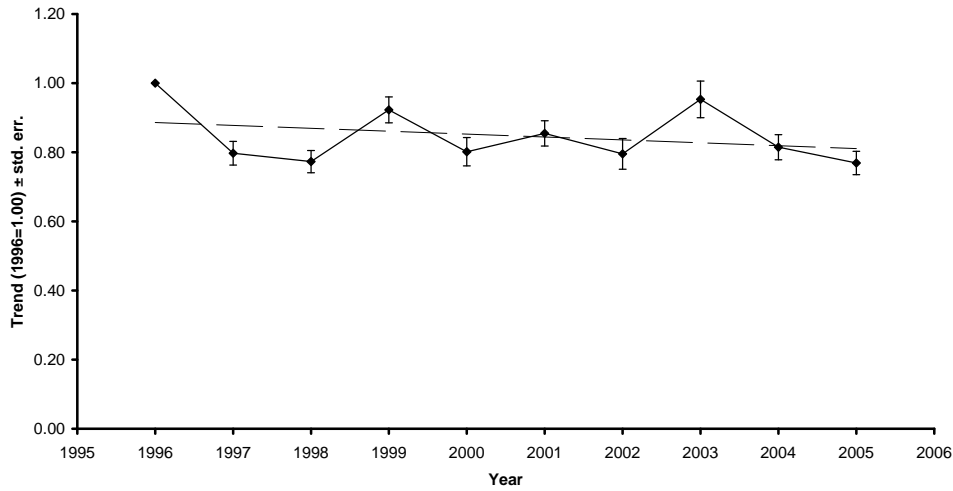


Number of sites	16
Number of years	15
Number of observed zero counts	71
Number of observed positive counts	89
Number of missing counts	80
Overall slope 1990-2005	0.9027
Overall slope 1996-2005	0.8304

## Cygnus olor Mute Swan

Baltic/Nordic, 1996 – 2005

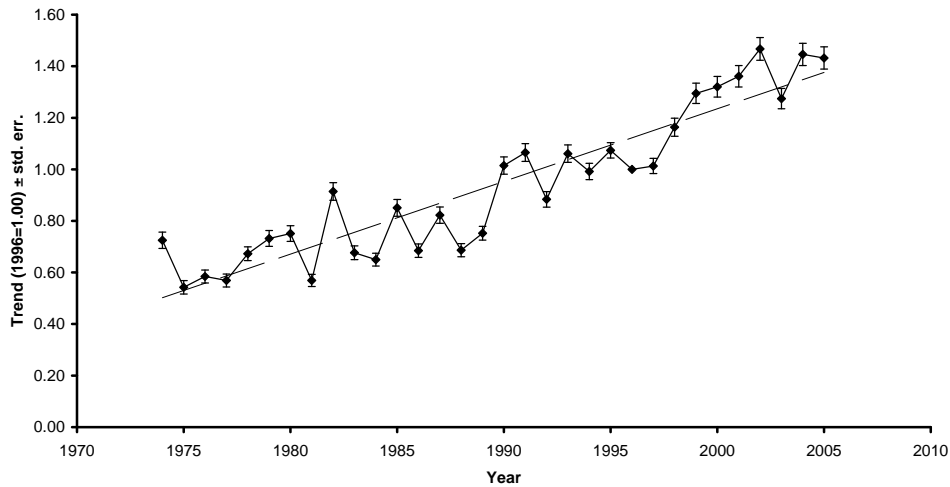
Cygnus olor (Mute Swan)



Number of sites	640
Number of years	10
Number of observed zero counts	1061
Number of observed positive counts	3734
Number of missing counts	1604
Overall slope 1996-2005	0.9907

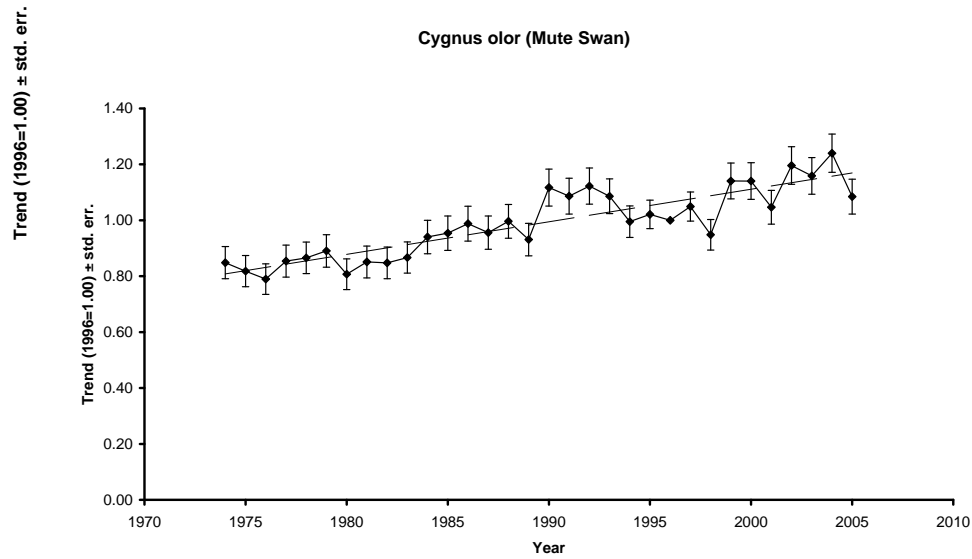
## NW Europe

Cygnus olor (Mute Swan)  
(>3 visits/site)



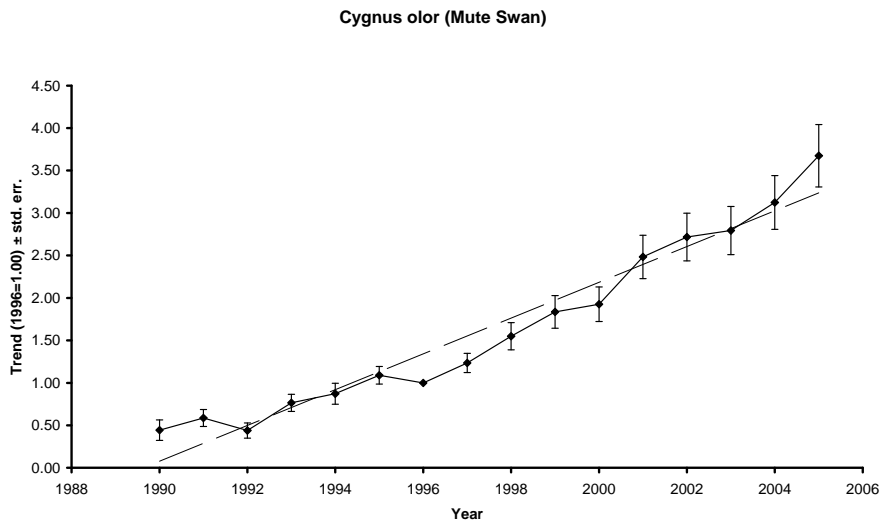
Number of sites	3484
Number of years	32
Number of observed zero counts	19222
Number of observed positive counts	40668
Number of missing counts	51598
Overall slope 1974-2005	1.0312
Overall slope 1996-2005	1.0405

## Central Europe



Number of sites	713
Number of years	32
Number of observed zero counts	3017
Number of observed positive counts	7903
Number of missing counts	11896
Overall slope 1974-2005	1.0120
Overall slope 1996-2005	1.0146

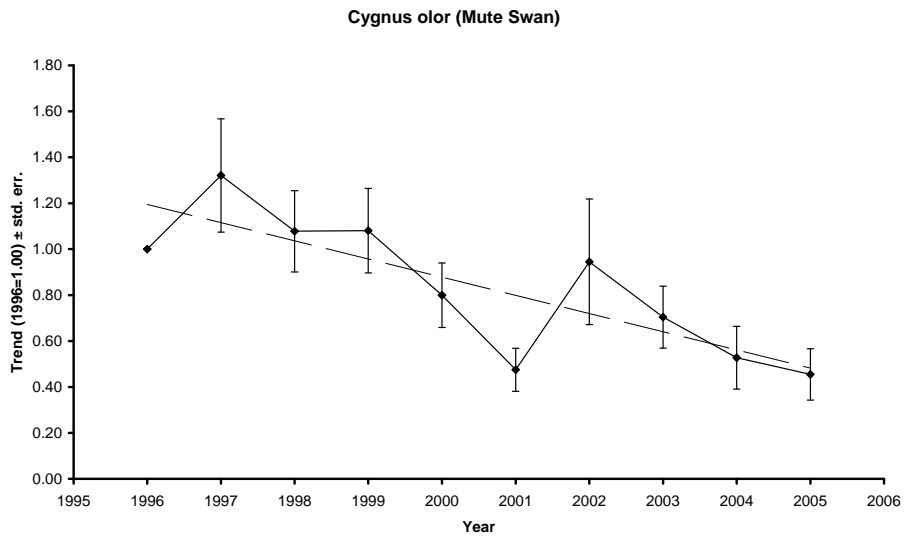
## West Mediterranean



Number of sites	112
Number of years	16
Number of observed zero counts	436
Number of observed positive counts	753
Number of missing counts	603
Overall slope 1974-2005	1.1526
Overall slope 1996-2005	1.1468

See pages 103-104 for notes on interpreting the graphs

## East Mediterranean/Black Sea

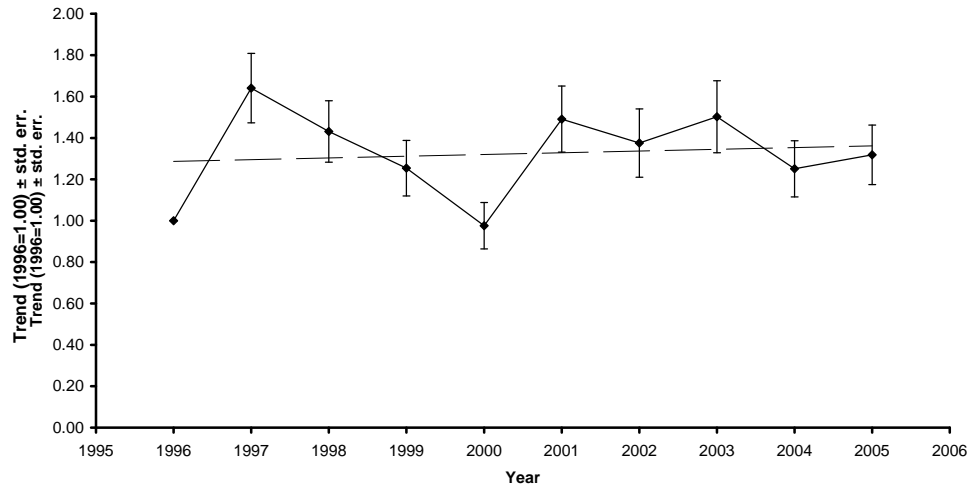


Number of sites	132
Number of years	10
Number of observed zero counts	194
Number of observed positive counts	597
Number of missing counts	529
Overall slope 1996-2005	0.9041

## *Cygnus cygnus* Whooper Swan

Baltic/Nordic, 1996 – 2005

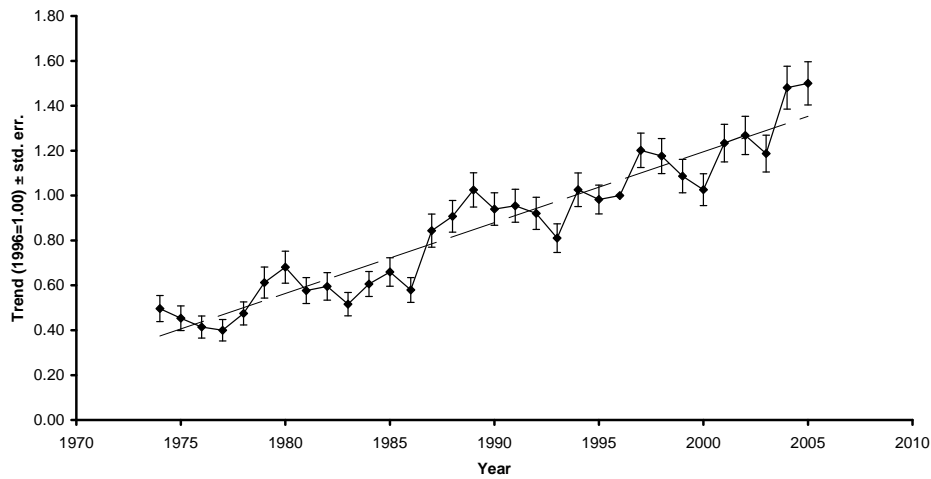
*Cygnus cygnus* (Whooper Swan)



Number of sites	233
Number of years	10
Number of observed zero counts	645
Number of observed positive counts	1217
Number of missing counts	468
Overall slope 1996-2005	1.0093

## NW Europe

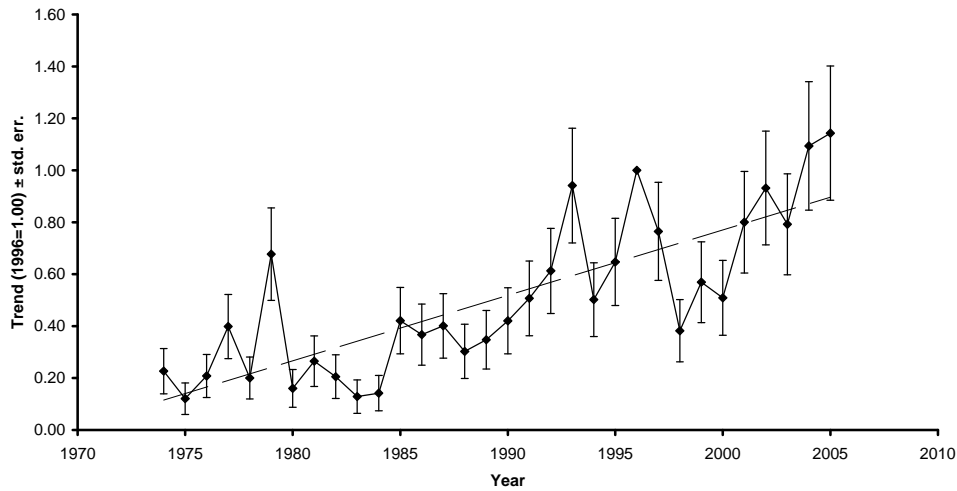
*Cygnus cygnus* (Whooper Swan)



Number of sites	1043
Number of years	32
Number of observed zero counts	10618
Number of observed positive counts	8510
Number of missing counts	14248
Overall slope 1974-2005	1.0396
Overall slope 1996-2005	1.0403

## Central Europe

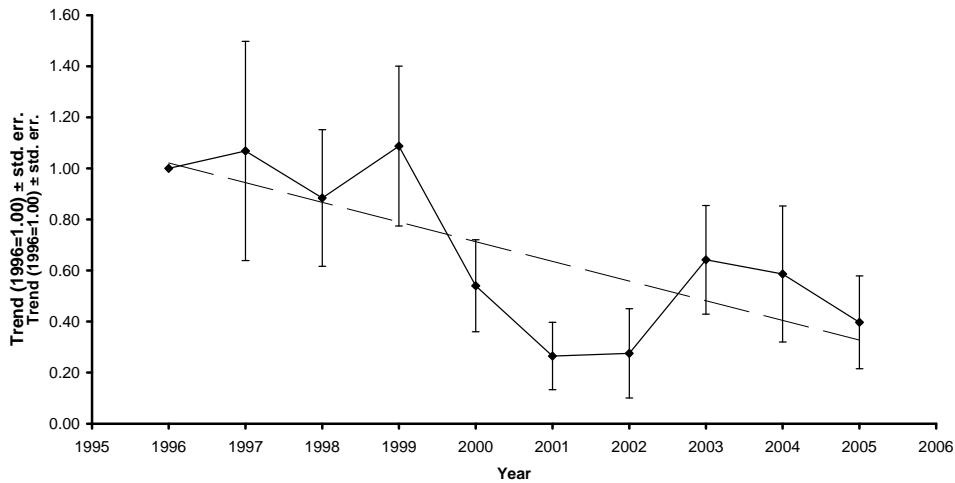
### Cygnus cygnus (Whooper Swan)



Number of sites	27
Number of years	32
Number of observed zero counts	447
Number of observed positive counts	256
Number of missing counts	161
Overall slope 1974-2005	1.0570
Overall slope 1996-2005	1.0612

## East Mediterranean/Black Sea

### Cygnus cygnus (Whooper Swan)

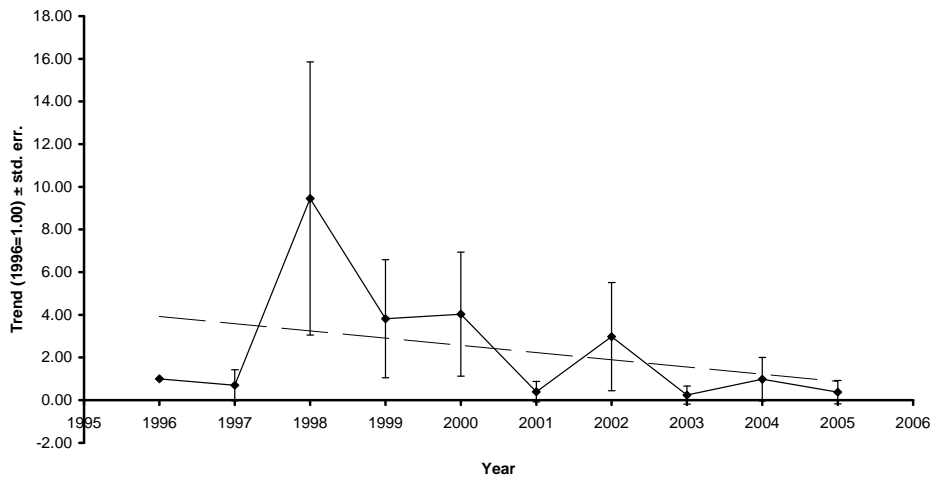


Number of sites	34
Number of years	10
Number of observed zero counts	76
Number of observed positive counts	135
Number of missing counts	129
Overall slope 1996-2005	0.8911

## *Cygnus columbianus bewickii* Bewick's Swan

Baltic/Nordic, 1996 – 2005

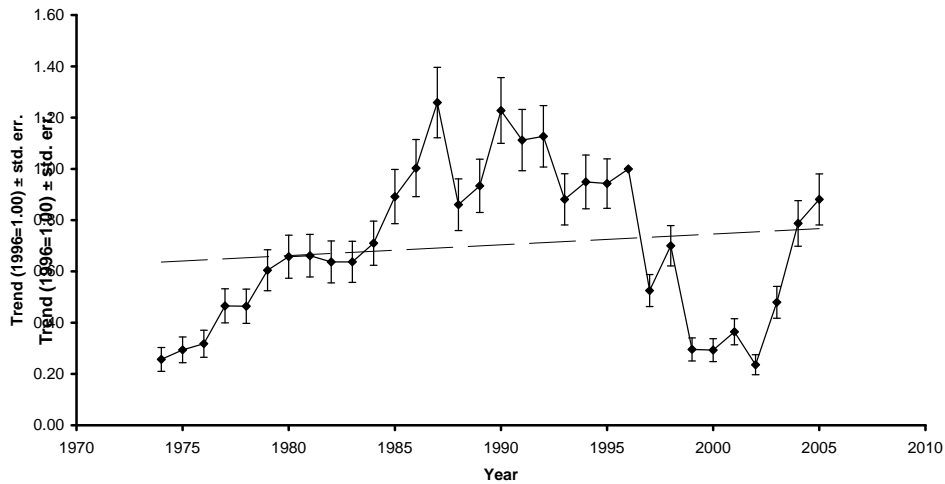
*Cygnus (columbianus) bewickii* (Bewick's Swan)



Number of sites	10
Number of years	10
Number of observed zero counts	51
Number of observed positive counts	43
Number of missing counts	6
Overall slope 1996-2005	0.8441

## NW Europe

*Cygnus (columbianus) bewickii* (Bewick's Swan)

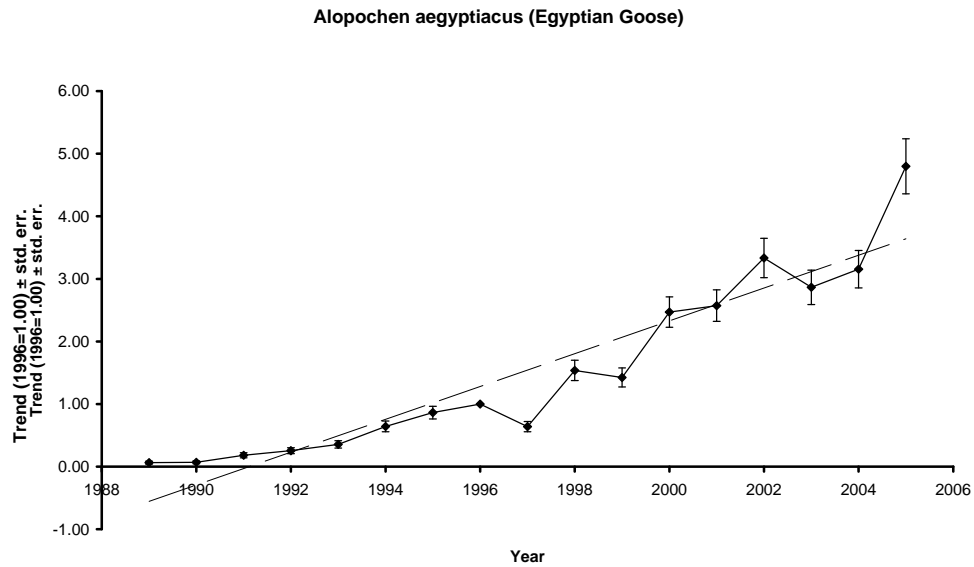


Number of sites	248
Number of years	32
Number of observed zero counts	3434
Number of observed positive counts	1687
Number of missing counts	2815
Overall slope 1974-2005	1.0061
Overall slope 1996-2005	1.0030

See pages 103-104 for notes on interpreting the graphs

## *Alopochen aegyptiacus* Egyptian Goose

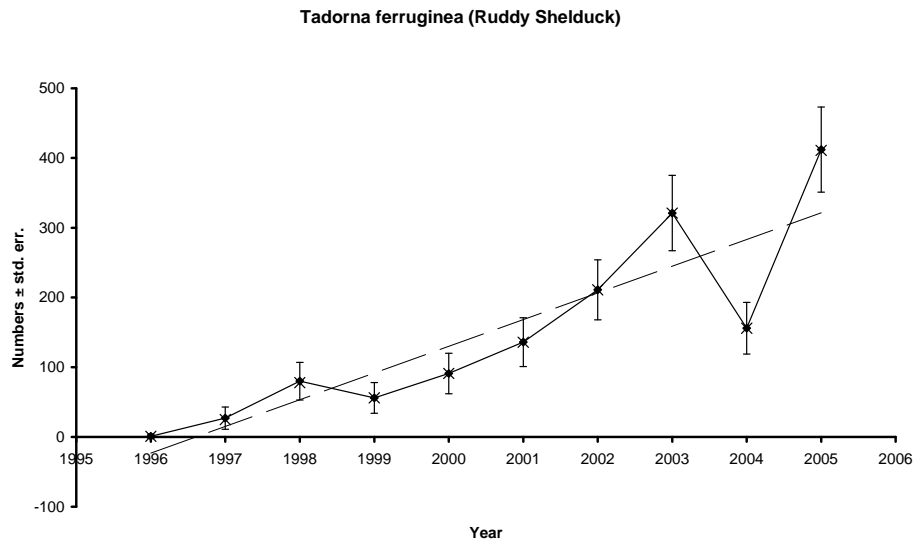
### NW Europe



Number of sites	315
Number of years	17
Number of observed zero counts	1935
Number of observed positive counts	2066
Number of missing counts	1354
Overall slope 1989-2005	1.2902
Overall slope 1996-2005	1.2067

***Tadorna ferruginea* Ruddy Shelduck**

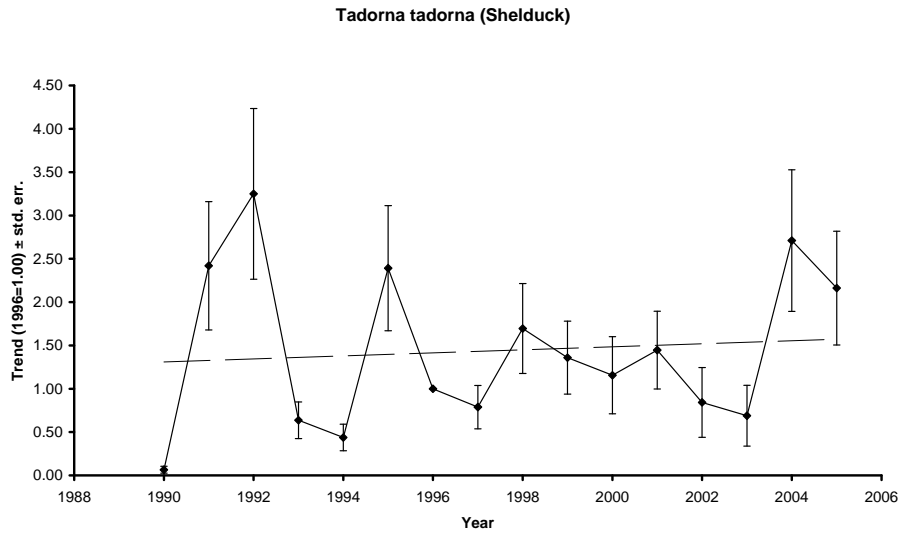
**Central Europe, 1996 – 2005**



Number of sites	22
Number of years	10
Number of observed zero counts	88
Number of observed positive counts	126
Number of missing counts	6
Overall slope 1996-2005	1.5948

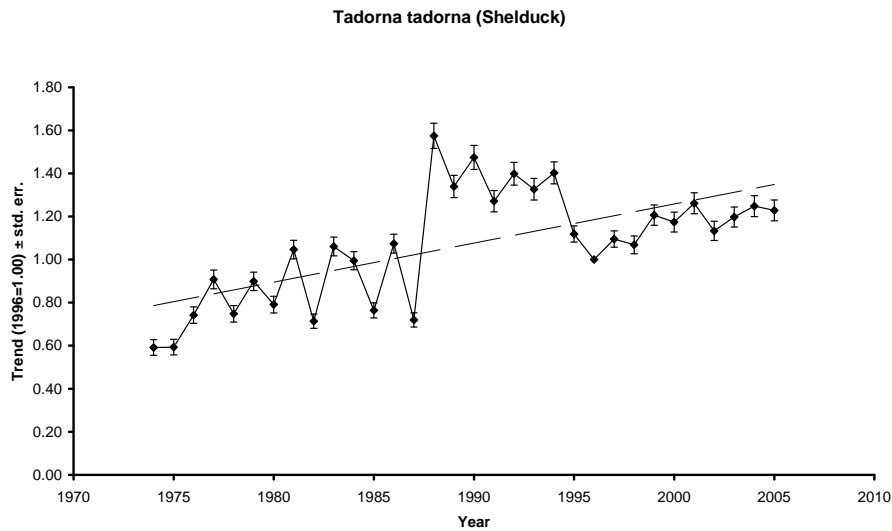
## *Tadorna tadorna* Common Shelduck

### Baltic/Nordic



Number of sites	59
Number of years	16
Number of observed zero counts	387
Number of observed positive counts	389
Number of missing counts	168
Overall slope 1990-2005	1.0710
Overall slope 1996-2005	1.0565

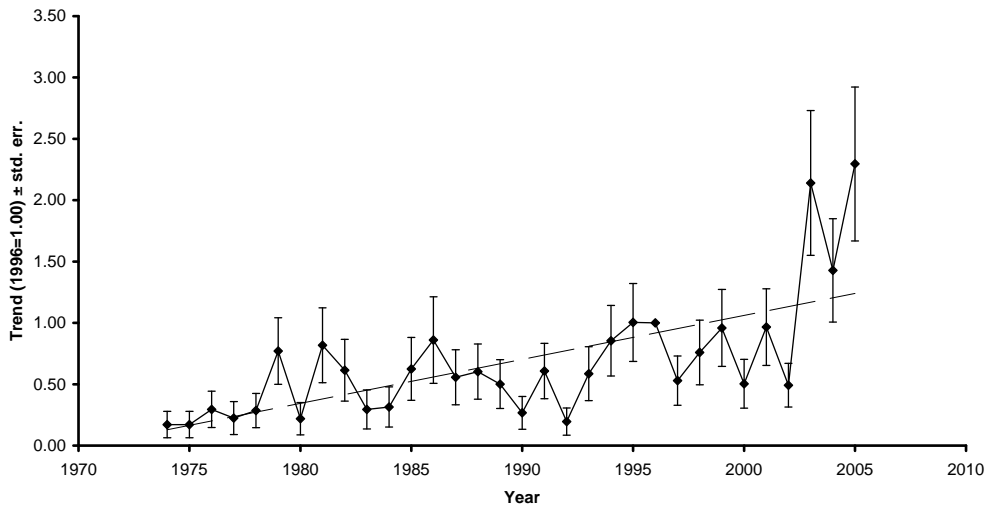
### NW Europe



Number of sites	1125
Number of years	32
Number of observed zero counts	8841
Number of observed positive counts	12238
Number of missing counts	14921
Overall slope 1990-2005	1.0197
Overall slope 1996-2005	1.0184

## Central Europe

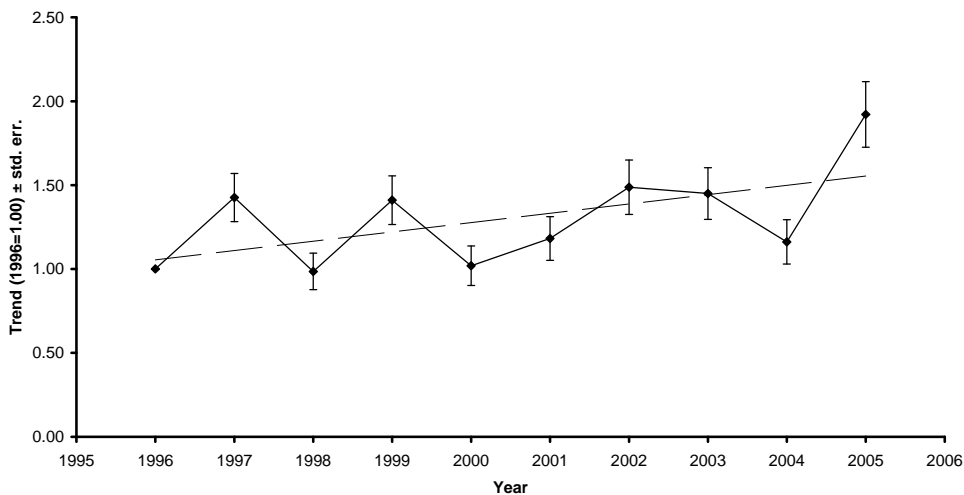
### Tadorna tadorna (Shelduck)



Number of sites	34
Number of years	32
Number of observed zero counts	579
Number of observed positive counts	292
Number of missing counts	217
Overall slope 1990-2005	1.0528
Overall slope 1996-2005	1.1065

## West Mediterranean

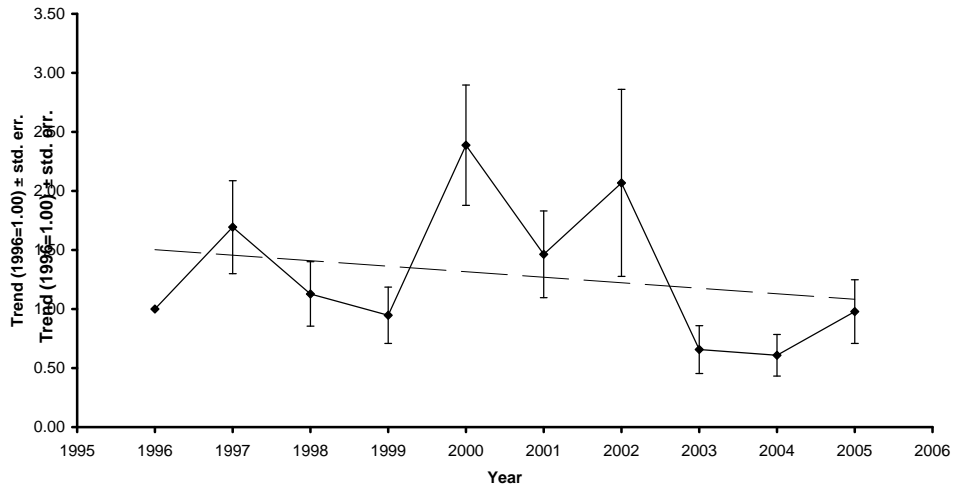
### Tadorna tadorna (Shelduck)



Number of sites	122
Number of years	10
Number of observed zero counts	254
Number of observed positive counts	704
Number of missing counts	262
Overall slope 1990-2005	1.0528
Overall slope 1996-2005	1.0411

## East Mediterranean/Black Sea

### *Tadorna tadorna* (Shelduck)

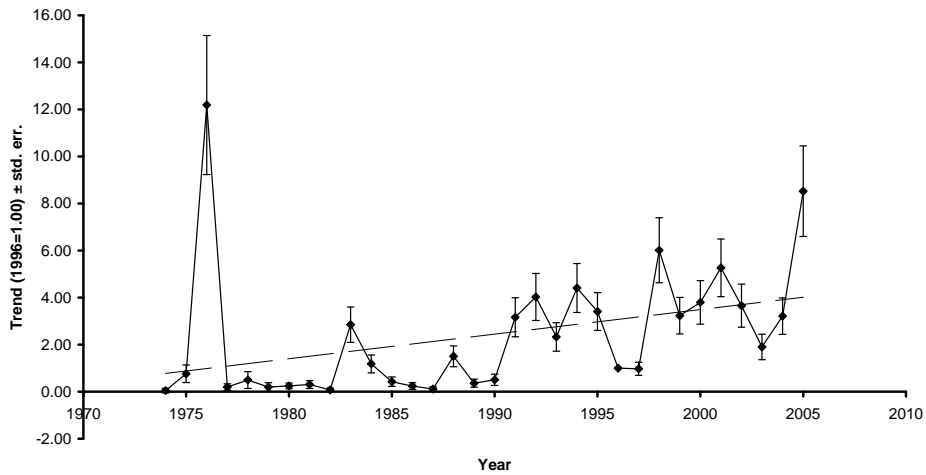


Number of sites	69
Number of years	10
Number of observed zero counts	111
Number of observed positive counts	342
Number of missing counts	237
Overall slope 1996-2005	0.9516

## *Anas penelope* Eurasian Wigeon

### Baltic/Nordic

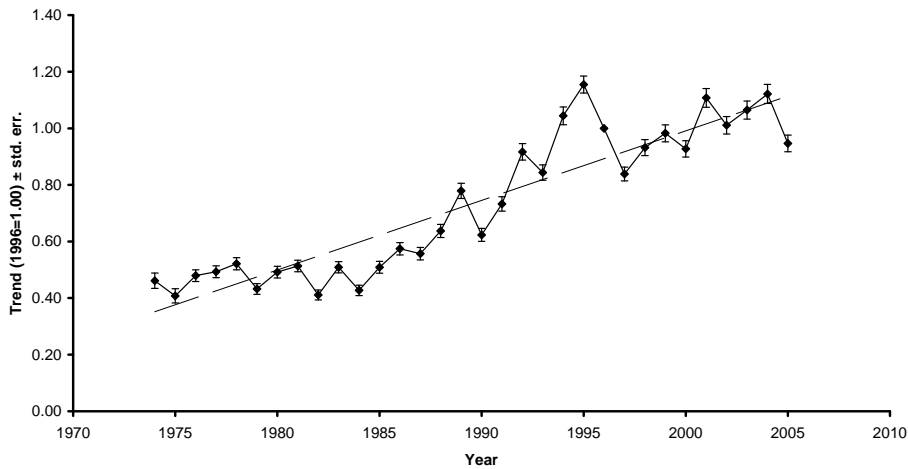
*Anas penelope* (Wigeon)



Number of sites	128
Number of years	32
Number of observed zero counts	1693
Number of observed positive counts	1065
Number of missing counts	1338
Overall slope 1974-2005	1.1032
Overall slope 1996-2005	1.1442

### NW Europe

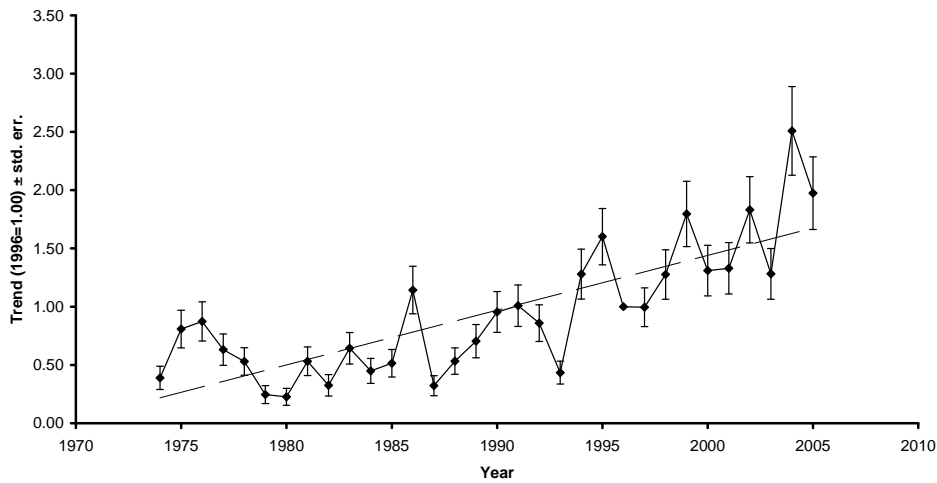
*Anas penelope* (Wigeon)



Number of sites	2345
Number of years	32
Number of observed zero counts	17314
Number of observed positive counts	24854
Number of missing counts	32872
Overall slope 1974-2005	1.0355
Overall slope 1996-2005	1.0156

## Central Europe

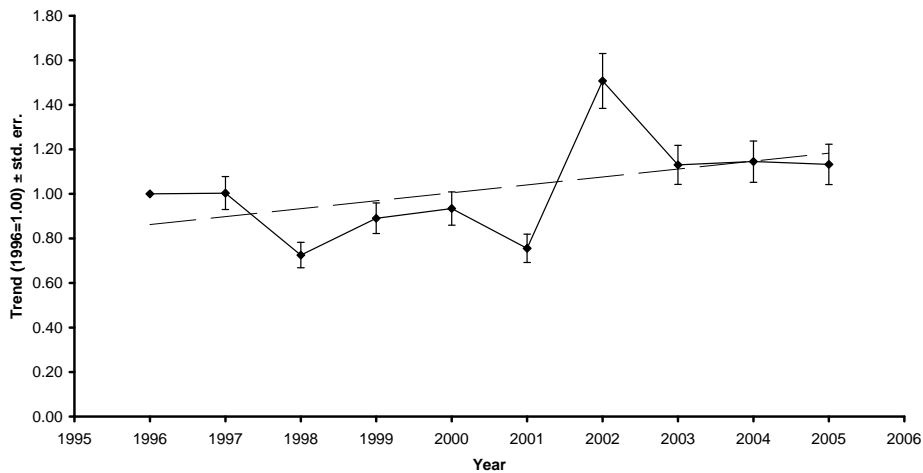
### Anas penelope (Wigeon)



Number of sites	161
Number of years	32
Number of observed zero counts	2431
Number of observed positive counts	1363
Number of missing counts	1358
Overall slope 1974-2005	1.0521
Overall slope 1996-2005	1.0710

## West Mediterranean

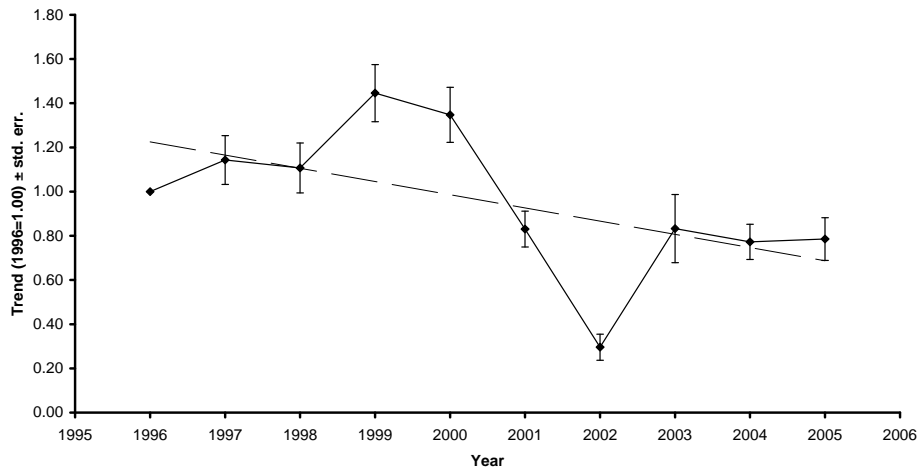
### Anas penelope (Wigeon)



Number of sites	340
Number of years	10
Number of observed zero counts	778
Number of observed positive counts	1904
Number of missing counts	718
Overall slope 1996-2005	1.0345

## East Mediterranean/Black Sea

### *Anas penelope* (Wigeon)

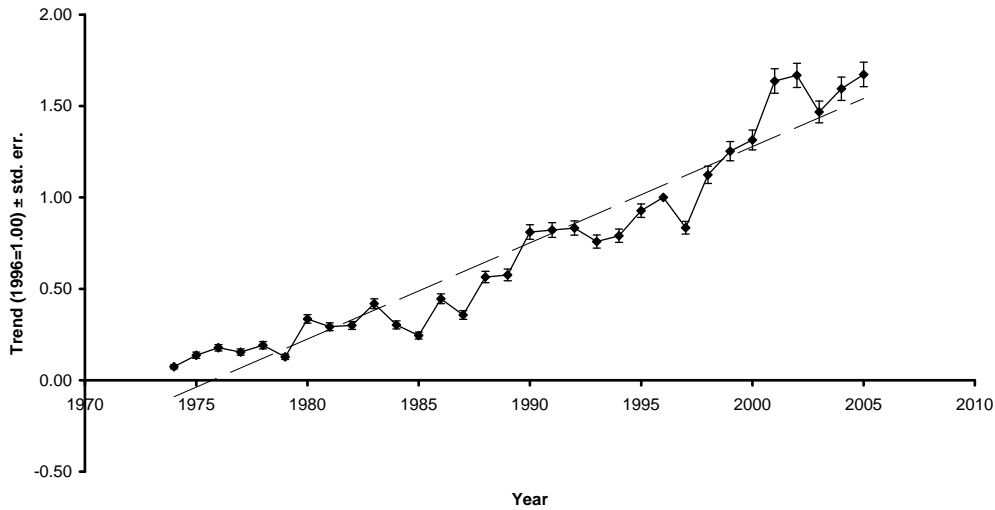


Number of sites	121
Number of years	10
Number of observed zero counts	179
Number of observed positive counts	585
Number of missing counts	446
Overall slope 1996-2005	0.9303

## *Anas strepera* Gadwall

### NW Europe

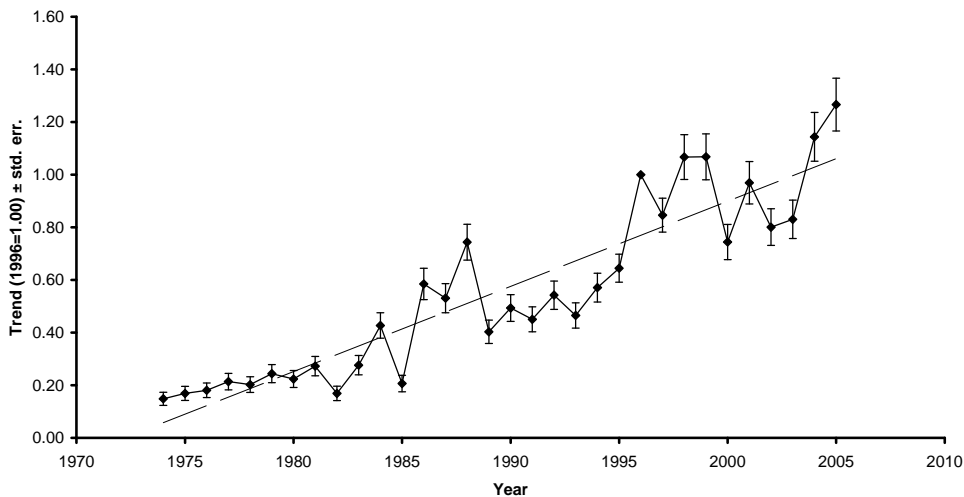
*Anas strepera* (Gadwall)



Number of sites	1355
Number of years	32
Number of observed zero counts	12944
Number of observed positive counts	12689
Number of missing counts	17727
Overall slope 1974-2005	1.0937
Overall slope 1996-2005	1.0714

### Central Europe

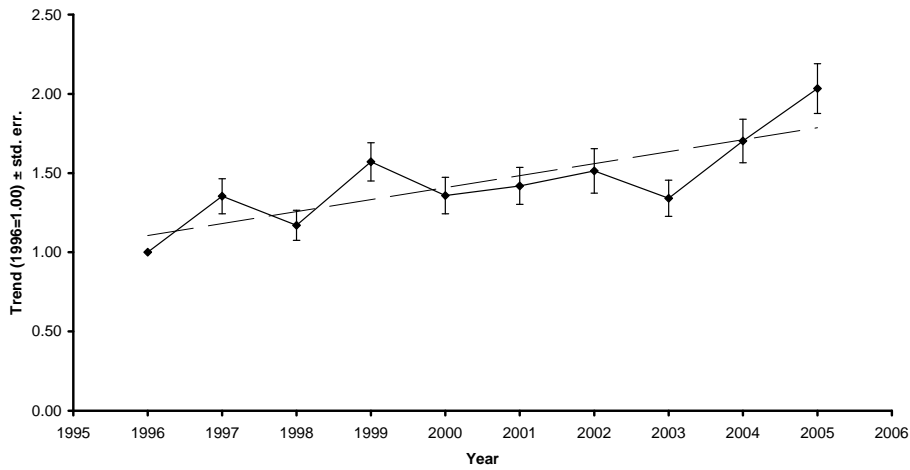
*Anas strepera* (Gadwall)



Number of sites	201
Number of years	32
Number of observed zero counts	1981
Number of observed positive counts	2460
Number of missing counts	1991
Overall slope 1974-2005	1.0686
Overall slope 1996-2005	1.0115

## West Mediterranean

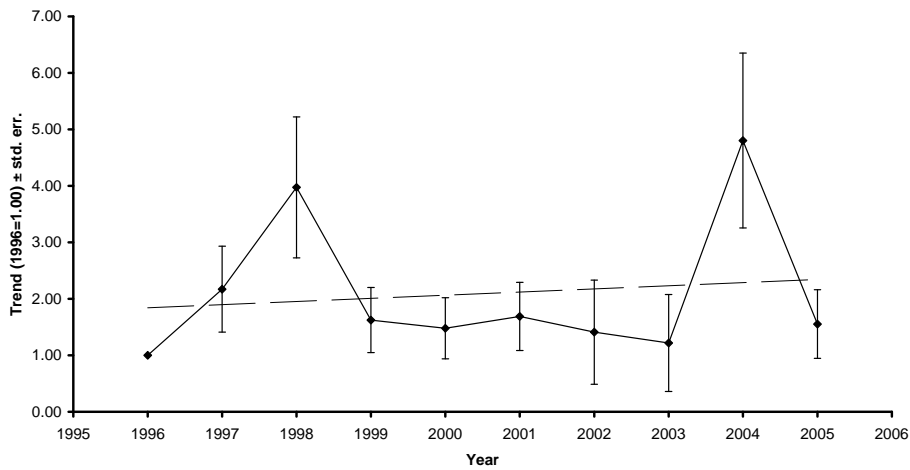
### *Anas strepera* (Gadwall)



Number of sites	309
Number of years	10
Number of observed zero counts	1745
Number of observed positive counts	2460
Number of missing counts	572
Overall slope 1996-2005	1.0536

## East Mediterranean/Black Sea

### *Anas strepera* (Gadwall)

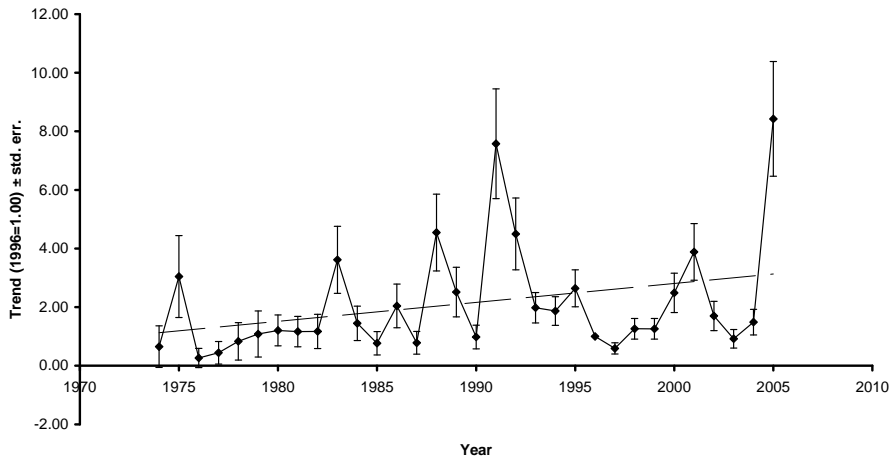


Number of sites	62
Number of years	10
Number of observed zero counts	115
Number of observed positive counts	293
Number of missing counts	212
Overall slope 1996-2005	1.0198

## Common Teal

### Baltic/Nordic

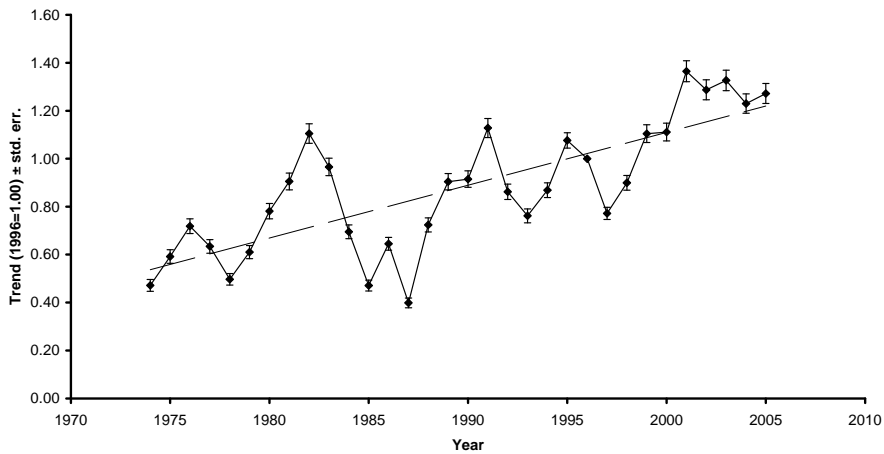
*Anas crecca* (Common Teal)



Number of sites	107
umber of years	32
Number of observed zero counts	1273
Number of observed positive counts	715
Number of missing counts	1436
Overall slope 1974-2005	1.0331
Overall slope 1996-2005	1.1611

### NW Europe

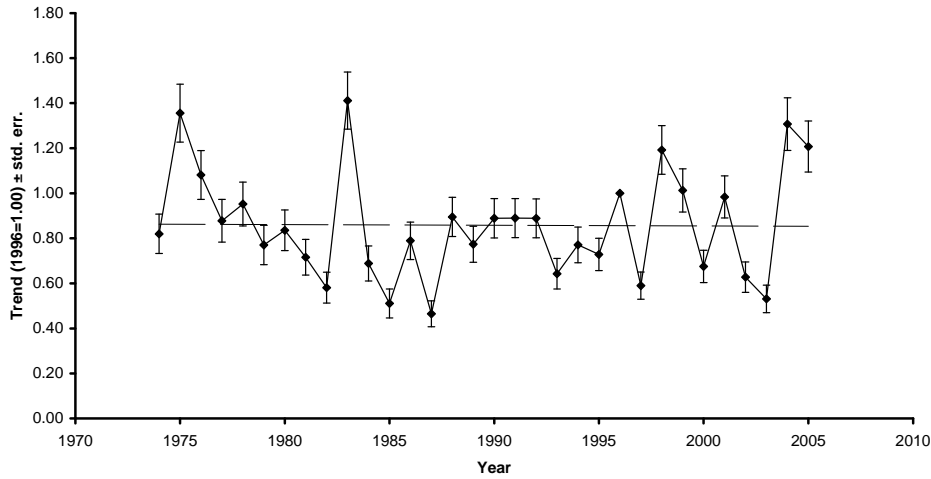
*Anas crecca* (Common Teal)



Number of sites	3061
umber of years	32
Number of observed zero counts	20077
Number of observed positive counts	31796
Number of missing counts	46079
Overall slope 1974-2005	1.0262
Overall slope 1996-2005	1.0458

## Central Europe

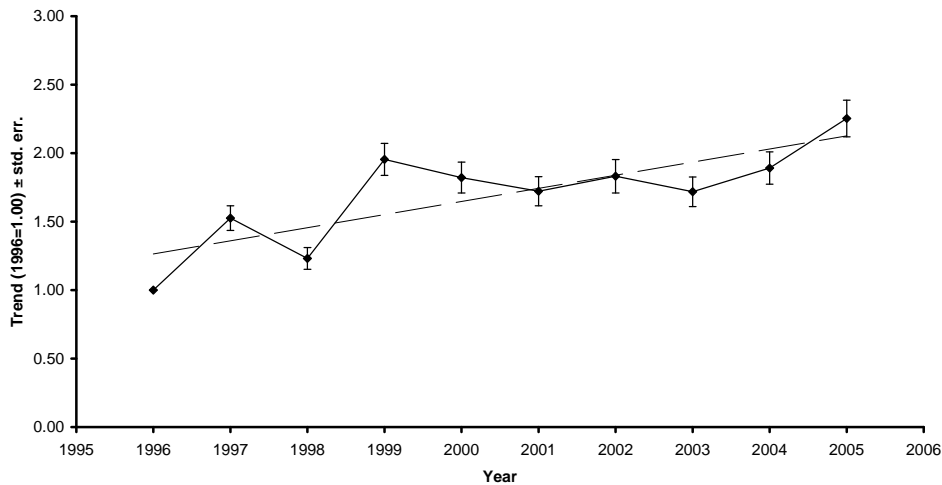
### Anas crecca (Common Teal)



Number of sites	433
umber of years	32
Number of observed zero counts	3177
Number of observed positive counts	4864
Number of missing counts	5815
Overall slope 1974-2005	0.9997
Overall slope 1996-2005	1.0026

## West Mediterranean

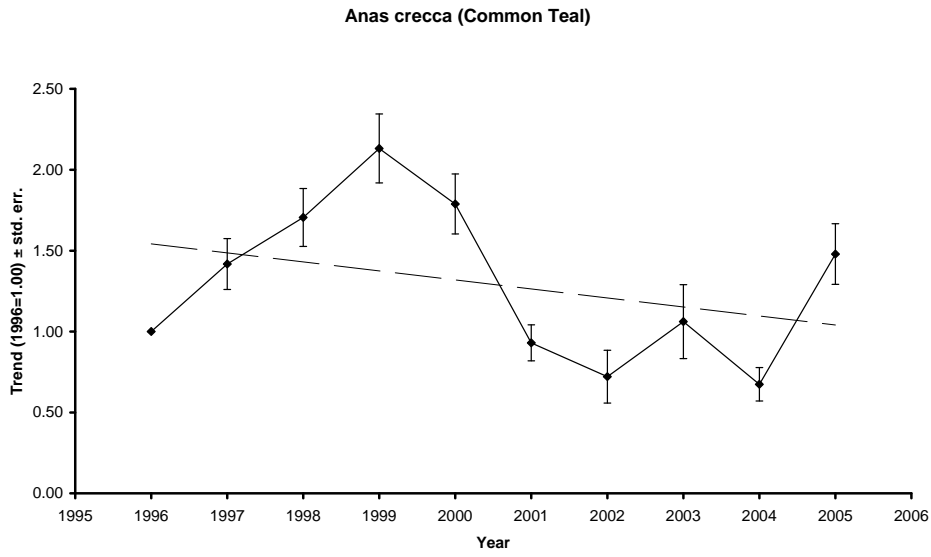
### Anas crecca (Common Teal)



Number of sites	566
umber of years	32
Number of observed zero counts	999
Number of observed positive counts	3373
Number of missing counts	1288
Overall slope 1996-2005	1.0645

See pages 103-104 for notes on interpreting the graphs

## East Mediterranean/Black Sea

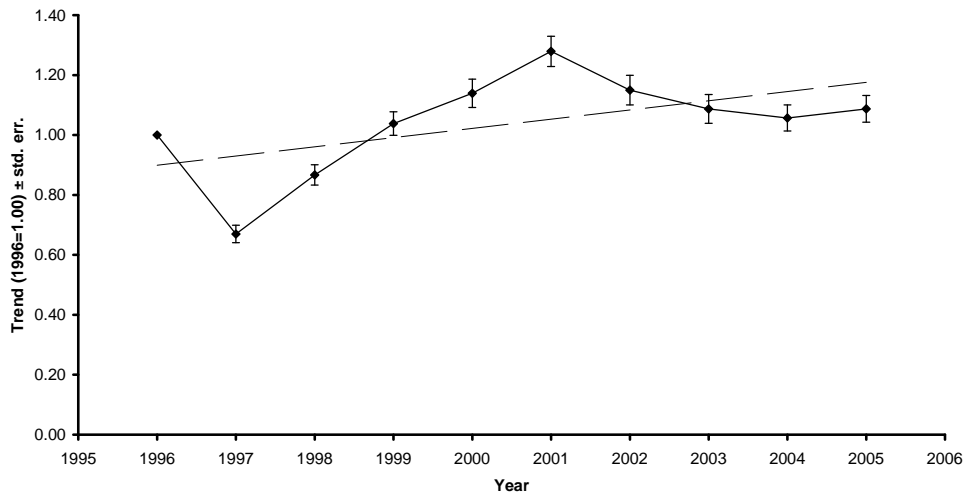


Number of sites	165
Number of years	10
Number of observed zero counts	200
Number of observed positive counts	804
Number of missing counts	645
Overall slope 1996-2005	0.9524

## *Anas platyrhynchos* Mallard

### Baltic/Nordic

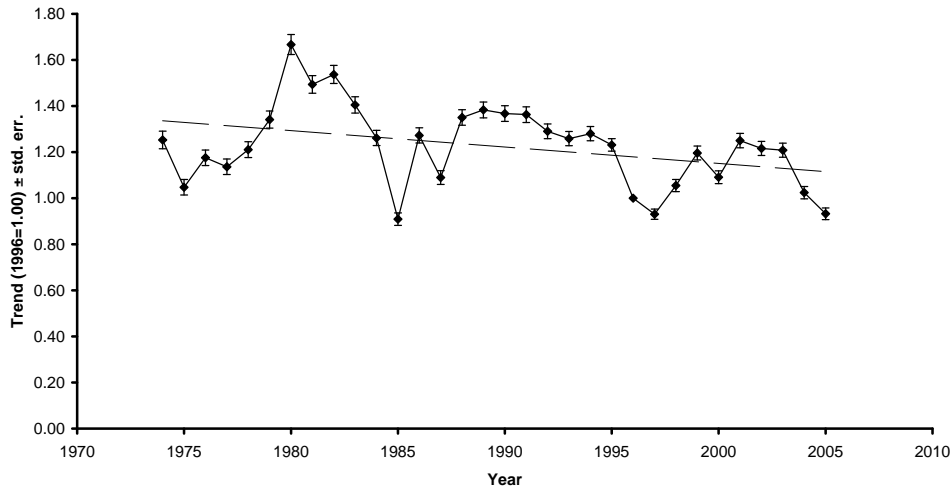
*Anas platyrhynchos* (Mallard)



Number of sites	985
Number of years	10
Number of observed zero counts	1207
Number of observed positive counts	6237
Number of missing counts	2406
Overall slope 1996-2005	1.034

### NW Europe

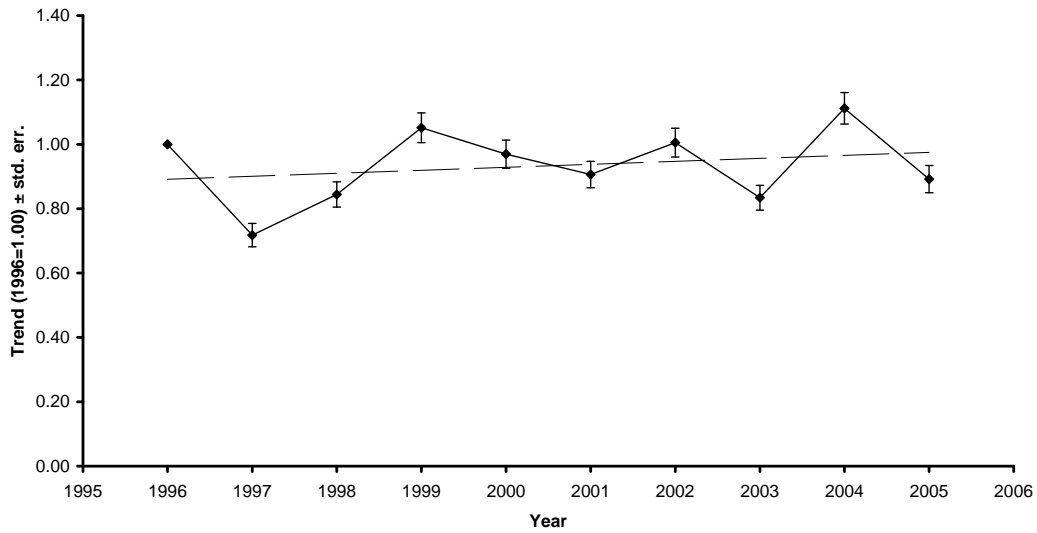
*Anas platyrhynchos* (Mallard)  
(>7 visits per site)



Number of sites	3765
Number of years	32
Number of observed zero counts	6369
Number of observed positive counts	63358
Number of missing counts	50753
Overall slope 1974-2005	0.9943
Overall slope 1996-2005	1.0071

## Central Europe

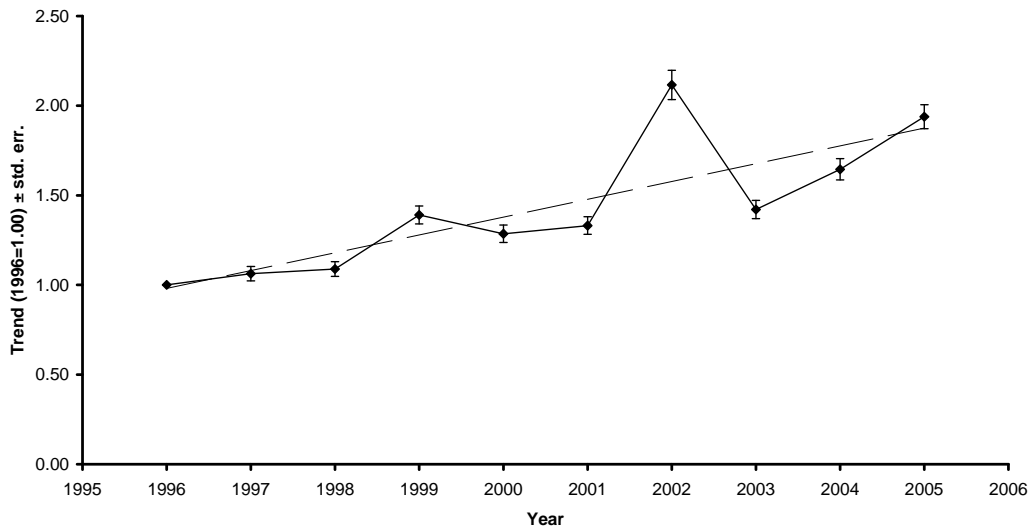
### *Anas platyrhynchos* (Mallard)



Number of sites	815
Number of years	10
Number of observed zero counts	329
Number of observed positive counts	5199
Number of missing counts	2632
Overall slope 1996-2005	1.0101

## West Mediterranean

### *Anas platyrhynchos* (Mallard)

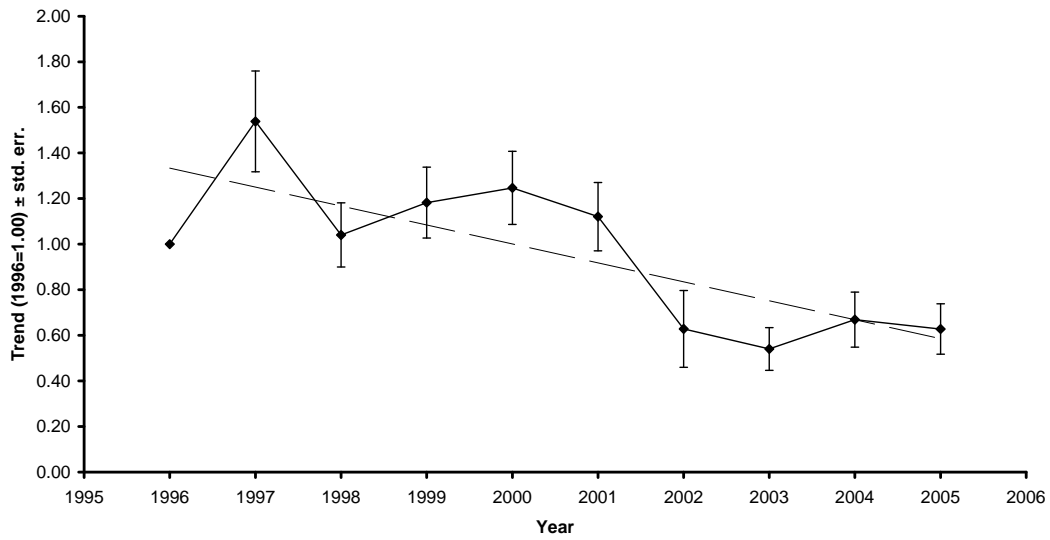


Number of sites	1288
Number of years	10
Number of observed zero counts	1064
Number of observed positive counts	7613
Number of missing counts	4203
Overall slope 1996-2005	1.0730

See pages 103-104 for notes on interpreting the graphs

## East Mediterranean/Black Sea

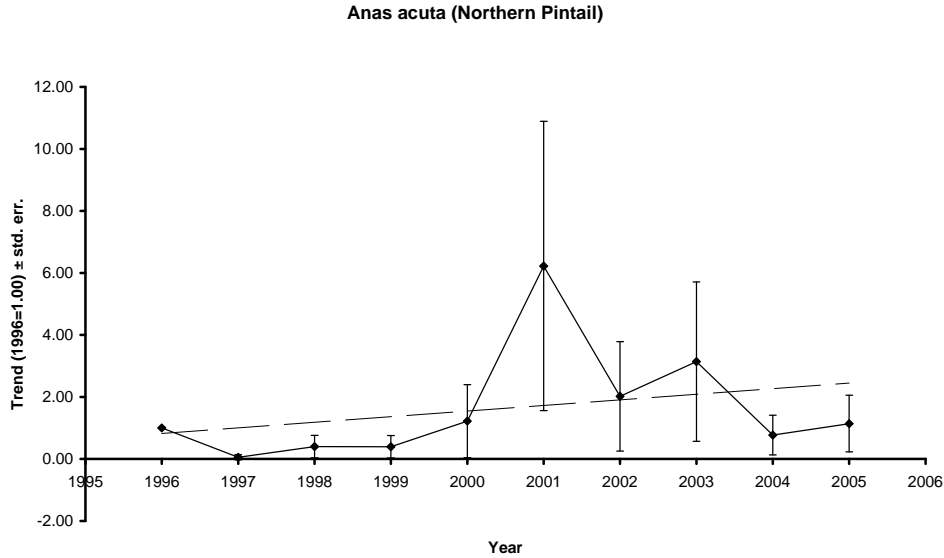
### *Anas platyrhynchos* (Mallard)



Number of sites	255
Number of years	10
Number of observed zero counts	129
Number of observed positive counts	1301
Number of missing counts	1120
Overall slope 1996-2005	0.9115

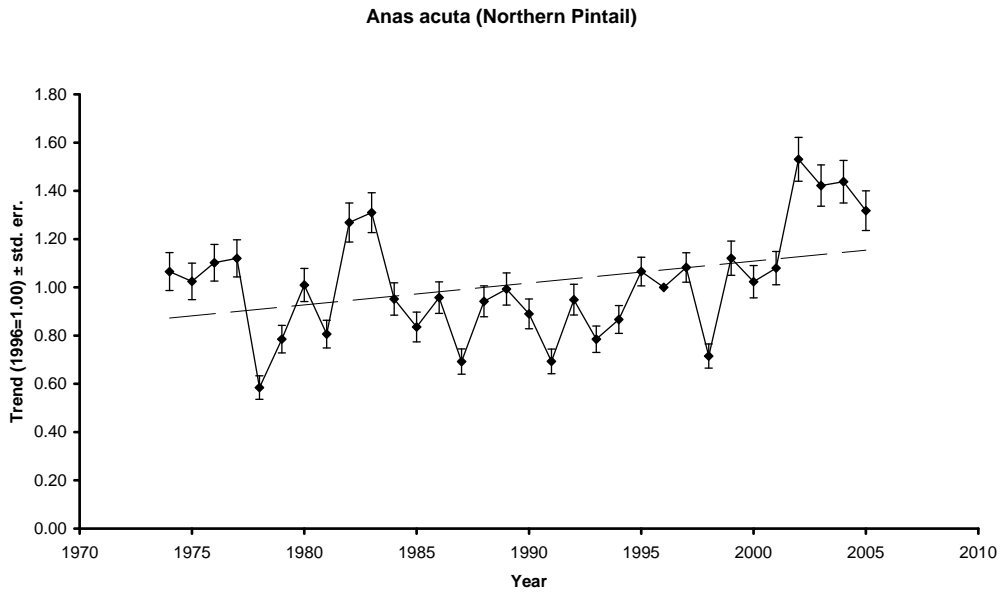
## *Anas acuta* Northern Pintail

### Baltic/Nordic



Number of sites	16
Number of years	10
Number of observed zero counts	65
Number of observed positive counts	77
Number of missing counts	18
Overall slope 1996-2005	1.2471

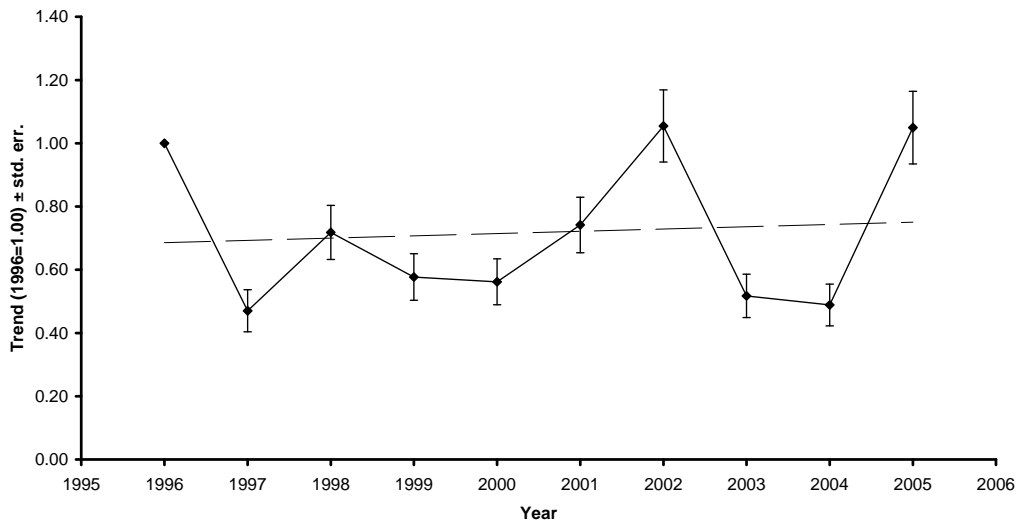
### NW Europe



Number of sites	791
Number of years	32
Number of observed zero counts	9973
Number of observed positive counts	7583
Number of missing counts	7756
Overall slope 1974-2005	1.0085
Overall slope 1996-2005	1.0552

## Central Europe

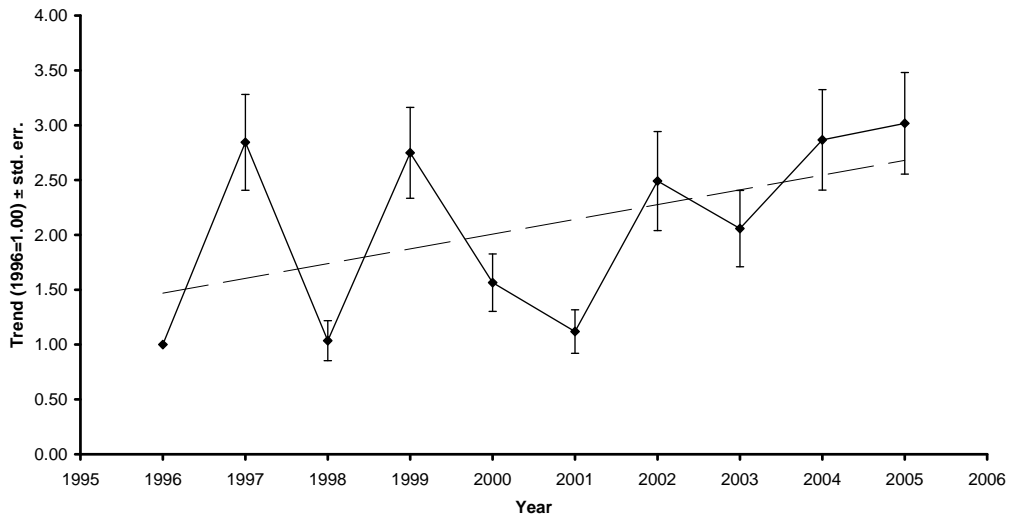
### *Anas acuta* (Northern Pintail)



Number of sites	58
Number of years	10
Number of observed zero counts	223
Number of observed positive counts	325
Number of missing counts	32
Overall slope 1996-2005	1.0071

## West Mediterranean

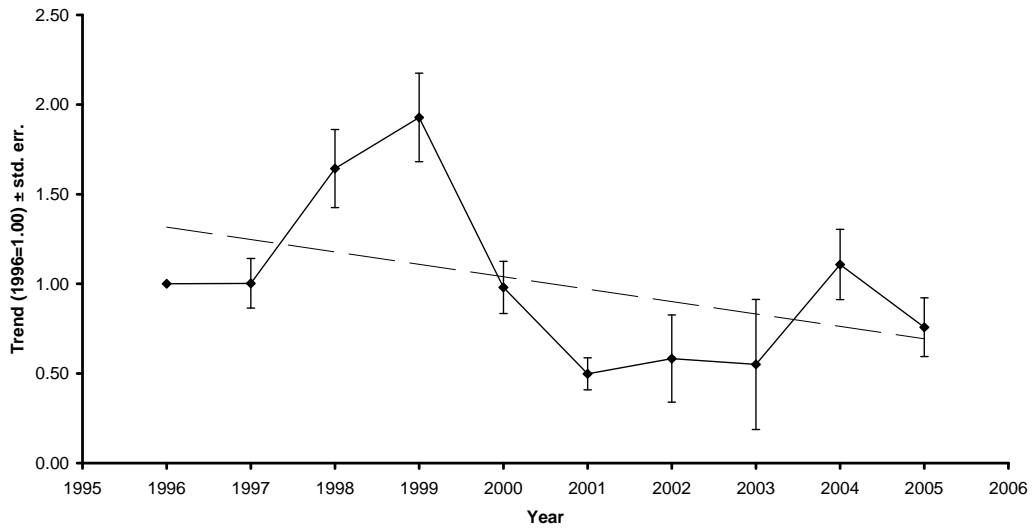
### *Anas acuta* (Northern Pintail)



Number of sites	191
Number of years	10
Number of observed zero counts	458
Number of observed positive counts	1072
Number of missing counts	380
Overall slope 1996-2005	1.0794

# East Mediterranean/Black Sea

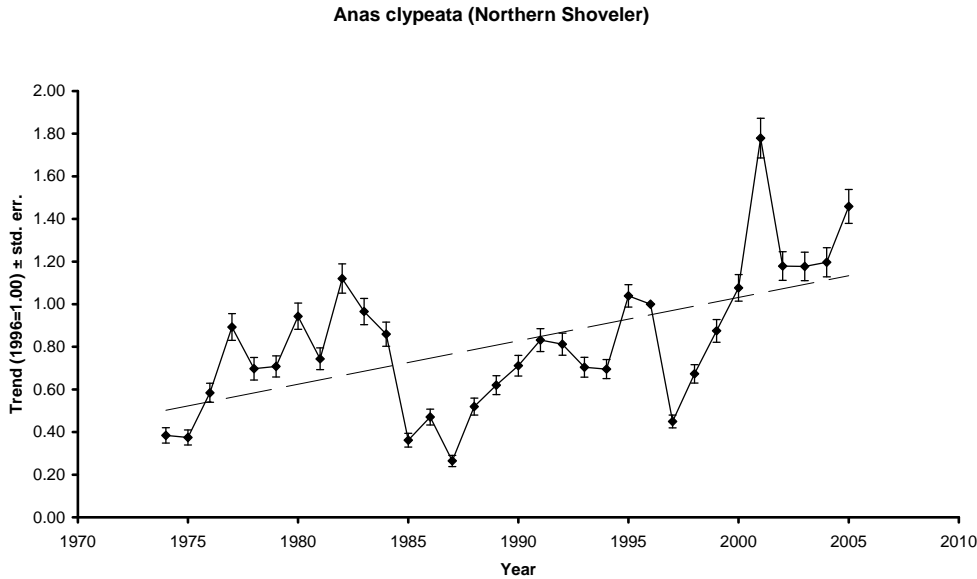
## *Anas acuta* (Northern Pintail)



Number of sites	70
Number of years	10
Number of observed zero counts	117
Number of observed positive counts	358
Number of missing counts	225
Overall slope 1996-2005	0.933

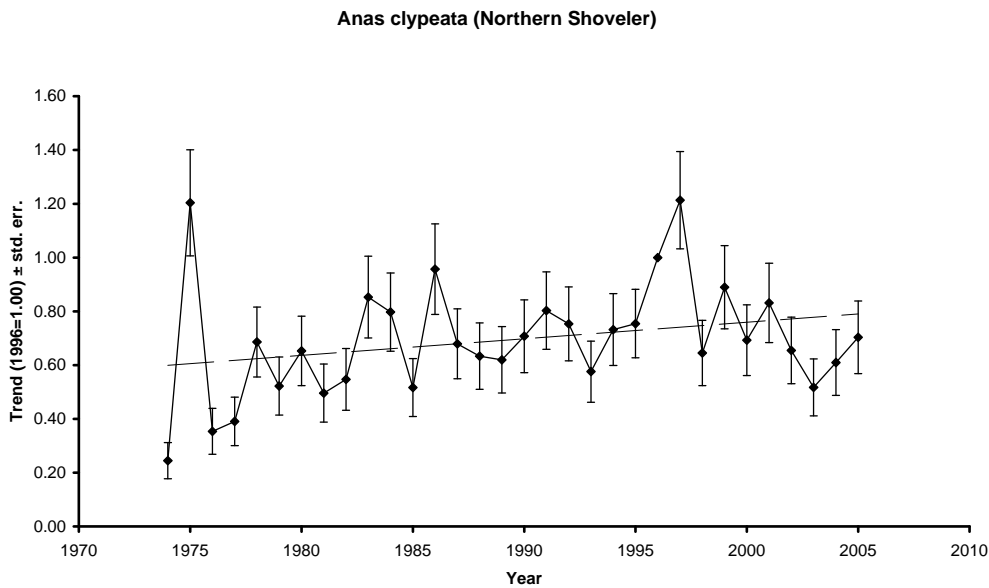
## *Anas clypeata* Northern Shoveler

### NW Europe



Number of sites	1192
Number of years	32
Number of observed zero counts	11910
Number of observed positive counts	11685
Number of missing counts	14549
Overall slope 1974-2005	1.0248
Overall slope 1996-2005	1.0906

### Central Europe

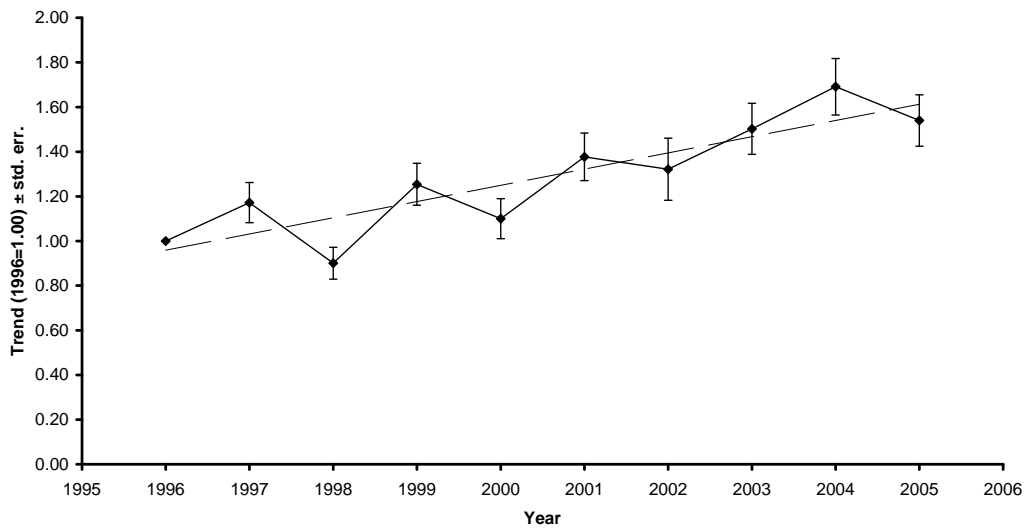


Number of sites	87
Number of years	32
Number of observed zero counts	1343
Number of observed positive counts	962
Number of missing counts	479
Overall slope 1974-2005	1.0134
Overall slope 1996-2005	0.9527

See pages 103-104 for notes on interpreting the graphs

## West Mediterranean

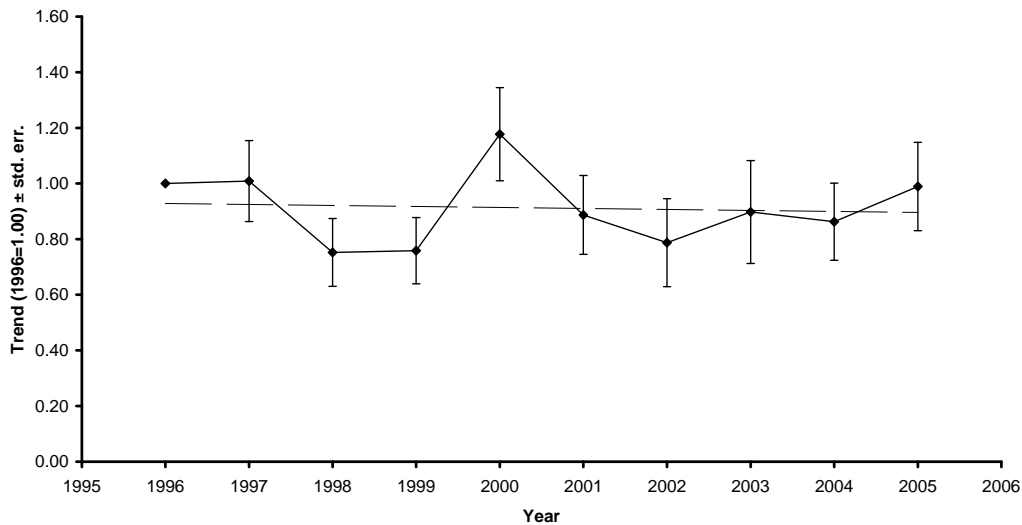
### *Anas clypeata* (Northern Shoveler)



Number of sites	457
Number of years	10
Number of observed zero counts	864
Number of observed positive counts	2590
Number of missing counts	1095
Overall slope 1996-2005	1.0584

## East Mediterranean/Black Sea

### *Anas clypeata* (Northern Shoveler)



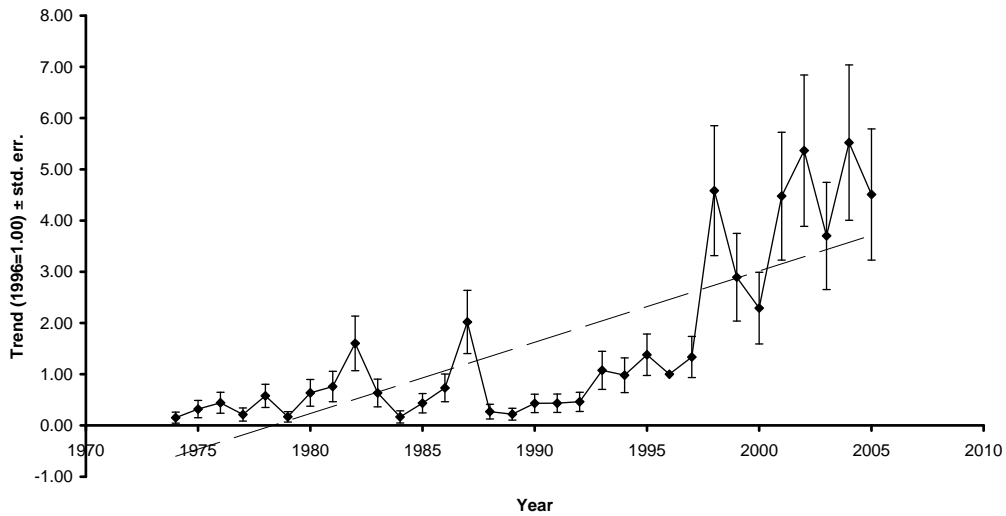
Number of sites	80
Number of years	10
Number of observed zero counts	82
Number of observed positive counts	419
Number of missing counts	299
Overall slope 1996-2005	0.9972

See pages 103-104 for notes on interpreting the graphs

## *Netta rufina* Red-crested Pochard

### NW Europe

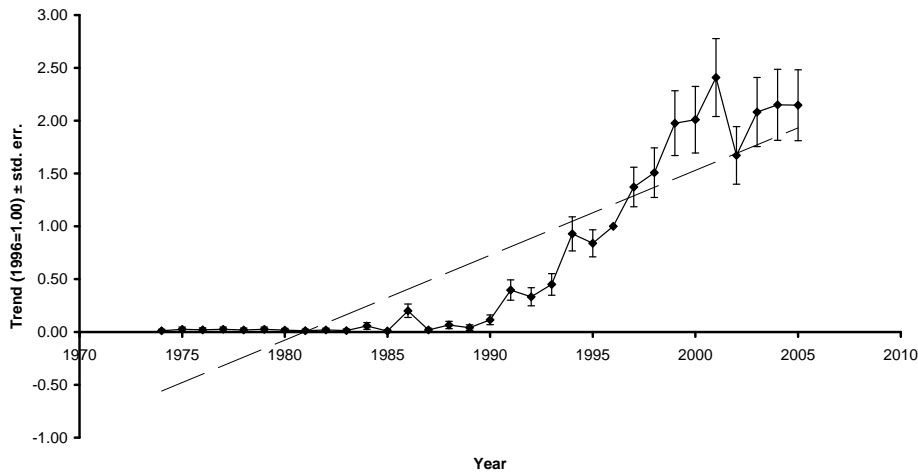
*Netta rufina* (Red-crested Pochard)



Number of sites	90
Number of years	32
Number of observed zero counts	1640
Number of observed positive counts	532
Number of missing counts	708
Overall slope 1974-2005	1.0979
Overall slope 1996-2005	1.67

### Central Europe

*Netta rufina* (Red-crested Pochard)

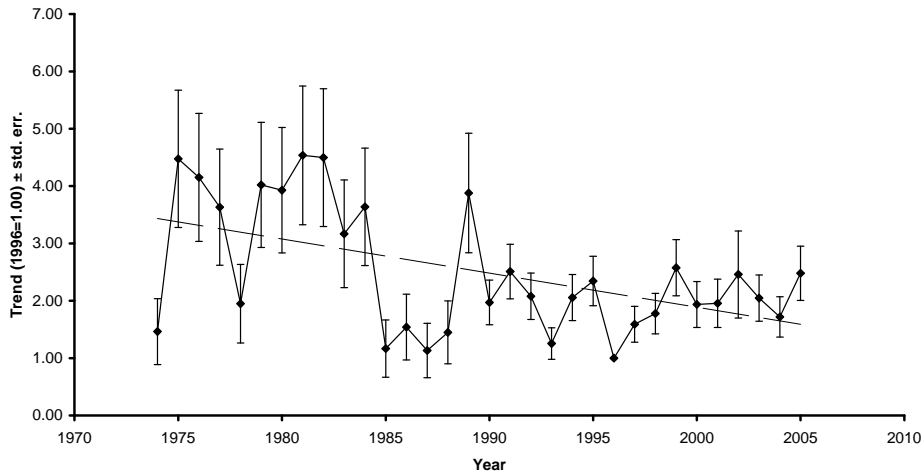


Number of sites	69
Number of years	32
Number of observed zero counts	1215
Number of observed positive counts	721
Number of missing counts	272
Overall slope 1974-2005	1.2267
Overall slope 1996-2005	1.0709

See pages 103-104 for notes on interpreting the graphs

## West Mediterranean

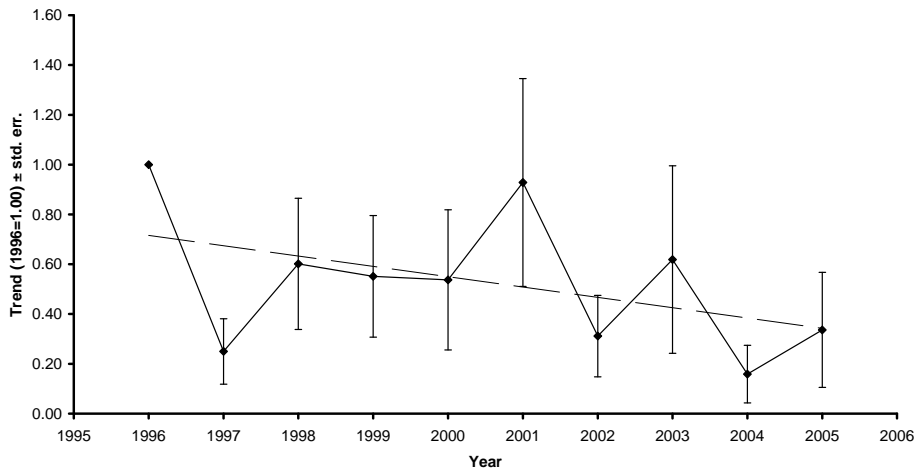
*Netta rufina* (Red-crested Pochard)



Number of sites	137
Number of years	32
Number of observed zero counts	958
Number of observed positive counts	836
Number of missing counts	2590
Overall slope 1974-2005	0.9805
Overall slope 1996-2005	1.0502

## East Mediterranean/Black Sea

*Netta rufina* (Red-crested Pochard)

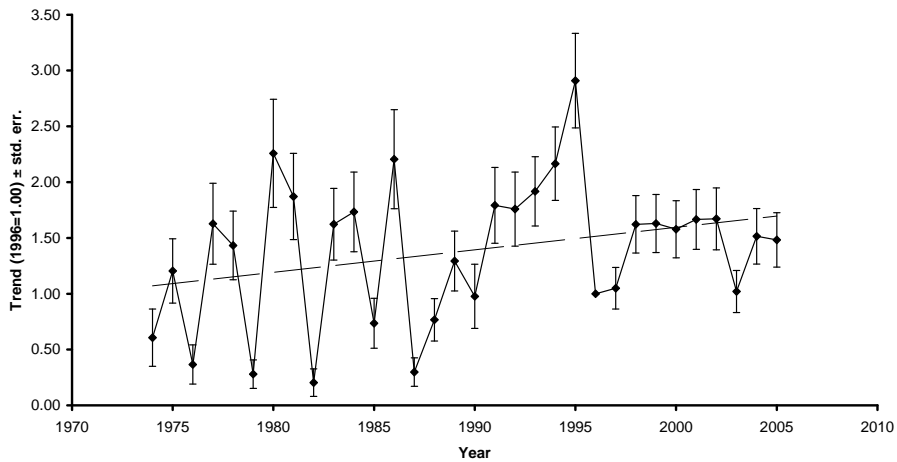


Number of sites	18
Number of years	10
Number of observed zero counts	50
Number of observed positive counts	74
Number of missing counts	56
Overall slope 1996-2005	0.9192

## Aythya ferina Common Pochard

### Baltic/Nordic

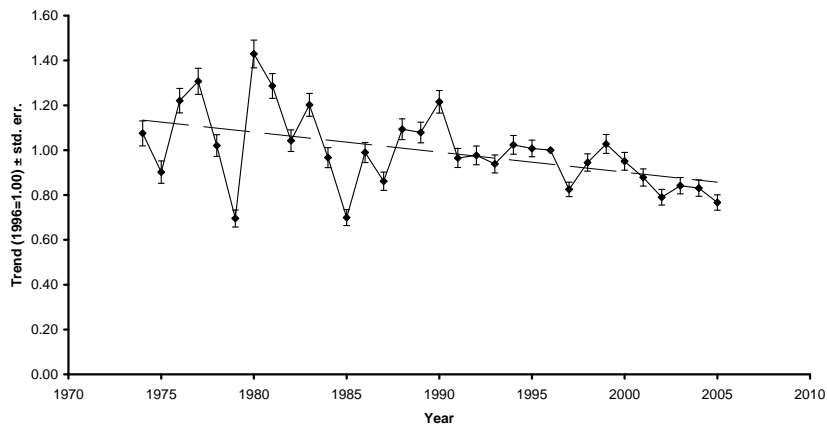
Aythya ferina (Pochard)



Number of sites	206
Number of years	32
Number of observed zero counts	2617
Number of observed positive counts	491
Number of missing counts	2521
Overall slope 1974-2005	1.0256
Overall slope 1996-2005	1.0074

### NW Europe

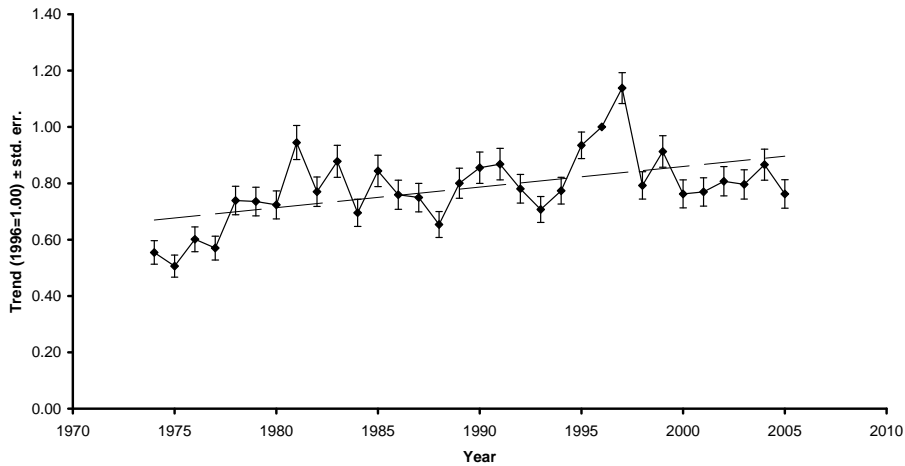
Aythya ferina (Pochard)



Number of sites	3417
Number of years	32
Number of observed zero counts	22830
Number of observed positive counts	36238
Number of missing counts	50276
Overall slope 1974-2005	0.9913
Overall slope 1996-2005	0.98

## Central Europe

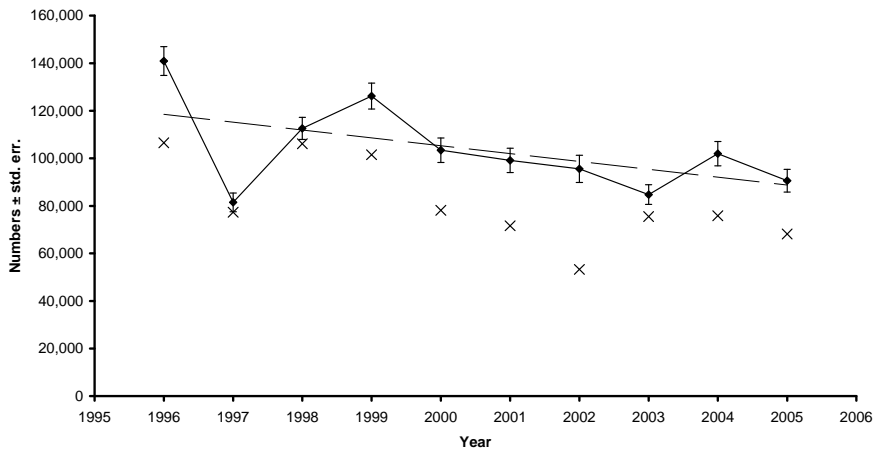
### *Aythya ferina* (Pochard)



Number of sites	541
Number of years	32
Number of observed zero counts	2775
Number of observed positive counts	6863
Number of missing counts	7674
Overall slope 1974-2005	1.0104
Overall slope 1996-2005	0.9729

## West Mediterranean

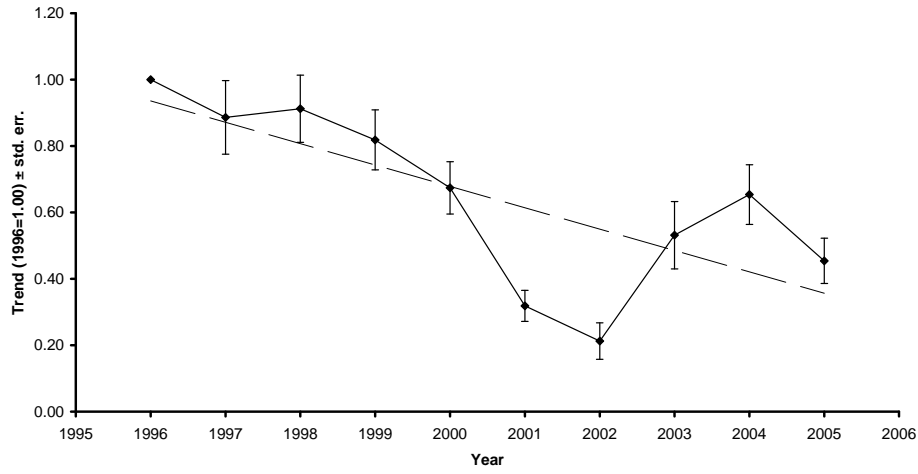
### *Aythya ferina* (Pochard)



Number of sites	489
Number of years	10
Number of observed zero counts	1076
Number of observed positive counts	2757
Number of missing counts	1057
Overall slope 1996-2005	0.9720

# East Mediterranean/Black Sea

*Aythya ferina* (Pochard)

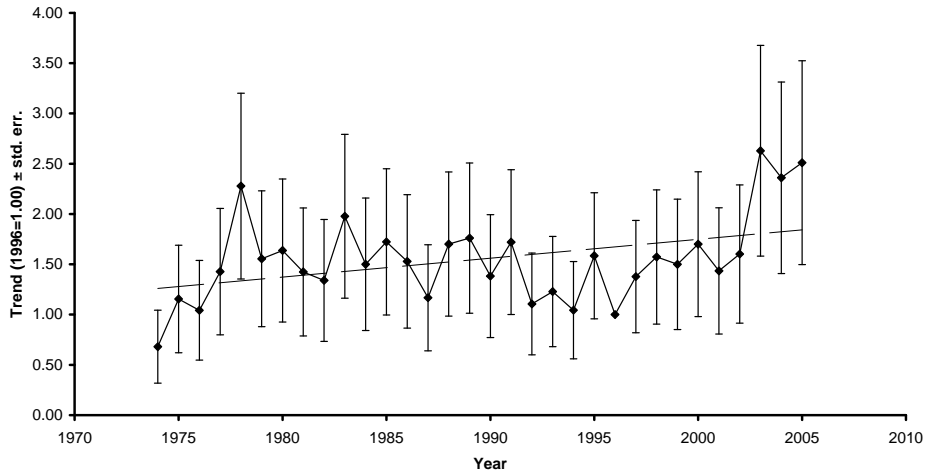


Number of sites	180
Number of years	10
Number of observed zero counts	230
Number of observed positive counts	856
Number of missing counts	714
Overall slope 1996-2005	0.9031

## *Aythya nyroca* Ferruginous Duck

### Central Europe

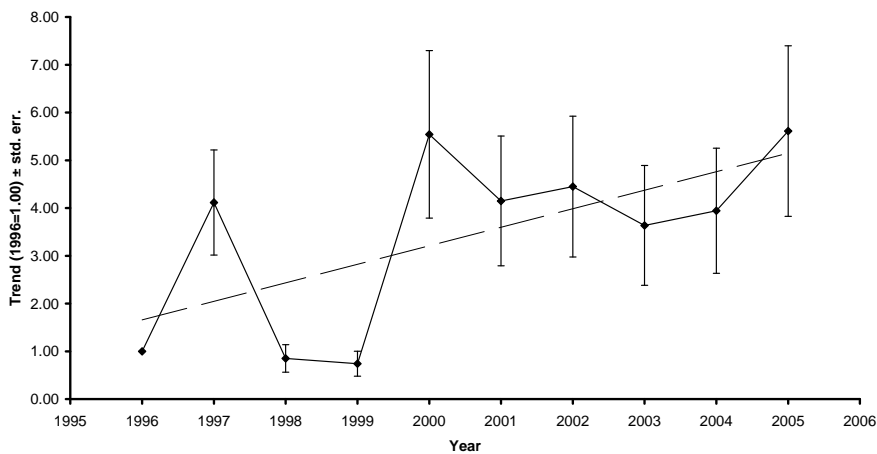
*Aythya nyroca* (Ferruginous Duck)



Number of sites	44
Number of years	32
Number of observed zero counts	915
Number of observed positive counts	375
Number of missing counts	118
Overall slope 1974-2005	1.0122
Overall slope 1996-2005	1.0675

### West Mediterranean

*Aythya nyroca* (Ferruginous Duck)

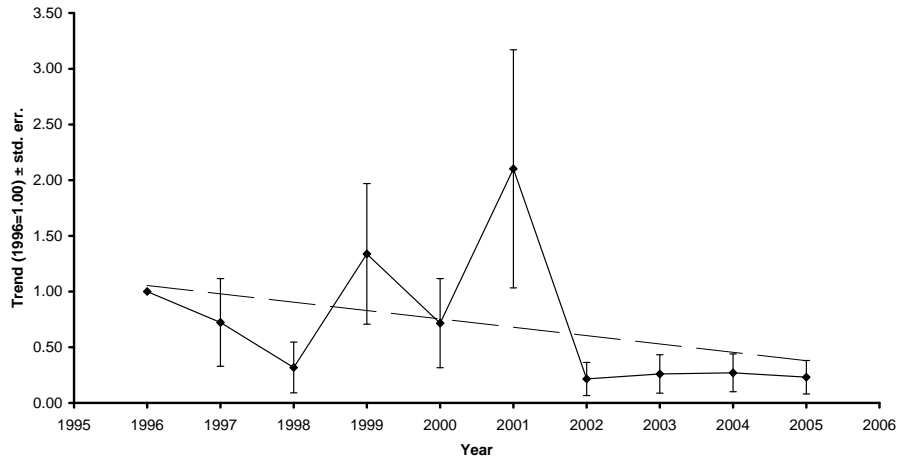


Number of sites	54
Number of years	10
Number of observed zero counts	221
Number of observed positive counts	237
Number of missing counts	82
Overall slope 1996-2005	1.1818

See pages 103-104 for notes on interpreting the graphs

## East Mediterranean/Black Sea

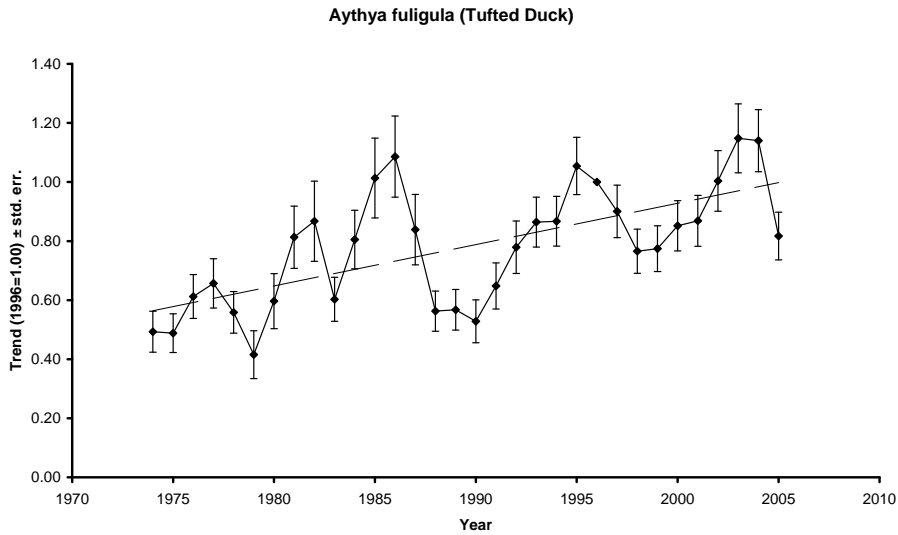
*Aythya nyroca* (Ferruginous Duck)



Number of sites	21
Number of years	10
Number of observed zero counts	42
Number of observed positive counts	91
Number of missing counts	77
Overall slope 1996-2005	0.8567

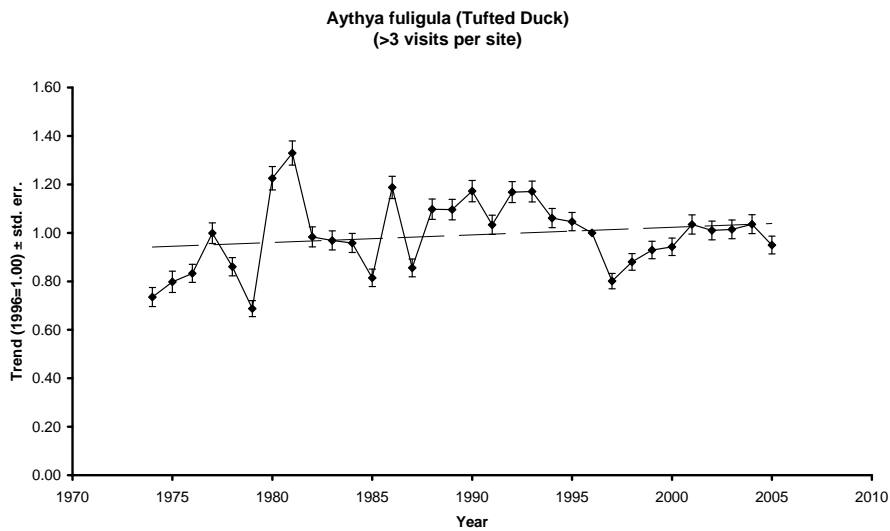
## *Aythya fuligula* Tufted Duck

### Baltic/Nordic



Number of sites	703
Number of years	32
Number of observed zero counts	5315
Number of observed positive counts	6145
Number of missing counts	11036
Overall slope 1974-2005	1.0192
Overall slope 1996-2005	1.0128

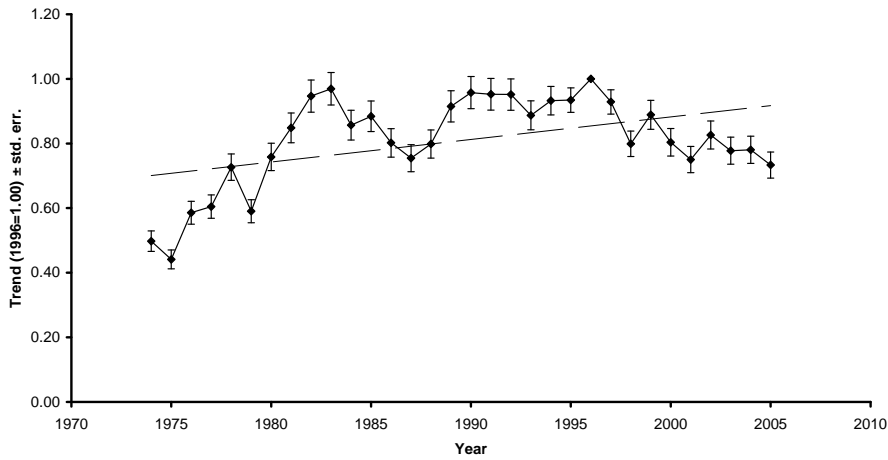
### NW Europe



Number of sites	3634
Number of years	32
Number of observed zero counts	17848
Number of observed positive counts	44004
Number of missing counts	54436
Overall slope 1974-2005	1.0039
Overall slope 1996-2005	1.0148

## Central Europe

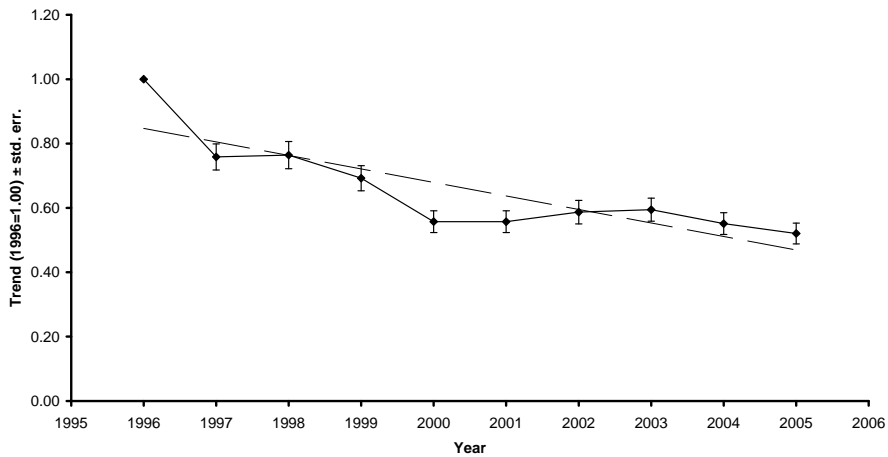
*Aythya fuligula* (Tufted Duck)



Number of sites	571
Number of years	32
Number of observed zero counts	2555
Number of observed positive counts	7287
Number of missing counts	8430
Overall slope 1974-2005	1.0104
Overall slope 1996-2005	0.9692

## West Mediterranean

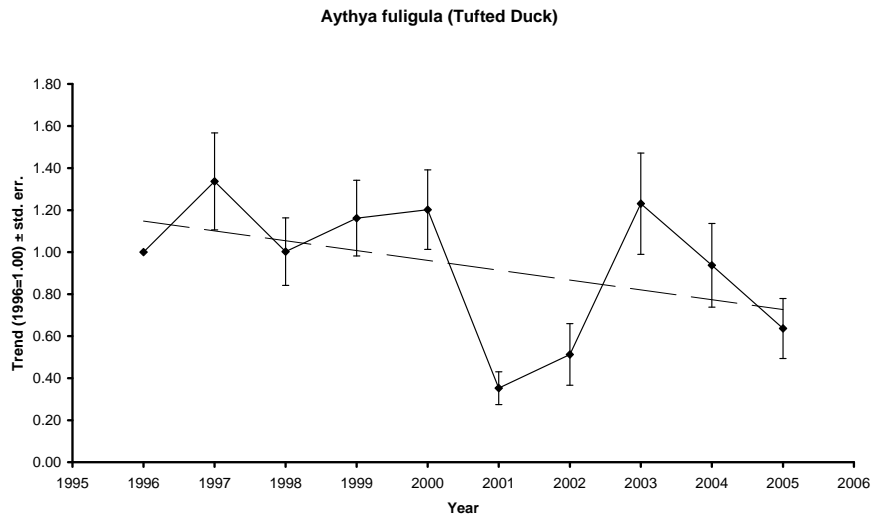
*Aythya fuligula* (Tufted Duck)



Number of sites	245
Number of years	10
Number of observed zero counts	593
Number of observed positive counts	1471
Number of missing counts	385
Overall slope 1996-2005	0.9420

See pages 103-104 for notes on interpreting the graphs

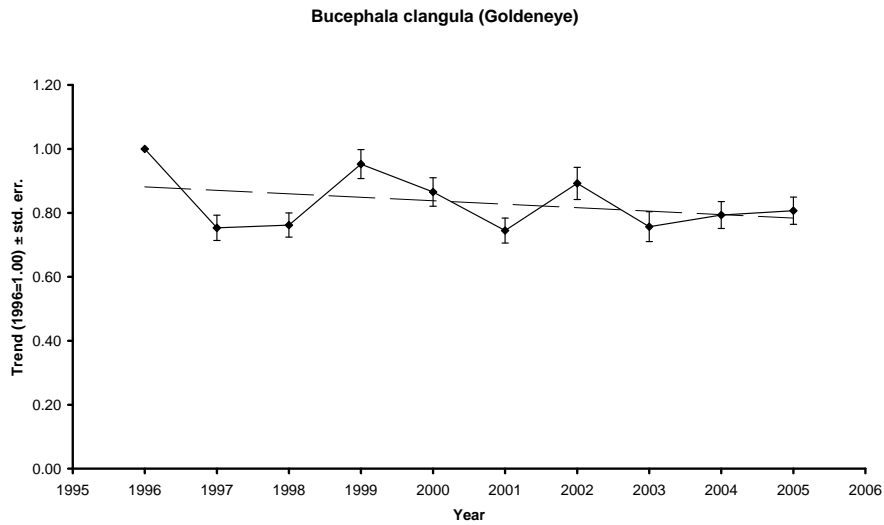
## East Mediterranean/Black Sea



Number of sites	130
Number of years	10
Number of observed zero counts	175
Number of observed positive counts	610
Number of missing counts	515
Overall slope 1996-2005	0.9455

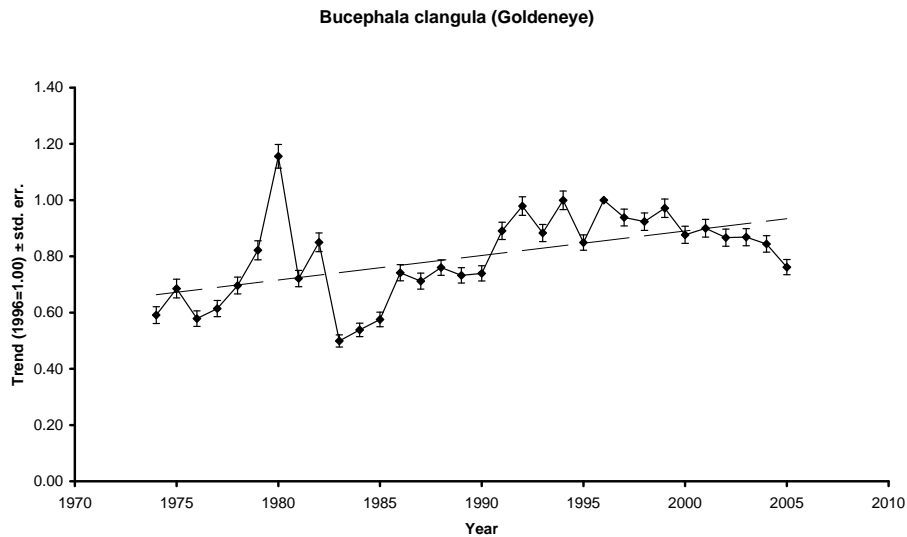
## *Bucephala clangula* Goldeneye

### Baltic/Nordic



Number of sites	821
Number of years	10
Number of observed zero counts	1276
Number of observed positive counts	5067
Number of missing counts	1867
Overall slope 1996-2005	0.9884

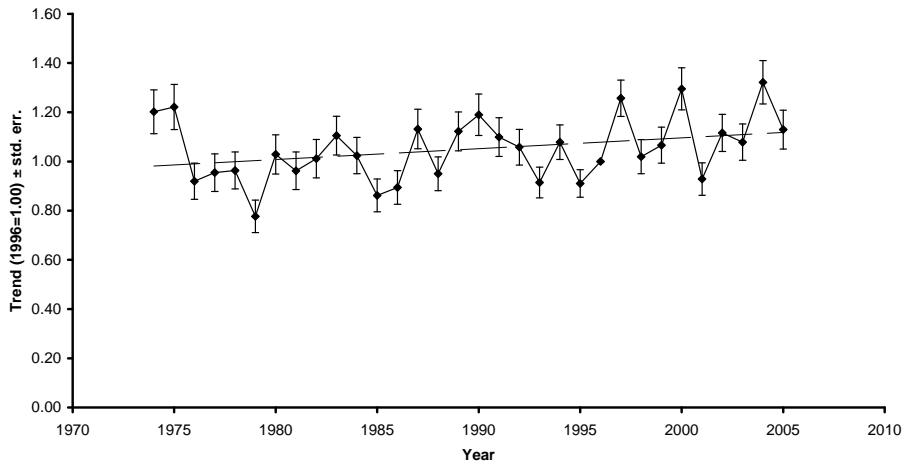
### NW Europe



Number of sites	2670
Number of years	32
Number of observed zero counts	19340
Number of observed positive counts	28734
Number of missing counts	37366
Overall slope 1974-2005	1.0120
Overall slope 1996-2005	0.9761

## Central Europe

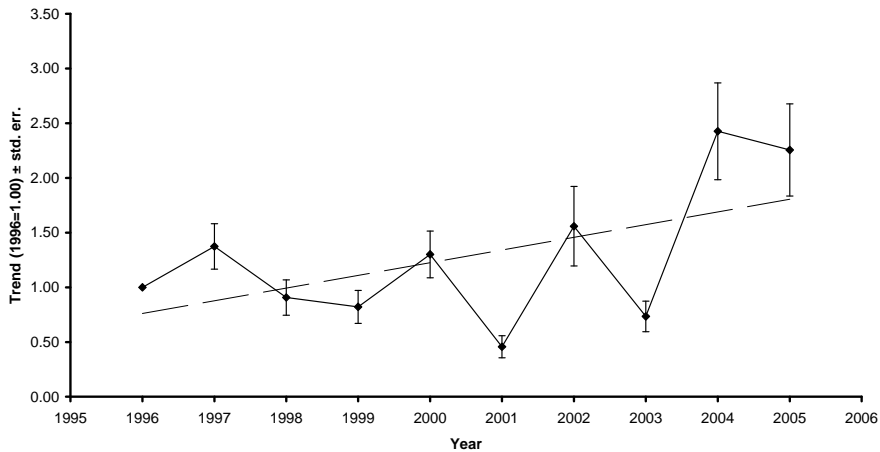
### *Bucephala clangula* (Goldeneye)



Number of sites	473
Number of years	32
Number of observed zero counts	2573
Number of observed positive counts	5405
Number of missing counts	7158
Overall slope 1974-2005	1.0043
Overall slope 1996-2005	1.0007

## West Mediterranean

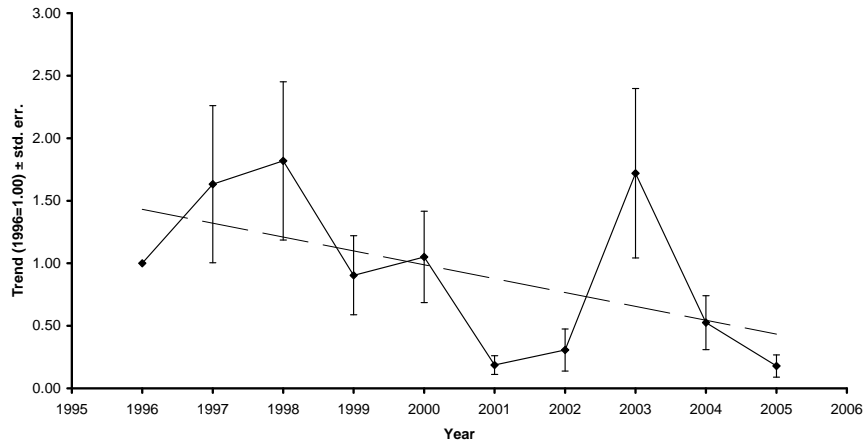
### *Bucephala clangula* (Goldeneye)



Number of sites	28
Number of years	10
Number of observed zero counts	68
Number of observed positive counts	190
Number of missing counts	22
Overall slope 1974-2005	1.0043
Overall slope 1996-2005	1.0702

## East Mediterranean/Black Sea

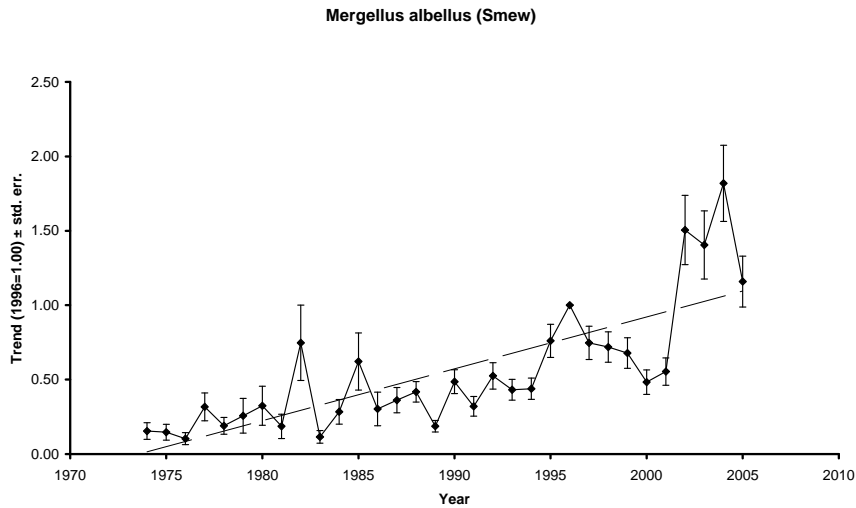
### *Bucephala clangula* (Goldeneye)



Number of sites	65
Number of years	10
Number of observed zero counts	100
Number of observed positive counts	272
Number of missing counts	278
Overall slope 1996-2005	0.8404

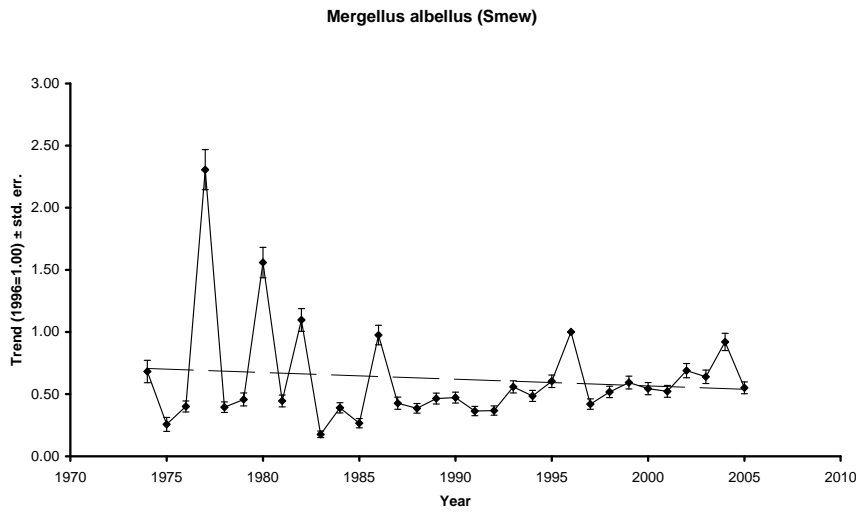
## *Mergellus albellus* Smew

### Baltic/Nordic



Number of sites	252
Number of years	32
Number of observed zero counts	3108
Number of observed positive counts	1568
Number of missing counts	3388
Overall slope 1974-2005	1.0683
Overall slope 1996-2005	1.0560

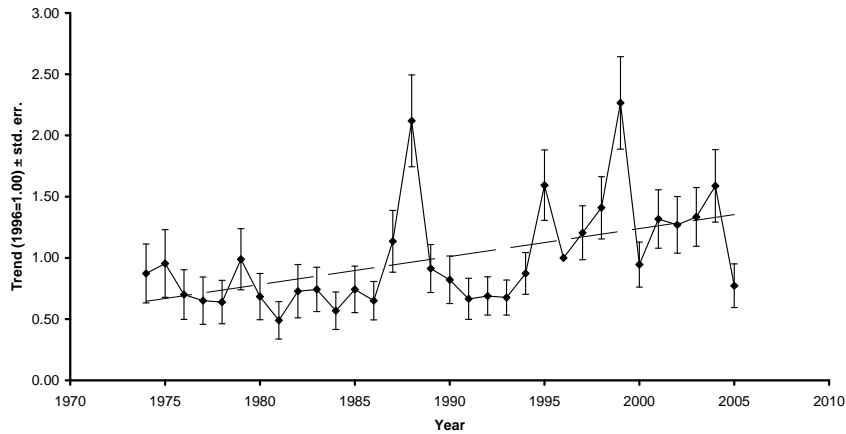
### NW Europe



Number of sites	913
Number of years	32
Number of observed zero counts	12225
Number of observed positive counts	7410
Number of missing counts	9581
Overall slope 1974-2005	1.0036
Overall slope 1996-2005	1.0110

## Central Europe

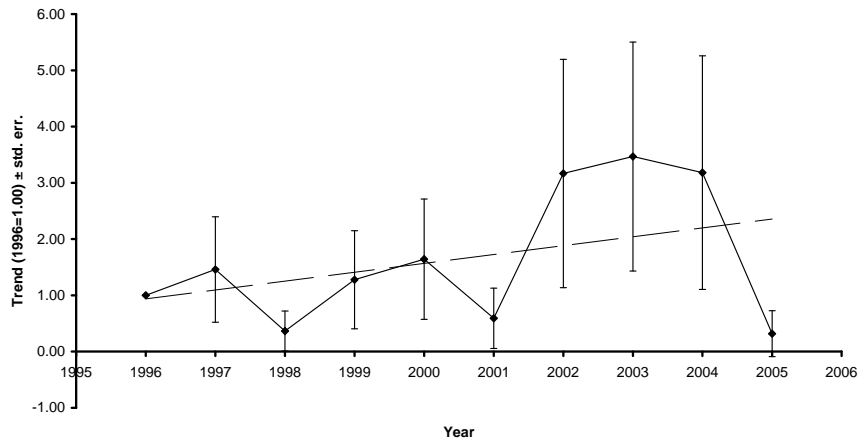
### Mergellus albellus (Smew)



Number of sites	200
Number of years	32
Number of observed zero counts	2266
Number of observed positive counts	1432
Number of missing counts	2702
Overall slope 1974-2005	1.0222
Overall slope 1996-2005	0.9683

## West Mediterranean

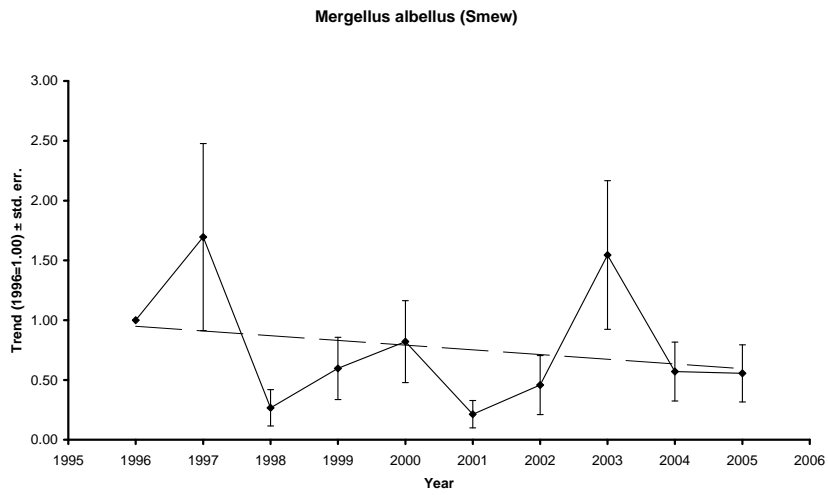
### Mergellus albellus (Smew)



Number of sites	10
Number of years	10
Number of observed zero counts	49
Number of observed positive counts	42
Number of missing counts	9
Overall slope 1996-2005	1.0504

See pages 103-104 for notes on interpreting the graphs

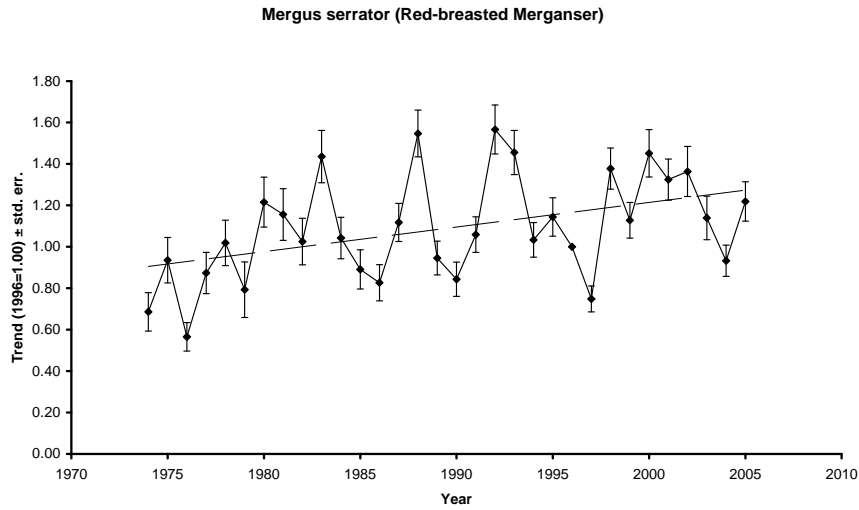
## East Mediterranean



Number of sites	53
Number of years	10
Number of observed zero counts	111
Number of observed positive counts	210
Number of missing counts	209
Overall slope 1996-2005	0.9627

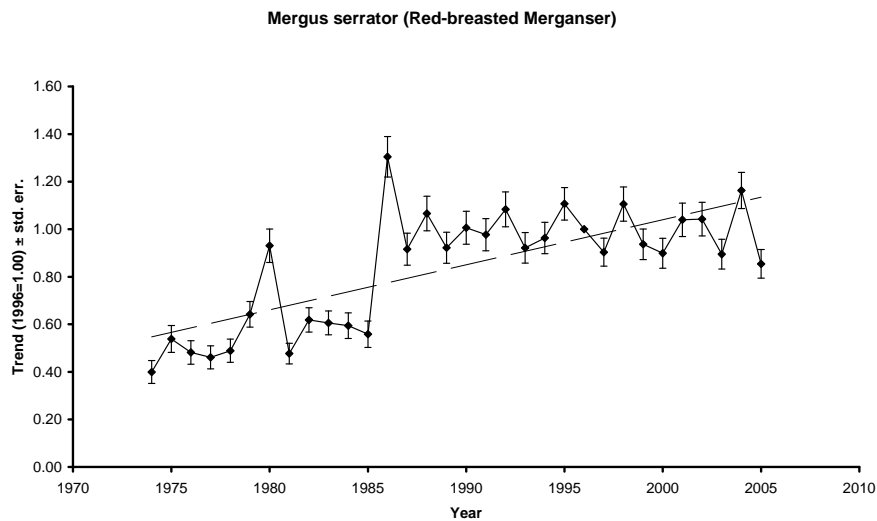
## *Mergus serrator* Red-breasted Merganser

### Baltic/Nordic



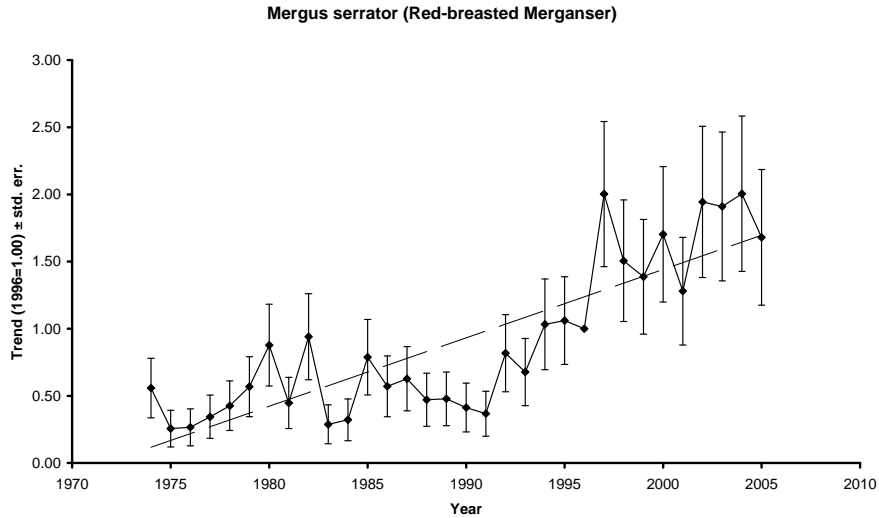
Number of sites :	833
Number of years :	32
Number of observed zero counts :	5727
Number of observed positive counts :	7991
Number of missing counts :	12938
Overall slope 1974-2005	<b>1.0121</b>
Overall slope 1996-2005	<b>0.9683</b>

### NW Europe



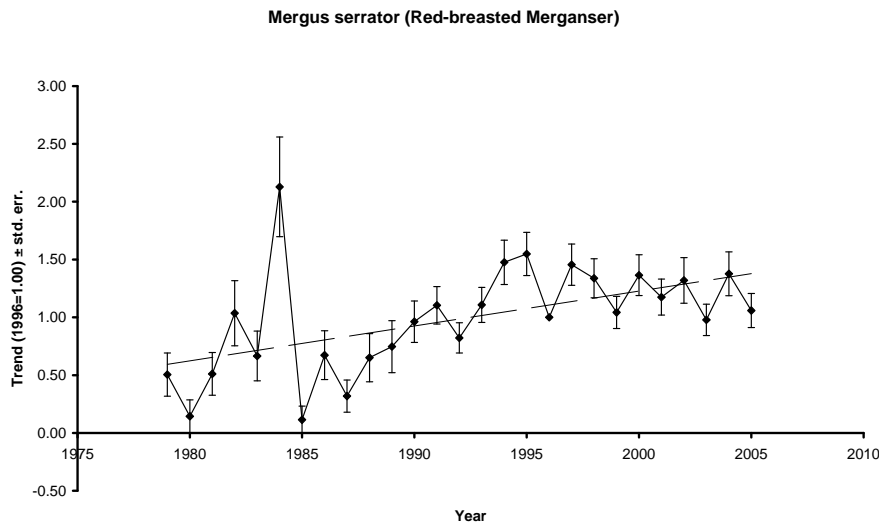
Number of sites :	646
Number of years :	32
Number of observed zero counts :	5471
Number of observed positive counts :	7706
Number of missing counts :	7495
Overall slope 1974-2005	<b>1.0268</b>
Overall slope 1996-2005	<b>0.9980</b>

## Central Europe



Number of sites :	41
Number of years :	32
Number of observed zero counts :	771
Number of observed positive counts :	360
Number of missing counts :	181
Overall slope 1974-2005	<b>1.0591</b>
Overall slope 1996-2005	<b>1.0350</b>

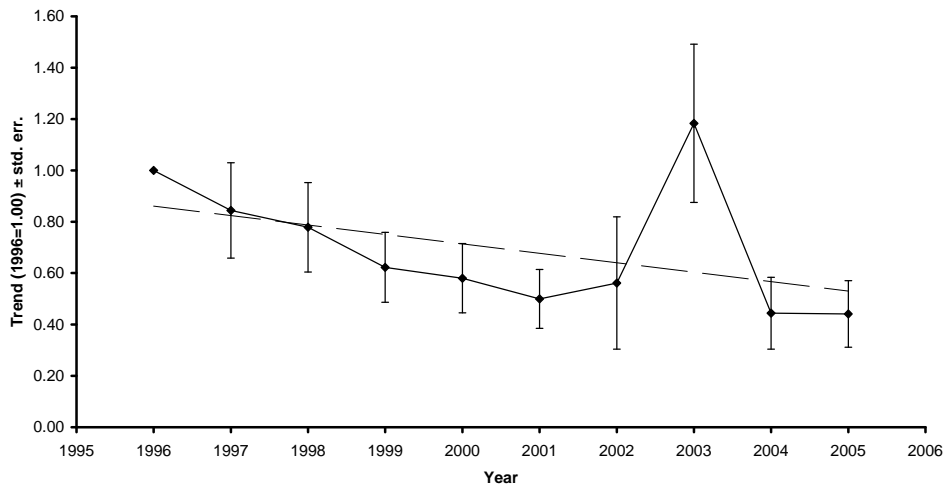
## West Mediterranean



Number of sites :	86
Number of years :	27
Number of observed zero counts :	538
Number of observed positive counts :	670
Number of missing counts :	1114
Overall slope 1974-2005	<b>1.0502</b>
Overall slope 1996-2005	<b>0.9925</b>

## East Mediterranean

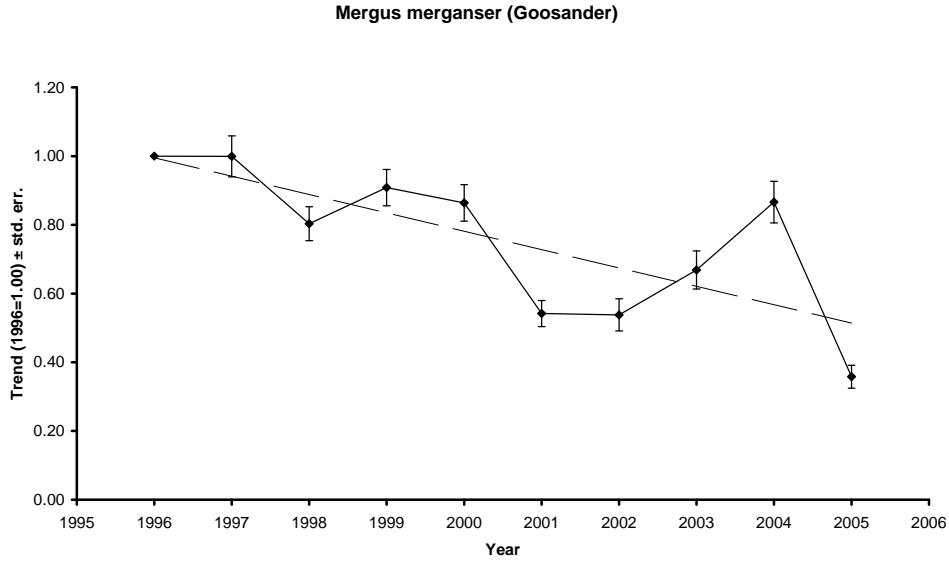
*Mergus serrator* (Red-breasted Merganser)



Number of sites :	45
Number of years :	10
Number of observed zero counts :	63
Number of observed positive counts :	229
Number of missing counts :	158
Overall slope 1996-2005	<b>0.9424</b>

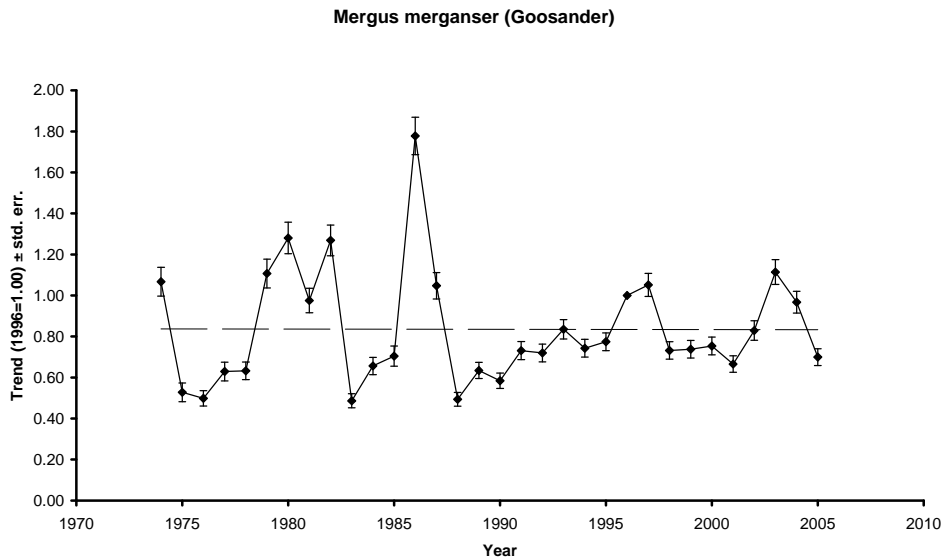
## *Mergus merganser* Goosander

### Baltic/Nordic



Number of sites :	607
Number of years :	10
Number of observed zero counts :	1162
Number of observed positive counts :	3477
Number of missing counts :	1431
Overall slope 1996-2005	<b>0.9233</b>

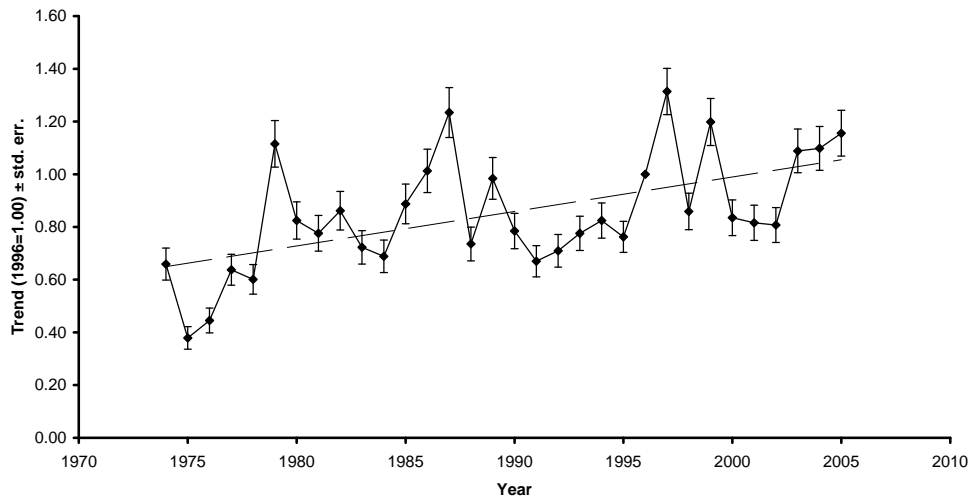
### NW Europe



Number of sites :	2187
Number of years :	32
Number of observed zero counts :	19977
Number of observed positive counts :	20640
Number of missing counts :	29367
Overall slope 1974-2005	<b>1.0025</b>
Overall slope 1996-2005	<b>0.9962</b>

## Central Europe

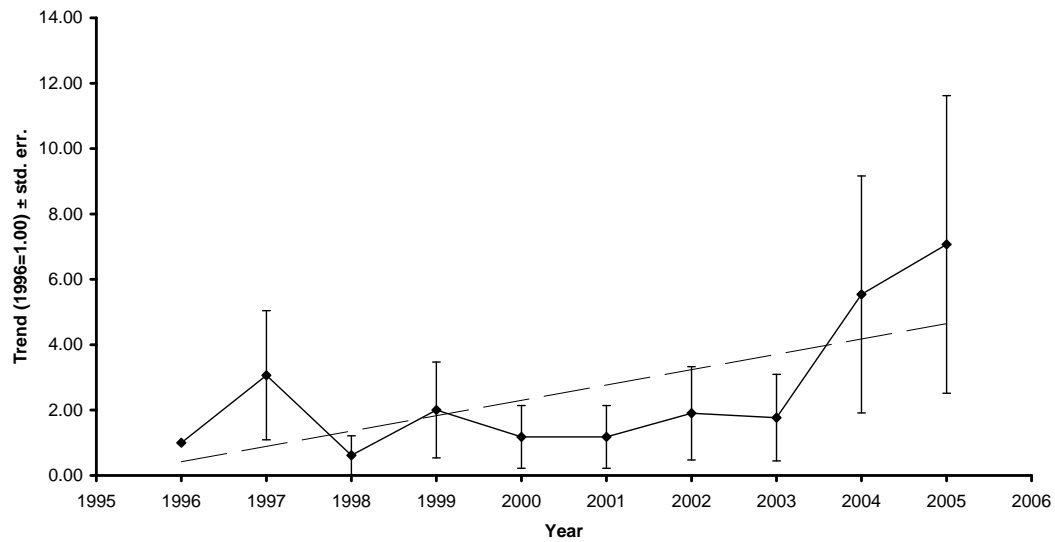
### Mergus merganser (Goosander)



Number of sites :	469
Number of years :	32
Number of observed zero counts :	3202
Number of observed positive counts :	5200
Number of missing counts :	6606
Overall slope 1974-2005	<b>1.0173</b>
Overall slope 1996-2005	<b>0.9819</b>

## West Mediterranean

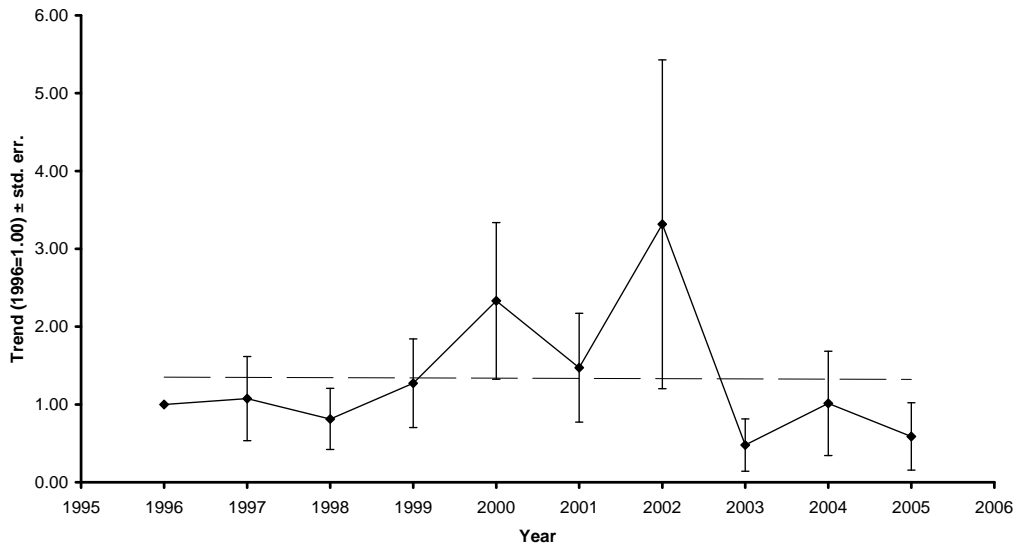
### Mergus merganser (Goosander)



Number of sites :	8
Number of years :	10
Number of observed zero counts :	35
Number of observed positive counts :	42
Number of missing counts :	3
Overall slope 1996-2005	<b>1.1770</b>

## East Mediterranean/Black Sea

### *Mergus merganser* (Goosander)



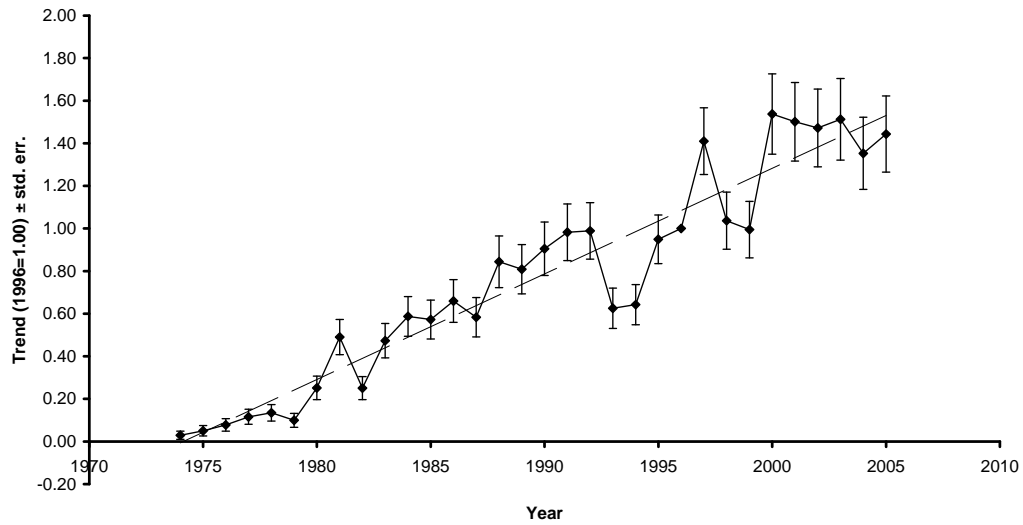
Number of sites :	24
Number of years :	10
Number of observed zero counts :	53
Number of observed positive counts :	95
Number of missing counts :	92
Overall slope 1996-2005	<b>0.9677</b>

See pages 103-104 for notes on interpreting the graphs

## *Oxyura jamaicensis* North American Ruddy Duck

### NW Europe

*Oxyura jamaicensis* (Ruddy Duck)

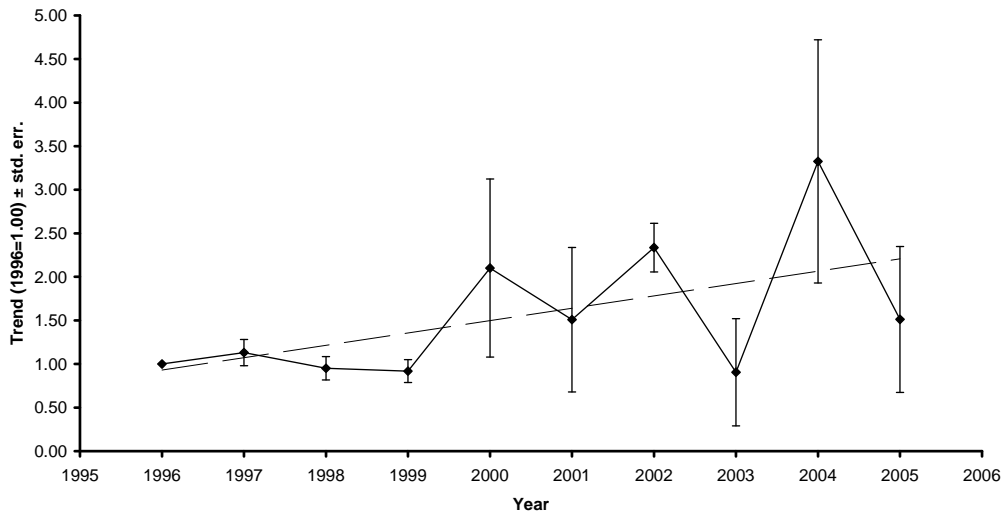


Number of sites :	252
Number of years :	32
Number of observed zero counts :	4007
Number of observed positive counts :	2021
Number of missing counts :	2036
Overall slope 1974-2005	1.1107
Overall slope 1996-2005	1.0396

## Gallinula chloropus Common Moorhen

### Baltic/Nordic

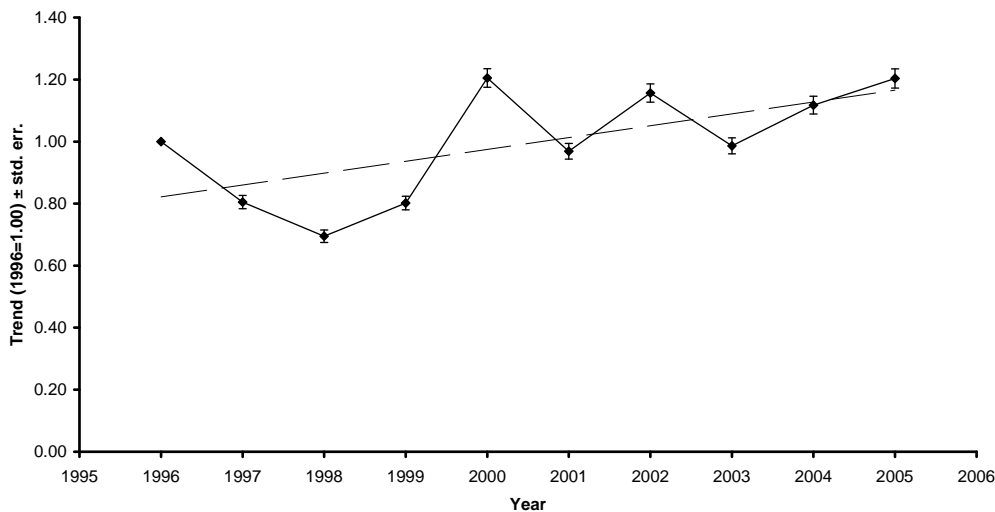
#### Gallinula chloropus (Moorhen)



Number of sites :	5
Number of years :	10
Number of observed zero counts :	9
Number of observed positive counts :	24
Number of missing counts :	17
Overall slope 1996-2005	<b>1.0852</b>

### NW Europe

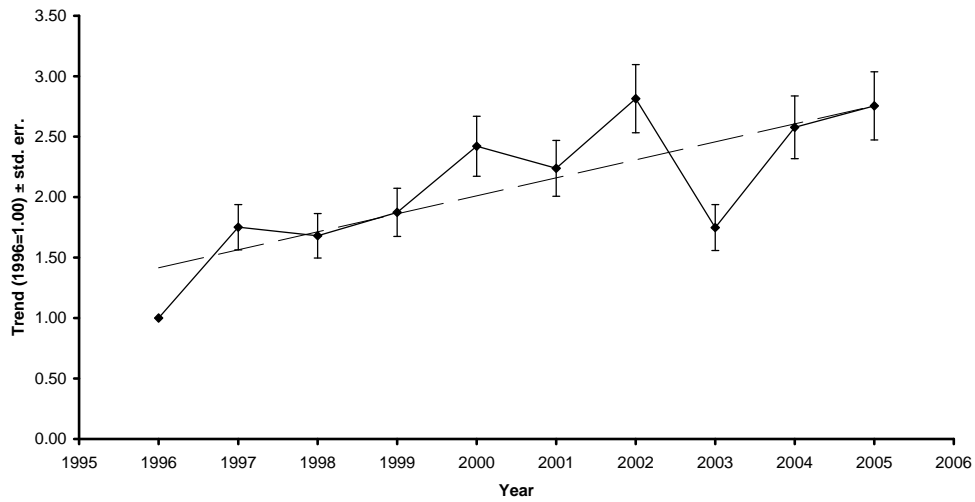
#### Gallinula chloropus (Moorhen)



Number of sites :	2228
Number of years :	10
Number of observed zero counts :	4075
Number of observed positive counts :	13506
Number of missing counts :	4699
Overall slope 1996-2005	<b>1.0852</b>

## Central Europe

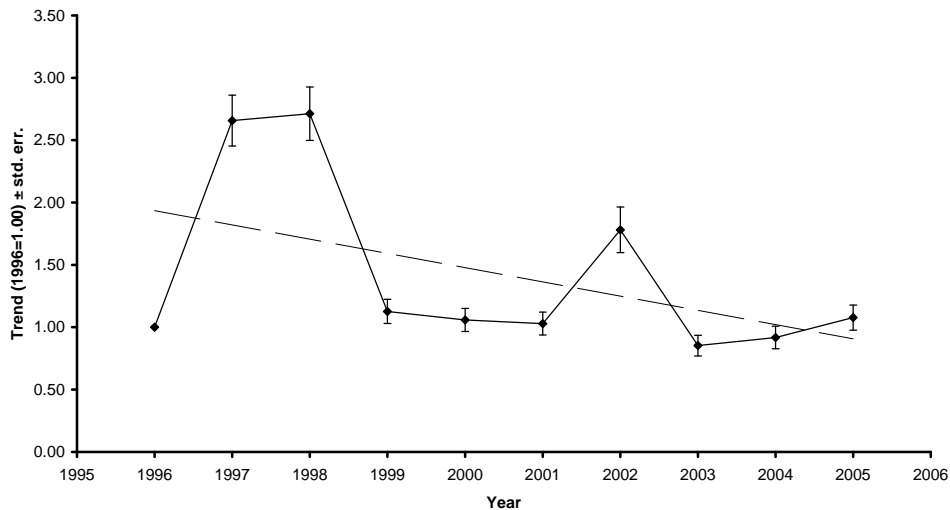
### *Gallinula chloropus* (Moorhen)



Number of sites :	195
Number of years :	10
Number of observed zero counts :	492
Number of observed positive counts :	1231
Number of missing counts :	227
Overall slope 1996-2005	<b>1.0830</b>

## West Mediterranean

### *Gallinula chloropus* (Moorhen)

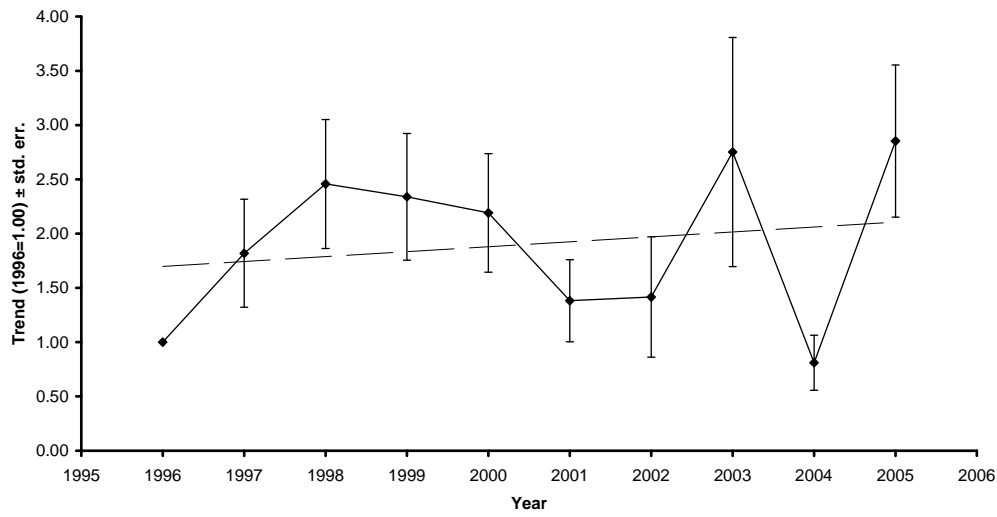


Number of sites :	800
Number of years :	10
Number of observed zero counts :	1297
Number of observed positive counts :	4260
Number of missing counts :	2443
Overall slope 1996-2005	<b>0.9342</b>

See pages 103-104 for notes on interpreting the graphs

## East Mediterranean

*Gallinago gallinago* (Common Snipe)

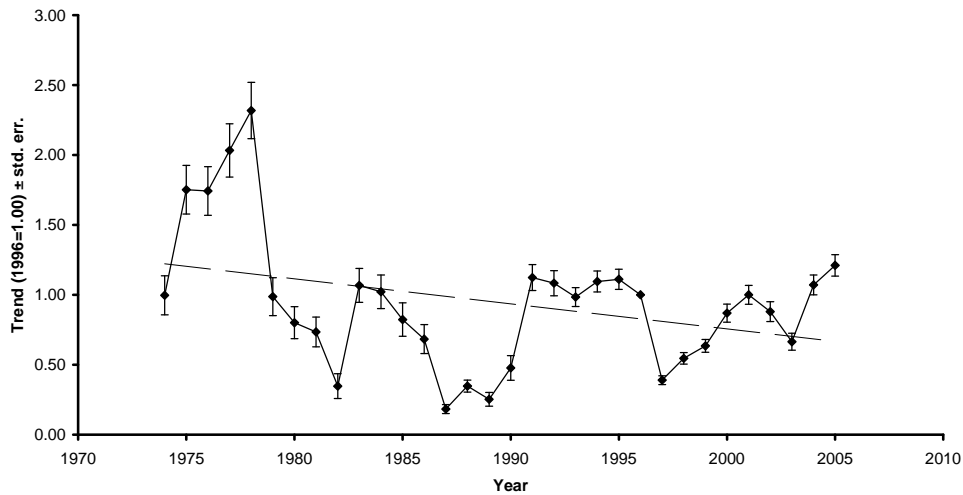


Number of sites :	59
Number of years :	10
Number of observed zero counts :	97
Number of observed positive counts :	259
Number of missing counts :	234
Overall slope 1996-2005	<b>1.0147</b>

## *Fulica atra* Common Coot

### Baltic/Nordic

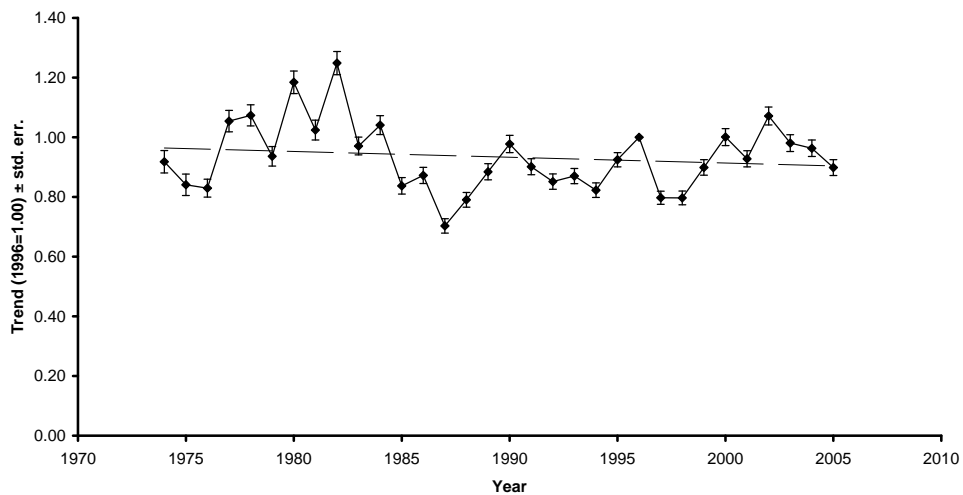
*Fulica atra* (Common Coot)



Number of sites :	456
Number of years :	32
Number of observed zero counts :	4293
Number of observed positive counts :	3983
Number of missing counts :	6316
Overall slope 1974-2005	<b>0.988</b>
Overall slope 1996-2005	<b>1.0632</b>

### NW Europe

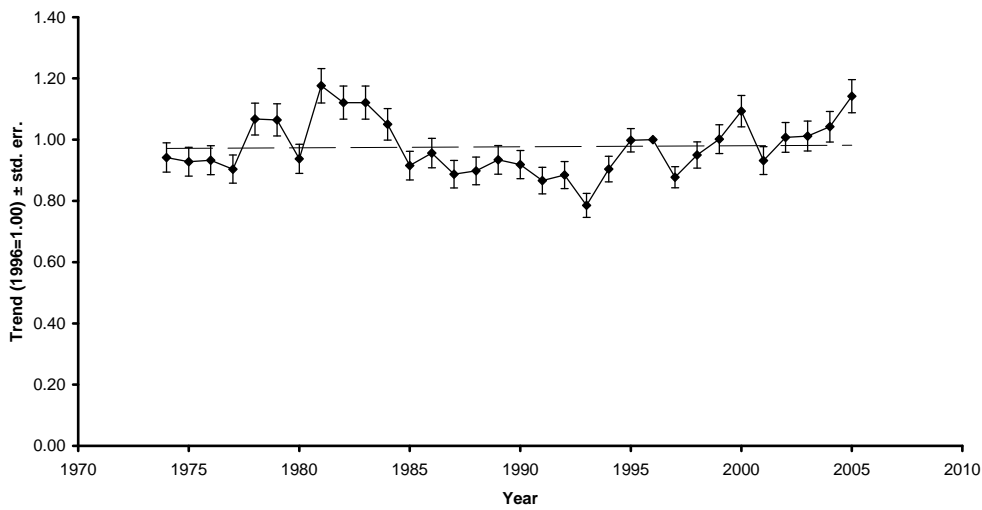
*Fulica atra* (Common Coot)  
(>4 visits per site)



Number of sites :	3657
Number of years :	32
Number of observed zero counts :	10117
Number of observed positive counts :	46547
Number of missing counts :	60360
Overall slope 1974-2005	<b>0.9982</b>
Overall slope 1996-2005	<b>1.0105</b>

## Central Europe

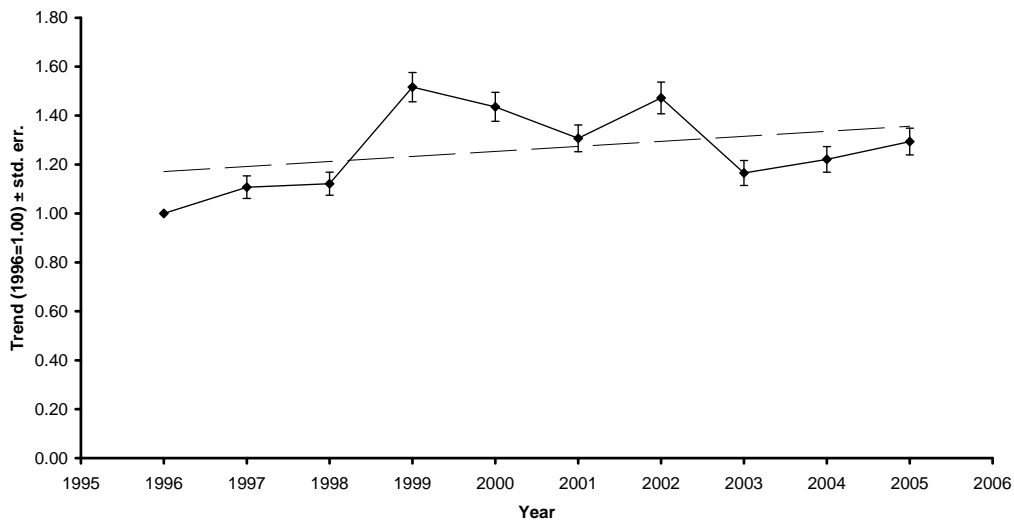
### Fulica atra (Common Coot)



Number of sites :	750
Number of years :	32
Number of observed zero counts :	2140
Number of observed positive counts :	9497
Number of missing counts :	12363
Overall slope 1974-2005	1.0007
Overall slope 1996-2005	1.0152

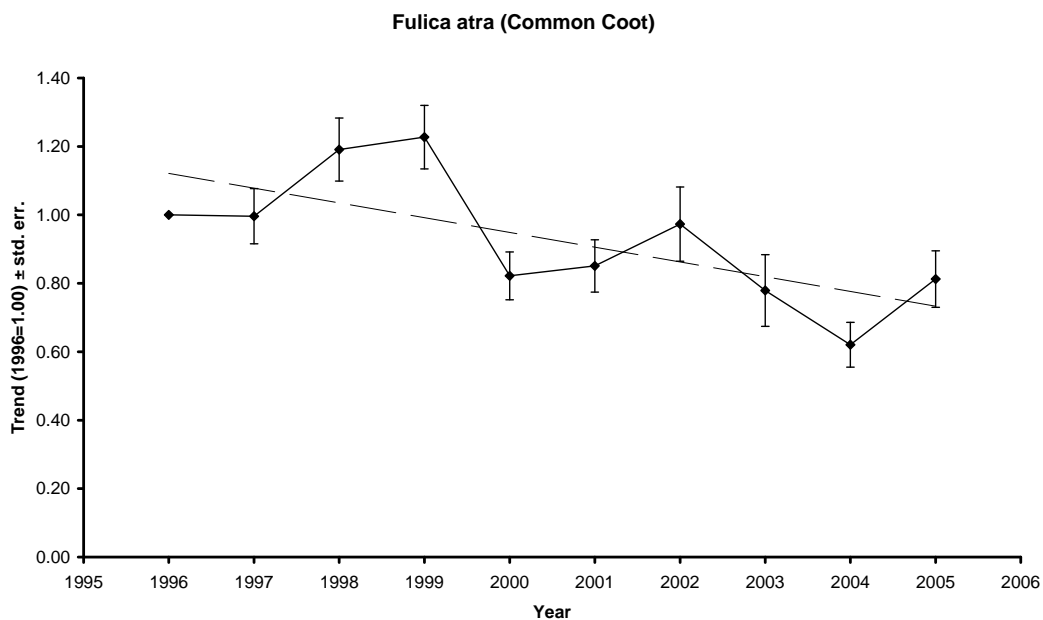
## West Mediterranean

### Fulica atra (Common Coot)



Number of sites :	853
Number of years :	10
Number of observed zero counts :	1088
Number of observed positive counts :	5089
Number of missing counts :	2353
Overall slope 1996-2005	1.0185

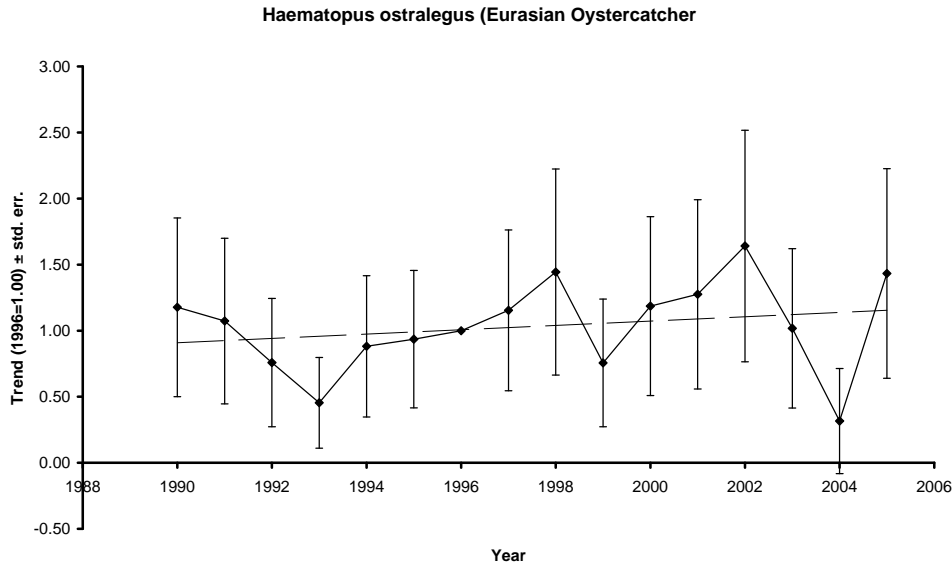
# East Mediterranean/Black Sea



Number of sites :	224
Number of years :	10
Number of observed zero counts :	149
Number of observed positive counts :	1138
Number of missing counts :	953
Overall slope 1996-2005	<b>0.9528</b>

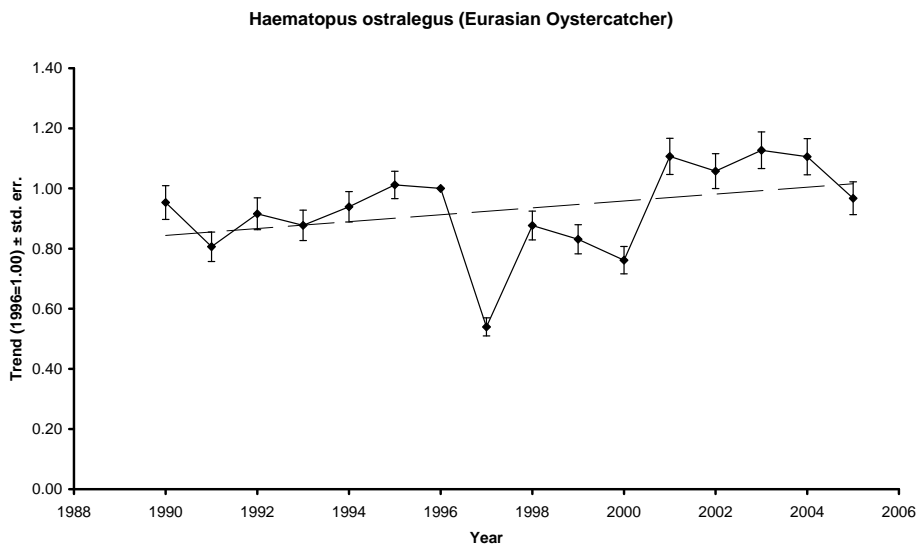
# *Haematopus ostralegus* Eurasian Oystercatcher

## Baltic/Nordic



Number of sites :	9
Number of years :	16
Number of observed zero counts :	84
Number of observed positive counts :	43
Number of missing counts :	17
Overall slope 1990-2005	<b>1.0029</b>

## NW Europe

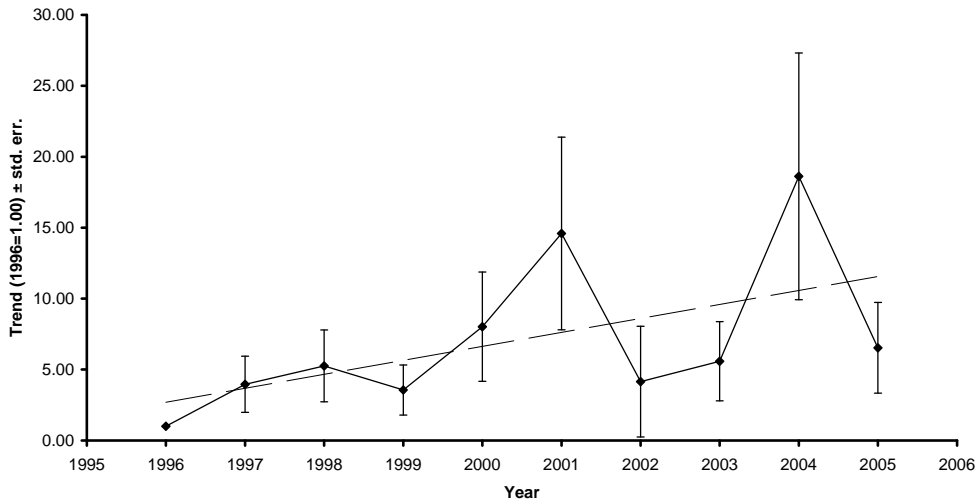


Number of sites :	469
Number of years :	16
Number of observed zero counts :	2482
Number of observed positive counts :	3144
Number of missing counts :	1878
Overall slope 1990-2005	<b>1.0127</b>
Overall slope 1996-2005	<b>1.0439</b>

## *Himantopus himantopus* Black-winged Stilt

### West Mediterranean

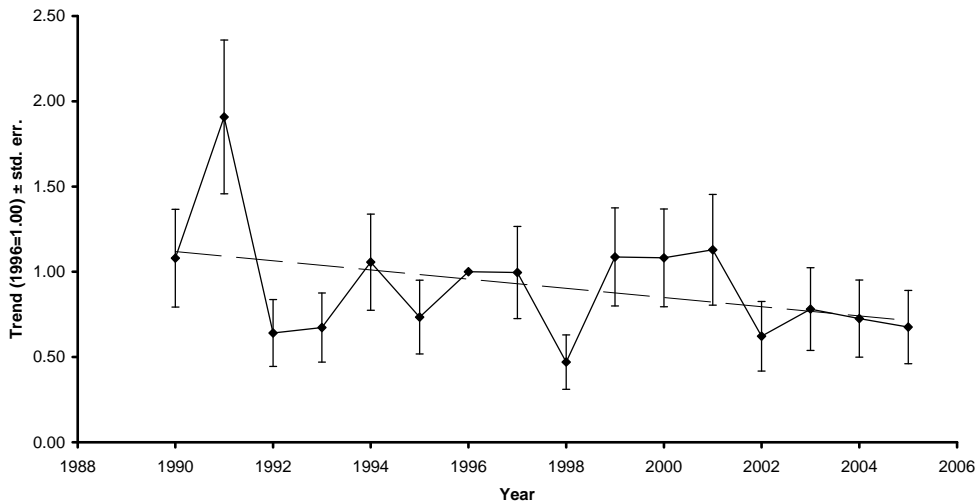
#### *Himantopus himantopus* (Black-winged Stilt)



Number of sites :	82
Number of years :	10
Number of observed zero counts :	193
Number of observed positive counts :	375
Number of missing counts :	252
Overall slope 1996-2005	<b>1.929</b>

### East Mediterranean/Black Sea

#### *Himantopus himantopus* (Black-winged Stilt)

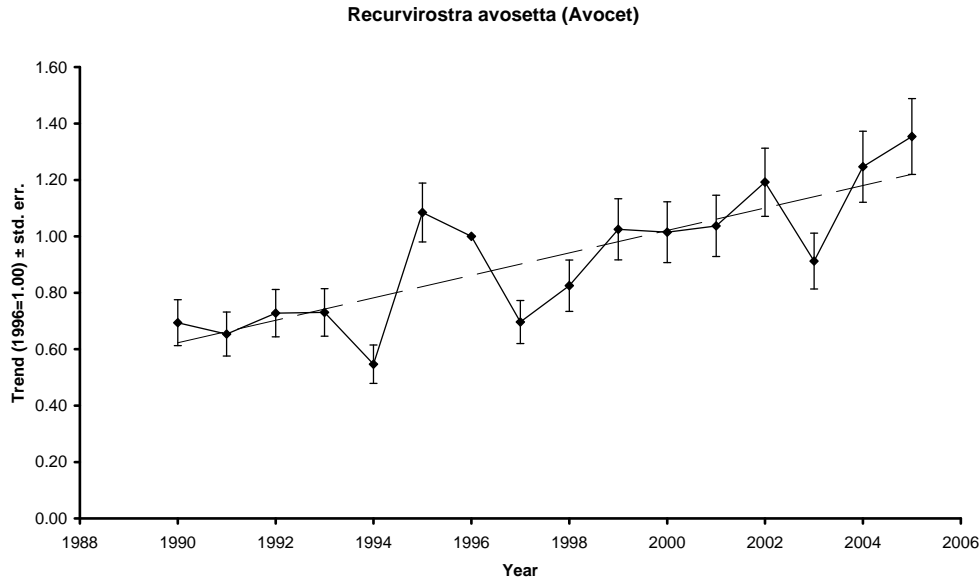


Number of sites :	24
Number of years :	16
Number of observed zero counts :	23
Number of observed positive counts :	212
Number of missing counts :	149
Overall slope 1990-2005	<b>0.9764</b>
Overall slope 1996-2005	<b>0.9653</b>

See pages 103-104 for notes on interpreting the graphs

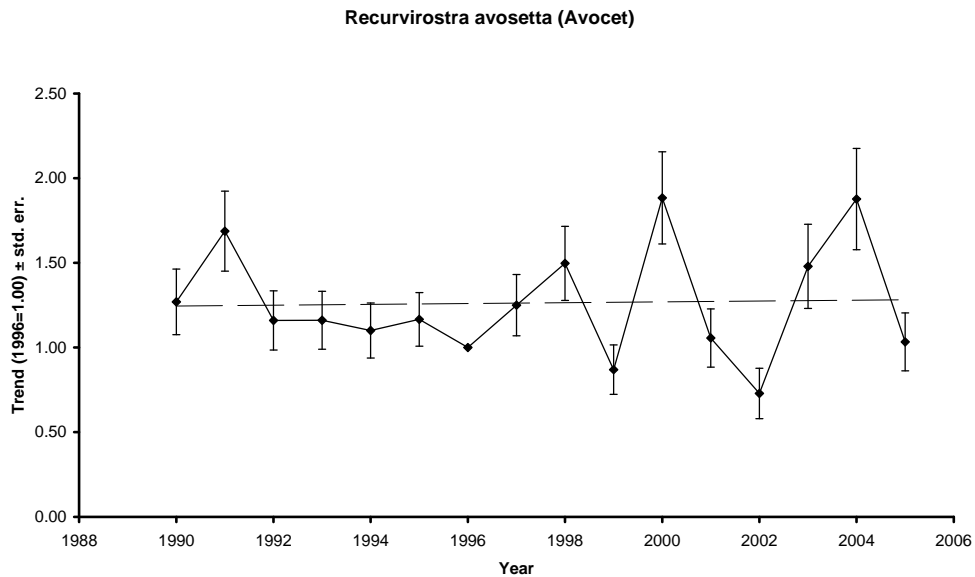
## *Recurvirostra avosetta* Pied Avocet

### NW Europe



Number of sites :	81
Number of years :	16
Number of observed zero counts :	385
Number of observed positive counts :	772
Number of missing counts :	139
Overall slope 1990-2005	<b>1.0445</b>
Overall slope 1996-2005	<b>1.0482</b>

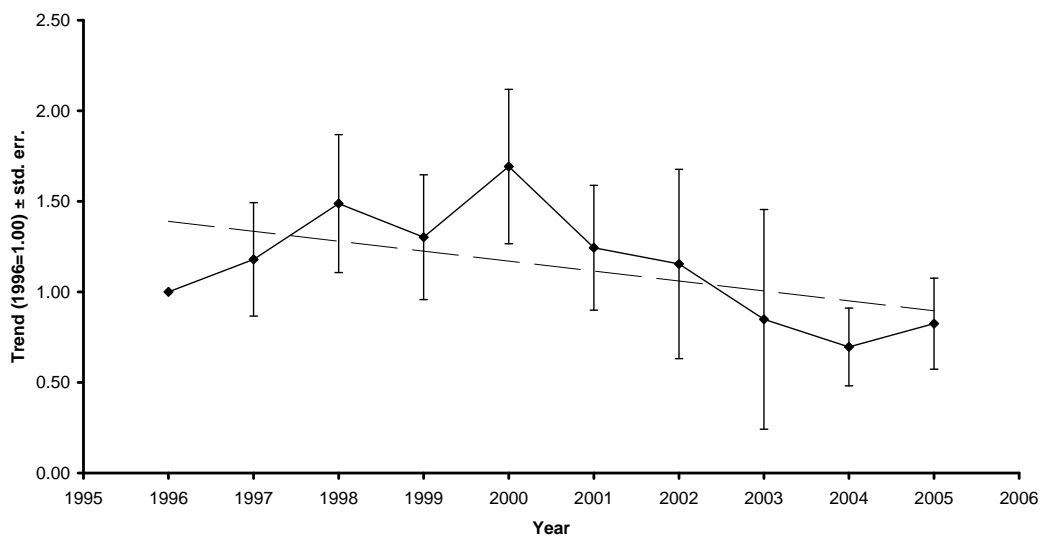
### West Mediterranean



Number of sites :	121
Number of years :	16
Number of observed zero counts :	553
Number of observed positive counts :	800
Number of missing counts :	583
Overall slope 1990-2005	<b>0.9975</b>
Overall slope 1996-2005	<b>1.0086</b>

## East Mediterranean/Black Sea

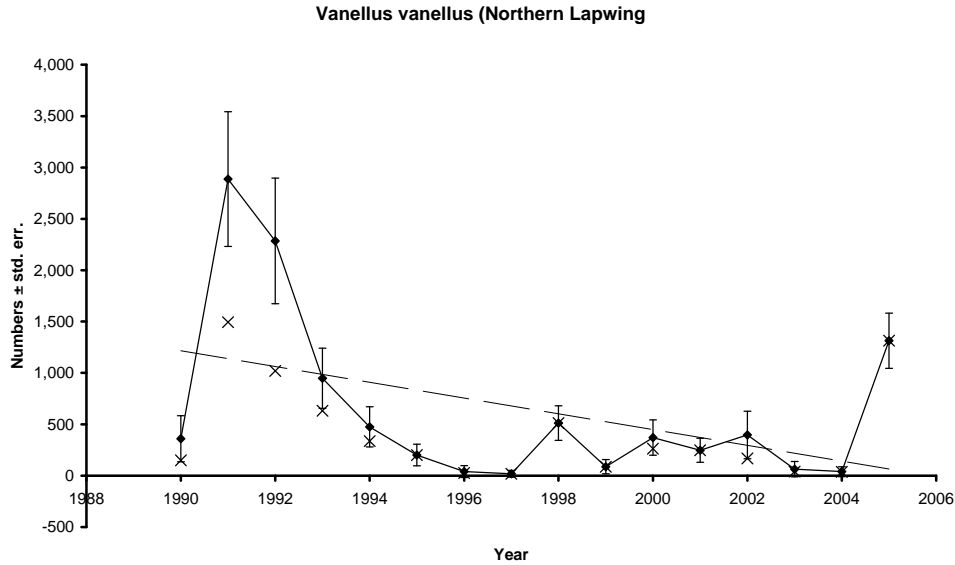
### Recurvirostra avosetta (Avocet)



Number of sites :	30
Number of years :	10
Number of observed zero counts :	29
Number of observed positive counts :	181
Number of missing counts :	90
Overall slope 1996-2005	<b>0.9475</b>

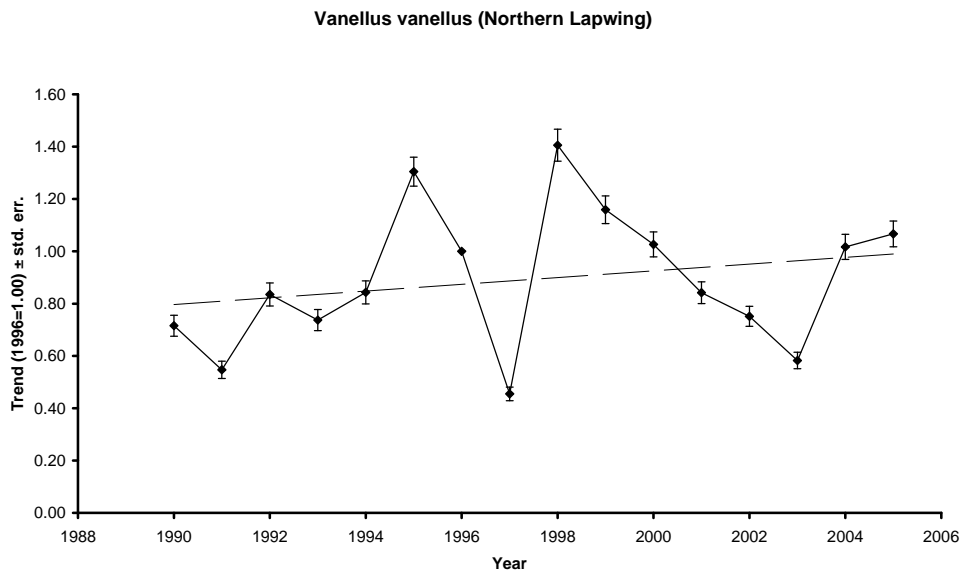
## *Vanellus vanellus* Northern Lapwing

### Baltic/Nordic



Number of sites :	22
Number of years :	16
Number of observed zero counts :	163
Number of observed positive counts :	126
Number of missing counts :	63
Overall slope 1990-2005	<b>0.9146</b>
Overall slope 1996-2005	<b>1.2689</b>

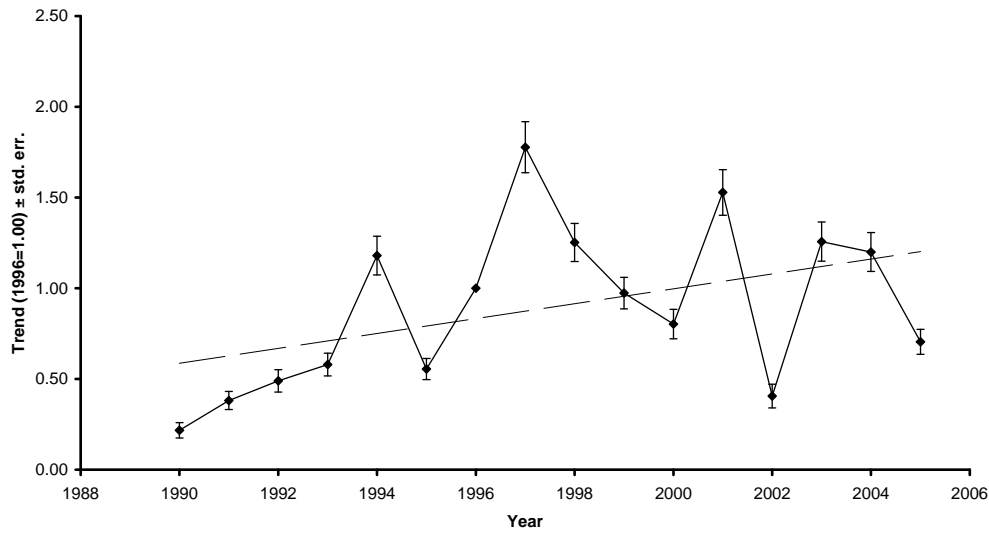
### NW Europe



Number of sites :	1203
Number of years :	16
Number of observed zero counts :	5249
Number of observed positive counts :	8650
Number of missing counts :	5349
Overall slope 1990-2005	<b>1.0156</b>
Overall slope 1996-2005	<b>1.0019</b>

## West Mediterranean

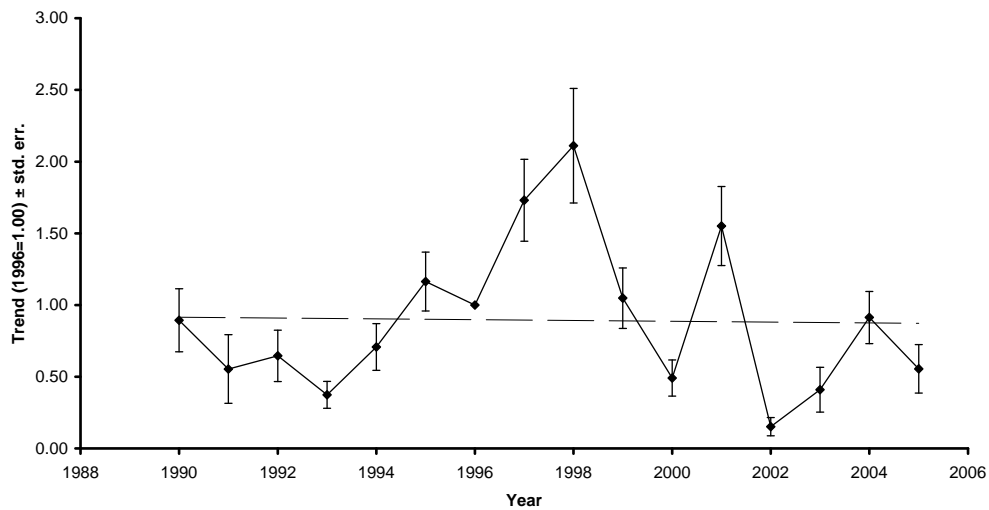
### Vanellus vanellus (Northern Lapwing)



Number of sites :	625
Number of years :	16
Number of observed zero counts :	2315
Number of observed positive counts :	3822
Number of missing counts :	3863
Overall slope 1990-2005	<b>1.0652</b>
Overall slope 1996-2005	<b>0.9534</b>

## East Mediterranean/Black Sea

### Vanellus vanellus (Northern Lapwing)

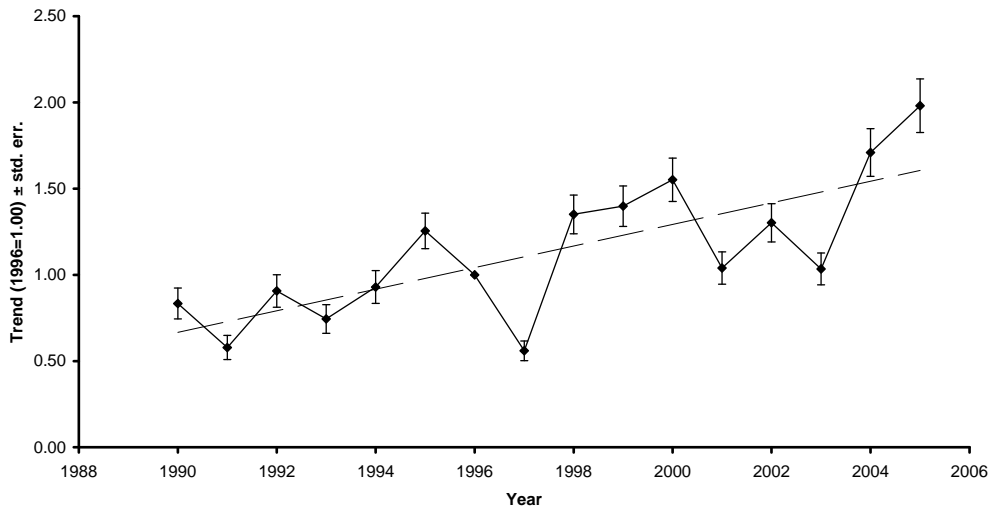


Number of sites :	75
Number of years :	16
Number of observed zero counts :	204
Number of observed positive counts :	486
Number of missing counts :	510
Overall slope 1990-2005	<b>0.9820</b>
Overall slope 1996-2005	<b>0.8674</b>

## *Pluvialis apricaria* Eurasian Golden Plover

### NW Europe

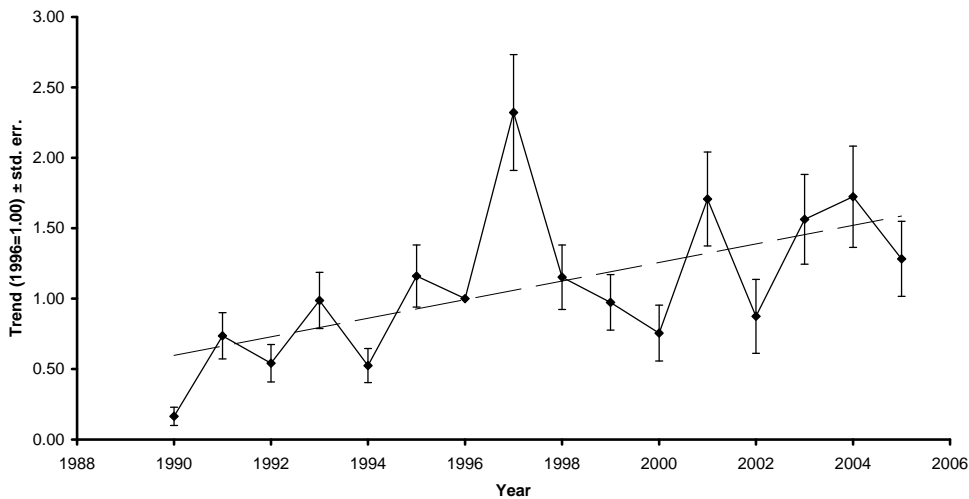
*Pluvialis apricaria* (Eurasian Golden Plover)



Number of sites :	441
Number of years :	16
Number of observed zero counts :	2489
Number of observed positive counts :	3021
Number of missing counts :	1546
Overall slope 1990-2005	<b>1.0563</b>
Overall slope 1996-2005	<b>1.0758</b>

### West Mediterranean

*Pluvialis apricaria* (Eurasian Golden Plover)

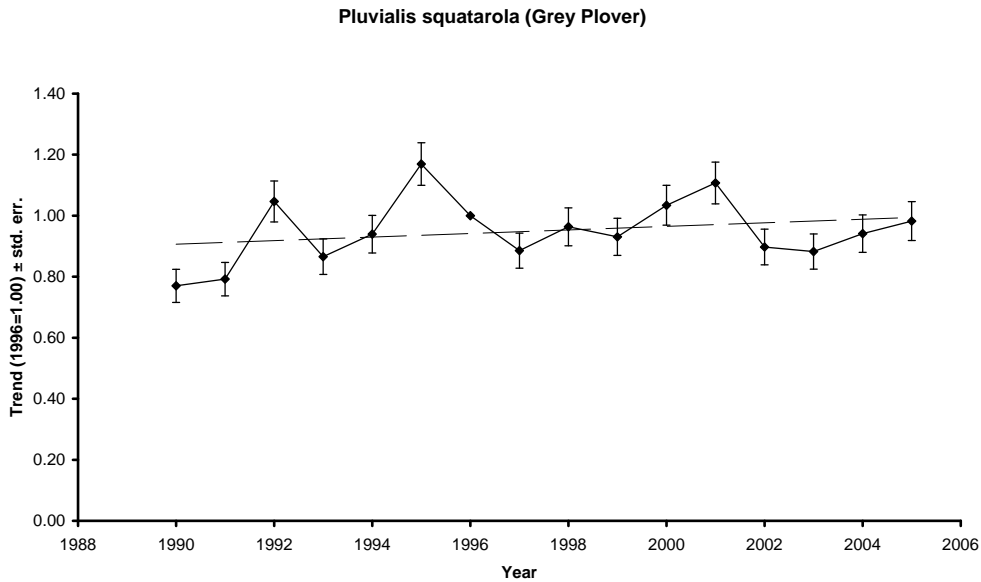


Number of sites :	140
Number of years :	16
Number of observed zero counts :	679
Number of observed positive counts :	772
Number of missing counts :	789
Overall slope 1990-2005	<b>1.0882</b>
Overall slope 1996-2005	<b>1.0040</b>

See pages 103-104 for notes on interpreting the graphs

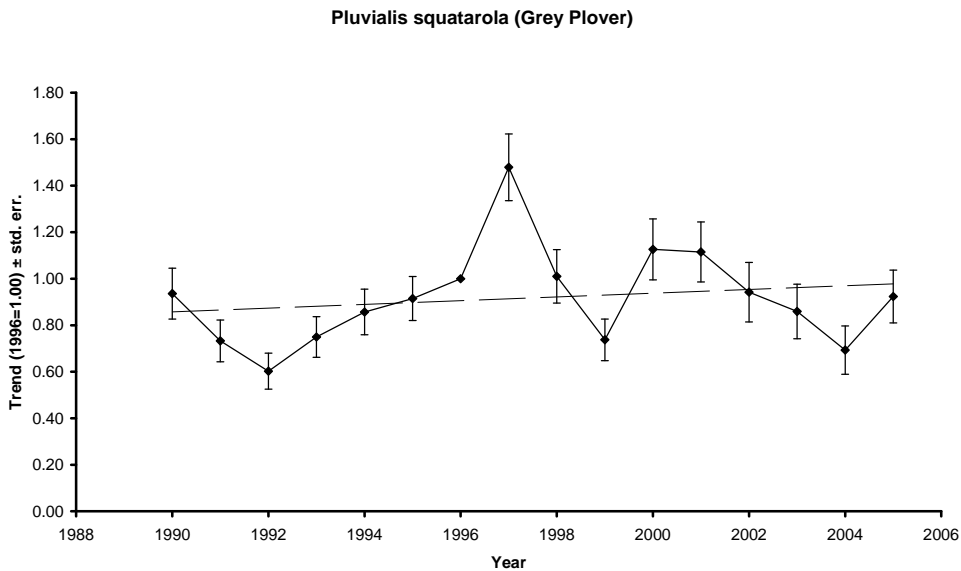
## *Pluvialis squatarola* Grey Plover

### NW Europe



Number of sites :	292
Number of years :	16
Number of observed zero counts :	864
Number of observed positive counts :	2910
Number of missing counts :	898
Overall slope 1990-2005	<b>1.0071</b>
Overall slope 1996-2005	<b>0.9982</b>

### West Mediterranean

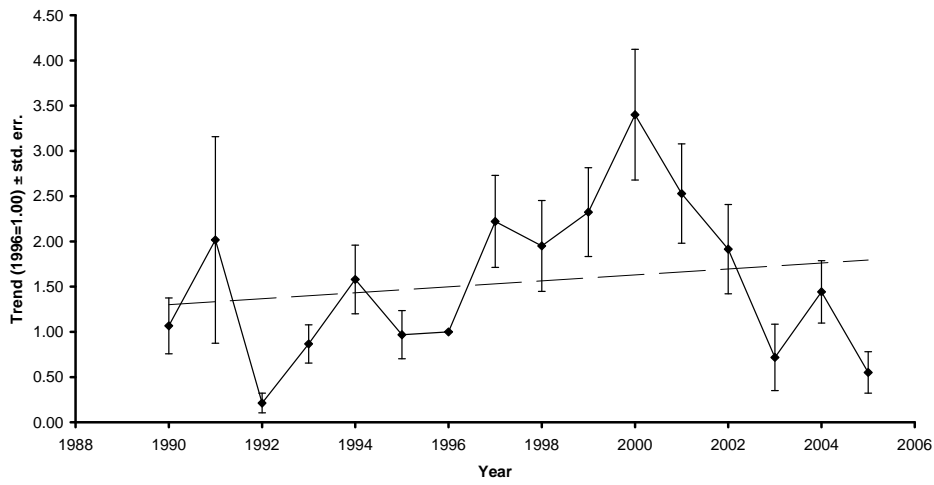


Number of sites :	150
Number of years :	16
Number of observed zero counts :	437
Number of observed positive counts :	1079
Number of missing counts :	884
Overall slope 1990-2005	<b>1.0092</b>
Overall slope 1996-2005	<b>0.9585</b>

See pages 103-104 for notes on interpreting the graphs

## East Mediterranean/Black Sea

### *Pluvialis squatarola* (Grey Plover)

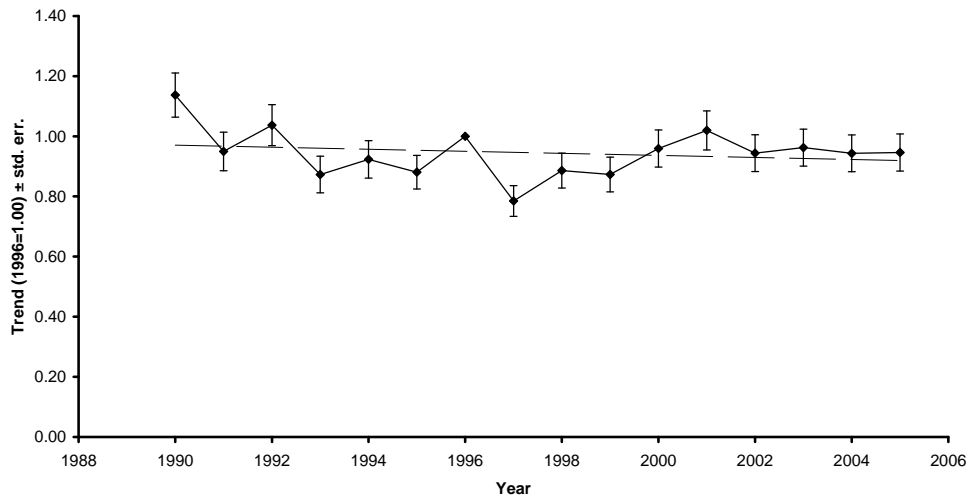


Number of sites :	36
Number of years :	16
Number of observed zero counts :	120
Number of observed positive counts :	228
Number of missing counts :	228
Overall slope 1990-2005	<b>1.0283</b>
Overall slope 1996-2005	<b>0.9104</b>

## *Charadrius hiaticula* Great Ringed Plover

### NW Europe

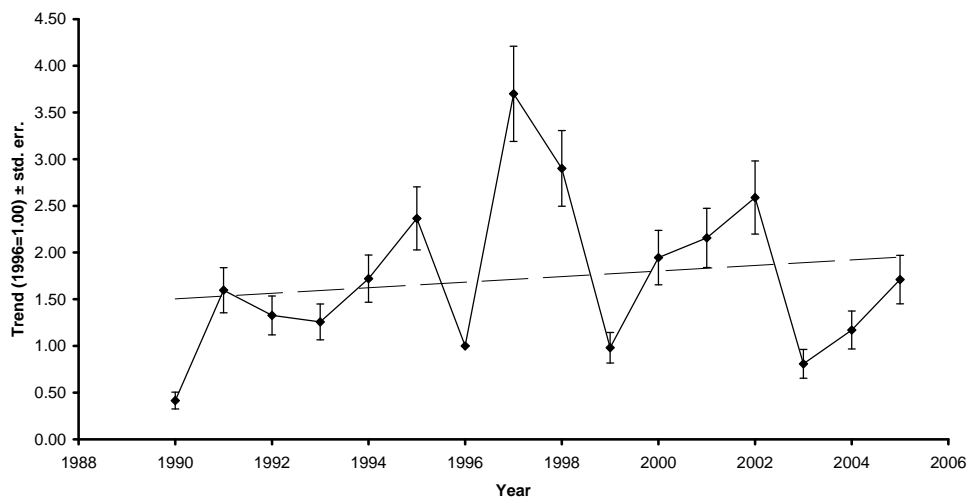
*Charadrius hiaticula* (Ringed Plover)



Number of sites :	335
Number of years :	16
Number of observed zero counts :	1027
Number of observed positive counts :	3106
Number of missing counts :	1227
Overall slope 1990-2005	<b>0.9969</b>
Overall slope 1996-2005	<b>1.0080</b>

### West Mediterranean

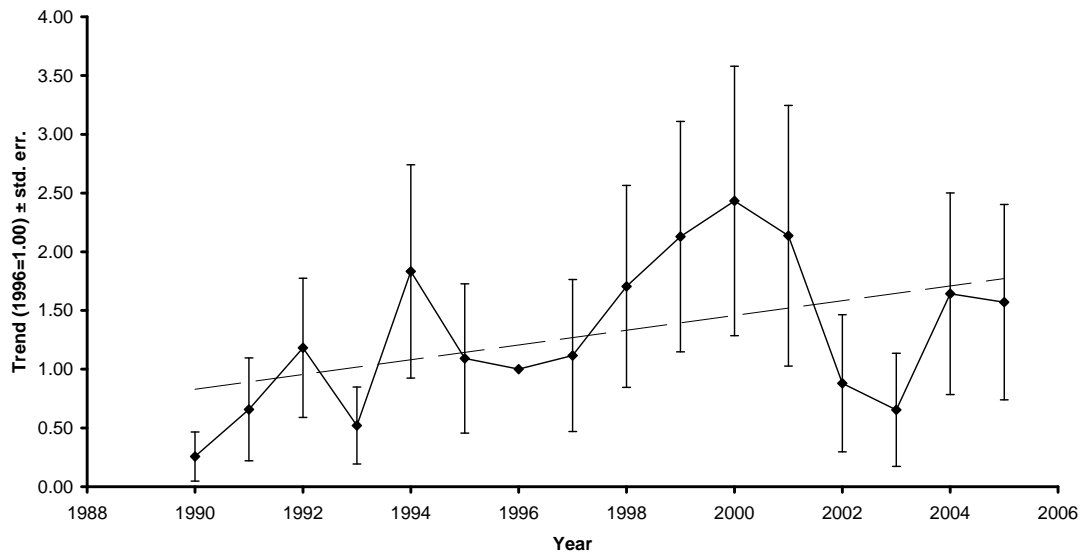
*Charadrius hiaticula* (Ringed Plover)



Number of sites :	132
Number of years :	16
Number of observed zero counts :	446
Number of observed positive counts :	869
Number of missing counts :	797
Overall slope 1990-2005	<b>1.0282</b>
Overall slope 1996-2005	<b>0.9573</b>

# East Mediterranean/Black Sea

## Charadrius hiaticula (Ringed Plover)

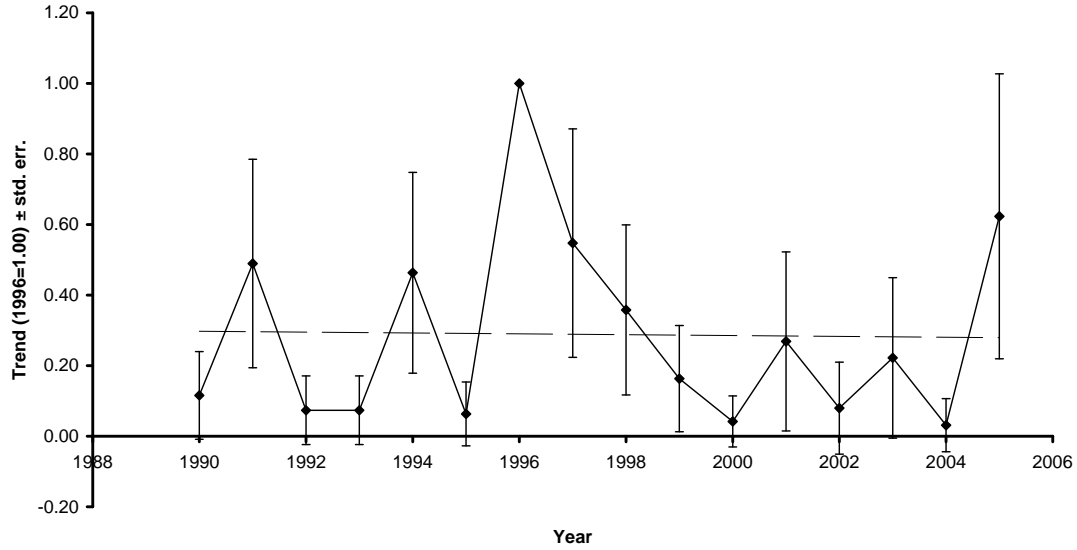


Number of sites :	20
Number of years :	16
Number of observed zero counts :	93
Number of observed positive counts :	130
Number of missing counts :	97
Overall slope 1990-2005	<b>1.0676</b>
Overall slope 1996-2005	<b>0.9744</b>

***Charadrius dubius* Little Ringed Plover**

**East Mediterranean**

**Charadrius dubius (Little Ringed Plover)**

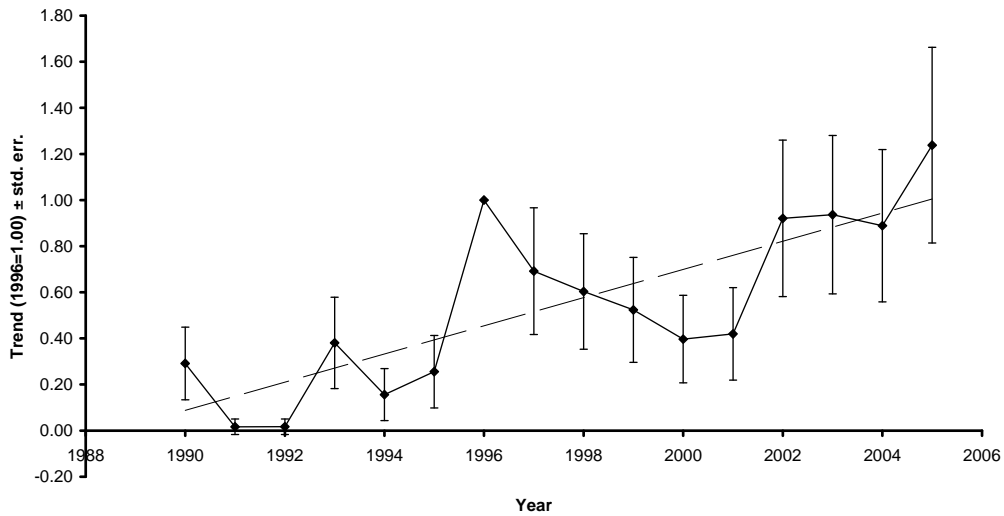


Number of sites :	7
Number of years :	16
Number of observed zero counts :	51
Number of observed positive counts :	45
Number of missing counts :	16
Overall slope 1990-2005	<b>0.9862</b>
Overall slope 1996-2005	<b>0.8913</b>

## *Charadrius alexandrinus* Kentish Plover

### NW Europe

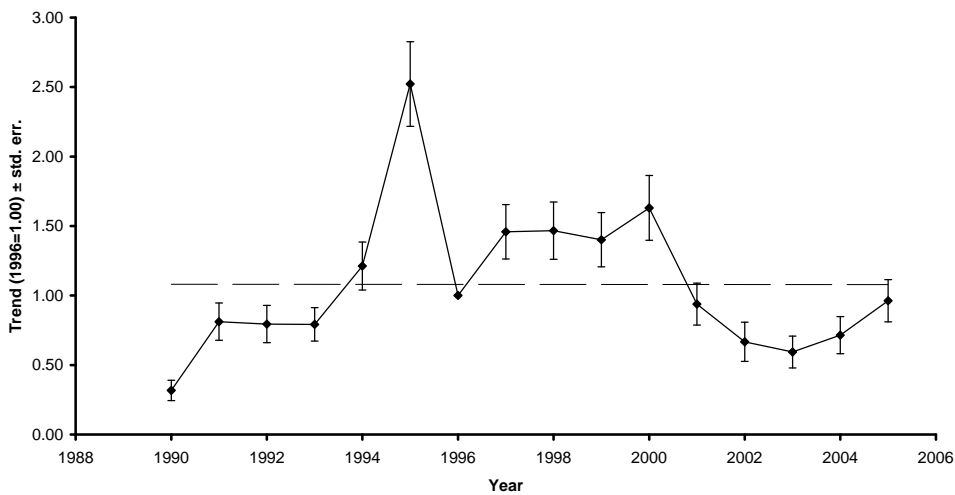
*Charadrius alexandrinus* (Kentish Plover)



Number of sites :	17
Number of years :	16
Number of observed zero counts :	158
Number of observed positive counts :	102
Number of missing counts :	12
Overall slope 1990-2005	<b>1.2155</b>
Overall slope 1996-2005	<b>1.0531</b>

### West Mediterranean

*Charadrius alexandrinus* (Kentish Plover)

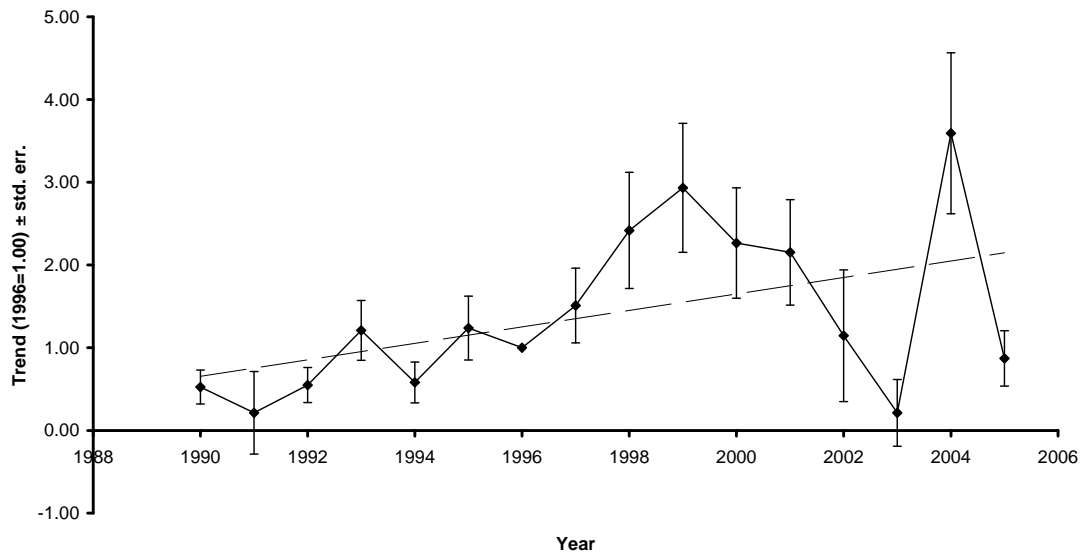


Number of sites :	210
Number of years :	16
Number of observed zero counts :	775
Number of observed positive counts :	1326
Number of missing counts :	1259
Overall slope 1990-2005	<b>1.0096</b>
Overall slope 1996-2005	<b>0.9491</b>

See pages 103-104 for notes on interpreting the graphs

# East Mediterranean/Black Sea

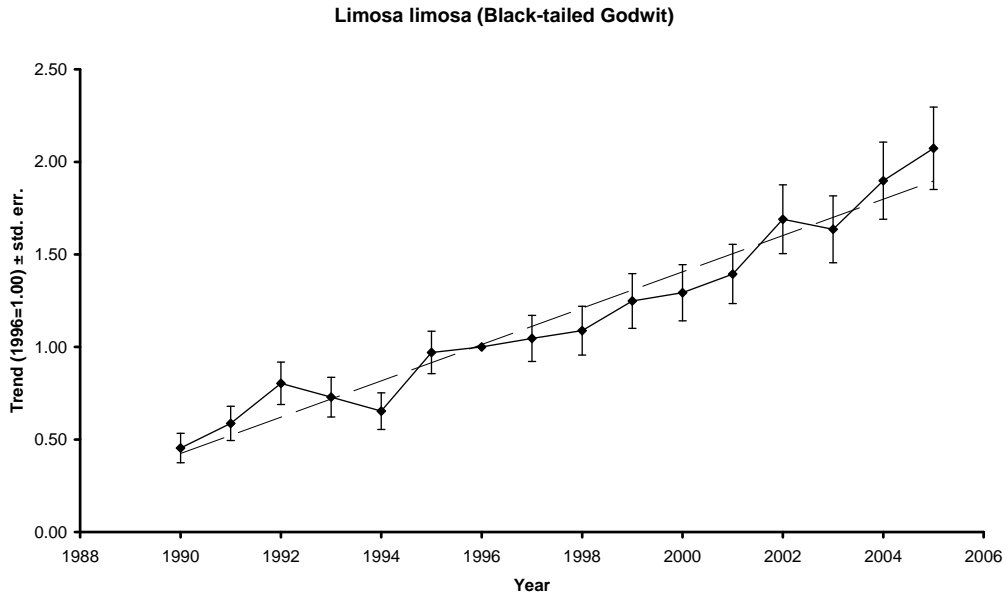
## Charadrius alexandrinus (Kentish Plover)



Number of sites :	32
Number of years :	16
Number of observed zero counts :	105
Number of observed positive counts :	202
Number of missing counts :	205
Overall slope 1990-2005	<b>1.0750</b>
Overall slope 1996-2005	<b>0.9470</b>

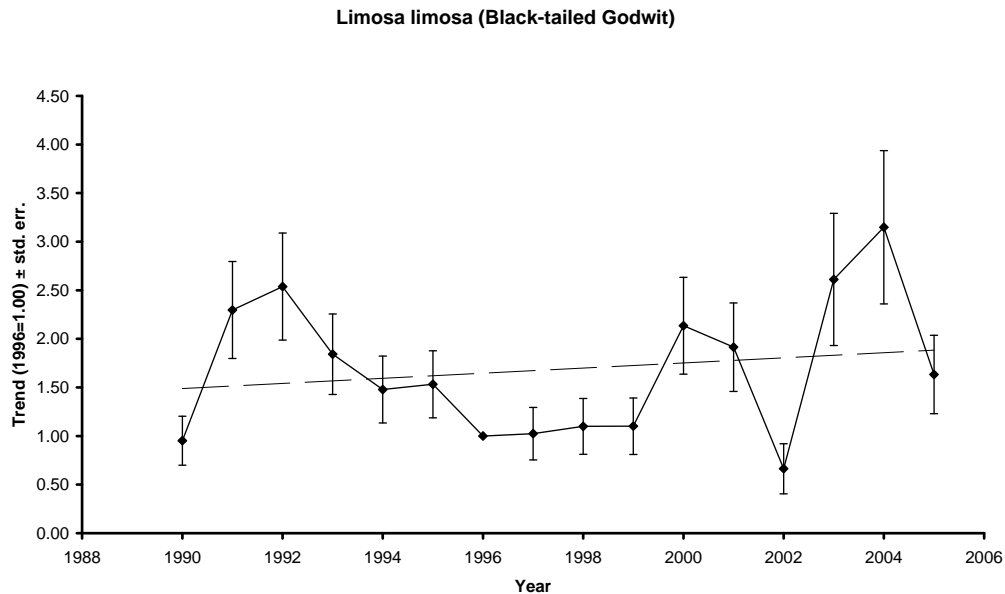
# *Limosa limosa* Black-tailed Godwit

## NW Europe



Number of sites :	150
Number of years :	16
Number of observed zero counts :	655
Number of observed positive counts :	1368
Number of missing counts :	377
Overall slope 1990-2005	<b>1.0938</b>
Overall slope 1996-2005	<b>1.0874</b>

## West Mediterranean



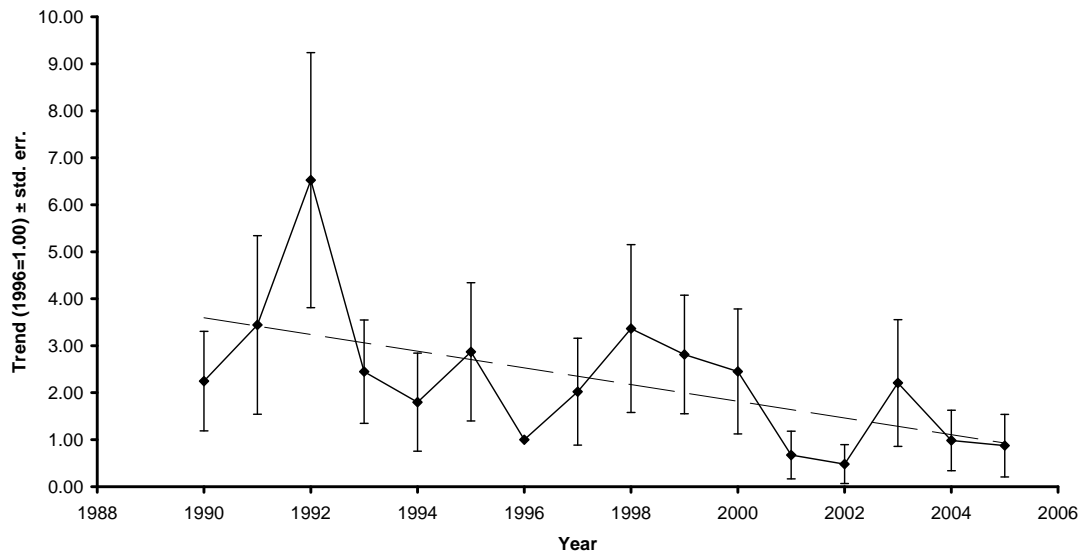
Number of sites :	116
Number of years :	16
Number of observed zero counts :	583
Number of observed positive counts :	699
Number of missing counts :	574
Overall slope 1990-2005	<b>1.0108</b>

See pages 103-104 for notes on interpreting the graphs

Overall slope 1996-2005	1.0662
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# East Mediterranean/Black Sea

## *Limosa limosa* (Black-tailed Godwit)

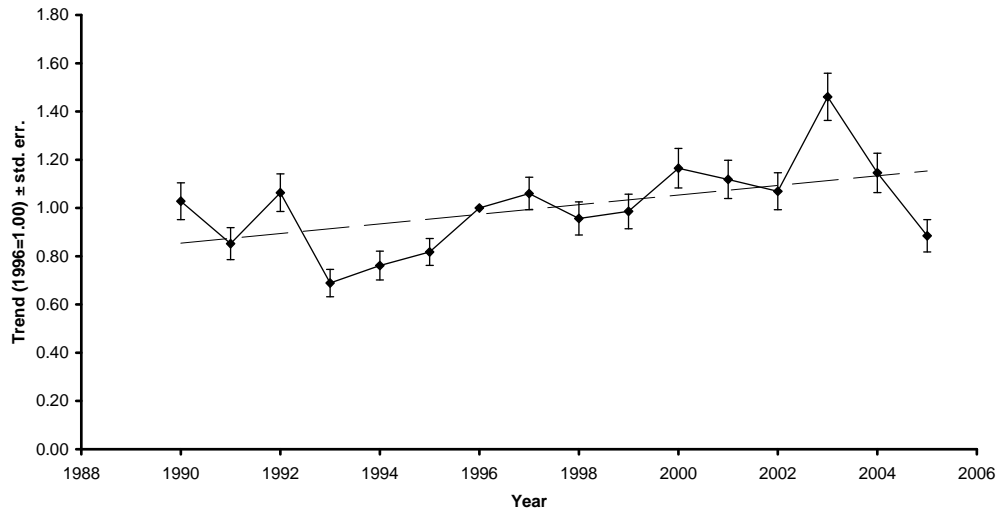


Number of sites :	18
Number of years :	16
Number of observed zero counts :	75
Number of observed positive counts :	108
Number of missing counts :	105
Overall slope 1990-2005	<b>0.9139</b>
Overall slope 1996-2005	<b>0.8766</b>

## *Limosa lapponica* Bar-tailed Godwit

### NW Europe

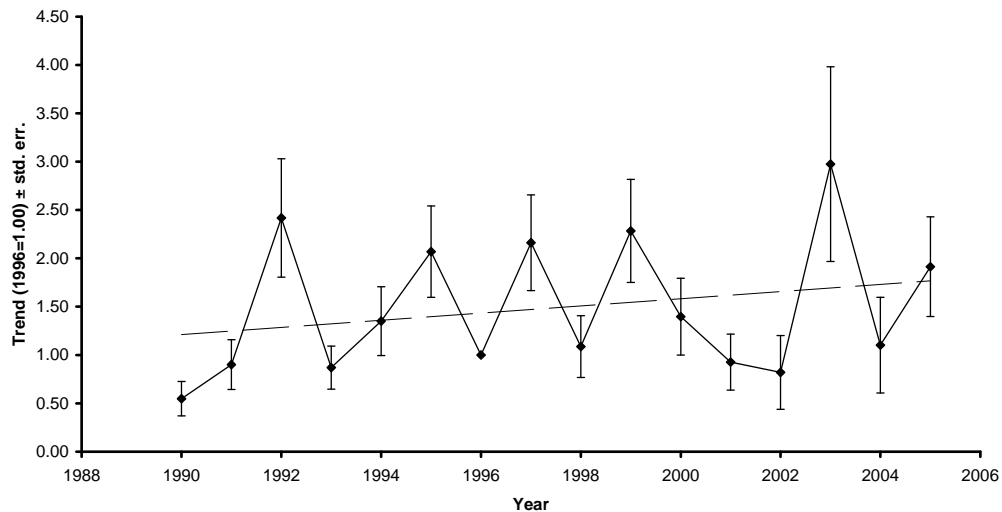
*Limosa lapponica* (Bar-tailed Godwit)



Number of sites :	236
Number of years :	16
Number of observed zero counts :	792
Number of observed positive counts :	2260
Number of missing counts :	724
Overall slope 1990-2005	<b>1.0199</b>
Overall slope 1996-2005	<b>1.0107</b>

### West Mediterranean

*Limosa lapponica* (Bar-tailed Godwit)



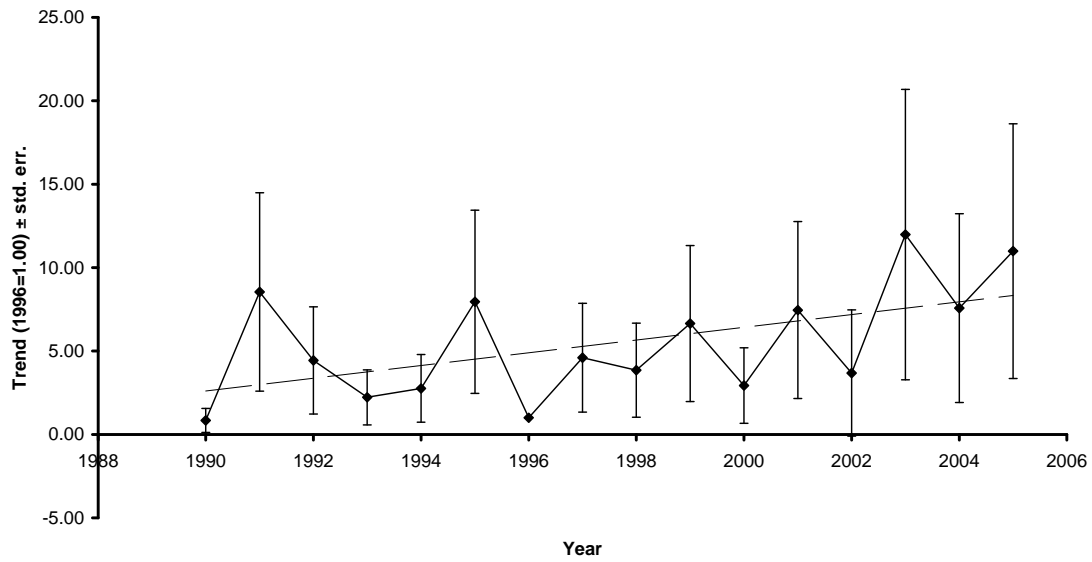
Number of sites :	56
Number of years :	16
Number of observed zero counts :	247
Number of observed positive counts :	376
Number of missing counts :	273
Overall slope 1990-2005	<b>1.0294</b>
Overall slope 1996-2005	<b>1.0319</b>

See pages 103-104 for notes on interpreting the graphs

## *Numenius phaeopus* Whimbrel

### West Mediterranean

#### *Numenius phaeopus* (Whimbrel)

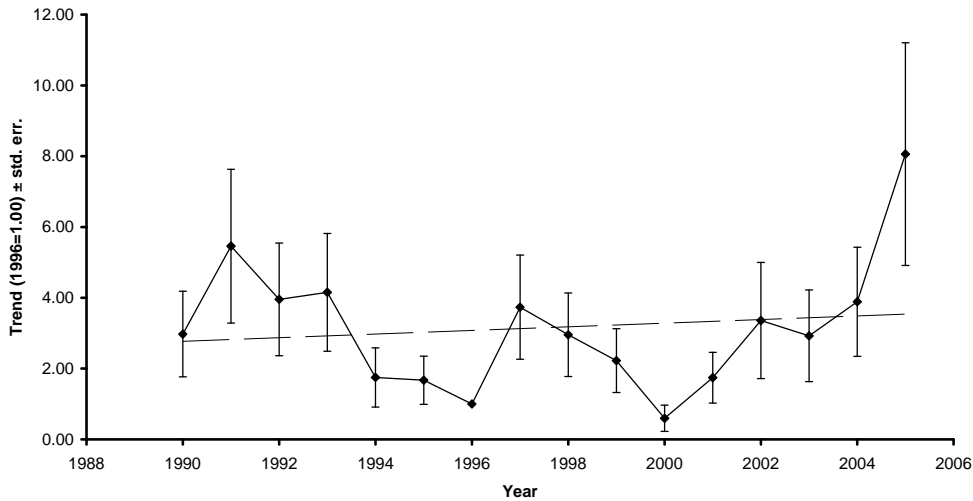


Number of sites :	53
Number of years :	16
Number of observed zero counts :	237
Number of observed positive counts :	296
Number of missing counts :	315
Overall slope 1990-2005	<b>1.0921</b>
Overall slope 1996-2005	<b>1.1473</b>

## *Numenius arquata* Eurasian Curlew

### Baltic/Nordic

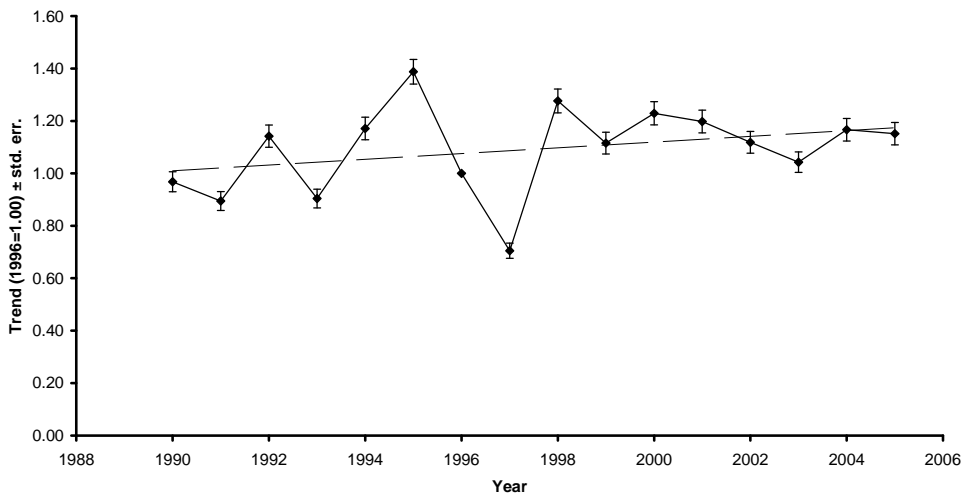
*Numenius arquata* (Eurasian Curlew)



Number of sites :	35
Number of years :	16
Number of observed zero counts :	248
Number of observed positive counts :	218
Number of missing counts :	94
Overall slope 1990-2005	<b>1.0036</b>
Overall slope 1996-2005	<b>1.1477</b>

### NW Europe

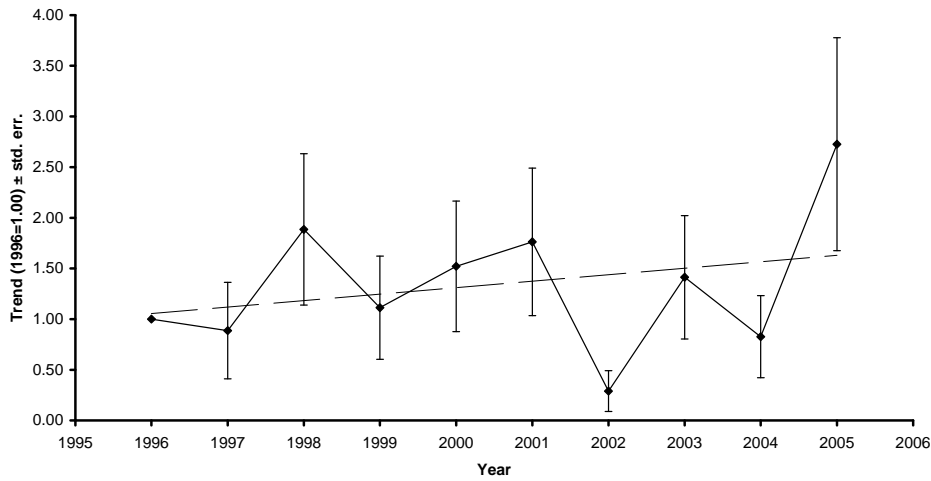
*Numenius arquata* (Eurasian Curlew)



Number of sites :	898
Number of years :	16
Number of observed zero counts :	2668
Number of observed positive counts :	7575
Number of missing counts :	4125
Overall slope 1990-2005	<b>1.0111</b>
Overall slope 1996-2005	<b>1.0221</b>

## Central Europe

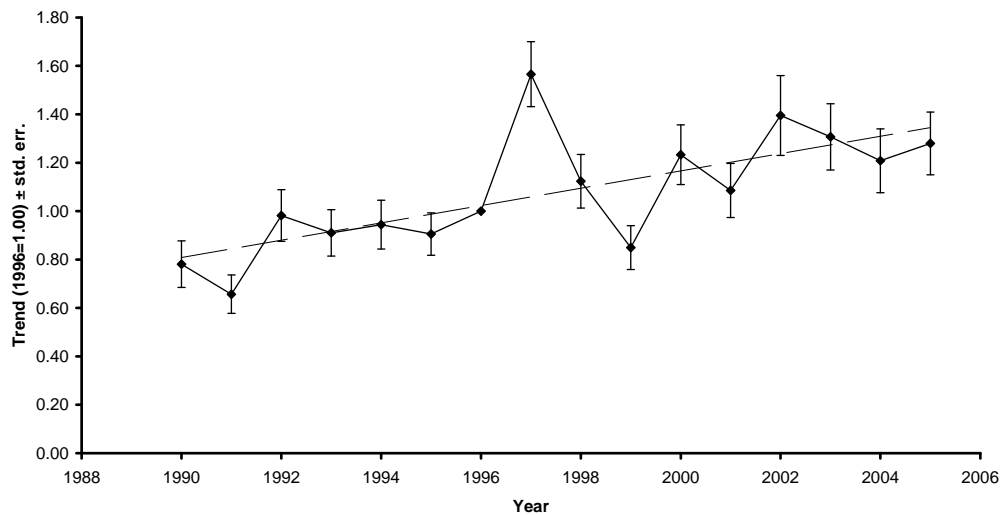
### Numenius arquata (Eurasian Curlew)



Number of sites :	9
Number of years :	10
Number of observed zero counts :	20
Number of observed positive counts :	70
Number of missing counts :	0
Overall slope 1996-2005	<b>1.0196</b>

## West Mediterranean

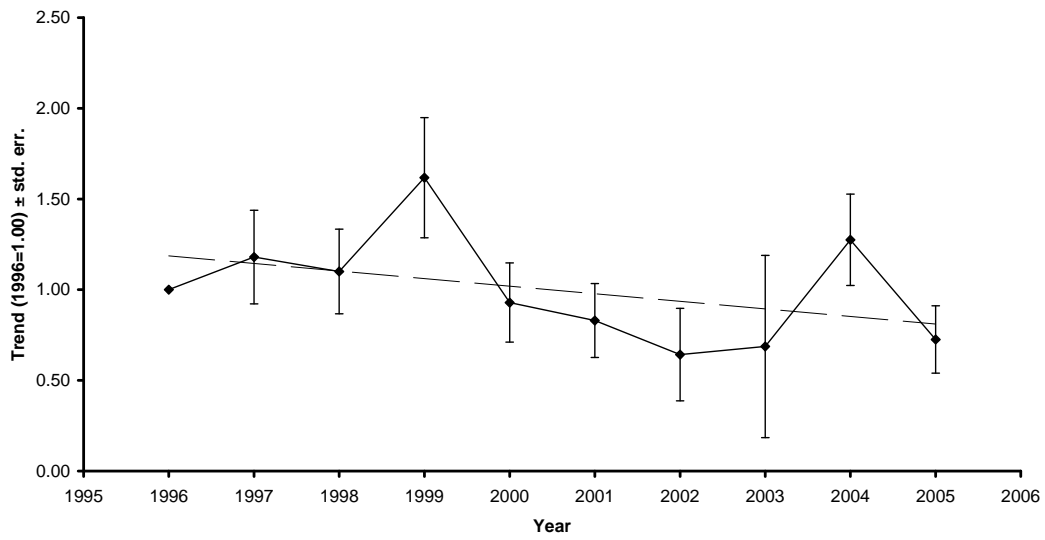
### Numenius arquata (Eurasian Curlew)



Number of sites :	178
Number of years :	16
Number of observed zero counts :	649
Number of observed positive counts :	1327
Number of missing counts :	872
Overall slope 1996-2005	<b>1.0181</b>

# East Mediterranean/Black Sea

Numenius arquata (Eurasian Curlew)

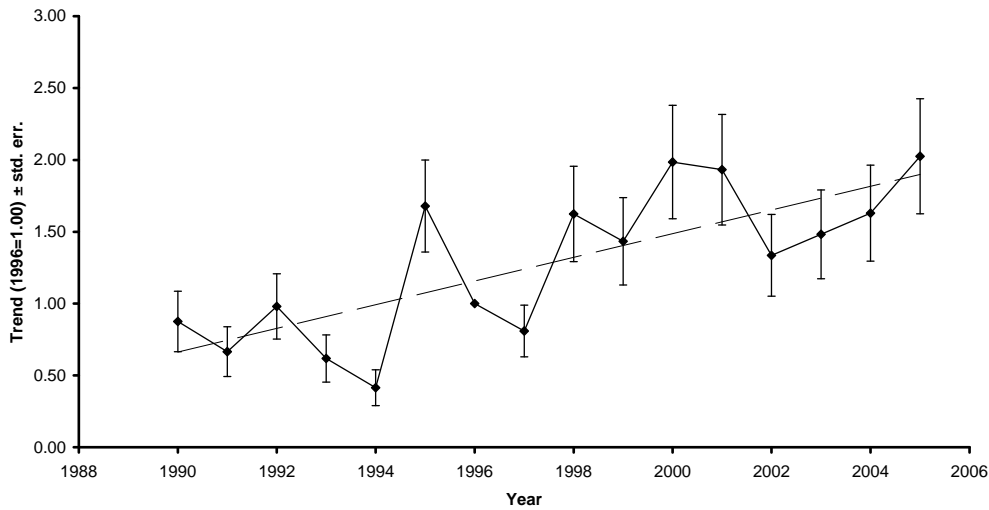


Number of sites :	36
Number of years :	10
Number of observed zero counts :	46
Number of observed positive counts :	186
Number of missing counts :	128
Overall slope 1996-2005	<b>0.9558</b>

## *Tringa erythropus* Spotted Redshank

### NW Europe

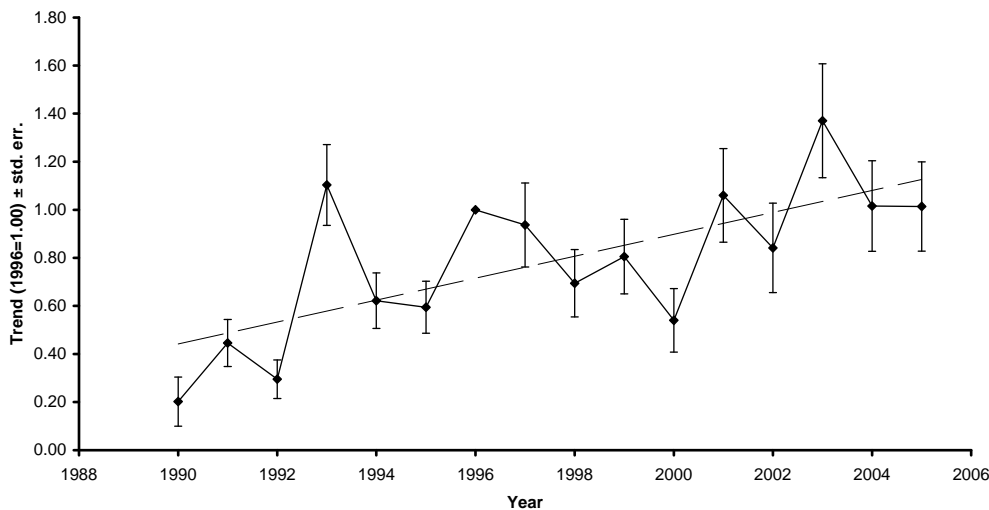
#### *Tringa erythropus* (Spotted Redshank)



Number of sites :	66
Number of years :	16
Number of observed zero counts :	493
Number of observed positive counts :	425
Number of missing counts :	138
Overall slope 1990-2005	<b>1.0746</b>
Overall slope 1996-2005	<b>1.0647</b>

### West Mediterranean

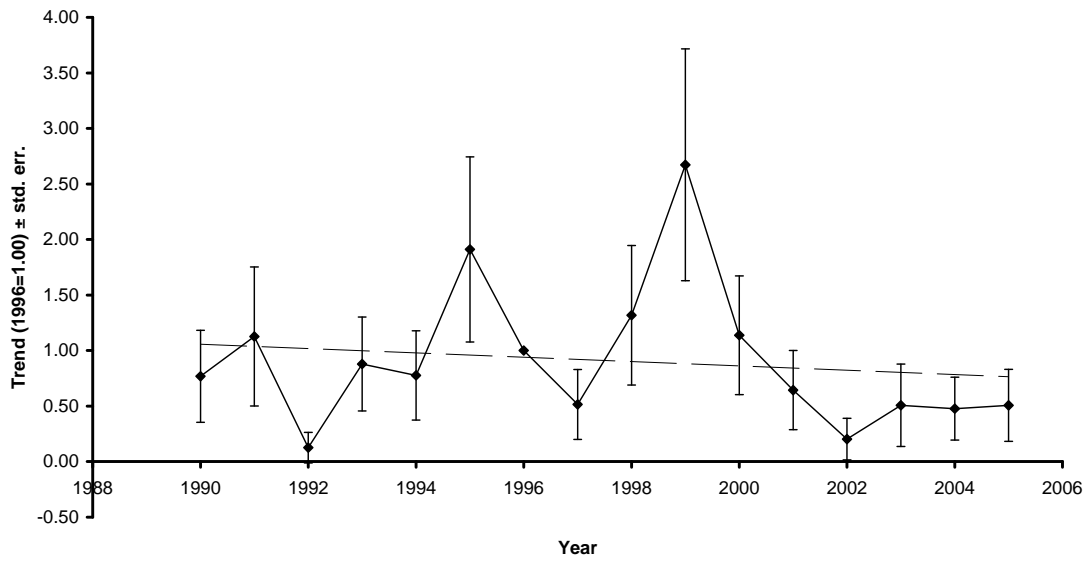
#### *Tringa erythropus* (Spotted Redshank)



Number of sites :	79
Number of years :	16
Number of observed zero counts :	402
Number of observed positive counts :	520
Number of missing counts :	342
Overall slope 1990-2005	<b>1.0792</b>
Overall slope 1996-2005	<b>1.0359</b>

## East Mediterranean/Black Sea

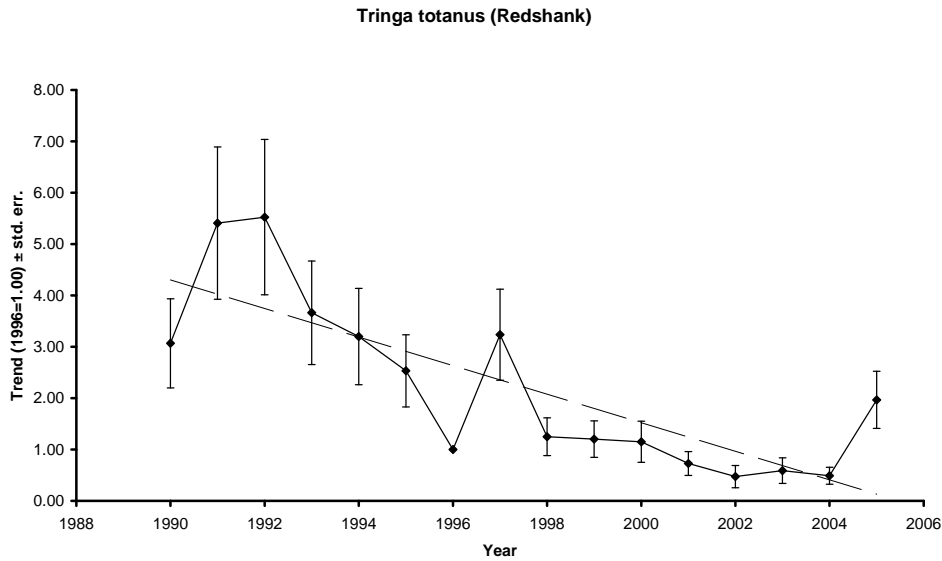
### *Tringa erythropus* (Spotted Redshank)



Number of sites :	27
Number of years :	16
Number of observed zero counts :	94
Number of observed positive counts :	187
Number of missing counts :	151
Overall slope 1990-2005	<b>0.9769</b>
Overall slope 1996-2005	<b>0.8800</b>

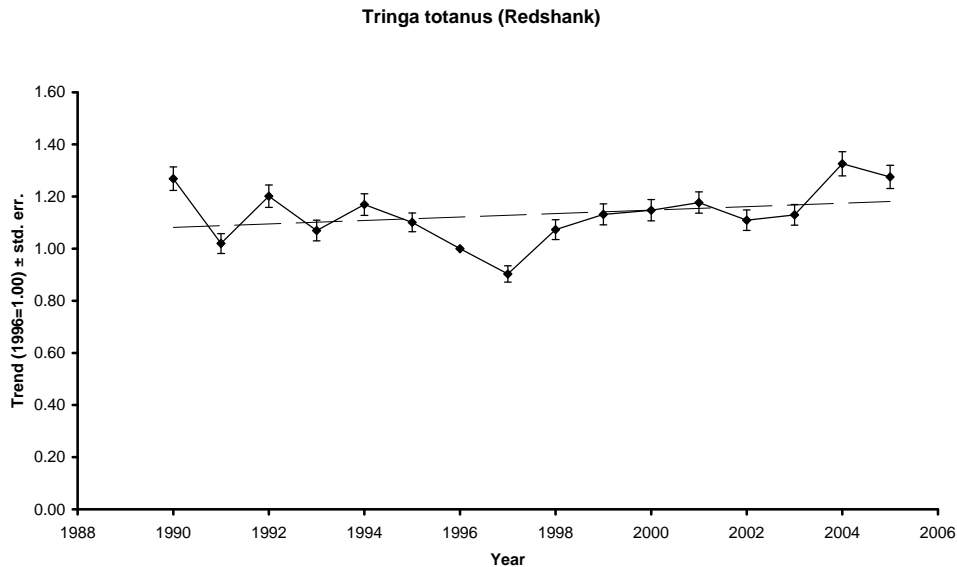
## *Tringa totanus* Common Redshank

### Baltic/Nordic



Number of sites :	34
Number of years :	16
Number of observed zero counts :	191
Number of observed positive counts :	203
Number of missing counts :	150
Overall slope 1990-2005	<b>0.8577</b>
Overall slope 1996-2005	<b>0.9120</b>

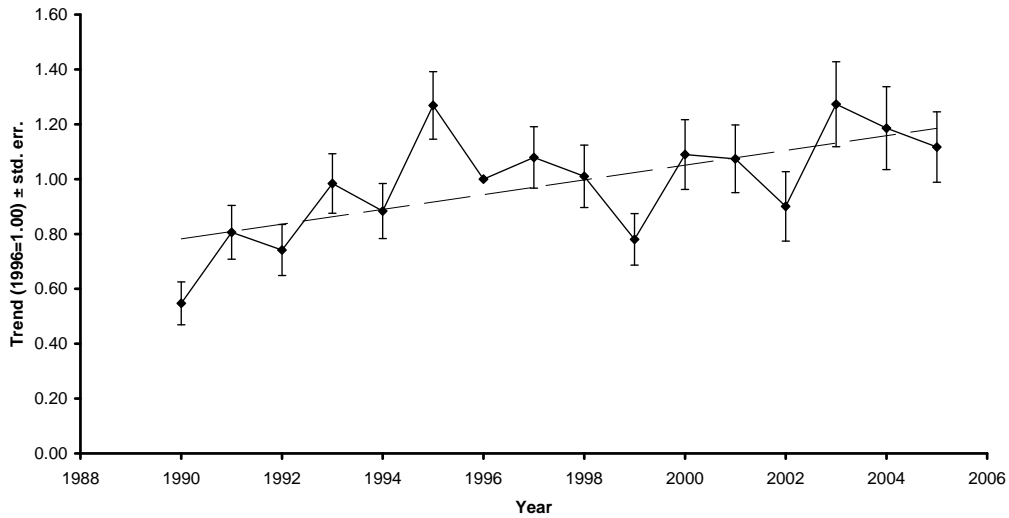
### NW Europe



Number of sites :	694
Number of years :	16
Number of observed zero counts :	2058
Number of observed positive counts :	5974
Number of missing counts :	3072
Overall slope 1990-2005	<b>1.0058</b>
Overall slope 1996-2005	<b>1.0301</b>

## West Mediterranean

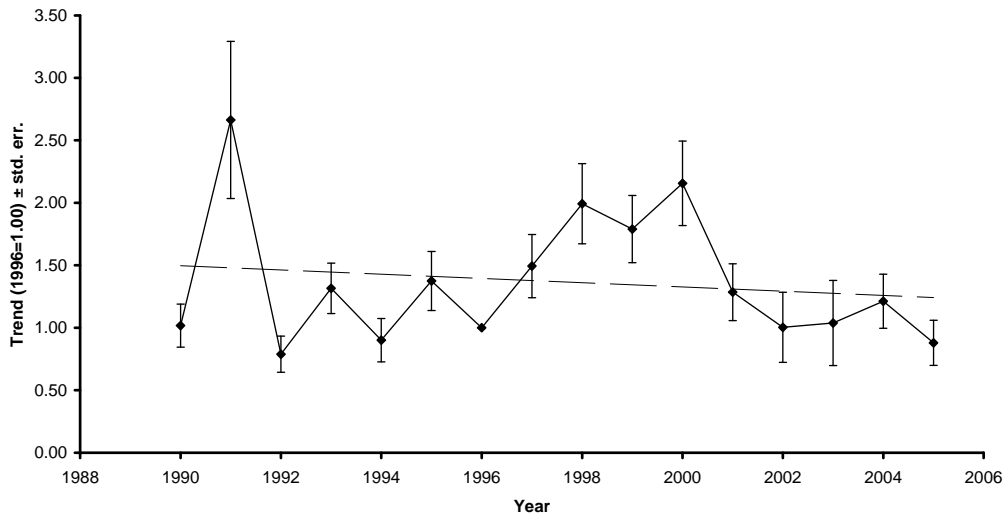
### Tringa totanus (Redshank)



Number of sites :	182
Number of years :	16
Number of observed zero counts :	634
Number of observed positive counts :	1192
Number of missing counts :	1086
Overall slope 1990-2005	<b>1.0307</b>
Overall slope 1996-2005	<b>1.0271</b>

## East Mediterranean/Black Sea

### Tringa totanus (Redshank)



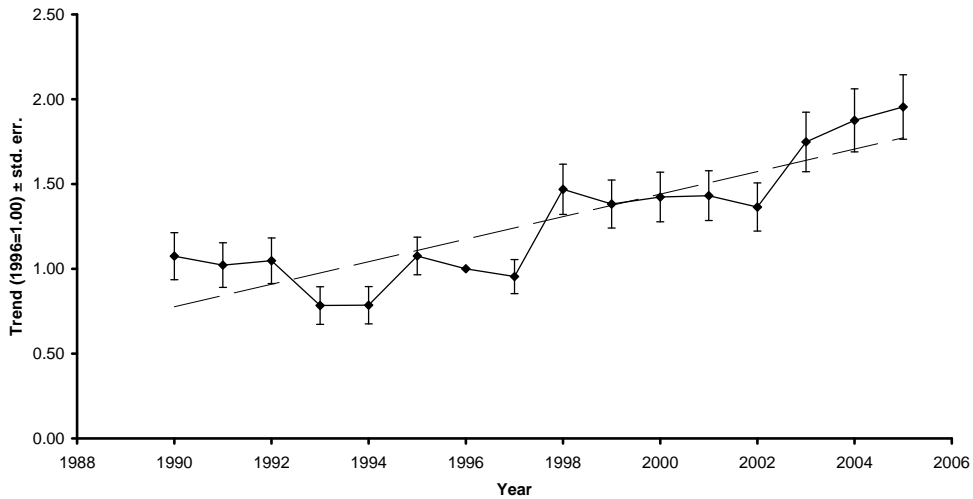
Number of sites :	78
Number of years :	16
Number of observed zero counts :	136
Number of observed positive counts :	541
Number of missing counts :	571
Overall slope 1990-2005	<b>0.9926</b>
Overall slope 1996-2005	<b>0.9474</b>

See pages 103-104 for notes on interpreting the graphs

## *Tringa nebularia* Common Greenshank

### NW Europe

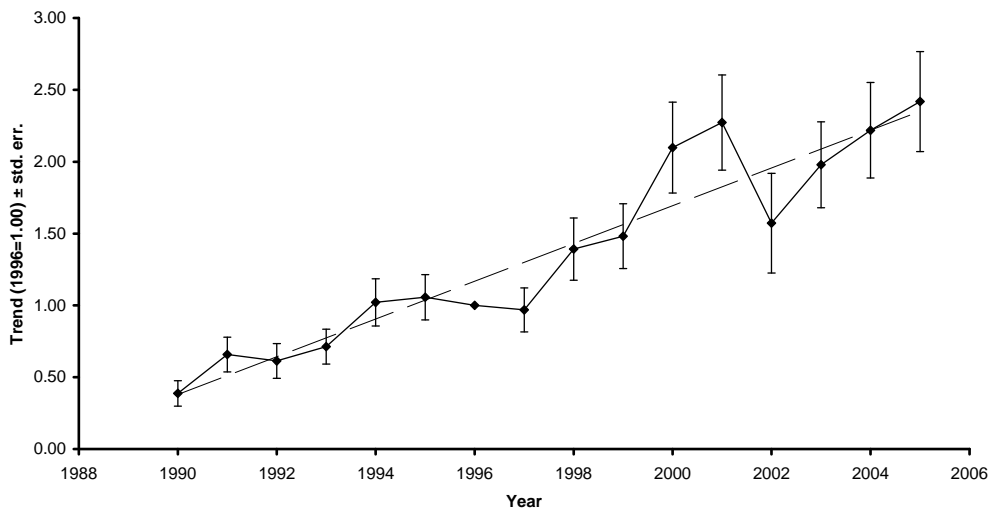
*Tringa nebularia* (Greenshank)



Number of sites :	176
Number of years :	16
Number of observed zero counts :	739
Number of observed positive counts :	1394
Number of missing counts :	683
Overall slope 1990-2005	<b>1.0520</b>
Overall slope 1996-2005	<b>1.0734</b>

### West Mediterranean

*Tringa nebularia* (Greenshank)



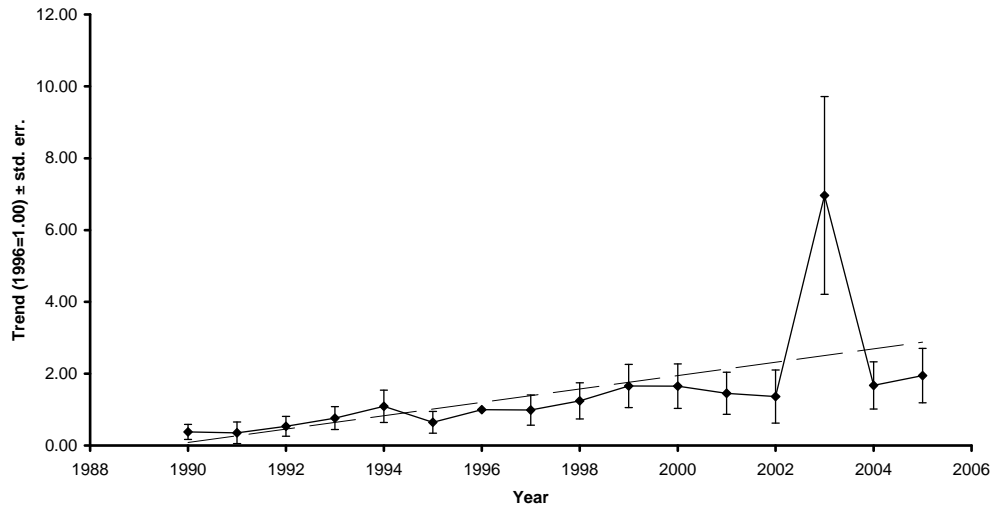
Number of sites :	110
Number of years :	16
Number of observed zero counts :	415
Number of observed positive counts :	787
Number of missing counts :	558
Overall slope 1990-2005	<b>1.1159</b>
Overall slope 1996-2005	<b>1.1080</b>

See pages 103-104 for notes on interpreting the graphs

See pages 103-104 for notes on interpreting the graphs

## East Mediterranean/Black Sea

### *Tringa nebularia* (Greenshank)

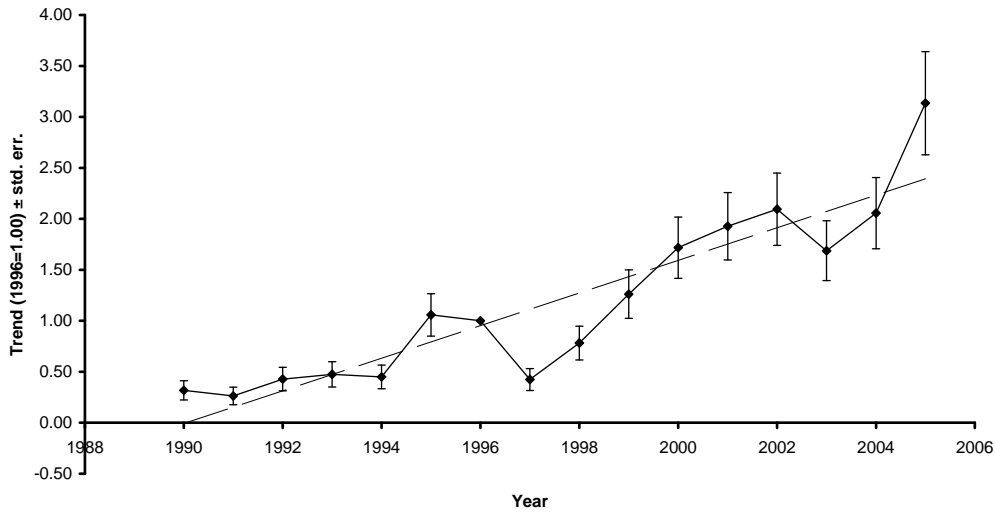


Number of sites :	36
Number of years :	16
Number of observed zero counts :	140
Number of observed positive counts :	204
Number of missing counts :	232
Overall slope 1990-2005	<b>1.1357</b>
Overall slope 1996-2005	<b>1.1133</b>

## *Tringa ochropus* Green Sandpiper

### NW Europe

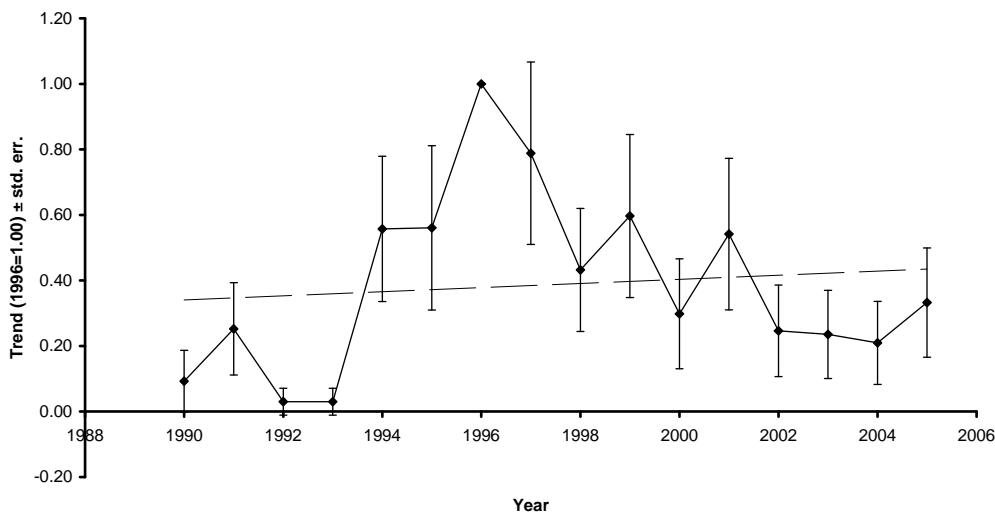
*Tringa ochropus* (Green Sandpiper)



Number of sites :	143
Number of years :	16
Number of observed zero counts :	1244
Number of observed positive counts :	737
Number of missing counts :	307
Overall slope 1990-2005	<b>1.1643</b>
Overall slope 1996-2005	<b>1.1742</b>

### Central Europe

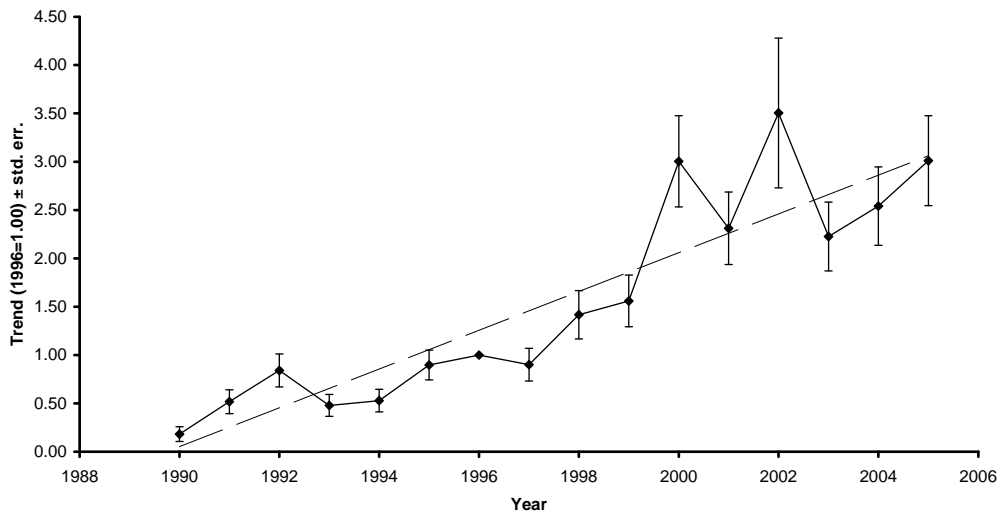
*Tringa ochropus* (Green Sandpiper)



Number of sites :	19
Number of years :	16
Number of observed zero counts :	152
Number of observed positive counts :	81
Number of missing counts :	71
Overall slope 1990-2005	<b>1.0802</b>
Overall slope 1996-2005	<b>0.8812</b>

## West Mediterranean

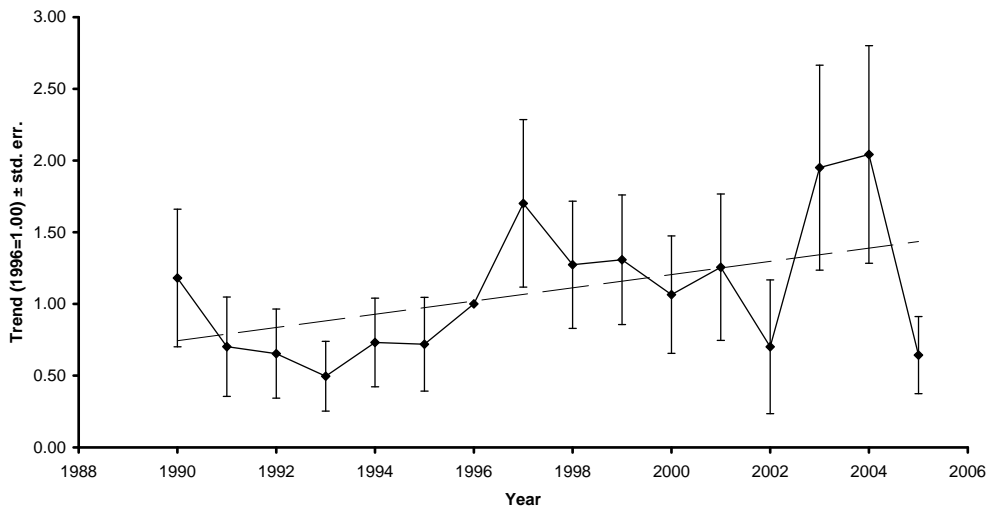
### *Tringa ochropus* (Green Sandpiper)



Number of sites :	207
Number of years :	16
Number of observed zero counts :	1053
Number of observed positive counts :	1012
Number of missing counts :	1247
Overall slope 1990-2005	<b>1.1760</b>
Overall slope 1996-2005	<b>1.1216</b>

## East Mediterranean/Black Sea

### *Tringa ochropus* (Green Sandpiper)

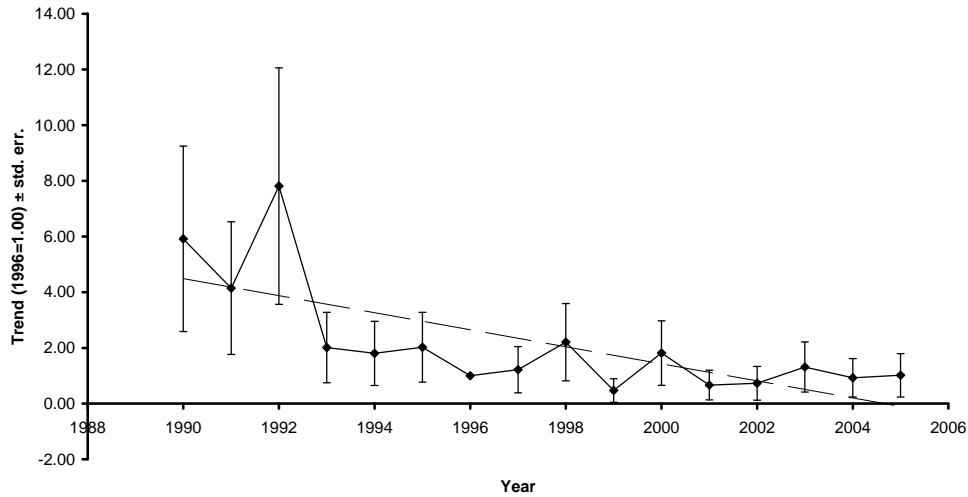


Number of sites :	36
Number of years :	16
Number of observed zero counts :	131
Number of observed positive counts :	211
Number of missing counts :	234
Overall slope 1990-2005	<b>1.0391</b>
Overall slope 1996-2005	<b>0.9896</b>

## *Arenaria interpres* Ruddy Turnstone

### Baltic/Nordic

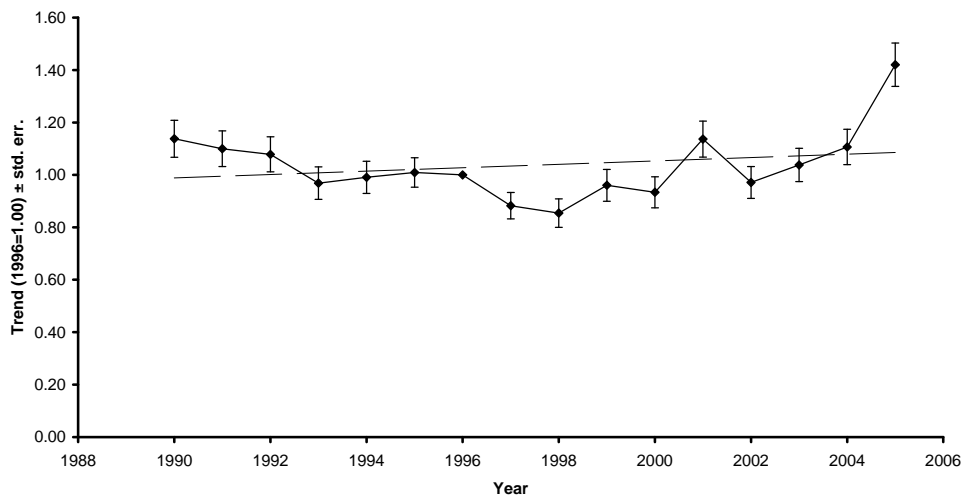
*Arenaria interpres* (Ruddy Turnstone)



Number of sites :	22
Number of years :	16
Number of observed zero counts :	182
Number of observed positive counts :	130
Number of missing counts :	40
Overall slope 1990-2005	<b>0.8840</b>
Overall slope 1996-2005	<b>1.0078</b>

### NW Europe

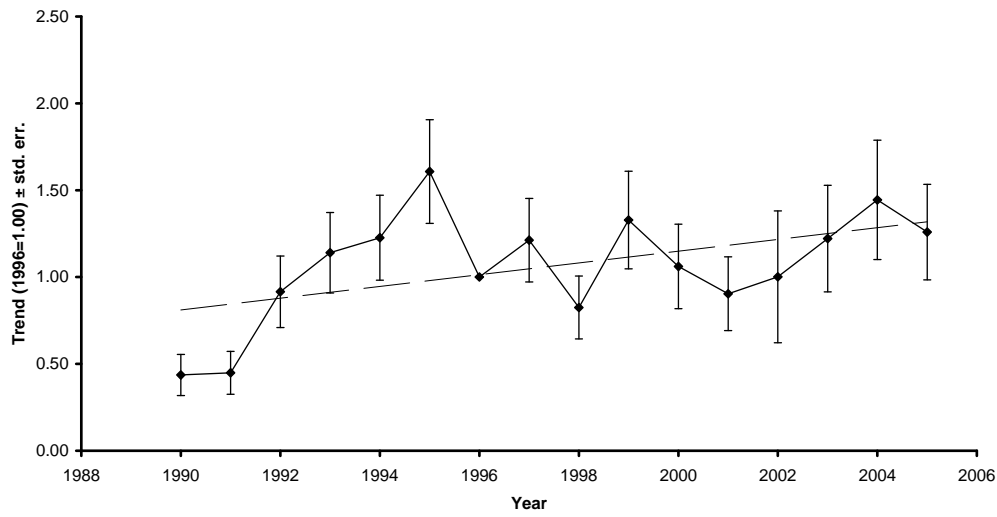
*Arenaria interpres* (Ruddy Turnstone)



Number of sites :	395
Number of years :	16
Number of observed zero counts :	1156
Number of observed positive counts :	3606
Number of missing counts :	1558
Overall slope 1990-2005	<b>1.0050</b>
Overall slope 1996-2005	<b>1.0367</b>

## West Mediterranean

*Arenaria interpres* (Ruddy Turnstone)

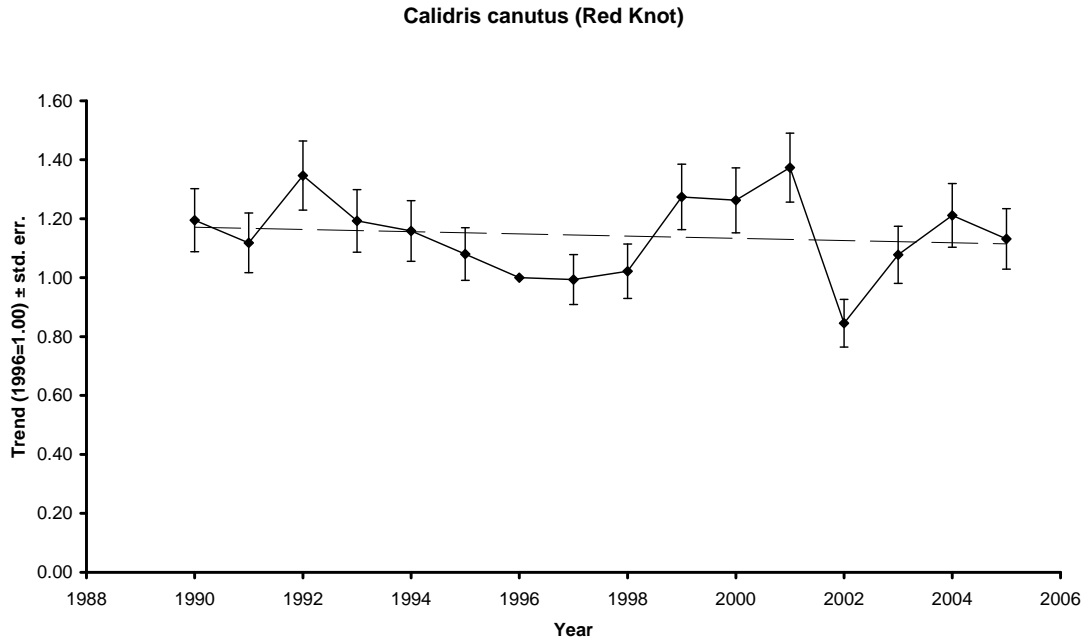


Number of sites :	395
Number of years :	16
Number of observed zero counts :	65
Number of observed positive counts :	53
Number of missing counts :	26
Overall slope 1990-2005	<b>1.0438</b>
Overall slope 1996-2005	<b>1.0237</b>

See pages 103-104 for notes on interpreting the graphs

# *Calidris canutus* Red Knot

## NW Europe

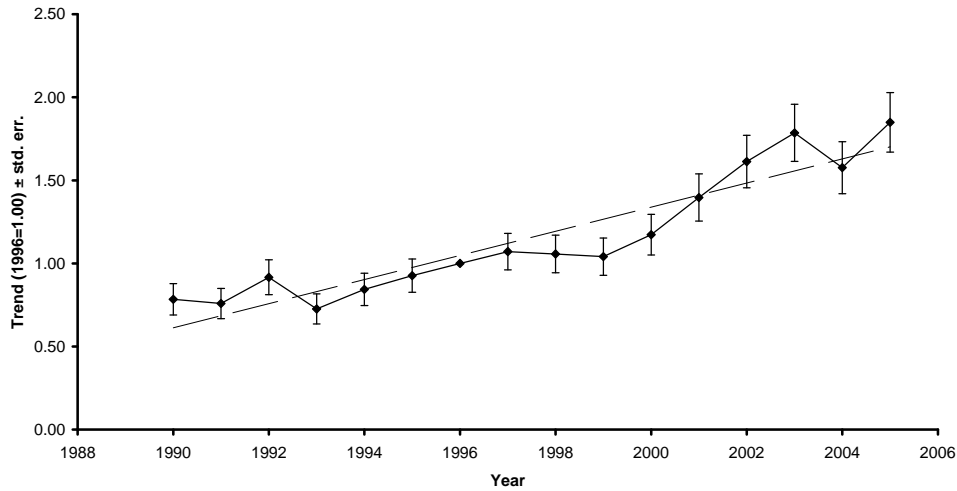


Number of sites :	191
Number of years :	16
Number of observed zero counts :	821
Number of observed positive counts :	1769
Number of missing counts :	466
Overall slope 1990-2005	<b>0.9962</b>
Overall slope 1996-2005	<b>1.0091</b>

## *Calidris alba* Sanderling

### NW Europe

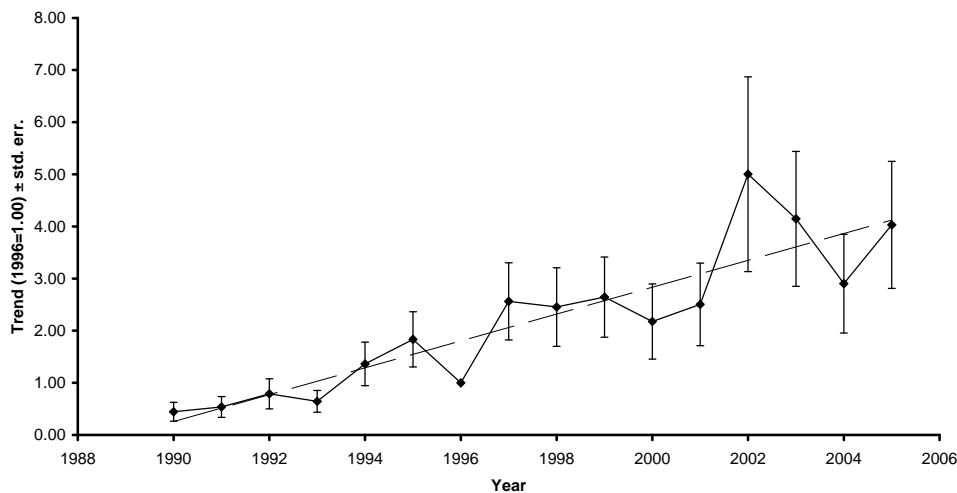
*Calidris alba* (Sanderling)



Number of sites :	231
Number of years :	16
Number of observed zero counts :	1012
Number of observed positive counts :	1949
Number of missing counts :	735
Overall slope 1990-2005	<b>1.0635</b>
Overall slope 1996-2005	<b>1.0773</b>

### West Mediterranean

*Calidris alba* (Sanderling)

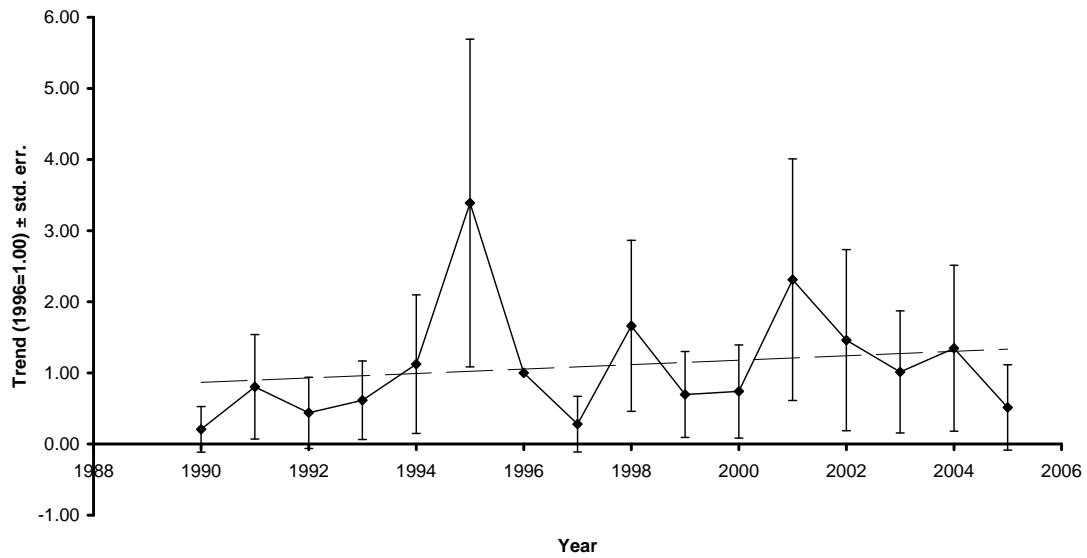


Number of sites :	99
Number of years :	16
Number of observed zero counts :	377
Number of observed positive counts :	582
Number of missing counts :	625
Overall slope 1990-2005	<b>1.1575</b>
Overall slope 1996-2005	<b>1.1750</b>

See pages 103-104 for notes on interpreting the graphs

# East Mediterranean/Black Sea

## *Calidris alba* (Sanderling)

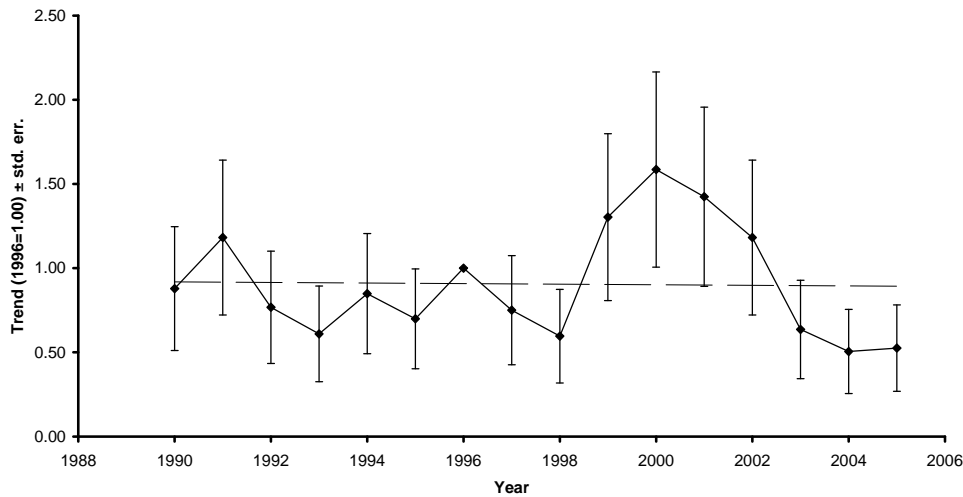


Number of sites :	9
Number of years :	16
Number of observed zero counts :	56
Number of observed positive counts :	45
Number of missing counts :	42
Overall slope 1990-2005	<b>1.0533</b>
Overall slope 1996-2005	<b>1.0490</b>

# *Calidris minuta* Little Stint

## NW Europe

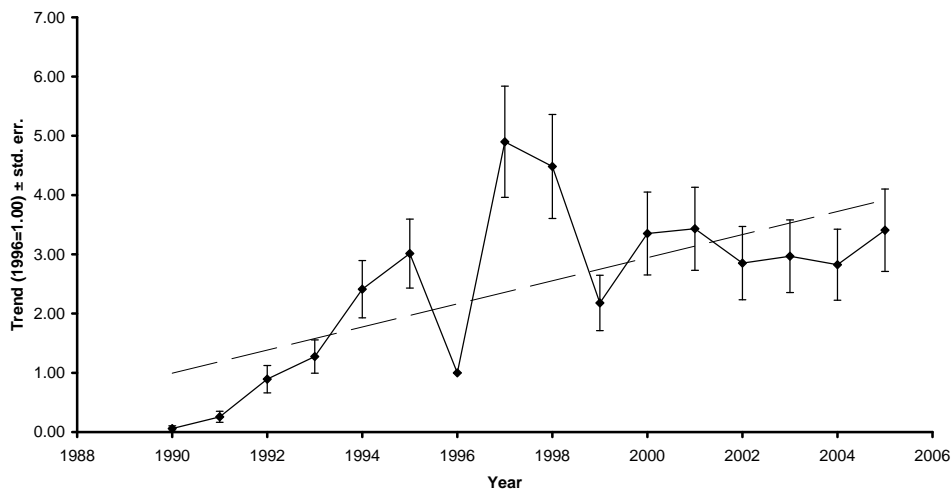
*Calidris minuta* (Little Stint)



Number of sites :	16
Number of years :	16
Number of observed zero counts :	137
Number of observed positive counts :	115
Number of missing counts :	4
Overall slope 1990-2005	<b>0.9903</b>
Overall slope 1996-2005	<b>0.9438</b>

## West Mediterranean

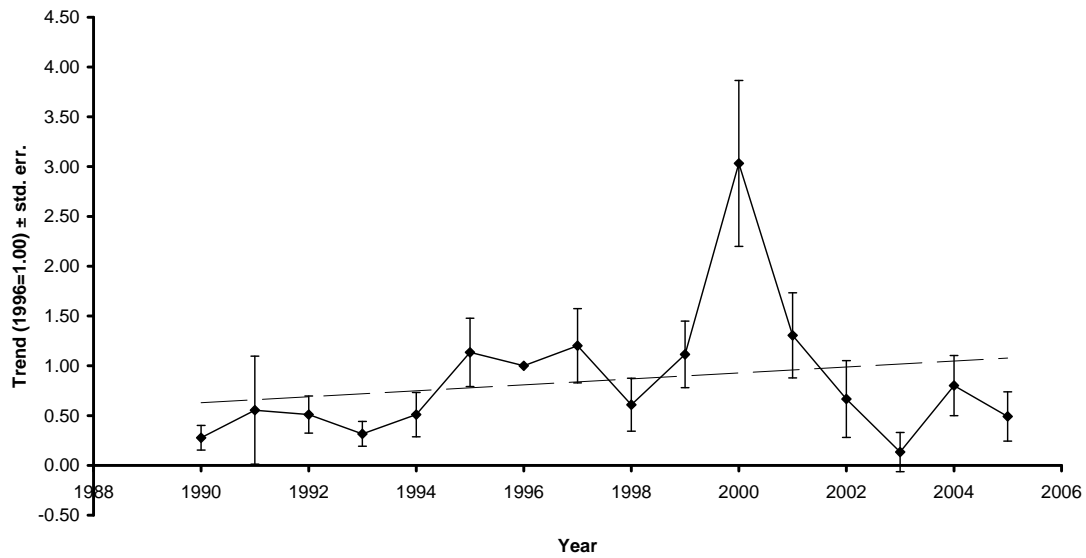
*Calidris minuta* (Little Stint)



Number of sites :	126
Number of years :	16
Number of observed zero counts :	571
Number of observed positive counts :	832
Number of missing counts :	613
Overall slope 1990-2005	<b>1.1881</b>
Overall slope 1996-2005	<b>1.0350</b>

## East Mediterranean

### *Calidris minuta* (Little Stint)

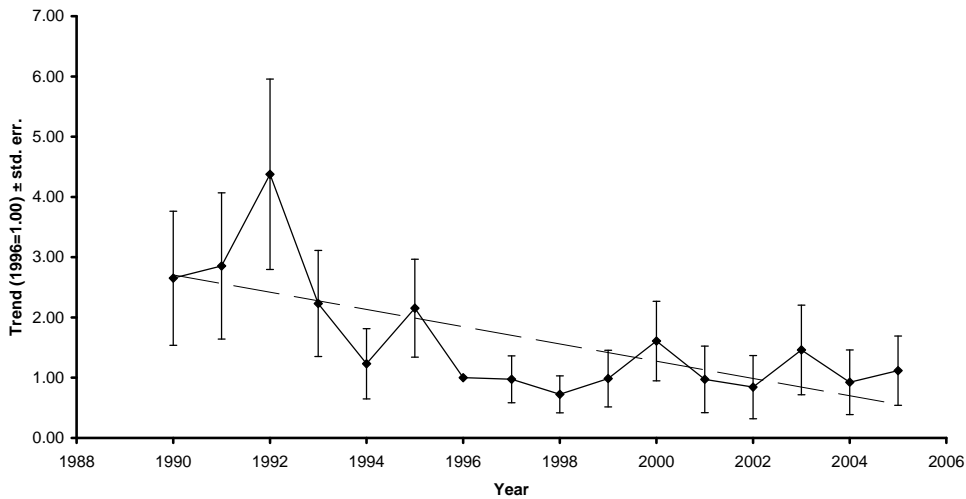


Number of sites :	41
Number of years :	16
Number of observed zero counts :	141
Number of observed positive counts :	246
Number of missing counts :	269
Overall slope 1990-2005	<b>1.0245</b>
Overall slope 1996-2005	<b>0.8842</b>

## *Calidris maritima* Purple Sandpiper

### Baltic/Nordic

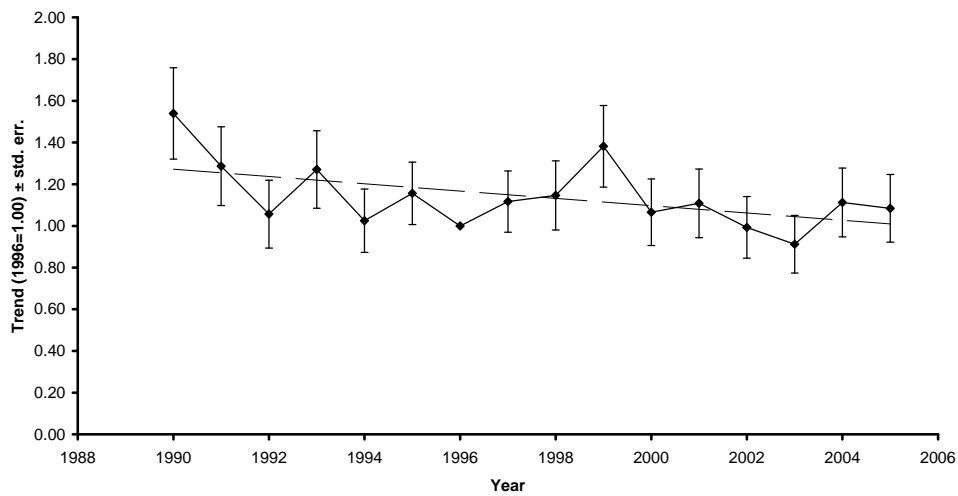
*Calidris maritima* (Purple Sandpiper)



Number of sites :	57
Number of years :	16
Number of observed zero counts :	348
Number of observed positive counts :	291
Number of missing counts :	273
Overall slope 1990-2005	<b>0.9266</b>
Overall slope 1996-2005	<b>1.0274</b>

### NW Europe

*Calidris maritima* (Purple Sandpiper)

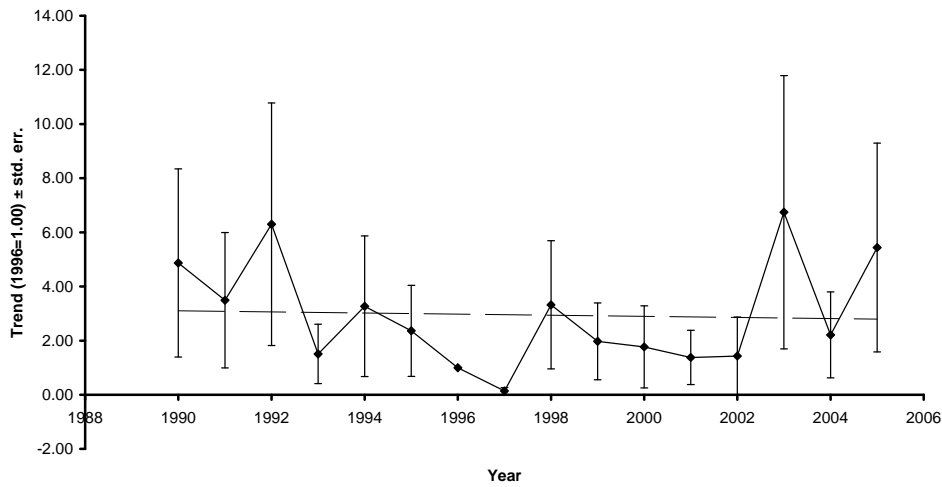


Number of sites :	136
Number of years :	16
Number of observed zero counts :	674
Number of observed positive counts :	1009
Number of missing counts :	493
Overall slope 1990-2005	<b>0.9858</b>
Overall slope 1996-2005	<b>0.9937</b>

## *Calidris alpina* Dunlin

### Baltic/Nordic

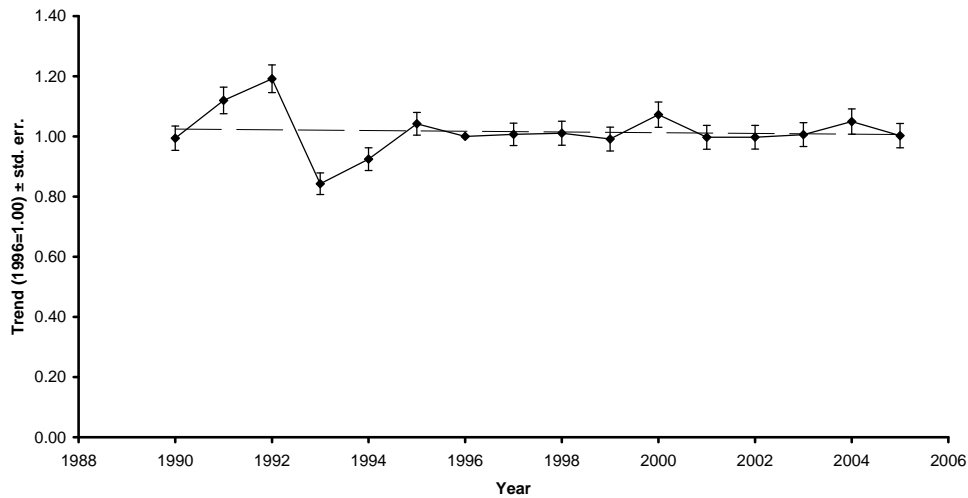
*Calidris alpina* (Dunlin)  
*Calidris alpina* 1990-2005 BA



Number of sites :	19
Number of years :	16
Number of observed zero counts :	120
Number of observed positive counts :	108
Number of missing counts :	76
Overall slope 1990-2005	<b>0.9904</b>
Overall slope 1996-2005	<b>1.2446</b>

### NW Europe

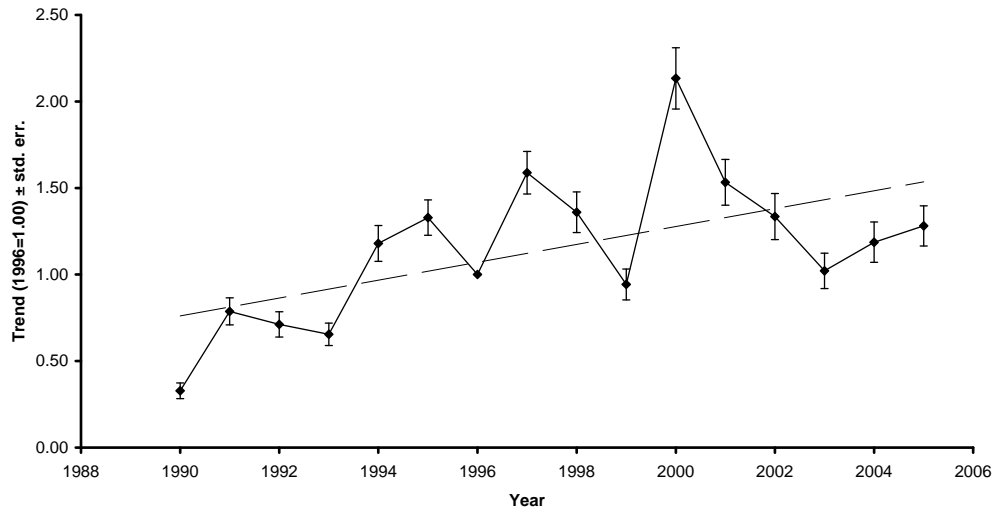
*Calidris alpina* (Dunlin)



Number of sites :	541
Number of years :	16
Number of observed zero counts :	2063
Number of observed positive counts :	4692
Number of missing counts :	1901
Overall slope 1990-2005	<b>0.9994</b>
Overall slope 1996-2005	<b>1.0011</b>

## West Mediterranean

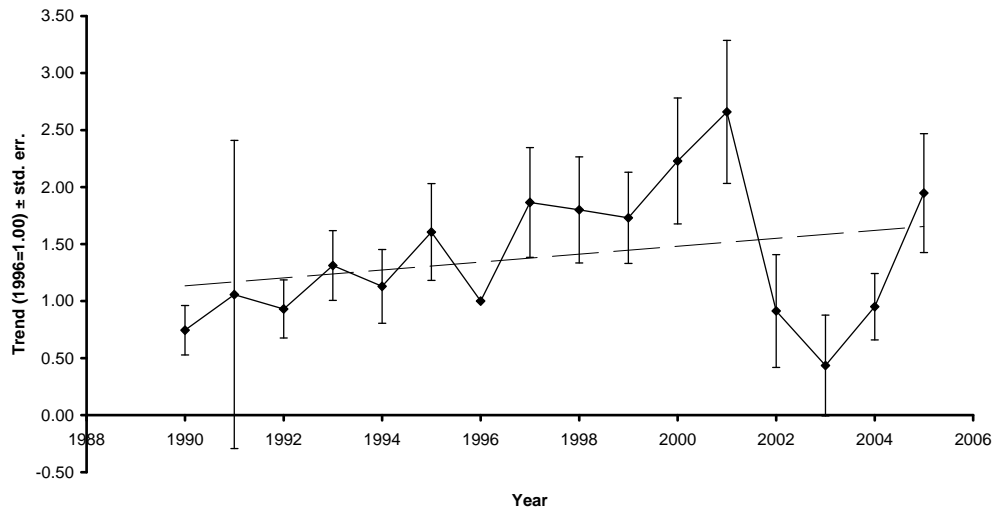
### Calidris alpina (Dunlin)



Number of sites :	212
Number of years :	16
Number of observed zero counts :	776
Number of observed positive counts :	1497
Number of missing counts :	1119
Overall slope 1990-2005	<b>1.0603</b>
Overall slope 1996-2005	<b>1.0029</b>

## East Mediterranean/Black Sea

### Calidris alpina (Dunlin)

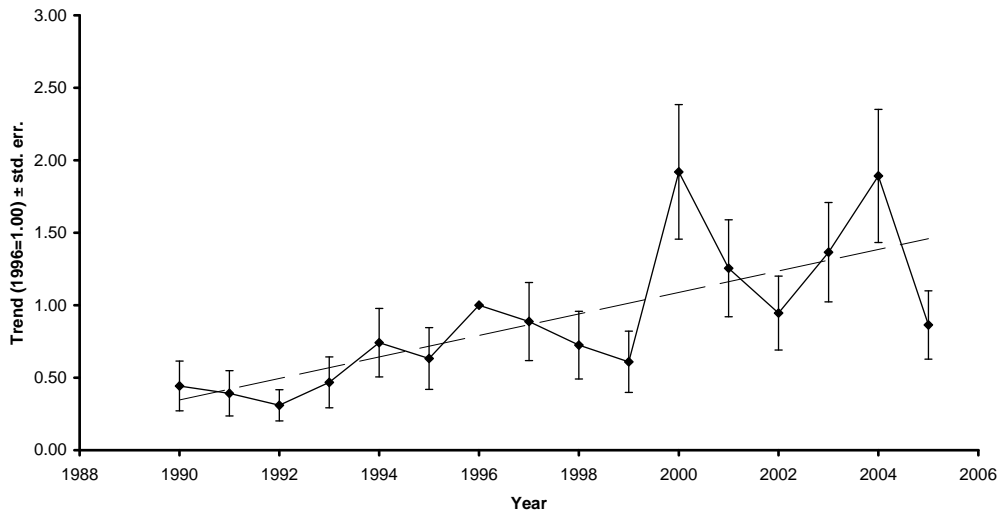


Number of sites :	51
Number of years :	16
Number of observed zero counts :	150
Number of observed positive counts :	322
Number of missing counts :	344
Overall slope 1990-2005	<b>1.0153</b>
Overall slope 1996-2005	<b>0.9449</b>

***Philomachus pugnax* Ruff**

**NW Europe**

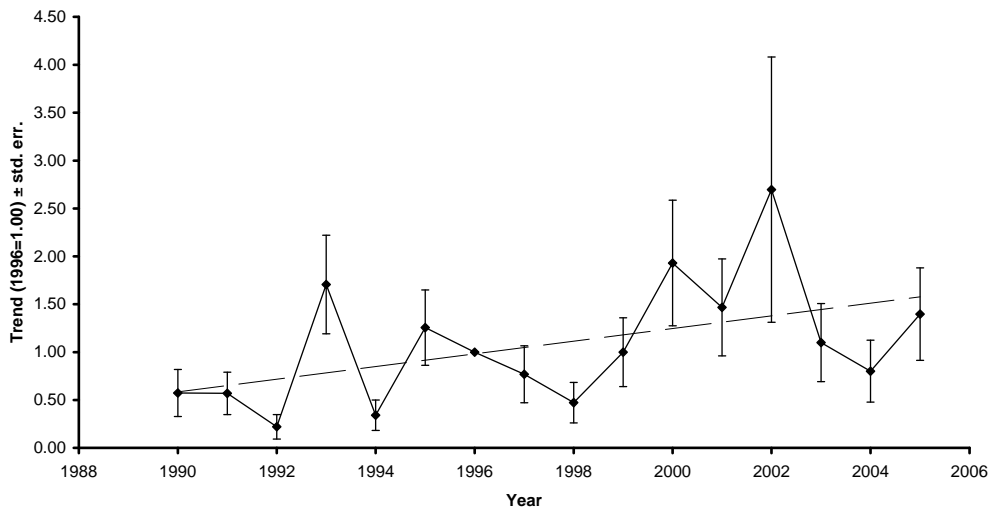
***Philomachus pugnax* (Ruff)**



Number of sites :	92
Number of years :	16
Number of observed zero counts :	652
Number of observed positive counts :	596
Number of missing counts :	224
Overall slope 1990-2005	<b>1.0930</b>
Overall slope 1996-2005	<b>1.0556</b>

**West Mediterranean**

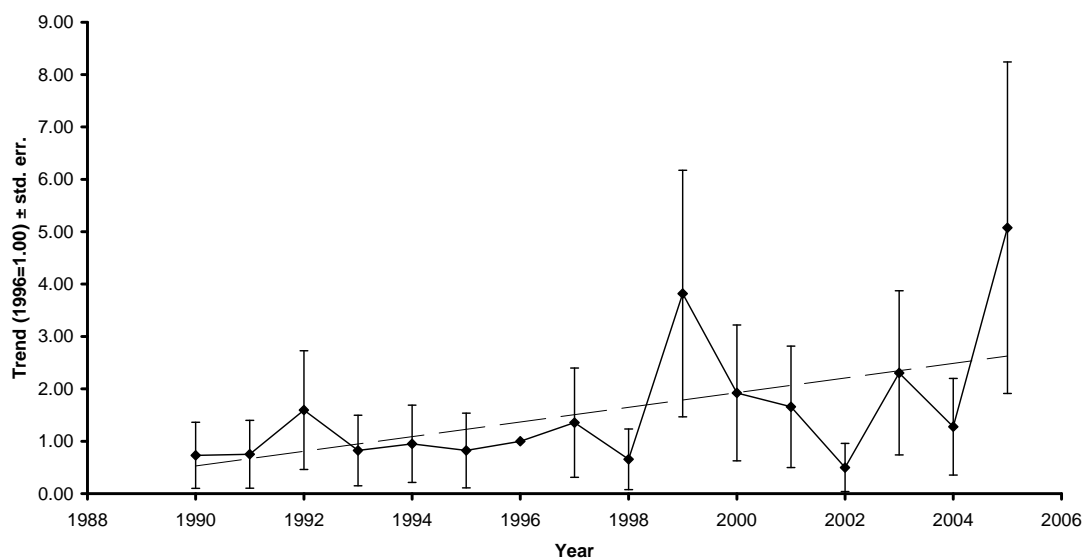
***Philomachus pugnax* (Ruff)**



Number of sites :	61
Number of years :	16
Number of observed zero counts :	348
Number of observed positive counts :	360
Number of missing counts :	268
Overall slope 1990-2005	<b>1.0789</b>
Overall slope 1996-2005	<b>1.1047</b>

# East Mediterranean/Black Sea

## Philomachus pugnax (Ruff)

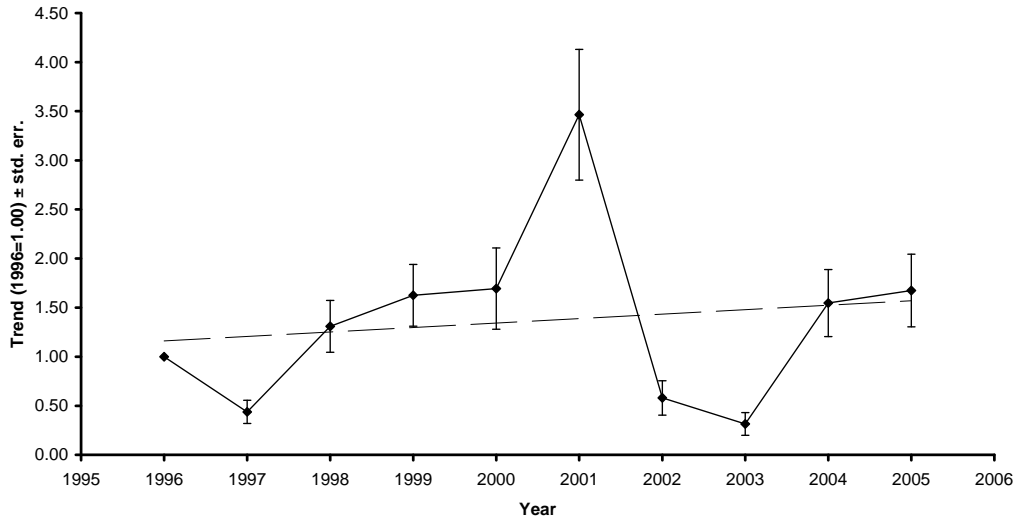


Number of sites :	12
Number of years :	16
Number of observed zero counts :	57
Number of observed positive counts :	77
Number of missing counts :	58
Overall slope 1990-2005	1.0712
Overall slope 1996-2005	1.0836

## *Larus canus* Common Gull

### Baltic/Nordic

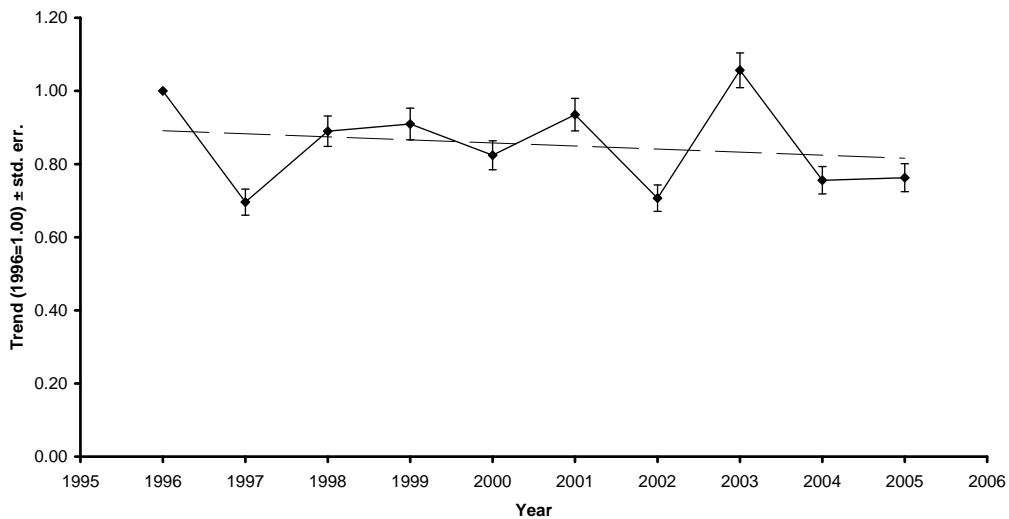
*Larus canus* (Common Gull)



Number of sites :	118
Number of years :	10
Number of observed zero counts :	458
Number of observed positive counts :	526
Number of missing counts :	196
Overall slope 1996-2005	<b>1.0242</b>

### NW Europe

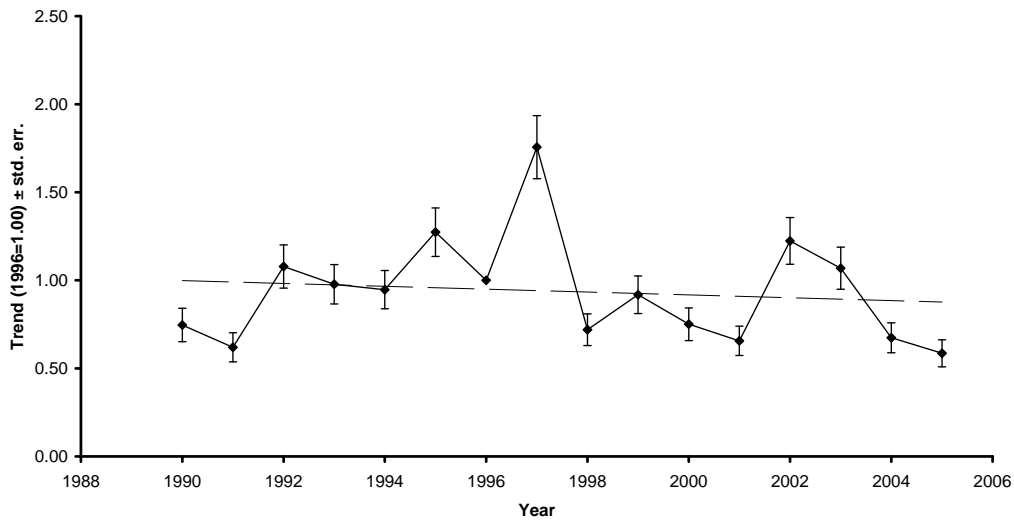
*Larus canus* (Common Gull)



Number of sites :	1283
Number of years :	10
Number of observed zero counts :	2853
Number of observed positive counts :	7171
Number of missing counts :	2806
Overall slope 1996-2005	<b>0.9902</b>

## Central Europe

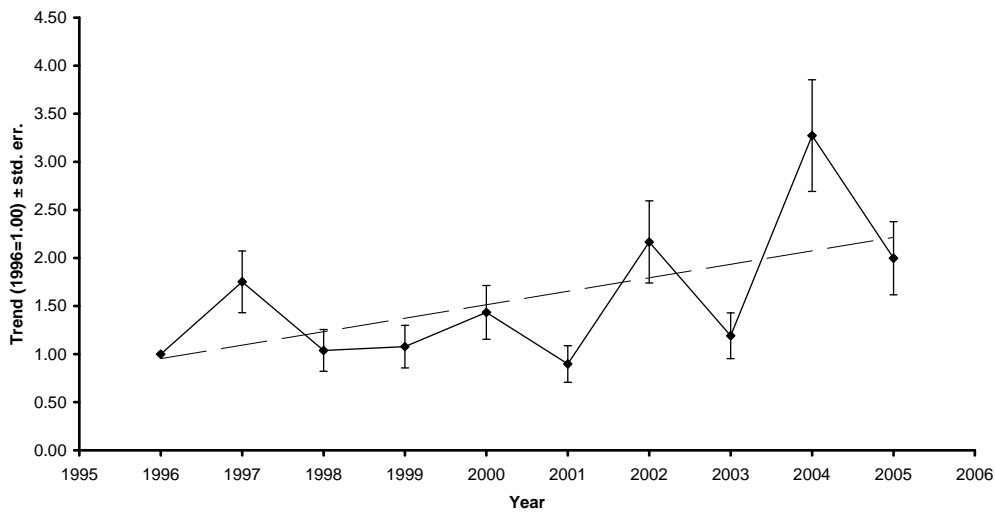
### Larus canus (Common Gull)



Number of sites :	167
Number of years :	16
Number of observed zero counts :	701
Number of observed positive counts :	1384
Number of missing counts :	587
Overall slope 1990-2005	<b>0.9898</b>
Overall slope 1996-2005	<b>0.9515</b>

## West Mediterranean

### Larus canus (Common Gull)



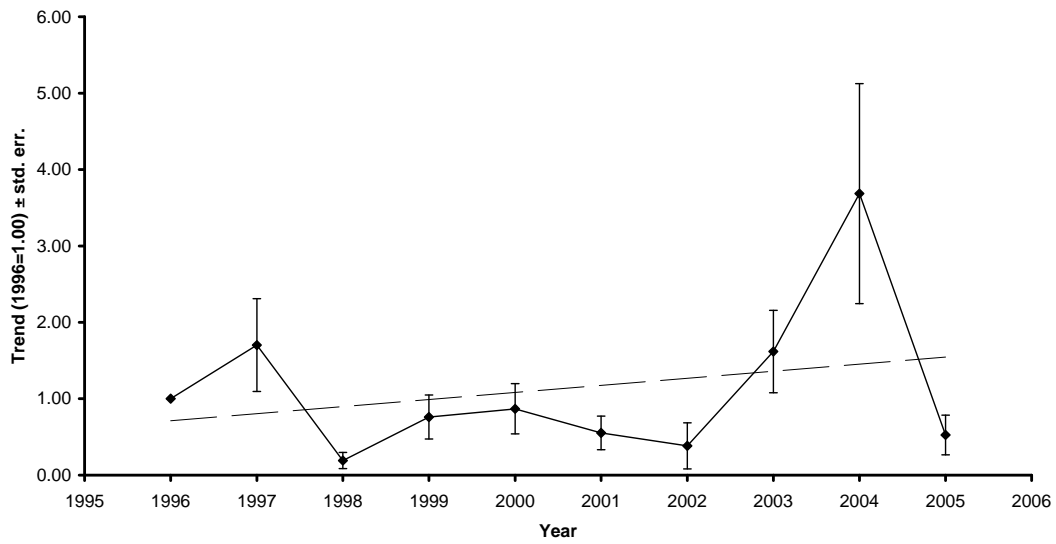
Number of sites :	95
Number of years :	10
Number of observed zero counts :	281
Number of observed positive counts :	494
Number of missing counts :	175
Overall slope 1996-2005	<b>1.0824</b>

See pages 103-104 for notes on interpreting the graphs

See pages 103-104 for notes on interpreting the graphs

### East Mediterranean/Black Sea

#### Larus canus (Common Gull)

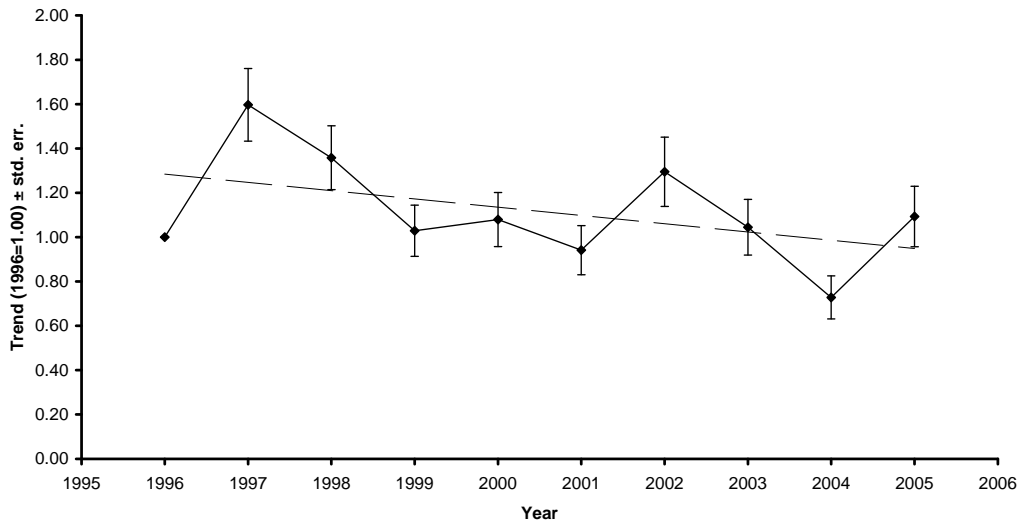


Number of sites :	62
Number of years :	10
Number of observed zero counts :	127
Number of observed positive counts :	244
Number of missing counts :	249
Overall slope 1996-2005	1.0486

## *Larus marinus* Great Black-backed Gull

### Baltic/Nordic

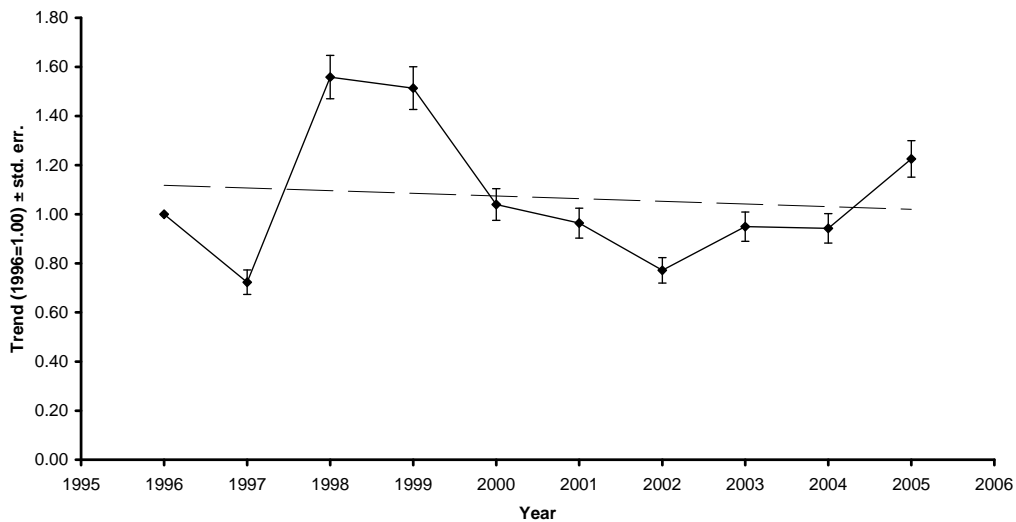
*Larus marinus* (Great Black-backed Gull)



Number of sites :	234
Number of years :	10
Number of observed zero counts :	548
Number of observed positive counts :	1389
Number of missing counts :	403
Overall slope 1996-2005	<b>0.9675</b>

### NW Europe

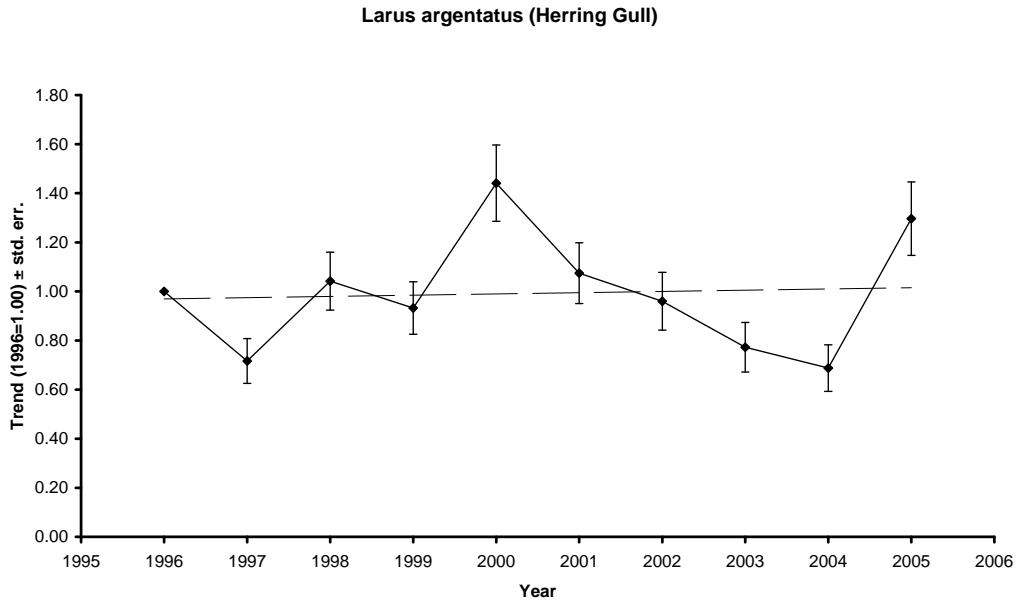
*Larus marinus* (Great Black-backed Gull)



Number of sites :	756
Number of years :	10
Number of observed zero counts :	1686
Number of observed positive counts :	4476
Number of missing counts :	1398
Overall slope 1996-2005	<b>0.9946</b>

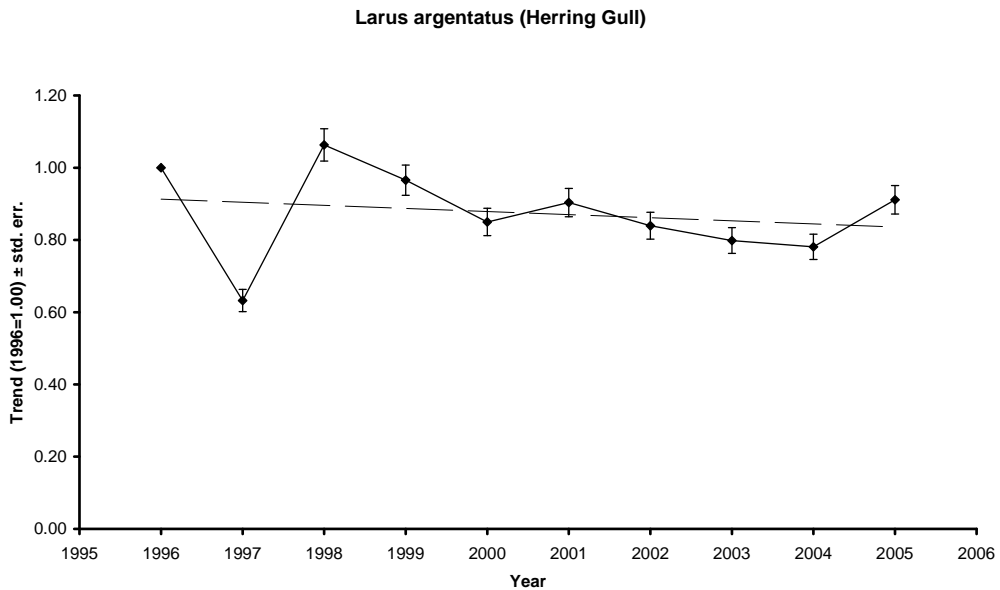
## *Larus argentatus* Herring Gull

### Baltic/Nordic



Number of sites :	307
Number of years :	10
Number of observed zero counts :	500
Number of observed positive counts :	1911
Number of missing counts :	659
Overall slope 1996-2005	<b>1.0030</b>

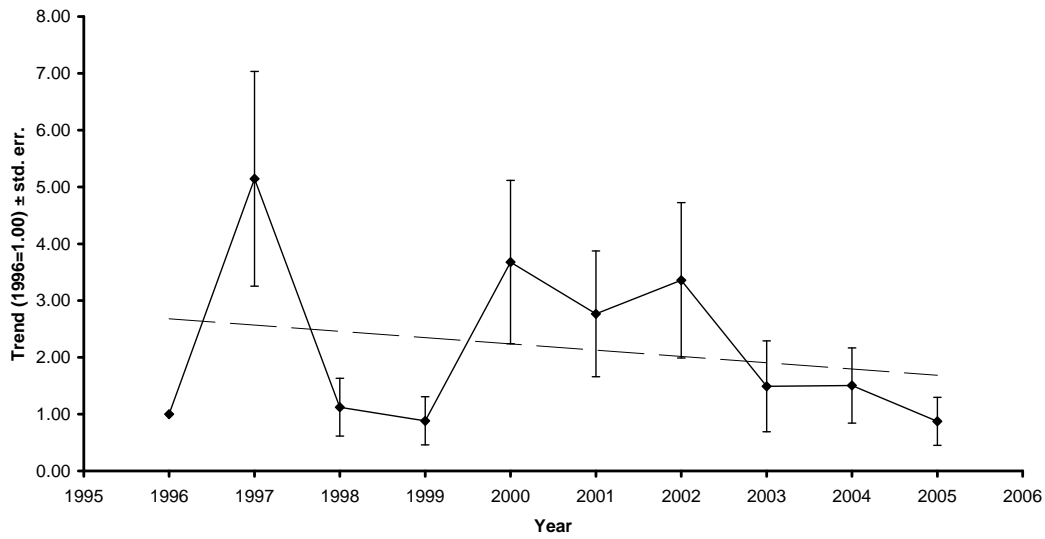
### NW Europe



Number of sites :	1180
Number of years :	10
Number of observed zero counts :	2440
Number of observed positive counts :	6742
Number of missing counts :	2618
Overall slope 1996-2005	<b>0.9930</b>

## West Mediterranean

### Larus argentatus (Herring Gull)

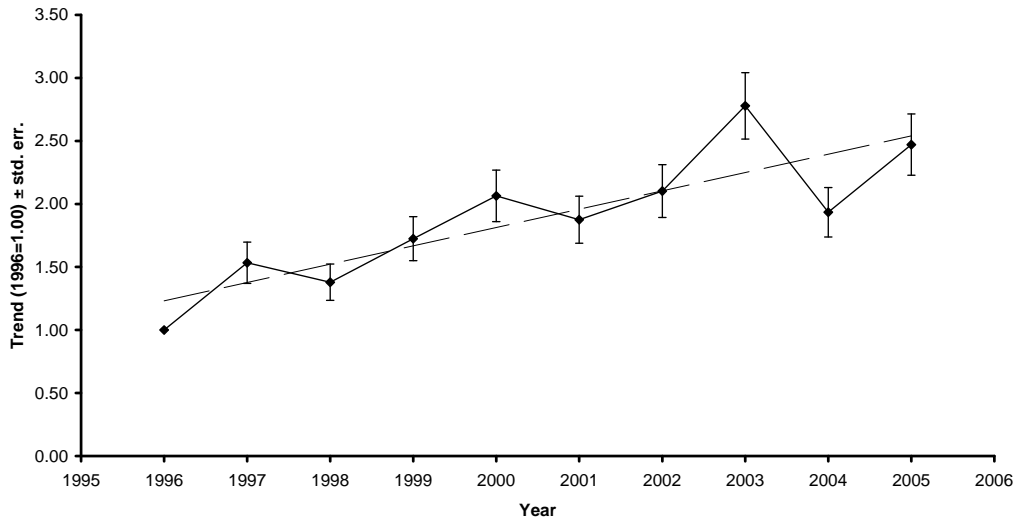


Number of sites :	31
Number of years :	10
Number of observed zero counts :	65
Number of observed positive counts :	152
Number of missing counts :	93
Overall slope 1996-2005	<b>0.9732</b>

## *Larus fuscus* Lesser Black-backed Gull

### NW Europe

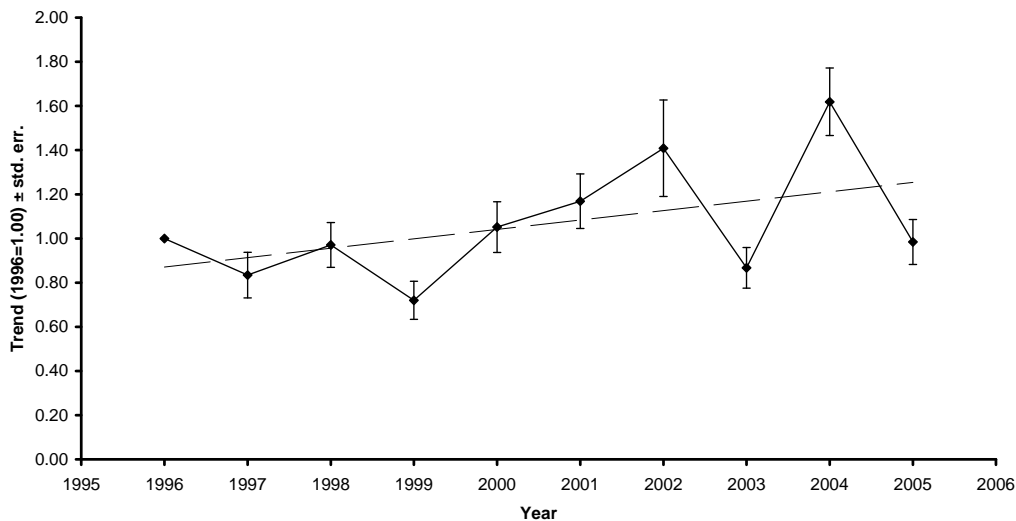
*Larus fuscus* (Lesser Black-backed Gull)



Number of sites :	499
Number of years :	10
Number of observed zero counts :	1651
Number of observed positive counts :	2689
Number of missing counts :	650
Overall slope 1996-2005	<b>1.0869</b>

### West Mediterranean

*Larus fuscus* (Lesser Black-backed Gull)

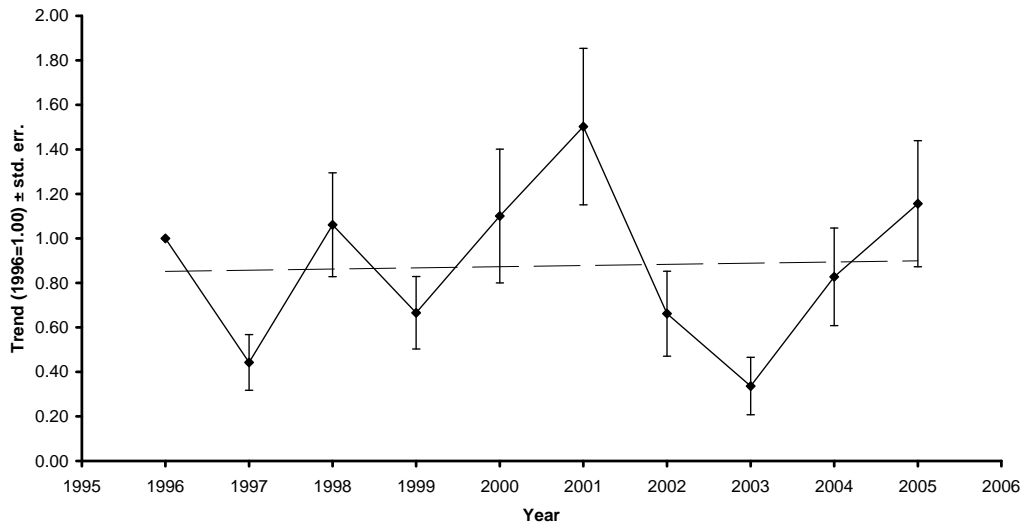


Number of sites :	292
Number of years :	10
Number of observed zero counts :	544
Number of observed positive counts :	1530
Number of missing counts :	846
Overall slope 1996-2005	<b>1.0372</b>

## *Larus ridibundus* Common Black-headed Gull

### Baltic/Nordic

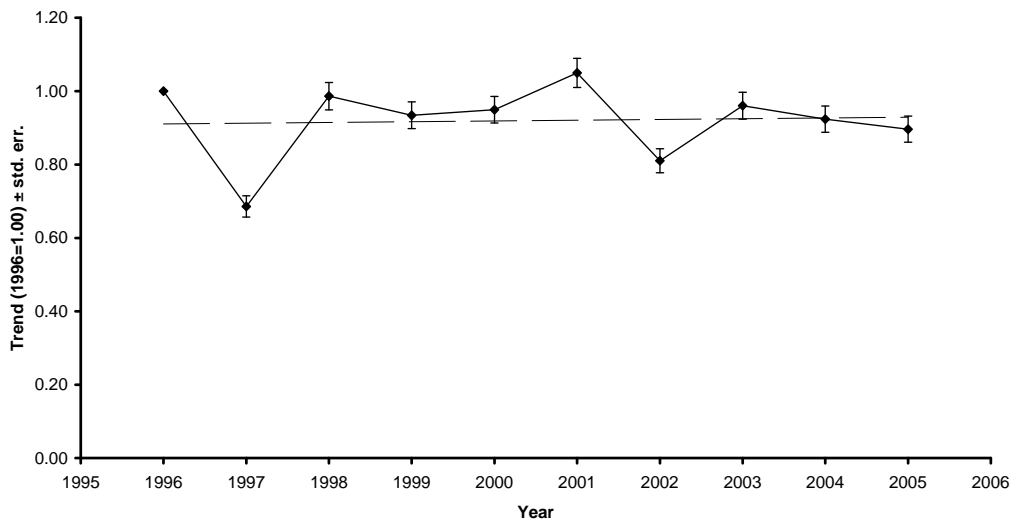
*Larus ridibundus* (Black-headed Gull)



Number of sites :	58
Number of years :	10
Number of observed zero counts :	186
Number of observed positive counts :	280
Number of missing counts :	114
Overall slope 1996-2005	<b>1.0007</b>

### NW Europe

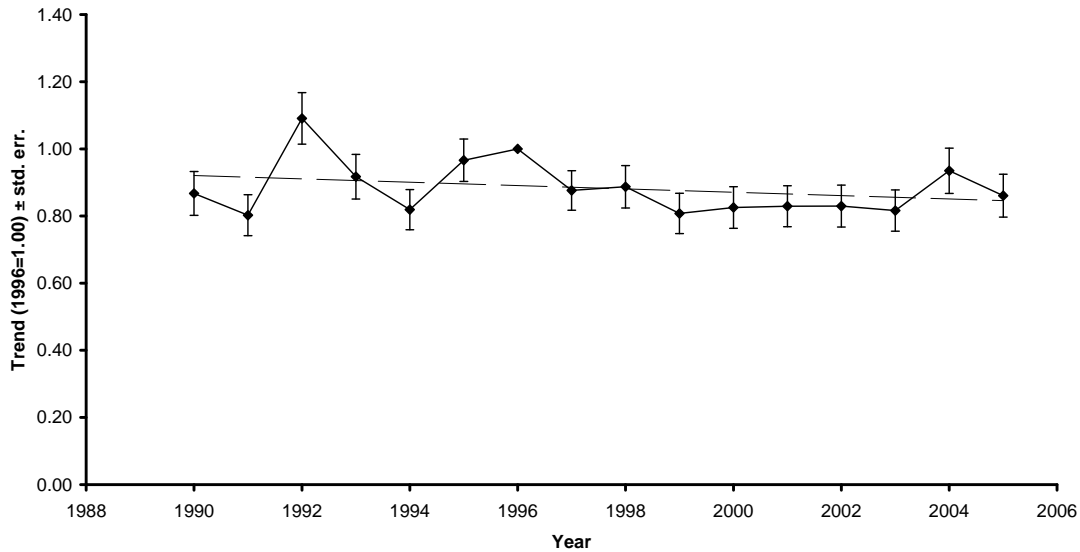
*Larus ridibundus* (Black-headed Gull)



Number of sites :	1955
Number of years :	10
Number of observed zero counts :	3094
Number of observed positive counts :	11799
Number of missing counts :	4657
Overall slope 1996-2005	<b>1.0039</b>

## Central Europe

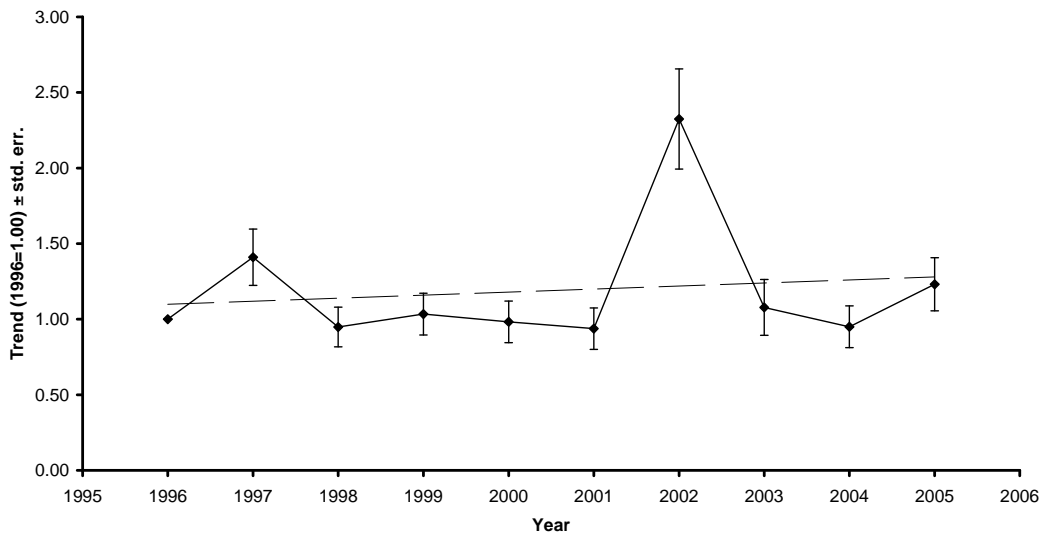
### *Larus ridibundus* (Black-headed Gull)



Number of sites :	283
Number of years :	16
Number of observed zero counts :	909
Number of observed positive counts :	2333
Number of missing counts :	1286
Overall slope 1990-2005	<b>0.9946</b>
Overall slope 1996-2005	<b>0.9920</b>

## East Mediterranean/Black Sea

### *Larus ridibundus* (Black-headed Gull)

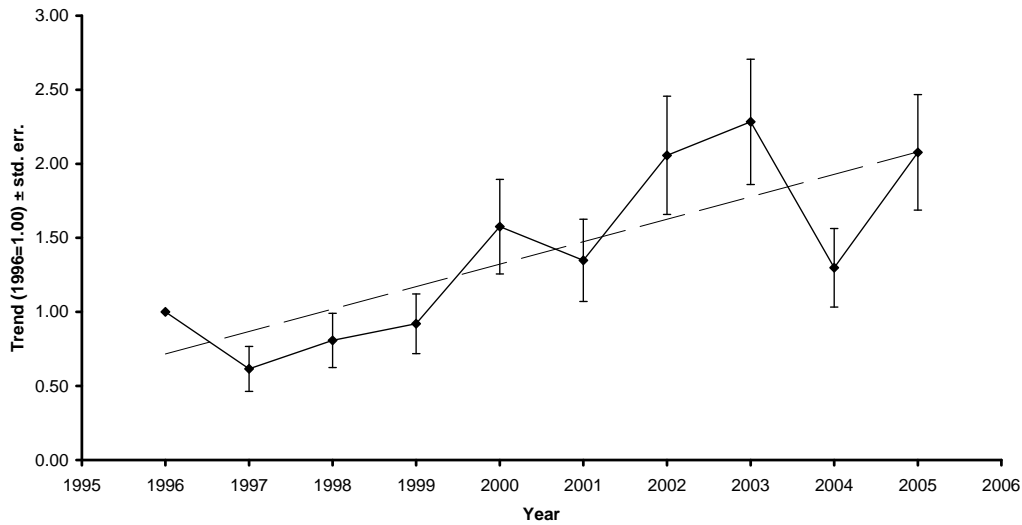


Number of sites :	181
Number of years :	10
Number of observed zero counts :	191
Number of observed positive counts :	871
Number of missing counts :	748
Overall slope 1996-2005	<b>1.0133</b>

## *Larus geni* Slender-billed Gull

### West Mediterranean

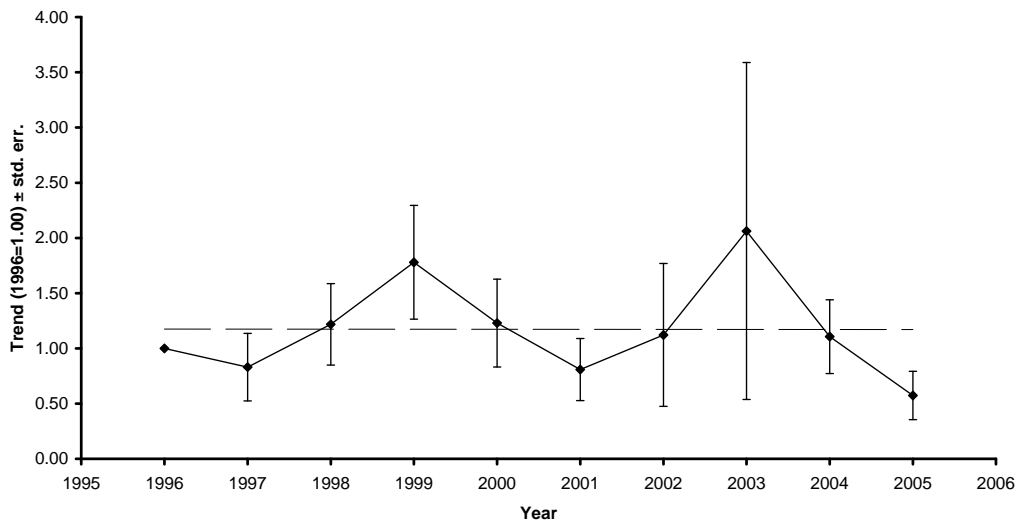
*Larus geni* (Slender-billed Gull)



Number of sites :	33
Number of years :	10
Number of observed zero counts :	67
Number of observed positive counts :	201
Number of missing counts :	62
Overall slope 1996-2005	<b>1.1238</b>

### East Mediterranean/Black Sea

*Larus geni* (Slender-billed Gull)

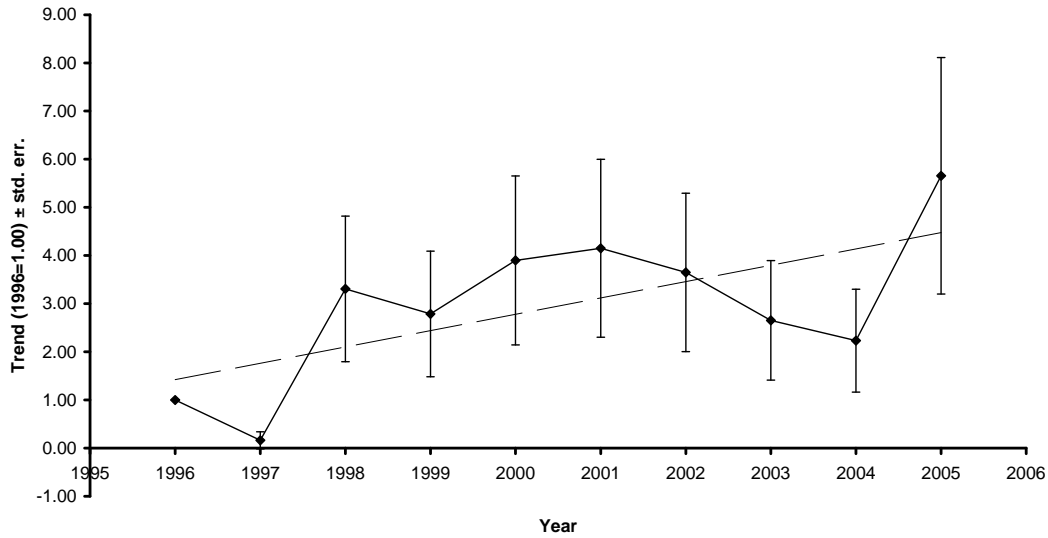


Number of sites :	20
Number of years :	10
Number of observed zero counts :	32
Number of observed positive counts :	112
Number of missing counts :	56
Overall slope 1996-2005	<b>0.9890</b>

## *Larus melanocephalus* Mediterranean Gull

### NW Europe

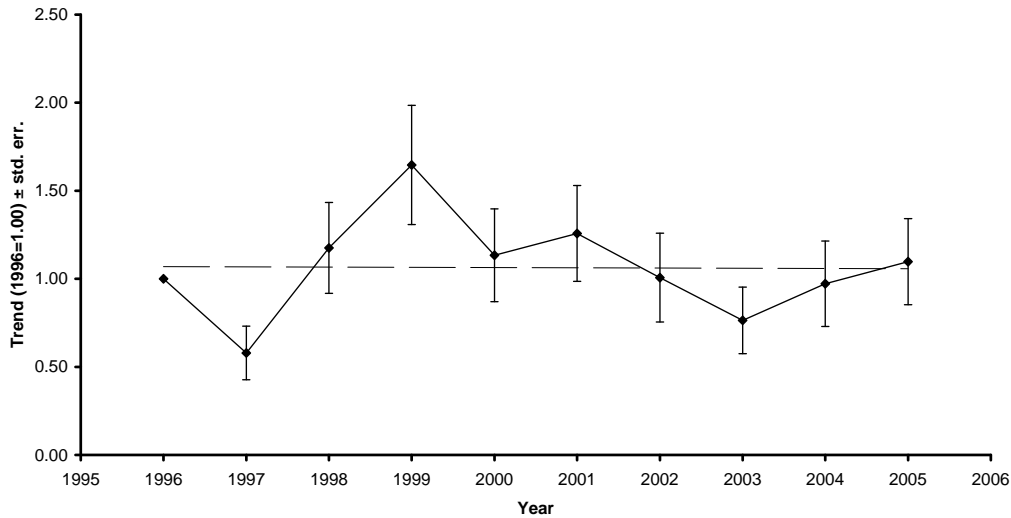
*Larus melanocephalus* (Mediterranean Gull)



Number of sites :	35
Number of years :	10
Number of observed zero counts :	165
Number of observed positive counts :	170
Number of missing counts :	15
Overall slope 1996-2005	1.2265

### West Mediterranean

*Larus melanocephalus* (Mediterranean Gull)



Number of sites :	89
Number of years :	10
Number of observed zero counts :	226
Number of observed positive counts :	446
Number of missing counts :	218

See pages 103-104 for notes on interpreting the graphs

Overall slope 1996-2005	1.0060
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## **ANNEX 5**

### **Report seabird populations African-Eurasian Migratory Waterbird Agreement 2005**



**Population sizes and status of tropical and sub-tropical seabird populations proposed for inclusion in the African-Eurasian Migratory Waterbird Agreement in 2005 and of additional candidate species**

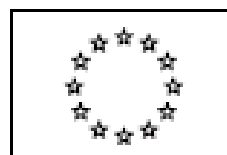


Brown Booby *Sula leucogaster* at an islet off Príncipe (Tim Dodman)

**Tim Dodman**

**Report to the African-Eurasian Migratory Waterbird Agreement, with support of the European Commission**

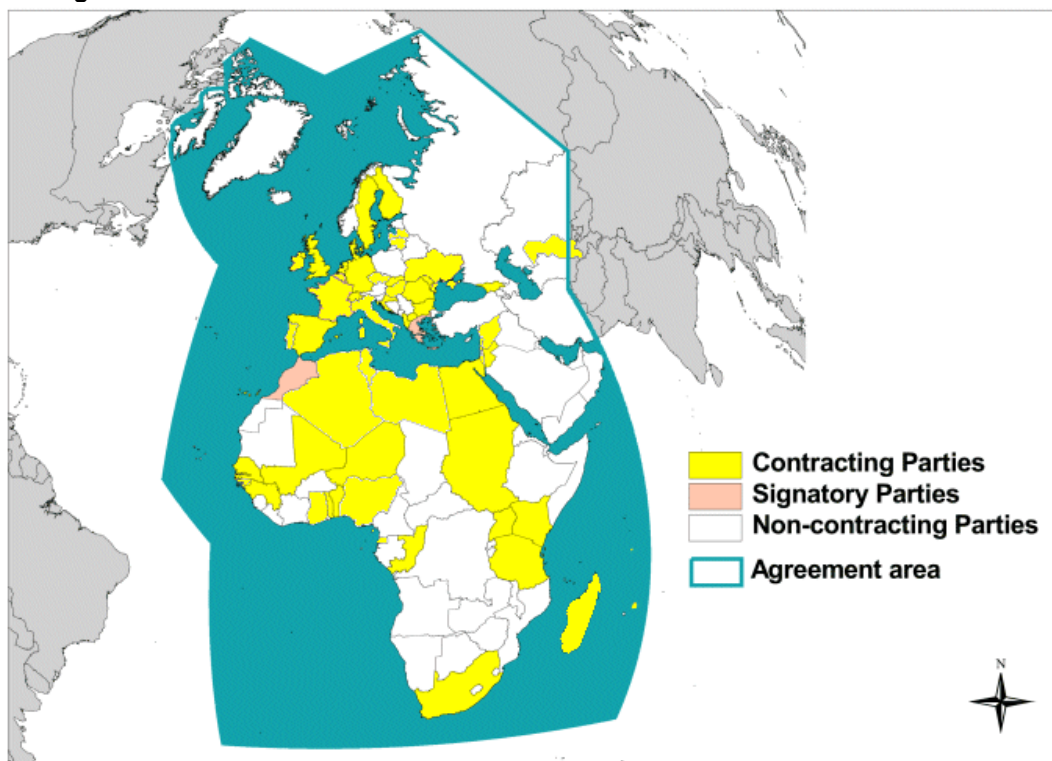
**November 2007**



## Introduction

This document provides information on the status of seabirds that were proposed for inclusion in the African-Eurasian Migratory Waterbird Agreement (AEWA) in 2005. The sizes of the populations given do not necessarily reflect sizes of discreet biological populations or subspecies, but focus on numbers occurring within the AEWA region. The document also provides information on some additional species and populations that were not proposed for inclusion in the AEWA in 2005, but, for reasons provided, potentially merit further consideration. All species mentioned occur in the Agreement area (see map), which embraces many islands of the Atlantic and Indian Oceans in particular, which are of great importance as breeding sites for seabirds.

### The Agreement Area



## Species Texts

### Red-billed Tropicbird *Phaeton aethereus*

There are breeding populations of this tropicbird in the Red Sea, Gulf of Aden and Persian Gulf; Cape Verde and Senegal; the South Atlantic (St Helena, Ascension and islands off the east coast of Brazil); the Caribbean; and the eastern Pacific seaboard between Peru and Mexico. There are three sub-species / populations within the AEWA region:

#### a. *aethereus* - South Atlantic: St Helena & Ascension

In the AEWA region, this population breeds only in St Helena and Ascension. There are an estimated 86 breeding pairs in St Helena, with about 43 pairs in northeast St Helena and another 43 pairs in southwest St Helena (Rowlands *et al.* 1998; Rowlands 2001). In Ascension, there are 55 pairs around the main island and about 500 pairs on Boatswainbird Island off the northeast of Ascension (Rowlands 2001). The tropicbird also breeds off the coast of Brazil at Fernando da Noronha, but these are outwith the AEWA region. The numbers

thus occurring in the AEWA region are around 641 breeding pairs, equivalent to 1,921 birds, rounded up to 2,000. Numbers have declined significantly in St Helena, especially in the southwest, due to rats, cats and hunting (Rowlands *et al.* 1998), but despite past declines here and at Ascension, the population overall is currently stable (McCulloch 2004).

b. *mesonauta* - Cape Verde & Senegal

The stronghold of this population is in Cape Verde, where clusters of breeding pairs occur on several islands. Hazevoet (1995) considered that the population had declined to about 100-125 pairs, due largely to predation by man. There is also a population on the Iles de la Madeleine, a small group of islands off Dakar, Senegal. The population here seems to fluctuate somewhat, but the site is protected as a national park, and the birds do not seem under threat. There are around 30 pairs (Morel & Morel 1990; Coulthard 2001). It is unlikely the population in Cape Verde exceeds 100 pairs, given the declines noted, so a total population estimate is given of 130 breeding pairs, rounded to 400 individuals.

c. *indicus* - Persian Gulf, Gulf of Aden, Red Sea

This subspecies is endemic to the Red Sea, Gulf of Aden and the Arabian Sea eastwards to the Gulf of Oman and eastern Arabian Gulf, breeding on rocky islands and at some mainland cliffs (Gallagher *et al.* 1984). PERSGA/GEF (2003) estimate the population at 800 pairs (2,400 birds), and it is probably stable given the inaccessibility of many of its nesting sites. However, their analysis excluded Eritrea, where the Red-billed Tropicbird breeds in the Dehalak Archipelago and is fairly common offshore post-breeding (Coulthard 2001a). The estimate is thus increased to 1,000 pairs or 3,000 birds to account for these birds, noting that surveys are required to determine the numbers breeding here.

### **Red-tailed Tropicbird *Phaethon rubicauda***

*rubicauda* - Western Indian Ocean

This tropicbird occurs in Seychelles and other islands of the western Indian Ocean. In Seychelles, it breeds mainly in the Aldabra group, with about 2,000 pairs on the lagoon islands of Aldabra and 50-200 pairs on Cosmoledo, whilst in the granitic group its only breeding site is Aride with up to six pairs (Skerrett *et al.* 2001). Their restriction to a small number of breeding islands and their disappearance from others, such as Astove and Assumption, is most likely due to the presence of cats and rats (Skerrett *et al.* 2001). In Mauritius, there are 500-700 pairs on Round Island, a site of intensive and continuous conservation management, and a handful of birds on Gunner's Quoin (Michel 1992; Safford 2001). There is also a sizeable breeding population of around 3,500 pairs on Europa (Le Corre 2004), and a small colony on Nosy Ve, southwest Madagascar, where there were 16 pairs in 1985 (Langrand 1990). Seabirds on Europa suffer from predation by introduced rats and land-birds (Le Corre & Safford 2001). The total population estimate is thus estimated at 6,072-6,822 breeding pairs or 18,216-20,466 individuals, rounded to 20,000. Given conservation management at most of its breeding sites, the population appears to be stable.

### **White-tailed Tropicbird *Phaeton lepturus***

This species occurs widely in tropical and subtropical waters. There are three populations within the AEWA region, although only one is mentioned in Table 1 of the proposal for new species to be added to AEWA Annex 2, which provides summarised information on the candidate seabird species for inclusion in the AEWA and Action Plan (AEWA 2005). The two additional populations, *europae* and *ascensionis*, are also presented here, as both can be considered migratory / nomadic, and both fall 100% within the Agreement area.

a. *lepturus* – Western Indian Ocean

Highest numbers occur in Seychelles, where estimates of breeding pairs include 300 on Aride during each monsoon season, 500 on Cousin during the southeast monsoon and 1,500 during the northwest monsoon, 450-850 on Cousine, and 2,000-2,500 on Aldabra, whilst there are small numbers at various other islands and possible breeding sites on Cosmoledo and Assumption (Skerrett *et al.* 2001). There are around 500-1,000 pairs on Round Island off Mauritius (Safford 2001), whilst it also nests on Mauritius itself in some river gorges (Michel 1992). There are about 100 pairs at the Ravine de la Grande Chaloupe on La Réunion (Le Corre & Safford 2001), and a handful of pairs in the Comoros and Mayotte (Louette 1988). This tropicbird

also breeds on rocky coasts of north and northwest Madagascar, especially at Antsirana, Nosy Be, Nosy Tanikely and Nosy Mitsio, where it is fairly common but vulnerable at accessible colonies to collection of eggs, young and brooding adults (Langrand 1990). The total estimated within each island group is thus about 5,000-6,000 pairs on Seychelles, 550-1,050 on Mauritius, 100 pairs on La Réunion, around 30 pairs on Comoros and probably <100 pairs on Madagascar, giving a total estimate of 5,780-7,280 pairs, or 17,300-21,800 birds, rounded to 17,000- 22,000. Although the species has declined across the region due largely to predation by man, cats and rats, the main populations are now protected, and the population overall is probably stable.

b. *europae* – Europa

This subspecies is endemic to the small island of Europa in the Mozambique Channel. The population numbers around 500-1,000 pairs (Le Corre & Safford 2001), equivalent to 1,500-3,000 birds. Seabirds do suffer from a number of threats at the site, especially predation by rats, Barn Owl *Tyto alba* and Pied Crow *Corvus albus*, though the island is a nature reserve (Le Corre & Safford 2001). Skerrett *et al.* (2001) consider that records of White-tailed Tropicbirds with plumage tinged golden yellow from Cousin in Seychelles might belong to *europae*, which has a high frequency of golden morphs. The population is probably stable.

c. *ascensionis* – Ascension and Gulf of Guinea islands

This subspecies is endemic to the tropical and sub-tropical Atlantic, with breeding populations on Ascension, São Tomé, Príncipe and Annóbon. In Ascension, there are about 1,000 pairs on Boatswainbird Island, whilst there are smaller numbers of birds breeding on cliffs of the main island. The species is quite widely scattered around the offshore islets of São Tomé and Príncipe, and Monteiro *et al.* (1997) estimated 141-292 breeding pairs from known sites, although there are several additional sites where breeding is uncertain. There are also about 50 pairs on Annóbon, further south (Jones & Tye 2006). This gives a total estimate of around 1,500 pairs or 4,500 birds. Given the protection status of Boatswainbird and the relative inaccessibility of nests at the offshore islets, the population is considered stable.

### **Cape Gannet *Sula capensis***

This gannet is a breeding endemic of Southern Africa, with colonies of 2,100 pairs on Mercury, 17,000 on Ichaboe and 800 on Possession in Namibia, 10,000 on Bird Island, Lambert's Bay and 58,000 on Malgas Island of South Africa's Western Cape and 68,000 on Bird Island, Algoa Bay of South Africa's Eastern Cape, giving a total of about 156,000 pairs (Hockey *et al.* 2005). The estimate of 346,000 given in the third AEWA report on the conservation status of migratory waterbirds (Delany *et al.* 2007) was based on the estimate of 176,000 pairs by duToit *et al.* (2002), multiplied by two, rather than three (the factor normally used to derive population estimates from numbers of breeding pairs). The collapse of sardine stocks has led to decreases at Namibian colonies, and overall decrease is >20% over three generations, though numbers have fluctuated or increased at South African colonies; despite (Hockey *et al.* 2005).

### **Masked Booby *Sula dactylatara***

The Masked Booby has a pantropical distribution. There are two populations in the AEWA region, *dactylatara* and *melanops*. The colonies breeding in St Helena and Ascension are not mentioned in Table 1 of the proposal for new species to be added to AEWA Annex 2, which provides summarised information on the candidate seabird species for inclusion in the AEWA and Action Plan (AEWA 2005). This population is thus presented here, along with *melanops* of the western Indian Ocean.

a. *dactylatara* – St Helena and Ascension

The main breeding site is Boatswainbird Island off Ascension, where there are about 1,200 pairs, whilst other sites on Ascension are being reoccupied after removal of cats, including one site with 20 pairs in 1996 (Rowlands 2001; White 2002). There is an adult population of some 200 birds at St Helena, where it breeds mainly along the north and northeast coasts (Rowlands *et al.* 1998). This population also breeds further west on islands off Brazil, but the breeding population occurring in the AEWA region is around 1,300 pairs or 4,000 individuals. McCulloch (2004) indicates that this species has recently become scarce at St Helena and may have stopped breeding for a time, its decline probably due to disturbance and predation, whilst its existence on the main island of Ascension is also threatened. The overall trend is probably therefore a

decline.

b. *melanops* – Western Indian Ocean, Red Sea and Gulf of Aden

The race *melanops* breeds across the western Indian Ocean, with highest numbers in Seychelles, where there are 5,000-6,000 pairs on Cosmoledo, 3,000 pairs on Boudeuse and a few pairs on Desneuefs (Skerrett *et al.* 2001). It also used to breed on several other islands, and local extinctions have been caused largely by habitat destruction and direct exploitation by man (Skerrett *et al.* 2001). The Masked Booby breeds on M'Chaco islet off Mwali in the Comoros, where the highest count given by Louette (1988) is of 178 birds. This probably represents a population of around 50-100 pairs. In the outer isles of Mauritius, there are around 50 pairs on Serpent Island and 200 pairs on Ile du Nord of the Cardagos Carajos Shoals (Safford 2001). There are 200-250 birds at Tromelin, a coralline island some 400km east of northern Madagascar (Le Corre & Safford 2001). Closer to the African continent, this booby is also found on Latham Island of Tanzania, where there may be around 1,500 birds (Baker & Baker 2002). The total population of the Western Indian Ocean is thus around 9,000-10,050 pairs. The population appears to be increasing at Tromelin (Le Corre & Safford 2001) but is overall in decline, notably in Seychelles (Skerrett *et al.* 2001).

Further north, there are breeding colonies also in the Gulf of Aden and in the Red Sea. In the Red Sea, there are about 48 breeding pairs on the rocky Abu Ali islands of Yemen (Al-Saghier 2002). In the Gulf of Aden, it breeds at Socotra and on Mait (or Maydh) Island of Somaliland, with combined estimates of 1,200-1500 pairs (PERSGA/GEF 2003). There is a count of 240 nests from Maydh Island during the month of November (Ash & Miskell 1998). The total estimate for the Gulf of Aden and Red Sea is therefore 1,250-1,550 pairs or 3,750-4,650 birds. PERSGA/GEF (2003) consider that these colonies are in rapid decline and in danger of extinction. The overall population estimate is 10,250-11,600 birds, equivalent to 30,750- 34,800, rounded to 30,000-35,000.

In addition to birds found in the western Indian Ocean, the Red Sea and the Gulf of Aden, this species also breeds on Great Chagos Bank in the Chagos Archipelago (Sheppard & Topp, undated), where the RSPB (2007) estimated 171 pairs to occur in 2006.

### **Brown Booby *Sula leucogaster***

This species has not been proposed for inclusion in the AEWA Action Plan. However, there are two populations occurring in the Agreement Area, which could be good candidates for inclusion. These are *leucogaster* in the Atlantic and *plotus* in the western Indian Ocean. Although Brown Booby adults are generally resident, immature birds wander widely, undoubtedly crossing international borders.

a. *leucogaster* – Eastern and mid Atlantic

Brown Booby breeds on Cape Verde, Alcatraz off Guinea, the Gulf of Guinea islands, St Helena and Ascension. There are less than 1,000 pairs in Cape Verde, with colonies on Santiago, Brava, Ilheu de Rombo, Raso and Boavista, though these colonies are under heavy pressure from human depredation (Hazevoet 1995). There are about 3,000 pairs on Guinea's offshore island of Alcatraz (Altenburg & Kamp 1991). Monterio *et al.* (1997) estimated 1,680-3,360 pairs from five islets of São Tomé and Príncipe, the majority on the Ilhas Tinhosas, the country's first Ramsar Site. Robins (1966) mentioned that each of the four southern islets of Annobón (Adams, Santarém, Escobár, Fernando Póo) had colonies of hundreds in May, so breeding presumably still occurs here. Brown Booby also breeds on St Helena and Ascension, though breeding may only be sporadic on St Helena. Seven pairs recently returned to the main island of Ascension after removal of cats (George & White 2003), whilst there are 700 pairs on nearby Boatswainbird Island (White 2002). The total population estimate for the region is about 7,250 pairs, equivalent to 21,750, rounded to 22,000. Although birds in Cape Verde are declining, the overall population is probably stable.

b. *plotus* – Western Indian Ocean, Red Sea and the Gulf of Aden

This is the rarest booby in Seychelles and most vulnerable, with about 60 pairs in Cosmoledo, where it is prone to predation by people and cats and disturbance; the species has been extirpated from several other islands (Skerrett *et al.* 2001). In Madagascar it is common in the vicinity of Nosy Be in the northwest, where it has recently begun nesting in the Mitsio archipelago, where there is a breeding population of some 300-500 birds and roosts of several hundred birds (Langrand 1990; ZICOMA 2001). Further north, there are widespread colonies along the Red Sea and the Gulf of Aden, with estimates of 13,234 pairs in Yemen (mostly on Socotra), 85 pairs on Egyptian islands in the Gulf of Suez and several breeding colonies in the Saudi Arabian Red Sea (PERSGA/GEF 2003). Brown Boobies also breed in their hundreds in the Dehalak Archipelago of Eritrea, occurring on several islands, including Harat, where 50 adults have been noted (Coulthard 2001a), and on the Sept Frères of Djibouti (Magin 2001). Altogether, there may be around 500 pairs in the western Indian Ocean and some 14,500 pairs in the Red Sea and Gulf of Aden, giving a total population estimate of 15,000 pairs or 45,000 birds. This estimate would be strengthened by improved data from Eritrea and Saudi Arabia in particular, whilst the presence of Brown Booby off Somaliland should also be investigated. The overall status is declining, given the alarming rate of decline in Seychelles, although other colonies may be increasing.

In addition, this population also includes 685 pairs in the Chagos Archipelago of the central Indian Ocean (RSPB 2007), though this island group is outwith the AEWA region.

### **Red-footed Booby *Sula sula***

This species has not been proposed for inclusion in the AEWA Action Plan. Two populations occur in the Agreement Area:

a. *sula* - South Atlantic

The South Atlantic population has declined to about 100 pairs, with only some 10 pairs on Boatswainbird Island of Ascension, whilst it has disappeared completely from St Helena (McCulloch 2004).

b. *rubripes* - Western Indian Ocean

There are about 25,000 pairs in Seychelles (Skerrett *et al.* 2001), 130-180 pairs on Tromelin and 2,800-3,800 pairs on Europa (Le Corre & Safford 2001), giving a total population of around 30,000 pairs (90,000 birds). Some colonies are in decline, though on Aldabra they are increasing.

### **Ascension Frigatebird *Fregata aquila***

This species is endemic to Ascension, where it now breeds only on Boatswainbird Island, although it used to occur in large numbers on the main island (McCulloch 2004). Recent estimates of the declining population range from 5,000-12,000 (McCulloch 2004; BirdLife International 2007). As the species ranges fairly widely in the tropical waters of the Atlantic, with records from West Africa (BirdLife International 2007), it could be considered for inclusion in the AEWA.

### **Magnificent Frigatebird *Fregata magnificens***

The only remaining population of Magnificent Frigatebird in the Eastern Atlantic is in Cape Verde, where a handful of birds still breed on the islets of Curral Velho and Baluarte off Boavista (Hazevoet 1995). This population has been separated as subspecies *lowei* on account of its large bill, though Hazevoet (1995) found no diagnostic characters in Cape Verde specimens. However, it appears that the population is separate from birds of the West Atlantic (Caribbean to Brazil), as birds are generally resident throughout the year in Cape Verde. The population probably numbers less than 10 birds (Hazevoet 1995). This population is currently not covered by the AEWA, but as it would appear to be a discrete population, and as it is recorded in offshore waters of Mauritania and Senegambia (Borrow & Demey 2001), it is a suitable candidate for further consideration. The population is in decline and may well disappear altogether from the Eastern Atlantic in coming years. The heightened pace of tourism development in Cape Verde, with many new infrastructures on Boavista, render the conservation of this unique population a high priority.

## Great Frigatebird *Fregata minor*

This species is widespread throughout tropical Pacific and Indian Oceans, also at Trinidad and Martin Vaz in the Atlantic (Harrison 1987). In the AEWA region it is represented by *aldabrensis* of the Western Indian Ocean, with breeding colonies on Aldabra, Europa, Cargados Carajos and formerly on Tromelin. There are 4,000 pairs on Malabar, Aldabra, with a further 10-20 pairs on Menai and South Island of Cosmoledo (Skerrett *et al.* 2001). The breeding population on Europa numbers 700-1,100 pairs, though the colony disappeared from Tromelin in the early 1980s (Le Corre & Safford 2001). Both Great Frigatebird and Lesser Frigatebird *F. ariel* have declined greatly on Cargados Carajos from populations of thousands in the 1950s. The total population is thus around 5,000 pairs, or 15,000 birds, though it may be higher if numbers on Cargados Carajos number more than a few hundred. The population is in decline, and several colonies have been eliminated, especially in Seychelles, where poaching has been a major threat, whilst tourism-related disturbance has also caused colonies to desert (Skerrett *et al.* 2001).

Further east, there are 164 pairs of Great Frigatebird in the Chagos Archipelago (RSPB 2007), outwith the AEWA region. These do not belong to *aldabrensis*.

## Lesser Frigatebird *Fregata ariel*

This frigatebird is widespread in the Indian Ocean and tropical western Pacific, with small numbers at Trinidad and Martin Vaz in the Atlantic (Harrison 1987). There is one population *iredalei* in the AEWA region, which occurs in the western Indian Ocean. It breeds only at Aldabra and Cargados Carajos. There are 6,000 pairs on Aldabra, where the population appears to be stable, although it used to also occur on Cosmoledo and possibly elsewhere in the Aldabra island group (Skerrett *et al.* 2001). Both Great Frigatebird and Lesser Frigatebird have declined greatly on Cargados Carajos from populations of thousands in the 1950s. The total population is likely to number about 6,500 pairs, equivalent of about 20,000 birds. Although the population has declined in the past, with extinctions on some islands and declines on Cargados Carajos, the colony on Aldabra appears to be reasonably secure, so the population may be considered presently stable.

Further east, there are 239 pairs of Lesser Frigatebird in the Chagos Archipelago (RSPB 2007), outwith the AEWA region. These do not belong to *iredalei*.

## Bridled Tern *Sterna anaethetus*

Wetlands International (2006) recognise eight discrete populations of Bridled Tern, of which three populations occur in the AEWA region:

### a. *melanoptera* – Western Africa

Dodman (2002) reviewed the status of this population, which centres on the Gulf of Guinea Islands of São Tomé and Príncipe and Annobón, whilst there is also a breeding colony at Mauritania's Banc d'Arguin and relatively recent small numbers in Senegal. Although far apart, these are treated as part of the same population. Breeding status is far from clear at São Tomé, Príncipe and the Ilhas Tinhosas, but there are regular records from around these islands, and breeding is likely (Jones & Tye 2006). At Annobón, a colony of 200 breeding pairs was recorded in 1959 on the islet of Tortuga, but does not appear to have been found since (Pérez del Val 2001; Jones & Tye 2006). In Senegal, there are 1-2 pairs regularly at Iles de la Madeleine, whilst there have also been breeding attempts at Langue de Barbarie. At the Banc d'Arguin, de Naurois (1969) reported some 1,200-1,800 pairs between 1959-1965, though by 1995 only 100 pairs were found (Gowthorpe *et al.* 1996). PNBA (1988) reported 440 pairs breeding from May to July 1984.

Rose & Scott (1997) gave an estimate of 4,500 based on Croxall *et al.* (1984). Dodman (2002) considered this too high, with a population decline apparent due to significant decreases at the Banc d'Arguin, and provided an estimate of 1,500 birds, based on 200 pairs at Annobón, about 200 at the Banc d'Arguin, with <100 elsewhere. The possibility of small overlooked breeding colonies elsewhere in West Africa should not be over-ruled.

b. *fuligula* – Red Sea, Persian Gulf, Arabian Sea and W India

Bridled Tern is abundant and widespread in the eastern Red Sea (Yemen and Saudi Arabia), where 130,000 pairs have been recorded, whilst 8,500 pairs have also been recorded at Suakin Archipelago in the Sudanese Red Sea, 500 pairs in the Egyptian Red Sea and 1,100 pairs in Socotra (PERSGA/GEF 2003). This species also breeds in the Gulf of Aden on islands of Somaliland, where hundreds of thousands of pairs have been reported (Archer & Godman 1937). Ash & Miskell (1998) noted 10,000 birds at one of these islands, Maydh Island, in the month of May, but no recent counts of breeding pairs have been made; (they consider this race to be *antarctica*). There are breeding colonies also in Eritrea's Dehalak Archipelago (Coulthard 2001b), and there are several colonies in the Arabian (Persian) Gulf. These include 25,000-27,000 pairs in Iran, 100 pairs in Bahrain, 2,000-2,500 birds in Kuwait, 15,500 pairs in Oman, 50 pairs in Qatar, 34,000 pairs on the Gulf Coral Islands of Saudi Arabia and at least 20,000 pairs in the United Arab Emirates (Scott 1995). Based on these data, Dodman (2006) gave an estimate of >750,000 birds, which was revised to 'D' (100,000-1,000,000) by Wetlands International (2006). This estimate is here revised to 750,000-1,050,000, which accounts for all breeding populations mentioned above, with the upper limit allowing for up to 100,000 pairs in Somaliland and up to 10,000 pairs in Eritrea. Given the lack of recent information from Somaliland, it is not possible to determine the overall status of this population. Birds of west India are not considered here, falling outwith the AEWA region.

c. *antarctica* – Western Indian Ocean

Breeding birds of the Kenya coast are thought to be of this population. A bird ringed in Seychelles was recovered from Pemba (Britton 1980), indicating at least some movement between the East African coast and the Indian Ocean islands. Britton (1980) gives 750 pairs for the Lamu Archipelago (Kiunga), with breeding in July-August each year. This species also breeds in some years at Whale Island in the Watamu Marine National Park (Bennun & Njoroge 1999). There are breeding records from the Bajan islands of southern Somalia, where 500 pairs have been recorded in the month of August (Ash & Miskell 1998).

In Seychelles, this species breeds in the granitic islands, with 600 pairs on Cousin (Burger *et al.* 1999), about 100 pairs on Aride, 1,000 pairs on Récif, with breeding records also from Cousine, Zavé, Booby, Mammelles, Ile Sèche and Bird Island (Skerrett *et al.* 2001). Bridled Tern is common in the Amirantes, though there are no breeding records except for small numbers on Desnoeufs (Skerrett *et al.* 2001), whilst it still breeds on rat-free islets of Cosmoledo (Mortimer & Constance 2000). Skerrett *et al.* (2001) also report of old colonies on Farquhar and Providence, and declines noted at Aride (from >1000 pairs in 1988 to <100 pairs in 1997). About 100 pairs breed on Nosy Mavony of the Iles Barren, west Madagascar (ZICOMA 2001). There are no breeding colonies in the Mascarenes (R. Safford, pers. comm.), whilst breeding status in the Iles Eparses is unclear. These colonies together give a total estimate for the Western Indian Ocean of some 3,600 pairs, but there are clearly some information gaps. A new estimate for the Western Indian Ocean is proposed of 10,000-15,000 birds.

Outside the AEWA region, breeding also occurs in the Andamans, and Chagos, where only 6 pairs were recorded in 2006 (RSPB 2007).

## **Sooty Tern *Sterna fuscata***

Two populations occur in the AEWA region, *fuscata* in the Atlantic and *nubilosa* in the Indian Ocean.

a. *fuscata* – Tropical South Atlantic islands and Gulf of Guinea islands

This population occurs widely in the non-breeding season along the West African coast from Mauritania to Cameroon, with breeding occurring in the Gulf of Guinea Islands. Further south, it also breeds on Ascension Island and Saint Helena. There is a large colony of around 100,000 pairs on the Tinhosas islands of Príncipe (Christy 2001). It probably also breeds on other islands of São Tomé and Príncipe and is known from Annobón (Jones & Tye 2006). Breeding has also been recorded in small numbers in the Sine Saloum delta and Langue de Barbarie of Senegal, where current breeding status is uncertain. No more than a few pairs ever seem to breed here. At Ascension, there were 194,000 pairs in 1997, with the main colonies found in the southwest of the island, occupying 9.14ha (Rowlands 2001). Breeding also occurs on the very small Boatswainbird Island just off Ascension and in northeast and southwest Saint Helena (Rowlands 2001). Based on these data, Dodman (2002) provided an estimate of 300,000 pairs (900,000 individuals), which

was adopted by Wetlands International (2002) and retained by Wetlands International (2006).

b. *nubilosa* – Gulf of Aden, coastal East Africa, western Indian Ocean

There are several races of *S. fuscata*, and the sub-specific status of birds in the Indian Ocean is not entirely clear. Harrison (1983) ascribes birds breeding on Jasiira Maydh (Mait Island), northern Somalia to sub-species *somaliensis*, whilst birds breeding here and in Seychelles have also been described as *fuscata*. However, there would seem to be a more general agreement that all birds from the Red Sea / Gulf of Aden, throughout the Indian Ocean and as far as South Japan in the north Pacific Ocean all belong to subspecies *nubilosa*. There may well be more than one population of *nubilosa*. Here, a summary is presented only of those birds occurring in the Western Indian Ocean and the Gulf of Aden / Red Sea, i.e. those occurring in the AEWA region.

There is no recent breeding information from Jasiira Maydh of northern Somalia, and the post-breeding movements of this colony are not clear. There is a large breeding population in Seychelles, where it is the most common seabird. Totals of island populations given by Skerrett *et al.* (2001) yield a total breeding population in Seychelles of some 2,950,000 pairs or 8,850,000 individuals. In Madagascar, 2,000 pairs were recorded on Nosy Fasy in July 1997, with a further 30 pairs on Nosy Foty, both islands in the Cape Anorontany archipelago (ZICOMA 2001). There are also 100,000 pairs on Iles du Lys in the Glorieuses Archipelago, 100,000 pairs on Juan de Nova and 500,000-1,000,000 pairs on the coralline island of Europa in the Mozambique Channel (Le Corre & Safford 2001). A further 250,000-500,000 pairs breed on Serpent Island, just north of Mauritius, 20,000 pairs in the Cargados Carajos shoals, whilst some 150 pairs were recorded in the Cocos and Sables islets of Rodrigues in 1998 (Safford 2001). This results in an additional number of around 1,500,000 pairs or 4,500,000 birds.

In East Africa, *S. fuscata* breeds in the Bajan Islands, southern Somalia, Kisite Island, southern Kenya, where there were around 20 pairs in 1997 (F. Ng'weno, *in litt.*) and on Latham Island, Tanzania, where there were 25,000-35,000 birds in 1989 (Baker & Baker 2002). There is in addition a breeding population on Chagos (outside the AEWA region), where there was a count of 82,208 pairs in 2006 (RSPB 2007). Sooty tern also breeds in small numbers in the Southern Indian Ocean at Ile Saint Paul and Amsterdam (Poillot & Salamolard 1999).

Based on these data, Dodman (2002) provided a total population estimate for the Western Indian Ocean and African coasts of 13,500,000 birds.

### **Brown Noddy *Anous stolidus***

Three populations occur in the AEWA region, though only one, *plumbeigularis*, is considered under the AEWA. The status of all three populations in the AEWA region is given below:

a. *stolidus* – South Atlantic and Gulf of Guinea islands

In the Gulf of Guinea, Christy (2001) gives a figure of 4,000-8,000 pairs for the Tinhosas Islands, though Monteiro *et al.* (1997) suggest 10,000-20,000 pairs. Breeding also takes place at São Tomé, including 200 pairs at Sete Pedras (Jones & Tye 2006) and Annobón, where there are 1,500 pairs (Pérez del Val 2001). There are also reports of several thousand birds from the southern islets of Annobón (Jones & Tye 2006). There is perhaps a total population in the Gulf of Guinea of 5,000-15,000 pairs, or 15,000-45,000 individuals. The stacks of Ascension support 500 pairs, whilst breeding also occurs in northeast and southwest St Helena and on Tristan Island, Inaccessible Island, the Nightingale Island Group and Gough Island, all in the Tristan da Cunha island group. Within the region there are most likely <100,000 birds, the population thus falling into category C (25,000-100,000).

b. *plumbeigularis* – Southern Red Sea and the Gulf of Aden

PERSGA/GEF (2003) give a population estimate of >30,000 breeding pairs in the southern Red Sea and the Gulf of Aden, including from colonies in Saudi Arabia, around 300 pairs in the Suakin Archipelago of Sudan and perhaps 10,000 pairs on Maydh Island of Somaliland. Ash & Miskell (1998) recorded 20,000 adults at Maydh in April 1979. Dodman (2002) gave an estimate of 25,000 pairs based on similar data, which was adopted by Wetlands International (2002) and retained by Wetlands International (2006).

c. *pileatus* – Western Indian Ocean

This is a widely distributed breeding bird in Seychelles, with colonies established on a number of islands, summarised by Skerrett *et al.* (2001) as being:

- Aride: about 8000 pairs
- Cousin: about 1000 pairs
- Cousine: about 900 pairs
- Bird: about 10,000 pairs
- African Banks: about 4000 pairs
- Marie-Louise: about 2000 pairs
- Etoile: about 1000 pairs
- Desnoeufs: several thousand pairs
- Farquhar: 10,000 pairs
- Cosmoledo: a few hundred pairs
- Aldabra: about 3500 pairs.

Skerrett *et al.* (2001) lists other breeding islands: Ile aux Vache Marine, Frégate, Ile Sèche, Mamelles, Récif, L'Ilot Frégate, Zavé, Booby, Coëtivy, Platte, Denis, Rémire, D'Arros, St Joseph Atoll, Desroches, Alphonse and Goëlettes. There would thus seem to be a minimum of 50,000 pairs (150,000 birds) in Seychelles.

In Madagascar, *A. stolidus* is reported from the Cape Anorontany archipelago in the north (ZICOMA 2001). There are some 100 pairs at Ile du Lys in the Glorieuses Archipelago (Le Corre & Safford 2001), some 10,000-100,000 pairs on Serpent Island, Mauritius, <1000 pairs on the Rodrigues islets and 4,500 pairs on Cargados Carajos shoals (Safford 2001). Brown Noddy also breeds on Réunion and on the Iles Glorieuses (Poillot & Salamolard 1999). In Eastern Africa, *A. stolidus* occurs on the Bajan islands in southern Somalia (Ash & Miskell 1998), and in Kenya in the Lamu Archipelago, where there are 'hundreds', on Whale Island, where it had bred, and on Kisite, where it may also breed (Britton 1980). It also breeds on Latham Island, Tanzania, where there were 10,000 adults in 1989 (Bregnballe *et al.* 1990).

The population in the Western Indian Ocean would appear to be in the order of 100,000-200,000 pairs, or 300,000-600,000 individuals. Outside the AEWA region, in the Chagos Archipelago, south of the Maldives, Symens in Sheppard & Seaward (1999) recorded 48,224 breeding pairs, though a much lower count of 6,433 pairs was made in 2006 (RSPB 2007).

### **Black Noddy *Anous minutus***

This population breeds on islands off Brazil (St Paul's Rocks, Fernando de Noronha and Trindade), the Gulf of Guinea Islands and Ascension and St Helena. In the Gulf of Guinea islands, there are some 10,000-20,000 pairs in the Tinhosas Islands (Christy 2001) and 13,500 pairs on Annobón (Pérez del Val 2001), although Pérez del Val (2001a) indicates that the population on Annobón is smaller than this figure, which dates from 1959, suggesting that this is a result of earlier over-estimates of breeding numbers. There were 5,000 pairs on the stacks of Ascension in 1990, as well as 5,000 on Boatswainbird Island, just off Ascension Island; breeding also occurs at the two IBAs of St Helena (Rowlands 2001).

The total population in the South and tropical Atlantic within the AEWA region is likely to be in the order of 30,000-50,000 pairs or 90,000-150,000 birds.

### **Lesser Noddy *Anous tenuirostris***

This population breeds in the Indian Ocean in Seychelles, Cargados Carajos, Mauritius, Chagos and the Maldives. Skerrett *et al.* (2001) list nine breeding islands in Seychelles, with a total breeding population in the order of 320,000 pairs or 960,000 birds. There is a colony of some 10,000-100,000 pairs on Serpent Island, just north of Mauritius, at least 4,000-6,000 pairs on the Rodrigues islets and 15,000 pairs on the Cargados Carajos shoals (Safford 2001). Based on these data, Dodman (2002) provided a population estimate for Africa of 1,050,000-1,350,000.

Outwith the AEWA region, Lesser Noddy also breeds in the Maldives, and in the Chagos Archipelago, where Symens in Sheppard & Seaward (1999) recorded 43,275 pairs (129,825 individuals), though only 2,682 pairs were counted in 2006 (RSPB2007).

### **White Tern *Gygis alba***

The race *candida* occurs in the Indian Ocean, though birds in Seychelles and Mascarenes have sometimes been ascribed to the race *monte*. Birds of the Indian Ocean are geographically isolated from the *candida* population that occurs from the southwestern central Pacific Islands to Marquesas. It is likely that the Seychelles and Mascarenes birds form a discrete population. White Terns can be found at their breeding islands throughout the year, but they also occur far from land in Indian Ocean waters.

White or Fairy Tern breeds throughout Seychelles. On Aride, there are 1,700 pairs during the southeast monsoon and 5,600 pairs during the northwest monsoon (Bowler & Hunter 2000). Numbers also vary on Cousin from 1,200-3,600 pairs, on Cousine from 1,000-1,500 pairs, on Frégate from 2,000-4,000 pairs, on St. François from 1,000-1,500 pairs, on Marie-Louise from 2,000-4,000 pairs and 100-400 pairs on Aldabra (Skerrett *et al.* 2001). However, as this species tends to breed year-round, total numbers breeding per island are likely to be significantly higher. About 5,000 pairs breed on Cargados Carajos shoals, with some 20 pairs on Cocos and Sables of the Rodrigues islets (Safford 2001). These data suggest a breeding population of around 30,000 pairs, rounded to 100,000 individuals for the Western Indian Ocean (Seychelles and Mascarenes).

Outwith the AEWA region, breeding also occurs on Chagos, where 603 pairs were counted in 2006 (RSPB 2007).

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