AGREEMENT ON THE CONSERVATION OF AFRICAN-EURASIAN MIGRATORY WATERBIRDS

Doc: AEWA/MOP 6.14
Agenda item: 15
Original: English

Date: 11 August 2015

6th SESSION OF THE MEETING OF THE PARTIES

9 - 14 November 2015, Bonn, Germany

"Making flyway conservation happen"

REPORT ON THE CONSERVATION STATUS OF MIGRATORY WATERBIRDS IN THE AGREEMENT AREA

Sixth Edition

Introduction

Article IV of the Agreement introduces the AEWA Action Plan (Annex 3 to the Agreement). Paragraph 7.4 of the AEWA Action Plan requires the Agreement Secretariat, in coordination with the Technical Committee and the Parties, to prepare a series of seven international reviews on the implementation of the Action Plan. These reviews shall be prepared at different frequencies, as per paragraph 7.5, and shall be submitted to the Meeting for the Parties (MOP) for consideration.

Amongst these seven international reviews is the *Report on the Conservation Status of Migratory Waterbirds in the Agreement Area* (aka Conservation Status Report - CSR). This review has been produced regularly and submitted to each session of MOP so far.

In accordance with paragraph 7.5, which determines the frequency of each international review, this report shall be produced for each session of MOP. The 6th edition of the Report on the conservation status of migratory waterbirds in the Agreement area (CSR6) is being submitted to the 6th Session of the Meeting of the Parties as per item 7.4 (a) of the Agreement's Action Plan.

The Secretariat contracted Wetlands International to produce CSR6 in October 2013. The Technical Committee examined the final draft of the report at its 12th Meeting in March 2015 and approved it.

Conclusions from this report served as a basis, *inter alia*, for proposing amendments to Table 1 of the AEWA Action Plan (see document AEWA/MOP 6.22 and draft resolution AEWA/MOP6 DR1).

Action requested from the Meeting of the Parties

The Meeting of the Parties is invited to note the 6th edition of the *Report on the Conservation Status of Migratory Waterbirds in the Agreement Area (CSR6)* and take its conclusions and recommendations into account in the decision-making process.

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

Sixth Edition

March 2015

Report prepared by Wetlands International

Szabolcs Nagy, Stephan Flink & Tom Langendoen

with contributions from

Marc van Roomen, Erik van Winden, Per-Arvid Berglund, Jonas Hentati-Sundberg, Andrea Angel, Ross Wanless, Stuart Butchart, Tim Dodman

co-funded by

The Federal Office for the Environment (FOEN) of Switzerland

Table of contents

Executive Summary 4
Acknowledgements 7
Introduction 8
Part 1. Taxonomic and geographic patterns of migratory waterbird populations included in the Agreement 9
    Taxonomic distribution of waterbird populations 9
Geographic distribution of waterbird populations 10
Part 2. Population sizes 11
    Quality of population estimates 11
    Populations with no population estimates 12
    Quality of population size estimates by families 13
    Geographic pattern of population size estimates 14
    Changes in quality of population size estimates 15
    Populations by size 16
Part 3. Population trends 17
    Quality of trend estimates 17
    Geographic patterns in quality of trend estimates 18
    Taxonomic patterns of the knowledge of population trends 19
    Patterns in population trends 20
    Patterns of population trends by taxonomic groups 21
    Patterns in trends by geographic regions 22
    Patterns in significant long-term decline 23
Part 4. Threats to waterbird species in the AEWA region 24
Part 5. Species of global conservation concern 24
    Red List status of AEWA species 24
    Geographic patterns in the Red List status of AEWA populations 26
Part 6. Progress towards the targets set in the AEWA Strategic Plan 27

Annex 1. Population sizes and trends of waterbird species included in the Agreement 31
Annex 2. Report on the status and trends of Red Listed AEWA species 111
Annex 3. List of contributors to the IWC 123

Executive Summary

This is the sixth edition of the AEWA Conservation Status Review allowing an increasingly long-term view of the changing status of the migratory waterbird populations listed on Table 1 of the AEWA Action Plan.

The key conclusions from this assessment are:

- The conservation status of many waterbird populations (particularly of globally threatened and near threatened ones) continue to deteriorate, in some cases rapidly. Such declines are occurring throughout the Agreement area, but particularly higher in areas where there are fewer contracting parties and where knowledge of the status of waterbirds and key sites remains very poor;
- On the other hand, the conservation status of waterbirds is improving where concerted conservation measures are taken, where their key sites are protected and their exploitation is well managed;
- Results suggests that better monitoring leads to the designation of a larger number of protected areas and this leads to better conservation status of waterbirds;
- It is encouraging that the knowledge of the status of waterbirds and their key sites has significantly improved in areas where active investment and exchange of experience has taken place (such as North and West Africa in the last triennium);
- Accordingly, there is an urgent need for recruiting more Contracting Parties in West Asia and in Central, Eastern and Southern Africa as well as for more intense implementation of the Agreement by all Contracting Parties to address the increasing pressure on migratory waterbirds arising from ever growing environmental change.

Status of knowledge

The status of knowledge has improved substantially during the last three years, particularly in the East Atlantic Flyway thanks to the joint efforts by the Conserving Migratory Birds in West Africa project and the Wadden Sea Flyway Initiative. The number of populations whose international status is being assessed with regular monitoring increased from 102 to 180, i.e. by 75%.

This represents 32% of all AEWA listed populations. However, 28% of the AEWA populations have no population trend estimates and 38% of them have poor trend estimates. The majority of the populations with no trend estimates are from the Afrotropic biogeographical region (63 populations, i.e. 35%), the West Asian-East African Flyway (38 populations, i.e. 57%).

Most of the population size estimates are based on some sort of monitoring but estimates are also derived using expert opinion rather than using statistically representative sampling or full censuses. Knowledge of the status of waterbird populations is especially poor in West Asia and in the Afrotropical region, with the exception of Southern Africa and the Atlantic Coast. In 17 out of 26 waterbird families (73%) trend estimates do not exist for some species or are based on only partial information.

Recommended actions:

- To develop AEWA Guidelines on adequate monitoring schemes for the populations listed on Table 1 of the AEWA Action Plan to assist Range States in gathering compatible data for international status assessments;

- To develop special schemes for species that cannot be effectively monitored through generic schemes. As a priority, review the status of monitoring of colonial breeding water- and seabirds, establish dataflow to routinely contribute to future editions of the AEWA Conservation Status Report and develop plan to establish a system to adequately monitor the population size and trend of colonially breeding birds across the Agreement area;

- Contracting Parties shall develop and maintain adequate waterbird monitoring schemes following AEWA guidelines;

- A funding scheme should be created to support low-income Contracting Parties in implementing adequate waterbird monitoring programmes that feed into international schemes.

Trends

Of the 376 populations with trend information, 36% are declining. This means that 46% more populations are declining than increasing. Consequently, the overall trend of the waterbird populations listed in Table 1 of the AEWA Action Plans is negative, but there is a slight improvement. The proportion of declining populations has declined from 42% in 1999 to 38% in the 2012 assessment and again to 36% in 2014.

Since the last assessment, the status of 193 populations has improved and, in the case of 142 populations, it has worsened. The highest proportion of populations decreasing in the last 10 years was recorded along the West Asian-East African Flyway, where more than half of all populations are declining. However, the highest proportion of populations with significant long-term decline was recorded along the Black Sea-Mediterranean and East Atlantic flyways.

Recommended actions:

- Continue the Wadden Sea Flyway Initiative, the Adriatic Flyway Programme and the Mediterranean Waterbird Monitoring Programme;

- Develop capacity building programmes similar to the Wadden Sea Flyway Initiative in the Black Sea region, along the West Asian-East African flyways and the Sahel Zone;

- Make concerted efforts to expand the Agreement along the West Asian-East African flyway.

Indicators:

Nine AEWA indicators of effectiveness from the AEWA Strategic Plan 2009-2017 were assessed based on the information generated for this report. Only one, 3.1.2, i.e. the requirement for a '*50% increase of species/ populations whose international status is being assessed with regular monitoring data'*, was achieved. In three cases, some progress was made towards the target, but it was not achieved, and in the case of five indicators, negative changes were recorded.

Progress towards the targets of the Strategic Plan was made in the case of Goal Indicator 3, i.e. at least 75% of the AEWA waterbird populations have a positive trend (growing or stable), where the number of populations with such a trend has increased to 64%.

This overall improvement was also reflected in Goal Indicator 4, i.e. overall status of indicator species has improved, as measured by the Waterbird Indicator, which has increased from -0.1363 in 2008 to -0.1144 in 2014. Negative changes in the indicators of effectiveness are partly related to an increasing number of

globally threatened and near threatened species, increasing number of populations with significant long-term decline and lower population size estimates.

Recommended actions:

- Intensify the implementation of the AEWA Single and Multi Species Action Plans;
- Improve protection and adequate management of nationally and internationally important areas and other habitats important for waterbirds;
- Improve sustainable management of waterbird populations;
- Reduce unnecessary mortality of waterbirds by implementing the relevant AEWA guidelines.

Acknowledgements

The 6th edition of the *Report on the Conservation Status of Migratory Waterbirds in the Agreement Area* is the result of a collaborative effort by Wetlands International, BirdLife International, SOVON, and the CAFF CBird Group. Their status assessments are available on the website of Wetlands International[1] and the Red List assessment of AEWA listed species prepared by BirdLife International is attached as Annex 2 to this report.

Updated population estimates benefitted substantially from the population and trend data provided by the EU Member States in the frame of their reporting under Article 12 of the EU Birds Directive and in case of European countries outside of the EU by BirdLife partner organisations in the frame of the European Red List of Birds Project funded by the European Commission. We are grateful to Christina Ieronymidou and Rob Pople of BirdLife International for making the data available to us. The Pan-European Common Bird Monitoring Scheme (PECMBS[2]) has provided breeding trend data on some abundant waterbird species. Population size and trend estimates were greatly improved by the enhanced survey efforts supported through the Mediterranean Waterbirds Project[3] in North Africa, the Conserving Migratory Birds in West Africa Project[4] together with the Wadden Sea Flyway Initiative[5] in West Africa and the Adriatic Flyway Project[6] in the north-east Adriatic.

The African-Eurasian Waterbird Census, as the flyway level implementation of the International Waterbird Census, is one of the most important monitoring schemes that contributed data to this and the above-mentioned assessments. Our special thanks go to the c. 20,000 observers who collected data from more than 17,000 sites in the AEWA region and the national IWC coordinators (Annex 3). We are also grateful to the members of the Strategic Working Group of the African-Eurasian Waterbird Monitoring Partnership[7] who provided useful strategic guidance on the development of waterbird monitoring along the flyway.

We are grateful to the financial support for data management provided by the Association of Members of Wetlands International and for the flyway level coordination of the African-Eurasian Waterbird Census by the Swiss Federal Office for the Environment, the UK Department for Environment, Food & Rural Affairs, the French Ministry of Ecology, Sustainable Development and Energy as well as by the EU LIFE+ NGO Operational Grant and also appreciate the funding provided by a wide range of organisations for waterbird monitoring nationally and regionally.

The text and the status assessments were greatly improved by comments and other assistance from Anne-Laure Brochet, Pierre Defos du Rau, Clémence Deschamps, Tony Fox, Matthieu Guillemain, Richard Hearn, Colette Hall, Jos Hooijmeijer, Kees Koffijberg, Lukasz Lawicki, Aleksi Lehikoinen, Jesper Madsen, Alexander Mischenko, Jean-Yves Mondain-Monval, Johan Mooij, Kerryn Morrison, Mohammed Shobrak, David Stroud, Eileen Rees, Pavel Tomkovich and Patrick Triplet.

1 http://www.wetlands.org/AfricanEurasianWaterbirdCensus/Outputs/CSR6BackgroundDocuments/tabid/3664/Default.aspx

2 http://www.ebcc.info/pecbm.html

3 http://www.medwaterbirds.net/

4 http://www.birdlife.org/africa/projects/conservation-migratory-birds-cmb

5 http://www.waddensea-secretariat.org/management/projects/wadden-sea-flyway-initiative-wsfi

6 http://www.euronatur.org/Adriatic-Flyway.937.0.html

7 http://www.wetlands.org/AfricanEurasianWaterbirdCensus/WaterbirdMonitoringPartnership/tabid/2789/Default.aspx

Introduction

Article IV of the Agreement text introduces the AEWA Action Plan, which is attached as Annex 3 to the Agreement. Paragraph 7.4 of the AEWA Action Plan requires the Agreement Secretariat in coordination with the Technical Committee and the Parties to prepare a series of seven international reviews on the implementation of the Action Plan. These reviews shall be prepared at different frequencies, as per paragraph 7.5, and shall be submitted to the Meeting of the Parties (MOP) for consideration.

Amongst these seven international reviews is the Report on the Conservation Status of Migratory Waterbirds in the Agreement Area (aka Conservation Status Report - CSR). This review has been regularly produced and submitted to each session of MOP so far[8]. The last two editions follow an enhanced format with increased analytical content.

Wetlands International was contracted by the UNEP/AEWA Secretariat in October 2013 to produce the 6th edition of the Conservation Status Report. In turn, Wetlands International subcontracted BirdLife International to assess the Red List status of the AEWA species, Andrea Angel, on behalf of the Global Seabird Group of BirdLife International, to assess the status of 'tropical' seabirds, Per-Arvid Berglund Jonas Hentati Sundberg, on behalf of the CAFF CBird Group, to assess the status of 'northern' seabirds. The Rubicon Foundation, Tim Dodman and SOVON, Dutch Centre for Field Ornithology led the assessment of the status of other populations.

Executive summary: This section includes the key conclusions of the report concerning the available knowledge about the status of waterbird populations, the threats affecting them and the geographic areas that deserve special attention because of the high number or proportion of declining populations. It also contains a summary of the key policy relevant recommendations.

Part 1: Summarizes the taxonomic and geographic patterns of waterbird populations included into the Agreement.

Part 2: Summarizes the information concerning population size estimates and their taxonomic and geographic patterns.

Part 3: Summarizes the information concerning population trends, their patterns by taxonomic groups and geographic areas. No new information is available on habitats, thus, the section from CSR5 is not repeated in this report.

Part 4: No comprehensively updated information is available on threats affecting the species listed on Annex 2 of the Agreement, therefore no new analysis of threats has been performed. Part 4 from CSR5 is not repeated in this report, but can be accessed online here.

Part 5: Summarizes the Red List status information for the species listed on Annex 2 of the Agreement.

Part 6: Reports the current status of the AEWA indicators against the 2008 baseline.

Annex 1: Contains the table documenting the population sizes and trends of AEWA-listed waterbird populations. The same information is available on the Waterbird Population Estimates Portal. Instructions on how to access the data and additional background documents can be found here.

Annex 2: Red List status assessment of AEWA populations produced by BirdLife International in April 2014.

Annex 3: List of national IWC Coordinators

[8] Its five previous editions of the CSR are available on the AEWA web site under Meeting of the Parties: http://www.unep-aewa.org/en/meetings/meetings-of-parties

Part 1. Taxonomic and geographic patterns of migratory waterbird populations included in the Agreement

Taxonomic distribution of waterbird populations

This report allocated species to families according to the taxonomy used in the checklist of BirdLife International[9].

The Agreement includes 555 populations of 255 species belonging to 26 families (penguins *Spheniscidae*, loons or divers *Gaviidae*, grebes *Podicipedidae*, tropicbirds *Phaethonitidae*, pelicans *Pelicanidae*, gannets and boobies *Sulidae*, cormorants *Phalacrocoracidae*, frigatebirds *Fregatidae*, herons and egrets *Ardeidae*, storks *Ciconiidae*, shoebill *Balaenicipitidae*, ibises and spoonbills *Therskiornithidae*, flamingos *Phoenicopteridae*, ducks, geese and swans *Anatidae*, cranes *Gruidae*, rails, crakes and allies *Rallidae*, crab plover *Dromadidae*, stilts and avocets *Recurvirostridae*, oystercatchers *Haematopodidae*, thick-knees *Burhinidae*, coursers and pratincoles *Glareolidae*, plovers *Charadriidae*, sandpipers and allies *Scolopacidae*, skuas and jaegers *Stercorariidae*, gulls and terns *Laridae* as well as auks *Alcidae*).

The vast majority of populations belong to the families of ducks, geese and swans (24%), gulls and terns (16%) and to the sandpipers and allies (13%, Figure 1).

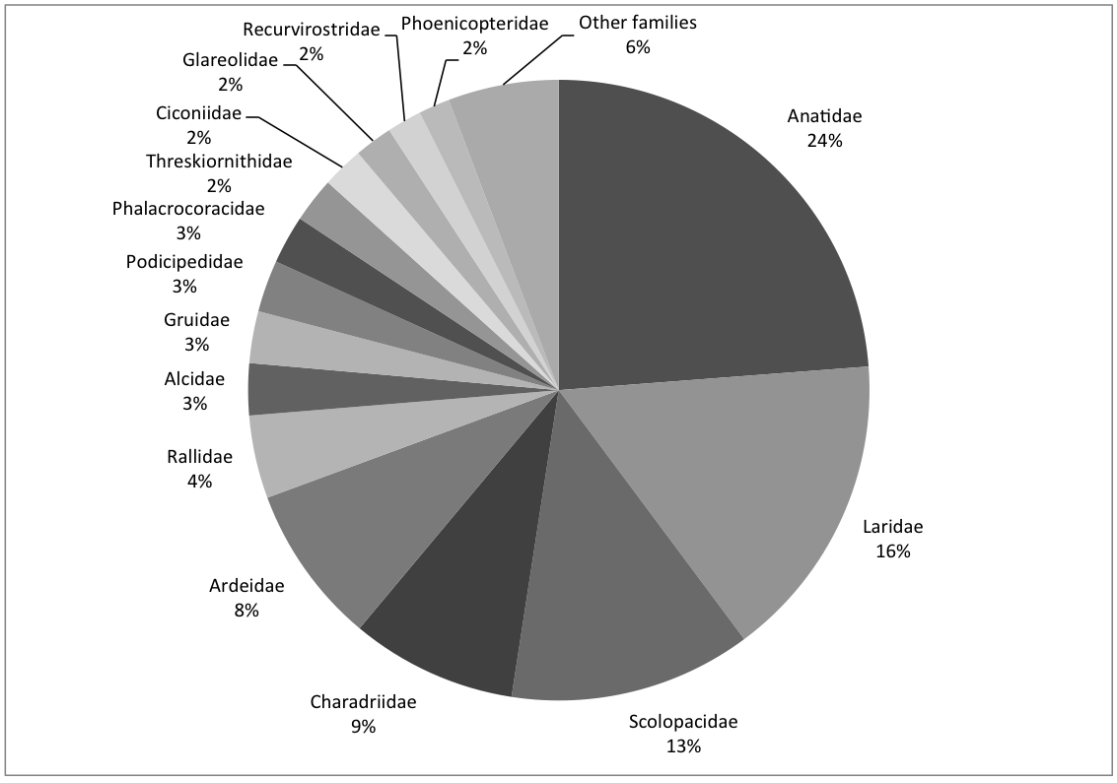

Figure 1. Taxonomic composition of waterbird populations included into the AEWA

[9] http://www.birdlife.org/datazone/info/taxonomy

Geographic distribution of waterbird populations

The earlier editions of the Conservation Status Report have assessed the geographic patterns of waterbird populations by the Ramsar regions of Africa, Asia and Europe. To overcome the analytical problem caused by the fact that the majority of waterbird populations belong to multiple regions, the CSR5 introduced a new geographic classification which is based on (a) the WWF terrestrial ecoregions for dispersive and short distance migrant populations and (b) on the wader/shorebird flyways for long-distance migrants (Figure 2). Populations were allocated only to a biogeographic region or a flyway that best overlaps with their distribution and this allocation was updated during the production of the 5th edition of the Waterbird Population Estimates.

a) Biogeographic regions

b) Flyways

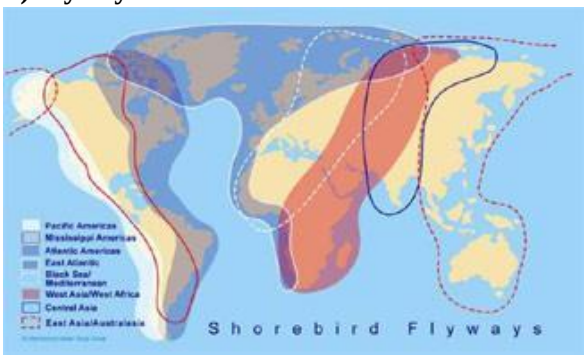

Figure 2. Geographic definitions used in this report

Most AEWA populations (70%) are restricted to either to the Western Palearctic (38%) or to the Afrotropic (32%) ecoregions. 12% belongs to the West Asian - East African, 8% to the East Atlantic, 8% to the Black Sea - Mediterranean and 2% to the Central Asian flyway (Figure 3).

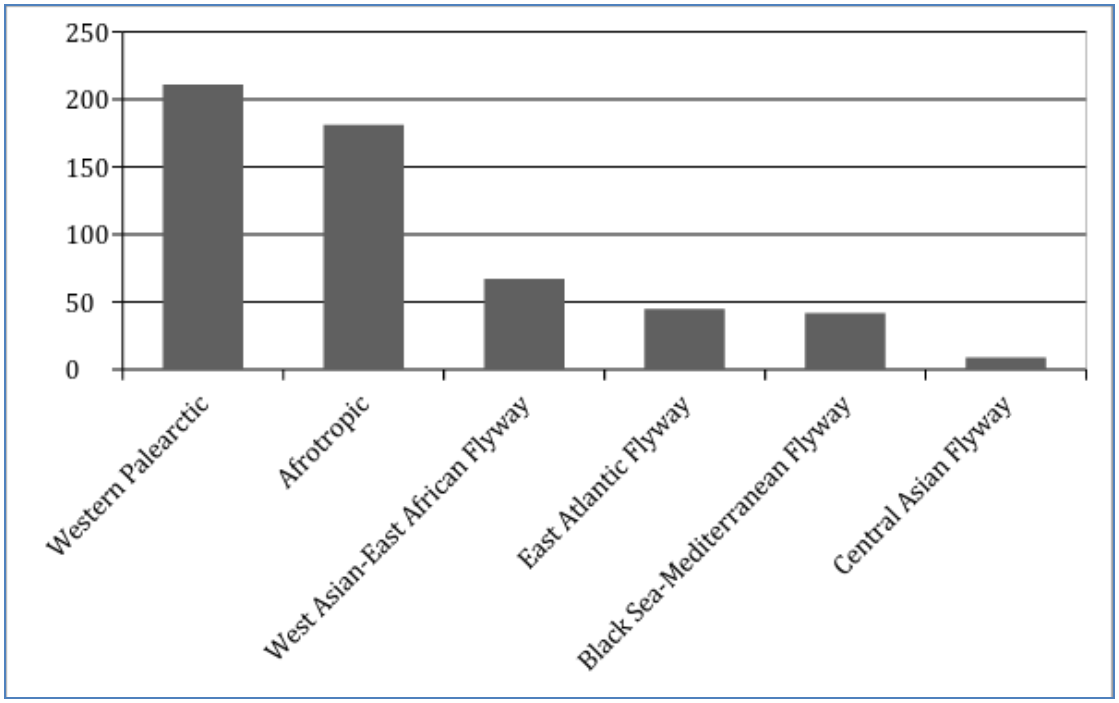

Figure 3. Distribution of waterbird populations covered by the AEWA according to their migration patterns

Part 2. Population sizes

Quality of population estimates

The quality of population estimates was assessed following the principles of the categories developed by the International Wader Study Group to assess the quality of trend estimates for waders. Four categories were identified.

1. No estimate: No population estimate is available;
2. Best guess: Population estimate is only possible in letter-coded ranges (i.e. A: 1-10,000, B: 10,000-25,000 individuals, etc. as applied in the Waterbird Population Estimates books);
3. Expert opinion: Population estimate is based on incomplete survey and monitoring data and population size has been involved employing some expert opinion for extrapolating from this data with more accuracy than the letter codes;
4. Census based: Population estimate is based on almost complete census or statistically adequate sampling.

The majority of the population estimates are based on counts, but extrapolated using expert opinion instead of any formal statistical procedures. Of the population estimates, 12% are based on comprehensive censuses or were derived using statistical procedures. This group consists of either localised goose or swan populations in Northwest Europe or concerns highly localised species subject to intensive conservation efforts (e.g. Northern Bald Ibis). Overall, 72% of the population estimates are based on surveys. Population estimates for 26% of the AEWA populations are only possible in broad ranges such as 1-25,000, 25,000-100,000, etc. (Figure 4).

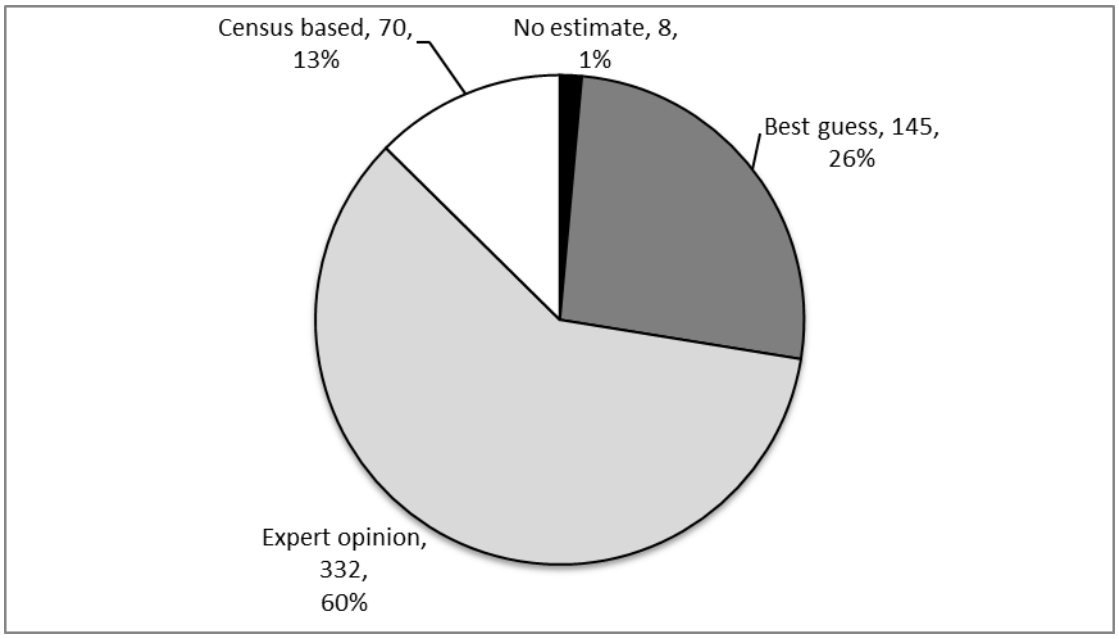

Figure 4. Quality of population size estimates (number of populations and percentage of all populations)

Populations with no population estimates

Some population size estimates are now available for 98% of the AEWA populations. Table 1 lists those populations with no population estimates. Since the previous edition, estimates were made for four populations: Jack Snipe *Lymnocryptes minimus*, Western Siberia/SW Asia & NE Africa; African Crake *Crecopsis egregia*, Sub-Saharan Africa; Black-throated Diver *Gavia arctica suschkini*, Central Siberia/Caspian and Heuglin's Gull *Larus heuglini*, NE Europe & W Siberia/SW Asia & NE Africa. In comparison, only 75% of the populations covered by the Agreement at the time had population estimate in the first report.

Table 1. Populations with no size estimates

Species	Sub-species	Population
Buff-spoted Flufftail	*Sarothrura elegans*	NE Eastern & Southern Africa
Buff-spoted Flufftail	*Sarothrura elegans reichenovi*	S West Africa to Central Africa
Water Rail	*Rallus aquaticus korejewi*	Western Siberia/South-west Asia
African Rail	*Rallus caerulescens*	Southern & Eastern Africa
Eurasian Golden Plover	*Pluvialis apricaria altifrons*	Northern Siberia/Caspian & Asia Minor
Little Ringed Plover	*Charadrius dubius curonicus*	Western Siberia/South-west Asia (Caspian)
Eurasian Woodcock	*Scolopax rusticola*	Western Siberia/South-west Asia (Caspian)
Heuglin's Gull	*Larus (heuglini) barabensis*	South-west Siberia/South-west Asia

These populations lack knowledge about their size for one or more of the following reasons:

a) cryptic species, e.g. rails or snipes;
b) difficult to separate from other species or populations on the field, e.g. Heuglin's Gull (*Larus heuglini*),
c) occur in the West Asia - East Africa flyway.

Quality of population size estimates by families

The larger families with the highest percentage of highly uncertain population estimates include divers *Gaviidae*, rails *Rallidae*, pratincoles *Glareolidae* and plovers *Charadriidae.* These populations tend to have a rather dispersed distribution and occur in habitat types poorly covered by waterbird monitoring schemes.

On the other hand, the larger families with better known population sizes include ducks, geese and swans *Anatidae*, grebes *Podicipedidae*, cormorants *Phalacrocoracidae*, auks *Alcidae*, colonially nesting seabirds *Fregatidae*, gulls and terns *Laridae*, *Phaethonidae, Sulidae*, storks *Ciconiidae*, cranes *Gruidae* and Flamingos *Phoenicopteridae*.

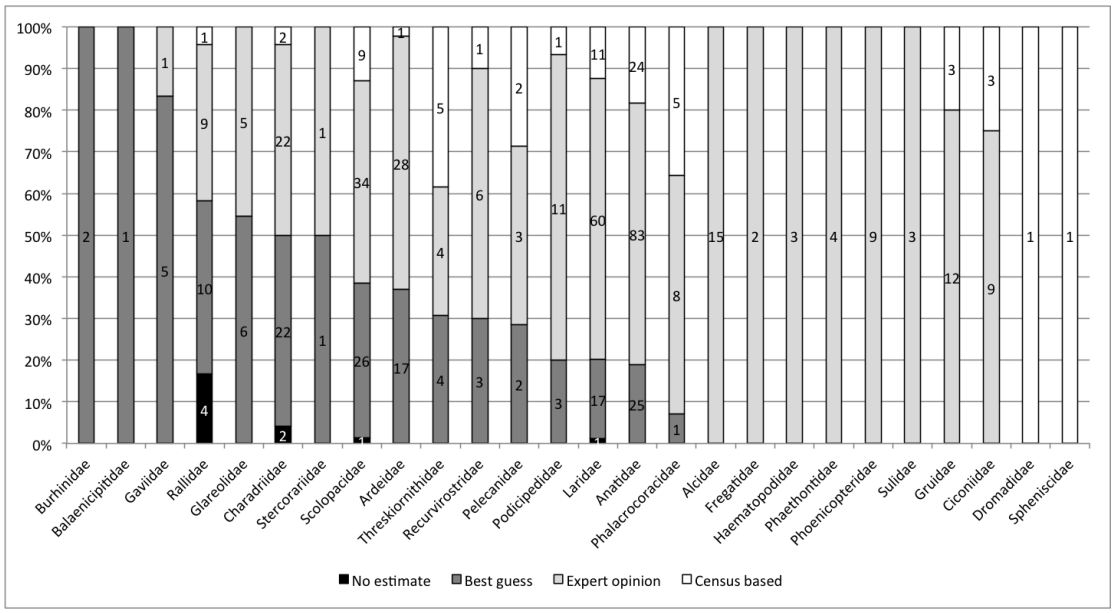

Figure 5. Quality of population estimates by families. (Numbers are the number of populations within each family).

Geographic pattern of population size estimates

The quality of the population estimates is best in the East Atlantic and Western Palearctic, while the worst is in the West Asia-East Africa and the Central Asian flyways (Figure 6). This reflects the intensity of monitoring activities in these regions.

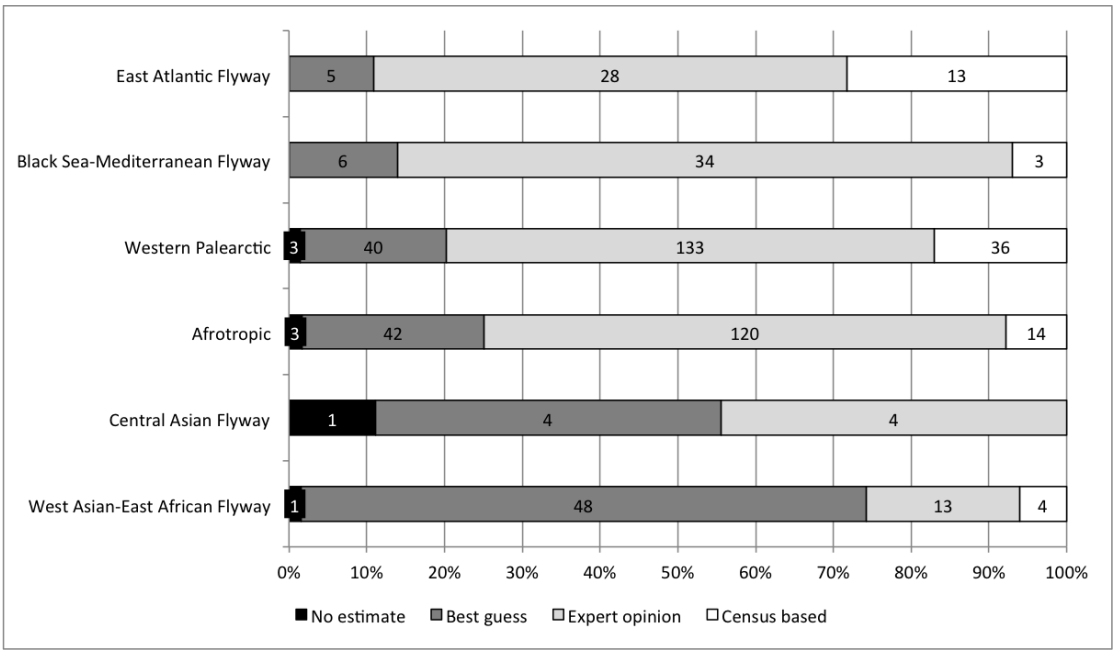

Figure 6. The quality of population size estimates by flyways. (Numbers are the number of populations within each category).

Changes in quality of population size estimates

The quality of 79 population estimates (14%) improved, 426 (77%) remained the same (Table 2). The quality of population size estimates has increased most in the East Atlantic flyway (by 26%) as the result of the data mobilisation and survey activities organised under the framework of the Wadden Sea Flyway Initiative in collaboration with the Conservation of Migratory Birds in West Africa Project (Figure 7).

Table 2. Changes in quality of population size estimates between the previous and current report

	Current report				
Previous report	No estimate	Best guess	Expert opinion	Census based	Grand Total
No estimate	8	4			12
Best guess		103	32	4	139
Expert opinion		38	288	39	365
Census based			12	27	39
Grand Total	8	145	332	70	555

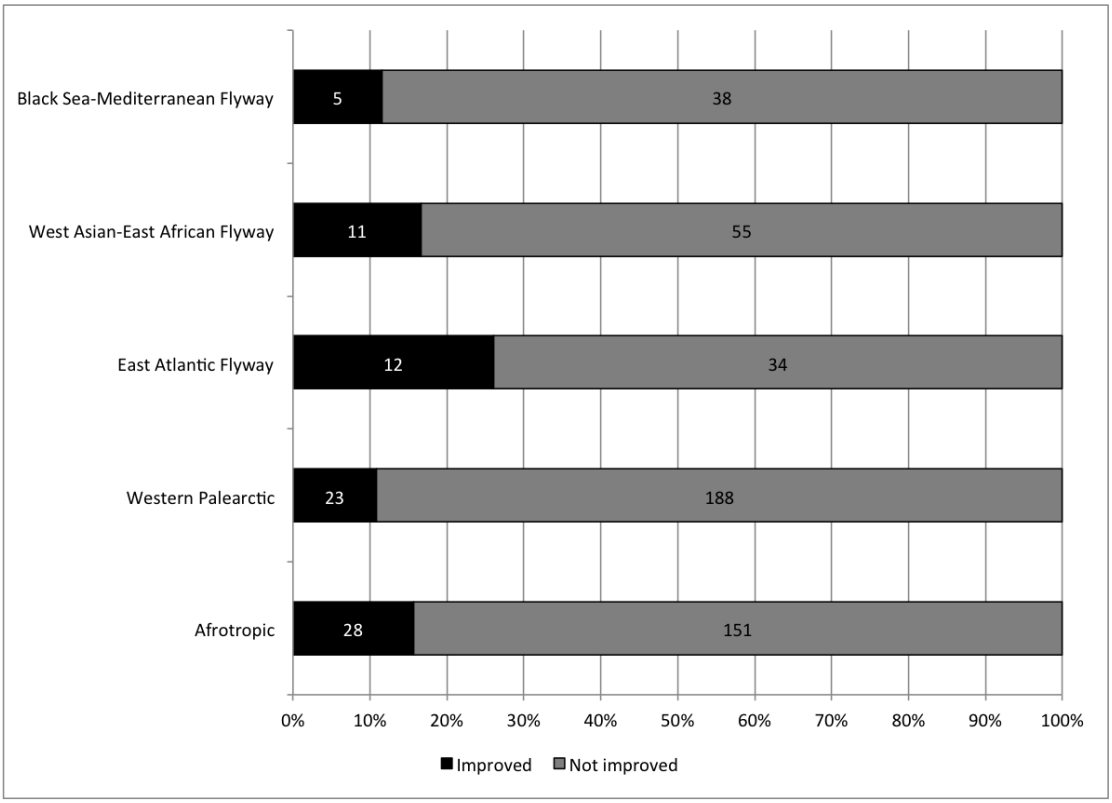

Figure 7. Proportion and number of populations with improved quality score for population size estimates

Populations by size

The same classes are used to summarise sizes of AEWA populations as in previous editions of the Conservation Status Report. These correspond to the criteria listing populations in categories A1c, A2, A3, B1, B2 and C1, apart from the population size class over 100,000, which has been split into two: one for 100,001 -1,000,000 and another one over 1,000,000.

Only 56 populations (10% of the AEWA populations with size estimates) count more than 1 million individuals. The size of most populations (34%) is between 100,001 and 1,000,000 individuals, whilst 159 (29%) populations have between 25,001 and 100,000 individuals. The size of 56 populations is estimated to be between 10,001 and 25,000, i.e. they qualify for Category 2 in Column A, and 92 populations (17%) have less than 10,000 individuals, i.e. would qualify for Category 1c in Column A (Figure 8).

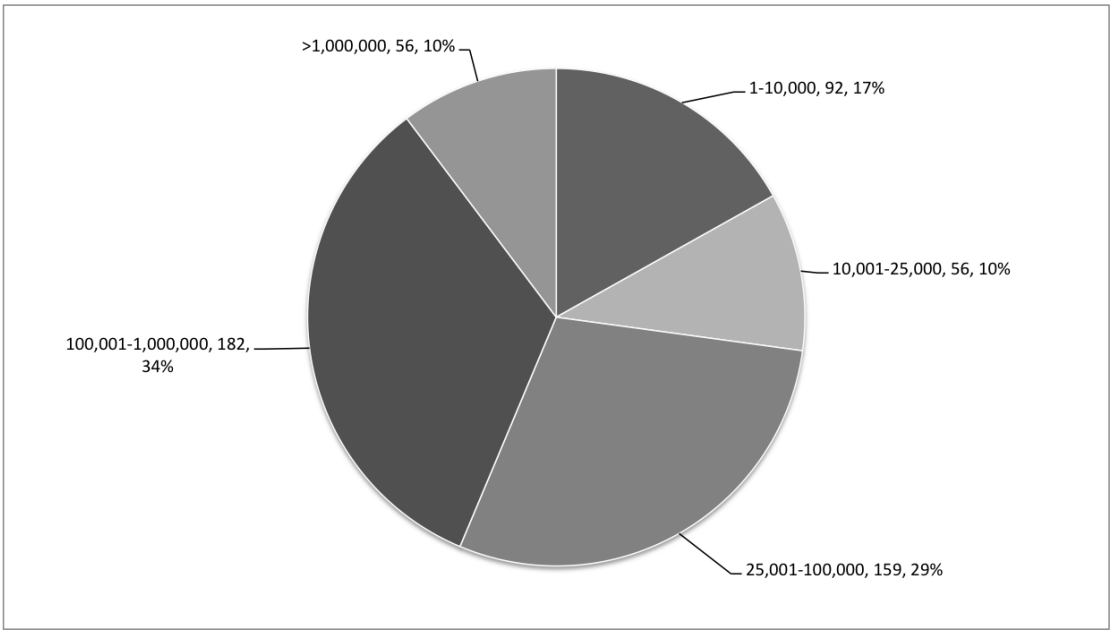

Figure 8. AEWA populations by population size

Part 3. Population trends

Trend analyses were carried out for two time periods: a recent 10-year trend period to analyse the recent changes and the long-term changes to apply the criteria for significant long-term decline. For the recent trends information was only taken into account if the end of the trend period was between 2004 and 2014 period. In the absence of such a period, the recent trend was considered unknown, i.e. categorized under the '*No idea'* quality code.

Quality of trend estimates

The quality of trend estimates was assessed following the methodology developed by the International Wader Study Group[10]. The categories were defined as follows:

No idea	No monitoring at international scale in either breeding or wintering periods. Trends unknown. This category also includes populations where trends are uncertain.
Poor	Some international monitoring in either breeding or wintering periods although inadequate in quality or scope. Trends assumed through partial information.
Reasonable	International monitoring in either breeding or wintering periods that is adequate in quality or scope to track direction of population changes.
Good	International monitoring in either breeding or wintering periods that is adequate in quality or scope to track direction of population changes with defined statistical precision.

About one third of the AEWA populations have good (6%) or reasonable (28%) quality trend estimates based on adequate monitoring schemes. However, more than a third of the population trend estimates are assumed based on partial information, i.e. poor (45%) or simply non-existent (28%, Figure 9).

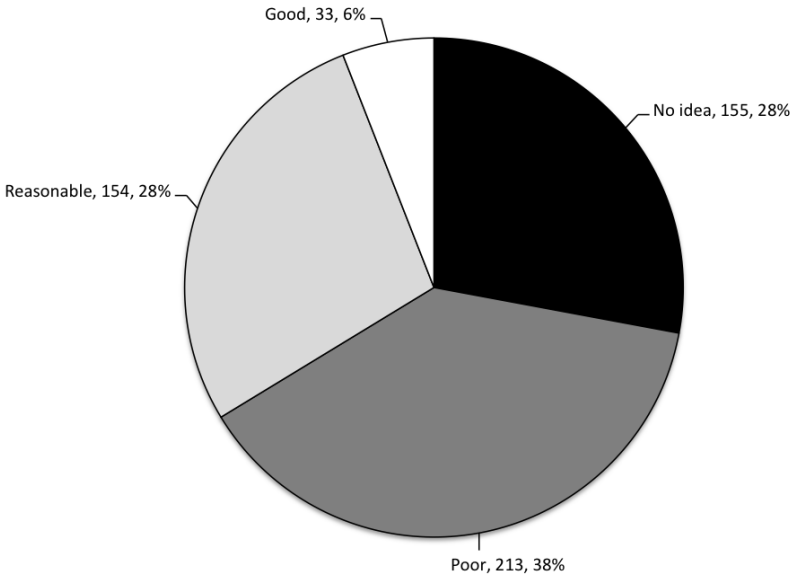

Figure 9. Quality of trend estimates of the AEWA populations

[10] See International Wader Studies No. 15 (URL: http://www.waderstudygroup.org/pubs/iws15.php).

Geographic patterns in quality of trend estimates

No trend estimates are available for 65% of populations in the Central Asian flyway, 58% of the populations in the West Asia/East Africa flyway, 35% in the Afrotropic ecoregion, 17% in the Western Palearctic, 14% in the Black Sea-Mediterranean flyway and for only 9% in the East Atlantic flyway (Figure 10).

In terms of absolute numbers, the Afrotropic ecoregion has the highest number of populations with unknown trends, followed by the West Asian-East African flyway and the Western Palearctic ecoregion. In the latter, more than half of the populations (21) with unknown trends are from the West Asian and the Caspian, six from each of Northern and Western Europe and from the Black Sea and Mediterranean and five are from the Northern Atlantic regions. In the Afrotropic ecoregion, the situation is comparable to the Western Palearctic in Southern Africa, but a vast majority of the population trend estimates are based on partial information.

Populations have comparatively the best population trend estimates in the East Atlantic flyway, which demonstrates the potential for improvements if coordination, training, technical and financial resources are made available in a strategic manner as has been the case here.

Also taking account of the populations with poor population estimates, the priority regions for developing monitoring activities in the future are West Asia and the Afrotropic ecoregion.

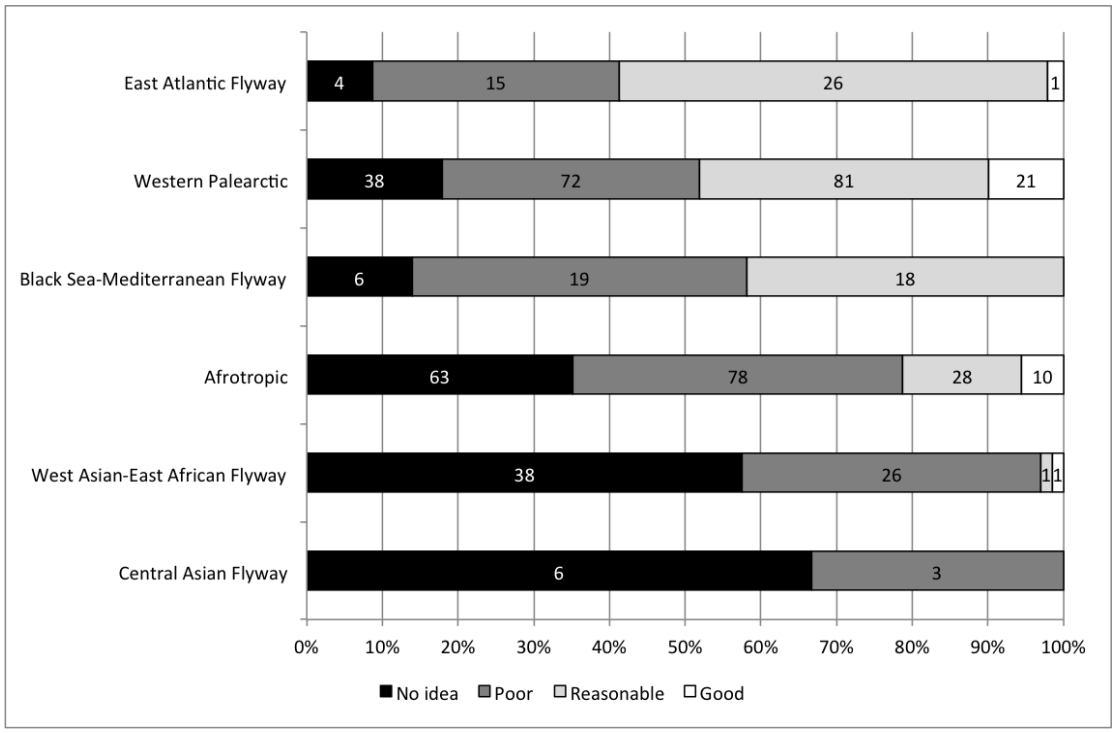

Figure 10. Quality of population trend estimates by flyways. (Numbers are the number of populations within each category).

Taxonomic patterns of the knowledge of population trends

In 17 out of 26 waterbird families (73%), trend estimates do not exist or are based on only partial information. Families where more than 50% of the trend estimates are of reasonable or good quality include relatively small ones such as the auks *Alcidae* and grebes *Podicipedidae* and often with a high degree of global threat status of the species such as cranes *Gruidae,* and cormorants *Phalacroracidae*

The highest proportion of populations with no trend estimates, belong to the thick-knees *Burhinidae*, pratincoles *Glareolidae,* plovers *Charadridae*, skuas *Stercoraridae* and rails *Rallidae*. These families include many rather dispersed species that cannot be well monitored during regular IWC counts. Monitoring the changes of their population sizes would require well-designed and representative special schemes. Surrogate information could be derived from analyses of checklists or from repeated atlas works.

The highest number of populations with no recent trend estimates include the gulls and terns (30 populations), plovers (29), sandpipers and allies *Scolopacidae* (21) and ducks, geese and swans *Anatidae* (20), i.e. it reflects the general taxonomic and distribution pattern of AEWA listed populations.

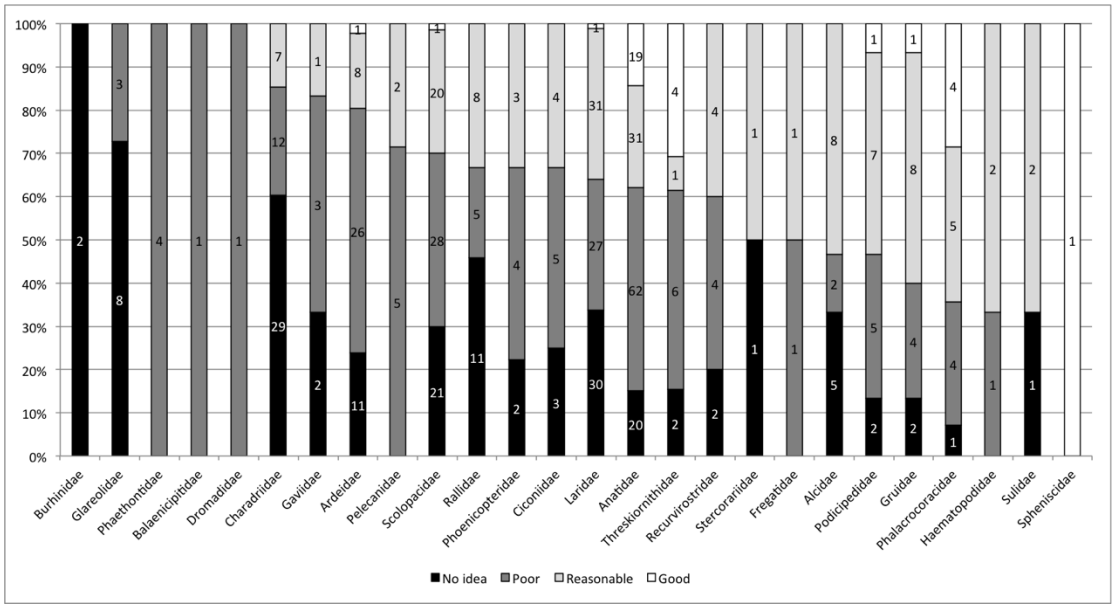

Figure 11. Quality of trend estimates by family. (Numbers are the number of populations within each category).

Patterns in population trends

36% of the 376 populations with trend information are declining, 39% are stable or fluctuating and only 25% are increasing. This means that 46% more populations are declining than increasing (Figure 12). The status of AEWA populations has deteriorated in the longer term. The proportion of declining populations has declined from 42% in 1999 to 38%% in the 2012 assessment, and again to 36% in 2014.

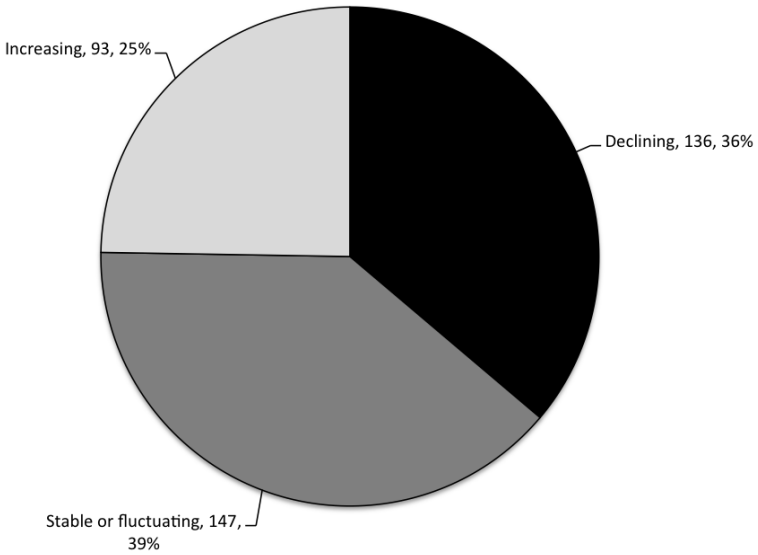

Figure 12. Distribution of trends amongst populations with trend estimates

Comparing the current assessments of population trends with previous assessment, the status of 193 populations improved and 142 have deteriorated (Table 3). There has been a significant increase of populations with unknown recent trend (from 69 to 190). This is because of the stricter criteria we used for recent trends that excluded old, already outdated trend information from the analysis in order to highlight knowledge gaps.

Table 3. Changes in population trends between two assessments

	Current report				
Previous report	Decreasing	Stable or fluctuating	Increasing	Unknown or uncertain	Grand Total
Decreasing	76	26	9	39	150
Stable or fluctuating	21	80	21	99	221
Increasing	23	22	57	13	115
Unknown or uncertain	16	8	6	39	69
Grand Total	136	136	93	190	555

Patterns of population trends by taxonomic groups

Taxonomic groups with a particularly high proportion (over 50%) of declining populations include the shoebills *Balaenicipitidae* (a mono-specific population), the penguins *Spheniscidae*, cranes *Gruidae*, grebes *Podicipedidae* and auks *Alcidae*. However, the largest numbers of declining populations are amongst ducks, geese and swans *Anatidae* (47, i.e. nine more than in the previous report), as well as, sandpipers and allies *Scolopacidae* (22, i.e. two less than in the previous report).

Although, a relatively large number of populations of gulls and terns *Laridae* (13) as well as herons *Ardeidae* (10) are declining compared to other families, in the former of these groups the number of increasing populations with known trends exceeds the declining ones, while in case of the latter group, the number of decreasing populations is only one more than the increasing ones.

The number of populations increasing is larger than the number of decreasing ones amongst the oystercatchers *Haematopodidae* and avocets and stilts *Recurvirostridae.* There is no population decreasing amongst the ones with known trends in the families of frigatebirds *Frigatidae*, storks *Ciconiidae*, tropicbirds *Phaethontidae*, pratincoles *Glareolidae* and skuas *Stercorariidae*, but this might be only the consequence of the lack of updated trend information in these difficult to monitor groups (Figure 13).

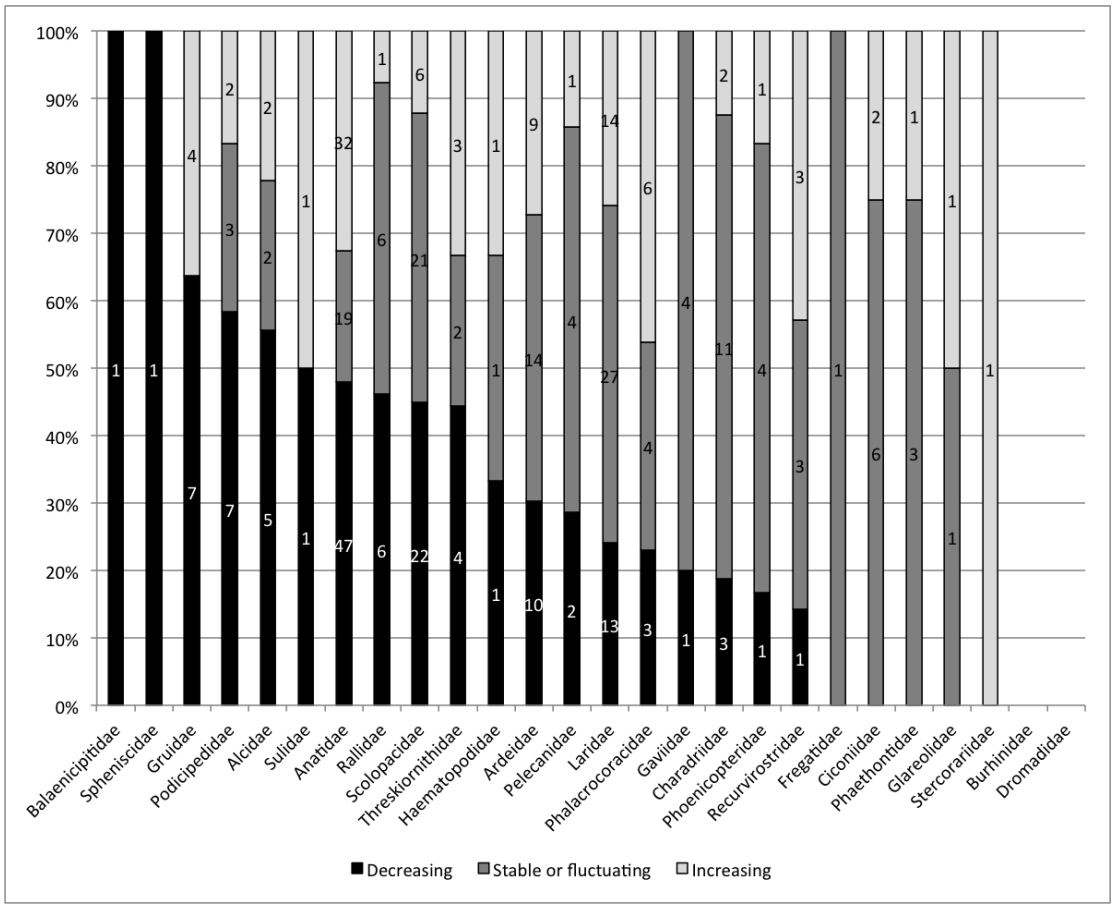

Figure 13. Population trends by families. (Numbers are the number of populations within each category).

Patterns in trends by geographic regions

The highest proportions of declining populations occur in the West Asian-East African flyway with more populations decreasing than stable or increasing. However, in absolute terms, the Western Palearctic holds the largest number of declining populations (74), but also the highest number of increasing ones (54). The highest proportion (40%) of increasing populations can be found in the East Atlantic flyway (Figure 14).

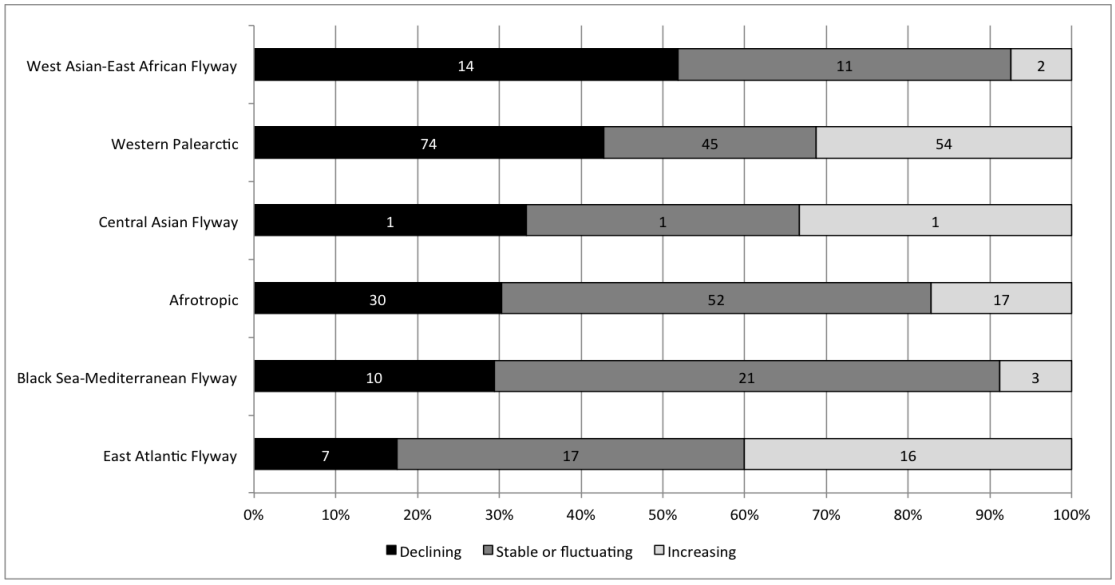

Figure 14. Population trends by flyways. (Numbers are the number of populations within each category).

In the Western Palearctic, the highest proportion (72%) of the populations are decreasing in the West Asia & Caspian sub-region, but the highest number of populations with decreasing trend can be found in Northern & Western Europe (32).

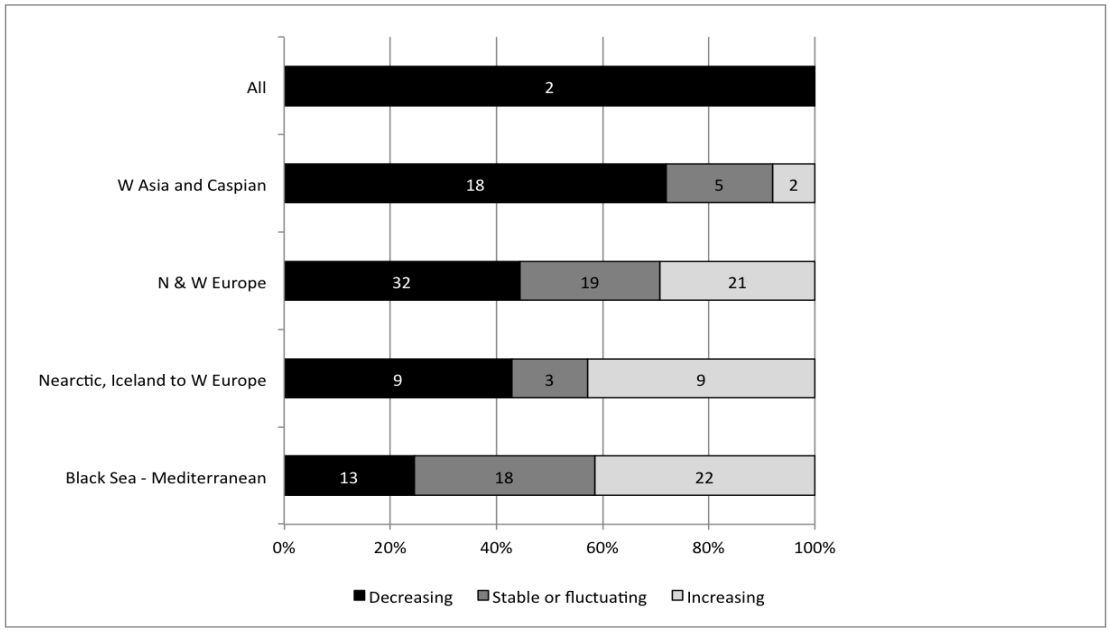

Figure 15. Number and proportion of populations in the Western Palearctic by their trend and by sub-regions

Patterns in significant long-term decline

In total, 165 populations are showing significant long-term decline as defined in AEWA Resolution 5.7, which represents 30% of all AEWA populations. The proportion of populations in significant long-term decline is the highest in the Black-Sea Mediterranean flyway. Apparently, it is much lower than the average in the Central Asian flyway. However, this is due to knowledge gaps. The trend is unknown for six of nine populations.

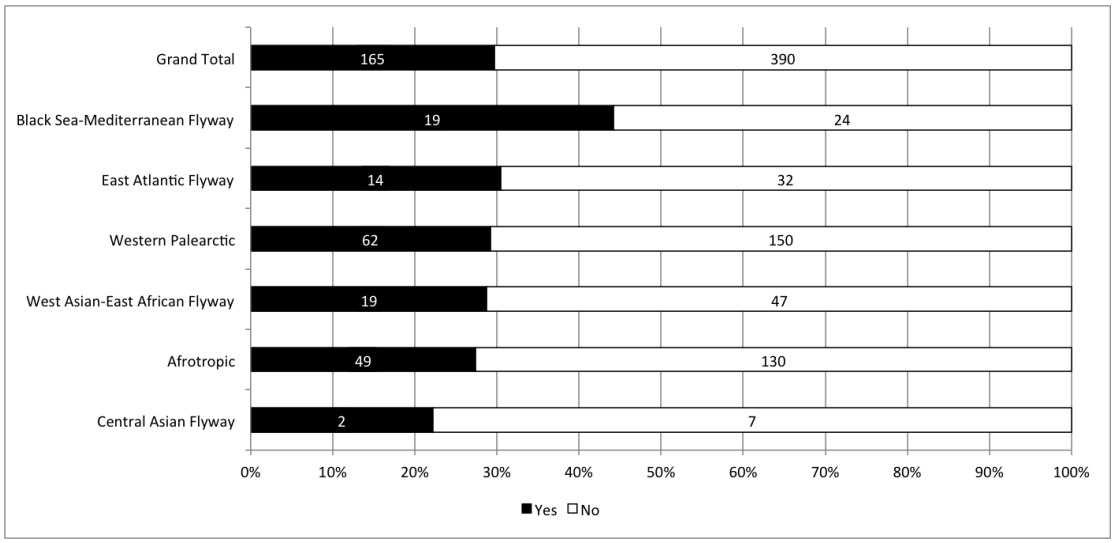

Figure 17. Proportion of populations that meet the AEWA criteria for significant long-term decline. (Numbers are the number of populations within each category).

Knowledge of trends limits the application of the significant long-term trend criteria. As Figure 18 shows, the proportion of populations with no recent trend is more than twice as much amongst the populations where the significant long-term decline was not applied than amongst the populations where it was, while the proportions are roughly the same for populations with reasonable and good trend information.

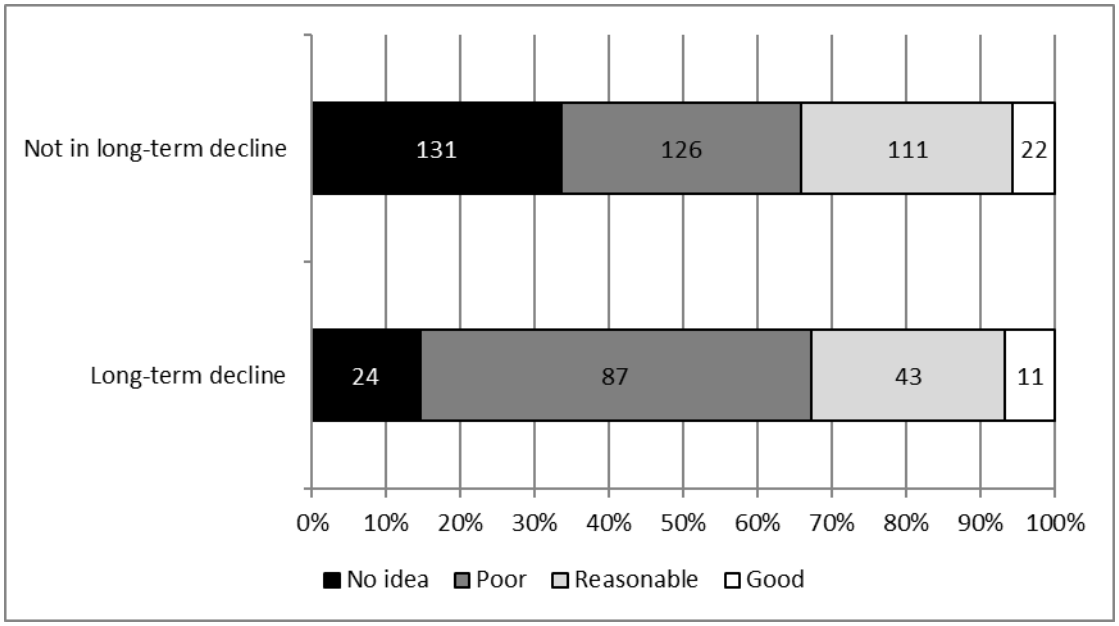

Figure 18. Quality of population trend estimates for populations classified as whether or not in significant long-term decline. (Numbers are the number of populations within each category).

Part 4. Threats to waterbird species in the AEWA region

As no comprehensively updated information is available on threats affecting the species listed on Annex 2 of the Agreement, no new analysis of threats has been performed. Part 4 of the previous 5th edition of the Conservation Status report can be accessed online here.

Part 5. Species of global conservation concern

A detailed overview of the status of species of global conservation concern was produced by BirdLife International and the full report is presented in Annex 2.

Red List status of AEWA species

The Red List status of the 255 species listed on Annex 2 of AEWA has been reviewed by BirdLife International, the Red List authority for birds, in 2014. The full report is presented in Annex 2.

Of all AEWA species, 27 (11%) are globally threatened, i.e. Critically Endangered (5), Endangered (8) or Vulnerable (14) and thus qualify to be listed under Category 1b under Column A. In addition, 15 species are included into the Red List as Near Threatened.

Five species have had their IUCN Red List category revised since the report from BirdLife to AEWA in 2010 (Table 2), including for both deteriorating status (Cape Cormorant *Phalacrocorax capensis*, Long-tailed Duck *Clangula hyemalis* and Velvet Scoter *Melanitta fusca;* see Table 3) and because of improved knowledge (Grey Crowned Crane *Balearica regulorum* and White-winged Flufftail *Sarothrura ayresi*).

A total of 15 AEWA-listed species qualified for higher or lower Red List categories owing to genuine (i.e. real) deterioration or improvement in status during 1988-2012. All are listed in Table 3 of Annex 2 to this report, with notes on the basis of each change.

Five species qualified for revised categories during two time-steps within this period (time-steps are defined as the intervals between the comprehensive assessments of the status of all species carried out by BirdLife International at 4-6 year intervals). Note that many other species underwent category revisions for non-genuine reasons (i.e. revised taxonomy, improved knowledge, changed IUCN Red List criteria etc).

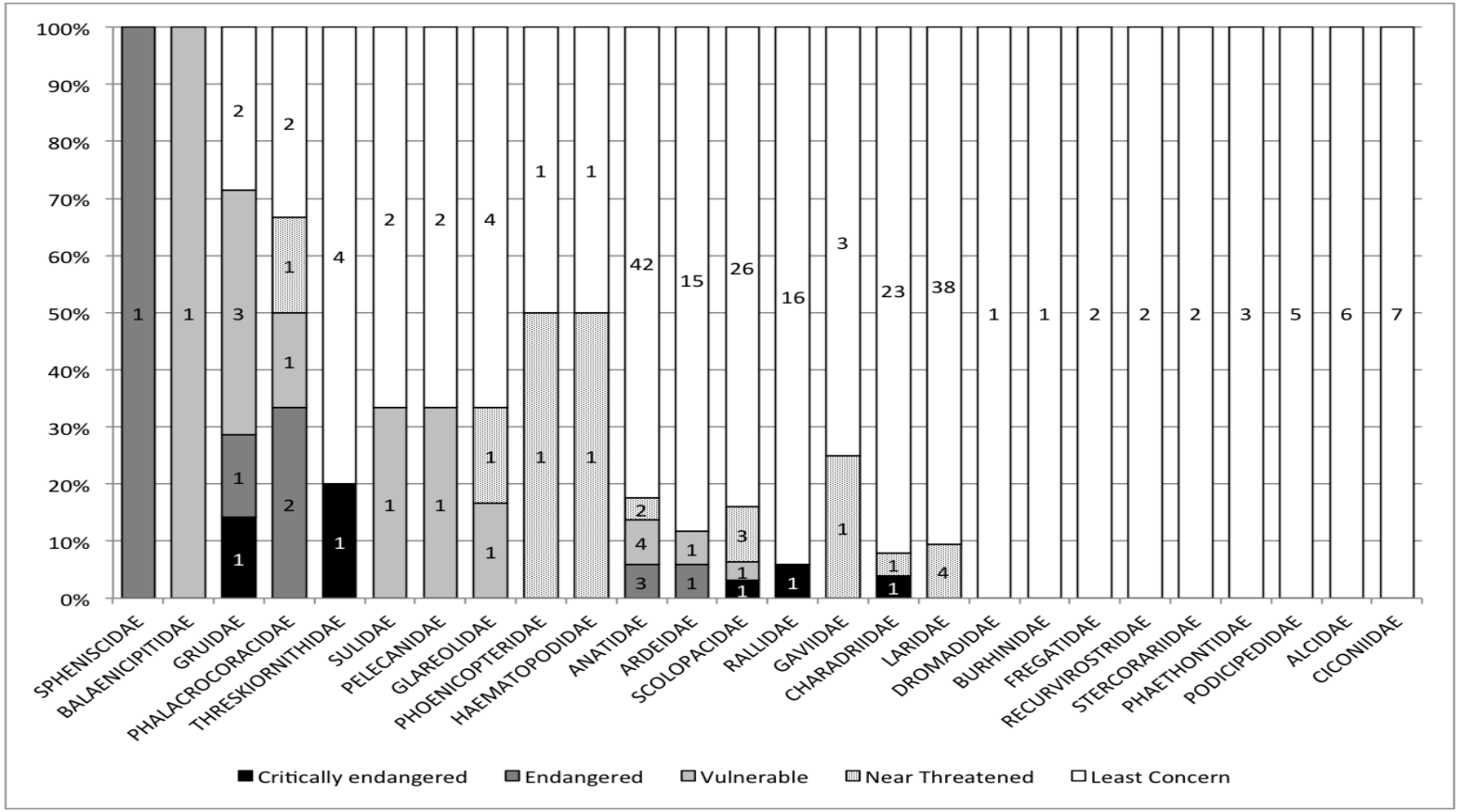

Figure 20. Proportion and number of species by their Red List status and by families listed according to increasing value of the Red List Index of the family (i.e. most threatened families on the left

Geographic patterns in the Red List status of AEWA populations

The geographic patterns in the conservation status of AEWA populations were assessed on the basis of their Red List status.

The highest number of populations of globally threatened species are in the Western Palearctic (19) while the highest number of globally threatened and near threatened ones are in the Afrotropic region.

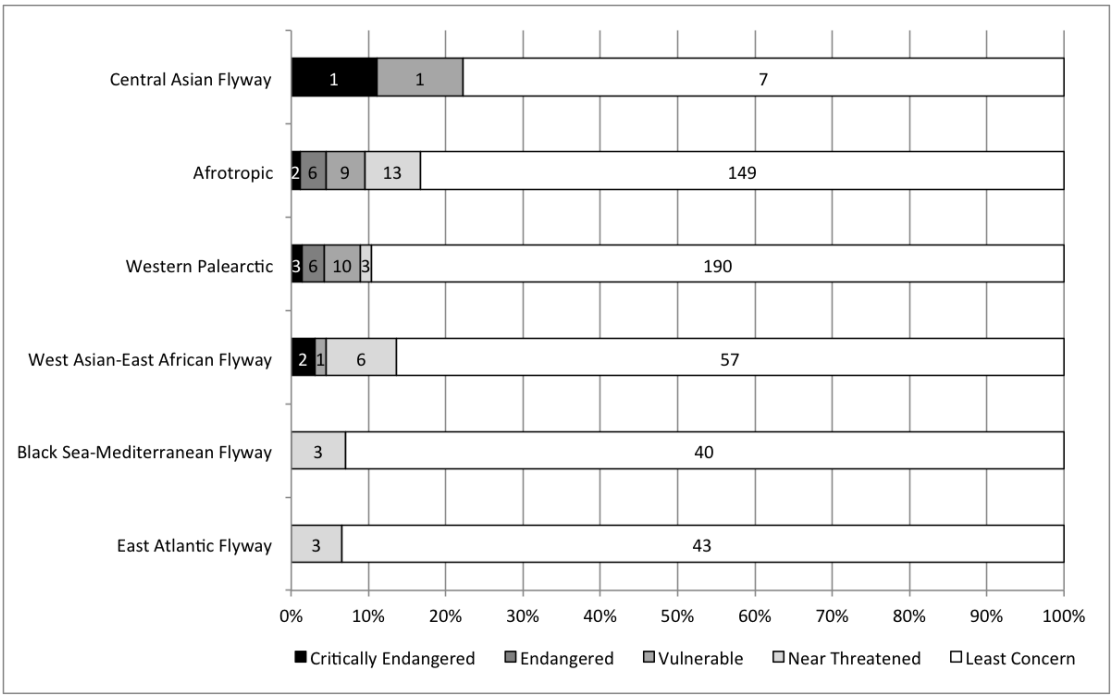

Figure 21. Proportion and number of populations by their conservation status assessment and by flyways according to increasing value of the Red List Index of the flyway (i.e. most threatened flyways are on the top)

Part 6. Progress towards the targets set in the AEWA Strategic Plan

The logical framework to the AEWA Strategic Plan 2009-2017 has identified a number of indicators in relation to the goal and relevant actions to be reported in the CSR:

Goal: To maintain or to restore migratory waterbird species and their populations at a favourable conservation status throughout their flyways at the Agreement level, within the period of the Strategic Plan 2009-2017 the following indicators were defined:

G.1 No AEWA waterbird population has become extinct in the Agreement area.
G.2 All AEWA waterbird populations currently at favourable conservation status have retained that status.
G.3 At least 75% of the AEWA waterbird populations have a positive trend (growing or stable).
G.4 Overall status of indicator species has improved, as measured by the Waterbird Indicator.
G.5 Overall extinction risk of waterbirds reduced, as measured by the Red List Index.
G.6 20% of threatened and Near Threatened species downlisted to lower categories of threat.
G.7 Fewer populations to be listed in Category 1 in Column A (20% reduction).
G.8 Fewer populations to be listed in Column A (5% reduction).

3.1 Necessary resources are in place to support, on a long-term basis, the international processes for gathering monitoring data for status assessment
3.1.2 50% increase of species/ populations whose international status is being assessed with regular monitoring data

Table 4 presents the results of the assessments of the AEWA indicators. In addition, short technical notes on the calculation of these indicators are provided below:

G.2: *As a proxy to the more complex definition of favourable conservation status in Art. 2 of the Convention on Migratory Species, populations listed in Category 1 of Columns B and C in 2008 were considered to be in favourable status. Populations that are listed on Appendix 1 of the Convention on Migratory Species (A1a) or which are Globally Threatened (A2) or which have small and therefore vulnerable (A1c and A2) or which are vulnerable because of being concentrated on a small number of sites (A3a or B2a), depending on a certain habitat type (A3b or B2b), undergoing a significant long-term decline (A3c or B2c) or undergoing large fluctuations (A3d or B2d) were considered as not having a favourable conservation status.*

G.4: *Currently annual indices can only be calculated for 169 populations and many of these are not representative for the population itself. In addition, there is a substantial bias in the distribution of populations with good quality trends. Therefore, a composite index similar to the ones generated by the Pan-European Common Bird Monitoring scheme cannot be applied for the AEWA region yet. Therefore a more qualitative Waterbird Indicator was developed using a similar approach as in the State of the World's Waterbirds publication calculating an average of the trend scores assigned to increasing (+1), stable or fluctuating (0) or declining (-1) populations for a given period, i.e. in this case for CSR4 and CSR5.*

3.1.2: *The assessment of this indicator is based on scoring the quality of population size and trend estimates for this and the previous report. For each time period, the minimum of the score for the quality of population size and trend was taken and the resulting values were converted into yes/no scores considering scores 1 and 2 as 'no' and 3 and 4 as 'yes'.*

Table 4. Summary results of AEWA indicators.

Indicator	Status	Assessment
G.1 No AEWA waterbird population has become extinct in the Agreement area	Based on the 2014 Red List assessment by BirdLife International and the trend data collected for this report, no AEWA listed population became extinct since CSR5. However, extensive surveys to find Slender-billed Curlews were unsuccessful, which increases the risk that this target will be not met by the end of the period covered by the Strategic Plan.	
G.2 All AEWA waterbird populations currently at favourable conservation status have retained that status	Of 263 populations formerly listed in categories B1 and C1 - and hence can be considered being in favourable conservation status - 35 are now in other categories. The reason of changing category is significant long-term decline for 25 of these populations (14 more than in CSR5), and lower population estimates for 10 populations (2 more than in CSR5).	
G.3 At least 75% of the AEWA waterbird populations have a positive trend (growing or stable)	Of the AEWA populations with known population trends, 64% have a positive trend. Although this is 4% higher than the 2008 assessment, this is still much lower than the target. However, this represents a slight increase compared to the 2012 assessment.	
G.4 Overall status of indicator species has improved, as measured by the Waterbird Indicator	The value of the Waterbird Indicator has increased from -0.1363 (N_{2008} = 396) to -0.1144 (N_{2014} = 376), which represents some improvement compared to the baseline, but still more populations are declining than increasing. The value of the index is somewhat lower than it was in CSR5 (-0.1118, N_{2011}= 391).	
G.5 Overall extinction risk of waterbirds reduced, as measured by the Red List Index	The Red List Index has declined by 1.6% since 1988. The direction of change is away from the target.	
G.6 20% of threatened and Near Threatened species downlisted to lower categories of threat	No Threatened or Near Threatened species has been downlisted between 2010 and 2013. Five species are now listed in higher Red List category than in 2010.	
G.7 Fewer populations to be listed in Category 1 in Column A (20% reduction)	Number of populations listed in Category 1 of Column A has increased from 100 to 113, i.e. by 13%. Twenty populations were moved into Category 1 of Column A and seven were removed. Out of the 20 populations added to Category 1 of Column A, 13 were added to Category 1c due to lower population size estimates than in the past and seven were added because the species was listed as globally threatened on the IUCN Red List.	
G.8 Fewer populations to be listed in Column A (5% reduction)	Number of populations listed in Column A has increased by 16 from 198 in 2008 to 214, i.e. by 9%. A total of 26 populations are not listed anymore in Column A. Of these, 17 were removed from Column A because of higher population estimates and in nine cases because the significant long-term decline criteria did not apply anymore. However, 42 new populations were added Column A. In four cases this happened because of adding the population to the IUCN Red List	

Indicator	Status	Assessment
	as threatened, in seven cases and Near Threatened, in 14 cases because of applying the significant long-term decline criterion and in 17 cases because of lower population estimates.	
3.1.2 50% increase of species/ populations whose international status is being assessed with regular monitoring data	Number of populations whose international status is being assessed with regular monitoring increased from 102 to 180, i.e. by 75%. This substantial increase is the result of several efforts such as the Art. 12 reporting under the EU Birds Directive, the European Red List of Birds project implemented by a consortium led by BirdLife International, the Mediterranean Waterbird Monitoring Project led by Tour du Valat/ONCFS, the Adriatic Flyway Project led by EuroNatur and the monitoring activities under the Wadden Sea Flyway Initiative led by SOVON.	

Annex 1. Population sizes and trends of waterbird species included in the Agreement

The most recent population estimate of each population listed in Table 1 of Annex 3 to the AEWA Agreement[11] is presented in the Waterbird Population Estimates Online Database[12] (also available as a separate document).

Annex 2. Report on the status and trends of Red Listed AEWA species

Report produced by BirdLife International is attached and also available as a separate document.

Annex 3. List of contributors to the IWC

The List of Contributors is attached and also available as a separate document.

[11] http://www.unep-aewa.org/sites/default/files/publication/aewa_agreement_text_2013_2015_en.pdf

[12] http://wpe.wetlands.org/search?form%5Bspecies%5D=&form%5Bpopulation%5D=&form%5Bpublication%5D=8&form%5Bprotection%5D%5B1%5D=1