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PROPOSAL FOR AMENDMENT OF THE DEFINITION AND THE GUIDANCE ON INTERPRETATION OF THE TERM "SIGNIFICANT LONG-TERM DECLINE" USED IN THE CONTEXT OF TABLE 1 OF THE AEWA ACTION PLAN AS APPROVED BY RESOLUTION 3.3

Compiled by the Technical Committee

Background

During the work on the 5th AEWA Conservation Status Report (CSR5), three issues were identified that should be refined in relation to the definition and the guidance for interpretation of the term "*significant long-term decline*" which were approved by Resolution 3.3:

(1) Inability of the current definition of *significant long-term decline* to trigger management actions in case of rapidly declining populations;
(2) Conflict between the lower limit for number of years needed for calculating *significant long-term decline* and calculating recent trends that are needed for the indicators related to the AEWA Strategic Plan;
(3) Inconsistency between the definition and the 1% annual rate of decline suggested in point 3 of the guidance.

(1) Rapidly declining populations: The current definition of *significant long-term decline* requires that the population "*has declined* by at least 25% in numbers or range over a period of 25 years or 7.5 generations, whichever is the longer". Unfortunately, this definition has some serious implications for the sustainable management of waterbird populations. One of these is that the generation length is longer than 3.33 years for the majority of waterbird species (see Figure 1). The mean generation length is 9.1 year, which means that the average period to be considered was 68.25 years if data availability would permit an analysis of over such a long period. Although, data availability still prevents the occurrence of such extreme situations, it is clear that the longer the period assessed the less influence recent population changes have on the trends or the more rapid declines are needed to produce the same annual rate of decline. This insensitivity presents some significant confines for adaptive management of waterbird populations. For example, the intensive survey data indicate that North East Europe/North West Europe population of the Bean Goose *Anser fabalis fabalis* has suffered over 50% decline between 2004/5 and 2010/11, but the long-term trend is still considered to be stable by the recent review of the IUCN/WI Goose Specialist Group. Seaduck populations wintering in the Baltic Sea and probably also suffering similar drastic declines are in similar ambivalent situations although common sense would dictate that such populations would deserve special attention under the AEWA management regime. In the case of the IUCN Red List criteria, the issue is addressed by allowing the projection of recent trends into the future. The proposed addition of the text of "or when similar decline can be predicted based on at least 10 years of the most recent data" to the definition of *significant long-term decline* would create a regime that is more sensitive to rapid declines. A careful application of point 4 of the guidance would still allow separating continued declines from fluctuations.

(2) Number of minimum years required for calculating long-term trends: Point 3 of the existing guidance allows calculating long-term trends over shorter periods, but these cannot be shorter than 9 years.

However, calculating trends for shorter periods are needed both for Table 1 and the indicators for the AEWA Strategic Plan. Ten year trends are widely applied, but this could not be used because of the overlap with the minimum required for the long-term trends.

As a consequence of this, the period for short-term trends was set to be five years for the CSR5. However, such a short period turned out to be impractical at international level. Therefore, it is suggested to increase the minimum number of years required for long-term trends to 11 years from 9. This would allow a clear distinction between shorter and longer-term trends and allowing both to fulfill their special role in identifying populations that should be classified in Categories A3c and B2c and in monitoring recent changes.

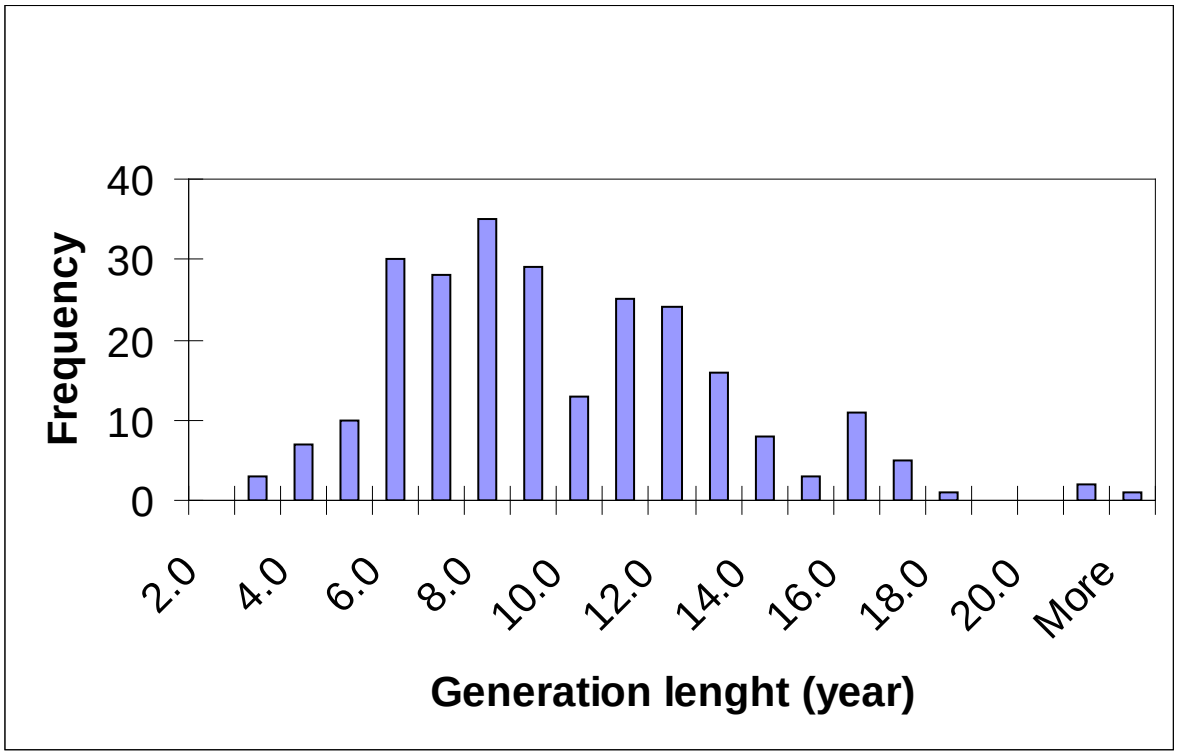

Figure 1. Histogram of AEWA species by generation length. Generation length figures were provided by BirdLife International, the IUCN Red List authority for birds.

(3) Inconsistency between the definition and the 1% annual rate of decline: The definition of *significant long-term decline* requires that a population suffers 25% decline over 25 years or 7.5 generations, whichever is longer. The last sentence of point 3 of the guidance allows for the use of shorter periods if it equals to a sustained decline of at least 1% per year. Unfortunately, this definition is contradictory to the definition in all cases when the generation length is longer than 4 years, i.e. in the majority of the cases (see Figure 1) because the necessary annual rate of decline decreases with the increase of the generation length (Figure 2).

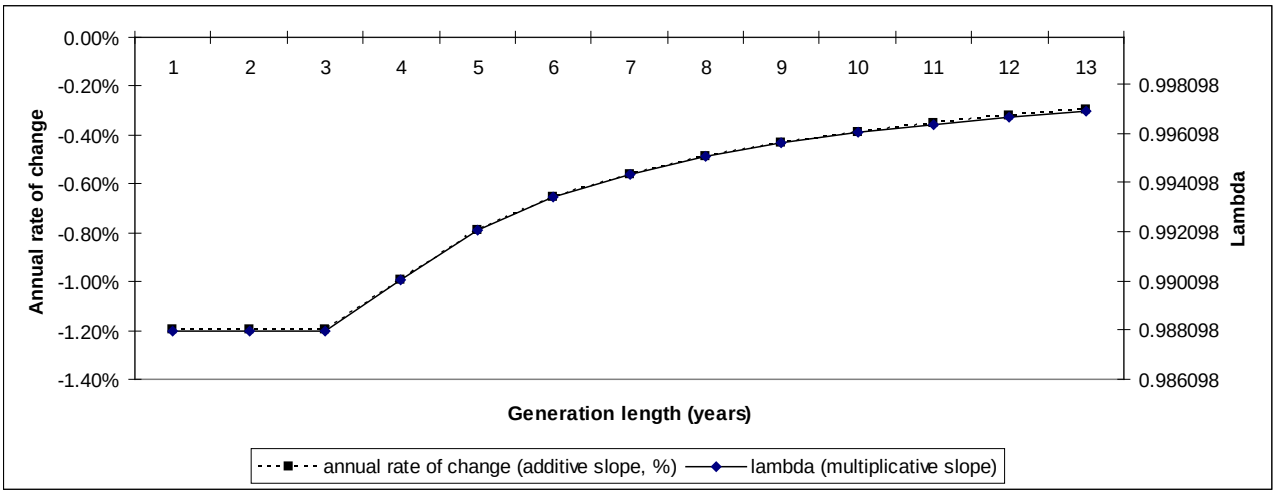

Figure 2. Relationship between annual rate of change and generation length.

Proposed changes to the definition and the guidance for interpretation of the term "*significant long-term decline*" addressing the above mentioned issues are presented in Appendix 1 in track changes.

Appendix 1

Guidance for interpretation of the term "significant long-term decline" of waterbird populations

Definition

A population in 'significant long-term decline' is one where the best available data, information or assessments indicate that it has declined by at least 25% in numbers or range over a period of 25 years or 7.5 generations, whichever is the longer or when similar decline can be predicted based on at least 10 years of the most recent data.

Guidance for the application of this definition

1. Where there are only poor quantitative assessments of trends at the international scale, international trends should be assessed on the basis of best expert knowledge and other available information bearing in mind the scale of decline indicated in the definition above.

2. Where one biogeographical population shows different trends in different countries, a decline of at least 25% in numbers or range over a period of 25 years or 7.5 generations in over half the countries for which information is available indicates that the population is in significant long-term decline. If for certain populations information is available for a period of more than 25 years this would be preferred.

3. Trend information for biogeographical populations at international scales is not always available over 25 year periods or 7.5 generations. In such situations, equivalent rates of decline may be used over shorter periods, but not shorter than ~~9~~ 11 years, and based on a sustained decline ~~of at least 1 % per year~~ at an annual rate that would produce 25% decline over the above mentioned period.

4. The delimitation of decline rates resulting from natural fluctuations should be based on the best expert knowledge, including information on the availability of suitable habitats.

5. Care is needed in applying this definition to monitoring data uncritically. There may be instances where a change of a population's range or distribution results in a decrease in numbers of a population counted, as a consequence of a greater proportion of the population now occurring in areas where there is less monitoring. Lower thresholds may be appropriate for decreasing range where it is accompanied by population decrease. Raw count data will always need expert interpretation.

6. The geometric mean of population size ranges should generally be taken as the basis of population trend calculations. Following IUCN Red List criteria definitions, generation length is the average generation length of parents of the current population. Each significant long-term decline revealed by the above-mentioned calculations will be examined, analyzed and approved by the Technical Committee.

Where the size of a population is known to be low (<100,000), expert judgments as to trend status should be undertaken on precautionary basis. This is especially important given recent findings of a low genetic variation of a number of waterbird populations - the implication being that the effective population size is much (possibly by a factor of 10) smaller than observed population size. In these cases, a population may become long-term unviable (owing to vulnerability to changing environmental events) at a higher population sizes than previously thought.