Using the data reported by Member States under Article 12 of the Birds Directive to summarise and present species' population status at EU level and measure progress towards Target 1(ii) of the EU Biodiversity Strategy to 2020

Version 6: March 2014
(revised in response to comments and proposals from the ad hoc workshop on 21 November 2013)

Contents

1. Background

By the end of 2013, Member States were expected to submit their first report under Article (Art.) 12 of the Birds Directive using the new format established in 2011. This new format puts the focus on data about the status and trends of all wild birds in the EU, and thereby streamlines the reporting with that used under Art. 17 of the Habitats Directive. However, there remain significant differences between the reports. For example, Art. 17 requires Member States to assess the status of relevant species and habitats in their national-biogeographic region(s), according to a general matrix that refers strongly to definitions given in the Habitats Directive. Under Art. 12 reporting, however, Member States do not have such an obligation.

At EU level, the Art. 17 data are compiled and assessed to determine the EU-biogeographic status of each species and habitat. Essentially, this is achieved by applying the general assessment matrix to the compiled data from Member States. For Art. 12 data, the Commission also intends to make an EU-level assessment. As with Art. 17, the national data will first be compiled, then assessed. The two main differences with the Art. 17 process are: (1) the assessment will be done at the level of the EU27, and not at biogeographic level; (2) a different assessment method will be used. After some debate in the respective working groups that led to the new Art. 12 reporting process, the view was taken by the Commission that an existing assessment method should preferably be used, allowing trends since an earlier (baseline) assessment to be calculated in a comparable way. This is particularly important for measuring progress towards Target 1(ii) of the EU Biodiversity Strategy to 2020[1].

2. Calculating and presenting summary statistics in Technical Report

The logical starting point for any EU-level analysis of the Art. 12 data is to combine the national data sets provided by each country to produce one EU-level data set, which summarises the size and trend of each species's population and range size at EU27 level. This involves fairly straightforward calculations performed using standardised methods, weighting each country's contribution accordingly (as explained in the methods chapters of *Birds in the European Union* and *Birds in Europe* (BirdLife International 2004a,b)[2].

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[1] '(ii)' refers to the Birds Directive component of Target 1, while '(i)' concerns the Habitats Directive part (https://circabc.europa.eu/sd/d/aacfbe5b-aec5-4306-8e78-60a1374f39ac/Measuring%20progress%20under%20Target%201.docx)
[2] https://circabc.europa.eu/sd/d/247face1-7892-4ae0-bf67-b951fe057b95/Point%208%20-%20Annex2-BiEU%20methodology.pdf
https://circabc.europa.eu/sd/d/7ebdb275-3bf3-4a56-a4cc-81bb74a7cce5/Point%208%20-%20Annex1-BiE2%20status%20assessment.pdf

This simple step produces valuable figures that are worthy of analysis and dissemination. Knowing how many individual birds of each species occur in the EU, and how they are distributed in space, is vital for many decisions. Understanding the overall direction and magnitude of each species's population and range trend indicates how they are faring across the EU, clearly highlighting which species and groups are doing poorly and well, and drawing particular attention to rapidly declining species in need of attention. Thus, the Technical Report (to be produced by the EEA/ETC-BD for informing the EC's Composite Report) will make maximum use of the Art. 12 data submitted by Member States, by summarising and presenting these 'headline' statistics for each species at EU27 level in a simple format, as illustrated in Table 1.

Table 1. An example of how EU-level summary data from Art. 12 reporting could be presented.

Species name	EU27 breeding population			EU27 wintering population			EU27 breeding range			Birds Directive Annex
	Size (min-max)	Short-term trend	Long-term trend	Size (min-max)	Short-term trend	Long-term trend	Area (sq km)	Short-term trend	Long-term trend	
Species A	20,000-30,000	↗ 16%	↘ 39%	n/a	n/a	n/a	4,000	↔	↘ 13%	I
Species B	n/a	n/a	n/a	300,000-500,000	↘ 14%	↔	n/a	n/a	n/a	II/A
Species C	700,000-900,000	↔	↗ 10%	50,000-80,000	↔	↘ 25%	60,000	↗ 22%	↔	n/a

3. 2020 Target 1(ii) and the need for population status assessment

Despite their value, these summary statistics (Table 1) do not classify species into meaningful groups according to their population status, extinction risk or any other priority-setting criterion. Specifically, a further step is needed to measure progress towards the EU's 2020 target for birds, which explicitly requires information about the number of species whose EU status is *secure* (and those whose status has *improved*). Target 1(ii) for birds under the EU's biodiversity strategy for 2020 is expressed as follows:

"By 2020, 50% more species assessed under the Birds Directive show a secure or improved status."

The baseline for birds is 52%, based on the number of species considered to be secure in the only complete EU-level population status assessment conducted to date, at EU25 level (BirdLife International 2004a). If the 2020 target was simply to increase this figure by 50%, then achieving it would mean that 78% of species (rounded up to 80% in some EC documents) would need to be in secure status by 2020. However, the target includes species whose status is either *secure or improving*. It is therefore necessary to use the data reported under Art. 12 to: (a) determine which species are *secure*; and (b) define the conditions under which non-secure species will be classified as *improving*. This is very important, as many species are a long way from being secure, but some are recovering, some remain depleted and others are still declining.

The method and parameters used to assess the conservation status of habitats and taxa under Art. 17 of the Habitats Directive do not apply to birds. However, retaining the logic of the system adopted for the Habitats Directive, and striving for consistency where possible, the formula to be used for measuring progress between the baseline assessment (2004) and the next assessment (2014) is proposed as follows:

% of bird species in target condition = A (% secure) + B (% improving)

The result should then be compared with the baseline figure (52%) to assess progress towards the target.

4. Criteria to identify component A of Target 1(ii): 'secure' species

To ensure comparability with the baseline assessment, it is important to distinguish secure from non-secure species in the same (or a very similar) way. The method used in 2004 involved applying a series of criteria and thresholds (Table 2) to the data for all species at EU level, which filtered out different species at different levels. Those passing through all the 'filters' were classified as secure, as shown in Figure 1.

Figure 1. Flowchart showing filters applied to assess the EU population status of birds in 2004.

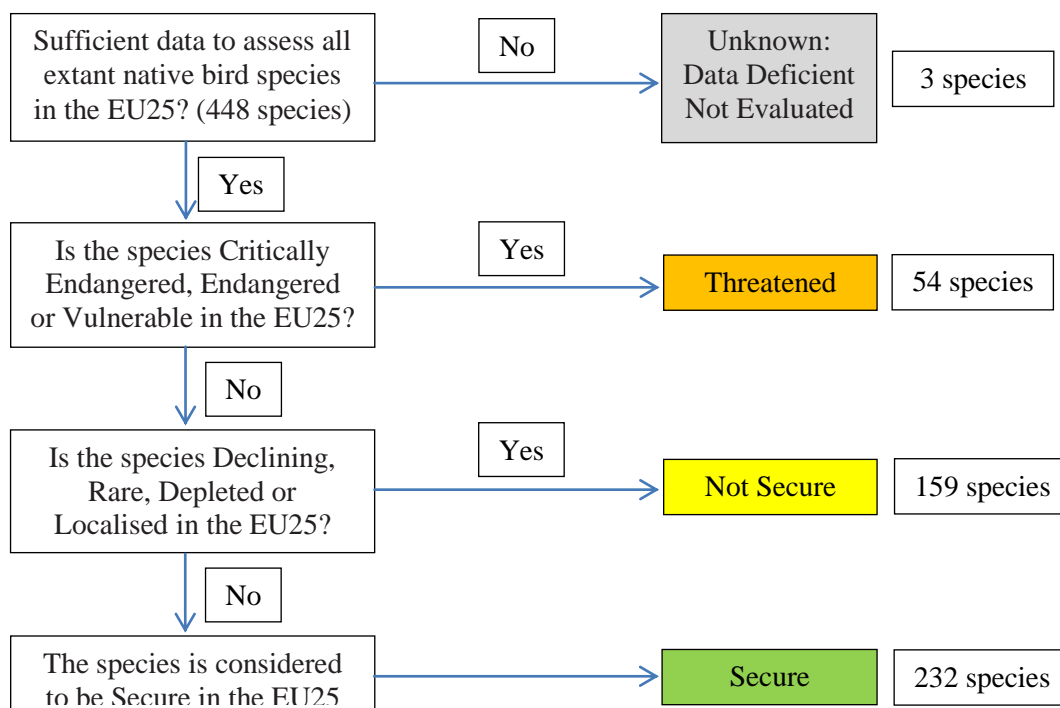|			
Sufficient data to assess all extant native bird species in the EU25? (448 species)	→ No →	Unknown: Data Deficient Not Evaluated	3 species
↓ Yes			
Is the species Critically Endangered, Endangered or Vulnerable in the EU25?	→ Yes →	Threatened	54 species
↓ No			
Is the species Declining, Rare, Depleted or Localised in the EU25?	→ Yes →	Not Secure	159 species
↓ No			
The species is considered to be Secure in the EU25	→	Secure	232 species

Table 2. A summary of the criteria and thresholds used to allocate species to population status categories in *Birds in the European Union* (BirdLife International 2004a).

EU25 population status category (and acronym)	Brief description of criteria and thresholds	2004 baseline	
		n spp	%
Critically Endangered (CR)	Meets any of the IUCN Red List criteria for CR at EU25 scale	8	2
Endangered (EN)	Meets any of the IUCN Red List criteria for EN at EU25 scale	14	3
Vulnerable (VU)	Meets any of the IUCN Red List criteria for VU at EU25 scale	32	7
Declining (D)	Declined in EU25 by >10% in 10 years or three generations	76	17
Depleted (H)	Not yet recovered from earlier declines in EU25 (1970-1990)	40	9
Rare (R)	EU25 population <5,000 pairs and not marginal	35	8
Localised (L)	≥90% EU25 population concentrated at ≤10 sites	8	2
Secure (S)	Does not currently meet any of the criteria above in EU25	232	52
Data Deficient (DD)	Inadequate information available to assess EU25 status	1	<1
Not Evaluated (NE)	EU25 population not evaluated against criteria	2	<1
	Total	448	100

Feedback from Member States has led to various changes to these criteria and thresholds being proposed over the past year. More details can be found below (Table 3), but some of the more significant changes have included replacing the categories Rare and Localised with the IUCN category Near Threatened, and changing the proposed threshold for Declining and Depleted from 10% to 20%.

Following those changes, most Member States have now accepted the proposal for the EC to use this method to calculate the number of secure species in 2014, using the data submitted under Art. 12. Thus, Figure 2 shows the refined set of 'filters' proposed for application in 2014. The figure required under component A (secure) of Target 1(ii) is the number of species classified as Secure (green box). For the figure needed under component B (improving), a second step is applied only to those species that are Threatened or Not Secure (see section 6).

Figure 2. Flowchart showing filters proposed to assess the EU population status of birds in 2014.
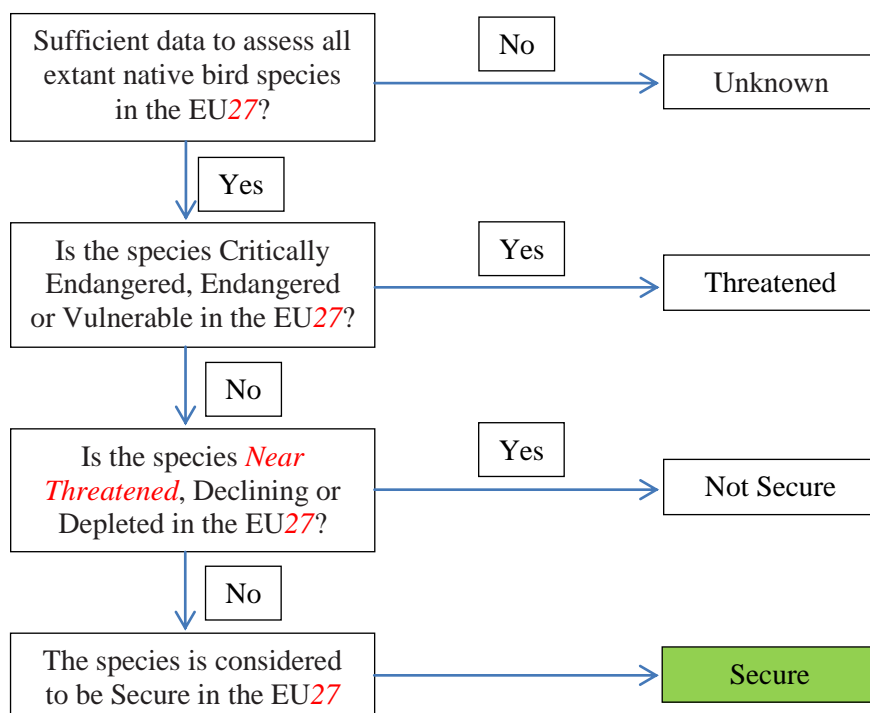

Table 3. A comparison of the criteria and thresholds used to allocate species to population status categories in *Birds in the European Union* (BirdLife International 2004a) and those proposed for application to the data from Art. 12 reporting in 2014, *highlighting major changes in red italics.*

EU population status category	Brief description of criteria and thresholds	
	2004 (applied)	**2014 (proposed)**
Regionally Extinct	*n/a*	*As per IUCN (i.e. no reasonable doubt that last individual in EU27 has died)*
Critically Endangered	Meets any of the IUCN Red List criteria for CR at EU25 scale	Meets any of the IUCN Red List criteria for CR at EU27 scale (e.g. Criterion A: decline ≥80%[3])
Endangered	Meets any of the IUCN Red List criteria for EN at EU25 scale	Meets any of the IUCN Red List criteria for EN at EU27 scale (e.g. Criterion A: decline ≥50%[3])
Vulnerable	Meets any of the IUCN Red List criteria for VU at EU25 scale	Meets any of the IUCN Red List criteria for VU at EU27 scale (e.g. Criterion A: decline ≥30%[3])
Near Threatened	*n/a*	*Close to meeting IUCN Red List criteria for VU at EU27 scale (e.g. Criterion A: decline ≥20%[3])*
Declining	EU25 population declined by >10% in 10 years or three generations	EU27 population *or range* declined by *≥20% since 1980, with continuing decline since 2001*
Depleted	Not yet recovered from earlier (1970-1990) population declines in EU25	*EU27 population or range declined by ≥20% since 1980, but no longer declining since 2001*
Rare	EU25 population <5,000 pairs and not marginal	*n/a (now covered partly by NT)*
Localised	≥90% EU25 population concentrated at ≤10 sites	*n/a (now covered partly by NT)*
Secure	Does not currently meet any of the criteria above in EU25	Does not currently meet any of the criteria above in EU27
Data Deficient	Inadequate information available to assess EU25 status	Inadequate information available to assess EU27 status
Not Evaluated	EU25 population not evaluated against criteria	EU27 population not evaluated against criteria (e.g. occurs only on passage)

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[3] Over ten years or three generations, whichever is longer.

5. Defining and refining the population status assessment categories

The IUCN Red List categories and criteria (IUCN 2012a,b) are well known and widely respected. They highlight species with a relatively high risk of (regional) extinction, which is just one of many ways of informing conservation priorities. Nevertheless, this concept is very relevant to the Birds Directive (e.g. Art. 4) and has been used to help prioritise species (e.g. for Species Action Plans, LIFE funding, etc.).

Including a regional Red List application in the system used to assess the EU population status of species is thus highly relevant. In 2004, the EU25 Red List (i.e. birds whose status was CR, EN or VU) comprised 54 species (12% of the total). The production of an updated EU Red List of Birds in 2014 is also a core deliverable of the Commission-funded contract, led by BirdLife International, to support Art. 12 reporting.

In common with other multilateral environmental agreements (MEAs), the Birds Directive demands much more than just avoiding extinction. In the 1990s, therefore, several additional categories (Declining, Rare and Localised) were developed and applied to identify a broader list of species of European conservation concern (SPECs) with relevance to the Directive (Tucker & Heath 1994). These criteria were reapplied (with minor changes) in 2004, when the Depleted category was also introduced, to capture species whose declines (between 1970 and 1990) had ceased or slowed (between 1990 and 2000), but which had not yet recovered from the deterioration that the Birds Directive intends to prevent, and thus could not be considered Secure.

A further reason for retaining the categories Rare and Localised in 2004 was the lack of sufficient guidance available on the appropriate thresholds to apply for assigning species to the IUCN Near Threatened (NT) category. Extensive guidance on this subject has since been developed (IUCN 2013), which means that these two categories (Rare and Localised) can now be replaced, as the susceptibilities they address can be captured more or less adequately by applying the Near Threatened guidance correctly. Any formal application of the IUCN Red List criteria and regional guidelines (such as that required to produce the EU Red List of Birds) requires species to be assessed for listing as Near Threatened (as well as more threatened categories), so this is a further reason for 'retiring' Rare and Localised and replacing them with NT. This change in criteria means that a number of species evaluated as Rare or Localised in 2004 would now be regarded as Secure. However, all such changes can be coded as 'non-genuine' anyway, and thus excluded from calculations for the purpose of assessing progress towards Target 1. It is also likely that some of these species will have undergone genuine improvements since 2004, such that they will no longer be Rare or Localised anyway.

Beyond the Red List criteria, however, there remains a need to retain (and define more explicitly) the other two categories, both of which have now been refined after Member State feedback, as follows:

Declining: Under IUCN Criterion A, Near Threatened can be invoked only by population declines exceeding 20% over ten years or three generations, whichever is longer (IUCN 2013). The definition of Declining has therefore been refined to capture species whose EU population or range size has declined by ≥20% since 1980 (based on the long-term trends reported by Member States) and which have continued to decline since 2001 (based on the short-term trends reported by Member States).

Declines of this magnitude are not only detectable (thereby addressing concerns raised about using a lower threshold of 10%), but also quite common amongst European birds (e.g. PECBMS 2013). They also have conservation significance, highlighting species for which remedial action should be taken before declines accelerate and they become threatened (from which it is much harder and costlier to recover). Range contractions exceeding 20% are less common but are of even greater conservation significance, given the importance attached to maintaining the area of species' distributions, as well as their populations.

Depleted: The definition of Depleted has been refined to capture species whose EU population or range size has declined by ≥20% since 1980 (based on the long-term trends reported by Member States) but which have not declined since 2001 (based on the short-term trends reported by Member States). A significant number of European bird species fall in this category (e.g. PECBMS 2013), but their conservation needs differ from those that are either Declining or Secure.

It is important to note that 1980 is a policy-relevant baseline, approximating to when the Birds Directive was adopted (1979) and entered into force (1981), rather than an ecological baseline. Thus, it does not adequately

capture the pre-1980 declines of many species, whose deterioration stimulated the development of the Directive (and other MEAs – e.g. Ramsar Convention, Convention on Migratory Species, Bern Convention). Given the difficulty of establishing an ecological baseline for many species in most countries, however, using 1980 as the baseline is a pragmatic solution.
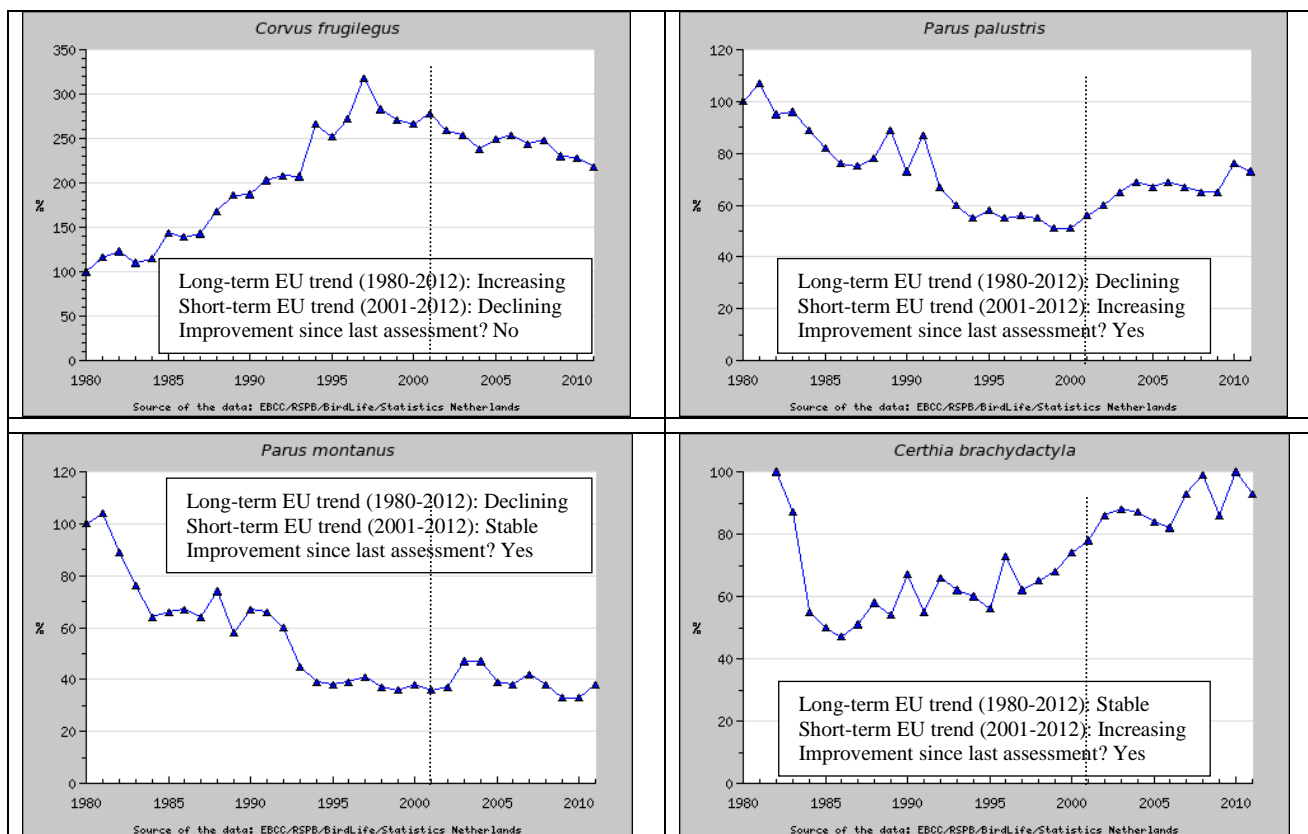
6. Criteria to identify component B of Target 1(ii): 'improving' species

Owing to the way in which Target 1 is formulated, *improvements* are only relevant to species classified as non-secure (i.e. Threatened or Not Secure) using the set of 'filters' above (Figure 2). Previous versions of this document included a 'matrix' that classified all possible changes between status categories since 2004 as improvements or deteriorations, in an attempt to achieve consistency with the Art. 17 approach. However, feedback from Member States indicated that this was too complex and less relevant under Art. 12, and that a simpler system based on the EU-level trends of species would be preferred, making more direct use of the short- and long-term trend data being reported by Member States. Table 4 presents the simplest way of doing this, based solely on changes in trend direction. The most important element is that species whose long-term trend is declining, but whose short-term trend is stable or increasing, count as improvements. Figure 3 presents some examples of applying this approach to species, using existing trend data from PECBMS.

Table 4. Classifying changes in trend direction of <u>non-secure</u> bird species at EU level as improvements.

Long-term trend (1980-2012)	Short-term trend (2001-2012)			
	Increasing	Stable/Fluctuating	Declining	Unknown
Increasing	Yes	No	No	No
Stable/Fluctuating	Yes	No	No	No
Declining	Yes	Yes	No	No
Unknown	Yes	No	No	No

Figure 3. Examples using data from the Pan-European Common Bird Monitoring Scheme (PECBMS).
For illustrative purposes, the vertical lines in 2001 indicate the point at which the change is being assessed.

This method makes good use of the national population data provided by Member States under Art. 12. It combines the direction and magnitude of species trends in each country, taking into account the relative size of each national population, to produce overall short- and long-term trends at EU level. It is also easy to communicate. If a species has stopped declining but remains depleted (and is thus non-secure), it contributes towards the 2020 target, because the loss of this particular aspect of biodiversity has been halted (i.e. improvement). Conversely, if a species is still declining, albeit it at a slower rate than previously, it does not contribute towards the 2020 target, because it represents ongoing biodiversity loss (i.e. deterioration).

7. Calculating and presenting progress towards Target 1 for birds

Table 5 presents two examples of how the elements described above could be combined to assess progress towards Target 1(ii). Under Scenario 1, progress is achieved because of an increase in the numbers of *both* secure *and* improving (non-secure) species. Under Scenario 2, progress has been achieved *only* because of an increase in the number of improving (non-secure) species, which 'offsets' the (smaller) reduction in the number of secure species. In practice, Scenario 2 is unlikely to arise. However, in discussion with Member States, it was agreed that it was important to present the two elements of the calculation separately, to show their relative contributions towards the target. This reflects the significant difference between species that are secure and species that are improving, which should not be concealed when reporting the results.

Table 5. Worked examples of measuring progress towards Target 1(ii) under two example scenarios.

Component of calculation	Definition	2004 Baseline	2014 Scenario 1	2014 Scenario 2
	Number of Threatened species	54	50	60
	Number of Not Secure species	159	150	170
A	Number of Secure species (Figure 2; Table 3)	232	245	215
	Total number of species assessed	445	445	445
A%	Percentage of Secure species	52%	55%	48%
B	Number of Improving species (i.e. non-secure but with stable or increasing trends; Table 4)	n/a	15	30
B%	Percentage of Improving species	n/a	3%	7%
A + B	Total number of species in target condition (i.e. Secure + Improving)	232	260	245
A% + B%	Total percentage of species in target condition (i.e. Secure + Improving)	52%	58%	55%

8. Presenting other data as ancillary information to aid interpretation

Much of the most recent discussion with Member States on this subject[4] revolved around whether non-secure species whose rate of decline has slowed significantly (sometimes as a result of conservation measures) should count as improvements and contribute towards the 2020 target. Ultimately, as stated above, it was concluded that they should *not* contribute towards the target, because their continuing declines represent an ongoing loss of biodiversity, which is very difficult to communicate as positive progress towards the target.

However, there was general agreement that such species *do* constitute a different type of improvement, and that it was important to communicate this as supporting information, alongside the 'headline' figures above. It often takes a long time for conservation action to take effect, and for the populations or ranges of declining species to stabilise and eventually start to increase again. Efforts to slow, halt and reverse such declines deserve acknowledgement, as they are essential steps on the road to the recovery from non-secure to secure.

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[4] At a dedicated workshop on 21 November 2013 at DG Environment, attended by 9 Member States and other key stakeholders.

The public is familiar with such cases, as they form the bulk of the improvements reported in updates to the IUCN Red List[5], and positive news stories about successful wildlife comebacks are rare but very popular[6]. Highlighting species in this condition may also indicate where additional investment in the coming years is most likely to deliver genuine improvements, which will help to ensure that the 2020 target is achieved. Equally, there is value in drawing attention to non-secure species and groups whose status has deteriorated further since the last assessment, for which current measures are evidently not sufficient and new approaches may be needed. Deeper analysis of the Art. 12 data set and other sources of information may be required to shed light on the underlying reasons for these patterns, but important messages can already be conveyed.

Consequently, besides the formal assessment and presentation of progress towards the 2020 target, a number of complementary statistics will also be calculated and reported, to make even more use of the Art. 12 data and provide a more complete picture of how birds are faring in the EU. Table 6 summarises a few ideas.

Table 6. Examples of relevant additional information to report, based on analyses of the Art. 12 data.

Number, names, habitat/ecosystems associations and regional distributions of non-secure species whose declines have slowed, to the extent that they have moved into a lower status category since last assessed.
Number, names, habitat/ecosystems associations and regional distributions of non-secure species whose declines have accelerated, to the extent that they have moved into a higher status category since last assessed.
Number, names, habitat/ecosystems associations and regional distributions of secure species that have increased dramatically (e.g. by >20%) since last assessed.

9. Implications of EU enlargement for comparing assessments over time

The continued enlargement of the EU (from 25 to 27 Member States in 2007, to 28 in 2013, and possibly even more before the next reporting round in 2019) poses its own challenges, as the geographical baseline shifts over time. This strengthens the case for retaining the existing set of core criteria (clarifying and adapting it only where necessary), to avoid generating results that cannot be compared meaningfully. The 2014 assessment will be applied at the scale of the EU27, because Croatia will not report in 2013.

A preliminary unpublished study by BirdLife International assessed the status of all bird species at EU27 scale, by combining the national data gathered from Bulgaria and Romania for BirdLife International (2004b) with those from the EU25, and reapplying the same criteria and thresholds as used in BirdLife International (2004a) at the EU27 scale. At that time, only three bird species bred in these two Member States but nowhere else in the EU27. Overall, the EU status of only 14 species (out of 451, i.e. 3%) differed when assessed the EU25 and EU27 scales, and only three (i.e. <1%) of these differences involved changes between Secure and non-secure categories.

In this case, therefore, the accession of Bulgaria and Romania is considered to have had little impact on the EU status of bird species, reflecting the widespread distribution of many European birds and the lack of any endemics in these countries. For similar reasons, the accession of Croatia is also unlikely to have many implications for the EU status of bird species when Art. 12 data from the EU28 are collated and assessed in 2019. However, this should not be taken as a general case, as the implications of enlargement will depend greatly on the countries under consideration. The accession of Turkey, for example, would have a much greater impact. Thus, it is imperative that all 'non-genuine' changes are coded as such, presented clearly in resulting products, and excluded from calculations for assessing progress towards Target 1.

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[5] e.g. http://www.birdlife.org/worldwide/news/red-list-birds-2013-number-critically-endangered-birds-hits-new-high
[6] e.g. http://www.rewildingeurope.com/news/articles/wildlife-comeback-in-europe-study-released/

10. References

BirdLife International (2004a) *Birds in the European Union: a status assessment.* BirdLife International. Wageningen, The Netherlands.

BirdLife International (2004b) *Birds in Europe: population estimates, trends and conservation status.* BirdLife International (BirdLife Conservation Series No. 12). Cambridge, U.K.

IUCN (2012a) *IUCN Red List Categories and Criteria. Version 3.1.* Second edition. IUCN. Gland, Switzerland & Cambridge, U.K. http://www.iucnredlist.org/documents/redlist_cats_crit_en.pdf

IUCN (2012b) *Guidelines for application of IUCN Red List Criteria at regional and national levels. Version 4.0.* IUCN. Gland, Switzerland & Cambridge, U.K. http://www.iucnredlist.org/documents/reg_guidelines_en.pdf

IUCN (2013) *Guidelines for Using the IUCN Red List Categories and Criteria. Version 10.* Prepared by the Standards and Petitions Subcommittee. http://www.iucnredlist.org/documents/RedListGuidelines.pdf

PECBMS (2013) *Population trends of common European breeding birds 2013.* CSO. Prague, Czech Republic. http://www.ebcc.info/index.php?ID=509

Tucker, G.M. & Heath, M.F. (1994) *Birds in Europe: their conservation status.* BirdLife International (BirdLife Conservation Series No. 3). Cambridge, U.K.