

Conservation status of European Golden Plover (*Pluvialis apricaria altifrons*) and Song Thrush (*Turdus philomelos*)

2022 update

Wild Birds Regulation Unit

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Key to conservation status codes

Category	European species of global conservation concern	Conservation status in Europe	Global population or range concentrated in Europe
SPEC 1	Yes	–	–
SPEC 2	No	Unfavourable	Yes
SPEC 3	No	Unfavourable	No
Non-SPEC^E	No	Favourable	Yes
Non-SPEC	No	Favourable	No

Source: BirdLife International (2004: xiii)

Categories of Species of European Conservation Concern (SPECs) and Non-SPECs

<p>Each species is initially assessed against the IUCN Red List Criteria (IUCN 2001) at a European level, and then against the additional criteria derived mainly from Birds in Europe I (Tucker and Heath 1994). All population size thresholds refer to minimum population estimates. In descending order of threat, a species is evaluated as:</p>	
Critically Endangered (CR)	if its European population meets any of the IUCN Red List Criteria (A to E) for Critically Endangered. Such species have an Unfavourable conservation status in Europe because they are considered to be facing an extremely high risk of extinction in the wild (IUCN 2001).
Endangered (EN)	if its European population meets any of the IUCN Red List Criteria (A to E) for Endangered. Such species have an Unfavourable conservation status in Europe because they are considered to be facing a very high risk of extinction in the wild (IUCN 2001).
Vulnerable (V)	if its European population meets any of the IUCN Red List Criteria (A to E) for Vulnerable. Such species have an unfavourable conservation status in Europe because they are considered to be facing a high risk of extinction in the wild (IUCN 2001).
Declining (D)	if its European population does not meet any IUCN Red List Criteria, but declined by more than 10% over 10 years (i.e. 1990–2000) or three generations, whichever is longer. Such species have an Unfavourable conservation status in Europe because they are unable to maintain their populations and/or natural ranges in the long-term. [Birds in Europe I classified species as SPECs if the size of their population or range declined between 1970–1990 by 20% or more in 33–65% of the population (or by 50% or more in 12–24% of the population). Given the shorter time period covered by Birds in Europe II, an overall decline exceeding 10% is comparable with this approach.]
Rare (R)	if its European population does not meet any IUCN Red List Criteria and is not Declining, but numbers fewer than 10,000 breeding pairs (or 20,000 breeding individuals or 40,000 wintering individuals), and is not marginal to a larger non-European population. Such species have an Unfavourable conservation status in Europe because the small size of their population renders them more susceptible to accelerated declines as a result of: break-up of social structure; loss of genetic diversity; large-scale population fluctuations and catastrophic chance events; existing or potential exploitation, persecution or disturbance by humans.
Depleted (H)	if its European population does not meet any IUCN Red List Criteria and is not Rare or Declining, but has not yet recovered from a moderate or large decline suffered during

	1970–1990, which led to its classification as Endangered, Vulnerable or Declining in Birds in Europe I. Such species have an Unfavourable conservation status in Europe because they have already undergone a population decline of the type that various directives, conventions and agreements intend to prevent, and have not yet recovered.
Localised (L)	if its European population does not meet any IUCN Red List Criteria and is not Declining, Rare or Depleted, but is heavily concentrated, with more than 90% of the European population occurring at 10 or fewer sites (as listed in Heath and Evans 2000). Such species have an Unfavourable conservation status in Europe because their dependence on a small number of sites renders them more susceptible to accelerated declines as a result of: large-scale population fluctuations and catastrophic chance events; existing or potential exploitation, persecution and disturbance by humans.
Secure (S)	if its European population does not meet any of the criteria listed above. Such species have a Favourable conservation status in Europe.
In addition, a species is considered to be:	
Data Deficient (DD)	if there is inadequate information to make a direct, or indirect, assessment of its risk of extinction based on its distribution and/or population status. A species in this category may be well studied, and its biology well known, but appropriate data on its abundance and/or distribution in Europe are lacking. Data Deficient is therefore not a category of threat (IUCN 2001).
Not evaluated (NE)	if its European population has not yet been evaluated against the criteria.
Source: BirdLife International (2004: 8)	

Species trends in Birds in Europe (2004)

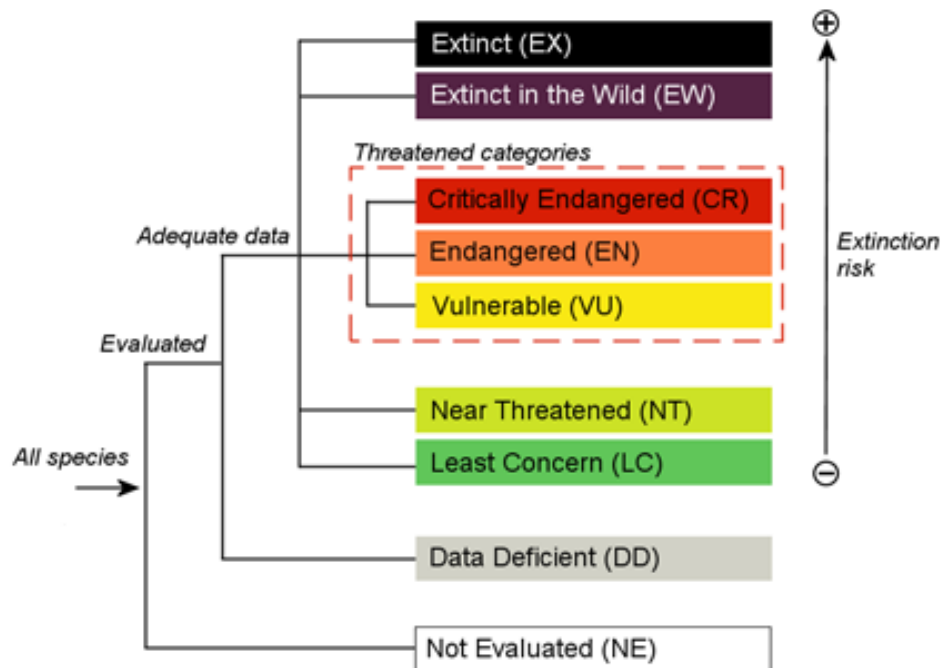
'Worst case' trend scenario 1990–2000	1990–2000 trend category	Criteria met
>30% decline	Large decline	IUCN Red List Criteria
10–29% decline	Moderate decline	Declining
<10% decline and <10% increase	Stable	-
10–29% increase	Moderate increase	-
>30% increase	Large increase	-
Unknown (insufficient data)	Unknown	-

Source: BirdLife International (2004)

IUCN Categories

EXTINCT (EX)	A taxon is Extinct when there is no reasonable doubt that the last individual has died. A taxon is presumed Extinct when exhaustive surveys in known and/or expected habitat, at appropriate times (diurnal, seasonal, annual), throughout its historic range have failed to record an individual. Surveys should be over a time frame appropriate to the taxon's life cycle and life form.
EXTINCT IN THE WILD (EW)	A taxon is Extinct in the Wild when it is known only to survive in cultivation, in captivity or as a naturalized population (or populations) well outside the past range. A taxon is presumed Extinct in the Wild when exhaustive surveys in known and/or expected habitat, at appropriate times (diurnal, seasonal, annual), throughout its historic range have failed to record an individual. Surveys should be over a time frame appropriate to the taxon's life cycle and life form.
CRITICALLY ENDANGERED (CR)	A taxon is Critically Endangered when the best available evidence indicates that it meets any of the criteria A to E for Critically Endangered (see Section V), and it is therefore considered to be facing an extremely high risk of extinction in the wild.
ENDANGERED (EN)	A taxon is Endangered when the best available evidence indicates that it meets any of the criteria A to E for Endangered (see Section V), and it is therefore considered to be facing a very high risk of extinction in the wild.
VULNERABLE (VU)	A taxon is Vulnerable when the best available evidence indicates that it meets any of the criteria A to E for Vulnerable (see Section V), and it is therefore considered to be facing a high risk of extinction in the wild.
NEAR THREATENED (NT)	A taxon is Near Threatened when it has been evaluated against the criteria but does not qualify for Critically Endangered, Endangered or Vulnerable now, but is close to qualifying for or is likely to qualify for a threatened category in the near future.
LEAST CONCERN (LC)	A taxon is Least Concern when it has been evaluated against the criteria and does not qualify for Critically Endangered, Endangered, Vulnerable or Near Threatened. Widespread and abundant taxa are included in this category.
DATA DEFICIENT (DD)	A taxon is Data Deficient when there is inadequate information to make a direct, or indirect, assessment of its risk of extinction based on its distribution and/or population status. A taxon in this category may be well studied, and its biology well known, but appropriate data on abundance and/or distribution are lacking. Data Deficient is therefore not a category of threat. Listing of taxa in this category indicates that more information is required and acknowledges the possibility that future research will show that threatened classification is appropriate. It is important to make positive use of whatever data are available. In many cases great care should be exercised in choosing between DD and a threatened status. If the range of a taxon is suspected to be relatively circumscribed, and a considerable period of time has elapsed since the last record of the taxon, threatened status may well be justified.
NOT EVALUATED (NE)	A taxon is Not Evaluated when it has not yet been evaluated against the criteria.

Structure of IUCN categories



Source: IUCN Red List Categories and Criteria Ver. 3.1 2nd edition. Available at: <https://portals.iucn.org/library/efiles/documents/RL-2001-001-2nd.pdf>

IUCN CRITERIA FOR CRITICALLY ENDANGERED, ENDANGERED AND VULNERABLE TAXA

<p>CRITICALLY ENDANGERED (CR)</p>	<p>A taxon is Critically Endangered when the best available evidence indicates that it meets any of the following criteria (A to E), and it is therefore considered to be facing an extremely high risk of extinction in the wild:</p> <p>A. Reduction in population size based on any of the following:</p> <ol style="list-style-type: none"> 1. An observed, estimated, inferred or suspected population size reduction of $\geq 90\%$ over the last 10 years or three generations, whichever is the longer, where the causes of the reduction are clearly reversible AND understood AND ceased, based on (and specifying) any of the following: <ol style="list-style-type: none"> (a) direct observation (b) an index of abundance appropriate to the taxon (c) a decline in area of occupancy, extent of occurrence and/or quality of habitat (d) actual or potential levels of exploitation (e) the effects of introduced taxa, hybridization, pathogens, pollutants, competitors or parasites. 2. An observed, estimated, inferred or suspected population size reduction of $\geq 80\%$ over the last 10 years or three generations, whichever is the longer, where the reduction or its causes may not have ceased OR may not be understood OR may not be reversible, based on (and specifying) any of (a) to (e) under A1. 3. A population size reduction of $\geq 80\%$, projected or suspected to be met within the next 10 years or three generations, whichever is the longer (up to a maximum of 100 years), based on (and specifying) any of (b) to (e) under A1. 4. An observed, estimated, inferred, projected or suspected population size reduction of $\geq 80\%$ over any 10 year or three generation period, whichever is longer (up to a maximum of 100 years in the future), where the time period must include both the past and the future, and where the
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reduction or its causes may not have ceased OR may not be understood OR may not be reversible, based on (and specifying) any of (a) to (e) under A1.

B. Geographic range in the form of either B1 (extent of occurrence) OR B2 (area of occupancy) OR both:

1. Extent of occurrence estimated to be less than 100 km², and estimates indicating at least two of a-c:

a. Severely fragmented or known to exist at only a single location.

b. Continuing decline, observed, inferred or projected, in any of the following:

- (i) extent of occurrence
- (ii) area of occupancy
- (iii) area, extent and/or quality of habitat
- (iv) number of locations or subpopulations
- (v) number of mature individuals.

c. Extreme fluctuations in any of the following:

- (i) extent of occurrence
- (ii) area of occupancy
- (iii) number of locations or subpopulations
- (iv) number of mature individuals.

2. Area of occupancy estimated to be less than 10 km², and estimate indicating at least two of a-c:

a. Severely fragmented or known to exist at only a single location.

b. Continuing decline, observed, inferred or projected, in any of the following:

- (i) extent of occurrence
- (ii) area of occupancy
- (iii) area, extent and/or quality of habitat
- (iv) number of locations or subpopulations
- (v) number of mature individuals.

c. Extreme fluctuations in any of the following:

- (i) extent of occurrence
- (ii) area of occupancy
- (iii) number of locations or subpopulations
- (iv) number of mature individuals.

C. Population size estimated to number fewer than 250 mature individuals and either:

1. An estimated continuing decline of at least 25% within three years or one generation, whichever is longer, (up to a maximum of 100 years in the future) OR

2. A continuing decline, observed, projected, or inferred, in numbers of mature individuals AND at least one of the following (a-b):

Population structure in the form of one of the following:

- (i) no subpopulation estimated to contain more than 50 mature individuals, OR
- (ii) at least 90% of mature individuals in one subpopulation.

b. Extreme fluctuations in number of mature individuals.

D. Population size estimated to number fewer than 50 mature individuals.

E. Quantitative analysis showing the probability of extinction in the wild is at least 50% within 10 years or three generations, whichever is the longer (up to a maximum of 100 years).

**ENDANGERED
(EN)**

A taxon is Endangered when the best available evidence indicates that it meets any of the following criteria (A to E), and it is therefore considered to be facing a very high risk of extinction in the wild:

Reduction in population size based on any of the following:

1. An observed, estimated, inferred or suspected population size reduction of $\geq 70\%$ over the last 10 years or three generations, whichever is the longer, where the causes of the reduction are clearly reversible AND understood AND ceased, based on (and specifying) any of the following:

- (a) direct observation
- (b) an index of abundance appropriate to the taxon
- (c) a decline in area of occupancy, extent of occurrence and/or quality of habitat
- (d) actual or potential levels of exploitation
- (e) the effects of introduced taxa, hybridization, pathogens, pollutants, competitors or parasites.

2. An observed, estimated, inferred or suspected population size reduction of $\geq 50\%$ over the last 10 years or three generations, whichever is the longer, where the reduction or its causes may not have ceased OR may not be understood OR may not be reversible, based on (and specifying) any of (a) to (e) under A1.

3. A population size reduction of $\geq 50\%$, projected or suspected to be met within the next 10 years or three generations, whichever is the longer (up to a maximum of 100 years), based on (and specifying) any of (b) to (e) under A1.

4. An observed, estimated, inferred, projected or suspected population size reduction of $\geq 50\%$ over any 10 year or three generation period, whichever is longer (up to a maximum of 100 years in the future), where the time period must include both the past and the future, AND where the reduction or its causes may not have ceased OR may not be understood OR may not be reversible, based on (and specifying) any of (a) to (e) under A1.

B. Geographic range in the form of either B1 (extent of occurrence) OR B2 (area of occupancy) OR both:

1. Extent of occurrence estimated to be less than 5,000 km², and estimates indicating at least two of a-c:

- a. Severely fragmented or known to exist at no more than five locations.
- b. Continuing decline, observed, inferred or projected, in any of the following:
 - (i) extent of occurrence
 - (ii) area of occupancy
 - (iii) area, extent and/or quality of habitat
 - (iv) number of locations or subpopulations
 - (v) number of mature individuals.
- c. Extreme fluctuations in any of the following:
 - (i) extent of occurrence
 - (ii) area of occupancy
 - (iii) number of locations or subpopulations
 - (iv) number of mature individuals.

2. Area of occupancy estimated to be less than 500 km², and estimates indicating at least two of a-c:

- a. Severely fragmented or known to exist at no more than five locations.
- b. Continuing decline, observed, inferred or projected, in any of the following:
 - (i) extent of occurrence
 - (ii) area of occupancy
 - (iii) area, extent and/or quality of habitat
 - (iv) number of locations or subpopulations
 - (v) number of mature individuals.

	<p>c. Extreme fluctuations in any of the following: (i) extent of occurrence (ii) area of occupancy (iii) number of locations or subpopulations (iv) number of mature individuals.</p> <p>C. Population size estimated to number fewer than 2,500 mature individuals and either:</p> <p>1. An estimated continuing decline of at least 20% within five years or two generations, whichever is longer, (up to a maximum of 100 years in the future) OR</p> <p>2. A continuing decline, observed, projected, or inferred, in numbers of mature individuals AND at least one of the following (a-b):</p> <p>a. Population structure in the form of one of the following: (i) no subpopulation estimated to contain more than 250 mature individuals, OR (ii) at least 95% of mature individuals in one subpopulation.</p> <p>b. Extreme fluctuations in number of mature individuals.</p> <p>D. Population size estimated to number fewer than 250 mature individuals.</p> <p>E. Quantitative analysis showing the probability of extinction in the wild is at least 20% within 20 years or five generations, whichever is the longer (up to a maximum of 100 years).</p>
<p>VULNERABLE (VU)</p>	<p>A taxon is Vulnerable when the best available evidence indicates that it meets any of the following criteria (A to E), and it is therefore considered to be facing a high risk of extinction in the wild:</p> <p>Reduction in population size based on any of the following:</p> <p>1. An observed, estimated, inferred or suspected population size reduction of $\geq 50\%$ over the last 10 years or three generations, whichever is the longer, where the causes of the reduction are clearly reversible AND understood AND ceased, based on (and specifying) any of the following:</p> <p>(a) direct observation (b) an index of abundance appropriate to the taxon (c) a decline in area of occupancy, extent of occurrence and/or quality of habitat (d) actual or potential levels of exploitation (e) the effects of introduced taxa, hybridization, pathogens, pollutants, competitors or parasites.</p> <p>2. An observed, estimated, inferred or suspected population size reduction of $\geq 30\%$ over the last 10 years or three generations, whichever is the longer, where the reduction or its causes may not have ceased OR may not be understood OR may not be reversible, based on (and specifying) any of (a) to (e) under A1.</p> <p>3. A population size reduction of $\geq 30\%$ projected or suspected to be met within the next 10 years or three generations, whichever is the longer (up to a maximum of 100 years), based on (and specifying) any of (b) to (e) under A1.</p> <p>4. An observed, estimated, inferred, projected or suspected population size reduction of $\geq 30\%$ over any 10 year or three generation period, whichever is longer (up to a maximum of 100 years in the future), where the time period must include both the past and the future, AND where the reduction or its causes may not have ceased OR may not be understood OR may not be reversible, based on (and specifying) any of (a) to (e) under A1.</p> <p>B. Geographic range in the form of either B1 (extent of occurrence) OR B2 (area of occupancy) OR both:</p> <p>1. Extent of occurrence estimated to be less than 20,000 km², and estimates indicating at least two of a-c:</p> <p>a. Severely fragmented or known to exist at no more than 10 locations.</p>

	<p>b. Continuing decline, observed, inferred or projected, in any of the following:</p> <ul style="list-style-type: none"> (i) extent of occurrence (ii) area of occupancy (iii) area, extent and/or quality of habitat (iv) number of locations or subpopulations (v) number of mature individuals. <p>c. Extreme fluctuations in any of the following:</p> <ul style="list-style-type: none"> (i) extent of occurrence (ii) area of occupancy (iii) number of locations or subpopulations (iv) number of mature individuals. <p>2. Area of occupancy estimated to be less than 2,000 km², and estimates indicating at least two of a-c:</p> <p>a. Severely fragmented or known to exist at no more than 10 locations.</p> <p>b. Continuing decline, observed, inferred or projected, in any of the following:</p> <ul style="list-style-type: none"> (i) extent of occurrence (ii) area of occupancy (iii) area, extent and/or quality of habitat (iv) number of locations or subpopulations (v) number of mature individuals. <p>c. Extreme fluctuations in any of the following:</p> <ul style="list-style-type: none"> (i) extent of occurrence (ii) area of occupancy (iii) number of locations or subpopulations (iv) number of mature individuals. <p>C. Population size estimated to number fewer than 10,000 mature individuals and either:</p> <p>1. An estimated continuing decline of at least 10% within 10 years or three generations, whichever is longer, (up to a maximum of 100 years in the future) OR</p> <p>2. A continuing decline, observed, projected, or inferred, in numbers of mature individuals AND at least one of the following (a-b):</p> <p>a. Population structure in the form of one of the following:</p> <ul style="list-style-type: none"> (i) no subpopulation estimated to contain more than 1,000 mature individuals, OR (ii) all mature individuals in one subpopulation. <p>b. Extreme fluctuations in number of mature individuals.</p> <p>D. Population very small or restricted in the form of either of the following:</p> <p>1. Population size estimated to number fewer than 1,000 mature individuals.</p> <p>2. Population with a very restricted area of occupancy (typically less than 20 km²) or number of locations (typically five or fewer) such that it is prone to the effects of human activities or stochastic events within a very short time period in an uncertain future, and is thus capable of becoming Critically Endangered or even Extinct in a very short time period.</p> <p>E. Quantitative analysis showing the probability of extinction in the wild is at least 10% within 100 years.</p>
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Executive Summary

This report provides an update on the conservation status of the Golden Plover (*Pluvialis apricaria*) and Song Thrush (*Turdus philomelos*) for review and consideration by the Malta Ornis Committee.

The conservation status of the two species is reviewed on the basis of current scientific literature, which also provides details of population size, mortality rates and migratory routes. Tracking (GPS) data from Song Thrushes fitted with a satellite-tag is also included in this report. An assessment of the Golden Plover at sub-specific level is also provided. A literature review based on the latest ornithological publications and scientific evidence shows that Golden Plovers migrating over the Maltese Islands are the sub-species *Pluvialis apricaria altifrons* from the Northeast European (West Continental) population and that the moderate historical decline refers to the nominate *P. apricaria apricaria*, which has a more restricted range and does not pass through Malta (Scott, 2002; Wetlands International, 2009). The current update, based on the most recently available scientific literature, shows that both *Pluvialis apricaria altifrons* and *Turdus philomelos* continue to have a **Favourable Conservation Status at the European, the EU28 and Malta's reference population levels.**

The assessment contains a review of the latest population trend estimates of both species, based on the current Article 12 report for period 2013–2018 as well as the latest PECMBS wild bird indicators. The report also determines the applicable annual mortality rate of Malta's reference population for each species in accordance with the principles established in the European Commission's Guide to Sustainable Hunting under the Birds Directive¹.

¹ http://ec.europa.eu/environment/nature/conservation/wildbirds/hunting/docs/hunting_guide_en.pdf

1. Conservation status of European Golden Plover (*Pluvialis apricaria altifrons*)

The Golden Plover (*Pluvialis apricaria s.l.*) is a medium-sized Palearctic wader which breeds in continental arctic, arctic alpine and boreal tundra, but secondarily on temperate oceanic unenclosed upland moors and peat-land. In winter, the Golden Plover occupies harvest fields, stubbles, close grazed pastures, fallows and other farmland of open character including floodlands. Its breeding range extends from Iceland to Russia and its wintering quarters stretch from Morocco to Asia Minor including South Europe (Geroudet 1983; Cramp & Simmons 1983).

European population

The European population is estimated at 630,000–860,000 pairs, which equates to 1,300,000–1,750,000 individuals (BirdLife International, 2022²). The population at EU28 level is estimated at 207,000–338,000 pairs (EEA, 2020)³. The population trend is estimated to be **increasing** (BirdLife International, 2022).

The Golden Plover (*Pluvialis apricaria s.l.*) is a huntable species listed under Annex II/B of the Birds Directive. According to the EU Management Plan for the Golden Plover⁴, this species is hunted in at least four EU member states, including Portugal, Ireland, France and Malta. According to the Management Plan, over 62,000 Golden Plovers were known to have been bagged annually in France and over 32,000 in Portugal⁵.

This species has an extremely large range, with an estimated global extent of occurrence of 1,000,000–10,000,000 km² (Wetlands International 2006⁶). BirdLife International (2022) notes that on the basis of such large range (11,100,000 km²), this species does not approach the thresholds for Vulnerable under the range size criterion (Extent of Occurrence <20,000 km² combined with a declining or fluctuating range size, habitat extent/quality, or population size and a small number of locations or severe fragmentation). The population size is very large, and hence does not approach the thresholds for Vulnerable under the population size criterion (<10,000 mature individuals with a continuing decline estimated to be >10% in ten years or three generations, or with a specified population structure). For these reasons the species is evaluated by BirdLife International (2022) and IUCN⁷ as **Least Concern** with an increasing population trend.

Sub-specific assessment – a historical review of trends and geographical populations

Cramp and Simmons (1983)⁸ maintain that the Golden Plover includes two sub-species *Pluvialis apricaria apricaria* (nominate) breeding from Ireland and Britain to the Baltic States and *Pluvialis apricaria altifrons* breeding at higher altitudes from Iceland to north-central Siberia. Delany *et. al.* (2007)⁹ indicate that the *altifrons* population is divided into three sub-populations, of which the Northeast European (West Continental) is the one that migrates over

² BirdLife International (2022) Species factsheet: *Pluvialis apricaria*. Downloaded from <http://www.birdlife.org> on 15/07/2022.

³ European Environment Agency (2020) Article 12 reports for the 2013-2018 reporting period (EU28) Available at: <http://bd.eionet.europa.eu/article12/summary?period=1&subject=A140>

⁴ European Union Management Plan 2009–2011 Golden Plover *Pluvialis apricaria*. Available at: https://ec.europa.eu/environment/nature/conservation/wildbirds/hunting/docs/Golden%20Plover%20EU_MP.pdf

⁵ EC 2009: *European Union Management Plan for Golden Plover 2009–2011*, Table 4, page 17.

⁶ Wetlands International (2006). - *Waterbird Population Estimates – Fourth Edition*. Wetlands International, Wageningen, the Netherlands.

⁷ <http://www.iucnredlist.org/details/22693727/0>

⁸ Cramp, S., ed. 1983. *The Birds of the Western Palearctic*. Vol. III 'Waders to Gulls'. (*Pluvialis apricaria* Golden Plover pp 201-216). Oxford University Press.

⁹ Delany, S, Scott, D, Dodman T, and Stroud, D (eds) (2009) *2009 Atlas of Wader Populations in Africa and Western Eurasia*. Wetlands International, Wageningen, The Netherlands.

Malta (breeds from North Norway to Russia-east 70 degrees) and winters in west and south continental Europe, east Britain and north-west Africa (Morocco to Tunisia).

The Agreement on the Conservation of African–Eurasian Migratory Waterbirds (AEWA) Status Report indicates that the *Pluvialis apricaria altifrons* breeds widely at high altitudes in Western Eurasia from Iceland east to 100 degrees east in Western Siberia, and winters south to North Africa (occasionally to Senegal) and the South Caspian. *Pluvialis apricaria apricaria* breeds at more westerly latitudes in Britain, Ireland, Denmark and Germany, and is a short-distance migrant, most birds wintering fairly close to their breeding areas (Scott, 2002).

Considerable variation exists in most populations, and many authors consider the species to be monotypic. Four main breeding populations can be identified: (1) Icelandic and Faeroese breeders (*altifrons*), wintering mainly in Ireland, with smaller numbers in western Britain, France and Iberia, and a few to Northwest Africa; (2) a population of *altifrons* breeding from Northern Norway east to about 70 degrees east and wintering mainly in western and southern continental Europe and Northwest Africa (Morocco and Tunisia) [Malta’s reference population]; (3) population of *altifrons* breeding in Western Siberia east to 100 degrees east and wintering in the Caspian region band possibly Asia Minor and Eastern Mediterranean; and (4) southern breeders (*apricaria*) breeding in Britain, Ireland, Denmark (extirpated?) and Germany, and wintering in Northwest Europe (Table 1).

Table 1 Countries of origin of *Pluvialis apricaria altifrons* and *Pluvialis apricaria apricaria*

Population	<i>altifrons</i> (Iceland & Faeroes)	<i>altifrons</i> (NW Europe)	<i>altifrons</i> (N–C Siberia)	<i>apricaria</i> (UK/IR/DK/D)
Population size	☺	☺	☹☹	☹
Breeding location	☺☺	☺☺	☺	☺☺

Source: Adapted from Gillings, S (2005) Table 1: An assessment of the level of knowledge for developing a flyway conservation strategy for each breeding population of Eurasian Golden Plover (after Davidson *et al.* 1998). ☺☺ = very good; ☺ = good; ☹ = adequate; ☹☹ = poor, ☹☹☹ = very poor. International workshop on passage and wintering Eurasian Golden Plovers (p. 6).

AEWA and its Resolution 4.11 (see <http://tinyuri.com/aewares411>) also provides the distribution for *Pluvialis apricaria apricaria* as “*Britain, Ireland, Denmark, Germany and the Baltic*”, thereby excluding in a definitive way the Central Mediterranean region. The same applies for the ‘European Management Plan for the Golden Plover, 2009–2011’ (see <http://tinyuri.com/gp-eump>) which indicates that “*The nominate southern subspecies Pluvialis apricaria apricaria nests in Ireland, Great Britain, Denmark, Germany, Latvia, Lithuania and Estonia. This subspecies winters in North-West, from Ireland to South Britain, France and Iberia*”.

In this context, it should be noted that the sub-species that migrates over Malta in autumn is *Pluvialis apricaria altifrons* as can also be attested by Delany *et. al.* (2007). The authors maintain that “there is growing evidence that numbers of *altifrons* wintering in Europe are increasing” (Delany *et. al.*, 2007: 183). The publication also indicates that the nominate *Pluvialis apricaria apricaria* has a more restricted migratory distribution that excludes the Maltese Islands and nearby central regions in the Mediterranean. The European Union Management Plan (EC 2009) specifies that:

“*The Northern P. a. altifrons subspecies is generally split into three populations based on their different flyways that overlap in winter. They are defined as:*

- *Icelandic (or East Atlantic): breeds in Iceland, the Faeroe Islands and Greenland and winters in Ireland, West Britain, France, West Iberia and North-West Africa.*
- *Northeast European (or West Continental): breeds in North Norway and Russia (east to 70 degrees east) and winters in West and south continental Europe, East Britain and North-West Africa (Morocco and Tunisia).*
- *North Central Siberia population, breeds in North Central Siberia (east to 100 degrees east) and winters in the Caspian Region, Asia Minor and the Eastern Mediterranean.”*

According to Delany *et al.* (2007) *Pluvialis apricaria apricaria* is declining whereas the *Pluvialis apricaria altifrons* is more or less stable (see also page 7, second paragraph, of *The European Union Management Plan 2009-2011 for Golden Plover*). On the basis of current literature, therefore, the population of the sub-species with a historical decline is the *P. a. apricaria*, whereas the other populations / groups (*P. apricaria altifrons*) found in Europe are stable or increasing.

According to the EU Management Plan for the Golden Plover, approximately 50% of Golden Plover (*P. apricaria altifrons*) European population breeds in Iceland with a total of >300,000 breeding pairs (Thorup 2006, 930,000 individuals, Wetlands International 2006). Trends in this population are not well known, whereas the relatively small Faeroese population is declining. Approximately half of this population is found in Norway, 22% in Finland, 17% in Sweden and 9% in Russia with a total ranging from 217,000 to 362,000 breeding pairs. This population is considered stable (Wetlands International 2006). According to AEWA, while the *P. apricaria apricaria* is declining, *P. apricaria altifrons* is considered as stable and possibly increasing.

It should thus be noted that this moderate decline is related to the nominate *Pluvialis apricaria apricaria* population which does not pass through Malta (Figures 1 and 2). Golden Plovers that migrate over the Maltese Islands form part of the Northeast European (or West Continental) population (*P. apricaria altifrons*) which has a **minimum population of 172,089 breeding pairs at EU28 level** (Finland and Sweden only) – see Table 3.

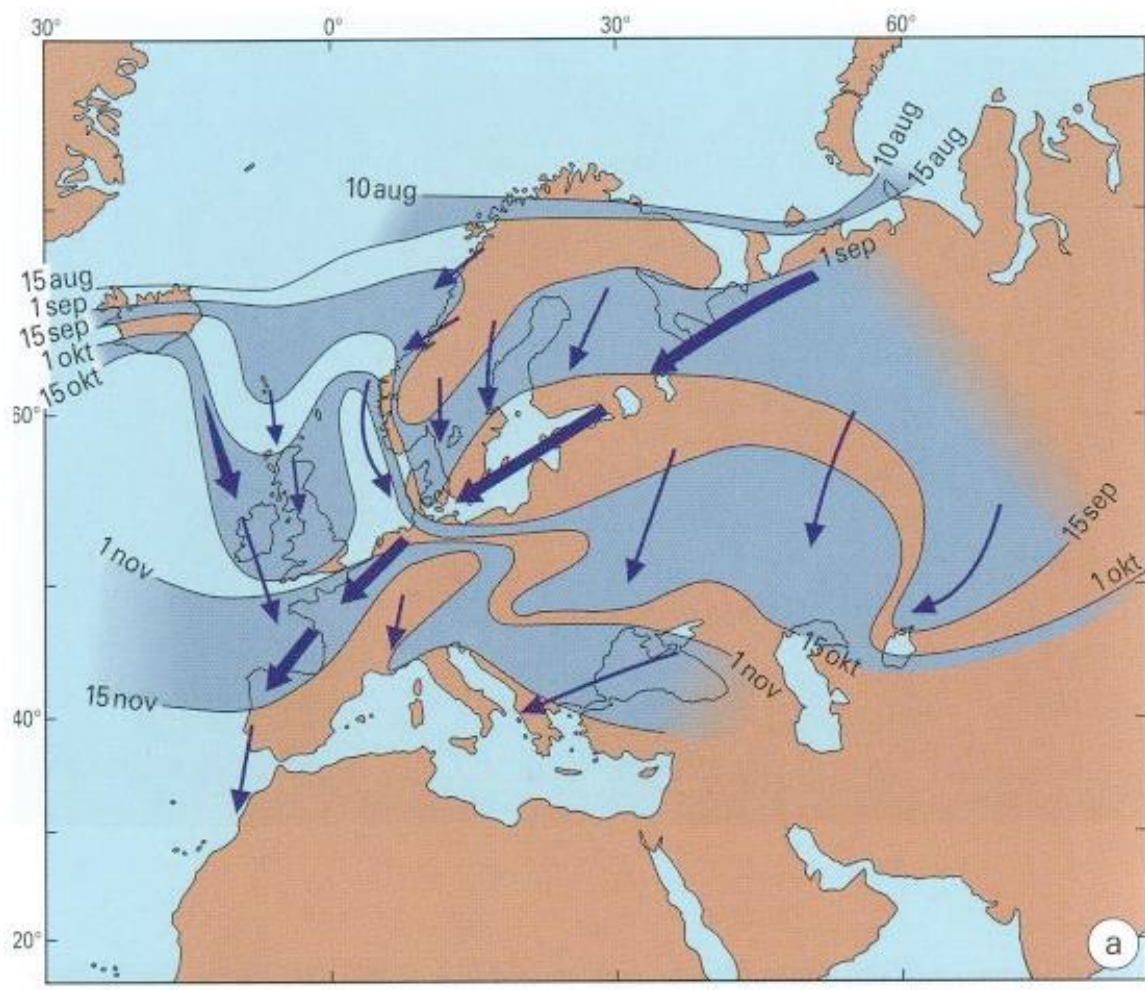


Figure 1: Outline of the timing and geography of the southward migration of Golden Plovers. Arrows indicate the most important migration routes, and size of arrow is an indication of migration intensity. Source: Jukema *et al.* 2001. In: Gillings, S (2005) International workshop on passage and wintering Eurasian Golden Plovers (p. 5).

Eurasian Golden Plover

Pluvialis apricaria

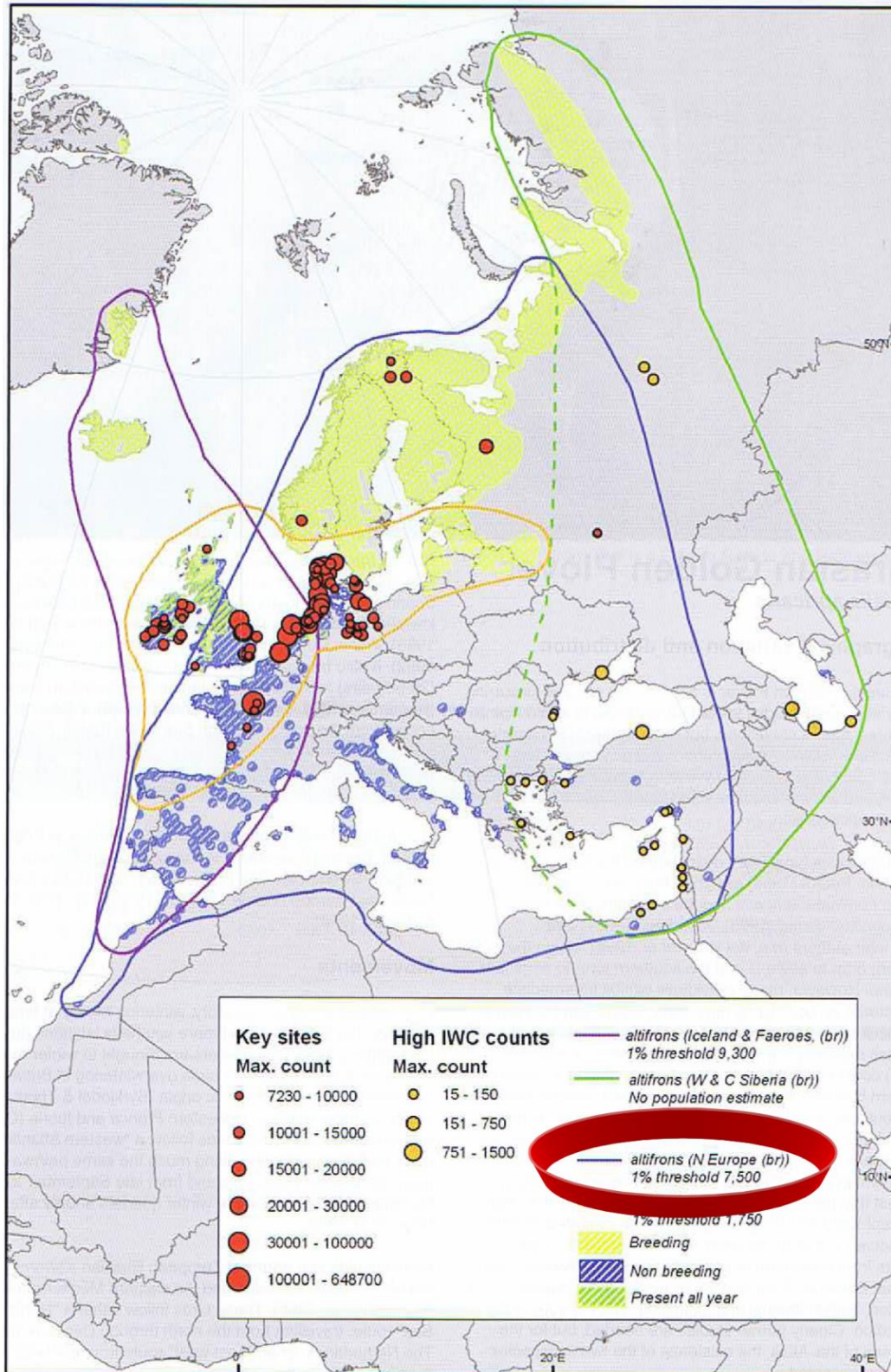


Figure 2: Migratory flyways of *Pluvialis apricaria altifrons*. Source: Wetlands International (2009) *An Atlas of Wader Populations in Africa and Western Eurasia* (p. 180). **Note orange boundary delineating the restricted migration pattern of nominate *Pluvialis apricaria apricaria*.**

Article 12 reports (2013–2018)

This update includes the current population trends and indices as reported by Member States in their Article 12 report for period 2013–2018¹⁰. Within the territory of the European Union (EU28), the European Golden Plover has a breeding population size of 207,000–338,000 pairs (previously reported at 244,000–355,000 pairs during the 2008–2012 reporting cycle) and a breeding range size of 533,000km² (previously reported at 661,000km² during the 2008–2012 reporting cycle). The **breeding population** trend in the EU28 is **Stable in both the short-term and long-term** (EEA, 2020)¹¹.

Short-term and long-term trend directions and magnitudes reported for the EU for this taxon correspond to trends in PECBMS (2019), indicating a stable trend (0%) during 2008–2017 and a stable trend (-13%) during 1981–2017¹².

The species has a wintering population size of 746,000–1,220,000 individuals (previously reported at 1,350,000–2,430,000 individuals during the 2008–2012 reporting cycle). The **wintering population** trends at EU level were reported as **declining in the short-term and increasing in the long-term**.

Wintering EU assessment: Short-term and long-term trend directions and magnitudes reported for the EU for this taxon do not correspond to trends in Wetlands International 2017 (<http://iwc.wetlands.org/static/files/0-IWC-trendanalysis-report-2017-final.pdf> and <http://iwc.wetlands.org/index.php/aewatrends>). In this instance, Wetlands International 2017 trends were however considered more representative alongside the Red List of British Birds (Stanbury *et al.*, 2017); thus the EU population trend is likely declining (source: see footnote 10).

The EU population status of *Pluvialis apricaria* was assessed as **Secure**, because the species does not meet any of the IUCN Red List criteria for threatened or Near Threatened, or the criteria for Depleted or Declining (the EU28 population or range has not declined by 20% or more since 1980)¹³.

European Bird Census Council (2021 update)

It should be noted that the “List of Countries” contributing to the latest European Bird Census Council (EBCC / PECBMS) update includes Estonia for the first time (EBCC 2021 update), apart from Norway, **Sweden** and **Finland** (the latter two constituting Malta’s reference population). According to the EU Management Plan for this species, Estonia, which sustains a breeding population of 2,500–3,400 pairs (EEA, 2020) does not form part of the Northeast European population of *Pluvialis apricaria altifrons* (Malta’s reference population)¹⁴.

According to the latest dataset available from the European Bird Census Council¹⁵ (EBCC, 2021) at the time the conservation status of the Golden Plover (*Pluvialis apricaria*) was updated (August 2022), **there was a decrease in the combined breeding population of the**

¹⁰ <https://nature-art12.eionet.europa.eu/article12/summary>

¹¹ European Environment Agency (2020) Article 12 reports for the 2013-2018 reporting period (EU28) Available at: <http://bd.eionet.europa.eu/article12/summary?period=1&subject=A140>

¹² https://nature-art12.eionet.europa.eu/article12/summary/audittrail/?reported_name=&period=3&subject=Pluvialis+apricaria

¹³ <https://nature-art12.eionet.europa.eu/article12/summary/datasheet/?period=3&subject=Pluvialis+apricaria>

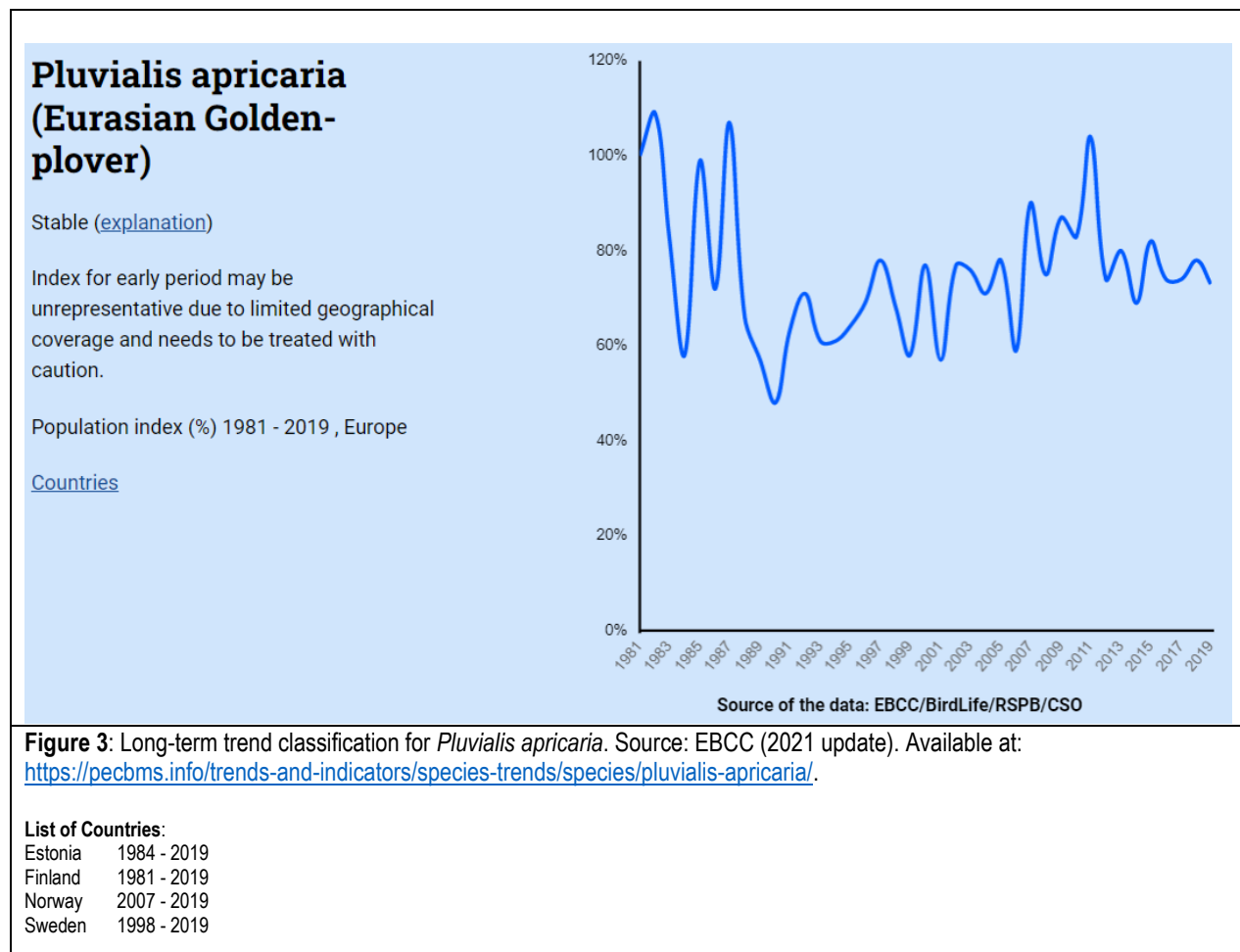
¹⁴ *The nominate southern subspecies P. a. apricaria nests in Ireland, Great Britain, Denmark, Germany, Latvia, Lithuania and Estonia. This subspecies winters in North-West Europe, from Ireland to South Britain, France and Iberia.* Source: EU Management Plan – Golden Plover (p.8).

¹⁵ *Trends of common birds in Europe, 2021 update.* Available at: <https://pecbms.info/european-wild-bird-indicators-2021-update/>

contributing countries (Norway, Sweden, Finland and Estonia) both in the short-term and long-term trends, when compared with the previous EBCC update (Norway, Sweden and Finland only).

In the short-term trend [ten-year slope] (2010–2019), the decrease was from 0% to -12% (**12% decrease**) and from -13% to -27% (**14% decrease**) in the long-term trend (1980–2019). The current EBCC assessment considers *Pluvialis apricaria* as **Stable** (1981–2019).

Figure 3 is an extract from the EBCC 2021 update, which confirms that the population trend category for *Pluvialis apricaria* remained **Stable** with “no significant increase or decline, and most probable trends are less than 5% per year”.



The Golden Plover does not breed in Malta. Table 2 lists the live-capturing data for Golden Plover in Malta and Gozo from 2006 to January 2022.

Table 2 **Live-capturing data for Golden Plover (2006–Jan2022)**

Species	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total	Average
Golden Plover	319	44	503 ¹	414	1,769	52	25 ²	158 ³	476 ⁴	321 ⁵	297 ⁵	167 ⁵	233 ⁵	588 ⁶	797 ⁷	688 ⁸	27 ⁹	6,878	405

Data sources:

2006–2012: *Carnet de Chasse* data, Environment Protection Directorate (MEPA).

2013–2022: Wild Birds Regulation Unit.

¹ Jan 2008 (n=16) + Oct–Dec 2008 (n=487)

² The 2012 figure represents the SMS data for the period 20th October to 31st December 2012 (i.e. excluding the period 1st January to 10th January 2013, n=8).

³ The 2013 figure represents the SMS data for the period 20th October to 31st December 2013 (i.e. excluding the period 1st January to 10th January 2014, n=58).

⁴ The 2014 figure represents the SMS data for the period 1st January to 10th January 2014 (n=58) and the game reporting data for the period 20th October to 31st December 2014 (n=418).

⁵ Game reporting data for the period 20th October to 31st December of the corresponding year.

⁶ Game reporting data for the period 1st November to 31st December of the corresponding year.

⁷ The 2020 figure represents the game reporting data for the period 1st January to 10th January 2020 (n=112) and the game reporting data for the period 1st November to 31st December 2020 (n=685).

⁸ The 2021 figure represents the game reporting data for the period 1st January to 4th January 2021 (n=15) [season closed on 4th January 2021 as soon as the national bag limit of 700 Golden Plovers was reached] and the game reporting data for the period 1st November to 31st December 2021 (n=673).

⁹ The 2022 figure represents the game reporting data for the period 1st January to 3rd January 2022 (n=27). The season was closed on 3rd January 2022 as soon as the national bag limit of 700 Golden Plovers was reached.

Reference population

The “small numbers” requirement, within the meaning of Article 9(1)(c) of the Birds Directive should be understood as “any sample of less than 1% of the total annual mortality of the population in question (average value) for those species which are not to be hunted and **a sample in the order of 1% for those species which may be hunted**. ‘Population in question’ is to be understood, with regard to migratory species, as the population of those regions from which come the main contingents passing through the region to which the derogation applies during its period of application”. Given that the Golden Plover qualifies as a huntable species under the Birds Directive (MT: Annex IIB), the “*small numbers*” requirement is understood as “*a sample in the order of 1% of the total annual mortality of the population in question*”.

As explained in the previous sections of this report, the reference population of the Golden Plover for Malta is the West Continental (Northeast European) population (*P. apricaria altifrons*). According to the EU Management Plan (2009–2011) for this species, this population is distributed as follows:

- Norway (c. 50%)
- Finland (22%)
- Sweden (17%)
- Russia (9%)

Although the flyways of Golden Plovers have been mapped by established scientific literature (see Figures 1 and 2 above), Malta will conduct a research project to assess the migratory routes of this species using satellite tracking devices, as agreed with the services of the European Commission in 2019. The project commenced in February 2022, but no Golden Plovers were caught, primarily since in Malta this species is a rare and irregular migrant during pre-nuptial migration.

Article 12 reports for the 2013–2018 reporting period specifies that the Northeast European breeding population of the Golden Plover (*P. a. altifrons*) within the EU territory (Finland and Sweden) ranges between 172,089–283,233 breeding pairs (previously reported at 203,000–290,000 breeding pairs during the 2008–2012 reporting cycle). Finland constitutes 44% whereas Sweden constitutes 39.7% of the EU28 population respectively. The breeding population of Finland and Sweden is distributed as follows:

- Finland: 89,089–143,233 pairs (best value: 121,726 pairs)
- Sweden: 83,000–140,000 pairs (best value: 110,000 pairs)

This results in a reference population of **172,089 minimum breeding pairs**, based on the current estimates as specified in Article 12 reports for the 2013–2018 reporting period. Table 3 provides a direct comparison between the breeding population estimates of the reference population (Finland and Sweden) and other breeding populations at EU28 level.

Table 3 Golden Plover EU28 Breeding Population (orange shading represents the West Continental component population of *Pluvialis apricaria altifrons* – Malta’s reference population)

Member State	% in EU28	Breeding Pairs (Min - Max)		Breeding Population Trend		Short-term % change (Max - Min)		Long-term % change (Max - Min)	
				Short term	Long term				
Denmark	0.2	N/A	N/A	Decreasing	Decreasing	N/A	N/A (-100)	N/A	N/A (-100)
Germany	0.1	0	2	Unknown	Decreasing	N/A	N/A	N/A	N/A

									(-86)
Estonia	1.1	2,500	3,400	Stable	Stable	1	8	12	27
Finland	44	89,089	143,233	Stable	Stable	-11	26	-9	44
Ireland		84	98	Decreasing	Decreasing	N/A	N/A (-37.5)	-84	-82
Lithuania		35	45	Stable	Stable	N/A	N/A	N/A	N/A
Latvia	0.1	260	550	Stable	Stable	1.56	6.27	7	12
Sweden	39.7	83,000	140,000	Stable	Increasing	0	28	10	40
UK	23.9	32,667	50,531	Stable	Increasing	-5.7	-5.7	+64	+64
Total		207,000	338,000	Stable	Stable				
							Trend (EU28 Population)		Secure

Source: European Environment Agency (2020): Article 12 reports for the 2013–2018 reporting period.

For the purpose of calculating the “small numbers” criterion in relation to the relevant “population concerned” (the reference population), Table 4 below shows the **minimum** number of breeding pairs of *Pluvialis apricaria altifrons*, together with other relevant information required for calculating the 1% mortality threshold. According to the British Trust for Ornithology (BTO)¹⁶, the typical lifespan of Golden Plover is four years and the annual mortality rate of adults is 27%, “based on a 50-year study in The Netherlands using colour-mark sightings” (Sandercock, 2003).

Table 4 Minimum breeding population and mortality rate – Malta’s reference population

	Golden Plover (<i>Pluvialis apricaria altifrons</i>)	Source
Minimum breeding population – pairs (Finland and Sweden only)	172,089	Article 12 reports for the 2013–2018 reporting period (EEA, 2020); Wetlands International (2009: 180).
Mortality rate – juveniles	53.33%	Das Kompendium der Vögel Mitteleuropas (KVM) / Birds of the Western Palearctic (BWP)
Mortality rate – adults	27%	BTO
Breeding rate (young per pair)	3.64	Golden Plover: European Management Plan-2009–2011, Technical Report-2009-034, Golden Plover.

Calculation of 1% mortality rate and “small numbers”

Golden Plover (*P. apricaria altifrons*)

Minimum breeding success 3.64 birds per pair (172,089 x 3.64) = 626,404

Mortality rate of 1st year birds (626,404 x 53.33%) = 334,061

Mortality rate of adults (344,178 x 27%) = 92,928

Total annual mortality (334,061 + 92,928) = 426,989

1% of total annual mortality (426,989 x 1%) = 4,270

¹⁶ Golden Plover *Pluvialis apricaria* Key Facts. British Trust for Ornithology. Available at: <https://app.bto.org/birdfacts/results/bob4850.htm>.

Total potential Golden Plover national bag limit (1% of total annual mortality of [minimum] reference population size) is: $4,270 \div 3 = 1,423$ (figure divided by three to take into account the three principal flyways and the fact that *Pluvialis apricaria altifrons* is a broad-front migrant [Wetlands International, 2009]).

Autumn seasonal bag limit in relation to “small numbers”

Based on the 1% mortality rate (of the minimum population size), the “small numbers” calculation with respect to the national bag limit would amount to 1,423 Golden Plovers. However, it should be noted that the average number of Golden Plovers captured with clap-nets during period 2006–2022 is 405 (Table 2). Thus, the previous season’s bag limit of 700 Golden Plovers should be retained if a derogation to open an autumn live-capturing season for this species is applied in 2022. This equates to 0.164% of the total annual mortality of the reference population (minimum population size), which is significantly less than the 1% threshold.

- **Golden Plover** – maximum national bag limit of **700** birds.

2. Conservation status of Song Thrush (*Turdus philomelos*)

The Song Thrush (*Turdus philomelos*) is a passerine species in the thrush family found in woodland and forest ecosystems. It is a huntable species, listed under Annex II/B of the Birds Directive and is present throughout Europe and the northern part of Asia eastwards of Lake Baikal. **The northern populations are migratory and winter in western and southern Europe.** The European population is estimated at 24.4–38.4 million breeding pairs. Europe forms c.65% of the global range. According to BirdLife International (2022)¹⁷, the global population size is estimated at 75–(118)120 million individuals.

This species has an extremely large range (23,300,000 km²), and hence does not approach the thresholds for Vulnerable under the range size criterion (Extent of Occurrence <20,000 km² combined with a declining or fluctuating range size, habitat extent/quality, or population size and a small number of locations or severe fragmentation). The population trend appears to be increasing, and hence the species does not approach the thresholds for Vulnerable under the population trend criterion (>30% decline over ten years or three generations). The population size is extremely large, and hence does not approach the thresholds for Vulnerable under the population size criterion (<10,000 mature individuals with a continuing decline estimated to be >10% in ten years or three generations, or with a specified population structure). For these reasons the species is evaluated as Least Concern (BirdLife International, 2022).

Global and European distribution

It has been documented that most Song Thrushes from the northern and eastern parts of the European range migrate via three or four main routes in a south westerly direction (Ashmole M.J., 1962; Busse P & Maksalon L, 1986). With reference to the central Mediterranean region, the Italian publication *Atlante della Migrazione degli Uccelli in Italia*¹⁸ states that “the Song Thrush is a regular breeder in Italy and a common passage migrant with the first thrushes occurring from late August, but high frequencies reached from late September, with the largest influxes in October with a maximum reached in the last decade of the month and good numbers till early November”. With reference to the migratory pattern of this species, the authors note that:

“Autumn recoveries mainly involve northern and central Italy, where most records are on the western side. Much less data from lower latitudes, while on islands most observations are from southern Sardinia. The good sample of direct autumn recoveries indicates NE–SW movements, primarily from the Balkans¹⁹. This main direction is similar to what [is] reported from more northern countries, like the UK, Norway, The Netherlands and Denmark. In our case Italy gets influxes from more eastern areas, with many birds entering through Friuli. Parallel routes towards our country are confirmed by the southernmost recoveries along the peninsula being referred to birds ringed in more eastern longitudes within the general ringing area.

The national sample of first-capture data indicates a progressive decline in average wing length during the autumn, suggesting an earlier passage of more northern populations... The importance of the Mediterranean as a wintering area for the species is confirmed by the many recoveries, mainly concentrated south of the Apennines and with a concentration of data in Sardinia, although this island might be also affected by earliest return movements...Average

¹⁷ BirdLife International (2022) Species factsheet: *Turdus philomelos*. Downloaded from <http://www.birdlife.org> on 22/07/2022.

¹⁸ Spina F. and Volponi S. (2008) *Atlante della Migrazione degli Uccelli in Italia*. Vol 2. Passeriformi (*Turdus philomelos*): pp.228–235).

¹⁹ For the purpose of this conservation status report, the Balkans are limited to EU Member States: Bulgaria, Croatia, Greece, Romania and Slovenia.

size of birds ringed in Italy during the winter months show a further seasonal decline in size till the central decade of December, followed by a new increase with the first decade of January, again suggesting early movements of birds of northern and eastern origin... Within a general framework of NE–SW Song Thrush movements across Europe, birds ringed in Italy move towards the coast of France, before reaching Mediterranean Iberia and North Africa, mainly in Algeria, later moving eastwards through Tunisia and flying back north via Sardinia and Corsica.” Spina & Volponi (2008: 235)

Cramp *et al.* (1988)²⁰ note that the Song Thrush is mostly resident but northern populations are partially or entirely migratory and that in contrast to other species such as Redwing (*Turdus iliacus*) and Fieldfare (*Turdus pilaris*), populations show strong affinity to regular wintering areas. The authors further note that:

“Most nominate philomelos from Fenno-Scandia, Germany, Switzerland, Poland, and [former] USSR are migratory, moving south-west or south-east through Europe to winter in southern England, France (mainly towards south-west), Spain and Portugal. Those from further north, especially first-year birds, winter furthest south to Canary Islands, Morocco, Algeria, Tunisia, Libya and Cyprus. Birds from Denmark, Netherlands, Belgium, and north-east France are partially resident with most others moving only short distances south or south-west, though considerable numbers from Netherlands winter in Britain and Ireland. Birds from Switzerland move south, with recoveries in southern France along Mediterranean coast into northern Italy, and in Corsica and Libya. Birds from east-central Europe winter correspondingly east of birds from Fenno-Scandia and western Europe: mainly in Italy, Yugoslavia, Greece, Balkans and Cyprus; also a very few recoveries in Balearics, Spain and Portugal.

Populations from further east presumably winter largely from eastern Mediterranean to Iran... In early part of winter, migrant populations from Britain, Belgium, Netherlands and Denmark are chiefly in north-west France, north of Scandinavian birds (in southern Spain and Portugal), but by January birds from Low Countries have also moved south-west into Iberia. Southward departures in autumn begin in August but main passage September to early November. Birds from Fenno-Scandia move south-west on broad front, fringe of movement (or birds drifted west) passing through eastern Britain. Siberian birds depart mid-September while populations further south remain until November, in southern central Asia, Kazakhstan, and Turkmenistan; rarely recorded on passage outside breeding range. Birds wintering around Mediterranean arrive mid-October with frequent influxes until mid-April. During severe weather over Europe, large-scale mid-winter arrivals occur regularly in North Africa.” Cramp *et al.* (1988: 990-992).

According to BirdLife International (2022) this species does not approach the thresholds for Vulnerable neither under the range size criterion, under the population trend criterion, nor under the population size criterion. For these reasons BirdLife International evaluates this species as Least Concern within both Europe and the EU28²¹ with an increasing population trend. IUCN²² also classifies this species as **Least Concern**.

Article 12 reports (2013–2018)

This update includes the current population trends and indices as reported by Member States in their Article 12 report for period 2013–2018²³. Within the territory of the European Union (EU28), the Song Thrush has a breeding population size of 12,200,000–20,500,000 pairs (previously reported at 12,700,000–21,900,000 pairs during the 2008–2012 reporting cycle)

²⁰ Cramp S. *et al.* (1988) Handbook of the Birds of Europe, the Middle East and North Africa: The Birds of the Western Palearctic. Vol V: Tyrant Flycatchers to Thrushes. The Royal Society for the Protection of Birds.

²¹ http://www.birdlife.org/datazone/userfiles/file/Species/erlob/summarypdfs/22708822_turdus_philomelos.pdf

²² <http://www.iucnredlist.org/details/22708822/0>

²³ <https://nature-art12.eionet.europa.eu/article12/summary>

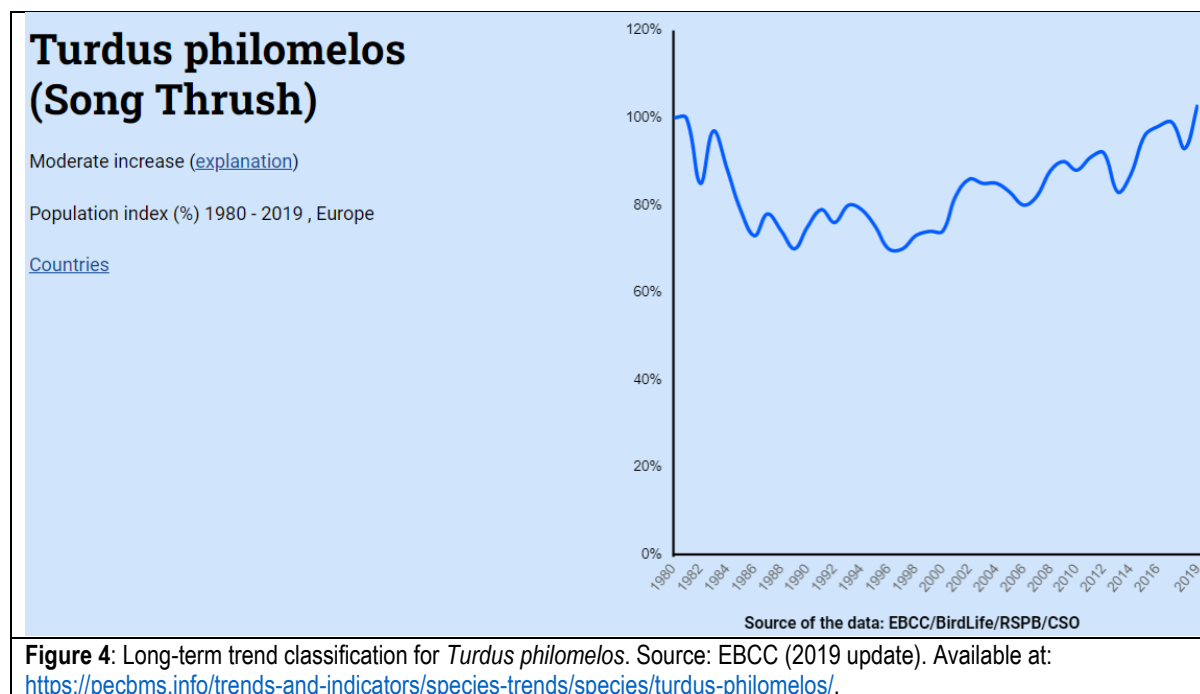
and a breeding range size of 3,100,000km² (previously reported at 3,520,000km² during the 2008–2012 reporting cycle). The **breeding population** trend in the EU28 is **Increasing in the short-term and Stable in the long-term** (EEA, 2020)²⁴.

Breeding population size estimate for Ireland converted to specified units (pairs) based on detection estimates in Crowe *et al.*, 2014 and expert opinion, and assuming a 2:1 ratio. In the absence of short-term and long-term trend magnitudes reported from Spain for this taxon, surrogate data were sourced from SACRE, 2018, indicating an increasing trend (59.1%) during 1998-2018. In the absence of a report from Romania for this taxon, surrogate data were sourced from the national Common Bird Monitoring Scheme in Romania 2017, indicating an uncertain trend during 2007–2016. Short-term and long-term trend magnitudes for this taxon in Czechia for the period given have been calculated and corrected from the average annual trends reported. Source: https://nature-art12.eionet.europa.eu/article12/summary/audittrail/?reported_name=&period=3&subject=Turdus+philomelos.

The EU population status of the Song Thrush was assessed as **Secure**, because the species does not meet any of the IUCN Red List criteria for threatened or Near Threatened, or the criteria for Depleted or Declining (the EU28 population or range has not declined by 20% or more since 1980). Data on the wintering population trends for this species was not available at the time this report was prepared (August 2022).

European Bird Census Council (2021 update)

The latest dataset available from the European Bird Census Council (EBCC, 2021)²⁵ at the time the conservation status of the Song Thrush (*Turdus philomelos*) was updated (August 2022), lists this species trend classification as **Moderate Increase**, defined as a “significant increase, but not significantly more than 5% per year” (Figure 4). When compared with the previous EBCC (2020) update, the short-term [ten-year (2010–2019)] trend **decreased by 4%** [from 20% to 16%], whereas in the long-term trend (1980–2019) the population decreased from 15% to 3% (**12% decrease**).



²⁴ European Environment Agency (2020) Article 12 reports for the 2013-2018 reporting period (EU28) Available at: <http://bd.eionet.europa.eu/article12/summary?period=1&subject=A140>

²⁵ Trends of common birds in Europe, 2021 update. Available at: <http://www.ebcc.info/index.php?ID=631>.

List of Countries:

Austria	1998 - 2019
Belgium-Brussels	1992 - 2019
Belgium - Flanders	2007 - 2019
Belgium-Wallonia	1990 - 2019
Bulgaria	2005 - 2019
Czech Republic	1982 - 2019
Denmark	1976 - 2019
Estonia	1984 - 2019
Finland	1975 - 2019
France	1989 - 2017
Germany East New	2005 - 2019
Germany East Old	1991 - 2010
Germany West New	2005 - 2019
German West Old	1989 - 2010
Hungary	1999 - 2019
Italy	2000 - 2019
Latvia	2005 - 2019
Lithuania	1994 - 2019
Luxembourg	2010 - 2019
Netherlands	1984 - 2019
Norway New	2007 - 2019
Norway Old	1996 - 2008
Poland	2000 - 2019
Republic of Ireland	1998 - 2019
Romania	2008 - 2019
Slovakia	2005 - 2019
Slovenia	2008 - 2019
Spain	1998 - 2019
Sweden New	1998 - 2019
Sweden Old	1975 - 2019
Switzerland	1999 - 2019
United Kingdom	1966 - 2019

Song Thrush distribution within the territory of the European Union (EU28)

It has been documented that most of the Song Thrush populations from the northern and eastern parts of the European range migrate via three or four main routes in a south westerly direction (Ashmole M.J., 1962, Busse P & Maksalon L., 1986). The Song Thrush breeds throughout the territory of the European Union (EU28), except Malta and Cyprus (and Gibraltar) (EEA, 2020). Table 5 provides an estimate of the breeding population of the Song Thrush within the EU28 (Article 12 reports for the 2013–2018 reporting period).

Table 5 Song Thrush EU28 Breeding Population

Member State	% in EU28	Breeding Pairs (Min - Max)		Breeding Population Trend		Short-term % change (Min - Max)		Long-term % change (Min - Max)	
				Short term	Long term				
Austria	2.7	350,000	550,000	Stable	Unknown	N/A	N/A (4)	N/A	N/A
Belgium	0.8	92,600	163,900	Decreasing	Decreasing	-35	-22	-54	-18
Bulgaria	2.0	150,000	500,000	Increasing	Stable	0	45	0	5
Croatia	4.8	600,000	1,000,000	Unknown	Unknown	N/A	N/A	N/A	N/A
Czechia	4.1	450,000	900,000	Increasing	Increasing	N/A	N/A (2)	N/A	N/A (1)
Germany	10.7	1,600,000	1,950,000	Increasing	Stable	8	24	N/A	N/A (5)
Denmark	2.3	384,280	384,280	Increasing	Stable	22.34	75.5	-7.06	32.87
Estonia	2.1	300,000	400,000	Stable	Stable	0	1	-13	10
Spain	3.1	369,672	663,714	Increasing	Increasing	N/A	N/A	N/A	N/A
Finland	6.4	980,844	1,175,381	Increasing	Increasing	12	28	13	46
France	9.1	1,000,000	2,000,000	Stable	Increasing	-3	11	6.1	24

Greece		1,000	3,000	Stable	Stable	N/A	N/A (0)	0	0
Hungary	2.4	366,000	430,000	Stable	Unknown	N/A	N/A	N/A	N/A
Ireland	N/A	687,965	1,028,321	Stable	Unknown	-8	0.3	N/A	N/A
Italy	1.2	100,000	300,000	Increasing	Stable	25	40	N/A	N/A
Lithuania	1.8	200,000	400,000	Stable	Stable	0	0	0	0
Luxembourg		5,000	8,000	Stable	Unknown	0	10	N/A	N/A
Latvia	3.1	430,769	617,919	Increasing	Increasing	3.8	41.7	130	131
Netherlands	0.9	110,000	180,000	Stable	Increasing	0	12	90	148
Poland	9.0	1,121,000	1,843,000	Increasing	Unknown	11	29	N/A	N/A
Portugal		5,000	10,000	Uncertain	Increasing	N/A	N/A	N/A	N/A
Romania	9.8	1,150,018	1,743,426	Uncertain	Unknown	-1	5	N/A	N/A
Sweden	11.7	1,157,000	2,703,000	Stable	Stable	-2	8	-9	7
Slovenia	1.3	138,400	276,900	Increasing	Unknown	N/A	N/A (33)	N/A	N/A
Slovakia	2.7	300,000	600,000	Stable	Stable	N/A	N/A	N/A	N/A
UK	7.9	1,308,420	1,308,420	Stable	Decreasing	N/A	N/A (7.06)	N/A	N/A (-10.98)
Total		12,200,000	20,500,000	Increasing	Stable				
						Trend (EU28 Population)		Secure	

Data source: European Environment Agency (2020): Article 12 reports for the 2013–2018 reporting period.

Table 6 lists the live-capturing data for Song Thrush in Malta and Gozo from 2006 to 2021.

Table 6 **Live-capturing data for Song Thrush (2006–2021)**

Species	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Total	Average
Song Thrush	420	10	552	1,199	5,027	2,069	44	135	292	248	230	183	511	722	651	1,006	13,299	831

Data sources:

2006–2012: *Carnet de Chasse* data, Environment Protection Directorate (MEPA).

2013–2021: Wild Birds Regulation Unit.

Reference Population

The “small numbers” requirement, within the meaning of Article 9(1)(c) of the Birds Directive should be understood as “any sample of less than 1% of the total annual mortality of the population in question (average value) for those species which are not to be hunted and **a sample in the order of 1% for those species which may be hunted**. ‘Population in question’ is to be understood, with regard to migratory species, as the population of those regions from which come the main contingents passing through the region to which the derogation applies during its period of application”. Given that the Song Thrush qualifies as a huntable species under the Birds Directive (MT: Annex IIB), the “*small numbers*” requirement is understood as “*a sample in the order of 1% of the total annual mortality of the population in question*”.

The Song Thrush shows a strong affinity to regular wintering areas (Cramp *et al*, 1988) and has a general framework of NE-NW movements across Europe (Spina & Volponi, 2008). Although there are no ring recoveries of this species in Malta, on the basis of this literature review, there is sufficient scientific data to ascertain that EU populations of Song Thrush migrating over Malta (NE-NW movements) come from the easternmost parts of the territory of the European Union, namely Romania, Bulgaria and Hungary (Table 7).

Nonetheless, as agreed with the services of the European Commission in 2019, Malta initiated a research project to assess the migratory routes of this species using satellite tracking devices. The first tagging effort took place during period February–March 2022. Three Song Thrushes were fitted with a satellite tag, two on 8 February and another one on 8 March 2022. Tracking data from the first two specimens shows that one remained in Romania throughout the breeding season (05 April – 14 June 2022) whereas the second specimen appears to have remained in Belarus (Table 8). However, since the last confirmed data associated with the second specimen was transmitted on 26 April 2022, it cannot be ascertained whether it remained in Belarus throughout the breeding season or whether it migrated further north in May. The third specimen was tracked within the same area where it was fitted with a satellite-tag during period 08 March 22 March 2022. No additional tracking data was obtained from the third specimen after 22 March (Table 8).

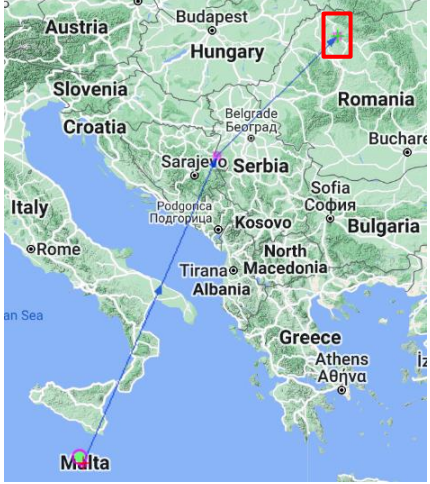

Although the sample size is by far too small to draw any meaningful conclusions, the flightpath taken by both specimens (tag nos. 20852 and 20853) is indeed indicative of Spina and Volponi’s (2008) observation of a *general framework of NE–SW Song Thrush movements across Europe*.

Table 7 Song Thrush reference population and current population trend (2013–2018)

										Short-term (10-year trend)		Long-term			
Country	% in EU28	Breeding Pairs		Short-term Trend	Mag. %		Long-term Trend	Mag. %		Max % Change (Min Population)	Max % Change (Max Population)	Max % Change (Min Population)	Max % Change (Max Population)		
		(Min - Max)			(Min - Max)			(Min - Max)							
Bulgaria	2.0%	150,000	500,000	Increasing	0	45	Stable	0	5	0	225,000	0	25,000		
Hungary	2.4%	366,000	430,000	Stable	N/A	N/A	Unknown	N/A	N/A	N/A	N/A	N/A	N/A		
Romania†	8.0%	1,510,018	1,743,426	Uncertain	-1	5	Unknown	N/A	N/A	-15,100	87,171	N/A	N/A		
Total		2,026,018	2,673,426							-15,100	312,171	0	25,000		
										Percentage change		-0.75%	11.68%	0.00%	0.94%
										Trend (Reference population)		Stable (<10% change)	Increasing (>10% change)	Stable (<20% change since 1980)	Stable (<20% change since 1980)

Data sources: European Environment Agency (2020): Article 12 reports for the 2013–2018 reporting period; Cramp et al (1988); Spina & Volponi (2008); † Movebank satellite-tracking data (2022).

Table 8 Satellite-tracking Data (2022)

Species	BirdLife Malta ring no.	Tag decimal id.	Location of GPS fixes (bold = last date of transmission)	Date of last GPS fix	Map
<i>Turdus philomelos</i>	CC4804	208582	Buskett, Malta	08 February 2022	
			Buskett, Malta	15 February 2022	
			Buskett, Malta	22 February 2022	
			Planina, Serbia	29 March 2022	
			Ileanda, Romania	05 April 2022	
			Ileanda, Romania	12 April 2022	
			Ileanda, Romania	26 April 2022	
			Ileanda, Romania	03 May 2022	
			Ileanda, Romania	10 May 2022	
			Ileanda, Romania	14 June 2022	

<i>Turdus philomelos</i>	CC4756	208583	Girgenti, Malta	08 February 2022	
			Girgenti, Malta	15 February 2022	
			Girgenti, Malta	22 February 2022	
			Buskett, Malta	22 March 2022	
			Baljci, Bosnia and Herzegovina	12 April 2022	
			Brgule, Bosnia and Herzegovina	19 April 2022	
Kletsk District, Belarus	26 April 2022				
<i>Turdus philomelos</i>	CC4805	208586	Girgenti, Malta	08 March 2022	
			Girgenti, Malta	15 March 2022	
			Girgenti, Malta	22 March 2022	
<p>Source: Movebank online platform (satellite-tracking database). Available at: https://www.movebank.org/cms/webapp?gwt_fragment=page=studies_path=study1995912295</p>					

Table 9 below shows the **minimum** number of Song Thrush breeding pairs, together with other relevant information required for the calculation of “small numbers”. According to the British Trust for Ornithology (BTO)²⁶, the typical lifespan of Song Thrush is three years and the annual mortality rate of adults is 43.7% ± 0.7%, which tallies with that specified by the *Birds of the Western Palearctic (BWP)*.

Table 9 Minimum breeding population and mortality rate – Malta’s reference population		
	Song Thrush (<i>Turdus philomelos</i>)	Source
Minimum breeding population – pairs (Bulgaria, Hungary and Romania only)	2,026,018	Article 12 reports for the 2013–2018 reporting period (EEA, 2020); Cramp <i>et al</i> (1988); Spina & Volponi (2008); Movebank satellite-tracking data (2022).
Mortality rate – juveniles	56%	Das Kompendium der Vögel Mitteleuropas (KVM) / Birds of the Western Palearctic (BWP)
Mortality rate - Adults	43.3%	BWP / British Trust for Ornithology (BTO)
Breeding rate (young per pair)	4	KVM / BWP / BTO

Calculation of 1% mortality rate and “small numbers”

Song Thrush (*Turdus philomelos*)

Minimum breeding success: 4 fledglings per pair (2,026,018 x 4) = 8,104,072

Mortality rate of 1st year birds: (8,104,072 x 56%) = 4,538,280

Mortality rate of adults: (4,052,036 x 43.3%) = 1,754,532

Total annual mortality: (4,538,280 + 1,754,532) = 6,292,812

1% of total annual mortality: (6,292,812 x 1%) = 62,928

Total potential Song Thrush national bag limit (1% of total annual mortality of [minimum] reference population size) is **62,928**.

Autumn seasonal bag limit in relation to “small numbers”

Based on the 1% mortality rate (of the minimum population size), the “small numbers” calculation with respect to the national bag limit would amount to 62,928 Song Thrushes. However, it should be noted that the average number of Song Thrushes captured with clapnets during period 2006–2021 is 831 (Table 6). Thus, the previous season’s national bag limit of 5,000 Song Thrushes should be retained if a derogation to open an autumn live-capturing season for this species is applied in 2022. This equates to 0.079% of the total annual mortality of the reference population (minimum population size), which is significantly less than the 1% threshold.

- **Song Thrush** – recommended maximum national bag limit of **5,000** birds.

²⁶ Song Thrush *Turdus philomelos* Key Facts. British Trust for Ornithology. Available at: <https://app.bto.org/birdfacts/results/bob12000.htm>.

3. Conclusion

European Golden Plover (*Pluvialis apricaria*)

The European (Eurasian) Golden Plover has an IUCN Least Concern classification at global level with an increasing population trend. At European Level, its IUCN classification is also Least Concern, with a stable population. According to the Article 12 report for reporting period 2013–2018, the EU breeding population status of Golden Plover is Stable in both the short-term and long-term trends (EEA, 2020).

It should be noted that the “List of Countries” contributing to the latest European Bird Census Council (EBCC / PECBMS) update includes Estonia for the first time (EBCC 2021 update), apart from Norway, **Sweden** and **Finland** (the latter two constituting Malta’s reference population). According to the EU Management Plan for this species, Estonia, which has a breeding population of 2,500–3,400 pairs (EEA, 2020) does not form part of the Northeast European population of *Pluvialis apricaria altifrons*. Estonia does not form part of Malta’s reference population²⁷.

According to the latest dataset available from the European Bird Census Council²⁸ (EBCC, 2021), **there was a decrease in the combined breeding population of the contributing countries** (Norway, Sweden, Finland and Estonia) both in the short-term and long-term trends, when compared with the previous EBCC update (Norway, Sweden and Finland only).

Due to the inclusion of Estonia in the latest EBCC update, a direct comparison between the current and previous updates should be treated with caution. In the short-term trend [ten-year slope] (2010–2019), the decrease was from 0% to -12% (**12% decrease**) and from -13% to -27% (**14% decrease**) in the long-term trend (1980–2019). The current EBCC assessment considers *Pluvialis apricaria* as **Stable** (1981–2019).

Malta’s reference population of *Pluvialis apricaria altifrons* (Finland and Sweden) remained stable in both the short-term and long-term trends.

Song Thrush (*Turdus philomelos*)

The Song Thrush has an IUCN Least Concern classification at global level with an increasing population trend. At European Level, its IUCN classification is also Least Concern with a stable population. According to the Article 12 report for reporting period 2013–2018, the EU breeding population status of Song Thrush is Increasing in the short-term trend and Stable in the long-term trend (EEA, 2020).

The latest dataset available from the European Bird Census Council (EBCC, 2021) lists this species trend classification as **Moderate Increase**. When compared with the previous EBCC (2020) update, the short-term [ten-year (2010–2019)] trend **decreased by 4%** [from 20% to 16%], whereas in the long-term trend (1980–2019) the population decreased from 15% to 3% (**12% decrease**).

Malta’s reference population of *Turdus philomelos* (Bulgaria, Hungary and Romania) remained stable in both the short-term and long-term trends, with an increasing short-term (10-year) trend in the maximum number of breeding pairs.

²⁷ The nominate southern subspecies *P. a. apricaria* nests in Ireland, Great Britain, Denmark, Germany, Latvia, Lithuania and Estonia. This subspecies winters in North-West Europe, from Ireland to South Britain, France and Iberia. Source: EU Management Plan – Golden Plover (p.8).

²⁸ Trends of common birds in Europe, 2021 update. Available at: <https://pecbms.info/european-wild-bird-indicators-2021-update/>