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Agenda item 8
18 June 2024

24th MEETING OF THE STANDING COMMITTEE
4 July 2024, Virtual Meeting Format

AEWA TECHNICAL COMMITTEE RECOMMENDATIONS FOR THE DELINEATION OF SELECTED POPULATIONS LISTED ON TABLE 1 OF AEWA ANNEX 3

Introduction

The AEWA Technical Committee is responsible for making recommendations to the Meeting of the Parties concerning the Action Plan, including the delineation of populations listed in Table 1 of AEWA Annex 3 (Action Plan).

At the 23rd meeting of the Standing Committee (StC23) in June 2023 proposals for the change of population boundary delineations of seven species were submitted (document AEWA/StC 23.7) and approved by StC. These proposals were elaborated and submitted by the AEWA Technical Committee following sub-tasks 1.2.1-1.2.7 of its Workplan 2023-2025.

Sub-task 1.2.8 of the Workplan foresees the revision of the boundary delineations of and additional more extensive set of populations listed in Table 1 of the AEWA Action Plan. At its 18th meeting (TC18) in March 2023, TC agreed that proposed boundary changes will be succinctly summarised in a tabular form when the changes only affect the list of range states, but full proforma will be prepared for cases when the changes would potentially affect the categorisation of populations in Table 1. At TC19 in March 2024 the Committee reviewed and agreed on proposed changes to boundary delineations of >30 populations, which are now submitted to the attention of the Standing Committee.

Overview of proposed changes in population boundary delineations

In total, the revision of boundary delineations of 33 populations is proposed at this time (Annex 1). For four populations, full proforma were prepared (Annexes 2–5). Two cases were considered that could potentially lead to changes in Table 1 categorisations, while the remaining two are somewhat more complex cases which were deemed to also merit a full proforma. The changes agreed by the TC to be proposed will not affect the Table 1 categorisation of any of the respective populations.

Action requested from the Standing Committee

The Standing Committee is requested to review the proposed changes in delineations of selected AEWA populations presented in Annex 1 to this document, as recommended by the Technical Committee, and to approve them for further use.

ANNEX 1 is available at the StC24 webpage as a separate Excel file.

ANNEX 2

DELINEATION OF BIOGEOGRAPHIC POPULATIONS OF THE PINK-FOOTED GOOSE (*ANSER BRACHYRHYNCHUS*)

PROPOSAL TO CHANGE POPULATION DELINEATIONS

Compiled by Szabolcs Nagy, Wetlands International and Jesper Madsen, Aarhus University

Name of population(s):

Pink-footed Goose *Anser brachyrhynchus*, Svalbard/North-west Europe

Current status on AEWA Table 1:

Category 1 of Column B

What is the issue?

This population of the Pink-footed Goose traditionally on breeds on Svalbard (*Figure 1.*), migrates through Norway and winters in Denmark, the Netherlands and Belgium. The population is subject of an AEWA International Single Species Management Plan (Madsen & Williams, 2012). One of the objectives of the ISSMP is to maintain a sustainable and stable Pink-footed Goose population and its range.

However, a new breeding group has been established on Novaya Zemlya and the formerly narrow migration corridor leading through Norway, Denmark and the Netherlands to Belgium has been expanded to Sweden and Finland leading both to Svalbard and to Novaya Zemlya (Madsen et al., 2023, *Figure 2*)[1]. The creation of the new migration route and breeding group is still evolving. The numbers continue to increase and the forming of new staging and wintering areas in e.g. Poland, Scania and Western Finland are being observed. However, there is no significant genetic difference between the two breeding groups and exchange of individuals is observed.

Option A: Recognise the Novaya Zemlya breeding group as a new AEWA population and extend the boundaries of the existing Svalbard/North-west Europe population to include the new staging areas in Finland and Sweden (*Figure 3*).

Option B: Extend the boundaries of the existing population to include the new breeding ground on Novaya Zemlya and the new staging areas in Finland and Sweden (*Figure 3*).

What is the evidence supporting the proposal?

Option A would be consistent with a narrow interpretation of Case 4 in AEWA/StC12.11 as the Novaya Zemlya breeding group has a discrete breeding ground.

Option B would be more consistent with AEWA's established treatment of other Anatidae populations, where for example breeding groups on Iceland are often treated together with birds breeding in Fennoscandia and N Russia (e.g. *Mergus serrator*, *Aythya fuligula*, *Aythya marila*, *Spatula clypeata*, *Mareca strepera*, *Mareca penelope*, *Anas platyrhynchos*, *Anas acuta*, *Anas crecca*).

[1] https://www.cell.com/current-biology/pdf/S0960-9822(23)00134-3.pdf

What are the implications of the proposal including any changes in status on AEWA Table 1?

Option A would result in listing the Novaya Zemlya breeding population in Category 1c of Column A because its size is just 3,000–4,000 individuals, i.e. below the 10,000 individual threshold. This means that sites supporting more than 35 individuals could qualify as internationally important ones. In addition, the broad overlap between a Column A and a Column B population of the same species in largely the same geographic area would present serious challenges for hunting the Column B population in line with the AEWA guidance (Doc. AEWA MOP 6.34), particularly in Denmark where they co-occur during the hunting season. This could also represent implications for the implementation of the AEWA ISSMP (in process of revision, due 2025).

Option B would represent no change to the listing of the population on Table 1, only its population delineations should be updated.

References

Madsen, J., Schreven, K. H., Jensen, G. H., Johnson, F. A., Nilsson, L., Nolet, B. A., & Pessa, J. (2023). Rapid formation of new migration route and breeding area by Arctic geese. *Current Biology*, *33*(6), 1162-1170. e1164.

Madsen, J., & Williams, J. H. (2012). International species management plan for the Svalbard population of the pink-footed goose Anser brachyrhynchus. *AEWA Technical Series*, *48*.

Figures

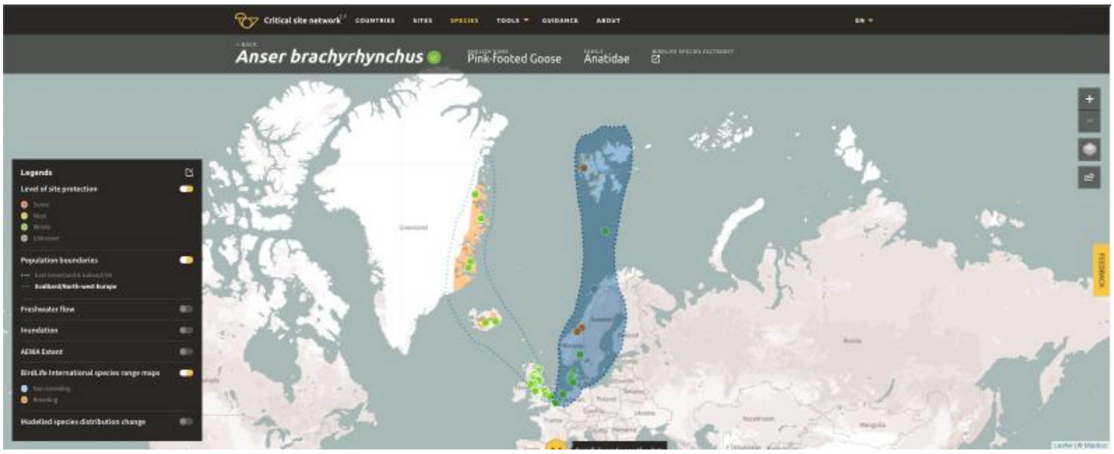

Figure 1. Current delineation of the flyway boundaries of the Anser brachyrhynchus, Svalbard/North-west Europe population. (Source: Critical Site Network Tool).

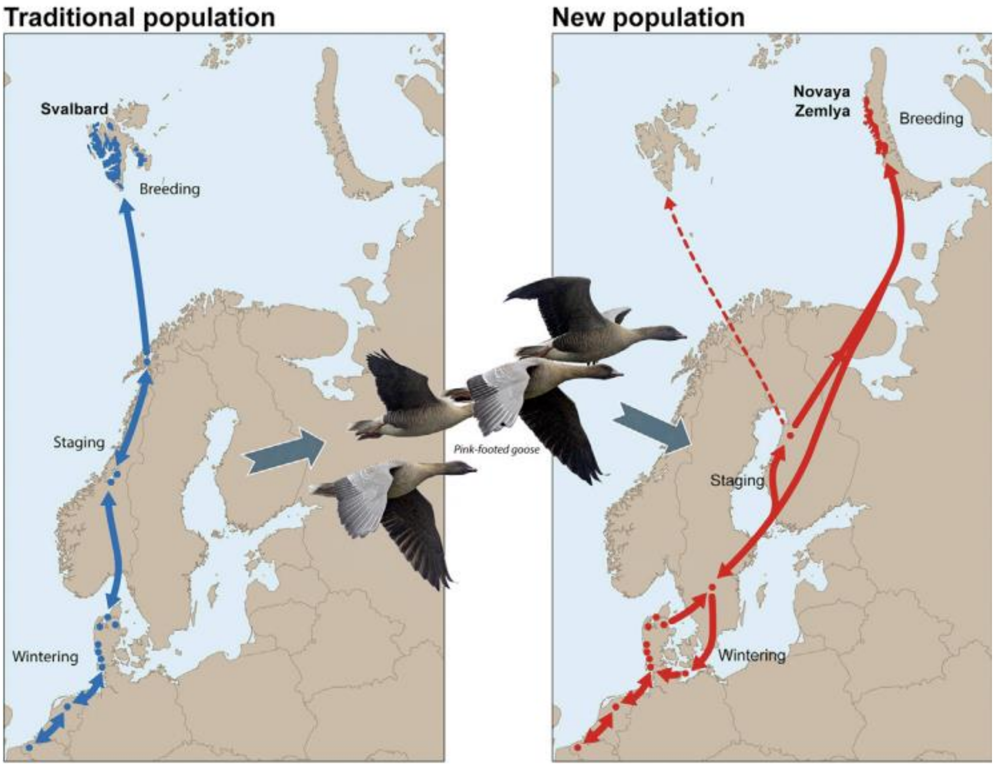

Figure 2. Summary of the flyway changes (Source: Madsen et al., 2023)

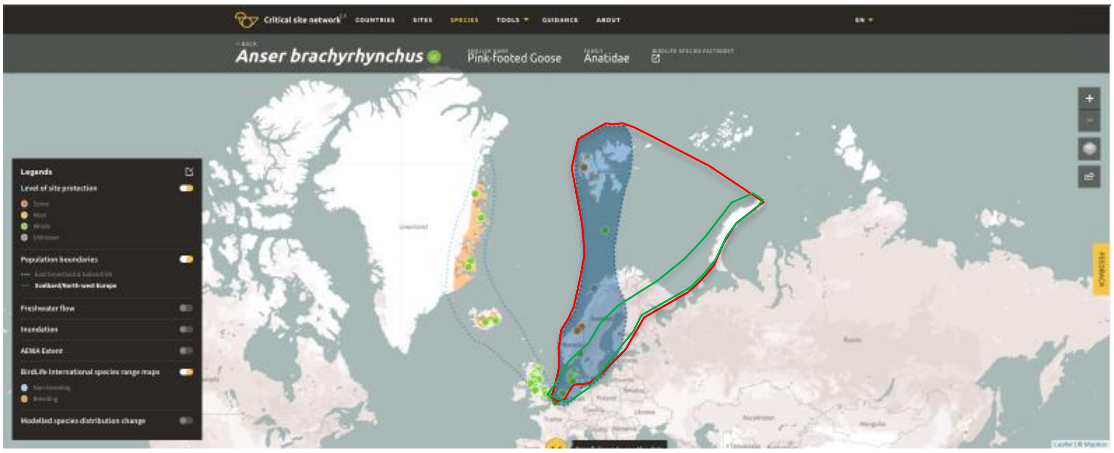

Figure 3. Proposed new flyway delineations. Green: Option A. Red: Option B.

ANNEX 3

DELINEATION OF BIOGEOGRAPHIC POPULATIONS OF THE GREAT KNOT (*CALIDRIS TENUIROSTRIS*)

PROPOSAL TO CHANGE POPULATION DELINEATIONS

Name of population(s):

Great Knot *Calidris tenuirostris*, Eastern Siberia/SW Asia & W Southern Asia

Current status on AEWA Table 1:

Category 1a 1b 1c of Column A

What is the issue?

The Great Knot breeds outside of the Agreement Area in NE Siberia from the Verkhoyansk Mountains to Magadan, Koryak Highlands and S Chukotka. The Wader Atlas claims (Delany et al., 2009) that Perennou et al. (1994) recognised the birds wintering in the Persian Gulf and western Indian Ocean as a separate population and that this treatment has been adopted in all four editions of *Waterbird Population Estimates* and by Stroud *et al.* (2004). The Wader Atlas has also speculated that Great Knots reach the Arabian Sea overland rather than around (or through) the Indian subcontinent. This is based on the relatively low number of observations along the coasts of India and Sri Lanka (Delany et al., 2009).

However, Perennou et al. (1994) has recognised a SW/S Asia population referring to counts of 570 individuals in the Asian Waterbird Census and mentioning three sites of international importance or which two (Charakla Saltworks and Rameshwaram and Manali Islands were in India). This treatment was maintained in WP1 (Rose & Scott, 1994), but the population name was changed to SW Asia/W S Asia (win) in WPE2 (Rose & Scott, 1997) and the subsequent editions of WPE. Recent observational and resighting of colour-marked birds also support the original population definition of Perennou et al. (1994). It would be also more logical to treat birds of S Asia and SW Asia together rather than treating the S Asian birds as part of the SE Asia, Australia (non-bre) population.

Therefore, the WPE contains a revised flyway delineation (*Figure 2*), and it is proposed that the AEWA is aligned with that.

What is the evidence supporting the proposal?

Although Great Knot is less numerous in S Asia than in SE Asia and Australia numbers are not trivial. In total, hundreds of individuals are reported from Oman, Iran, Sri Lanka and various states of India (*Figure 3*).

Observations on eBird (*Figure 1.*) and States of India's Birds show observations around the entire coast of the Indian subcontinent.

Colour marked birds from the same ringing site at the Khairusova-Belogolovaya River, Kamchatka, Russia, are observed both in the United Arab Emirates (Dorofeev, 2017; Dorofeev & Campbell, 2017) and on the E and W coasts of India (Bhatia et al., 2023). Observations in India involve also birds marked at Bohai Bay, China, indicating that Great Knots reach the subcontinent through coastal staging sites rather than an overland non-stop flight.

What are the implications of the proposal including any changes in status on AEWA Table 1?

Counting Great Knot is notoriously difficult in some areas (de Fouw et al., 2017) because they roost in dense Bar-tailed Godwit flocks where it is difficult to detect even for experienced observers. Therefore, they estimated that the Barr Al Hikman may host about 1,000 individuals based on 107–309 birds counted. Assuming similar proportions across the range and considering around 200 birds being counted in Iran, 300–500 birds in India, 276 in Sri Lanka an unknown number in the UAE and Saudi Arabia, we can estimate the population with a 4 to 10 multiplier to 3,000–6,000 individuals. This will be much higher than the current estimate of 1,500–2,000 individuals.

The change in population size estimate has no implication for Table 1 because the CMS (Appendix I) and global Red List (EN) statuses of the species will not change, and the population size will remain smaller than 10,000 individuals. Hence, it will be still listed also in Categories 1a, 1b and 1c.

The 1% threshold under Criterion 6 of the Ramsar Convention on Wetlands will increase from 15 to 40 individuals. However, being the species globally threatened, sites can be also identified and designated under Criterion 2.

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Figures

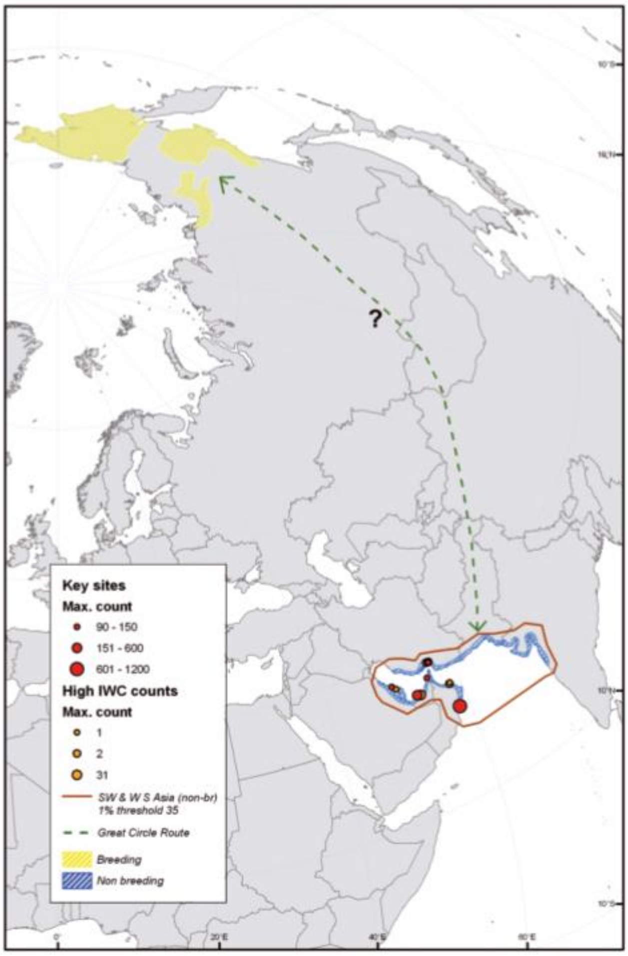

Figure 1. Assumed overland migratory route of Great Knot from the Wader Atlas (Delany et al., 2009)

Figure 2. Proposed delineation of the SW & S Asian population of Great Knot (based on [the Waterbird Populations Portal](#) with corrections)

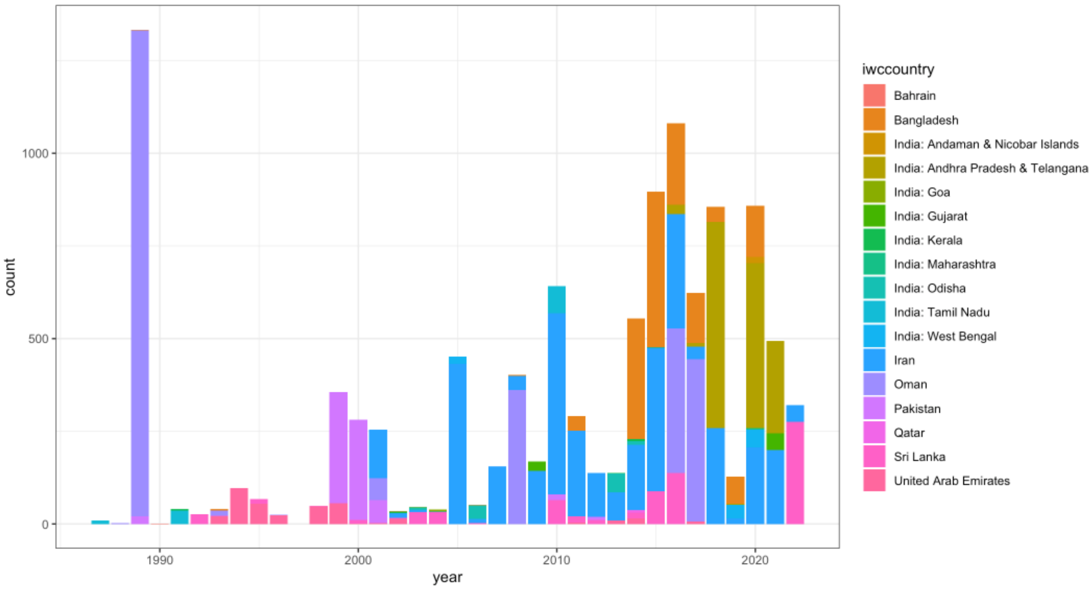

Figure 3. Great Knot numbers reported to the IWC

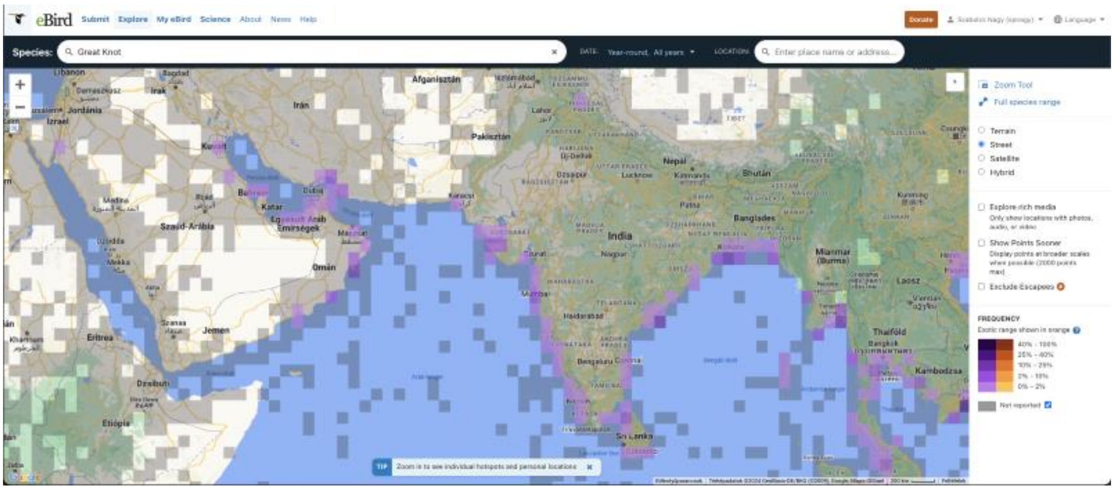

Figure 4. Observations of Great Knot on [eBird](#).

ANNEX 4

DELINEATION OF BIOGEOGRAPHIC POPULATIONS OF THE SOOTY TERN (*ONYCHOPRION FUSCATUS*)

PROPOSAL TO CHANGE POPULATION DELINEATIONS

Compiled by Szabolcs Nagy, Wetlands International

Name of population(s):

Sooty Tern *Onychoprion fuscatus*, nubilosus, Red Sea, Gulf of Aden, E to Pacific

Current status on AEWA Table 1:

Category 2a of Column B

What is the issue?

The population delineation on the CSN Tool (*Figure 1*) does not include the whole range of the *nubilosus* subspecies (see further details in the next section).

It is proposed to either (A) adopting the same population definition as on the WPP (*Figure 2*), or (B) splitting the subspecies into an Indian Ocean and a W Pacific population.

In addition, it is proposed to include the Bay of Bengal into the range of the subspecies.

What is the evidence supporting the proposal?

The subspecies range is defined by the HBW and BirdLife International Illustrated Checklist of the Birds of the World (del Hoyo et al., 2014) as S Red Sea, Gulf of Aden, and Indian Ocean E to W Pacific Ocean (Ryukyu Islands and Philippines).

Genetic studies found little difference in mitochondrial DNA between rookeries in the Indian (Seychelles and Chagos) and Pacific (Johnston Island) Oceans (Avise et al., 2000) even though the latter is within the range of the *oahuensis* subspecies, but this is rather common amongst seabirds.

Geolocator studies have revealed the importance of the Bay of Bengal as a non-breeding feeding area (Jaeger et al., 2017). The same studies provide no evidence of birds from the Seychelles reaching even Indonesia. Therefore, birds breeding in the Indian Ocean could be regarded as a management unit and defined as a separate biogeographic population.

What are the implications of the proposal including any changes in status on AEWA Table 1?

According to the AEWA guidance on interpreting the criteria of concentration on a small number of sites (AEWA/MOP4.25) requires that over 90% of the population occurs at less than 10 sites. The BirdLife Marine IBA e-atlas contains 8 sites that qualifies for the species in the breeding season and an additional three with unknown season in the range of the *nubilosus* subspecies. All these sites are in the Indian Ocean. It requires more detailed (and up-dated) population size figures to determine whether the population would qualify for Category 2a if the entire range of the *nubilosus* is considered as the relative proportion at the colonies within the Agreement Area would certainly decrease if the total population size increases. If the population would not qualify for Category 2a, it should be listed in Category 1 of Column C. This would in a way defeat the purpose of making an exception from the original selection criteria, i.e. that more than 75% of the (sub)species range should be within the agreement area unless the breeding population is concentrated in the Agreement Area and the main known threats are occurring in the breeding sites (AEWA/MOP3.16).

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Figures

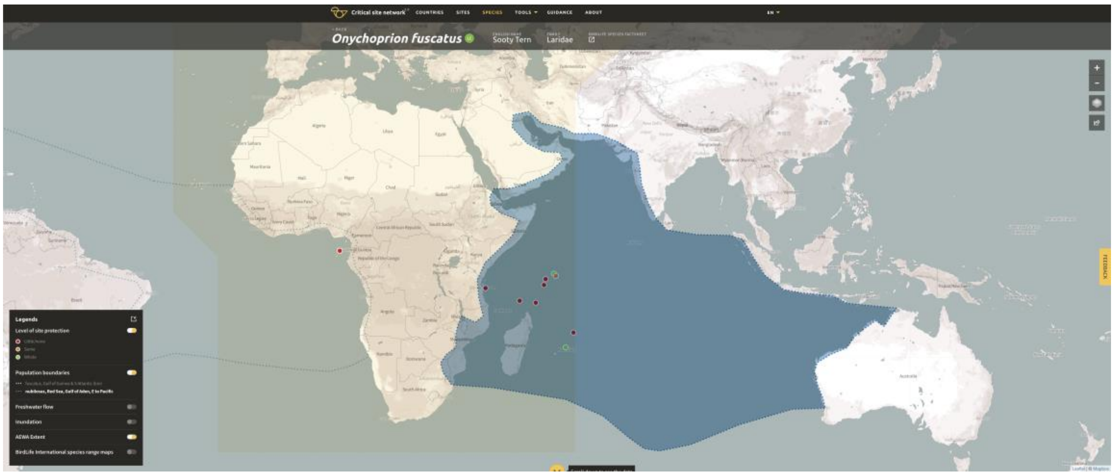

Figure 1. Current delineation of the Onychoprion fuscatus, nubilosus, Red Sea, Gulf of Aden, E to Pacific on the <u>CSN Tool</u>.

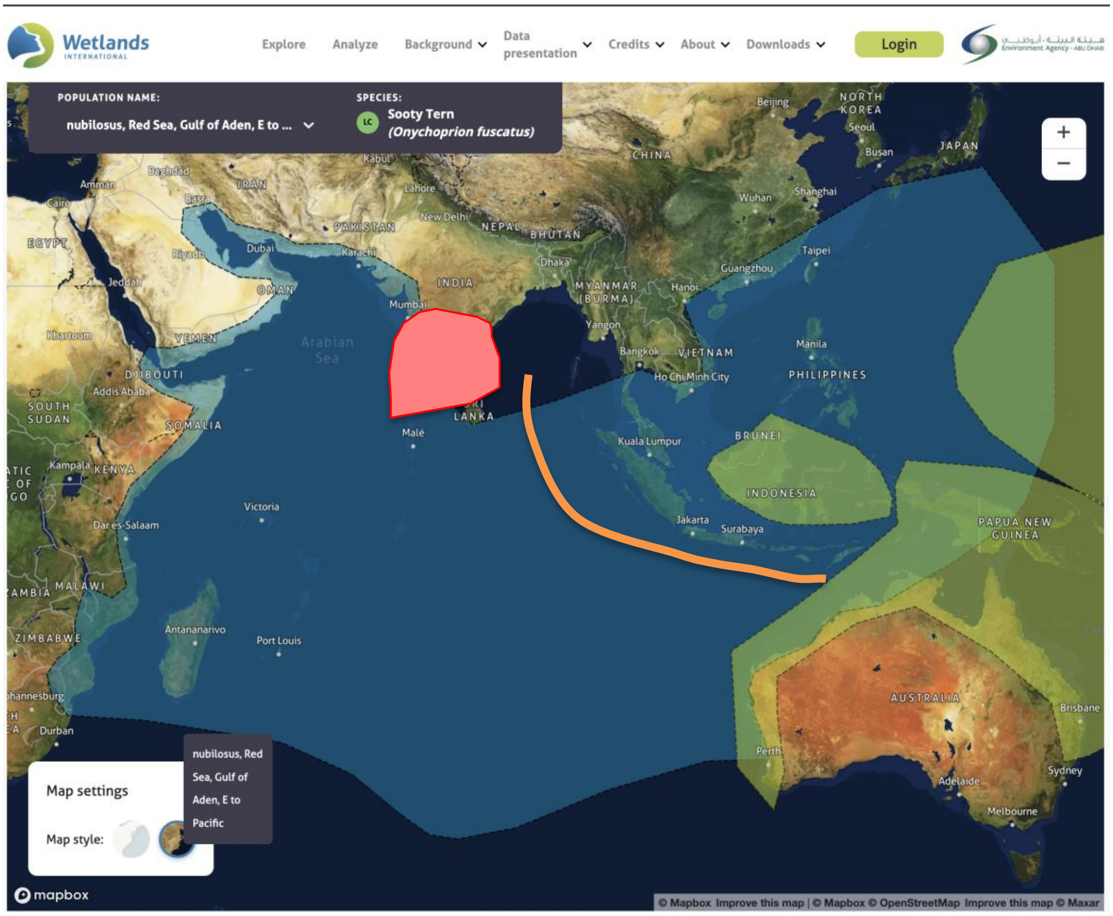

Figure 2. Current population delineation on the of the Onychoprion fuscatus, nubilosus, Red Sea, Gulf of Aden, E to Pacific on the WPP. The red area indicates the proposed range extension into the Bay of Bengal. The orange line indicates the proposed split of the population.

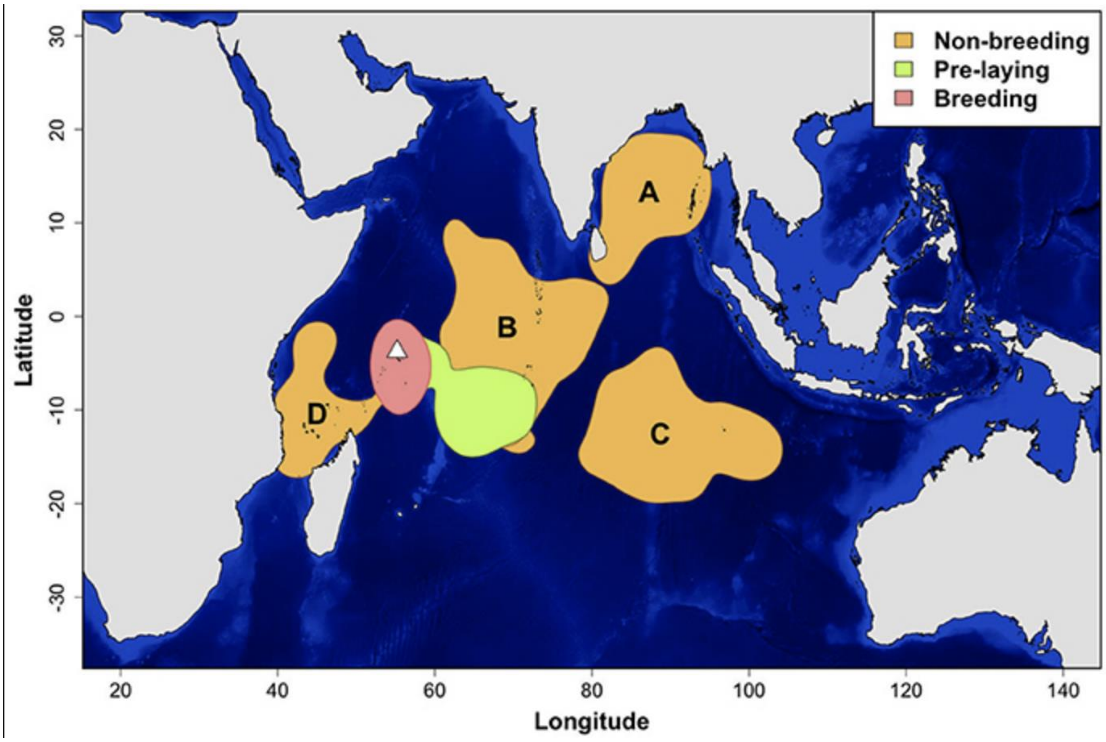

Figure 3. Distribution of Sooty Terns breeding on the Bird Island, Seyschelles (from Jaeger et al., 2017)

ANNEX 5

DELINEATION OF BIOGEOGRAPHIC POPULATIONS OF THE ARCTIC TERN (*STERNA PARADISAEA*)

PROPOSAL TO CHANGE POPULATION DELINEATIONS

Compiled by Szabolcs Nagy, Wetlands International

Name of population(s):

Arctic Tern *Sterna paradisaea*, Western Eurasia (bre)

Current status on AEWA Table 1:

Category 1 of Column C

What is the issue?

AEWA Table 1 recognises a Western Eurasia (bre) population of Arctic Tern, which is inconsistent with the treatment of the species in the Waterbird Population Estimates (WPE). Its first two editions (Rose & Scott, 1997; Rose & Scott, 1994) have recognised a single Arctic/S Ocean population of the species. In WPE3 this was split into a N Eurasia (br) and a N North America (br) population (Delany & Scott, 2002). However, the flyway delineation in the CSN Tool (**Error! Reference source not found.**) has included also Greenland and N E Canada considering the migratory patterns of birds. This has led to a confusing situation when:

- The AEWA population definition is inconsistent with the WPE definition.
- The current delineation of the W Eurasian population is inconsistent with its name. This leaves the E Eurasian birds not covered in the WPE.
- The population estimates in CSR7 and CSR8 are inconsistent with the name, but consistent with the population delineation.

The decision not including the entire N Eurasian population into AEWA was justified by the large number of birds breeding in the E Eurasia and wintering outside of the Agreement Area in the Pacific. Scott (2002) argued that Arctic Terns from Iceland, Greenland and north-eastern Canada probably migrate south through the mid-Atlantic and do not reach the African coast based on ring-recovery data (Underhill et al., 1999). However, more recent telemetry studies show that migration of Arctic Terns from these areas also takes place within the Agreement Area (see details in the next section).

This proposal considers three options for the consistent treatment of Arctic Tern populations in the WPE and AEWA (boundaries proposed outside of the Agreement Area are only indicative and need to be discussed with other stakeholders as well after the decision of the TC):

A. **Retain the population treatments of WPE3**, use them also in AEWA and adjust the population boundaries accordingly (*Figure 6*). The advantage of this option is that it would not present complications for population estimates if the birds can be counted at the breeding colonies across the range. However, this is a rather theoretical advantage because there is very little breeding bird monitoring is going on in Russia, and it would be also difficult to carry it out also in the future. Its disadvantage is that it would involve many birds breeding and wintering outside of the Agreement Area.
B. **Define an Atlantic and a Pacific population** and adjust the population definitions both in AEWA and the WPE (*Figure 7*). This approach would be more consistent with the flyway approach, the Atlantic population would largely overlap with the AEWA Agreement Area (although would extend also into the W Atlantic and into the Indian and Pacific Oceans). The disadvantage would be that we do not know whether and where is a migratory divide between the Atlantic and Pacific flyways. (However, this is also the case for many other circum-Arctic species). This would represent some complications for population estimates, because those estimates should be still based on breeding bird surveys as non-breeding counts would be impossible for this species as it is largely pelagic in winter.
C. **Retain the N American population and split the N Eurasian one into a W Palearctic and a new E Palearctic population in WPE** (*Figure 4*). This approach may sound practical. However, it would

result in an inconsistent treatment of populations. Birds from North America, Greenland and Iceland migrating and wintering in the Agreement Area would be still not covered by AEWA.

Therefore, the adoption Option B is recommended. Based on the decision of the AEWA TC, further consultations will be conducted with other expert networks concerning the N American and E Asian population segments before finalising their delineation.

What is the evidence supporting the proposal?

A geolocator study following birds from the Baltic Sea (Alerstam et al., 2019) confirmed that birds from W Eurasia followed mainly the W African coast, but it has also shown that birds have ventured deep into the N Atlantic on their post-breeding migration and spent October and November mainly in the S Indian Ocean and reached the S Pacific (*Figure 5*).

Another geolocator study of Arctic Terns from the Netherlands (Fijn et al., 2013) show similar pattern to birds from the Baltic (*Figure 6*).

Birds tracked from Svalbard (Hromádková et al., 2020) followed indeed a somewhat more central route, but many of them remained within the Agreement Area. Although some has moved to the SW Atlantic (*Figure 7*).

A geolocator study on Arctic Terns breeding on E Greenland and Iceland (Egevang et al., 2010) shows that the birds adopted to migration routes. Majority of them followed closely the W African seaboard on their southbound migration. Some individuals have spread out even into the Indian Ocean. These birds have wintered in the waters of Antarctica between South America and Africa. Some other birds have migrated towards Cape Verde and then crossed the Atlantic to the coast of Brasil and Argentina, but turned back towards Africa before ended up on the same wintering area as the birds that followed the African route (*Figure 8*).

Arctic Terns breeding in Alaska followed the E Pacific to the central south Pacific (McKnight et al., 2013), but some birds have ventured even into the S Atlantic (*Figure 9*).

A more recent study of Arctic Terns breeding in Canada and Alaska (Wong et al., 2021) shows that many Arctic Terns from Canada also migrate within the Agreement Area both in autumn and spring (*Figure 10* and *Figure 11*).

What are the implications of the proposal including any changes in status on AEWA Table 1?

The W Eurasian population is already listed in Category 1 of Column C. The European population alone was estimated at 531,000–754,000 pairs. From these 100,000 pairs are in Greenland and 150,000–250,000 pairs in Iceland (BirdLife International 2021). The total Atlantic population was estimated at 881,000–1,454,000 pairs.

Hence, neither option would have an impact on the current listing of the species in Table 1. It would remain in Category 1 of Column C. The 1% thresholds could change, but the population size is so large that the 20,000 waterbirds would be lower than the 1% threshold.

References

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Figures

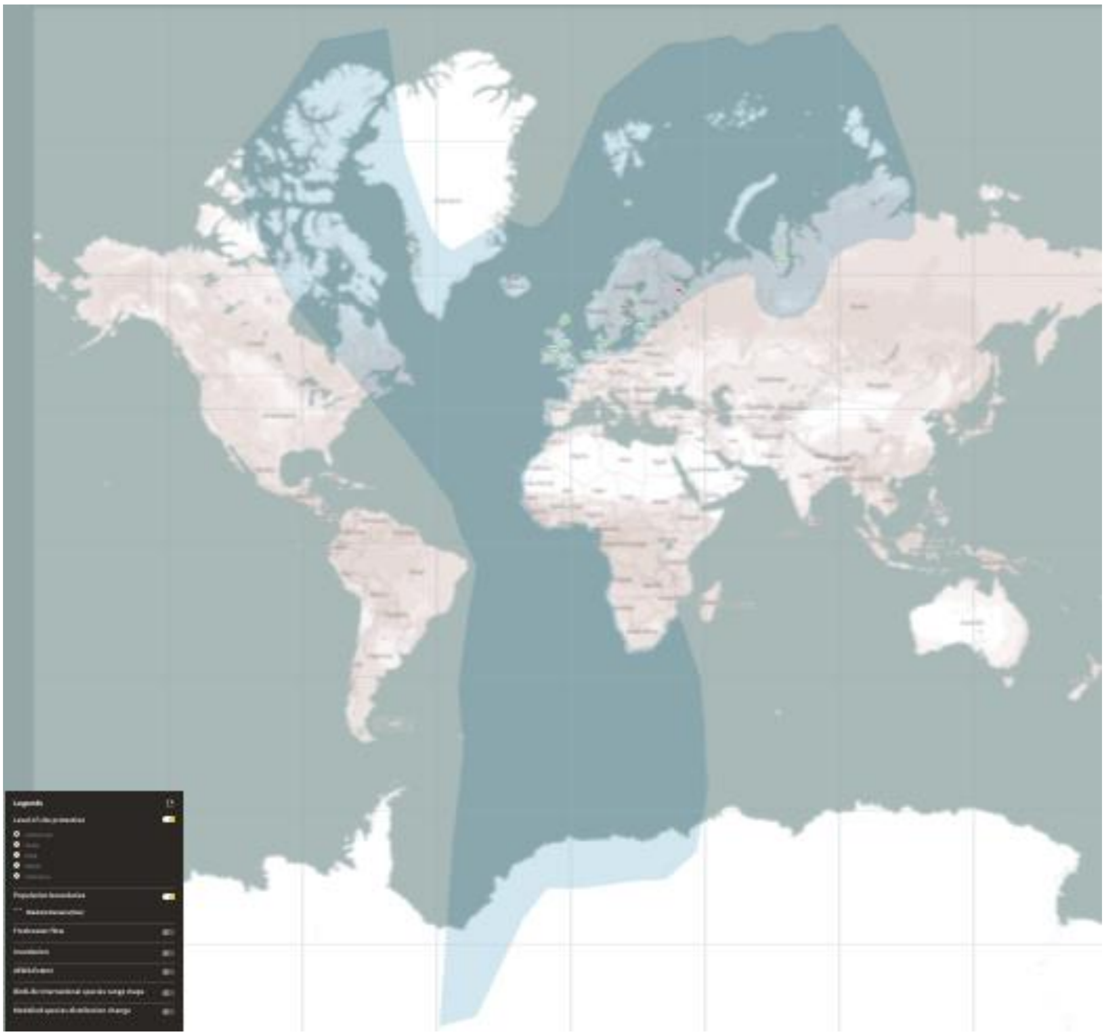

Figure 1. Current delineation of the W Eurasian population of Arctic Tern on the CSN Tool

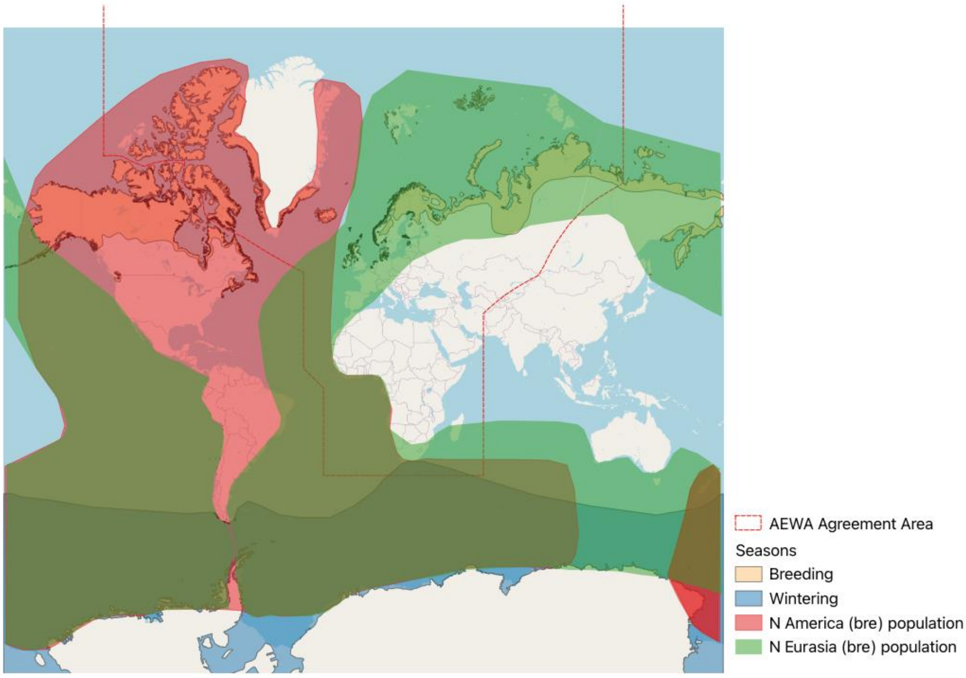

Figure 2. Option A

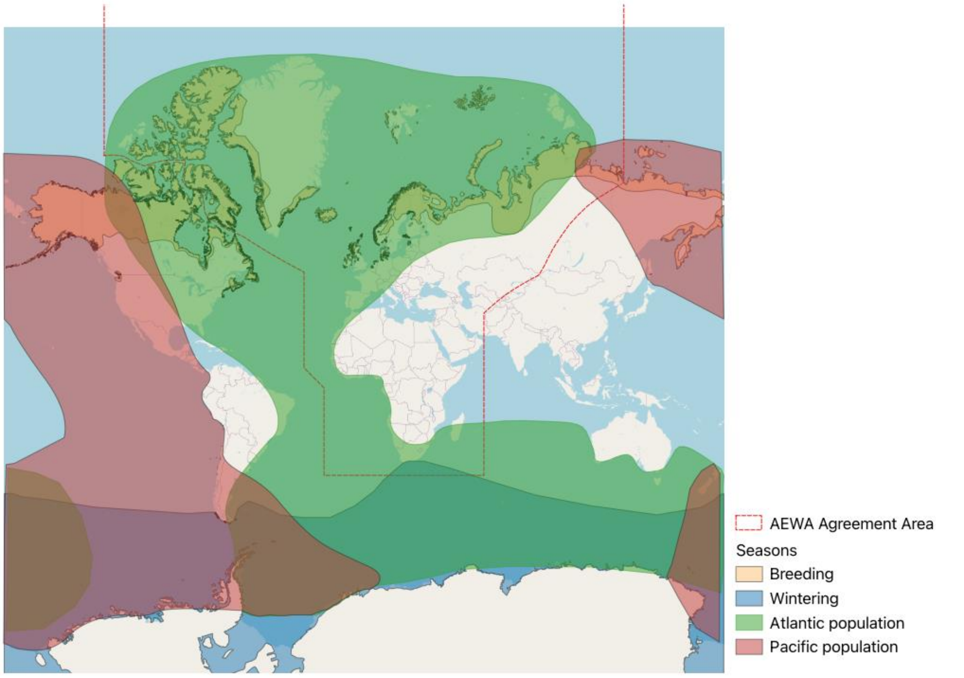

Figure 3. Option B

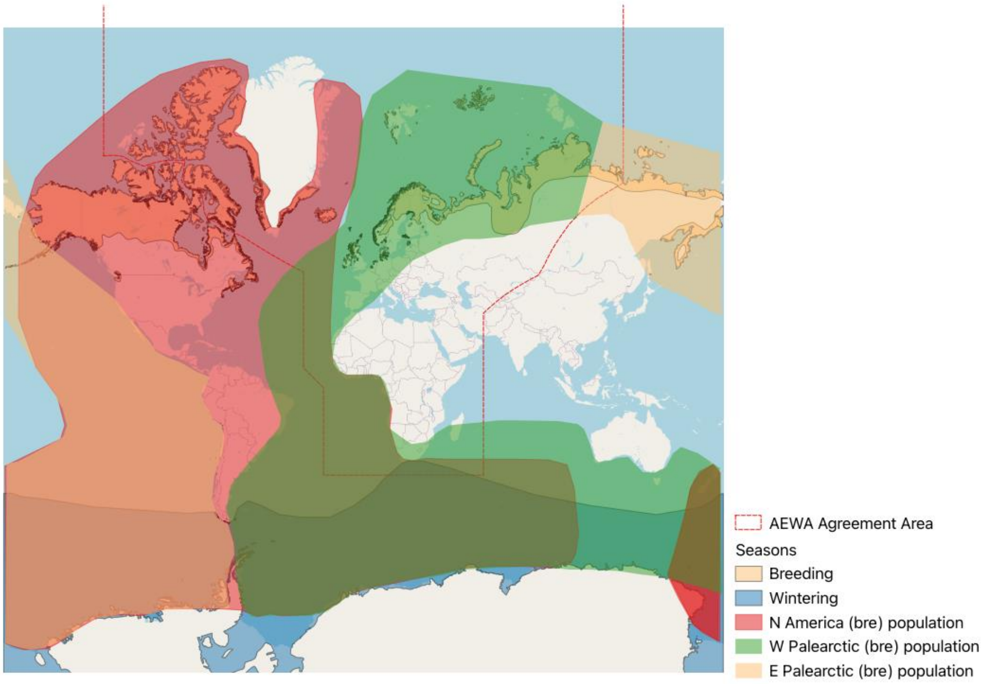

Figure 4. Option C

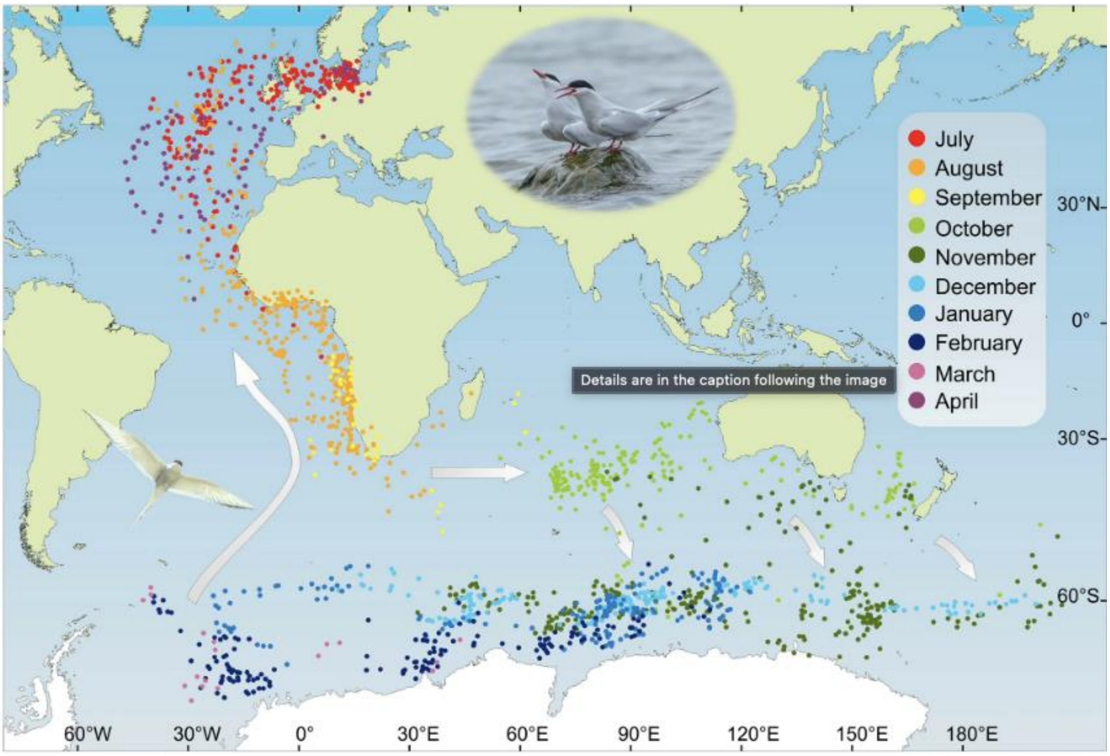

Figure 5. Migration of Arctic Terns from the Baltic Sea (from Alerstam et al., 2019).

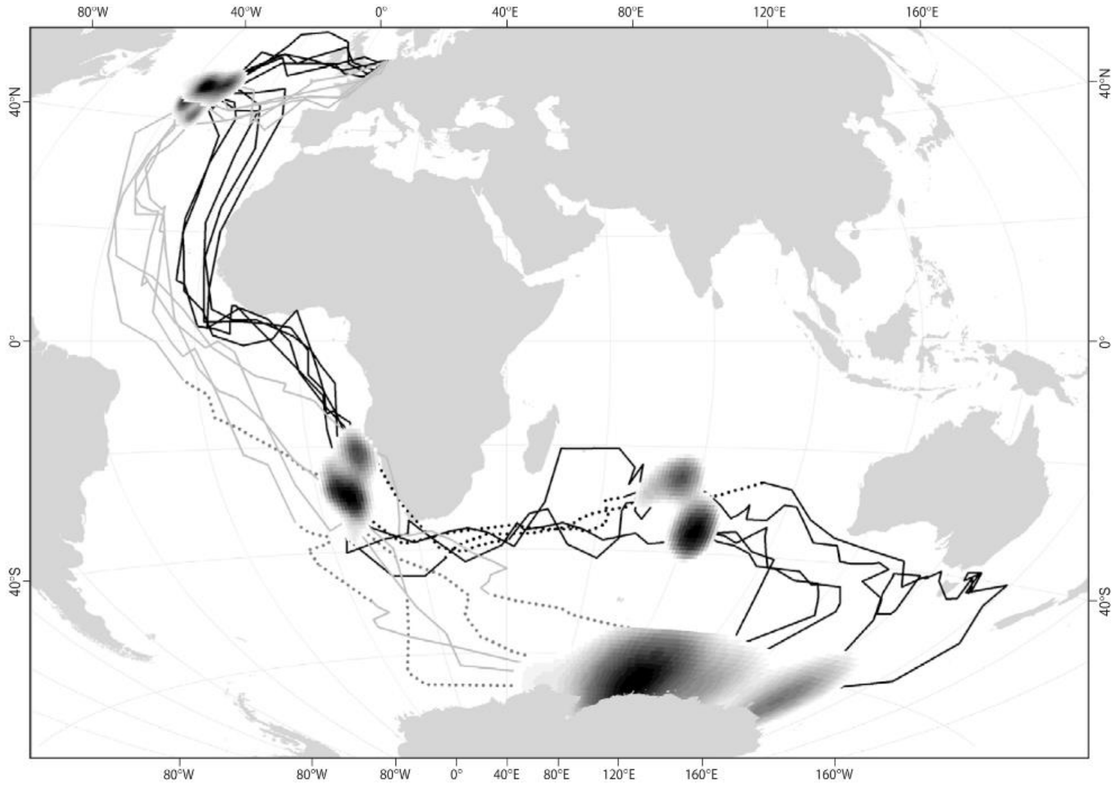

Figure 6. Migration of Arctic Terns from the Netherlands (from Fijn et al., 2013)

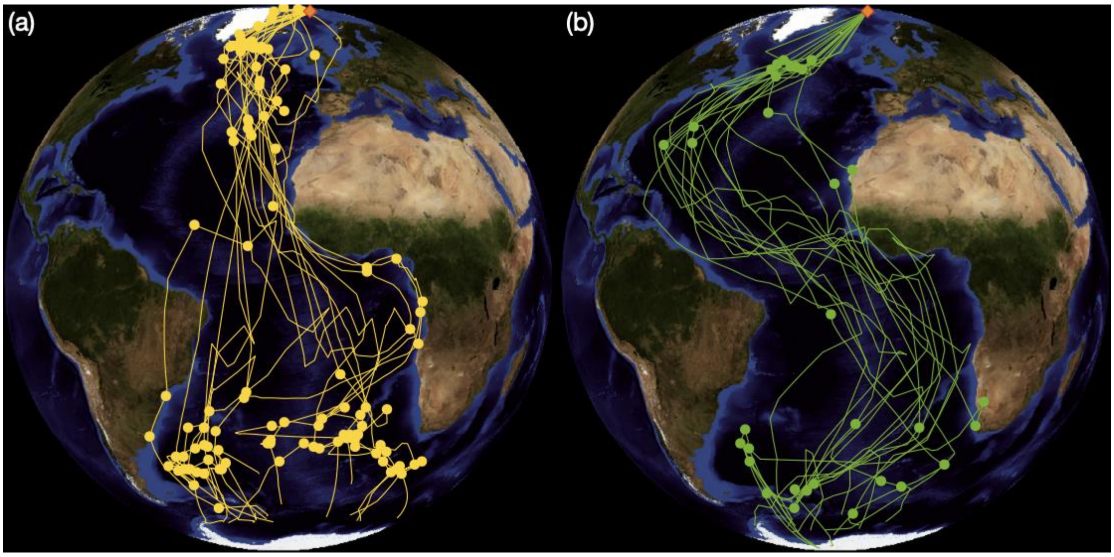

Figure 7. Migration of Arctic Terns from Svalbard (from Hromádková et al., 2020)

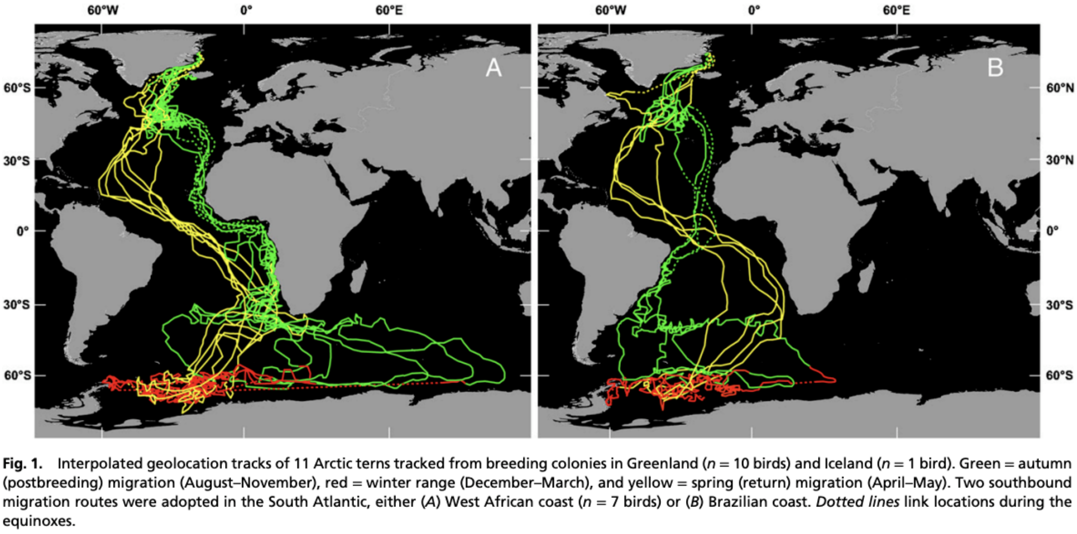

Figure 8. Migration of Arctic Terns from Greenland and Iceland (from Egevang et al., 2010).

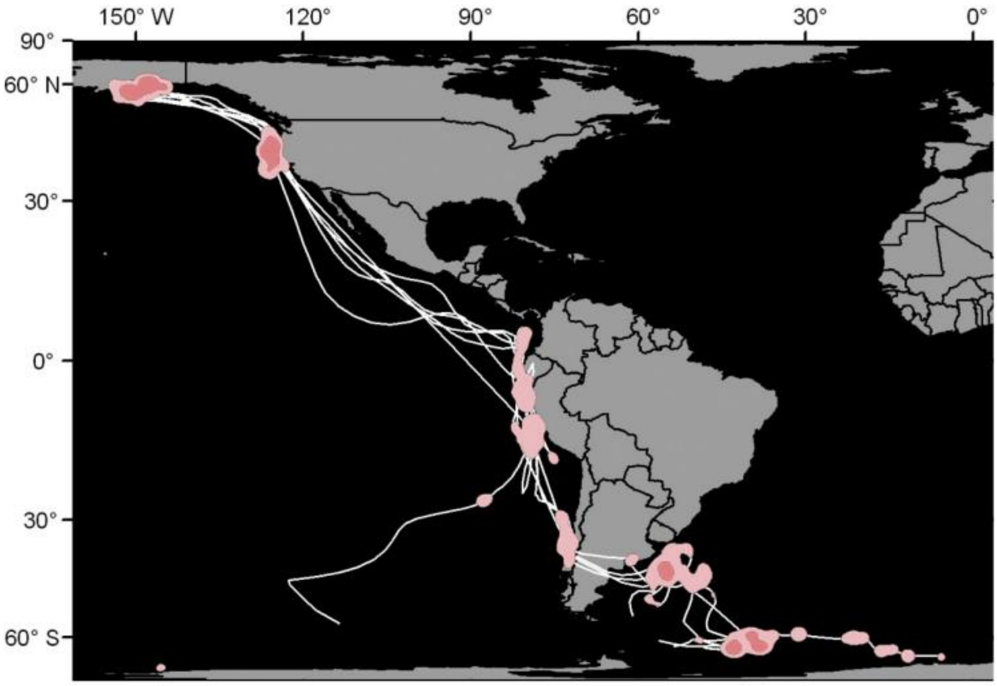

Figure 9. Migration of Arctic Terns from Alaska (from McKnight et al., 2013)

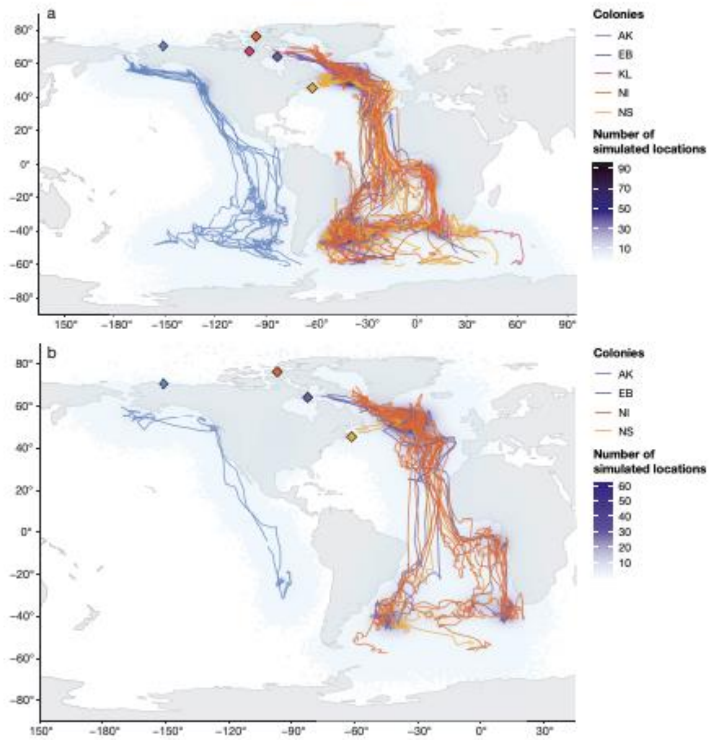

Fig. 1. Most likely individual southbound migration routes used by Arctic terns during (a) Year 1 (August–December 2017) from each breeding colony (denoted by corresponding coloured diamond; AK = Alaska: 70.35° N, 151.03° W, n = 8; EB = East Bay: 64.01° N, 82.07° W, n = 7; KL = Karrak Lake: 67.25° N, 100.25° W, n = 4; NI = Nasaruvaalik Island: 75.83° N, 96.30° W, n = 19; NS = Nova Scotia: 45.06° N, 61.32° W, n = 15), and (b) Year 2 (August–November 2018; AK: n = 2; EB: n = 5; NI: n = 19; NS: n = 2). The uncertainty is displayed with the density of simulated/sampled locations by the model (purple shading; see also Fig. S2). All Canadian colonies used a known North Atlantic staging site (between 41°–53° N and 27°–41° W; Egevang et al. 2010). The tracks shown do not extend to the breeding colonies or to Antarctic non-breeding grounds, and it is likely that the birds travelled farther north or south, respectively. However, due to 24 h daylight or battery depletion in the second year, tracks for this period could not be interpreted reliably from the geolocator data. Background map source: Natural Earth (https://www.naturalearthdata.com/downloads/110m-physical-vectors/110m-land/)

Figure 10. Autumn migration routes of Arctic Terns from Canada and Alaska (from Wong et al., 2021).

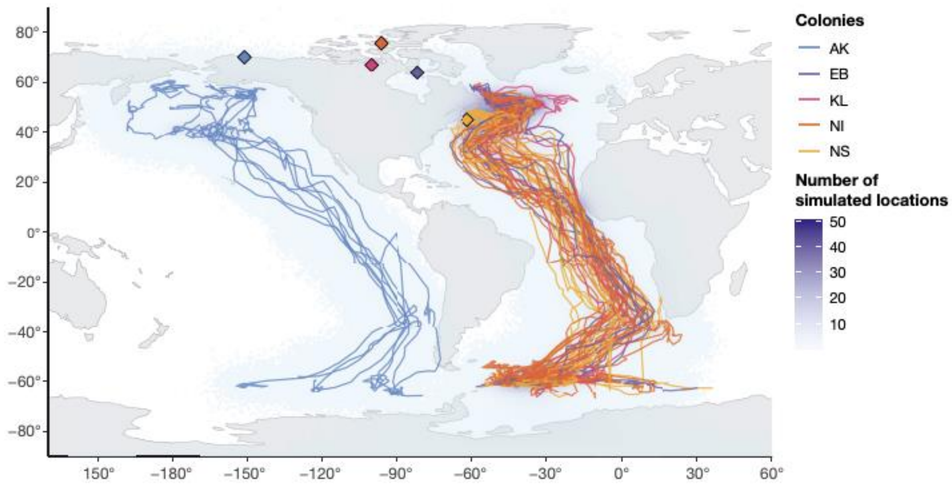

Fig. 3. Most likely individual northbound migration routes used by Arctic terns during Year 1 (February–June 2018) from each breeding colony (denoted by corresponding coloured diamond; AK = Alaska: 70.35° N, 151.03° W, n = 8; EB = East Bay: 64.01° N, 82.07° W, n = 7; KL = Karrak Lake: 67.25° N, 100.25° W, n = 4; NI = Nasaruvaalik Island: 75.83° N, 96.30° W, n = 19; NS = Nova Scotia: 45.06° N, 61.32° W, n = 15). The uncertainty is displayed with the density of simulated/sampled locations by the model (purple shading; see also Fig. S2). The tracks shown do not originate from Antarctica or extend to the original breeding grounds, and it is likely that the birds travelled farther north. However, due to 24 h daylight, tracks for these periods could not be interpreted reliably from the geolocator data. Background map source: Natural Earth (https://www.naturalearthdata.com/downloads/110m-physical-vectors/110m-land/)

Figure 11. Spring migration routes of Arctic Terns from Canada and Alaska (from Wong et al., 2021).

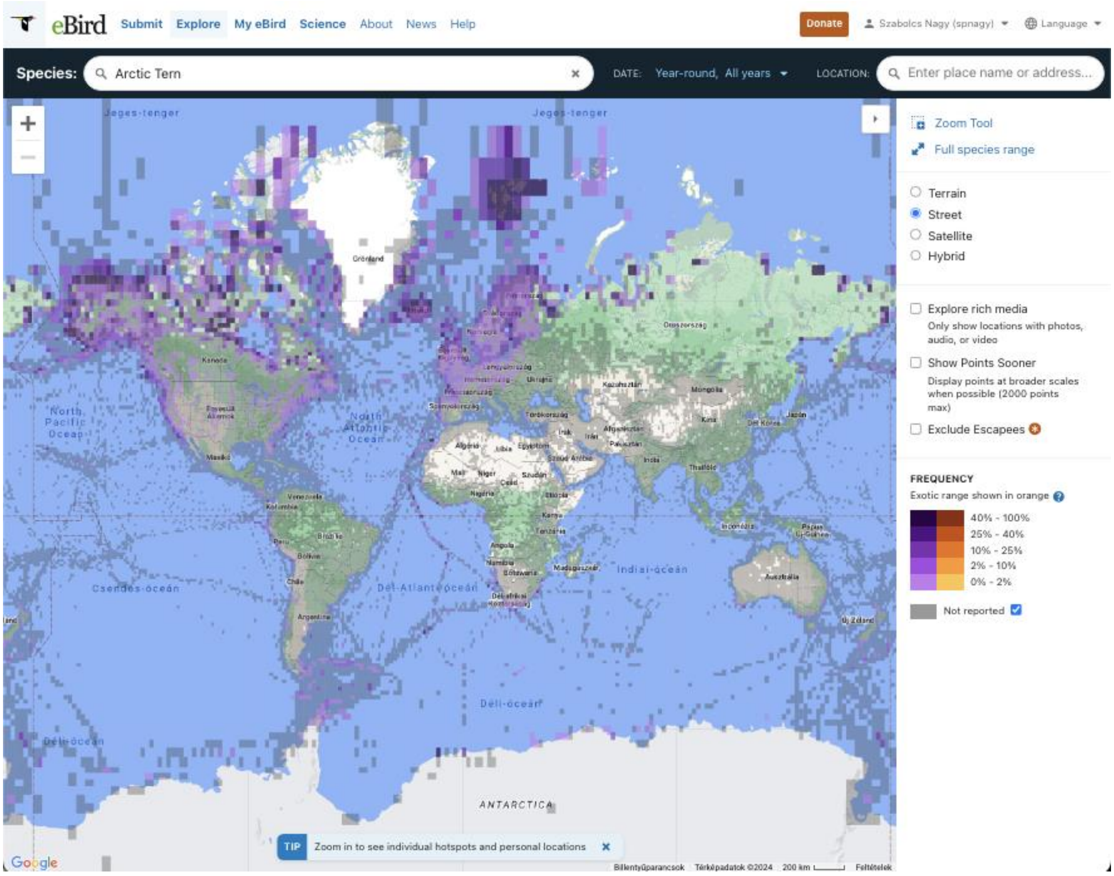

Figure 12. Observations of Arctic Tern on eBird.