Taiga Bean Goose
(*Anser fabalis fabalis*)

AEWA European Goose Management Platform

EGMP Technical Report No.6
Population Status Report 2017-2018

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Prepared by the AEWA European Goose Management Platform Data Centre

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Geographical scope:
This population report comprises four Management Units (MU), i.e. Western, Central, Eastern1, of the Taiga Bean Goose. The range states of these MUs are: Belarus, Denmark, Estonia, Finland, Germany, Latvia, Netherlands, Norway, Poland, Russia, Sweden, Ukraine and the United Kingdom.

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Contents

1 Summary

This report compiles annual monitoring data on the population status of the four Management Units (Western, Central, Eastern1 and Eastern2) of Taiga Bean Goose for the season 2017/18. This data is used to assess the population development and provides input for the modelling of an optimal harvest strategy for the Central MU for the coming hunting season (2017/18). The latter is part of an adaptive harvest management framework set up to support the implementation of the AEWA International Single Species Action Plan (ISSAP) for the population. The estimated population size in January 2018 was 878 individuals for the Western MU and 38,717 individuals for the Central MU, whereas the population size for the two Eastern MUs remain unknown. Currently up to date harvest at sub-species level is not available for either of the three harvested MU (the Western MU is protected). However, the minimum number of Bean Geese harvest in the Central MU during the previous hunting season was >3,513 individuals.

2 Aim

The aim of this report is to compile and review the available annual monitoring data upon which to assess the population status of the Taiga Bean Goose *Anser fabalis fabalis* for the season 2017/18. The data have been compiled to establish the population size and trend of each of the four MUs, i.e., Western, Central, Eastern1 and Eastern2 (Figure 1), of the Taiga Bean Goose, as well as providing specific data to input to the modelling and assessment of an optimal harvest strategy for the Central MU for the forthcoming hunting season (2018/19). This is part of an adaptive[1] harvest management framework established to support the implementation of the AEWA International Single Species Action Plan for the population (Marjakangas et al., 2015). We thank the national goose monitoring networks who contributed to this report.

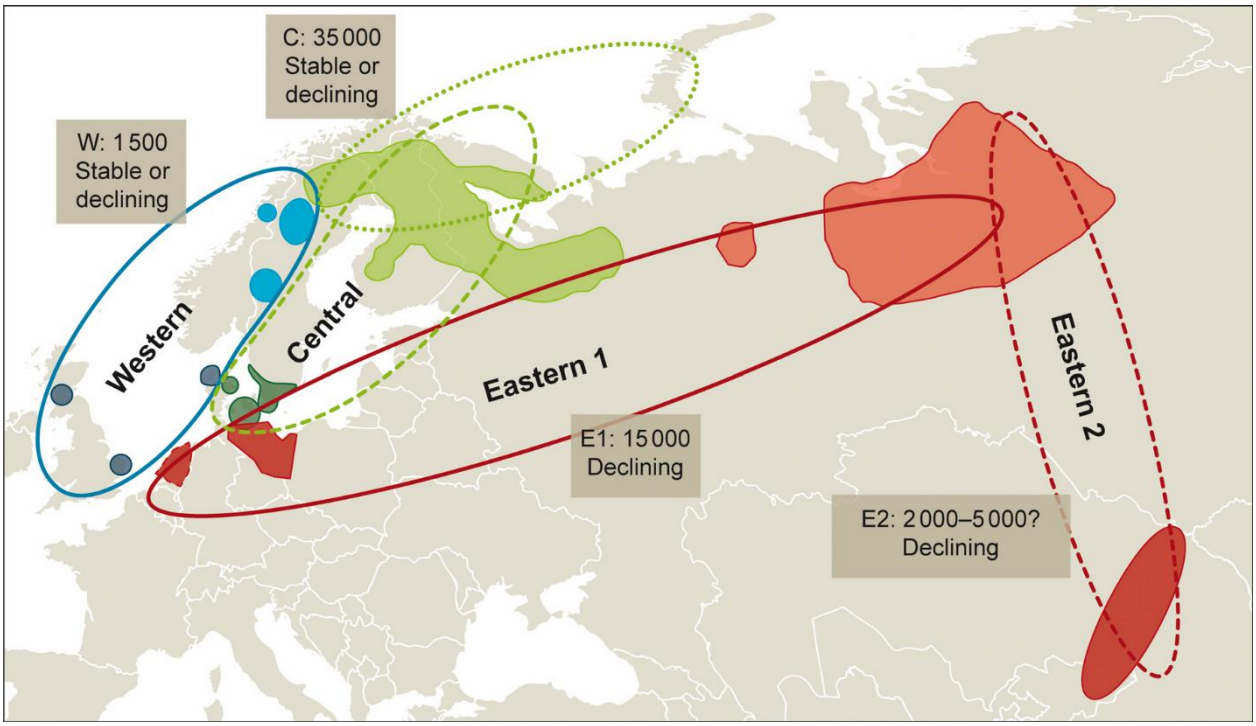

Figure 1. *The four MUs of Taiga Bean Goose; Western, Central, Eastern1 and Eastern2 (dotted line indicate linkages between breeding areas in norther Fennoscandia and known moulting areas in Novaya Zemlya and the Kola Peninsula)*

3 Western MU

Population estimates and productivity

Population estimates for the Western unit of Taiga Bean Goose, consist of counts from north of Limfjorden in North Jutland in Denmark as well as from England and Scotland in the United Kingdom.

Denmark

Goose monitoring in Denmark is coordinated as part of the national nature monitoring programme NOVANA (data being input online into fugledata.dk), supplemented with observations from BirdLife Denmark's citizen science portal DOFbasen.dk. The programme contributes to the mid-winter International Waterbird Census (IWC) coordinated by Wetlands international. The IWC count in 2018 took place in and around the week-end of 14-15 January, but data in DOFbasen.dk gives a better coverage of the north and north-western parts of Denmark, where this population is found. Based on these counts from January 2018 there were 654 Taiga Bean Geese, 0 Tundra Bean Geese and 70 unidentified Bean Geese in Jutland north of Limfjorden (Table 1). Based

[1] It should be noted that until reliable and up-to-date population and harvest data is available on an annual basis, it is not possible to establish an adaptive harvest management program.

on expert judgement, the 70 unidentified Bean Geese in 2018 were most likely Taiga Bean Geese (by virtue of the fact they were counted at sites that traditionally normally only hold Taiga Bean Geese).

Estimates for Denmark are currently preliminary, because there might be a few observers who have not yet entered their registrations in fugledata.dk and DOFbasen.dk. Additionally, Bean Geese in North Jutland are notoriously very difficult to locate, which may partly explain the low numbers in 2018.

United Kingdom

The Bean Goose counts in the United Kingdom also contribute to the international counts coordinated by Wetlands international. In Scotland and England the counts are carried out regularly through the winter months and, instead of relying on a January count, a maximum winter count (which can be any month, including the January count) is used as the final estimate. Counts are made in collaboration between the Wildfowl & Wetlands Trust (WWT), the Bean Goose Action Group, Scotland (BGAG) and the Royal Society for the Protection of Birds (RSPB). Results from ringing and re-sightings suggest very little (if any) within-winter movement of Taiga Bean Geese to/from continental Europe (Mitchell et al., 2016), which means that adopting this count approach poses little risk of double counting.

The population estimates for the United Kingdom was 224 individuals in 2017/2018 (Table 1).

Harvest

Taiga Bean Geese from the Western MU are protected from hunting in Denmark as well as in the UK.

Conclusions for the Western MU

Population estimates

Eight hundred and seventy-eight individuals were counted in the Western MU in 2017/2018, excluding the unidentified Bean Geese. Assigning the unidentified individuals within Denmark to the Taiga race yields an estimated population size of 948 for January 2018, numbers that suggest a further decline in population size of the western MU of Taiga Bean Goose, unless geese were short-stopping further east due to the rather mild weather conditions that pre-vailed prior to the mid-winter census. There might, however, be alternative explanations for the decrease in observed numbers:

1) As mentioned, estimates from Denmark are currently preliminary.
2) Bean Geese in North Jutland are very difficult to locate, hence some flocks might have been missed during the count in 2018. Data gathered from telemetry devices fitted to Western MU Taiga Bean Geese in NW Jutland showed them using wetlands and natural habitats well away from roads and human habitation that are not normally extensively searched during count periods and which are unlikely to be found by birdwatchers without a specific interest in locating these birds.
3) In recent years, numbers accounted for during mid-winter counts in the Central MU have fallen below those generated by surveys undertaken at other times of the winter season. For instance, both the spring and autumn counts of Central MU Taiga Bean Geese are recording (consistently) more geese (as well as following a pattern of a modest upward trend) which we fail to replicate in the mid-winter count. Telemetry tagged Western MU Taiga are known to associate with Central MU birds at staging areas, for instance in the Östen/Ymsen area in autumn and spring, so birds from the Western MU may be using these and other unknown areas during mild conditions during mid-winter.
4) It is also not beyond the bounds of possibility that increasing numbers of birds are wintering further up the flyway, for instance in Sweden or Norway, in areas yet to be recognised and counted, particularly in mild winters such as 2017/18.

Despite the potential gaps in survey coverage, the population level remains far below the short-term target (for the next 20 years) of 4,000 individuals, specified in the International Single Species Action Plan (Marjakangas et al., 2015).

***Table 1**. Results of international count of Bean Geese, the Western MU, winter of 2017/2018. *Preliminary totals*

Country	Area	Period	Number of Bean Geese			Reported by
			Taiga	Tundra	Unidentified	
Denmark*	NW Jutland	7-8 January	654	0	70	Preben Clausen & Tony Fox, AU
UK	Slamannan, Scotland	20 dec. 2017	206	-	-	Carl Mitchell/BGAG/RSPB
	Norfolk, E England	5+16 dec. 2017	18	-	-	
TOTAL			878	0	70	

4 Central MU

Population estimates for the Central MU of Taiga Bean Goose consist of counts from Southern Sweden, the Netherlands and Denmark (i.e. excluding the area north of Limfjorden in North Jutland described above). All the birds in Sweden and the Netherlands were identified as Central MU birds. Geese from the Central MU also winter in North-Central Germany depending on the severity of winter weather. It has however not been possible to obtain population estimates from Germany in January 2018.

Productivity data are available from Sweden.

Population estimates

Sweden

The Bean Goose counts in Sweden are part of the contribution to international counts coordinated by Wetlands International which are performed throughout the winter, although only the January counts of Bean Geese are separated into Taiga and Tundra Bean Geese. In Sweden, the central counting areas are divided into Southwest Scania, Northeast Scania and North of Scania. In Southwest Scania, Bean Geese have always been separated into subspecies, whereas in Northeast Scania and North of Scania the observers have only recently (since 2014) been trained and asked to record numbers on the basis of this distinction. While most Bean Goose counts have been separated between the two subspecies, there is, however, still a number of geese unidentified to sub-species (Table 2). As the unidentified geese in 2018 were mostly from areas further north, where the majority of the geese normally are Taiga Beans, these where all considered Taiga Beans. Hence, the population estimates for Sweden in January 2018 was 35,806 Taiga Bean Geese (Table 2).

In addition to population counts, the productivity was assessed in southern Sweden, where 1,930 Taiga Bean Geese where checked for young in late October and early November. Of these, 135 were yearlings and 1,795 adults, i.e. the proportion of young birds was 7% in the flocks checked (H. Kampe-Persson unpubl.data).

Denmark

The January 2018 count in Denmark (excluding the region used by the Western MU) recorded 2,652 Taiga Bean Geese, 2,829 Tundra Bean Geese and 910 unidentified Bean Geese. In an attempt to assign the unidentified Bean Geese to subspecies, the following methods have been applied:

- The Bean Geese unidentified to subspecies have been assigned to Taiga Bean Geese or Tundra Bean Geese in the former Storstrøms Amt (primarily the islands Lolland-Falster-Møn) on the basis of the ratio amongst all the Bean Geese that have been identified to subspecies for each year within this particular region;

- The remainder of the unidentified Bean Geese in 2018 elsewhere in Denmark were assigned to subspecies on the basis of the ratio of identified Taiga to Tundra Bean Geese in the total annual counts outside the former Storstrøms Amt.

The totals for Denmark is thus 2,911 Taiga Bean Geese in January 2018 (Table 2).

The Netherlands

The national goose counts in The Netherlands, including those for Bean Geese contribute to the international counts coordinated by Wetlands international and are performed during monthly counts from September to May. Specifically, for Taiga Bean Goose, also non-systematic observations from the portal www.waarneming.nl have been used. The January count from the Netherlands was 0 in 2018 (Table 2).

Recent results from telemetry and resightings of collared Taiga Bean Geese marked in north-eastern Jutland, Denmark show that the remnant wintering Dutch birds currently at least partially belong to the Central Unit (O. Therkildsen unpubl. data).

Table 2. *Results of international counts of Bean Geese, the Central MU, winter of 2017/2018. *Preliminary totals. Grey colors: Numbers before unidentified geese have been assigned*

Country	Area	Period	Number of Bean Geese			Reported by
			Taiga	Tundra	Unidentified	
Sweden	S Sweden	January	26,068	1,139	9,738	Leif Nilsson
			35,806	1,139	0	
Denmark*	Outside SE DK	January	2,401	194	215[2]	Preben Clausen & Tony Fox
	SE DK		251	2,635	695[3]	
			2,911	3,480	0[4]	
Germany	North-Central Germany	NA	NA	NA	NA	NA
The Netherlands		January	0	(203,283)	0	Kees Koffijberg
TOTAL			**38,717**	-	-	

[2] Outside Lolland-Falster-Møn the ratio between 2,595 identified Bean Geese were 93 Taiga: 7 Tundra, and 215 uidentified geese were assigned to subspecies proportionally as 199 Taiga and 16 Tundra Bean Geese.

[3] On Lolland-Falster-Møn the ratio between 2,886 identified bean geese were 9 Taiga: 91 Tundra, and 695 uidentified geese were assigned to subspecies proportionally as 60 Taiga and 635 Tundra Bean Geese

[4] Final estimates of the two subspecies in the Central part, after unidentified have been assigned.

Harvest

Taiga Bean Geese from the Central MU was in 2017/2018 hunted in Russia, Finland, Sweden, Denmark and Germany.

Sweden

The open season for Bean Geese in Sweden extends from October 1st until December 31th, but only in the counties of Skåne and Blekinge. In addition, under derogations ('skyddsjakt') allowed under two different legal instruments and reporting systems (Jensen et al., 2017), Bean Geese can be shot to prevent damage to crops outside the normal open season and permitted areas.

The Bean Goose harvest is reported on a voluntary basis to the Swedish Association for Hunting and Wildlife Management. Such data originate from defined geographical areas and so are used to extrapolate the levels of reported harvest to unreported areas to generate estimates for entire counties and scaled up nationally.

Proportion of Tundra and Taiga bean geese in Swedish harvest 2017/2018

During winter 2017/18 a targeted sampling of heads from shot Bean Geese in Skåne was launched by the Swedish Association for Hunting and Wildlife Management, funded by Swedish Environmental Agency and Swedish Association for Hunting and Wildlife Management (Liljebäck & Ohlsson, 2018). In total 233 birds were collected and examined covering a significant proportion of the total harvest in Skåne. Among the analysed birds 128 certain Taiga (55%), 48 probable Taiga (21%), 33 possible Tundra (14%) and 24 certain Tundra (10%) were identified. This suggests that 10-24% of harvested birds in Skåne were Tundra bean geese this winter (Liljebäck & Ohlsson, 2018). A high degree of individual variation in characteristics and measurements were found and as a consequence a relatively large sample of birds remained as undetermined subspecies. The collected data and stored samples will be further analysed and compared to other datasets to hopefully increase resolution between subspecies.

When and why are bean geese shot in Skåne?

Of the 233 bean geese sampled in this study 44% were shot during regular hunting, i.e. open season, and 56% was shot during the period 1th January- 15th March when derogation shooting to prevent damage on agriculture crops is allowed without specific licence from authorities. When hunters were asked they confirmed that the birds shot during derogation shooting is reported to the Swedish Game Survey, i.e. they make no distinction between birds shot during regular hunting and derogation shooting when reporting the yearly bag. However, as the winter conditions[2] limited hunters' opportunities to hunt during the open season, farmers and landowners may have put extra pressure on the specialized goose hunters to go for derogation shooting when the open season was over (Liljebäck & Ohlsson, 2018).

When Swedish harvest data for bean geese, in earlier years, was revisited it became clear that the total harvest has included a significant (but unknown) proportion of individuals shot during derogation shooting (Bergqvist pers.comm.). Swedish hunters will now, partly because of these new findings, be encouraged to report all individuals shot during protective hunting (of all species) to the system for bag statistics in Sweden (Bergqvist pers.comm.) starting with reporting in hunting year 2018/2019.

Age structure among harvested Bean geese

The age of harvested birds was determined based on coloration of inside of the upper mandible. The proportion of juveniles based on these data was 29%, 34% 2cy-birds and 36% older than 2cy+ birds (Liljebäck & Ohlsson, 2018). In an earlier study on shot Bean Geese in eastern Skåne between 1985 and 2002 (including a total of 5555 birds) the mean proportion of juveniles (first year birds) over the years were 26,7 % but with significant variation between years (unpublished data, Andersson in litt 2018). This older study was based on the use of aging characteristics from collected wings from harvested birds, a method which does not allow the separation of 2cy birds from older than2cy+ birds. A relative over-representation of young birds among harvested geese compared to age ratio in the field has been found in many other studies. This very limited comparison to older data from harvested Bean Geese in Skåne suggests there was nothing unusual about the reproductive success in summer 2017.

[2] The autumn of 2017 was late and the autumn weather was characterized by high amounts of rainfall and extreme warm temperatures. Larger aggregations of bean geese on agriculture fields (where hunting normally take place) did not occur until mid-December leaving little opportunity for hunting during the open season. Many indications suggest that winter 2017/2018 was extreme in many ways in Skåne which most likely affected the outcome of this study by lower overall harvest and likely affecting the spatial distribution of geese and possibly also sub-species distribution.

Total harvest in Sweden

During the 2016/2017 hunting season, the total hunting bag of Bean Geese was estimated at 2,212 birds, which corresponds to between 1,200-1,700 Taiga Beans based on these new results (55-76% Taiga Beans) (Table 3). Harvest data for 2017/18 were not available at the time of writing this report[3], but will consist of at least 233 Beans which equates to 128-170 Taiga Beans. The numbers of Bean Geese shot under special licences issued by statutory authorities to reduce agricultural damage are not currently gathered and collated, but the numbers are considered to be small compared to those shot under recreational hunting.

Denmark

The hunting season in Denmark for Bean Geese runs from 1 September until 30 November, but hunting has, since 2014, only been allowed in Southeast Denmark in the municipalities of Vordingborg, Guldborgsund and Lolland. The spatial restrictions on hunting were initially established to protect Taiga Bean Geese from the Western MU in North Jutland, but later expanded to most of the country to protect Taiga Bean Geese in general.

Harvest of Bean Geese is reported by hunters through the mandatory Hunting Bag Statistics (administrated by the National Environmental Agency). Furthermore, hunters may, on a voluntary basis, submit wings from shot geese to the Danish Wing Survey. These wing samples contribute to the knowledge of the temporal hunting bag variations, as well as knowledge of age ratio.

In the 2017/2018 hunting season the total hunting bag of Bean Geese consisted of 822 birds (Table 3), but the number of received wings was very low, offering no basis for viable analyses of the contribution from the two Bean Goose sub-species.

Based on the mandatory Hunting Bag Statistics, it has become clear that more than half of the reported Bean Geese are shot in protected areas (Sørensen and Madsen, 2017). It is unclear to what degree this results from incorrect determination of shot geese to species, limited hunter knowledge of the species or of the hunting regulations related to this species. Whatever the explanation, to mitigate any unintentional illegal hunting, the Danish Hunting Association and the Danish Wing Survey have, during 2017/2018, increased the awareness of "Grey Geese" and encouraged hunters to submit the head and tail of shot Bean Geese, or photos of these (Sørensen and Madsen, 2017). These body parts make it is possible to distinguish Taiga from Tundra Bean Geese, and thereby obtain better information relating to the distribution of the hunting harvest of the two sub-species.

Unfortunately, no parts or photos were received during the 2017/2018 hunting season, which however may be attributed the low number of observed, and harvested, Bean Geese in Denmark, compared to previous years.

Netherlands

Bean Geese are protected in the Netherlands, but may be subject to scaring and shooting at local level, with permission from the local statutory authority. Focusing on the only area where Taiga Bean Geese occur, no licenses were issued in the reporting period (Table 3).

Finland

In Finland the Bean Goose hunting reopened last year in a 'Tundra Bean Goose' zone in south-east Finland after 3-year total moratorium. Hunting was restricted to October-November and there was a mandatory requirement to report the harvest bag.

The Finnish Wildlife Agency received reports indicating a harvest of 157 Bean Geese. To gain information about the distribution of the harvest of the two sub-species, the hunters were asked to voluntarily e-mail pictures of their bird and identify them as either Taiga or Tundra Bean. Based on the received pictures of 46 Bean Geese, it was estimated by the Natural Resources Institute Finland that about 85% of birds shot were Tundra Bean Geese. This translates to a total of 24 Taiga Bean Geese that were shot out of a total of 157 Bean

[3] The hunting year in Sweden goes from 1 July – 30 June, hence data are not available until after 1 July.

Geese (Table 3). With regards to the hunter's own field identification of Taiga vs Tundra Bean Goose, in 82% of the reports, the question was answered and based on these answers approximately 90% of the harvest was Tundra Bean Geese, corresponding to the estimate by the Natural Resources Institute Finland of 85%.

Russia

In Russia the "official" hunting bag statistics of geese consist of mandatory hunting bag reports and during the hunting season 2014-2016 a new method of differentiating the species of bagged waterbirds by pictures was tested. Based on the mandatory hunting bag reports, an estimated 223,000 geese where shot annually between 2014-2016. Additionally, and according to the picture survey ~62,000 (27.8%) of these where Bean Geese (Solokha & Gorokhovsky, 2017). This is for 65 administrative areas of Russia. As the primarily hunting regions for the Central MU is only Karelia, Murmansk and Arkhangelsk, and because the available data from Russia does not allow for a sub-species determination of Bean Geese, the data are not included in Table 3.

*Table 3. Bean Goose hunting bag during the hunting seasons 2014/15-2017/18. *The region of Karelia, Murmansk and Arkhangelsk. **Preliminary data.*

Country	**2014/15**	**2015/16**	**2016/17**	**2017/2018**
Sweden (Bean)	1,675	1,582	2,212	>233**
Sweden (Taiga)			1,200-1,700	>128-170**
Denmark (Bean)	1,296	1,440	1,301	822
Netherlands	0	0	0	0
Finland (Taiga)	0	0	0	24
Russia*	NA	NA	NA	NA
TOTAL (Bean)	>2,971	>3,022	>3,513	NA

Conclusion for the Central MU

A total of 38,717 Taiga Bean Geese were counted in January 2018, compared to 56,792 Taiga Bean Geese in January 2017. None of these estimates include counts from Germany. Nevertheless, given the most recent population estimate of 38,717 Taiga Bean Geese, the Central MU appears to have either declined significantly during the last year or the count is incomplete. For two major reasons, the latter seems most realistic:

It has not been possible to obtain population estimates from Germany, hence we know that the January count is biased towards the low side.

Counts during autumn and spring have been consistently higher than the January count. In October 2017, during the age ratio sampling in southern Sweden, the Bean Goose staging sites were checked, and a total of 59,977 Taiga Bean Geese were counted together with 9,742 Tundra Bean Geese and 11,759 unidentified Bean Geese. The majority of the unidentified Geese were assessed as the Taiga Bean Goose, equating to a total of 60,000 – 70,000 Taiga Bean Geese in southern Sweden, October 2017 (H. Kampe-Persson unpubl. data). This is a further increase to the October population estimate in 2016 of 42,993 (Kampe-Persson, 2017). The Taiga Bean Geese were also counted at the Swedish spring staging areas in 2017, where a total of approximately 65,500 Taiga Bean Geese were counted during one weekend (11-12 March) (Skyllberg and Nousiainen, 2017).

The hunting bag data from the Central MU range states shows that at least 3,513 Bean Geese were shot in 2016/2017, whereas the data from 2017/18 is still unavailable from the main contributors. The application of the Adaptive Harvest Management programme for the Central MU of the Taiga Bean Goose requires the availability of robust estimates of population size and harvest bag data separated into the two sub-species (Taiga and Tundra Bean Geese). These two variables are the prerequisite for assessing the population response to management actions. In 2018 it has been possible to obtain reasonable count data from Denmark, Sweden

and the Netherlands, but unfortunately not from Germany. In addition, while it has been possible to obtain sub-species-specific harvest data from Finland for the most recent hunting season, it has not been possible to separate the harvested Bean Geese into the two subspecies in Denmark. On the other hand, in Sweden, a large effort has now been put into separating the sub-species during the hunting season 2017/2018, but hunting bag data from 2017/2018 are not available yet. Finally, hunting data from other range states continues to be lacking (e.g. from Russia and Germany).

For these reasons, the successful implementation of an Adaptive Harvest Management framework for the Central Taiga Bean Goose MU cannot occur until the following data have been made available:

1) Reliable annual population estimates; and
2) Up to date sub-species-specific hunting bag data from all range states (particular Sweden, Finland, Denmark, Russia (by region) and Germany).

Initiatives to resolve the latter issue is already in progress in Sweden, Denmark and Finland, as described above. To our knowledge, however, no initiatives have been taken in Germany or Russia.

As for reliable population consensus estimates, it is recommended that an alternative to the January counts is investigated, including using the existing Swedish data series from autumn/spring.

5 Eastern1 MU

Population estimates

The Eastern1 MU Taiga Bean Geese winters in North-east Germany, North-west Poland, in lower numbers in Southern Sweden and only in small numbers in The Netherlands. In this report, all the birds in Sweden and the Netherlands were identified as Central MU birds in the absence of better information. Until better information is made available, we are forced to consider that this wintering element has contracted its wintering range eastwards into eastern Germany and Poland. However, as there have been no goose counts reported from Germany and Poland in January 2018, it is not possible to estimate the population size for the Eastern1 MU.

Harvest

Taiga Bean Geese from the Eastern1 MU was in 2017/2018 hunted in Germany, Russia and Poland. The bag size is unknown.

In Russia, however, the Taiga Bean Goose is included in the Red Book of thirteen districts of the Russian Federation, including KhMAO-Ugra and the Krasnoyarsky Kray, but not the adjacent region of Yamal-Nenets Autonomous Okrug (YaNAO), where a significant part of the Taiga Bean Goose population nests. In YaNAO the Taiga Bean Goose is hunted, and especially the spring hunting, which coincides with the onset of incubation, is considered a huge threat to the population (S. Rozenfeld, pers.comm.).

On the initiative of Russian researchers, the chair of EGMP IWG has directed a letter to the Governor of YaNAO and suggested that the Taiga Bean Goose should be included in the Red Book of YaNAO, applying the second highest category of rarity status, in order to halt the rapid decline of the population. Furthermore, to make protection measures on regional level, Russian researchers are planning to tag Taiga Beans in the spring 2018 from the western part of Yamal, to detect the border between the populations (E1 or central) breeding in Russia.

6 Eastern2 MU

The Eastern2 MU winters in South-east Kazakhstan, Eastern Kyrgyzstan and North-west China, it has however not been possible to get population estimates from these countries.

7 References

Jensen, G.H., Fox, A., Christensen, T.K., Clausen, P., Koffijberg, K., Liljebäck, N., Madsen, J., Mitchell, C., Nilsson, L., 2017. Taiga Bean Goose population status report 2015/16 and 2016/17. Prepared by the AEWA European Goose Management Platform Data Centre.

Kampe-Persson, H., 2017. Höstinventering. Vär Fägelvärld 6: 38-40.

Liljebäck N & Ohlsson T. 2018. Analyse of Bean Goose Harvest in County of Skåne winter 2017/2018. Manuscript of technical report to Swedish Environmental Agency.

Marjakangas, A., Alhainen, M., Fox, A.D., Heinicke, T., Madsen, J., Nilsson, L., Rozenfeld, S., 2015. International Single Species Action Plan for the Conservation of the Taiga Bean Goose (Anser fabalis fabalis). AEWA Technical Series No. 56. Bonn, Germany.

Mitchell, C., Griffin, L., Maciver, A., Minshull, B., Makan, N., 2016. Use of GPS tags to describe the home ranges, migration routes, stop-over locations and breeding area of Taiga Bean Geese Anser fabalis fabalis wintering in central Scotland. Bird Study 63: 437–446. doi:10.1080/00063657.2016.1236779.

Skyllberg, U., Nousiainen, I., 2017. Tajgasädgäsen ökar efter år av minskning. Vär Fägelvärld 6: 32-37.

Solokha, A., Gorokhovsky, K., 2017. Vesilintujen metsästyssaalis Venäjällä. Suomen Riista 63: 43–52.

Sørensen, I.H., Madsen, J., 2017. Bliv klogere på de grågæs: Fokus på sædgåsen. Jæger 9: 30-31.

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