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AEWA EUROPEAN GOOSE MANAGEMENT PLATFORM

8th MEETING OF THE
AEWA EUROPEAN GOOSE MANAGEMENT
INTERNATIONAL WORKING GROUP

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EGMP National Report Summary 2023

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The 8th Meeting of the AEWA European Goose Management International Working Group is being hosted by the UNEP/AEWA Secretariat in Bonn, Germany.

List of Acronyms

AEC - Agri-environmental climate

AEWA - African-Eurasian Migratory Waterbird Agreement

AFMP - Adaptive Flyway Management Programme

CAB - County Administrative Boards

CAP - Common agricultural policy

EGM IWG - European Goose Management International Working Group

EGMP - European Goose Management Platform

FCS - Favourable Conservation Status

FRV - Favourable Reference Values

HABIDES - Habitats and Birds Directives Derogation System)

HELMI - Health and Early Life Microbiota

IBA - Important Bird Areas

ISSMP - International Single Species Management Plan

ISSAP - International Single Species Action Plan

LUKE - The Finnish Institute of Natural Resources

NINA - Norwegian Institute for Nature Research

OFB - The French Biodiversity Agency

SEPA - Swedish Environmental Protection Agency

SLU - Swedish University of Agricultural Sciences

SPA - Special Protection Areas

TF - Task Force

Background and Summary

As outlined in Rule 32 of the Modus Operandi of the European Goose Management International Working Group (EGM IWG) adopted at the 1st Meeting of the International Working Group (EGM IWG1) in December 2016, reports on the implementation of the AEWA International Single Species Action and Management Plans (ISSAPs and ISSMPs) within the remit of the European Goose Management Platform (EGMP) shall be prepared by each Range State, according to a format agreed by the EGM IWG.

The scope of the National Reports is on activities foreseen in the respective Action and Management Plans in the remit of the EGMP, as well as the implementation of adaptive harvest management programmes. In addition, reporting on other tasks as decided by the EGM IWG in terms of implementation, is included as necessary.

In order to improve the reporting process under the EGMP, the EGM IWG6 in June 2021 agreed on a two-year reporting cycle, on a trial basis until EGM IWG8 in 2023 and a modified national reporting template. It was agreed that the Secretariat and the Data Centre, with the collaboration of the Task Forces (TF) will prepare and present a new format and workflow for the national reporting at the EGM IWG7 in 2022. Document Doc. AEWA/EGMIWG/7.5 was adopted at EGM IWG7 in June 2022 and provides an overview on the template to be used for the EGMP National Reporting as well as a proposed workflow for submission of EGMP National Reports in 2023 at EGM IWG8 and in future cycles, should the EGM IWG adopt this process.

It was also noted that independently of the EGMP National Reports, specific data requests related to the iterative phases described in the Adaptive Flyway Management Programmes (AFMPs) are taken care of during a separate data collation by the EGMP Data Centre.

Since both the Pink-footed Goose ISSMP and the Taiga Bean Goose ISSAP have reached the end of their 10-year cycle and an evaluation process with possible revision for these plans is in progress, the present national reporting has focused only on the implementation of the Barnacle Goose ISSMP and the Greylag Goose ISSMP.

In general, and across the three populations of the two species, there is a good collection of population-specific measures, such as population size, demographic variables and offtake data. However, because flyway-based management requires a highly coordinated and efficient monitoring program to be able to work, lack of data from a single Range State can mean that the assessment cannot be done. This is the case for both the Greenland Barnacle Goose population and the Greylag Goose population assessment in 2023.

When it comes to monitoring related to the assessment of the likelihood of serious damage to agriculture and risk to air safety and particularly to other flora and fauna, the information is focused on damage to agriculture and risk to air safety in those Range States where geese pose a significant risk. Only few Range States maintain a spatially explicit database and assess the risk of goose damage to other fauna and flora. However, some studies have been undertaken on the impact of Barnacle Geese on the Arctic ecosystem.

In addition to monitoring and assessment activities, all Range States use a range of activities to maintain the populations at a satisfactory level and minimise agricultural damage and conflicts e.g. all Range States use lethal population control, and many have improved the effectiveness of derogation/population control and non-lethal measures through experimenting with different timing. Additionally, most Range States report that key sites are protected for certain populations and accommodation areas are provided to reduce risks and conflicts at sensitive areas.

In addition, some Range States take key sites for geese into account in land use planning and growing of sensitive crops. Scaring and/or land management techniques are additionally applied to reduce the attractiveness of sensitive areas.

Furthermore, most Range States have in the past or will in the future focus on activities which can maintain low crippling rates and improve derogation shooting techniques to further reduce crippling.

In general, and across the three populations, there is a lack of:

- information on the role of predators;
- analyses of the impact of various agricultural policy scenarios and measures on goose populations and on goose damage;
- monitoring related to the assessment of the likelihood of serious damage to other flora and fauna;
- promotion of goose-based eco-tourism at selected key sites or the Range States do not see it as a task for the government. In most Range States there are, however, birdwatching towers with relevant informative posters established, and a few have goose-based eco-tourism activities;
- production of best practice guide on establishing refuge areas;
- development and implementation of a communication strategy and plan;
- guidance on implementation of population management protocols at national level.

Action requested from the EGM IWG

The EGM IWG is invited to take note of the summary of EGMP National Reports for the period 2021-2023 and take its conclusions and recommendations into account in the decision-making process.

In addition, the EGM IWG is requested to take a final decision on the periodicity of the national reporting (i.e.. keep a 2-year cycle or alternative option). This gives the advantage that an analysis can be undertaken on the effect of actions, or the lack of actions, in terms of reaching the ISSMP goals. It is however still essential that the workplans are kept updated on a regular basis in the interim period) and decide if the national reporting process should be amended or kept as it has been in these past 2 years.

Overview of report submission rate

As of the deadline 5 May 2023, 7 out of 15 of the EGM IWG Range States submitted a National Report for 2021-2023 (Belgium, Estonia, Finland, Germany, Norway, Sweden, and UK). Between the deadline and the finalization of the report, 6 more have been received from Belarus, Denmark, France, Iceland, Latvia and the Netherlands, respectively.
Two Range States have not submitted a report (Ireland and Ukraine).
Non-participating Range States: Lithuania, Poland, Russia and Spain

General non-species-specific reporting

This section summarizes the main information provided by the Range States on 1) new or adjusted existing legislation to facilitate the implementation of adaptive harvest management within the framework of an ISSAP or ISSMP and 2) established national working groups to support the implementation of the management and action plans under EGMP.

New or adjusted existing legislation

Range States were asked to report new or adjusted existing legislation to facilitate the implementation of adaptive harvest management within the framework of an ISSAP or ISSMP.

In Finland, a ban on hunting of Bean Goose has been implemented with a total hunting ban in certain areas and partial closing of hunting season in certain areas, including annual quota and restriction on hunting methods (bait feeding banned) in Lapland. Additionally, a ban on hunting of Greylag Goose during hunting seasons 2020-2023 was adopted, with a total hunting ban in inland area and in coastal area a daily quota (2 geese/day/hunter) and restriction on hunting methods, with bait feeding banned from 10-20 August on hunting over agricultural fields.

None of the other countries have adopted new or adjusted existing legislation. However, in Estonia, France and Iceland, the development of new or adjustment of existing legislation is currently in progress or under technical and/or political discussion.

Establishment of national working groups

Range States were asked if they have established national working groups to support the implementation of the management and action plans under EGMP.

In Denmark, revitalisation of a national working group (farming, hunting, airport operators, Danish Ornithological Society) is planned prior to the EGM IWG8 in June 2023.

A national working group has been established in Belgium with all relevant stakeholders (representatives of farmer's, hunting, and nature conservation organisations) as well as national experts.

Estonia has established a national working group on goose management, with the main aim to support, discuss, develop a national goose action plan. All stakeholders are involved. Meetings will be regular, at least twice a year.

In France, they have a group at the French Biodiversity Agency (OFB).

In Finland, there will be a written stakeholder consultation on EGMP documents in advance of the annual meeting (NGOs, hunters, birdwatchers, farmers).

Germany has established a working group, which consists of representatives of the Federal Government and representatives of the Federal States. The working group deals with EGMP matters, when coordination on a national level is necessary.

An informal working group has been set up to work on implementation and monitoring in Iceland.

The Netherlands has established a Working Group on AEWA Goose Policy with representatives of the national government, provincial governments, wildlife management councils, Bij12 and Sovon Dutch Centre for Field Ornithology. Furthermore, in 2022 a provincial Goose TF was installed to further improve the coordination and implementation of goose policy related matters at provincial level.

In Norway, there is a national group meeting once per year. In addition to the Environment Agency, members are from the Farmers Union, BirdLife Norway, the Norwegian Hunters Association, the Norwegian Anglers Association and NINA (Norwegian Institute for Nature Research).

In the United Kingdom there is an existing National Goose Forum with various stakeholders, with government and agency involvement. This supports all goose management in Scotland.

Finally, Sweden has indicated that they have established national working groups to support the implementation of the management and action plans under EGMP.

Latvia has stated that they have not created any working groups.

Barnacle Goose Russia/Germany and Netherlands Population

All eight participating Range States to the Russia population of the Barnacle Goose (Belgium, Denmark, Estonia, Finland, Germany, Netherlands, Norway and Sweden) have reported on the implementation of the International Species Management Plan for the Barnacle Goose. Russia is a none participating Range State and have not reported.

1.1. Protection and management of key sites

Six Range States (Belgium, Denmark, Estonia, Finland, Germany and Netherlands) have reported that key sites for the population are protected. Sweden has responded that Barnacle Geese are regulated in nature conservation and hunting jurisdiction. In addition, Norway explained that there is no monitoring of Barnacle Geese in the Oslo Fjord area, but where they overlap with Greylag Geese some figures will be available.

1.2. Promotion of goose-based eco-tourism at selected key sites

Range States were asked if they promote goose-based eco-tourism at selected key sites. All relevant Range States except Norway confirmed that they have private or public services linked to recreation for people who enjoy watching geese.

2.1. Key sites for geese in land use planning

Range States were asked if they have taken key sites for geese into account in land use planning and growing of sensitive crops.

In Estonia, the first goose management plan in the country has been accepted with proposal to take the goose staging sites into account in land use planning.

There is an ongoing large-scale study in Eastern Finland, at the main spring and autumn staging sites of the population, whilst ensuring that there are sufficient fields for resting.

In Sweden, most key sites are protected, and the Wildlife Damage Center and the County Administrative Board (CAB) provides information for farmers with guidelines and compensation of damages for all species near or close to key sites.

In Germany, all key sites are Special Protection Areas (SPAs).

The Netherlands reported that all key sites are SPA's but most of the feeding areas in farmland are not.

Belgium reported that it was not relevant for them since crops are most sensitive during the growing season, when only small numbers of breeding Barnacle Geese are present (feral population).

2.2. Accommodation areas to reduce risks and conflicts

Range States were asked if they provide accommodation areas to reduce risks and conflicts at sensitive areas through e.g. subsidies. Answers were given by all Range States except Norway.

Belgium reports, that in designated areas for wintering waterbirds, scaring is not needed as a condition to receive a compensation for crop-damage from wintering geese. All hunting is closed after November 15 so that these areas can play their role as wintering accommodation area. As wintering Barnacle Geese (and other wintering geese) leave the wintering grounds before the growth season starts, there are no specific sensitive areas as to consider specific measures on top of the general measures for wintering waterbirds that are already in place.

In Denmark, accommodation areas are provided (and under further development) in the vicinity of Copenhagen Airport. Scientific project on this subject is currently being carried out in SE Denmark by Aarhus University/Jesper Madsen, including farmland habitat and salt marsh restoration. Furthermore, the municipality in Guldborgsund re-establishes salt marsh including a suitable habitat for Barnacle Geese.

Estonia indicated that the practice of providing accommodation areas for geese is not used in Estonia. However, this practice is described in new the goose management plan in Estonia in connection of scaring the geese from sensitive fields.

In Finland, there is an ongoing large-scale study in Eastern Finland at key spring and autumn staging sites of the population. One of the main foreseen activities is the provision of specific fields for feeding/resting (accommodation areas – so-called "goose fields"), with the aim to steer the birds away from sensitive agricultural fields.

Germany reports that schemes or subsidies are in place in the agri-environmental Special Protection Areas (SPAs) to provide accommodation areas and to reduce conflicts with farmers. On EU level an initiative was started to change the Common agricultural policy (CAP) regulation to enable co-financing of damage payments caused by specially protected animals in the coming CAP period. The final decision on the application is expected in 2021. In Schleswig Holstein agri-environmental schemes are also offered outside SPAs and a damage compensation on summer corps has started in 2023.

In the Netherlands, some Dutch provinces have provided accommodation areas. Others have periods of winter rest. In these months scaring of geese with derogation shooting is not allowed.

Sweden indicates that accommodation areas/lure crops for resting and grazing birds are provided in most counties where geese appear.

2.3 Apply scaring and/or land management techniques to reduce the attractiveness of sensitive areas

Range States were asked if they have applied scaring and/or land management techniques to reduce the attractiveness of sensitive areas to geese and monitoring the implications of such local displacement for conflicts at wider scale.

In Belgium, scaring is needed to receive a compensation for the crop-damage, but only outside the accommodation areas.

Denmark reports that scaring is needed to comply with conditions for derogation. Scientific project on this subject is currently being carried out in SE Denmark by Aarhus University/Jesper Madsen. https://projects.au.dk/da/can/integreret-forvaltning-bramgaes

Estonia indicates that the scaring of geese from sensitive areas without nominating the alternative feeding areas (wet grassland for example) is common practice. There have not been monitoring activities to study the effect

of scaring the geese. The derogation hunting measure has been accurately studied in Estonia in 2019-2021. Derogation hunting has been under critical discussion on different levels in the society and in court.

In Finland, both previous and ongoing studies in Eastern Finland at key spring and autumn staging sites apply scaring and/or land management techniques to reduce the attractiveness of sensitive areas. Foreseen activities include scaring and the provision of alternative feeding fields on farms. Also involves monitoring the implications of the implemented measures.

In Germany, farmers outside the SPAs can apply for permission to use scaring techniques to reduce the attractiveness of grasslands and fields with sensitive crops. Schleswig-Holstein has started a field trial in 2022 with a new breed of *Festuca arundinacea* to improve the amount of dry mass in grassland.

Netherlands reports that policies are in place to stimulate farmers to take scaring techniques on valuable crops prior to financial compensation or lethal intervention.

In Sweden, scaring is done in great scale by farmers and subsidies are provided by the CAB. The Wildlife Damage Center provides support, trials, information and education.

In Norway, a range of research and monitoring initiatives are ongoing to evaluate the effect of various measures implemented in order to reduce the attractiveness of sensitive areas. These initiatives have high priorities.

3.1. Reduce risk posed by goose migration to air safety

Range States were asked if they reduce risk posed by goose migration to air safety through operational measures such as radar surveillance.

Belgium, Estonia, Finland and Sweden all report, that geese are not a big risk near the airports and are taken together with other birds by Bird Control Units.

In the Netherlands, a number of measures are in place by airport authorities and in Denmark there are local measures in place around each airport. Copenhagen airport has a new radar in operation to support the surveillance and response. The effectiveness of derogation shooting outside the airport is currently subject to a scientific study.

Norway reports, that information on bird collisions with aircrafts are collected and evaluated at the Avian Bird Office. A new project is in the starting phase at Trondheim Airport, a collaboration between the national airport agency ("Avinor"), Farmers Union, Stjørdal municipality and BirdLife Norway.

3.2 Establish an internationally coordinated programme to assess agricultural damage

All Range States were asked if they have established an internationally coordinated programme to assess agricultural damage, including monitoring and assessment protocols.

Belgium reports that data are gathered as an output from the compensation scheme for crop-damage from wintering geese. The Finnish Institute of Natural Resources (Luke) participated in a research programme that partly engages Agriculture TF.

Germany indicates that there is a project started in 2021 to assess the use of satellite data for the detection of goose damage on agricultural land in Schleswig-Holstein.

In the Netherlands, there is a routine in place to apply for damage. Assessment of agricultural damage is currently under evaluation by an independent scientific consortium. Insights are shared with the Agriculture TF.

Sweden reports that their "Wildlife Damage Center" is a part of the EGMP Agriculture TF.

Denmark, Estonia and Norway have taken no action.

3.3 Liaise with farmers affected by goose damages to reduce agricultural conflicts

Range States were asked if they liaise with farmers affected by goose damages to reduce agricultural conflicts. Answers were given by all Range States and Denmark and Germany also referred to action 2.2. and 2.3.

Belgium reports that the compensation scheme is working well, providing a fair compensation for the damage incurred. As wintering geese leave the wintering grounds before the growing season, agricultural conflicts are limited.

In Denmark, wildlife managers from the Nature Agency provide advice/guidance to farmers.

Estonia indicated that there is no good practice yet. About half of scaring expenses are compensated for farmers today, but there are no guidelines for the farmers on how to minimize the rate of damages.

In Eastern Finland, previous and ongoing studies includes communication with farmers. Regional goose working groups have also been established in key areas.

In Germany, there are local and regional groups in Schleswig-Holstein that discuss possibilities to reduce conflicts between geese and farmers. In Lower Saxony there is a round table with farmers, hunting- and nature conservation organizations. Furthermore, Lower Saxony developed a goose management strategy focussing on one hand on the establishment of accommodation areas for wintering arctic geese including an implementation of agri-environmental schemes and subsidies for farmers with goose-dependent damages. On the other hand, damages by wintering geese should be kept within limits outside the accommodation areas, e.g. using scaring techniques.

The Netherlands indicated that compensation schemes are in place. In designated foraging areas on agricultural land for migrating Management Units all damage to crops is compensated, sometimes combined with a subsidy scheme. On remaining agricultural land generally 80-95% of damage is compensated.

In Norway and Sweden, local, regional and national management groups are established in relevant areas.

4.1. ***Lethal population control for preventing serious damage to crops***

Range States were asked "*If necessary and if there is no other satisfactory solution, apply lethal population control under derogations according to the provisions of the Birds Directive, the Bern Convention and AEWA, for preventing serious damage to crops*".

In the case of Denmark, derogation permits for Barnacle Geese are being granted from September to May (varying conditions apply each season).

In Estonia, derogation hunting is common practice in the autumn. There is a clear need for juridically correct policy following the Birds Directive, the Bern Convention, and AEWA, for using derogation hunting as a measure for preventing serious damage to crops in spring.

In Finland derogations to shoot Barnacle Geese in the autumn are being granted under Art. 9 of the EU Birds Directive by the national competent authority in line with the relevant provisions.

Germany reports that the Birds Directive is implemented in the German legislation. In Schleswig-Holstein derogation for Barnacle Geese under Art. 9 of the Birds Directive is implemented.

In the Netherlands, the Birds Directive is implemented in the Dutch Legislation and used in line with the relevant provisions. In general farmers should take non-lethal scaring techniques on valuable crops prior to lethal population control. When this is not feasible or effective, measures are escalated to lethal scaring. Only then lethal population control is allowed.

Norway reports, that lethal population control will be considered where applicable.

In Sweden CAB can decide to perform population control accordingly to regulations in the Swedish hunting act and Ordinance and guidelines from Swedish Environmental Protection Agency (SEPA). Private farmers can protect single fields under given circumstances.

4.2 ***Assess periodically, and report to the AEWA EGM IWG, the cumulative impact of derogations (as well as hunting in Range States in which derogation is not required) on the development of the population, the likelihood of serious damage to agriculture and risk to air safety and to other flora and fauna (including the Arctic ecosystems), and the non-lethal measures taken to prevent damage/risk, as well as the effectiveness of these. If necessary, coordinate the derogation measures between Range States to avoid risk to the population and to enhance effectiveness of the measures.***

Belgium answered that since derogations are only issued for the feral breeding population that does not interact with the migrating population, it has no direct link to this action. Denmark has detailed data on derogation schemes. The effectiveness of derogation compared to other scaring methods has been tested in a scientific study. Furthermore, derogation shooting measures to reduce goose numbers around Copenhagen Airport are currently being tested.

In Estonia, derogation reporting is provided by the Ministry of Environment. Derogations to shoot Barnacle Geese in the autumn are being granted under Art. 9 of the EU Birds Directive by the national competent authority. Barnacle Goose monitoring takes place in the entire western Estonia by aerial counts every 3rd spring. There is no monitoring for the effectiveness of non-lethal measures so far.

Finland reports that derogations to shoot Barnacle Geese in the autumn are being granted under Art. 9 of the EU Birds Directive by the national competent authority in line with the relevant provisions. This includes derogation reporting as required under the EU.

In Germany, hunting ban for Barnacle Geese will persist in Lower Saxony. Derogations under Art. 9 seem not to be necessary in the coming years as the increase in the wintering population of Barnacle Geese has levelled off in recent years. In Schleswig-Holstein the winter population is monitored closely, new counts of breeding Barnacle Geese will be available at the end of 2023. A coordination process between Lower Saxony and Schleswig-Holstein is implemented. In North Rhine-Westphalia, the hunting ban will also remain, without any derogations.

In the Netherlands, derogation figures are collected by the regional wildlife councils and made available to the EGMP. Furthermore, a routine has been set up to use summer counts to monitor impact of derogations at a provincial level and adjust measures in the following period, in line with the adaptive character of the EGMP. Derogation has been coordinated with Germany and Belgium in 2022 in line with agreements made during the EGM IWG.

Norway will not monitor the Barnacle Geese in the Oslofjord area, but where they overlap with Greylag Geese some figures will be available.

4.3 Improve effectiveness of derogation measures through experimenting with different timing

Range States were asked if they have improved effectiveness of derogation measures through experimenting with different timing and methods and better understanding the relative efficacy of lethal versus non-lethal scaring techniques.

In Belgium, derogation measures focus on feral populations in e.g. parks.

In Denmark and Sweden, there are several scientific projects trying to improve the effectiveness of derogation measures through experimenting with different timing .

In Estonia, derogation hunting effectiveness was monitored in 2019-2021. The main outcome was that there is no difference between in the effectiveness of lethal and non-lethal scaring. A new approach to regular goose scaring (5-6 times per day, based on publications), including the nominating alternative feeding/resting areas as well as effectiveness monitoring, was proposed in the new goose management plan.

Finland reports that the issue is covered under the ongoing study in Eastern Finland.

In the Netherlands, studies into non-lethal scaring techniques are performed regularly and compared to lethal scaring techniques. Multiple studies have been set up so get insight in non-lethal methods like BirdAlert.

4.4 Promote best practices of goose population adjustment including timing to minimize damage and significant disturbance to other species

Belgium reports that the only derogation measure allowed is caging/trapping of the feral breeding population only and limited from 1 May to 30 September.

In Denmark, best practice is included in national legislation on derogation permits. The subject is also frequently discussed in national working groups.

In Estonia, the issue is considered in the new goose management plan. Finland indicated that less invasive methods of scaring etc. are used in spring versus autumn (when for example derogations for shooting are granted) to minimize disturbance to other species during the pre-breeding season.

The Netherlands refers to action 4.3 and report that the newly installed inter-provincial Goose TF (2022) might cover sharing best practices within the Netherlands. Results of evaluation of scaring techniques is shared via seminars to all potential stakeholders.

In Norway, there are several ongoing research projects and Sweden has recently raised concerns regarding effect on waders.

4.5 Maintain low crippling rates

In Belgium, this is not relevant. Standard derogation, even for the feral breeding population, does not involve shooting, but only caging and trapping.

In Denmark, the last awareness campaign on reducing crippling rates was completed in 2015 with very positive results. Currently monitoring of crippling rates is continued from 2023 onwards.

Estonia reports that this point should focus on the ethics of hunters, but so far there are no measures to reduce the crippling rate.

Finland is foreseeing to raise this issue in the communication to and education of hunters as a part of ongoing draft of the Strategy for Responsible Waterfowl Hunting (including wider waterfowling issues covering ducks and geese).

In the Netherlands, there are no actions so far, but based on scientific output there is interest from educative side to improve hunter training courses in future in order to carry out derogations in a proper way.

In Sweden, hunter exams deal with these issues, a specific goose hunting course has been developed by the hunters' organisation. There are plans on updated education by the hunters' organisation.

4.6 Improve derogation shooting techniques to further reduce crippling

Belgium reports that this is not relevant for them. Standard derogation, even on the feral breeding population, does not involve shooting, but only caging / trapping.

In Denmark, awareness to shooting distance is essential. The shooting distance here is maximum 25 meters.

Estonia reports that this point should focus on the ethics of hunters, and that they have no measures to reduce the crippling rate.

According to recent observations from Finland, geese can be scared from the fields using bang cartridge instead of killing methods. However, still more studies on the efficiency of different derogation methods are needed.

In the Netherlands there are no actions so far, but based on scientific output there is interest from educative side to improve hunter training courses in future in order to carry out derogations in a proper way.

In Sweden hunter exams deal with these issues, a specific goose hunting course has been developed by the hunters' organisation. There are plans on updated education by the hunters' organisation.

In Norway the hunter exams deal with these issues, a specific goose hunting course is being updated by the hunters' organisation.

A.1 Produce and update periodically, spatially explicit population size estimates based on agreed international monitoring

In Belgium, the summer goose population is estimated by mid-July counts. From October to March the wintering population counts are estimated by the mid-monthly waterbird censuses.

In Denmark, Estonia and in Finland there are ongoing monitoring programs and population estimates.

Germany reports that a monitoring program for breeding and wintering Barnacle Geese is in place in Lower Saxony, which can be used for estimating the population size of the different management units. Regarding the survey of wintering geese in North Rhine-Westphalia, Barnacle Geese are counted, alongside all other wintering geese, monthly from September to March. The results are obtained by the state Office of Environment, Nature Conservation and Consumer Protection. In Schleswig-Holstein monitoring of wintering geese based on agreed international monitoring schemes is already in place. A survey of breeding birds will be carried out in 2023.

The Netherlands indicated that a national governmental monitoring scheme is in place and data collected are compatible with monitoring needs from EGMP. It involves numbers, habitat, distribution and age-ratio data. Data from summer counts are collected in cooperation with Regional Wildlife Councils.

In Sweden, such data are collected by Lund University.

A.2 Maintain an annually updated bag statistics database including geese taken by any means (whether under derogations or, in those Range States in which it is permissible, hunting)

In Belgium, derogations are reported to the EU and the EGMP.

In Denmark, hunters must report game bags (hunting and derogation) of all species on an annual basis. Furthermore, data on individuals shot under derogation is required for each permit and provided by the landowner.

Estonia reports that bag statistics database is provided annually by the Environment Agency. In Finland there is only derogation shooting. In both countries data are collected and reported under the EU Birds Directive. Data are collected and reported under the EU Birds Directive.

Germany reports that Barnacle Geese derogated under Art. 9 of the Birds Directive will be regularly reported to the European Commission as well as to the EGMP and will be published by Schleswig-Holstein on the following website: https://www.schleswig-olstein.de/DE/fachinhalte/A/artenschutz/as_07_Jahresbericht.html

In the Netherlands, all aspects of the derogation system will be reviewed. New ways of reporting data in the field (apps) have started to be used and are foreseen to expand to achieve better data quality.

In Sweden, hunters report to Swedish Hunters' Organisation who estimate total harvest from open season and conditional hunting. CAB reports on other derogations in the Habitats and Birds Directives Derogation System (HABIDES). There is ongoing work to improve and secure bag statistics.

A.3 Maintain a spatially explicit database on goose damage to agriculture, other fauna and flora and fauna and risk to air safety

Spatial references are kept in Belgium of damage by wintering birds, that is compensated through the compensation scheme, .

In Denmark, there is no action concerning damage to agriculture. For all civil airports statistics of bird strikes are reported annually.

Estonia reports an ongoing registration of goose damage.

In Finland, risk for the air safety is rather limited. Rough estimations have been made, but these estimations are not based on "spatially explicit database". Annual estimations of damages are needed when assessing the needs of compensations to cover the damages for the farmers.

Germany has assigned extensive experimental studies in Lower Saxony via enclosures to determine changes in goose damage to agriculture with time (5-10 years). Additionally, goose damages in grasslands and arable land are annually estimated by experts in case of major loss of biomasses. For Schleswig-Holstein the are some results for the damage to agriculture in 2021, but yearly updates are not planned.

In the Netherlands, a nation-wide highly detailed spatial information is available on goose damage to agriculture. There is also a Bird Strike database. There is no database for spatial information on damage to flora and fauna, which is reviewed every now and then when specific (regional) questions arise.

In Norway, a database is not available at present.

In Sweden, the Wildlife Damage Centre collects information gathered by CABs on damages. Furthermore, the Swedish Transport Agency collects information on risk to air safety.

A.4 Collect demographic (mortality, reproduction, differential migration and connectivity) data from an agreed representative sampling framework across the range

Belgium and Denmark report no actions so far.

In Estonia and Finland, collection is ongoing.

In the Netherlands, productivity counts are made in summer, mostly during summer census. Neckband scheme in place to study survival and spatial site-use. In addition, age-ratio counts in autumn among migratory geese.

A.5 Analyse the impact of various agricultural policy scenarios and measures (Nitrate Directive, agri-environmental measures, various production incentives including biofuels) on goose populations and on goose damage

This has not been done in any of the Range States.

A.6 Assess the role of predators (e.g. White-tailed Eagle, Red Fox, Polar Bear, Arctic Fox) in regulating goose populations

Finland reports an ongoing assessment of the White-tailed Eagle impact on the breeding population of Barnacle Geese and in Denmark there are plans to assess the impact of White-tailed Eagle on the breeding population on the island "Saltholm" . There are no assessments in the other Range States.

A.7 Monitor and assess the impact of the populations on other flora and fauna and ecosystems in the Arctic

Estonia reports that this kind of monitoring is a proposed activity in the new goose management plan.

In Finland, the question is being considered in an ongoing study.

In the Netherlands, an extensive evaluation was made in 2005-2008 of the use of accommodation areas and further fine-tuning of regulations has been taken up on provincial level, including scientific analyses of the use of accommodation areas and the responses of different species.
In Sweden the Wildlife Damage Centre in cooperation with CAB collect this kind of information.

B.1 Produce best practice guide on establishing refuge areas (size, management, subsidies)

In Belgium, there are no species-specific actions for Barnacle Goose on this action. But experiences are drawn from initiatives targeting other goose species.

Estonia has proposed such activity in the new goose management plan.

In Finland, the question is being considered in the ongoing study in Eastern Finland.

In the Netherlands, an extensive evaluation was made in 2005-2008 of the use of accommodation areas and further fine-tuning of regulations that have been taken up on provincial level, including scientific analyses of the use of accommodation areas and the responses of different species.

In Denmark and Sweden, there are several scientific projects trying to produce best practice guide on establishing refuge areas (size, management, subsidies).

B.2 Provide guidance on conflict resolution and how to make this consistent with the European legal framework, including the Common Agricultural Policy (CAP)

Belgium reports, that the damage-compensation scheme works well and can limit the conflict with agricultural damage to a satisfactory level.

In Denmark, there is an ongoing demonstration project on integrated conflict resolution in Guldborgsund Municipality.

In Finland, there is a guidance from the farming advisory organisation Pro Agria on how to resolve conflict with Barnacle geese (In Finnish only) https://www.proagria.fi/uploads/valkoposkihanhien_aiheuttamien_haittojen_ehkaisy_jukka_forsman_luke_0_2022-06-13-125216_yptm.pdf

Sweden has a range of goose projects.

B.3 Create a toolbox for decisions in relation to determining significant damage (including metrics, benchmarking, verification, monitoring, various management techniques to prevent damage, compensation)

In Belgium, there are no species-specific actions for Barnacle Goose on this action. But experiences are drawn from initiatives targeting other goose species.

Estonia reports, that there is a juridical document providing the methods for determining the significant damage.

In Finland, there are National procedures for determining significant damage in place. A working group report is available (in Finnish only): https://mmm.fi/documents/1410837/1516643/Valkoposkihanhity%C3%B6ryhm%C3%A4n+raportti_+2020pdf.pdf/452688c3-cbc3-44ca-61a2-00c9b7acb94a/Valkoposkihanhity%C3%B6ryhm%C3%A4n+raportti_+2020pdf.pdf?t=1598948326851

The Netherlands has indicated that this is included in the prescriptions for assessing damage and regulations to apply for damage compensation.

In Norway, it will overlap with Greylag Goose actions.

Sweden reports that they have developed an application for digital registration of damages, used by CAB staff.

B.4 Provide guidance on implementation of population management protocols at national level

None of the Range States have implemented population management protocols. In Belgium there is no ambition to support population management of the migrating population in the country. The only actions that are foreseen in Belgium concern the resident feral population that is as such not a part of this management plan.

In Finland, only derogations to prevent serious damage are implemented.

In the Netherlands, all derogations are applied in the context of the existing EU-regulations of Art. 9.

B.5 Share experience concerning methods to prevent damage to agriculture and risks to air safety as well as to other flora and fauna

Belgium reports that this species is only minorly contributing to the total of goose damage. Therefore, no species-specific actions are foreseen. Estonia has proposed this activity in the new goose management plan.

Denmark and Finland participate in the EGMP Agriculture TF and the forthcoming Flight safety TF.

Germany reports that the long-term study on goose-dependent yield loss in coastal grasslands of Lower Saxony including the implementation of agri-environmental schemes to reduce the conflicts with farmers has recently been published in an international journal (Journal of Applied Ecology).

In the Netherlands, studies in Dutch mentioned under 4.3 will have an English summary. The newly installed inter-provincial Goose TF (2022) might cover this topic for sharing experiences within the Netherlands.

Norway reports that is takes actively part in the EGMP process, including sharing of information. For local outreach there is a designated position in the Norwegian Farmers' Union for some of this.

Sweden refers to the Wildlife Damage Centre on agriculture and an ongoing project at Kristianstads Högskola regarding effects on other flora and fauna.

C.1 Develop and implement a communication strategy and plan

In Belgium, a general communication concerning various actions to remove alien and feral goose populations from the wild is conducted annually in the breeding season, before the moulting period. Estonia has proposed this activity in the new goose management plan.

In Finland, a communication strategy is ongoing nationally.

In the Netherlands, there is no formal strategy and plan at present, but communication is a topic discussed in the National Working Group and seminars have been organised to share knowledge.

In Norway, there is no strategy for this at present, but a significant number of talks and presentations are given locally in Norway at evening meetings with farmers and hunters, as well as local wildlife managers.

D.1 Develop a specific guidance on the application of Art. 9 of the Birds Directive in the context of the Barnacle Goose Management Plan

This action does not apply to the Range states, but is a task for the EC.

D.2 For Range States in which hunting is legal, review national legislation in the light of the framework legal guidance document developed under the EGMP

The Range States report that this is not relevant and / or that shooting is only possible under derogation.

Barnacle Goose East Greenland/Scotland & Ireland population

Two out of three participating Range States to the East Greenland population of the Barnacle Goose (Iceland and UK) have reported on the implementation of the International Species Management Plan (ISSMP) for the Barnacle Goose. Ireland have not reported, and Greenland is a none-participating Range State.

1.1. Protection and management of key sites

Both Range States have a network of protected areas and relevant legislation which provides protection.

1.2. Promotion of goose-based eco-tourism at selected key sites

Range States were asked if they promote goose-based eco-tourism at selected key sites. In Iceland goose-based eco-tourism has not been implemented and in the UK, it is done by NGOs, but with no clear overview.

2.1. Key sites for geese in land use planning

Range States were asked if they have taken key sites for geese into account in land use planning and growing of sensitive crops. In Iceland the national legislation is currently being reviewed on these matters and in the UK, it is not under government control.

2.2. Accommodation areas to reduce risks and conflicts

Range States were asked if they provide accommodation areas to reduce risks and conflicts in sensitive areas through e.g., subsidies. In Iceland, this subject is likewise being reviewed as for action 2.1, and in the UK, they have a scheme for feeding areas and protected areas for roosts on Islay.

2.3 Apply scaring and/or land management techniques to reduce the attractiveness of sensitive areas

Range States were asked if they have applied scaring and/or land management techniques to reduce the attractiveness of sensitive areas to geese, monitoring the implications of such local displacement for conflicts at wider scale. This has not been implemented on Iceland, but in the UK, farmers are able to carry out scaring, but there is no general monitoring of effectiveness at the moment. A PhD project currently in development might give insight into the effectiveness.

3.1. Reduce risk posed by goose migration to air safety

Range States were asked if they reduce the risk posed by goose migration to air safety through operational measures such as radar surveillance. In Iceland, monitoring is done by ISAVIA and in the UK by the Civil Aviation Authority https://www.caa.co.uk/data-and-analysis/safety-and-security/birdstrike-data/.

3.2 Establish an internationally coordinated programme to assess agricultural damage

Range States were asked if they have established an internationally coordinated programme to assess agricultural damage including monitoring and assessment protocols. Both Iceland and the UK answered that it is work in progress led by the EGMP Agriculture TF.

3.3 Liaise with farmers affected by goose damages to reduce agricultural conflicts

Range States were asked if they liaise with farmers affected by goose damage to reduce agricultural conflicts. This action still has to be implemented in Iceland and is managed under goose schemes and local goose management groups in the UK.

4.1. *Lethal population control for preventing serious damage to crops*

Range States were asked "*If necessary and if there is no other satisfactory solution, apply lethal population control under derogations according to the provisions of the Birds Directive, the Bern Convention and AEWA, for preventing serious damage to crops*".

Derogation is not applied in Iceland, and only on two Islands in Scotland (Islay and Uist).

4.2 *Assess periodically, and report to the AEWA EGM IWG, the cumulative impact of derogations (as well as hunting in Range States in which derogation is not required) on the development of the population, the likelihood of serious damage to agriculture and risk to air safety and to other flora and fauna (including the Arctic ecosystems), and the non-lethal measures taken to prevent damage/risk, as well as the effectiveness of these. If necessary, coordinate the derogation measures between Range States to avoid risk to the population and to enhance effectiveness of the measures.*

This action is handled by the EGMP, which every 3 years assess the cumulative impact of derogations (as well as hunting in the Range States in which derogation is not required) on the development of the population. The range of offtake scenarios has not yet been decided, and due to missing population size data from Ireland, it was not possible to do the assessment in 2023 as planned. Furthermore, as the latest estimate of the population size show that the population is below the 200% threshold of the FRP, it is necessary to coordinate the derogation measures between Range States to avoid risk to the population and to enhance the effectiveness of the measures. How this coordination shall take place, has not been agreed upon yet.

In terms of the likelihood of serious damage to agriculture, a damage impact model has been developed by the EGMP Modelling Consortium. The result of this study will be presented at EGM IWG8 in 2023, and further arrangement of how the results shall be used will be discussed.

The likelihood of serious damage to air safety and to other flora and fauna (including the Arctic ecosystems), and the non-lethal measures taken to prevent damage/risk, as well as the effectiveness of these is outstanding.

4.3 Improve effectiveness of derogation measures through experimenting with different timing

Range States were asked if they have improved effectiveness of derogation measures through experimenting with different timing and methods and better understanding the relative efficacy of lethal versus non-lethal scaring techniques.

This does not apply to Iceland, but UK states that derogation shooting is restricted to areas where most damage occurs, and restrictions are in place to minimise disturbance to other geese, particularly Greenland White-fronted Geese. Shooting also restricted early in the season in specific locations.

4.4 Promote best practices of goose population adjustment including timing to minimize damage and significant disturbance to other species

See answers from action 4.3.

4.5 Maintain low crippling rates

In Iceland, this is done through education, and in the UK trained and experienced marksmen carry out bulk of the shooting, and flocks are monitored for crippling.

4.6 Improve derogation shooting techniques to further reduce crippling

This does not apply to Iceland, and UK have not answered.

A.1 Produce and update periodically, spatially explicit population size estimates based on agreed international monitoring

This is done in both Iceland and the UK as part of the triannual assessment of the cumulative impact of derogations (as well as hunting in Range States in which derogation is not required) on the development of the population. Data from Ireland is outstanding in 2023.
On Islay, UK population data is collected annually.

A.2 Maintain an annually updated bag statistics database including geese taken by any means (whether under derogations or, in those Range States in which it is permissible, hunting)

Hunting bag have been recorded since 1995 on Iceland, as well as the proportion of juveniles in the bag. In the UK where offtake only consists of derogation, the numbers are available from NatureScot.

A.3 Maintain a spatially explicit database on goose damage to agriculture, other fauna and flora and fauna and risk to air safety

In both Iceland and the UK, focus has mainly been on agricultural damage. In Iceland, they have grazing experiments in NW and SE, as well as interviews with farmers. In the UK, there is no data on air safety and nothing relevant to record for other fauna and flora, furthermore, agricultural damage to grass crops has not been measured over the past 2 years.

A.4 Collect demographic (mortality, reproduction, differential migration and connectivity) data from an agreed representative sampling framework across the range

In Iceland, data is being gathered, and in the UK, they have standard counts as well as productivity assessments done annually at a national scale, and data is also collected from carcasses.

A.5 Analyse the impact of various agricultural policy scenarios and measures (Nitrate Directive, agri-environmental measures, various production incentives including biofuels) on goose populations and on goose damage

This has not been implemented in Iceland. In the UK, goose policy review recommendations states that future goose management will cover other policy drivers, particularly net zero and agri-environment measures but they are not advanced enough yet to provide specific scenarios.

A.6 Assess the role of predators (e.g. White-tailed Eagle, Red Fox, Polar Bear, Arctic Fox) in regulating goose populations

This has not been implemented in Iceland. In the UK, no formal assessment has been made; while it is possible that White-tailed Eagle might have an impact in the future, there is currently not enough of them in the UK to be regulating goose populations.

A.7 Monitor and assess the impact of the populations on other flora and fauna and ecosystems in the Arctic

This has not been implemented in neither Iceland nor the UK.

B.1 Produce best practice guide on establishing refuge areas (size, management, subsidies)

Not available, furthermore there is uncertainty about who shall produce it, as the UK states that a guide has not been provided by the Secretariat.

B.2 Provide guidance on conflict resolution and how to make this consistent with the European legal framework, including the Common Agricultural Policy (CAP)

Not available in either Iceland or the UK.

B.3 Create a toolbox for decisions in relation to determining significant damage (including metrics, benchmarking, verification, monitoring, various management techniques to prevent damage, compensation)

Both the UK and Iceland reply that this is ongoing work led by the Agriculture TF.

B.4 Provide guidance on implementation of population management protocols at national level

Not available in either Iceland or the UK.

B.5 Share experience concerning methods to prevent damage to agriculture and risks to air safety as well as to other flora and fauna

Work in progress led by the Agriculture TF.

C.1 Develop and implement a communication strategy and plan

Not available in either Iceland or the UK, but in preparation in the UK.

D.1 Develop a specific guidance on the application of Art. 9 of the Birds Directive in the context of the Barnacle Goose Management Plan

Both the UK and Iceland reply that this action does not apply to them, but is a task for the EC.

D.2 For Range States in which hunting is legal, review national legislation in the light of the framework legal guidance document developed under the EGMP

This is only relevant for Iceland where hunting takes place, which replies that National legislation has been reviewed and hunting season updated.

Greylag Goose NW/SW European population

All seven participating Range States to the NW/SW European population of Greylag Goose (Belgium, Denmark, Finland, France, the Netherlands, Norway and Sweden) have reported on the implementation of the International Species Management Plan (ISSMP) for the population. Germany and Spain are none participating Range States and have not reported.

1.1. Protection and management of key sites

All seven Range States have reported that key sites for the population are protected. In Belgium, sites with international importance have been identified and protected, and formal conservation for these sites has been agreed. In Denmark, Finland and France key sites are protected as SPAs. In addition, in Finland management is foreseen to be covered by Health and Early Life Microbiota (HELMI) programme. In the Netherlands, sites are protected under national legislation (SPA/Nature 2000 sites and National Ecological Network); 34% of feeding geese are within SPA boundaries, for night roosts this is 74%. In Norway, greylag geese often prefer farmland areas for foraging, but their roosting sites are often protected wetland areas where geese are safe. Finally, in Sweden key sites are regulated in nature conservation and hunting jurisdiction.

1.2. Promotion of goose-based eco-tourism at selected key sites

Range States were asked if they promote goose-based eco-tourism at selected key sites. In Belgium, goose-based eco-tourism is rather based on Pink-footed and Greater White-fronted Geese. In Denmark, there is no need to promote further as existing ecotourism sites attract visitors anyway. For example the Wadden Sea National Park, and from 2022 there has been established annual public "goose days" at Nissum Fjord - organized by "Naturpark Nissum Fjord". In Norway, no such activities are recognized, but large flocks of geese attract birders and other eco-tourists in some areas. This brings small scale benefits for the local economy (use of local, cafeterias, markets, etc.). In France, there are mainly two parts which are involved in goose-based eco-tourism activities: Camargue and Lac du Der (bird watching, photography festival). In the Netherlands, in general, they do not see goose-based eco-tourism as a task for the government. There are some private tour companies' which organize birdwatching trips, and some key areas (Friesland, Zeeland) are highly frequented by goose observers privately. In many nature areas general eco-tourism facilities (that can also involve geese) are organised by the management authorities. In Norway, in both protected and important wetland areas, bird watching towers with relevant informative posters are established. At some places there are also locally initiated eco-tourisms in the form of presentations (e.g. Vestfold) and guided tours (e.g. Ørlandet). In Sweden, in most concentration areas or hotspots there are accomodations for public, such as bird towers and/or information signs. However, there is no knowledge of any tourism activities aimed specially for Greylag Geese, but in some places as a part of a "nature package".

2.1. Key sites for geese in land use planning

Range States were asked if they have taken key sites for geese into account in land use planning and growing of sensitive crops.

This is to some extent done in Finland, the Netherlands, Norway and Sweden. In Finland, national legislation on building and construction includes this requirement. However, this legislation is not targeted to concern sensitive crops, as protecting sensitive crop from Greylag Geese is not a major issue in Finland. In the Netherlands, all key sites are SPAs but most of the feeding areas in farmland are not. Many geese frequent agricultural areas outside SPAs and may cause damage. Same hold geese breeding in SPAs and feed just outside on farmland. In Norway, many Greylag Geese already occupy areas where there are sensitive crops, and there are several initiatives to guide and share knowledge about preventive measures (preventive measures as fences, and scaring devises like lasers, etc.). This is an ongoing and prioritised activity. In 2023 (autumn) a new handbook (developed by the Norwegian Farmers Union and NINA) about how to reduce and prevent crop damage will be launched. In Sweden, most key sites are protected, and the Wildlife Damage Center and CAB provide information for farmers. Furthermore, there are guidelines and compensation of damages for all species near or close to key sites.

In Belgium, Denmark and France, crop damage is not a significant problem at national level and dealt with locally through derogation shooting.

2.2. Accommodation areas to reduce risks and conflicts

Range States were asked if they provide accommodation areas to reduce risks and conflicts at sensitive areas through e.g. subsidies.

In Belgium, Finland, the Netherlands and Sweden accommodation areas are provided. Specifically, in Belgium, in designated areas for wintering waterbirds, scaring is not needed as a condition to receive a compensation for crop damage from wintering geese. Hunting in these areas is also closed from November 15th as to prevent disturbance in important sites for wintering waterbirds. In Finland, “Bird Fields” for accommodation areas are currently prepared in the context of Barnacle Goose damage management, and “Bird

Fields" are also included in the CAP program. In the Netherlands, some Dutch provinces have provided accommodation areas. Others have periods of winter rest, where scaring of geese with derogation shooting is then not allowed. However, in some provinces Greylag Goose is not the key species for accommodation areas and the species uses accommodation areas less compared to e.g. Barnacle Goose. Finally, in Sweden, accommodation areas/lure crops for resting and grazing birds are provided in most counties where geese appear.

In Denmark and France, greylag geese are not a critical problem - although local problems exist in Denmark, but hunting (/derogation) alleviates most problems. In Denmark, effects of farmland habitat accommodation areas are tested in a scientific study in Guldborgsund municipality.

In Norway, there are no accommodation areas designated specifically for Greylag Geese in Norway, other than the protected wetland areas already holding significant numbers of geese at different time periods of the year.

2.3 Apply scaring and/or land management techniques to reduce the attractiveness of sensitive areas

Range States were asked if they have applied scaring and/or land management techniques to reduce the attractiveness of sensitive areas to geese, monitoring the implications of such local displacement for conflicts at wider scale.

In all countries, except France, scaring and/or land management techniques are used to reduce the attractiveness of sensitive areas to geese. In Belgium, scaring is needed in order to be able to get derogation or to receive a compensation for the crop damage. In Denmark, this is done mainly at a local scale, but there is no specific action taking place for Greylag Geese. In the Netherlands, policies are in place to stimulate farmers to take scaring techniques on valuable crops prior to financial compensation or lethal intervention.
In Finland, Norway and Sweden, they likewise monitor the implications of such local displacement for conflicts at a wider scale. In Finland, techniques are currently being developed by the Natural Resources Institute (LUKE), but mostly for the Barnacle Goose. In Norway, a range of research and monitoring initiatives are ongoing to evaluate the effect of various measures implemented in order to reduce the attractiveness of sensitive areas, and in Sweden, the Wildlife Damage Centre provides support, trials, information and education.

3.1. Reduce risk posed by goose migration to air safety

Range States were asked if they reduce risk posed by goose migration to air safety through operational measures such as radar surveillance.

In Belgium, Finland, France and Sweden, the risk to air safety is considered to be low and there are no or only limited activities to reduce the risk. Whereas in Denmark, the Netherlands and in Norway, various measures are in place, e.g. in Denmark, at Copenhagen Airport, a new radar is in operation to support the surveillance and response, and the effectiveness of derogation shooting outside the airport is currently subject to a scientific study. In Norway, a new project is in the starting phase at Trondheim Airport, a collaboration between the national airport agency ("Avinor"), Farmers Union, Stjørdal municipality and BirdLife Norway.

3.2 Establish an internationally coordinated programme to assess agricultural damage

All Range States were asked if they have established an internationally coordinated programme to assess agricultural damage including monitoring and assessment protocols.

Work in progress led by the Agriculture TF financially supported by the Norwegian Environment Agency. Furthermore, in the Netherlands, an assessment of agricultural damage is currently under evaluation by an independent scientific consortium.

3.3 Liaise with farmers affected by goose damages to reduce agricultural conflicts

Range States were asked if they liaise with farmers affected by goose damages to reduce agricultural conflicts.

With the exception of France, where agricultural conflicts have not been identified so far, the rest of the Range States have some communication/collaboration with farmers. In Belgium, a fair amount of compensation is provided to farmers for the damage incurred. In Finland, CAP provides a compensation mechanism in prioritized areas. In the Netherlands, compensation schemes are in place. In designated foraging areas on agricultural land for migrating Management Units all damage to crops is compensated, sometimes combined with a subsidy scheme. On remaining agricultural land generally 80-95% of the damage is compensated. In Norway, the Norwegian Environment Agency cover expenses of a position at the Norwegian Farmers' Union with a primary role to be a link between management decisions and local municipal implementation, assisting farmers in sustainable farming in landscapes with geese. Communicating and informing about preventive measures in order to reduce crop damage and conflicts are also important tasks. This project, along with NINA, has a special focus on presenting EGMP-related information to farmers and farmers' representatives in Norway. In Denmark, wildlife managers from the Nature Agency provide advice/guidance to farmers and in Sweden, local, regional and national management groups are established in relevant areas.

4.1 Establish hierarchical population targets at flyway, management unit and national levels

Answers were received from Belgium, Finland, the Netherlands, Norway, and Sweden, which all have some kind of target or a plan to do so. In Belgium, they have set population targets at the (sub-)national scale in 2010 for the wintering population. Through the EGMP process, these levels have been communicated to ensure consistency. In Finland, they have not set a target for the population size, but instead, the target is to increase the distribution area toward inland areas. In the Netherlands, the Favourable Reference Values (FRVs) (notably population) from the AFMP have been used to set Favourable Conservation Status (FCS) on the provincial level, in order to coordinate management.

4.2 Establish an internationally coordinated population management programme

This action is under development by the EGMP's Greylag Goose TF, and supported by the participating Range States: Belgium, Denmark, Finland, France, the Netherlands, Norway, and Sweden.

4.3 Improve effectiveness of population control through experimenting with different timing

Range States were asked if they have improved effectiveness of population control measures through experimenting with different timing and methods and better understanding the relative efficacy of lethal versus non-lethal scaring techniques

This has not been done in France, as agricultural damages have not been identified; and not at large scale in Norway, but several case studies exist and new initiative testing crop damage reduction and conflict reduction are ongoing. Furthermore, in Norway, responsible hunting arrangements are in practice in many locations in Norway (including a good reporting system for offtake) but improving the effectiveness of derogation in Norway would need a research project.

In Belgium they have found that, scaring and derogation can limit the agricultural conflicts and conflicts with biodiversity to a satisfactory level. In Denmark, they have introduced hunting in January and August, and the effect will be evaluated. In Finland, it is currently being developed by the Natural Resources Institute, but mostly for the Barnacle Goose. In the Netherlands, studies into non-lethal scaring techniques are performed regularly and compared to lethal scaring techniques. Furthermore, multiple studies have been set up to get

insight into non-lethal methods, e.g. BirdAlert. Finally, in Sweden the Wildlife Damage Centre runs a range of research projects on these matters.

4.4 Promote best practices of goose hunting including timing to minimize damage and significant disturbance to other species

This is done in all Range States where hunting takes place; in Belgium. the hunting period is limited till early autumn to prevent disturbance to wintering waterbird populations. As such, the focus of hunting targets the breeding population. In Denmark, hunting in August is only allowed on farmland, and only at a distance of min. 300 m from open water. In Finland, the early season from 10-20 August hunting is only allowed on agricultural lands. Furthermore, hunters are encouraged to focus on hunting in areas of sensitive crops and to restrain from hunting in areas where geese can forage without causing damage to sensitive crops. In France, no damage recorded so far, however goose hunting occurs at the same date as most other waterfowl (end of August to 31 January), so that goose hunting itself is not causing specific disturbance to other species. In Norway, several goose hunting projects have been performed in order to identify the optimal timing of hunting (including the practice of responsible hunters minimizing crippling). And in Sweden, the hunting exam deals with these issues, where a specific goose hunting course is being updated by the hunters' organisation.

4.5 Maintain low crippling rates

Actions towards maintaining a low crippling rate are foreseeing in Finland, who will raise this issue in the communication to and education of hunters as a part of ongoing draft of the Strategy for Responsible Waterfowl Hunting (including wider waterfowling issues covering ducks and geese). Furthermore, in Norway awareness campaigns about low crippling rates are from time to time added in hunting magazines. The reduction of crippling rates is also an essential part of the theoretical and practical parts of a recently developed goose hunting course in Norway. In Sweden, the hunting exam deals with these issues, where a specific goose hunting course is being updated by the hunters' organisation. Likewise in the Netherlands, there is interest from educative side to improve hunter training courses in future in order to carry out derogations with minimal crippling.

In Belgium crippling is not considered a problem as breeding birds can often be approached close enough to limit crippling risks.

In Denmark and France, there are no plans at the moment.

4.6 Develop hunting techniques to further reduce crippling

The same actions as already mentioned in points 4.4 and 4.5.

A.1 Produce and update periodically, spatially explicit population size estimates based on agreed international monitoring

In all seven Range States population size estimates are available or foreseen in the future, the interval has however not been decided for all Range States. In Belgium, the summer population is estimated annually by mid-July counts, and the wintering population is assessed through the mid-monthly waterbird census. In Denmark both mid-winter counts and summer counts are organised. In Finland, monitoring scheme for both size and development of population is under progress. In France, the wintering population size is evaluated from Wetlands International mid-January counts, and the breeding population size is evaluated from national monitoring scheme every sixth year (first occurrence 2021-2022). In the Netherlands, national governmental monitoring scheme is in place and data collected are compatible with monitoring needs from EGMP. It involves numbers, habitat, distribution and age-ratio data, and data from summer counts are collected in cooperation with Regional Wildlife Councils. In Norway, a project for developing a population estimate was

initiated in 2021. Outcome will be available in the spring of 2023. The initiative is coordinated among the Scandinavian countries. The project has been resource demanding and will not be conducted annually. A six-year cycle is more likely. In Sweden, counts are organised by Lund University.

A.2 Maintain an annually updated bag statistics database including geese taken by any means

In all Range States some kind of reporting takes place; in Denmark and Finland, hunters must report game bags and derogation of all species on an annual basis. In Belgium, hunters report every spring their hunting bag of the past hunting season, and derogation data have to be reported by the beneficiary of the derogation. These data are kept in a separate database. When derogation concerns scaring by shooting (by a hunter), the data are mostly already included in the reported hunting bag. This is estimated to concern only a small number. In Sweden, hunters report to the Swedish Hunters' Organisation who estimate total harvest from open season and conditional hunting. CAB reports on other derogations in HABIDES. There is ongoing project to improve and secure bag statistics. In Norway, reporting by hunters and hunting statistics in Norway are well established and Statistics Norway process the data. A process for a better overview of figures from derogation is in progress. In Norway, not being a member of EU, there are legislative regulations for damage prevention on serious goose-impacted farmland. It may be practiced in the breeding season as a last solution to protect crop. Geese may be shot, but not at a scale that reduces the local population. The measure is primarily for scaring and crop protection. All relevant results will be reported to the AEWA EGM IWG. In France, hunters are encouraged by their federation to report their hunting bag on Chassadapt app. Finally, in the Netherlands, all aspects of the derogation system will be reviewed. New ways of reporting data in the field (apps) have started to be used and could potentially be expanded to achieve better data quality.

A.3 Maintain a spatially explicit database on goose damage to agriculture, other fauna and flora and fauna and risk to air safety

In Belgium, spatial references of fields where the compensation scheme is paying for damage are kept. In Denmark, there are no action concerning damage to agriculture, however for all civil airports statistics of bird strikes are reported annually. In Finland, there is no actual need for the database. Damages caused by Greylag Geese are local, limited to some (few) fields in coastal areas, and damages to agriculture are usually not compensated. In France, goose damage is not significant enough to maintain a database on the subject. In the Netherlands, a nation-wide highly detailed spatial information is available on goose damage to agriculture. There is likewise, a Bird Strike database. However, there is no database for spatial information on damage to flora and fauna but is reviewed every now and then when specific (regional) questions arise. A database does not exist in Norway at present, but some fragmented data exist, and in Sweden data on air safety is compiled by the Swedish Transport Agency, a database for goose damages is under development, however there is nothing on flora or fauna.

A.4 Collect demographic (mortality, reproduction, differential migration and connectivity) data from an agreed representative sampling framework across the range

With the exception of France, some demographic information is collected in the Range States. In Belgium, through the mid-July counts a statistically sound sample of juvenile-adult ratio on some breeding cores is foreseen. In Finland, collecting data on mortality and movements is carried out by marking schemes (GPS tags and neckbands). Furthermore, estimates on productivity will be carried out along with population monitoring. In the Netherlands, productivity counts are made in summer, mostly during summer census, and neckband schemes are in place to study survival and spatial site-use. In Norway, juvenile assessments in early August are conducted for a few selected sites on an annual basis, but more sites may be included in the coming years. Finally, both Denmark and Sweden, have ongoing research projects.

A.5 Analyse the impact of various agricultural policy scenarios and measures (Nitrate Directive, agri-environmental measures, various production incentives including biofuels) on goose populations and on goose damage

This has not been done in any of the Range States.

A.6 Assess the role of predators (e.g. White-tailed Eagle Haliaeetus albicilla, Red Fox Vulpes vulpes) in regulating goose populations

This has not been done in any of the Range States, however, in Finland, an on-going GPS tagging will shed light on the role of predators as a cause of mortality, and in Norway some fragmented data exist.

B.1 Produce best practice guide on establishing refuge areas (size, management, subsidies)

No actions have been taken in Denmark, France and Norway. National initiatives are in place in the four other Range States. In Belgium, refuge areas are mainly nature reserves or agricultural areas around these, where agricultural damage is compensated in an easier way than standard. In Finland, most important sites have been protected (Important Bird Areas (IBA) areas -> Natura 2000 sites) and management plans are done. However, management plans concern all relevant species and habitats in the area and usually they are not targeted at geese. Also, artificial refuges on agriculture lands will be established under CAP. In the Netherlands, in 2005-2008 an extensive evaluation was made of the use of accommodation areas and further fine-tuning of regulations has been taken up on provincial level, including scientific analyses of the use of accommodation areas and the responses of different species. Finally, in Sweden, the Wildlife Management Center and CAB produce guidelines for farmers.

B.2 Provide guidance on conflict resolution and how to make this consistent with the European legal framework, including the Common Agricultural Policy (CAP)

In general, work is in progress by the Agriculture TF. At national level different actions have been taken, e.g. in Denmark, there is an ongoing demonstration project on integrated conflict resolution in Guldborgsund Municipality. In Sweden, there is guidance to CAB. Whereas in Belgium, no agri-environmental climate (AEC)-measures as part of the EU CAP are foreseen to resolve agricultural conflicts with goose damage. In Finland, France and the Netherlands no need or no actions have been taken.

B.3 Create a toolbox for decisions in relation to determining significant damage (including metrics, benchmarking, verification, monitoring, various management techniques to prevent damage, compensation)

In general, work is in progress by the Agriculture TF. At national level, different systems are in place, e.g. in Belgium, significant damage is benchmarked in legislation: 250€ per case or 5% of the total crop yield. Minimum levels of scaring are decided by Ministerial Decree as a threshold for derogation and compensation. In the Netherlands this is included in the prescriptions for assessing damage and regulations to apply damage, and in Sweden guidelines and standardized protocols for inspection of damaged crops are in place.

B.4 Provide guidance on implementation of population management protocols at national level

For most Range States, this has not been conducted yet (Belgium, Denmark, France, the Netherlands and Norway). In Finland, the Ministry of Forestry and Agriculture follows trends of game species and is responsible for controlling the hunting pressures if needed, and in Sweden they have produced guidelines.

B.5 Share experience concerning methods to prevent damage to agriculture and risks to air safety as well as to other flora and fauna

Part of this action is taken care of through the Agriculture TF, where the members share experience concerning methods to prevent damage to agriculture, as well as the forthcoming Flight Safety TF, which will deal with risk to air safety.

Furthermore, at national level, actions have been taken in Belgium and Finland, where best practices have been concluded and shared. Furthermore, in the Netherlands, it has been agreed that studies in Dutch mentioned under 4.3 will have an English summary. Furthermore, the newly installed inter-provincial Goose TF might cover this topic for sharing experiences within the Netherlands. In Norway, for local outreach, there is a designated position in the Norwegian Farmers' Union, and in Sweden they have a designated Wildlife Damage Center, who shared their experiences.

C.1 Develop and implement a communication strategy and plan

None of the other Range States have developed a communication strategy and plan. However, in several of the Range States presentations and talks are given on a regular basis.

D.1 Range States review their national legislation in the light of the framework legal guidance document developed under the EGMP

This has either already been done or under development in all Range States, who are demanded to actively play a role in the international population control, with the exception of Belgium.

E.1 Range States contribute on a regular basis to the budget of the EGMP

This is done by all seven Range States.

E.2 National and regional governments secure the necessary funds for the implementation of the actions at national and sub-national levels

This is partly done by all seven Range States.

Conclusions – Major accomplishments and gaps

General non-species-specific reporting

Apart from one Range State, all other Range States, that have replied, have set up some kind of national working group and/or written stakeholder consultation in advance of the EGM IWG meetings. On the other hand, except for one Range State, none of the other Range States have adopted new or adjusted existing legislation to facilitate the implementation of adaptive harvest management within the framework of an ISSAP or ISSMP.

Species-specific reporting

In general, and across the three populations of the two species, there is a good collection of population-specific measures, such as population size, demographic variables and offtake data. However, because flyway-based management requires a highly coordinated and efficient monitoring program to be able to work, lack of data from a single Range State can mean that the assessment cannot be done. This is the case for both the Greenland Barnacle Goose population and the Greylag Goose population assessment in 2023.

When it comes to monitoring related to the assessment of the likelihood of serious damage to agriculture and risk to air safety and particularly to other flora and fauna, the information is focused on damage to agriculture and risk to air safety in those Range States where geese pose a significant risk. Whereas only few Range States

maintain a spatially explicit database and assess the risk on goose damage to other fauna and flora. However, some studies have been undertaken on the impact of Barnacle Geese on the Arctic ecosystem
In addition to monitoring and assessment activities, all Range States use a range of activities to maintain the populations at a satisfactory level and minimise agricultural damage and conflicts e.g. all range stats use lethal population control, and many have improved the effectiveness of derogation/population control and non-lethal measures through experimenting with different timing. Additionally, most Range States reports that key sites for the populations are protected and provide accommodation areas to reduce risks and conflicts at sensitive areas.

In addition, some Range State take key sites for geese into account in land use planning and growing of sensitive crop as well as apply scaring and/or land management techniques to reduce the attractiveness of sensitive areas.

Furthermore, most Range States have in the past or will in the future focus on activities which can maintain low crippling rates and improve derogation shooting techniques to further reduce crippling.

In general, and across the three populations, there is a lack of:

- information on the role of predators;
- analyses of the impact of various agricultural policy scenarios and measures on goose populations and on goose damage;
- monitoring related to the assessment of the likelihood of serious damage to other flora and fauna;
- promotion of goose-based eco-tourism at selected key sites or the Range States do not see it as a task for the government. In most Range States there are, however, birdwatching towers with relevant informative posters established, and a few have goose-based eco-tourism activities;
- production of best practice guide on establishing refuge areas;
- guidance on implementation of population management protocols at national level;
- development and implementation of a communication strategy and plan.

For some of these activities there may be a natural explanation, given the fact that the indicators for some of the objectives related to these activities are only collected every 6-year vs. most population specific measures such as population size and bag statistics that are collected on an annual basis.

It is therefore important to remind the members of the EGM IWG to collect information of indicators listed in the individual AFMPs, so that the EGMP Data Centre can analyse if the actions have the expected effect in terms of reaching the objectives. In relation to this it is important to note that moving forward it will be necessary that the Range States explain more thoroughly in their national reports what activities had taken place.

Based on the responses, it is also clear that some of the activities may be better reported by/in collaboration with the TFs, e.g.:

- Establishment of an internationally coordinated programme to assess agricultural damage.
- Establishment of an internationally coordinated population management programme for Greylag Goose.
- Periodic assessment of the cumulative impact of derogations (as well as hunting in Range States in which derogation is not required) on the development of the population, the likelihood of serious damage to agriculture and risk to air safety and to other flora and fauna (including the Arctic ecosystems), and the non-lethal measures taken to prevent damage/risk, as well as the effectiveness of these.

- Sharing of experiences concerning methods to prevent damage to agriculture and risks to air safety as well as to other flora and fauna.
- The creation of a toolbox for decisions in relation to determining significant damage.
- Guidance on conflict resolution and how to make this consistent with the European legal framework, including the CAP.

Whereas the EC is better placed to report on the development of a specific guidance on the application of Art. 9 of the Birds Directive in the context of the Barnacle Goose Management Plan.

Finally, we want to share a useful idea provided by the Netherlands, where it has been agreed that studies in Dutch about how to improve effectiveness of population control measures, will have an English summary. We hereby recommend that all studies relevant for the EGMP should include an English summary.

Recommendations for the future process

On the basis of the reporting process so far and the summary of EGMP National Reports 2021-2023, the following conclusions and recommendations have been identified for consideration by the EGM IWG:

It is recommended that the EGMP TFs continue updating and keeping an overview of the workplans corresponding to the ISSMPs and ISSAPs (which have been used as a template for this national reporting cycle). It is however essential that these workplans are kept updated on a regular basis in the interim period, in order to make this process efficient.

As of the deadline of 5 May 2023, 7 out of 15 countries of the EGM IWG Range States submitted a National Report for 2021-2023. After the deadline, six more National reports have been submitted. Particularly because of the late submission of several reports the timeline for producing the summary was affected and follow-up on certain responses or information provided by the Range States, was not possible.

Finally, it is recommended that the AEWA Secretariat and the Data Centre further conceptualise the process for national reporting and submit a proposal to EGM IWG9 in 2024, so that it is agreed and ready for the next national reporting cycle in 2025. This proposal should take into account the revision process of the ISSAP for the Taiga Bean Goose and the ISSMP of the Pink-footed Goose and include the national reporting of these two species in the reporting process. In addition, the reporting of activities could be considered to be done together with the reporting of the indicators in the ISSMPs for the Barnacle Goose and the Greylag Goose. This gives the advantage that an analysis can be undertaken on the effect of actions, or the lack of actions, in terms of reaching the ISSMP goals.