

Implementation of the No Net Loss principles by Hunters

Introduction

Action point 7b) of the EU Biodiversity Strategy 2020 requires the European Commission to carry out further work with a view to **“proposing by 2015 an initiative to ensure there is no net loss of ecosystems and their services (e.g. through compensation or offsetting schemes)”** (action 7b).

The Mitigation Hierarchy is comprised of 4 steps; each of them being necessary to ensure environmental damage is prevented; skipping one or more steps could result in increased costs and will result in poorer mitigation of damage and a net loss of biodiversity. If conducted in order, the Mitigation Hierarchy represents a relevant method for achieving no net loss, and possibly achieving net gain of biodiversity from development.

Hunters conduct the steps of the Mitigation Hierarchy often without knowing it, and the work they do represents an added value that contributes to the achievement of the No Net Loss principles.

More information on the Mitigation Hierarchy from a hunting perspective is available here:
<http://www.face.eu/sites/default/files/attachments/nnl.pdf>

Step 1: Avoidance & Step 2: Minimisation

If damage to the natural environment can be avoided it is important that this is done as first stage, and if impact cannot be avoided entirely, it must be minimised as much as possible.

Reducing initial damage to the natural environment is much easier, less expensive and more effective than reversing damage or attempting to rebuild complex ecosystems after biodiversity has been lost. The principles of avoidance and minimisation are often put into practice by hunters as they monitor the population levels of game species to ensure the population size is healthy.

These two principles are further practiced by hunters through the principle of sustainable use, as hunters ensure that the numbers of individuals of a species hunted does not negatively impact on the population and does not cause the species population/conservation status to suffer.

Step 3: Rehabilitation and Restoration

If damage to the natural environment cannot be avoided and minimised, then it must be restored. Hunters are experienced in restoration of habitats and ecosystems and have been conducting such projects for many years in order to reintroduce the wildlife that had been lost from a site; as a result many examples exist in Europe of their work in wetlands, grasslands and forests. More information on hunters' contribution to habitats' restoration can be found here:

http://www.face.eu/sites/default/files/attachments/restoration_en.pdf

Step 4: Offsetting

Offset activities are to be undertaken if residual impacts remain after avoidance, minimisation and restoration actions have been carried out. While it is crucial to deal with all the biases, limitations and risks, offsetting measures become relevant for tackling the remaining negative impacts (the residual impacts) that could not be avoided, minimised or restored, and therefore can contribute to biodiversity conservation.

Usually, when conducted sustainably, hunting activities contribute to the first three steps of the mitigation hierarchy. However, hunting reserves and areas managed for hunting could be seen as potential offsets, carried out cost-effectively through voluntary engagement by hunters.

For more information on hunters' role in offsetting, please see:

<http://www.face.eu/wildlife-conservation/no-net-loss>

This document aims to provide an overview on how hunting activities already contribute to the principles of No Net Loss through understanding the potential impact, monitoring activities, minimising the disturbance, etc.

This document will focus on the two first steps of the Mitigation Hierarchy (i.e. avoidance and minimisation) as a lot of actions related to those topics are undertaken by hunters.

It will also highlight how hunting activities, by following sustainable principles, avoid and minimise their impact on wildlife.

Hunters' involvement with the last two steps of the Mitigation Hierarchy (i.e. rehabilitation and restoration, and offsetting) is presented in the following documents:

- http://www.face.eu/sites/default/files/attachments/restoration_en.pdf
- http://www.face.eu/sites/default/files/documents/english/offsetting_measures_and_hunting_the_risks_and_opportunities_-_final_en_design.pdf

Hunting is Highly Regulated

Before going into the details of how hunting activities contribute to No Net Loss principles, it is worth noting that hunting is already a highly regulated activity based on the sustainable use principles both at EU and national level.

At the European Level

The Birds Directive¹ (2009/147/EC), developed in 1979, was the very first legal instrument of the European Community (the predecessor to the EU) specifically dealing with nature conservation, relates to the conservation of all species of naturally occurring birds in the wild state in the Union. It covers the protection, management and control of these species and their habitats and lays down rules for their exploitation, including through hunting.

In 1992, the EU governments adopted the Habitats Directive² (92/43/EEC) aiming at conserving EU's most threatened mammal species and natural habitats. This Directive, along with the Birds Directive - commonly known as the EU Nature Directives – is at the heart of EU nature policy, and it remains the cornerstone of Natura 2000, the EU's vast network of protected areas.

Both of these Directives recognise the role of sustainable hunting, while specifying limitations with regard to which species can be hunted, when hunting can take place and which methods and tools can be used. Decades of infringement procedures and case-law have created a strong legal framework regulating hunting all across the Union.

In addition to the Birds and Habitats Directives, several initiatives were launched and undertaken at European level:

In 2001, the European Commission launched the 'Sustainable Hunting Initiative' aiming to improve the understanding of the legal and technical aspects of the Birds Directive's provisions on hunting while developing an awareness raising programme to promote sustainable hunting in accordance with the Directive.³

In 2004, BirdLife International and FACE (the Federation of Associations for Hunting and Conservation of the EU) reached an agreement on ten points enabling hunting to continue within a well-regulated framework while ensuring the implementation and following the provisions of the Birds Directive.⁴

In 2007, the annual meeting of the Parties (Standing Committee) to the Convention on the Conservation of European Wildlife and Natural Habitats (Bern, 1979), adopted the European Charter



on Hunting and Biodiversity. This charter aims to reinforce the implementation and coherence of global and European biodiversity instruments such as the Convention on Biological Diversity and the Birds and Habitats Directives.⁵

In 2008, the European Commission developed the *Guidance document on hunting under Council Directive 79/409/EEC on the conservation of wild birds "The Birds Directive"*⁶ providing guidance on how to implement the rules and hunting provisions under the Birds Directive. While not being legally binding, the guidance provides concrete figures and measures to be implemented in order to be in line with the requirements of the Birds Directive.

At the National Level

At a national level, hunting is highly regulated, both through governmental legislation and through voluntary self-regulation by hunters, preventing the loss of biodiversity and ensuring its sustainability.

Several examples can be presented to illustrate this regulation:

In northern **Finland**, legislation states that, while local people have the legal right to hunt freely on state land within their home municipality, non-local hunters must apply for a licence, with regional quotas set for licence numbers. Sustainability is then ensured by balancing the allocation of non-local licence-holders with the number of local hunters while game populations are monitored each summer and winter.⁷

In **Portugal**, the numbers of hunting days and the daily bag per hunter are controlled by the government. On one hand, newly-created hunting areas must possess a government-approved annual hunting plan which determine total annual bag quota per species for resident birds. On the other hand, bag quotas for migratory birds are controlled by limiting hunting days per week and governmental control on the daily hunting bags.⁸

In **France**, departmental game management plans exist for all sites. Most species have bag limits imposed at departmental level; those that do not are regulated with limits placed on the number of days where hunting is allowed, season bag limits, closed areas, and protection of female black grouse (*Tetrao tetrix*) and capercaillie (*Tetrao urogallus*).^{vii}

In Eastern European countries, local government set annual bag limits, however in **Poland** long term hunting plans and bag limits are set by Regional Forest Directorates. Furthermore, in Poland all hunting clubs must employ a gamekeeper to manage the land and wildlife and ensure adherence with the law on each territory.^{vii}

Hunting in much of Europe is also regulated through the requirement of passing a mandatory hunting examination which often involves:

- A theoretical section testing ecological knowledge including diseases, species identification, conservation principles;
- Knowledge of hunting legislation, and
- A practical section testing accuracy.

Mandatory tests such as these exist in the Nordic countries, France, Germany, Austria, Belgium, the Netherlands, Luxembourg, Estonia, Hungary, Poland, Czech Republic, Latvia Bulgaria, Portugal, Italy and much of Spain.⁹

Through both national and European legislation, hunting in Europe is very tightly regulated in order to not impact nature and its wildlife. These regulations on hunting help maintain its sustainability and help ensure that hunting in Europe continues to not threaten biodiversity.



Populations monitoring and hunting's disturbance

Prior to implementing the Mitigation Hierarchy, it is crucial to evaluate the impact of a specific human activity and follow the impact trends on a long-term basis.

In the case of hunting, some countries have a long-standing recording of the fluctuation of game populations (for example the UK's National Gamebag Census)¹⁰. Data from monitoring and sustainability surveys are used to formulate policies which are often implemented via hunting management plans.

An example of this process is the Finnish wildlife triangle counting method, whereby population estimates of game and non-game species are used to determine next year's hunting quotas and make conservation decisions.¹¹ Actions such as this ensure that damage to natural populations is reduced as much as possible in order to maintain a sustainable hunt over many years.

Furthermore, local hunters often contribute to monitoring programmes of game species (through bag data recording and field monitoring) which aims to identify the appropriate quotas ensuring that hunting is sustainable and do not negatively impact game populations.

An example of bag data collection schemes such as this is found in Estonia, where hunters submit samples from each shot wolf (*Canis lupus*), bear (*Ursus arctos*) and lynx (*Lynx lynx*) to researchers to better understand the status and trends of large carnivore populations.¹²

However, huntable species often coexist alongside non-huntable species. Non-target species may be disturbed by hunting activities and these disturbances may impact upon their conservation status. It is therefore important that hunting can demonstrate that its activities do not pose a threat to the conservation status of non-target species as well as target species.

FACE has developed a literature review on the effects of hunting disturbance on non-huntable species. This review reveals that hunting disturbance unequivocally has an effect on wildlife by causing behavioural responses and displacement of populations.

A study of ungulate escape responses showed even non-hunted species responded to hunting disturbance,¹³ and in birds disturbance has been shown to cause behavioural responses in a wide range of species.^{14,15,16} However, limited evidence exists to say that disturbance causes impacts to population size or has negative consequences for conservation status.

A study of non-hunted roe deer (*Capreolus capreolus*) suggested that hunting disturbance was responsible for the low survival rates during the hunting season compared to the non-hunting season,¹⁷ however no other studies could be found that concluded hunting disturbance affected the population size of non-target ungulates.

In birds, the scientific literature suggests that hunting disturbance does not affect the population size nor the conservation status of non-target species.^{9,18,19,20,21,22}

The review on the effects of hunting disturbance on non-huntable species notes that displacement of populations does not have an impact on the population when refuge habitats are available. On the other hand, the scientific literature shows that disturbance during times of high energy stress (while reproducing, migrating or in winter) has the greatest impacts on populations. It therefore recommends that:

- Hunting should be limited in intensity through use of spatial restrictions or time intervals between hunting events
- Hunting should not occur during times of high energy stress.

The review also highlights that these recommendations are already implemented in most of Europe; greater implementation and stricter enforcement of these rules would minimise disturbance further.

For more information on hunting disturbance and the literature review, please see:

<http://www.face.eu/wildlife-conservation/species-action>



Sustainable Use via Hunting Management Plans

Hunters can also contribute to the **Avoidance** and **Minimisation** of loss of biodiversity through the use of management plans that are tailored to sustainably use wildlife and strict regulations that safeguard these management plans and the populations they manage from overuse.

It is vital that hunting of wild animal species (as allowed under Article 14 of the Habitats Directive and Article 7 of the Birds Directive) is not to the detriment of the conservation status of huntable species.

In order to ensure that hunting remains sustainable, data collected from monitoring is used to create hunting management plans that **minimise** the damage done to game species by hunting while helping maintaining healthy populations year after year.

Through the management plans, hunting can therefore contribute to No Net Loss principles and examples of such management plans can be found all over Europe:

On the Dyfi estuary in **Wales (UK)**, a breeding population of the rare Greenland white-fronted geese exists, and migratory populations pass through much of Wales. In response to the species' decline, wildfowling clubs on the Dyfi estuary have been protecting the geese with an effective voluntary ban on shooting since the 1970s; this has been copied and at now all wildfowling clubs in Wales have a voluntary moratorium on shooting Greenland white-fronted geese.²³

Hunters voluntarily self-regulate in **Denmark**, where a network of reserves was established in the 1990s in response to falling waterbird bag sizes,²⁴ granting the birds a safe area and improving hunting outside these reserves as the waterbird population increased in response.

Italy is another example where when ISPRA (The Institute for Environmental Protection and Research) recommended limiting bag sizes of lapwing (*Vanellus vanellus*), skylark (*Alauda arvensis*) and turtle dove (*Streptopelia turtur*) with hunters voluntarily followed such advice.²⁵

In 2002-2005, **Croatian** hunters were involved in the establishment and implementation of a wolf management plan; following surveys of the wolf population hunters agreed to limit the bag quota to ensure the sustainability of hunting, as a result the population size was 190 in 2007, up from 50 in the 1990s.²⁶

Furthermore, examples show that hunters accept the cancellation of a hunt that cannot be conducted sustainably: in 2004-2006 Slovenian hunters involved in the joint **Slovenian-Croatian** DinaRis project agreed that the lynx (*Lynx lynx*) population could not be sustainably hunted, so agreed to ban all lynx hunting activities.²⁷

The activities described here are just a few examples of how hunting in Europe self-regulates to ensure sustainability and no loss of biodiversity.



Conclusion

As shown in this document, the hunting community of Europe already contributes to all steps of the Mitigation Hierarchy:

- To avoidance and minimization, through monitoring activities and the use of management plans ensuring sustainable use of natural resources, and through the strict national and European legislation that safeguards wildlife populations from overuse;
- To rehabilitation and restoration, through the extensive habitat creation and maintenance work that occurs all over Europe and has done for decades (the 2015 report of the FACE Biodiversity Manifesto has identified projects ongoing since the early 1970s);
- To offsetting measures through their local and voluntary skills in land management.

Relevant information and best practice examples of hunters' activities contributing to nature conservation can be found in the 2015 report of the FACE Biodiversity Manifesto. This report is the results of the implementation of the FACE Biodiversity Manifesto and is highlighting trends and assessment of 181 case studies.

For more information please see <http://www.face.eu/nature-conservation>.

Planning of the EU's No Net Loss Initiative is expected to begin in 2016, with the target of creating further action to halt the loss of biodiversity within the EU in accordance with the goal of the EU Biodiversity Strategy to 2020.

Hunters' fundamental interest in the natural environment mean they support measures that safeguard nature while taking account of the social and cultural requirements of the human population that live in and use that landscape.

It is extremely important that measures such as the Mitigation Hierarchy are implemented and enforced for activities and developments that threaten biodiversity and this document aims to demonstrate that hunting activities in Europe are already conducted following those principles. Therefore, hunting's contribution should be acknowledged and hunters should be considered as relevant partners for the implementation of No Net Loss principles.



- ¹ Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds (codified version)
- ² Council Directive 92/43/EC of the 21 May 1992 on the conservation of natural habitats and of wild fauna and flora
- ³ http://ec.europa.eu/environment/nature/conservation/wildbirds/hunting/index_en.htm
- ⁴ FACE-Birdlife agreement:
http://ec.europa.eu/environment/nature/conservation/wildbirds/hunting/docs/agreement_en.pdf
- ⁵ European charter on hunting and biodiversity:
http://www.face.eu/sites/default/files/attachments/charter.en-fr.fin_.pdf
- ⁶ http://ec.europa.eu/environment/nature/conservation/wildbirds/hunting/docs/hunting_guide_en.pdf
- ⁷ Mustin K, Newey S, Irvine J, *et al.* Biodiversity impacts of game bird hunting and associated management practices in Europe and North America. The James Hutton Institute
- ⁸ Arroyo BE & Beja P. 2002. Impact of hunting management practices on biodiversity. (ed. Reconciling game bird hunting and biodiversity (REGHAB))
- ⁹ <http://face.eu/about-us/members>
- ¹⁰ <https://www.gwct.org.uk/ngc>
- ¹¹ http://www.rktl.fi/english/news/wildlife_monitoring_in.html
- ¹² <http://www.lcie.org/Blog/ArtMID/6987/ArticleID/74/Counting-phantoms-in-the-forest-The-role-of-hunters-in-monitoring-large-carnivores>
- ¹³ Stankowich T. 2008. Ungulate flight responses to human disturbance: A review and meta-analysis. *Biological Conservation* 141 (9): 2159-2173
- ¹⁴ Madsen J. 1995. Impacts of disturbance on migratory waterfowl. *Ibis* 137: S67-S74
- ¹⁵ Madsen J. 1998. Experimental refuges for migratory waterfowl in Danish wetlands. II. Tests of hunting disturbance effects. *Journal of Applied Ecology* 35 (3): 398-417
- ¹⁶ Evans DM and Day KR. 2001. Does shooting disturbance affect diving ducks wintering on large shallow lakes? A case study on Lough Neagh, Northern Ireland. *Biological Conservation* 98: 315-323
- ¹⁷ Calenge C, Maillard D, Invernia N, Gaudin JC. 2005. Reintroduction of roe deer *Capreolus capreolus* into a Mediterranean habitat: female mortality and dispersion. *Wildlife Biology* 11(2):153-161
- ¹⁸ Boos M, Arnauduc JP, Robin JP. 2002. Effects du dérangement sur l'énergétique chez les oiseaux et les possibilités de compensation nutritionnelle. Rapport final de convention de recherche CNRS/FNC
- ¹⁹ Martínez-Abraín A, Viedma C, Gómez JA, *et al.* 2013. Assessing the effectiveness of a hunting moratorium on target and non-target species. *Biological Conservation* 165: 171-178
- ²⁰ Kurzejeski EW, Vangilder LD and Lewis JB. 1987. Survival of Wild Turkey Hens in North Missouri. *The Journal of Wildlife Management* 51 (1): 188-193
- ²¹ Folk RH and Marchinton RL. 1980. Effects of intensive deer hunting on behavior of wild turkeys. *J. Wildl. Manage.* 44:398-402
- ²² Reed DJ and Guynn DV. In: Eversole, Arnold G., ed. Proceedings of the forty-fourth annual conference: Southeastern Association of Fish and Wildlife Agencies. 1990 October 21-24; Richmond, VA. Baton Rouge, LA: Louisiana Department of Wildlife and Fisheries: 304-309
- ²³ <http://www.dailypost.co.uk/news/local-news/wildfowlers-extend-monitoring-project-white-6449815>
- ²⁴ Madsen J, Pihl S, Clausen P. 1998. Establishing a reserve network for waterfowl in Denmark: a biological evaluation of needs and consequences. *Biological Conservation* 85:241-255
- ²⁵ For reference, please contact FACE (The European Federation of Associations for Hunting and Conservation)
- ²⁶ Štrbenac A, Jeremić J, State Institute for Nature Protection, Croatia. Conservation of wolf through acceptance by all interest groups: development of the Croatian Wolf Management Plan. Available at: Z:\CONSERVATION\Biodiversity Manifesto\CASE STUDIES\Croatia\7102015_103840_Development_of_the_Croatian_wolf_management_plan.pdf
- ²⁷ http://www.mop.gov.si/fileadmin/mop.gov.si/pageuploads/podrocja/velike_zveri/majic_dinaris.pdf

