**LIFE project**

Coordinated Efforts for International Species Recovery EuroSAP

(LIFE14 PRE UK 002)

Species Status Report for Velvet Scoter *Melanitta fusca*

Western Siberia & Northern Europe/NW Europe population



Photo: Gediminas Gražulevičius

    

Report commissioned by: The European Commission Directorate General for the Environment

Report compiled by Mindaugas Dagys, Lithuanian Ornithological Society (Lithuania)

Lithuanian Ornithological Society

Naugarduko 47-3

Vilnius LT-03208

Lithuania

E-mail: dagys@ekoi.lt

**List of contributors:**

Antra Stīpniece – Latvian Ornithological Society (Latvia)

Antti Below – Metsähallitus (Finland)

Bernard Deceuninck – Ligue pour la Protection des Oiseaux LPO (France)

David A. Stroud – UK Joint Nature Conservation Committee (United Kingdom)

David Schönberg Alm – Swedish Environmental Protection Agency (Sweden)

Fredrik Haas – Biological Institute, Biodiversity, University of Lund (Sweden)

Gennady Grishanov – Immanuel Kant Baltic federal University (Russia)

Ib Krag Petersen – Aarhus University, Department of Bioscience (Denmark)

Itri Levent Erkol – Doğa Derneği (Birdlife Turkey)

Jan Kube – NordStream2 (Germany)

Jochen Bellebaum – IWWR (Germany)

Leho Luigujõe – University of Life Sciences, Institute of Agricultural and Environmental Studies (Estonia)

Leif Nilsson – Biological Institute, Biodiversity, University of Lund (Sweden)

Liutauras Raudonikis – Lithuanian Ornithological Society (Lithuania)

Nele Markones – FTZ West, Kiel University (Germany)

Richard Hearn – Wildfowl and Wetlands Trust (United Kingdom)

Svein-Håkon Lorentsen – Norwegian institute for Nature Research (NINA) (Norway)

Włodzimierz Meissner – University of Gdańsk, Department of Vertebrate Ecology & Zoology (Poland)

Date of adoption:

* 1st draft – September 2016

This is the first draft of the "Species Status Report for Velvet Scoter *Melanitta fusca*" – all comments, corrections, missing/new information and contributions are welcome. Please send them to Mindaugas Dagys at dagys@ekoi.lt for the incorporation into the 2nd draft of this report.

***Contents***

[Geographic scope of the report 4](#_Toc462405444)

[0 - INTRODUCTION 6](#_Toc462405445)

[1 - BIOLOGICAL ASSESSMENT 7](#_Toc462405446)

[Taxonomy and biogeographic populations 7](#_Toc462405447)

[Distribution throughout the annual cycle 7](#_Toc462405448)

[Habitat requirements 8](#_Toc462405449)

[Survival and productivity 8](#_Toc462405450)

[Population size and trend 9](#_Toc462405451)

[2 - THREATS 11](#_Toc462405452)

[General overview 11](#_Toc462405453)

[By-catch in fishing gear 11](#_Toc462405454)

[Habitat loss/degradation 12](#_Toc462405455)

[Marine pollution 12](#_Toc462405456)

[Disturbance 12](#_Toc462405457)

[3 - POLICIES AND LEGISLATION RELEVANT FOR MANAGEMENT 14](#_Toc462405458)

[International conservation and legal status of the species 14](#_Toc462405459)

[EU Policies that have direct or indirect impact on the species 14](#_Toc462405460)

[National policies, legislation and ongoing activities 14](#_Toc462405461)

[Regulated use and management of the species 15](#_Toc462405462)

[Coverage of the Velvet Scoter in protected areas 15](#_Toc462405463)

[Monitoring 15](#_Toc462405464)

[4 - REFERENCES 19](#_Toc462405465)

Geographic scope of the report



**Figure 1.** Map of breeding and wintering distribution of the Velvet Scoter (BirdLife International & NatureServe 2014)*.*

**Table 1.** Range states for the Velvet Scoter (Western Siberia & Northern Europe/NW Europe population only). Principal range states – **in bold**; occasional records – *in italics*.

|  |  |  |
| --- | --- | --- |
| Breeding | Migration | Wintering |
| **Russia** | **Finland** | **Finland** |
| **Norway** | **Sweden** | **Sweden** |
| **Finland** | **Estonia** | **Estonia** |
| **Sweden** | **Latvia** | **Latvia** |
| **Estonia** | **Lithuania** | **Lithuania** |
|  | **Russia** | **Russia** |
|  | **Poland** | **Poland** |
|  | **Germany** | **Germany** |
|  | **Denmark** | **Denmark** |
|  | **Norway** | **Norway** |
|  |  | UK |
|  |  | Netherlands |
|  |  | Belgium |
|  |  | France |
|  |  | *Ireland* |
|  |  | *Slovenia* |
|  |  | *Switzerland* |
|  |  | *Albania* |
|  |  | *Bulgaria* |
|  |  | *Croatia* |
|  |  | *Czech Republic* |
|  |  | *Greece* |
|  |  | *Hungary* |
|  |  | *Italy* |
|  |  | *Macedonia* |
|  |  | *Montenegro* |
|  |  | *Serbia* |

0 - INTRODUCTION

In 2015, BirdLife international with partners launched EU LIFE project "Coordinated Efforts for International Species Recovery (EuroSAP) (LIFE14PRE UK 002)", the aim of which is to develop new or update existing species action plans for 16 threatened species. EU Management Plan for the Velvet Scoter *Melanitta nigra* was prepared in 2006 and adopted for the period 2007–2009. As major declines of the species have been detected during and after this period, there is an obvious need for the review of the conservation strategy and implement already foreseen or new conservation measures for this species on a flyway scale. The Velvet Scoter Species Action Plan to be developed during the EuroSAP project will be developed in cooperation with and with the support of AEWA.

This Species Status Report for Velvet Scoter has been compiled from the information supplied by national species experts (listed in the List of contributors above) from the principal range states of the species via a special questionnaire. It contains current knowledge and information on the species numbers and recent trends in breeding and non-breeding areas, conservation status and actions, coverage in protected areas, monitoring schemes and threat assessment. The report will feed into to the development of the Velvet Scoter Species Action Plan.

1 - BIOLOGICAL ASSESSMENT

Taxonomy and biogeographic populations

Velvet Scoter (*Melanitta fusca*) is a waterbirds species, attributed to the group of seaducks, which includes ducks that primarily nest inland, usually on or near freshwater water bodies, but spend most of their time outside the breeding season in marine waters.

Previously, Velvet Scoter was considered a polytypic species with three distinct subspecies – *M*. *f*. *fusca*, breeding in NW Asia (Siberia) and Northern Europe, *M*. *f*. *stejnegeri*, breeding in NE Asia, and *M*. *f*. *deglandi*, breeding in North America (Collinson *et al*. 2006). However, recently each of these subspecies was granted the status of an independent species – Velvet Scoter (*Melanitta fusca*), Siberian Scoter (*Melanitta stejnegeri*) and White-winged Scoter (*Melanitta deglandi*), respectively (Collinson *et al*. 2006). This species status assessment deals only with the Velvet Scoter (*Melanitta fusca*).

There are two recognised distinct biogeographic populations of the Velvet Scoter: 1) Western Siberia & Northern Europe/NW Europe and 2) Black Sea & Caspian (Wetlands International 2016). The Velvet Scoter species action plan to be prepared during the LIFE EuroSAP project will deal only with the Western Siberia & Northern Europe/NW Europe biogeographic population, therefore the main focus in this report will be on this population.

The Black Sea & Caspian population is a very small and little studied isolated population breeding in Turkey, Armenia and Georgia, and wintering probably mostly in the Black and Caspian Seas. Very fragmented data suggest that the population consists of no more than 1500 individuals, with even further steep decline suspected in recent years (Wetlands International 2016). However recent data on numbers, distribution, breeding ecology as well as possible threats are lacking, and there is an obvious need for special efforts to investigate this secluded and likely steeply declining population of the Velvet Scoter. Recent data from Turkey suggest only some 60–90 breeding pairs in East Anatolia region, scattered among eight high-altitude lakes (I. L. Erkol, pers. comm.).

The breeding area of the Western Siberia & Northern Europe/NW Europe biogeographic population of the Velvet Scoter reaches Yenisei and Khatanga Rivers and southern part of Taimyr Peninsula in the East, stretching west along the Arctic Russia all the way to Scandinavia, where breeding areas reach southern Norway and Sweden as well as Estonia. It is noteworthy, that birds in Western Europe breed either along the Baltic Sea coast (in Sweden, Finland and Estonia) or in inland highland regions (in Finland, Sweden and Norway).

Distribution throughout the annual cycle

Breeding in northern regions, this species has a short reproductive period. Northward migration from the Baltic Sea to Barents Sea takes place in mid-May to early June, while the autumn migration of breeding females and juveniles starts in August and peaks in September and October. Males move to moulting areas much earlier, sometimes already in June, as soon as females start incubating. Moulting areas are mainly located along the northern coasts of Russia – in Pechora and White Seas, although moulting aggregations have also been observed in northern Baltic Sea (Anker-Nilssen et al. 2000, Luigujoe & Kuresoo 2000).

The main wintering grounds of the Velvet Scoter are located in the Baltic Sea, primarily along the eastern and south-eastern coasts. Highest numbers of birds aggregate in Riga Bay, Latvian, Lithuanian and Polish exposed coasts and Pomeranian Bay (Skov et al. 2011). Throughout the wintering period Velvet Scoters are not very mobile, but tend to use several wintering areas for prolonged periods of time (unpublished telemetry data).

Prior to spring migration to breeding grounds, high numbers of Velvet Scoters aggregate in north-eastern part of the Baltic Sea – Riga Bay, waters of West Estonian Archipelago, from where the main migration route to the Arctic breeding grounds lies through the Gulf of Finland, north east through the White Sea and eventually to Barents and Kara Seas, where birds spend some time in marine waters before dispersing into inland nesting locations (Skov et al. 2011, unpublished telemetry data). Average altitude of migrating Velvet Scoters above Western Estonia in the daytime was 128 m, however most intensive migration took place during the night and considerably higher altitudes, particularly above the land (Kahlert et al. 2012).

Habitat requirements

On northern breeding grounds, Velvet Scoter breeds mainly inland, near freshwater lakes and streams in forested or open tundra. In Fennoscandia and Estonia, the species breeds either in forested coastal areas or in montane regions (in Norway, Sweden and Finland) (del Hoyo et al. 1992, Anker-Nilssen et al. 2000). Nests are usually well concealed and located close to water, only occasionally in the proximity of other conspecifics, but may associate with gulls and terns (Cramp & Simmons 1977). Diet during the breeding season is poorly studied, but on fresh water bodies is thought to be comprised mostly of insect larvae, primarily Trichoptera, while in coastal areas – of molluscs (Anker-Nilssen et al. 2000).

Outside the breeding season Velvet Scoter stays mostly in marine waters. It has high preference for sandy areas where it feeds on infaunal or epifaunal species – mainly bivalve molluscs (up to 95% by count and 80% by volume) and, to a lesser extent, gastropods, crustaceans, annelids and even fish (Žydelis 2002, Fox 2003). Diet also varies considerably between regions and wintering sites. In the Baltic Sea Velvet Scoters prefer marine areas with the depth of 10–30 m (Skov et al. 2011).

Survival and productivity

Data and studies on Velvet Scoter survival are few. Koskimies (1975) estimated 72% survival rates for coastal breeding birds in Finland (recalculated in Brown & Houston 1982), whereas survival rates in closely related White-winged Scoter (formerly treated as a subspecies of the Velvet Scoter), breeding in Saskatchewan and undertaking long-distance overland migrations similar to Velvet Scoters breeding in the Arctic, were lower, but still relatively high for a waterbird species – ca. 64% (Brown & Houston 1982). Age at first breeding is 2–3 years; clutch size usually 7–9 eggs; incubation lasts 27–28 days; fledging is at 50–55 days (Cramp & Simmons 1977).

Population growth in Velvet Scoter may be influenced by the density dependence mechanisms (possibly brought about by intraspecific competition for food) at the breeding sites – high breeding density may result in suppression of the overall breeding success (Hartman et al. 2013). Winter weather conditions may influence population dynamics indirectly through the effect on the condition of breeding birds as well as directly through increased juvenile (first-year) mortality in severe winters (Hartman et al. 2013).

Population size and trend

Following a Baltic Sea wide survey of wintering waterbirds in the early 1990s, wintering population size of the Western Siberia & Northern Europe/NW Europe biogeographic Velvet Scoter population was estimated at around 1000000 individuals (Durinck et al. 1994, Delany & Scott 2006). The next detailed assessment of populations of waterbirds wintering in the Baltic Sea took place some 15 years later – it was based on data of comprehensive surveys carried out in 2007–2009. The assessment, done within the framework of SOWBAS (Status of wintering Waterbird populations in the Baltic Sea) project, identified a dramatic decline in the abundance of wintering Velvet Scoters in the Baltic Sea by about 60% or 3.6% per year (Skov et al. 2011), which led to an updated estimate of 450000–500000 individuals of the entire Western Siberia & Northern Europe/NW Europe biogeographic population (Wetlands International 2016) and listing of this species as Endangered (EN) in 2012. Subsequent re-evaluation of newly compiled data by BirdLife International (2015), resulted in downlisting of this species to Vulnerable (VU).

A new coordinated survey of waterbirds wintering in the Baltic Sea was carried out in the winter of 2015/2016, but the final results of this survey are not yet available. Current information on the numbers and trends of wintering Velvet Scoters in the principal range states is provided in Table 2. The reported trends differ from country to country, with pronounced declines reported only for the UK, Estonia and Kaliningrad Region of Russia, with numbers fluctuating or stable in most other countries.

Information on breeding numbers of the Velvet Scoter is scarce, particularly from Russia, which accounts for the major part of the breeding population. Estonia, Finland, Norway and Sweden in total reported just over 18000 breeding pairs (Table 2). Worryingly, all these countries also reported declines in breeding numbers of Velvet Scoters, most of them by 50% or more (Table 2).

**Table 2.** Velvet Scoter population size and trend by country (data provided by national experts).

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Country | Breeding numbers (pairs) | Quality | Year(s) of the estimate | Breeding population trend in the last 10 years (or 3 generations) | Quality | Non-breeding population | Quality | Year(s) of the estimate | Non-breeding population trend | Quality |
| Denmark | 0 | G(O) | – | – |  | 6804\* | G(O) | 2013 | Unknown | P(S) |
| Estonia | 150–300 | M(E) | 2008–2012 | Decreasing (-50%) | M(E) | 20000–200000 | P(S) | 2008–2012 | Declining (-50%) | P(S) |
| Finland | ~5200 | G(E) | 2010 | Decreasing (-84%) | G(E) | Accidental wintering | – | – | Unknown | P(S) |
| Germany | 0 | G(O) | 2000–2015 | – | – | 39000 | M(E) | 2001–2005 | Fluctuating | M(E) |
| Latvia | 0 | G(O) | 1980–2016 | – | – | 20000 | M(E) | 2000–2012 | Stable | M(E) |
| Lithuania | 0 | G(O) | 1988–2016 | – | – | up to 30000 | G(E) | 2010–2013 | Fluctuating | G(E) |
| Norway | 400–650 | M(E) | 2015 | Probably decreasing | M(E) | 20000–30000 | M(E) | 2006 | Stable (+1.55%/y) | G(O) |
| Poland | 0 | G(O) | – | – | – | Data not available yet | G(O) | 2011–2016 | Stable | G(O) |
| Russia | ? | ? | ? | ? | ? | Densities: up to 14.3–62.5 ind./km² | G(O) | 2004–2015 | Decreasing | G(O) |
| Sweden | 7981–12205 | M(E) | 2008 | Decreasing (-30–50%) | G(E) | 2700–8000 | G(O) | 2009–2011 | Fluctuating | G(E) |
| UK | 0 | G(O) | – | – | – | 800–2500 | M(E) | 2005–2009 | Declining (-77%) | M(E) |

*\*– actually observed birds during aerial surveys, may represent more than 70000 birds; final numbers will be established through distance sampling estimation and spatial modelling (I.K.Petersen, pers. comm.).*

|  |  |  |
| --- | --- | --- |
| Notes |  |  |
| ✓ | Quality: | **Good (Observed) [G(O)]** = based on reliable or representative quantitative data derived from complete counts or comprehensive measurements.  **Good (Estimated) [G(E)]** = based on reliable or representative quantitative data derived from sampling or interpolation.  **Medium (Estimated) [M(E)]** = based on incomplete quantitative data derived from sampling or interpolation.  **Medium (Inferred) [M(I)]** = based on incomplete or poor quantitative data derived from indirect evidence.  **Poor (Suspected) [P(S)]** = based on no quantitative data, but guesses derived from circumstantial evidence. |

2 - THREATS

General overview

The assessment of threats and limiting factors for the Velvet Scoter population used threats identified during in the previous Management Plan as a starting point. These threats were re-evaluated by species experts using the following definitions of threat levels:

* Critical: a factor causing or likely to cause very rapid declines and/or extinction;
* High: a factor causing or likely to cause rapid decline leading to depletion;
* Medium: a factor causing or likely to cause relatively slow, but significant, declines;
* Low: a factor causing or likely to cause fluctuations;
* Not relevant: a factor not relevant for the area and/or season and not likely to have any effect on population.

National assessments of each threat, initially identified in the 2007 EU Management Plan for Velvet Scoter, are summarised in Table 3. It is worth mentioning that none of the threats in any of the countries have been assessed as being of critical importance. On wintering grounds, by-catch of Velvet Scoters in fishing gear was overall considered the most important threat, followed by habitat loss/degradation and marine pollution. Negative impact from disturbance was perceived as a threat of medium importance in some areas of intensive shipping traffic. On the other hand, human disturbance was identified as a medium-importance threat for breeding birds in all countries within the breeding range (except Russia, for which no data from breeding areas has been received so far). Habitat loss/degradation was also an issue in some breeding areas (e.g. overgrowing of breeding habitats in Estonia). In addition to threats listed in the 2007 Velvet Scoter Management Plan, only viral diseases in nestlings and predation by mink were identified as novel local threats in Finland.

Climate change is thought to have a potential to affect waterbird populations in a variety of ways and through a number of different mechanisms, some of which may have negative, while others – positive outcomes for the species in question (Fox et al. 2015). However, given the global nature of these potential effects, both in terms of impacts and potential solutions, the potential threats posed by the climate change are not included in this report.

By-catch in fishing gear

Wintering Velvet Scoters aggregate in large numbers in shallow marine waters that are also often extensively used by coastal gill net fisheries (e.g. Sonntag et al. 2012, Bellebaum et al. 2013). Being bethivorous, Velvet Scoters feed by diving to the sea bottom, which greatly increases their chances of encountering and getting entangled in gill nets set at a wide range of depths. While somewhat less susceptible to getting entangled in set gillnets than ichthyophagous pursuit divers (e.g. divers, grebes, Alcids), Velvet Scoters rank among the most common victims of fisheries by-catch in the Baltic Sea (Dagys & Žydelis 2002, Žydelis et al. 2009). The importance of this threat to marine birds has been widely recognised in recent years and even declines of some marine bird populations have been at least partly attributed to it (Žydelis et al. 2009, 2013, Fox et al. 2015). The effect of this threat varies between sites, species affected, fishing techniques and gear types used in the fishery (Dagys & Žydelis 2002, Žydelis et al. 2009, Shester & Micheli 2011).

Habitat loss/degradation

Habitat loss/degradation as a potential threat to breeding Velvet Scoters has been identified in Estonia (high threat level) and Norway (medium threat level). In Estonia, habitat loss on breeding grounds occurs through the overgrowing of breeding habitats (L. Luigujõe, pers. comm.).

Habitat loss/degradation on wintering grounds has been identified as a medium- to high-level threat in more than half of the principal wintering range states (Table 3). Actual causes of habitat loss/degradation may be country specific and arise from sea bottom modification (e.g. sand extraction, dumping), installation of wind power plants that cause avoidance of former feeding areas by birds (e.g. Krijgsveld 2014). Wind power plants may also cause a threat of direct mortality, particularly to migrating waterbirds, but this threat is rather difficult to quantify and more high precision flight data are needed for that. Bottom trawling fishery may also have a negative effect on this species as soft bottom habitats, preferred by wintering Velvet Scoters, are also most suitable for bottom trawlers that avoid stony bottom habitats.

Marine pollution

Marine oil pollution, arising either from operational discharges from oil installations or ships (unintentional or otherwise) – oil products from engine compartments, ballast waters, etc., or from ship traffic and coastal or marine oil installation accidents, pose a serious threat to wintering Velvet Scoters that aggregate in high numbers and relatively high densities in marine regions with intensive ship traffic and oil-related activities. Just as other species of waterbirds, that spend most of their time on sea surface and feed by diving, Velvet Scoters are particularly vulnerable to oil slicks on sea surface. Oiled birds may suffer various consequences, depending on the degree and nature of oiling – from direct mortality through drowning, hypothermia caused by disruption of insulating layer of feathers or poisoning through the ingestion of oil while preening feathers, to various indirect or sub-lethal effects, ranging from decrease in body condition and reduced survival to behavioural effects and changes in breeding success.

Disturbance

Disturbance in breeding areas (e.g. by boats) is known to increase the mortality of ducklings thus reducing the reproductive output of Velvet Scoters (Mikola et al. 1994).

On wintering grounds Velvet Scoters may be locally disturbed by artisan fishing boats involved in gillnet fishery, but such disturbances usually have a very limited and local character. However, for example in Germany, Velvet Scoters are mainly found in the EEZ of the Pomeranian Bay, where they may be affected by disturbance from shipping traffic. In this area shiping traffic has significantly increased, in some parts doubled since 2006. One important reason is increased traffic to Szczecin and Świnoujście ports (PL), which is promoted by deepening the shipping routes in the Pomeranian Bay and Świnoujście roads. Large scale avoidance of shipping lanes has also been observed in Lithuania (Žydelis 2002).

**Table 3.** Assessment of threats for Velvet Scoter by country (threat level identified in 2007 is provided in brackets after the threat name).

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Country | Habitat loss/degradation – breeding (low/medium) | Habitat loss/degradation – wintering (low/medium) | Harvesting (local) | By-catch in fishing gear (unknown/medium) | Pollution– breeding (unknown) | Pollution – wintering (medium) | Human disturbance– breeding (medium) | Human disturbance – wintering (low/local) |
| Denmark | Not relevant | Medium/ Low | Low | Low | Not relevant | – | Not relevant | Medium |
| Estonia | High | High | Not relevant | Medium | Medium | High | Medium | Low |
| Finland | Low | Not relevant | Not relevant | Low | Low | Not relevant | Medium | Not relevant |
| Germany | Not relevant | Medium | Not relevant | High/ Medium | Not relevant | Low | Not relevant | Medium |
| Latvia | Not relevant | High | Low | Medium | Not relevant | Medium | Not relevant | Low |
| Lithuania | Not relevant | Low | Not relevant | High | Not relevant | Medium | Not relevant | Low |
| Norway | Medium/ Low | Low | Low | Low | Low | Medium/ Low | Medium/ Low | Low |
| Poland | Not relevant | Low | Not relevant | High | Not relevant | Low | Not relevant | Low |
| Russia (wintering) | Not relevant | Medium | Not relevant | Low | Not relevant | Medium | Not relevant | Low |
| Sweden | Low | Medium/ Low | Not relevant | Low | – | – | Medium | Low |
| UK | Not relevant | Not relevant | Not relevant | Not relevant | Not relevant | Not relevant | Not relevant | Not relevant |

3 - POLICIES AND LEGISLATION RELEVANT FOR MANAGEMENT

International conservation and legal status of the species

**IUCN Global Red List Status** – Vulnerable (A2abcde+3cde+4bcde); previously assessed as Endangered (2012, 2013).

**African-Eurasian Migratory Waterbird Agreement** – column A (1b).

**Bonn Convention** – Appendix II (1979).

**Convention on International Trade in Endangered Species (CITES)** – Not listed.

**Bern Convention** – Appendix III

**European Red List Status** – Vulnerable (VU) (BirdLife 2015)

**European regional assessment** – Vulnerable (VU)

**EU27 regional assessment** – Vulnerable (VU)

**HELCOM Red List of Baltic Sea species in danger of becoming extinct**: breeding – Vulnerable (VU; A2b); wintering – Endangered (EN, A2b) (HELCOM 2013).

EU Policies that have direct or indirect impact on the species

Velvet Scoter is listed in Annex II Part B of the **EU Birds Directive** for Denmark, Germany, France, Ireland, Latvia, Finland, Sweden and United Kingdom, making this species a potential game species in these countries (see below and Table 4 for more details).

EU Common Fisheries Policy may have an indirect effect on wintering Velvet Scoters through its impact on fisheries practice on the species' wintering grounds.

EU Plan of Action for reducing incidental catches of seabirds in fishing gears may have direct implications for the management and reduction of the by-catch impact on Velvet Scoters as well as other marine waterbird species.

National policies, legislation and ongoing activities

No national species action plans have been adopted in the principal range states of the species. Only France, which holds relatively small wintering numbers of this species, has adopted a National Plan of Action for Velvet Scoter for the period 2015–2020 in 2014 (Girard & Troilliet 2014).

No projects aimed exclusively at the conservation of the Velvet Scoter have been implemented. However it was among the target species in some EU LIFE projects:

* *Baltic MPAs - Marine protected areas in the Eastern Baltic Sea (LIFE05 NAT/LV/000100)*. 2005-2009. Extensive waterbird inventories were carried out in marine waters of Latvia, Lithuania and Estonia, following by the designation of a number of SPAs, some of them for the protection of Velvet Scoters. By-catch of waterbirds in fishing gear was studied during the project and alternative fishing methods, aimed at reducing the bird by-catch were suggested and tested.
* *DENOFLIT – Inventory of marine species and habitats for development of NATURA 2000 network in the offshore waters of Lithuania (LIFE09 NAT/LT/000234)*. 2010-2015. The project was aimed primarily at identification of important wintering areas for seabirds and designation of SPAs in offshore waters of the Lithuanian EEZ. One of the newly established marine SPAs has Velvet Scoter as a target species. Velvet Scoters were also tracked throughout their annual cycle by means of implantable satellite transmitters, providing data on their wintering and breeding areas as well as migration.

Regulated use and management of the species

Velvet Scoter is listed in Annex II Part B of the EU Birds Directive as a potentially huntable species in eight EU member states (Denmark, Germany, France, Ireland, Latvia, Finland, Sweden, United Kingdom). However, open seasons were reported only for Denmark (1 October – 31 January) and Latvia (2nd Saturday of August – 30 November) as well as Russia (2nd Saturday of August – 15 November). However, Velvet Scoter has been removed from the list of huntable species in Latvia as of 7 September 2016. Thus, it appears that there is little interest in Velvet Scoter as a game species in wintering areas (Table 4).

Coverage of the Velvet Scoter in protected areas

The summary of Velvet Scoter coverage in protected areas of international networks (IBA, Ramsar, Natura 2000) and national protected areas is presented in Table 5 below.

Monitoring

There is no special monitoring of wintering Velvet Scoters in any for the range countries, however, in all countries except Russia Velvet Scoters are counted under various waterbird monitoring schemes, with various degrees of coverage. National monitoring schemes and surveys, which include Velvet Scoter, are summarised Table 6.

**Table 4.** Velvet Scoter national legal protection, species projects and monitoring.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Country** | **Protection** | **Hunting season** | **National action plan** | **National working group** | **Monitoring** |
| Denmark | Unprotected | 1 October – 31 January | No | No | Yes |
| Estonia | Protected from killing, nest destruction and disturbance | Not huntable | No | No | Yes |
| Finland | Protected from killing, nest destruction and disturbance | Mainland – No open season  Åland – No open season1 | No | No | Yes |
| Germany | Protected from killing and disturbance | No open season | No | No | Yes |
| Latvia | Unprotected | No open season as of 7 September 2016 | No | No | Yes |
| Lithuania | Protected from killing | Not huntable | No | No | Yes |
| Norway | Protected from killing and nest destruction | No open season2 | No | No | Yes |
| Poland | Protected from killing | Not huntable | No | No | Yes |
| Russia | Unprotected | 2nd Saturday of August – 15 November | No | No | No |
| Sweden | Protected from killing | No open season3 | No | No | Yes |
| UK | Protected from killing | No open season4 | No | No | Yes |

1 – http://www.visitaland.com/en/do/hunting/

2 – http://www.face.eu/sites/default/files/norway\_en.pdf

3 – http://jagareforbundet.se/jakten/jakttider/#Blekinge län,-1,2016-01-01,2016-12-31,

4 – https://basc.org.uk/game-and-gamekeeping/quarry-species-shooting-seasons/

**Table 5.** Coverage of the Velvet Scoter in protected areas.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Country** | **% in IBAs** | **% in Ramsar sites** | **% in SPAs** | **% in national PAs** |
| Denmark | N/A; can be estimated | N/A; can be estimated | 46–74% | N/A; can be estimated |
| Estonia | 90–100% | 50–90% | 90–100% | 0–10% |
| Finland | 5–15% (raw estimate) | 2–5% (raw estimate) | 10–20% (raw estimate) | 5–10% (raw estimate) |
| Germany | 50–90% | N/A | 80% | 80% |
| Latvia | 80–100% | 0–10% | 80–100% | 80–100% |
| Lithuania | 50–80% | 0% | 70–90% | 70–90% |
| Norway | N/A | N/A | – | N/A |
| Poland | 80–98% | 0% | 67–97% | N/A |
| Russia | 0–10% (wintering only) | 0% | – | 0–10% (wintering only) |
| Sweden | N/A | N/A | N/A | N/A |
| UK | 10–50% | 24.3% | 24.3% | 50–90% |

**Table 6.** Monitoring of the Velvet Scoter.

|  |  |
| --- | --- |
| Country | Comments |
| Denmark | National monitoring program every six summers (for mapping moulting birds) and every three winters for wintering/migrating birds. The surveys are multi-species surveys, not specifically aiming at Velvet Scoter. Many line transect surveys. The monitoring program aims at describing distribution within as well as outside of the Danish SPAs. |
| Estonia | IWC midwinter counts since 1967. Data since 1990 in the computer.  Small Island monitoring scheme will cover nearly all Velvet Scoter islands. |
| Finland | Species is monitored among other species in archipelago in National Archipelago Bird Monitoring (about 2500 islands included; most protected, but some also non-protected). In northern Finland the species is not adequately monitored. Also in Åland in SW Finland, monitoring is not sufficient. |
| Germany | A national winter census every 3 years (observer-based aerial survey) is covering the entire German Baltic (EEZ and the territorial waters). Covers offshore SPAs. A survey of the Pomeranian Bay, the main staging area for Velvet Scoter, is conducted every 2 years, including ship-based surveys. |
| Latvia | The national biodiversity monitoring programme foresees annual mid-winter counts from coast, transect counts from plane in winter covering all territorial and EEZ waters 3 times during 6 year period, transect counts from plane in autumn covering all territorial and EEZ waters 2 times during 6 year period and transect counts from ship in spring for estimating *Clangula* and *Melanitta* total numbers, density and demographic parameters every 2nd year. Coastal counts in January 2015 and 2016 and aerial transect counts in February 2016 have already taken place as part of the state monitoring programme. |
| Lithuania | Monitoring of wintering waterbirds at present carried out only from the coast in two coastal SPAs. Three counts are carried out per wintering season every three years. So far no counts in offshore areas, but foreseen in the future. |
| Norway | Monitoring of the wintering population. Annual counts in 10 areas along the Norwegian coast. Some protected areas covered. |
| Poland | There is a national monitoring of wintering seabirds in Polish Baltic zone, which started in 2011 and was prolonged up to 2018 (it is planned as long-term data collection, but the decision on prolongation is taken every 3 years). This mid-winter ship and coastal survey covers all marine Natura 2000 areas, including almost all wintering sites of Velvet Scoters in Poland. Additionally long-term data collected annually since 1984 are available from the Gulf of Gdańsk area (western part) and from some other sections of the Polish coast. |
| Russia | There is no official fixed seabird monitoring scheme (ship/plane) in the Kaliningrad region at the present time. Earlier seabird monitoring conducted to evaluate the impact of oil extraction by "Lukoil - Kaliningradmorneft". Currently, these works are not carried out. The database for the study period from 2003 to 2015, is owned by "Lukoil - Kaliningradmorneft". At the present no such surveys are carried out. |
| Sweden | National monitoring program for coastal breeding birds started in 2015. Inland breeding birds covered by the Swedish monitoring program.  Midwinter counts from the ground producing annual midwinter indices. Offshore aerial surveys of wintering areas in 2009, planned for 2016. |
| UK | Annual count data are predominantly derived from the Wetland Bird Survey and are thus land-based counts that are known to under-estimate the number of seaducks present.  There is no national monitoring scheme in the UK using appropriate methods for seaducks such as Velvet Scoter. |

4 - REFERENCES

Anker-Nilssen, T., Bakken, V., Strøm, H., Golovkin, A.N., Bianki, V.V., Tatarinkova, I.P. 2000. The Status of marine birds breeding in the Barents Sea Region. Norsk Polarinstitutt Rapport Nr. 113.

Bellebaum, .J, Schirmeister, B., Sonntag, N., Garthe, S. 2013. Decreasing but still high: bycatch of sea-birds in gillnet fisheries along the German Baltic coast. Aquatic Conserv: Mar. Freshw. Ecosyst. 23: 210–221.

BirdLife International 2015. European Red List of Birds. Luxembourg: Office for Official Publications of the European Communities.

BirdLife International & NatureServe 2014. Bird Species Distribution Maps of the World. 2015. Melanitta fusca. The IUCN Red List of Threatened Species. Version 2016-2.

Brown, P.W., Houston, C.S. 1982. Longevity and Age of Maturity of White-winged Scoter. J Field Ornithol 53: 53–54.

Collinson, M., Parkin, D.T., Knox, A.G., Sangster, G., Helbig, A.J. 2006. Species limits within the genus *Melanitta*, the scoters. British Birds 99: 183–201.

Copenhagen. TemaNord 2011:550.

Dagys, M., Žydelis, R. 2002. Bird bycatch in fishing nets in Lithuanian coastal waters in wintering season 2001–2002. Acta Zoologica Lituanica 12: 276–282.

del Hoyo, J., Elliot, A., Sargatal, J. 1992. Handbook of the Birds of the World, vol. 1: Ostrich to Ducks. Lynx Edicions, Barcelona, Spain.

Delany, S., Scott, D. (eds) 2006. Waterbird Population Estimates – Fourth Edition. Wetlands International, Wagingen, The Netherlands.

Durinck, J., Christensen, K.D., Skov, H., Danielsen, F. 1993. Diet of the Common Scoter *Melanitta nigra* and Velvet Scoter *Melanitta fusca* wintering in the North Sea. Ornis Fennica 70: 215–218.

Durinck, J., Skov, H., Jensen, F.P., Pihl, S. 1994. Important Marine Areas for Wintering Birds in the Baltic Sea. EU DG XI research contract no. 2242/90-09-01. Ornis Consult report.

Elts, J., Leito, A., Leivits, A., Luigujõe, L., Mägi, E., Nellis, R., Nellis, R., Ots, M., Pehlak, H. 2013. Status and numbers of Estonian birds, 2008–2012. Hirundo 26(2): 80–112 (in Estonian with English summary).

Fox , A.D. 2003. Diet and habitat use of scoters Melanitta in the Western Palearctic - A brief

Fox, A.D., Jónsson, J E., Aarvak, T., Bregnballe, T., Christensen, T.K., Clausen, K.K., Clausen, P., Dalby, L., Holm, T.E., Pavón-Jordan, D., Laursen, K., Lehikoinen, A., Lorentsen, S.-A., Møller, A.P., Nordström, M., Öst, M., Söderquist, P., Therkildsen, O.R. 2015. Current and potential threats to Nordic duck populations — a horizon scanning exercise. Ann. Zool. Fennici 52: 193–220.

Gedeon, K., Grüneberg, C., Mitschke, A., Sudfeldt, C., Eickhorst, W., Fischer, S., Flade, M., Frick, S., Geiersberger, I., Koop, B., Kramer, M., Krüger, T., Roth, N., Ryslavy, T., Stübing, S., Sudmann, S.R., Steffens, R., Vökler, F., Witt, K. 2014. Atlas Deutscher Brutvogelarten – Atlas of German Breeding Birds. Stiftung Vogelmonitoring and Dachverb and Deutscher Avifaunisten, Münster.

Girard, O., Troilliet, B. 2014. Plan national de gestion (2015–2020) Macreuse brune (Melanitta fusca). Office national de la chasse et de la faune sauvage, Chanteloup, France.

Hario, M., Rintala, J. 2011. Saaristolintukantojen kehitys Suomessa 1986-2010. Linnut vuosikirja 2010: 40–51 (with English summary).

Hartman, G., Kölzsch, A., Larsson, K., Nordberg, M., Höglund, J. 2013. Trends and population dynamics of a Velvet Scoter (*Melanitta fusca*) population: influence of density dependence and winter climate. Journal of Ornithology 154: 837–847 (DOI: 10.1007/s10336-013-0950-7).

HELCOM 2013. HELCOM Red List of Baltic Sea species in danger of becoming extinct. Balt. Sea Environ. Proc. No. 140.

Kahlert, J., Leito, A., Laubek, B., Luigujõe, L., Kuresoo, A., Aaen, K., Luud, A. 2012. Factors affecting the flight altitude of migrating waterbirds in Western Estonia. Ornis Fennica 89: 241–253.

Koskimies, J. 1957. Nistortstreue und Sterblichkeit bei einem marinen Bestand der

Krijgsveld, K.L. 2014. Avoidance behaviour of birds around offshore wind farms. Overview of knowledge including effects of configuration. Bureau Waardenburg bv. The Netherlands.

Latvian Breeding Bird Atlas 2000–2008 http://www.lob.lv/lv/atlants/index.php

Latvian Breeding Bird Atlas 2013–2017 http://www.lob.lv/lv/eiropas\_atlants/index.php

Luigujõe, L., Kuresoo, A. 2000. Non-breeding staging areas for common and Velvet Scoter in Estonia. Scoter Workshop, Wetlands International Seaduck Specialist Group. 29 November – 3 December 2000. Mols, Denmark.

Markones, N., Guse, N., Borkenhagen, K., Schwemmer, H., Garthe, S. 2015. Seevogel-Monitoring 2014 in der deutschen AWZ von Nord- und Ostsee. Unpublished report for BfN.

Mikola, J., Miettinen, M., Lehikoinen, E., Lehtilä, K. 1994. The effects of disturbance caused by boating on survival and behavior of velvet scoter Melanitta fusca ducklings. Biological Conservation 67: 119–124.

Ottosson, U., Ottvall, R., Green, M., Gustafsson, R., Haas, F., Holmqvist, N., Lindström, Å., Nilsson, L., Svensson, M., Svensson, S., Tjernberg, M. 2012. Fåglarna i Sverige: antal och förekomst. Sveriges ornitologiska förening, Halmstad, pp 84-85.

overview. Wildfowl 54: 163–182.

Priednieks, J., Strazds, M., Strazds, A., Petriņš, A., Vīksne, J. (ed.) 1989 Latvian Breeding Bird Atlas 1980-1984, Rīga, Zinātne, 296 pp.

Samtente, Melanitta fusca. Die Vogelwarte 19: 46–52.

Shester, G.G., Micheli, F. 2011. Conservation challenges for small-scale fisheries: Bycatch and habitat impacts of traps and gillnets. Biological Conservation 144: 1673–1681.

Shimmings, P., Øien, I.J. 2015. Bestandsestimater for norske hekkefugler (Population numbers of Norwegian breeding birds). NOF-Rapport 2015-2, 268 p. (Can be downloaded from http://birdlife.no/prosjekter/rapporter/2015\_02\_NOF.pdf)

Skov, H., Heinänen, S., Zydelis, R., Bellebaum, J., Bzoma, S., Dagys, M., Durinck, J., Garthe, S., Grishanov, G., Hario, M., Kieckbusch, J.J., Kube, J., Kuresoo, A., Larsson, K., Luiguoje, L., Meissner, W., Nehls, H.W., Nilsson, L., Petersen, I.K., Roos, M.M., Pihl, S., Sonntag, N., Stock, A., Stiepniece, A., Wahl, J. 2011. Waterbird populations and pressures in the Baltic Sea. Nordic Council of Ministers,

Sonntag, N., Schwemmer, H., Fock, H.O., Bellebaum, J., Garthe, S. 2012. Seabirds, set-nets, and conservation management: assessment of conflict potential and vulnerability of birds to bycatch in gillnets. ICES Journal of Marine Science 69: 578–589.

Strann, K.K. 2006. Sjøorre Melanitta fusca. P 96-97 in Svorkmo-Lundberg, T., Bakken, V., Helberg, M., Mork, K., Røer, J.E., Sæbø, S. (eds). Norsk vinterfuglatlas. Fuglenes utbredelse, bestandsstørrelse og økologi vinterstid. In Norwegian (Norwegian wintering bird Atlas. Distribution, population size and ecology of wintering birds). Norsk Ornitologisk Forening, Trondheim.

Wetlands International 2016. "Waterbird Population Estimates". Retrieved from wpe.wetlands.org on Saturday 10 Sep 2016.

Žydelis, R. 2002. Habitat selection of waterbirds wintering in the Lithuanian coastal zone of the Baltic Sea. Doctoral dissertation, Institute of Ecology.

Žydelis, R., Bellebaum, J., Österblom, H., Vetemaa, M., Schirmeister, B., Stipniece, A., Dagys, M., van Erden, M., Garthe, S. 2009. Bycatch in gillnet fisheries – An overlooked threat to waterbird populations. Biological Conservation 142: 1269–1281.

Žydelis, R., Small, C., French, G. 2013. The incidental catch of seabirds in gillnet fisheries: A global review. Biological Conservation 162: 76–88.