

**Introduction**

The Kingdom of Sweden is a Nordic country on the Scandinavian Peninsula in Northern Europe, bordered by the Baltic Sea (Gulf of Bothnia in the east, Kattegat and Skagerrak in the west), Norway (west) and Finland (north/north-east).

The Coast Guard registers 200-300 oil spills in the Swedish area of the Baltic Sea annually, with peaks up to over 480. These spills are known to kill 200,000 Long-tailed ducks every year (killings of other species are unreported).

In terms of risk, the Gulf of Bothnia ranks low as it does not have major shipping routes crossing the area. The area is visited by predominantly high quality ships. In terms of oil spills (inc. chronic pollution) and preparedness, the coastline (and local authorities) between Västra Götaland in the west (Skagerrak) up to Stockholm will be most challenged.

**Seabirds**

The Baltic Sea is a very important wintering area for seabirds, totaling about nine million individuals of about 30 species every year. More than 90% of the birds winters within an area of less than five percent of the total Baltic sea area. The birds can be found on offshore banks, in lagoons and along the coasts. In Sweden, the species most vulnerable to oiling include Eiders, Velvet Scooters, Common Scooter, Long Tailed Duck and Red Breasted Merganser. These species winter in large numbers (resp. ~18,000; ~6,000; ~40,000; ~80,000; and ~4,000), and especially Kalmarsund, Öland, Hanöbukten and SW Skania are important areas of congregation (Nilsson, 2007).

**Marine mammals**

The population of Grey Seals along the Swedish coast is assessed 7,500 individuals (status 2006), most of them inhabiting the Stockholm Archipelago and Aland Sea (over 4000 individuals). Other areas where they occur are Bothnian Bay (~1500 individuals), and Östergötland/Södermanland (~1500 individuals) and South Sweden (a few hundred animals).

**Regional Seas**

Baltic Sea (inc. Kattegat, Baltic Sea proper, Gulf of Bothnia)  
North Sea (Skagerrak)

**Past experience**

So far Sweden has experienced three major maritime emergencies in its area of responsibility, i.e. the Volgoneft (1989), the Baltic Carrier (2001) and the Fu Shan Hai (2003). Only from the latter incident, an oiled wildlife activity has been reported. In that case, a 6-700 birds were oiled of which 300 mute swans. Because of incidental actions to shoot oiled birds and other actions to capture them, most of the victims were scattered over 200km of coast. In total 67 birds were captured and taken into a rehabilitation centre, of which 42 made it to a release. Less than 100 birds were collected dead from beaches and 20 were shot.

**Response: the role of the authorities**

The responsibility for various environmental rescue issues and services in the event of oil spills is shared between several national regional and local authorities. Municipal authorities are responsible for cleanup operations and the police and fire brigade activities in their own geographical areas. Under certain circumstances, the County Administrative Boards may take over these responsibilities, especially in larger incidents that affect more than one municipality. The Rescue Services Agency (Räddningsverket) coordinates public sector activities and supervises the municipal fire brigades. The Agency supports municipal authorities with personnel and materials from five regional oil combating depots, and also deals with compensation issues.

The Coast Guard (Kustbevakningen) is responsible for emergency services and coordinates activities regarding oil combat at sea. The Environmental Protection Agency (Naturvårdsverket) is the national environmental authority and will be involved in monitoring the environmental effects of oil spills. The Environmental Research Institute (IVL-Svenska Miljöinstitutet AB) will provide so called emergency oil services to the Environmental Protection Agency and other authorities, including expert advice on decontamination issues.

Oiled wildlife response is not a formal activity in Sweden. It has been routine practice that oiled birds are shot although this has happened ad hoc and not as a coordinated, and well prepared response activity. Increasingly, wildlife rehabilitators are allowed to undertake a rescue and rehabilitation effort, although there is still scepticism with some institutes such as IVL and SRSA.

The Swedish Environmental Protection Agency (under the Ministry of Environment) would be the main player to further oiled wildlife response planning.

### **Oiled wildlife response**

#### Formal guidelines?

There is no formal policy in Sweden. Traditionally, oiled animals are euthanised on an ad hoc basis, especially if they are concerning birds that are considered of no conservation value. However, in some regions attempts to rehabilitate birds are allowed, such as happened in the Fu Shan Hai incident. Recognised wildlife groups make their arrangements directly with the Coast Guard and the involved local municipalities.

#### Response objectives and strategy

Not formally defined. Interested wildlife rehabilitators would concentrate to capture and rehabilitate those species that are known to rehabilitate well. Other animals would be euthanized if appropriate given the circumstances.

In case of an oiled wildlife incident, the Swedish Environmental Research Institute provides a general advice to the Municipalities in question on how to deal with casualties, but in the end it is a Municipality that takes the decision.

In large incidents hunters are hired to shoot birds. In some cases, especially when rare species are involved, a decision can be taken to wash the animals.

#### Euthanasia or rehabilitation?

Not formally defined. See als "objectives and strategy.

#### Impact assessment

Not formally defined. The Swedish Environmental Protection Agency has the general responsibility to advise municipalities and county boards on the practicalities of general oil spill impact assessment. In case scientific data collection on dead birds need to be carried out, the Swedish Ornithological Society but also Gotland University are likely to be interested in participation.

#### Notification and early response

Not formally defined.

### **Wildlife responders**

There are different groups of wildlife responders. Most experienced and active in oiled wildlife rehabilitation is the KfV's Riksförbund (Swedish Wildlife Rehabilitators Association). There are some 40 associated members

of this organisation with small rehab centres throughout the country. Only 3 of them (based in Kristianstad-Bromölla, Skanör and Kungälv) have some advanced experience with and knowledge of oiled wildlife rehabilitation and each of them is supposed to have a capacity of at least 100 oiled birds. There is good cooperation amongst these centres and they would assist each other in case of large numbers of casualties. Other centres with less capacity but with knowledge are based in Skurup-Sjöbo, Malmö, Ystad and Simrishamn. All the mentioned centres are based in the south of Sweden (Skania). One centre, based in Stockholm, has knowledge but is depending on temporary facilities to handle oiled birds. Work is being done to create a facility on Gotland, where annually many animals (mainly long tailed dicks) are oiled.

Another response group is the Swedish Hunters Association

**Cooperation between stakeholders**

KFV's Riksförbund has developed a good relationship with the Coast Guard and a number of municipalities, especially in Skanör.

**Permanent facilities**

There are no large facilities in Sweden. Many small scale rehabilitation centres exist throughout Sweden, but the ones most experienced in oiled wildlife response are concentrated on the south coast (see "Wildlife responders").

**Current processes**

The Swedish Wildlife Rehabilitation Association (KFV's Riksförbund) and Animal Welfare Sweden (Djurskyddet) are planning to organise a national meeting for key organisations, including authorities, to discuss national oiled wildlife response planning. This meeting would take place March 2008.

**Documentation and references**

## General references

Nilsson, L. 2007. International waterfowl and goose counts in Sweden. Annual report 2006/07. Department of Ecology, Lund University. 44 pp.

K.-E. Kulander et al. (2005). Oil combating along the Swedish coastline and in the major lakes up to 2010. Swedish Rescue Services Agency, Karlstad. pp33.

J.A. Hillarp (2004). The Fu Shan Hai incident in June 2003. In: The Third Sea Alarm Conference - Proceedings. Sea Alarm Foundation. pp 50.

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