



marine protected areas
in the Eastern Baltic Sea



LIFE Nature project “Marine Protected Areas in the Eastern Baltic Sea”
Reference number: LIFE 05 NAT/LV/000100

Executive summary: **Action C1 – Assessing and reducing impact of fishery by-catch on species of community interest** Action leader P13, Institute of Ecology of Vilnius University

Goal of the action

The main goal of this action was to investigate in detail the impact of fisheries on waterbirds and marine mammals in the Eastern Baltic Sea and, if necessary, to provide recommendations for mitigation of any significant impacts. In addition, the impact of fishery on seals was investigated in Estonia. In Lithuania and Latvia, only waterbird by-catch in fishing gear was investigated, whereas in Estonia, seal by-catch as well as seal damage to fishing gear was investigated in addition to the waterbird by-catch.

Activities implemented

As an initial preparatory step of the action, detailed background information on commercial fishery in each of the three countries was collected and summarised in a report. This summary includes various organisational aspects of the fisheries – spatial organisation (fishing sectors), licensing, distribution of fishing quotas, reporting, fishery control, fishing restrictions (temporal, spatial, gear type, catch size, etc.) as well as information on the numbers and type of vessels/companies involved, fishing gear used, intensity trends, catches, etc. Extensive literature survey was carried out on the available studies, publications, reports on bird and mammal bycatch in relevant fishing gear, measures for mitigation and avoidance of such bycatch suggested or implemented elsewhere.

By-catch data was collected in several ways during the project. First of all, data on waterbirds and seals (in Estonia only) caught in fishing gear was collected from co-operating fishermen, operating under normal conditions along their normal fishing schedule and with traditional fishing gears. In addition, experimental fishing was carried out in Lithuania and Estonia, in order to collect an unbiased sample of bycatch data. The collected data were analysed in order to obtain bycatch rates, which allowed rough estimation of bycatch victims as well as comparison of different types of fishing gear in respect of the threat posed to birds.

Results achieved

Analysis of seal bycatch in Estonia revealed that *ca.* 280 seals drown in fishing gear in Estonia every year, 90–95% of them being grey seals. While any bycatch of seals in fishing gear is ethically hardly acceptable, bycatch does not appear to have hampered the continuing growth of populations of both species of seals, probably because mostly young seals, which have high

mortality anyway, become victims of bycatch. Thus, bycatch of seals in fishing gear at present in Estonia should not be considered a major threat on a population level.

Information on more than 700 waterbird bycatch events was collected during the project in all the three countries. Although the species composition of bycatch victims differed among the countries and reflected species composition of birds concentrating in different seasons in areas of commercial fishery, most common bycatch victim in all the countries was the Long-tailed Duck, which accounted for 50–60% of all the caught birds. Other common victims in Latvia and Lithuania included Velvet Scoter, divers and alcids, while in Estonia – Tufted Duck and mergansers. In all the three countries, large mesh size gillnets (>50 mm) were found to be most dangerous to birds, although only in Lithuania bycatch rate and its extent were considered to be high enough to warrant inclusion of special mitigation measures into management plans for Lithuanian SPAs.

Main lessons learned

The overall finding of bycatch assessment was that the present threat posed to waterbirds in the Baltic countries had a tendency to decrease, which is facilitated by the overall decrease in fishing effort in most areas as well as decreasing numbers of wintering birds, be it due to mild weather conditions or the overall decrease in waterbird populations. However, bycatch of birds in fishing gear cannot be overlooked and ignored, as it poses a real threat to many species of birds, can cause large numbers of casualties under certain conditions and is still poorly monitored and regulated. Obligatory reporting of bird bycatch in fishing gear is one of the measures that could facilitate both understanding the scope and extent of the bycatch phenomenon as well as reducing this threat to birds.