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| Document title | Grey seal census reports |
| Code | 8-3 |
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| Agenda Item | 8 – Core indicators and other activities under the Seal Expert Group teams |
| Submission date | 29.9.2016 |
| Submitted by | Population team |

Background

This document contains the grey seal census reports from 2015 (Annex 1) and 2016 (Annex 2), submitted by the population team. The report from 2016 is still in a draft status and will be completed during the meeting.

Action requested

The Meeting is invited to take note of the information.

Annex 1 Baltic grey seal censuses in 2015

Seal researchers from Denmark, Finland, Estonia, Poland, Russia and Sweden have summarized the results on the grey seal censuses carried out in the Baltic in 2015.

The censuses covered the main distribution area of the grey seal in the Baltic Sea. Censuses were performed during a period from May 25 to June 7 and the counts were used to construct an international summary of the whole sea area.

Censuses are carried out during this time of the year, when grey seals are hauling out on land in maximum numbers due to moult. No ice was available during the survey period, so it is unlikely that this year's counts were affected by seals hauling-out on the ice. The seals were counted from photographs taken during aerial censuses.

Synchrony is important for censuses, especially in the core area of the Baltic grey seal. Today, all censuses are conducted repeatedly. Most areas are counted three times during the census period and the largest results per sea area are summed up to total counted number for the whole Baltic. Results from aerial counts in archipelagos of Central Sweden and Southwestern Finland, the core area of the grey seal moult, were used from period of [???]. It should be noted that all seals are not hauling-out at the same time and some animals may have escaped the censuses due to human disturbance.

Census results are presented by sea area. Census results should be understood as a relative index of abundance, which is smaller than the real population size. The essential use of these numbers is to estimate the population trend and use that to serve as guidance for management and conservation of grey seal stocks.

The total number of grey seals counted in 2015 was **30 285** individuals. This figure comprises of the following values by sea area: Bothnian Bay and North Quark **1 607**, Sea of Bothnia **2 727**, waters around SW Finnish archipelago including Åland **8 293**, Swedish Baltic proper between Gulf of Bothnia and 58°N (northern tip of Gotland) **9 422**, Gulf of Finland **1 877**, W Estonia **3 968**, (1 877 of them in Baltic Proper and 2 091 in Gulf of Riga), Swedish Baltic proper south of 58°N **2 528**, Danish Baltic waters **906** and Poland **14** (Table 1). Thus, the major part of the grey seal population was concentrated to the Northern part of the Baltic proper during late spring and early summer. It should be noticed that due to movements, distribution of the grey seal population could be different during other parts of the year.

The total figure of approximately **30 285 grey seals** is less than last year's result. Sea level was high and increased during the survey period which made the grey seals to appear at less often used sites. Weather was rather windy during the census period, but relatively good weather conditions could be selected for survey days. Since year 2000 numbers of counted grey seals have been approximately: 9 700, 10 300, 13 100, 16 000, 17 600, 18 300, 20 700, 22 000, 22 300, 20 400, 23 100, 23 900, 28 300, 29 500, 32 200 and 30 285 in 2015. The counted numbers show an increasing trend over the whole period, but the increase has concentrated mostly in the archipelago of central Sweden and in the southern Baltic, of which the latter numbers now exceed 10 % of the total counted population. It still has to be emphasized that the situation during the moulting time does not necessarily exactly reflect the distribution of grey seals at other times of year.

Next survey season will be during period from 23 May to 5 June 2016.

Commented [A1]: Finland: 28 May, Sweden ??? Should Estonia be added or should we stick with the area that has been separated earlier?

Commented [A2]: This describes the Finnish weather conditions.

Commented [A3]:

Commented [A4]: A suggestion. Is that a good period?

GREY SEAL NUMBERS IN 2015

| Area / Country | Estonia | Finland | Russia | Denmark | Sweden | Poland | In total |
|------------------------------|----------------|----------------|---------------|----------------|---------------|---------------|-----------------|
| Bothnian Bay and North Quark | | 371 | | | 1 236 | | 1 607 |
| Sea of Bothnia(1)(2) | | 478 | | | 2 249 | | 2 727 |
| Central Sweden | | | | | 9 422 | | 9 422 |
| SW Finnish archipelago | | 8 293 | | | | | 8 293 |
| Gulf of Finland | 246 | 574 | x | | | | 820 |
| Western Estonia | 1 877 | | | | | | 1 877 |
| Gulf of Riga | 2 091 | | | | | | 2 091 |
| Southern Sweden | | | | | 2 528 | | 2 528 |
| Denmark | | | | 906 | | | 906 |
| Poland | | | | | | 14 | 14 |
| In total | 4 214 | 9 716 | x | 906 | 15 435 | 14 | 30 285 |

1) Sandbäck – Södra Sandbäck in the SE corner of the area, close to SW Finnish archipelago

2) Gräsö-area in Sweden is included into the Sea of Bothnia

x = No count from Russia 2015. Last count in 2012 was around 300 grey seals

Annex 2 Baltic grey seal censuses in 2016

Seal researchers from Denmark, Finland, Estonia, Poland, Russia and Sweden have summarized the results on the grey seal censuses carried out in the Baltic in 2016.

The censuses covered the main distribution area of the grey seal in the Baltic Sea. Censuses were performed during a period from May 23 to June 4 and the counts were used to construct an international summary of the whole sea area.

Censuses are carried out during this time of the year, when grey seals are hauling out on land in maximum numbers due to moult. No ice was available during the survey period, so it is unlikely that this year's counts were affected by seals hauling-out on the ice. The seals were counted from photographs taken during aerial censuses.

Synchrony is important for censuses, especially in the core area of the Baltic grey seal. Today, all censuses are conducted repeatedly. Most areas are counted three times during the census period and the largest results per sea area are summed up to total counted number for the whole Baltic. The maximum result for the Archipelago of Central Sweden is from 24th of May. For the Bothnian Sea, the largest number is from 29th of May and for Northern Quark from 30th of May. Results from South-Western Finland and Estonia are from June 1. **Grey seals in the Northern part of Bothnian Bay and Russian side of Gulf of Finland were not surveyed in 2016.** In recent censuses these areas have had a few tens and a few hundreds of grey seals, respectively. It should be noted that all seals are not hauling-out at the same time and some animals may have escaped the censuses due to human disturbance.

Census results are presented by sea area. Census results should be understood as a relative index of abundance, which is smaller than the real population size. The essential use of these numbers is to estimate the population trend and use that to serve as guidance for management and conservation of grey seal stocks.

The total number of grey seals counted in 2016 was XXXXX individuals. This figure comprises of the following values by sea area: Bothnian Bay and North Quark **1347**, Sea of Bothnia **2699**, waters around SW Finnish archipelago including Åland **9627**, Swedish Baltic proper between Gulf of Bothnia and 58°N (northern tip of Gotland) **9217**, Gulf of Finland **1065**, W Estonia **4088**, (1443 of them in Baltic Proper and 2645 in Gulf of Riga), Swedish Baltic proper south of 58°N **1438**, Danish Baltic waters **589** and Poland **xx** (Table 1).

Thus, the major part of the grey seal population was concentrated to the Northern part of the Baltic proper during late spring and early summer. It should be noticed that due to movements, distribution of the grey seal population could be different during other parts of the year.

The total figure of approximately xxxxx **grey seals** is less than last year's result. Since year 2000 numbers of counted grey seals have been approximately: 9 700, 10 300, 13 100, 16 000, 17 600, 18 300, 20 700, 22 000, 22 300, 20 400, 23 100, 23 900, 28 300, 29 500, 32 200, 30300, and XXXXX in 2016. *The counted numbers show an increasing trend over the whole period with sign of leveling off during last years.* It still has to be emphasized that the situation during the moulting time does not necessarily exactly reflect the distribution of grey seals at other times of year.

Next survey season will be during period of weeks 21 and 22, *May 22 to June 4, 2017.*

GREY SEAL NUMBERS IN 2016

| Area / Country | Estonia | Finland | Russia | Denmark | Sweden | Poland | In total |
|--------------------------------------|-------------|--------------|--------|------------|--------------|--------|-------------|
| Bothnian Bay and North Quarken | | 356* | | | 991 | | 1347 |
| Sea of Bothnia(1)(2) | | 539 | | | 2160 | | 2699 |
| Central Sweden | | | | | 9217 | | 9217 |
| SW Finnish archipelago | | 9627 | | | | | 9627 |
| Gulf of Finland | 420 | 645 | x | | | | 1065 |
| Western Estonia (excl. Gulf of Riga) | 1443 | | | | | | 1443 |
| Gulf of Riga | 2645 | | | | | | 2645 |
| Southern Sweden | | | | | 1438 | | 1438 |
| Denmark | | | | 589 | | | 589 |
| Poland | | | | | | | |
| In total | 4508 | 11167 | | 589 | 13806 | | |

1) Sandbäck – Södra Sandbäck in the SE corner of the area, close to SW Finnish archipelago

2) Gräsö-area in Sweden is included into the Sea of Bothnia

* Only seal sanctuaries of the Quarken

x = No count from Russia 2016. Last count in 2012 was around 300 grey seals