

Agenda for HELCOM-workshop during the SEAEAGLE2017 conference in Estonia

“White-tailed eagle productivity” is one of many HELCOM core set indicators, and such indicators are used to evaluate progress towards the goal achieving good environmental status in the Baltic Sea. The sea eagle indicator is included in the category for “Hazardous substances”, which means that the primary interest of HELCOM regarding sea eagles is effects of pollutants on sea eagle reproduction. There are also biodiversity indicators, but it is important to note that the sea eagle indicator is included in the “Hazardous substances”-set.

The “White-tailed eagle productivity” core indicator report has been a work in progress for several years. Sweden act as lead country, with Finland as co-lead. The core indicator report is not officially published yet, and during this workshop we will review the status of the process and the core indicator report.

During this workshop we will focus on the following topics:

- Current status of the core indicator report and update of the evaluation process. Also, we will give an update on the results and status, as calculated from the most recent data available (the latest update of the data sets were done previously in 2017).
- We are now in a situation where effects of legacy POPs such as DDT and PCB still has negative effects on egg shell parameters and reproduction, at least locally. Brominated and fluorinated compounds have not (yet) been demonstrated to impair sea eagle reproduction in the Baltic region. With increasing eagle populations, the effects of hazardous substances are probably to some extent overridden by ecological processes, manifested as density-dependent effects. It is therefore necessary to evaluate how the core indicator can be improved in the future, by combining population ecology with ecotoxicology. It will be necessary to identify patterns regarding density-dependent mechanisms, and how/if such patterns can be separated from effects of hazardous substances. There are some interesting work being done on this topic, and during the workshop we will discuss mechanisms behind density dependence and if/how the core indicator can be improved in the future.
- Also, we will discuss the needs and ongoing activities on contaminant monitoring in various sea eagle matrices (eggs, feathers, blood samples etc.).
- Monitoring programmes must also assure that field protocols, data collection and terminology are consistent and comparable both within and across countries. Therefore, a supplement to the core indicator report, “Monitoring Guidelines” will be completed before the end of 2017. This guideline document will benefit greatly from input from workshop participants. During the workshop we will therefore review methods and definitions relevant for the core indicator (how to determine territory occupancy, nest status, breeding attempt etc.). The current workshop is also a good platform to discuss other important data collected frequently, such as biometric measures and age determination of nestlings. If the participating countries already have manuals or documents for field work etc., please bring them to the workshop (even if they are in your native language).
- Data storage is to some extent beyond the scope of the core indicator, but it is important to address how different eagle projects handle and store monitoring data.

The general idea for this workshop is primarily to address the status and relevance of the core indicator, and how the indicator itself and future updates of data can be improved. But a second

agenda is also to discuss use of the HELCOM core indicator as a platform for future collaborations regarding monitoring and research.

The workshop will be chaired by **Peter Hellström**, Swedish Museum of Natural History, Stockholm. Questions and suggestions for the workshop can be sent to peter.hellstrom@nrm.se

Info on the HELCOM core set indicators can be found here:

<http://www.helcom.fi/baltic-sea-trends/indicators/>