

PERSISTENT, BIOACCUMULATIVE, TOXIC CHEMICALS IN THE ECOSYSTEM OF THE BALTIC SEA (ESTONIAN DATA)

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Introduction

The Baltic Sea as a virtually enclosed and fairly shallow sea is particularly vulnerable to the toxic organic pollutants. If in the first period (1974-1994) our findings on deposition and concentration in air and precipitation will be combined with studies of how the toxic organic pollutants are transported in the atmosphere, what happens to them in the Baltic Sea and how are they cycling between water, plankton, fish, algae, seals, etc [1], then in the second period (after 1994) the aim of the study was to search reasons for the increase in the Baltic seal population.

Results and discussions

Comparing the food chain of grey seal in the Central Baltic in the beginning of the 1970 and species content during examination catches in spring 1995, we can assume that nowadays the grey seals caught from Estonian monitoring sites cannot have as much fat fish-cod, salmon and sea trout as in the end of 1970's and in the beginning and in the middle of 1980's [2].

Low salinity and oxygen concentration began to affect the evolution of grey seal's (also cod and salmon's) main food, Baltic herring and sprat. The studies concerning the feeding of herring and sprat carried out during the years 1982-1992 in the north-eastern part of the Baltic Sea showed changes in fish diet and also the rising number of fish with an empty stomach [1, 2]. This in turn has noticeably altered the food content of the grey seal - the fatty fishes have been replaced by roach and perch, the PCB content of which is one of the lowest in the Baltic Sea.

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References

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