

Council

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***Russian Studies of Distribution and By-Catch of Atlantic Salmon Post-Smolts
in the Norwegian Sea in 2003***

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In 2003 Russia continued a comprehensive programme to study the by-catch of post-smolts in pelagic fisheries. As in the previous year it included collection of information during the pelagic fish survey by a research vessel and the screening of commercial catches by shipboard observers.

Studies to assess the by-catch of post-smolts were undertaken in the trawl-acoustic survey of mackerel, blue whiting and herring by the research vessel "Smolensk" from 8 - 17 July 2003. The survey covered the area from 64°45N to 68°30N between 03°E and 06°W in the international waters of the Norwegian Sea. A total of 31 hauls were taken in the surface layer (0 - 10 m) by mid-water trawl at a speed of 4 - 4.8 knots. Hauls at deeper depth (to 150 - 300 m) were also taken regularly to sample blue whiting. The whole catch was screened.

Mackerel was registered by the research vessel over the entire area covered by the survey. This species was always found in the hauls when the trawl was towed in the upper sea layer. Mackerel catches varied from 5 kg to 5,395 kg, the average was 429 kg and contained mainly fish 32-38 cm in length and 370-670 g in weight. The total catch of mackerel was 13,293 kg. When towing was conducted with a headline at 30-340 m depth the catch consisted of blue whiting. Neither Atlantic salmon adults nor post-smolts were caught.

In commercial fisheries, information on by-catch of adult salmon and post-smolts was collected on five fishing vessels, which operated in the international waters of the Norwegian Sea in the period from 17 April - 26 September 2003. The hauls were taken at depths from 0 to 400 m according to the vertical distribution of fish.

There were 6 observers and 3 fish inspectors, who worked onboard the fishing vessels which operated in the pelagic fisheries in the Norwegian Sea. Scientific observers reported no adult Atlantic salmon or post-smolts: however, one post-smolt and 15 adult salmon were recorded in July - August by fish inspectors. Two of the adults were caught when the target species was blue whiting. In addition, one fish caught in late July was described as a sea trout. The total catch of four vessels inspected by fish inspectors was 3,800 t of mackerel and 3,400 t of blue whiting. 416 hauls were screened fully or partially.

So, the findings in 2003 confirmed the results obtained in 2002, which showed that the by-catch of post-smolts in the trawl fishery for mackerel in the international waters of the Norwegian Sea was composed only of single individuals. The mid-water trawl used by the commercial mackerel fishery, which cannot capture post-smolts migrating close to the sea surface during towing, may, however, capture individual post-smolts in the course of hauling the trawl onboard. Such by-catch may occur even in the fishery of demersal fish. It should also be noted that, given that only single salmon and post-smolts occur in catches of pelagic fish, it is not correct methodologically to compare by-catch data obtained in research surveys to the catch data from the commercial mackerel fishery, because despite overlapping areas, the time when the two species gather in concentrations is different and their migration takes place at different depths.