

4.3.4. Biomass indices and distribution of jellyfish

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In August-September 2015, jellyfish were found in the entire studied area of the Barents Sea. The lion's mane jellyfish (*Cyanea capillata*) was the most common jellyfish collected at all stations.

In 2015, the number stations with no jellyfish were similar to 2014, and were 30 and 28 respectively. However, the coverage area was larger due to the Barents Sea was ice free in 2015, while area north and east of Svalbard was covered with ice in 2014. Jellyfish biomass was low in all western areas from the Norwegian coast to Spitsbergen and increased from southwest to northeast and southeast (Figure 4.3.4.1). The highest catches were taken in the central, southern and eastern areas. Number of station with high jellyfish biomass (> 10 000 kg per sq nm) was lower in 2015 than in 2014, and was 71 and 131 respectively.

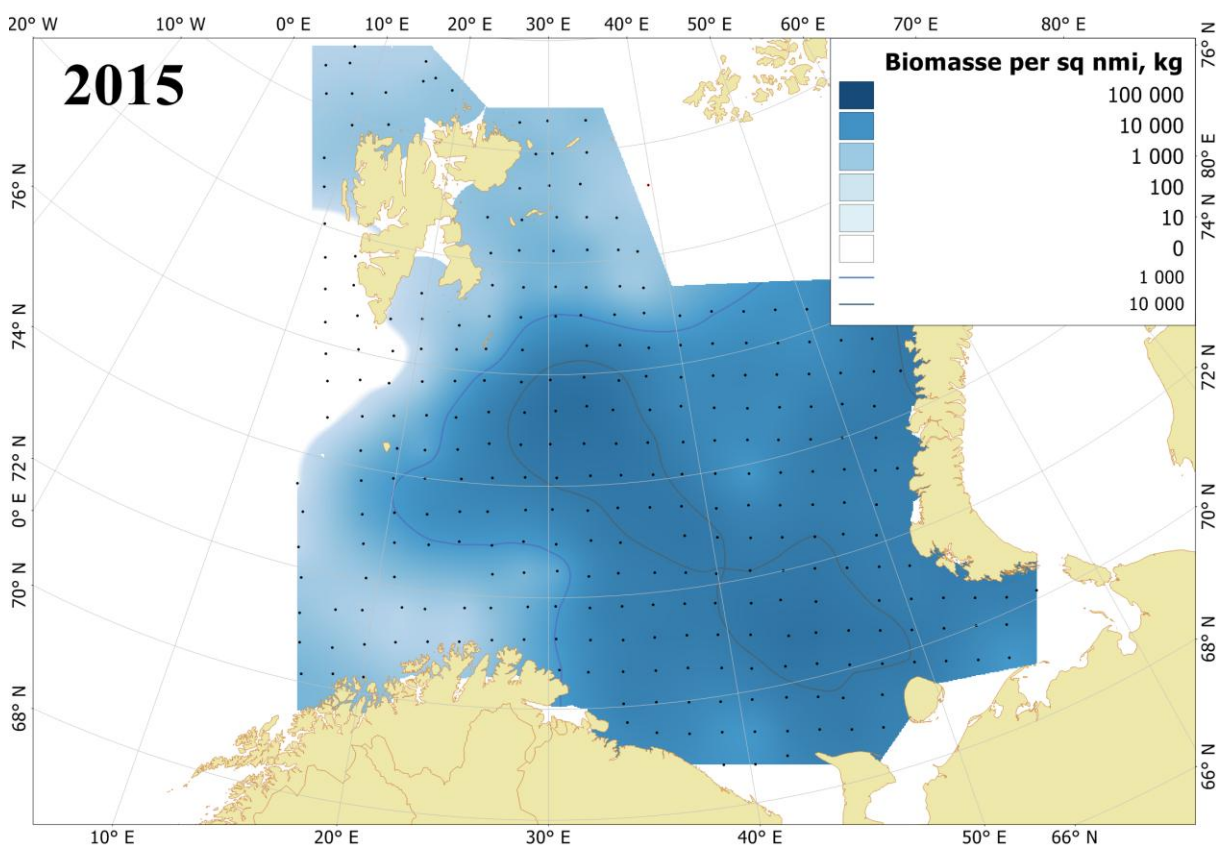


Figure 4.3.4.1. Distribution of jellyfish biomass in the Barents Sea, August-October 2015.

The total jellyfish biomass caught by pelagic trawls in upper water layers 0-60 m was 2.6 million tonnes in the Barents Sea in August-October 2015 (Figure 4.3.4.2). During last 5

years (2011-2015) the estimated total biomass of jellyfish has been higher than the long term mean (1.2 million tonnes).

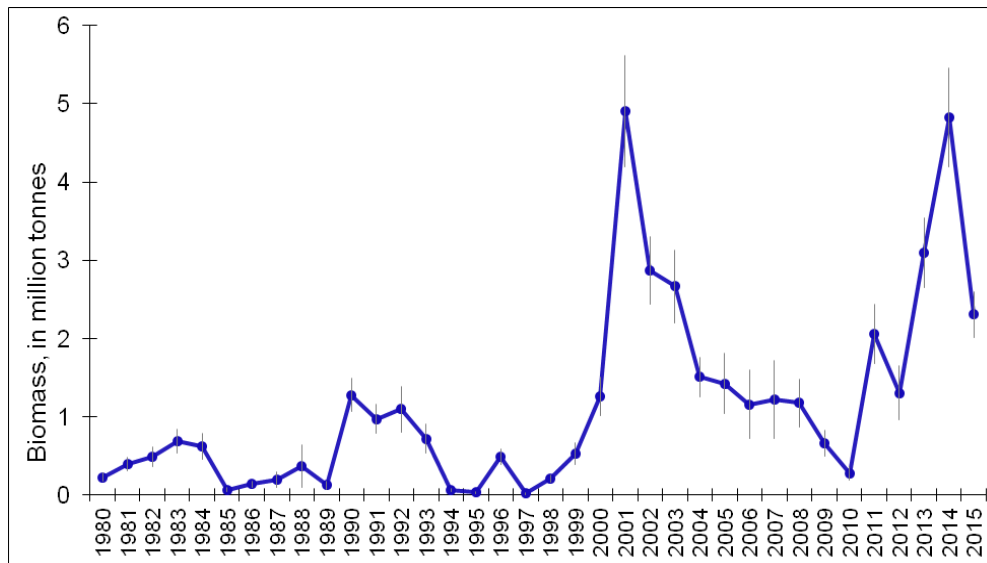


Figure 4.3.4.2. The total jellyfish biomass, mostly *Cyanea capillata*, in million tonnes with 95% confidence interval (grey line) for the period 1980-2015.

Single specimens of blue stinging jellyfish *Cyanea lamarckii* were found at two stations close to the deeper (more than 1000 m depth) western part of the surveyed area. One specimen of *C. lamarckii* was found at a station located at 71°05'N; 23°16'E and 2 specimens at a station located at 70°43'N; 18°09'E. *C. lamarckii* was also recorded in 2014 (4 specimens at three stations), but further north. *C. lamarckii* is not reproducing in the Barents Sea, and the presence of this warm-temperate species may be linked to the inflow of Atlantic water masses.

Single specimens of helmet jelly *Periphylla periphylla* was found at six pelagic (totally 9 specimens) and six bottom (6 specimens) stations between 72°20'-81°05'N and 9°04'-35°09'E. In 2014, *P. periphylla* were found in seven pelagic (27 specimens) and one bottom (2 specimens) stations approximately in the same area.

Other gelatinous plankton recorded during the survey were: the moon jellyfish *Aurelia aurita* (class Scyphozoa), Ctenophores and different genera of the class Hydrozoa: *Sarsia* (order Anthoathecata), *Aglantha* (order Trachymedusae), *Cuspidella* (order Leptothecata), and *Physophora hydrostatica* (order Siphonophorae). The small and fragile gelatinous plankton may be easily destroyed by other organisms (such as larger fish or/and invertebrates) in the trawl cod end, which will contribute to an underestimation of the abundance of gelatinous zooplankton.