Seed Mussel Survey Report for the Rosslare & Long Bank Areas – 19 to 21/07/2023.

Methodology: Tows carried out with standard seed mussel dredge.

Area surveyed: Location of the 2022 beds between the Long Bank and the Lucifer Bank, as well as the South Shear outside Rosslare Harbour. Survey was extended to the west side of the Long Bank to the North Cardinal buoy and near Bar Buoy (see map attached).

Survey summary:

Long Bank East: 14 tows were carried out in the area corresponding to the 2022 seed mussel settlement between the Long Bank and the Lucifer Bank. No live mussels were found in any of the tows. However, significant amount of empty mussel shells was observed. The condition of the shells(soft shells, shells ashes) and their average length (30 mm) possibly indicate that mortality occurred during the winter. Both starfish *Asteria rubens* and spider crab *Maja brachydactyla* were also found through the samples. There was no sign of new settlement through the samples.

Long Bank West: 18 tows were done along the west side of the Long Bank, either side of the north cardinal buoy. Four tows presented some amount of 1 year old mussels (>40 mm in length), from few scattered clumps to half a bag mixed with a lot of waste material comprised of old oyster shells and coarse sand. The other tows at proximity showed significant recent mortality due to starfish predation. No biomass was estimated from that location at the time of the survey due to the low amount of mussel present in the dredges. Mussels or seed was not observed in the tows further to the north.

Bar Buoy: 4 tows were done in the Bar buoy area. No seed or mussel were found in any of the dredges.

Rosslare: 19 tows were done in the South Shear, in an area corresponding to the 2022 mussel bed footprint. Various quantities of old mussels were found in 11 tows. The content of the dredges was characterised by large amount of waste material such as shells, stones/gravel, and spider crabs. The analysis of the sample (N=112) collected in the

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area indicated that the average length is 48.53 mm (minimum: 38.53 mm, maximum: 58.67 mm). The mussel presented heavy level of concretion from other organism such as barnacles and incrusting bryozoans (Fig.1).

Fig.1: Mussels from Rosslare

There is no indication of 2023 self-recruitment on the bed has indicated by the size distribution (Fig.2). No biomass estimation was carried out at the time of the survey; however, the dredge content indicate that the mussel is possibly scattered on the seabed.

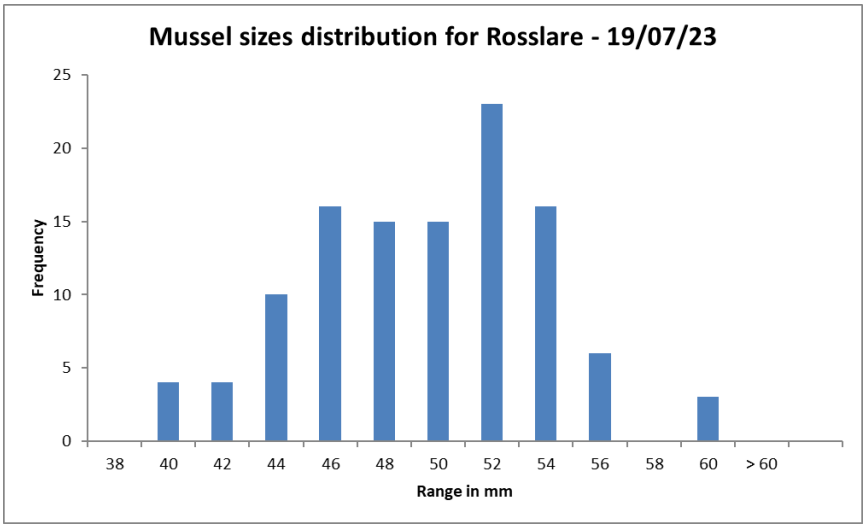

Fig.1: Mussel length distribution for Rosslare (N=112)

Summary

Following this survey, there is no indication of newly settled seed mussel in these areaa. It appears that potential 2022 post fishery remaining biomass between the Long Bank and the Lucifer was depleted probably by starfish predation. There is still a bit of biomass of large mussels left in the South Shear outside Rosslare Harbour. Mussels have been consistently observed in that particular area since 2020, however, there are no signs of self-recruitment for 2023. Some scattered large mussels have also been observed on the West side of the Long Bank, but the biomass appears to be low on the seabed according to the sampling. All those mussels are likely 1 to 2 years old, and possibly even older for Rosslare, despite fishing activities and winter storm displacement (BIM, 2021). Potential biomass surveys will be carried out at later stage.

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Reference:

BIM. (2021). *2021 Post Fishery Survey Report*.

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Preliminary Seed Mussel Survey Map for the Wexford Area - July 2023