Manila clam

Manila clam (Tapes philippinarum) culture and sediment interactions were tested by comparing two rearing areas, including an oceanic (‘Le-Ferret’) and a more estuarine (‘Les-Jacquets’) sites in the bay of Arcachon (France). The growth of a calibrated clam population (10-mm spat) was monitored in these two areas with a concomitant sediment-water interface survey over a 1.5-year period. Two sites per area, including control and rearing plots, were sampled on a monthly basis. The potential clam farming impacts by bioturbation and interactions were examined at three sediment depths: 0–1, 1–2 and 2–10 cm. Moreover, the main hydrobiological parameters were measured on a weekly basis to establish a relationship between these parameters and sediment-water interface characteristics. The existence of a gradient between the three depths was revealed for most of the parameters examined, with the exception of silt and organic carbon levels, and this regardless of the area examined. Clam growth showed a rate improvement in the oceanic area, which is characterized by a lower silt content. The clam effect was minimal and the activity identified at the ‘Ferret’ site was in fact due to the presence of a net which acted as a particle trap. No significant relationship was established between water column parameters and those of the sediment-water interface at the two geographical sites examined. These results demonstrate that clam rearing had only a limited effect on the environmental sediment parameters (i.e. water percentage, and phaeopigments and silt levels) from a spatio-temporal point of view. Therefore, a return to environmental conditions existing before the implementation of clam farming is likely to occur upon cessation of this activity.

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