

Soft bottom macrofauna monitoring under anthropogenic influences in Calvi bay, Corsica. Methodological simplifications

This work is within the framework of STARE-CAPMED long-term research program of STARESO dedicated to STATION of Reference and RESEARCH on Change of local and global Anthropogenic Pressures on Mediterranean Ecosystem Drifts. The aims of this program are: (1) improve the understanding of anthropogenic influences on the functioning of the Calvi bay coastal ecosystems and (2) differentiate local from global anthropogenic influences.

Fourteen stations are sampled one to two times per year, along gradients from anthropogenic sources of influence (river mouth, fish farm, anchoring areas and sewage) mere 2 stations out of influences.

The analysis of soft-bottom macrofauna is time consuming and some methodological simplifications are looking for. In the case of *Posidonia oceanica* fibers presence, an adapted staining-distaining method is proposed and allows a time saving in the sorting of soft-bottom macrofauna. In the analysis process, working with habitat types and taxonomic sufficiency are proposed: finding habitat types existing at high precision scale along Corsican coasts is important to adapt reference conditions (bad and high) with the natural characteristics of macrobenthic assemblages. These reference conditions are used to M-AMBI calculation. An adaptation of the M-AMBI for the weak human impacted geographic zone, the Corsica, is envisaged by a weighting with the Pielou index. As a first time, all is done at the species level. In a second time, the steps are done at genus and family levels. By comparison of results obtained between different identification levels, the taxonomic sufficiency (TS) for the Corsican coastal waters is determined. The adapted M-AMBI calculation and TS are applied on the macrofauna populations identified in Calvi bay.

It could be interesting to test the analysis process applied around Corsica on other Mediterranean areas.