



Conference Abstract

Is the ecological status assessment result the same using genomic- and morphology-based benthic biotic indices?

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Abstract

Monitoring and assessment of benthic communities have been routinely undertaken using morphology-based benthic indices, among which AZTI's Marine Biotic Index (AMBI) and multivariate-AMBI (M-AMBI), are the most successful worldwide (Borja et al., 2019). They are used officially in routine monitoring in many European countries, where they have been intercalibrated (European Commission, 2018). AMBI has been mirrored by metabarcoding, and the genomic version (gAMBI; Aylagas et al., 2014) has demonstrated to yield results comparable to the morphological version. However, we have so far failed to develop a reliable genomic version of M-AMBI (M-gAMBI), which includes gAMBI, richness and diversity (Aylagas et al., 2018). This is because richness and diversity present very different results in morphological and genomic analyses. Since the multivariate method needs reference conditions, these must be set specifically for M-gAMBI to make its results comparable to those obtained with M-AMBI. To this aim, we started annual surveys in 2018, in 22 sampling locations, in Basque estuaries and coast. We present the results from the first three years of these surveys and discuss the problems faced when developing genomic reference conditions for M-gAMBI. The findings are of paramount importance for managers, since any new method or modification of an existing assessment method,

needs to demonstrate that the results obtained when assessing the status are similar to those morphological-based methods, already approved and intercalibrated.

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Keywords

biotic indices; reference conditions; metabarcoding; comparability; estuaries; coasts; North Spain

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