

Diversity in the retained and escapee catch of three different trawl codend meshes in the E. Mediterranean

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Abstract

The diversity in the bottom trawl codend and the codend cover was studied in commercial fishing grounds in the south Aegean Sea in autumn 2014. In total, 81 hauls were carried out at depths between 50-310m using three different codend meshes. The examined meshes were: i) the previously legal 40mm diamond, ii) the currently legislated 40mm square and iii) the potentially alternative 50mm diamond mesh according to the EC Regulation 1956/2006 for the Mediterranean area. The cover-codend method was used for the escapees study. Catch in the cover and codend was identified to the lowest possible taxonomic level, counted and weighed. Richness and Shannon diversity index were calculated per haul. GLM-ANOVA was used to examine the relation of diversity indices with various factors (e.g. area, depth, temperature, mesh type, target species and total catch). In total, 236 taxa were identified belonging to 20 faunistic categories. Multivariate methods were also applied to discriminate groups of stations related to the above mentioned factors and identify the taxa that affect similarity or dissimilarity among the hauls.

Keywords: species diversity, codend catch, escapees, Eastern Mediterranean

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