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Ecosystem Structure Changes in the Turkish Seas as a Response to Overfishing

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Human population in Turkey has grown more than five-fold since its establishment in 1923 and more than 73 million people are currently living in the country. Turkey is surrounded by partially connected seas (the Black Sea, the Sea of Marmara, the Aegean Sea and the Mediterranean Sea) each of which has significantly different productivity levels and ecosystem characteristics. Increasing human population with its growing socio-economic needs has generated an intensive fishing pressure on the fish stocks in its exclusive economic zone. Fishing grounds in the surrounding seas were exploited with different fishing intensities depending upon their productivity level and catch rates. Hence, the responses of these different ecosystems to overfishing have been realized differently. In this study, changes of the ecosystem structures in the Turkish Seas were comparatively investigated by ecosystem indices such as Marine Trophic Index (MTI), Fishing in Balance (FiB) and Primary Production Required (PPR) to assess the degree of sustainability of the fish stocks for future generations.