

Growth rate, Stock Assessment and Management of Trawl-fishing Commercial Species

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Bottom trawl fishing is the leading commercial fishing method in Israel. Trawling activity in Israel is of multi-species nature, the typical catch is made out of dozens of commercial species, as well as non-commercial bycatch. At present, the state of the target species populations is mostly unknown due to lack of formal stock assessment and limited historical data.

Population age structure and growth models also represents basic gaps in the knowledge concerning Israel's coastal fish stocks. During the last 3 years we conducted trawl surveys each autumn and spring and recorded size distribution of selected species. Coupling our data with previous record of size distribution enabled us to determine growth rates and estimate the population structure for some main target species. Growth rate of most species was fast when compared to other parts of the Mediterranean, in contrast estimated maximal length was small. We found that most individuals are very young (<3 years) which may imply strong fishing mortality.

In addition we explored a new data source derived from fisherman diaries recorded between 1970' to present days. For the total catch of fish species as well as for two species of prawns and squid, we found no trend in the catch per unit effort (CPUE) in this period.

I will conclude by presenting a new model which simulate trawl fishery activity in the Israeli coast and may help to evaluate stock sizes and predict management outcomes.