

The influence of meteorological parameters on fisheries, especially those on small-pelagic-fish species.

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Abstract

The central Mediterranean is our Project Area. In this area, the main catch of small-pelagic-fish species would consist of *sardines*, *sardinellas*, *anchovies*, *mackerels* and *horse mackerels*.

Since the studies that have been done so far in the Area have proved to be rather limited in number, it has been necessary to look farther afield. The Aquatic Sciences and Fisheries Abstracts (ASFA) has quite an extensive data base on studies that are relevant to the Project. In fact, no less than 300 records have been extracted from ASFA.

Numerous studies that have been carried out in various climatic regions all over the world, together with the results obtained from such studies, are catalogued in ASFA.

Top of the list, due to its particular importance and to the large areas under its influence, are studies of El Niño, the climatic phenomenon originating in the tropical Pacific, but which seems to affect the climate all over the globe. El Niños that were particularly strong had severely affected catches of pelagic species off South America. In fact El Niño was found to affect the productivity, faunal distribution and fish survival, besides having been the cause of intense rainfall and subsequent landslides in certain areas, and drought in others.

The paper also discusses some of the results of the studies done on small-pelagic species (such as sardine, mackerel, shrimp, squid and crabs) and the environmental factors, with special reference to the meteorological parameters that affect their behaviour. Most of such studies considered have so far taken place outside the Mediterranean region.

It would also be of great interest to find out the possible effects of global warming on fisheries. Thus a list of studies conducted world-wide has been presented, together with an indication of trends for the next two or three decades that would result from the global warming.

The presentation ends by describing the long time period of meteorological data available in Malta, an island at the centre of the Project Area.

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