

1. GENERAL INTRODUCTION

During its thirty-first session (Rome, 9–12 January 2007), the General Fisheries Commission for the Mediterranean (GFCM) reiterated its interest for strengthened cooperation with the International Commission for the Conservation of Atlantic Tunas (ICCAT) and agreed that in the short term, priority should be given to the improvement of knowledge on the sustainable exploitation of small tuna fisheries, including their biological and socio-economic aspects.

As a result, follow-up will be ensured on the Recommendations of the seventh session of the Joint GFCM/ICCAT Ad Hoc Working Group concerning small tunas, especially in relation to the compilation of statistics and the implementation of scientific research programmes.

The general project for this study was presented during the 2007 ICCAT/Scientific Committee on Research and Statistics (SCRS) meeting (Srouf and Di Natale, 2007).

The presence of several species of small tunas and the related fisheries have been well known in the Mediterranean Sea since historical times. Indeed small tunas are quite common in several artisanal or small scale fisheries throughout the area studied, however catches are only sometimes recorded in the national statistics systems or are not considered relevant because many catches are often sold on local markets or for subsistence.

According to the ICCAT database on catch statistics, it is clear that the small tunas are quite important in the Mediterranean Sea (including the Black Sea), reaching a total of about 80 000 tonnes in the year 2005. It is reasonable to estimate that catches of all small tuna species combined in the Mediterranean and in the Black Sea might reach a total of about 150 000 tonnes in some years, which should result in a quantity much larger than all the other tuna species in the same area. It is believed that the under-estimation of the landings is one of the explanations for the inaccurate reporting of the small tuna catches in some countries or fisheries. Even without full statistical evidence at the moment, it can be reasonably assumed that the small tuna fisheries are highly significant from a social and economic point of view, particularly for the coastal communities in both the Mediterranean and the Black Seas. Furthermore, these species are certainly very important from an ecological point of view, due to their relevance in the local food chain, either as predators or prey.

This study on small tuna species in the Mediterranean and in the Black Sea (Table 1) takes into account six species. Three of them are common to almost all countries in this area: the Atlantic bonito *Sarda sarda* (BON), the bullet tuna *Auxis rochei* (BLT)¹ and the little tunny *Euthynnus alletteratus* (LTA); the skipjack *Katsuwonus pelamis* (SKJ) appears, more or less regularly in seven of them; the plain bonito *Orcynopsis unicolor* (BOP) appears only in the statistics of Mediterranean Morocco, Algeria, Tunisia, Libyan Arab Jamahiriya and Portugal (for the few longline vessels fishing in the Mediterranean Sea); the narrow-barred Spanish mackerel *Scomberomorus commerson* (COM), a lessepsian migrant, has a role in the fishery of the countries of the Levant Sea, namely Egypt, Israel, Lebanon, but specimens have been found in other countries.

Three species, the Wahoo (*Acanthocybium solandri*), the West African Spanish mackerel (*Scomberomorus tritor*) and the Indian mackerel (*Rastrelliger kanagurta*) have been rarely found in Mediterranean and Black Sea waters and the few specimens recorded can be considered vagrant.

Other species, like the black skipjack, the dogtooth tuna and the king mackerel have been mentioned in some fishery statistics in the area, possibly due to a misidentification and no specimens are included in any Mediterranean collection.

For the main species it was possible to collect a lot of data, while for the others there is very scarce scientific information about several of the biological and ecological parameters.

This report took also advantage of the latest available information about several aspects of the small tuna fisheries and biology, which was provided during the Joint GFCM/ICCAT Meeting on Small Tuna Species in the Mediterranean (Malaga, Spain, 5–9 May 2008). A preliminary summary of

¹ According to this report, the catches of *Auxis thazard* (FRI) reported in several statistics have been considered as a mis-identification of the species. The problem is more extensively examined in Section 3.2.

information about the content of this report was also presented at the same meeting (Srouf *et al.*, 2008).

The structure of this report includes a first part about the biological and ecological information by species, a second part concerning the fishery and exploitation, a third part concerning the economic aspects of these fisheries and finally some management considerations.

A bibliography is included under each section, to facilitate the identification of specific references.

Table 1 – Species or entities of small tunas reported in the Mediterranean and in the Black Sea

ICCAT CODE	Species name	English	French	Spanish
BLT	<i>Auxis rochei</i>	Bullet tuna	Bonitou	Melva
FRI	<i>Auxis thazard</i>	Frigate tuna	Auxidae	Melva
FRZ	<i>Auxis thazard</i> & <i>Auxis rochei</i>	Frigate and bullet tunas	Auxidae and Bonitou	Melva
LTA	<i>Euthynnus alletteratus</i>	Little tunny	Thonine commune	Bacoreta
SKJ	<i>Katsuwonus pelamis</i>	Skipjack tuna	Listao	Listado
BOP	<i>Orcynopsis unicolor</i>	Plain bonito	Palomette	Tasarte
COM	<i>Scomberomorus commerson</i>	Narrow-barred Spanish mackerel	Thazard rayé Indo-Pacifique	Carite estriado Indo-Pacífico
BON	<i>Sarda sarda</i>	Atlantic bonito	Bonite à dos rayé	Bonito del Atlántico
TUN	Thunnini	Tunas nei Young tunas	Thonidés nca Jeunes thonidés	Atunes nep Atunes jóvenes
Vagrant species				
WAH	<i>Acanthocybium solandri</i>	Wahoo	Thazard-bâtard	Peto
RAG	<i>Rastrelliger kanagurta</i>	Indian mackerel	Maquereau des Indes	Caballa de la India
MAW	<i>Scomberomorus tritor</i>	West African Spanish mackerel	Thazard blanc	Carite lusitánico
Uncertain presence, possibly due to misidentification in fishery statistics				
BKJ	<i>Euthynnus lineatus</i>	Black skipjack	Thonine noire	Barrilete negro
KGM	<i>Scomberomorus cavalla</i>	King mackerel	Thazard barré	Carite lucio
DOT	<i>Gymnosarda unicolor</i>	Dogtooth tuna	Bonite à gros yeux	Casarte ojón

1.1 Bibliography consulted

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