

TUNA CATCH IN THE EASTERN ADRIATIC

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SUMMARY

The quantity of bluefin tuna stock has considerably decreased in recent years. Hence, optimal solutions are being discussed with a view towards species protection, although only 2.5% (11-year mean) of the catches of this species are exploited in the eastern part of the Adriatic Sea.

RÉSUMÉ

Actuellement, le stock de thon rouge a considérablement diminué. C'est pourquoi il est débattu des solutions les meilleurs visant à protéger l'espèce, même si son exploitation dans la partie orientale de la Mer Adriatique ne représente que pour 2,3 % (moyenne sur 11 ans).

RESUMEN

Actualmente, el stock de atún rojo ha disminuido en forma considerable. Por ello, se discuten las mejores soluciones destinadas a proteger la especie, si bien su explotación en la zona este del Adriático es sólo del 2,3% (media de 11 años).

INTRODUCTION

The bluefin tuna, *Thunnus thynnus* (L.) population which is exploited in the Adriatic, is a constituent part of the East-Atlantic stock. Its abundance has been reduced nowadays. So it is understandable that attempts are underway to regulate the stock protection through legislative measures. Thus catch of specimens weighing less than 1.8 kg is forbidden. Another measure which forbids to catch more than 15% of those under 6.4 kg has been brought as well. Current attempts to reduce restrain fishing effort are certainly welcome, especially for the nations accounting an exceptionally high fishing effort.

The Croatian tuna fishermen are exploiting an insignificant part of the East-Atlantic stock (2.3% - 11 years average). Aware of the importance to protect this population, we are joining the ICCAT efforts aimed at regulating such protection. We are giving some specific proposals designed to help arrive at optimum solutions.

MATERIAL

Material originated from the eastern Adriatic purse - seine catch samples. The official statistics and results displayed in the cited papers are used as well.

RESULTS AND DISCUSSION

Size composition of tuna catch

Individual tuna weight varies mostly from 3.1 to 20 kg apiece, with those ranging between 3 and 7 kg 12 %, those from 8 to 15 kg make 80 % of total catch, while those above 15 kg 8 % (ALEGRIA, 1984). According to TIČINA (1994), the bluefin tuna weight varies from 3.1 to 6.4 kg 15%, those between 6.5 and 20 kg 66%, and those with more than 30 kg 1% (Tab.1)

According ICCAT recommendations catches of bluefin tuna specimens weighing less than 6.4 kg should be avoided. As the share in catch in August 1996 was 23% (according to official statistics) it can be assumed that tuna of desirable catch weight (between 6.4 and 20 kg) was largely represented in August, at a rate as high as 95 % (ALEGRIA, 1984), respectably 100% in 1990 (Tab. 2.).

A catch structure like this leaves no doubt that prohibiting tuna catch in the Adriatic Sea in August would be economically and biologically a drastic measure, the more so as the smallest specimens (from 3.1 to 6.4 kg) caught in the Croatian fishing grounds come in very small quantities. Tuna has a high growth potential (ALEGRIA, 1984). Increasing the recruitment rate with the possibility of achieving a marked growth potential among the smallest tuna specimens would contribute to the commercial value of the total population of this important species.

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Catch fluctuations

Tuna catches vary considerably over years just as those of other pelagic fish. Last year (1996) tuna catch accounted for only 2.3% of the total national catch. This percentage of 2.3% is also a 35-year observation average, which stands below the tuna share of 3% in the total world catch.

Tuna catches show significant seasonal variations in the Eastern Adriatic as well. The most abundant tuna catches are attained in summer i. e. July, August and September (Fig. 1) These months account for 67% of total annual tuna catch in 1996. Abundant catch also occurs in May. These data provide a catch variation pattern almost identical to that of the earlier 35-year period and 11-years period (Fig. 1).

CONCLUSION

The fact is that the most favourable tuna weight structure in the fishing grounds of Croatia is attained in August. The smallest specimens (from 3.1 to 6.4 kg) are caught in negligible quantities (Tab. 1). Therefore the ICCAT recommendations concerning the purse seine tuna fishing in August should not be applied in the Eastern part of the Adriatic Sea (Croatian territorial waters) because no quantities of small tuna specimens weighing less than 3.1 kg occur in the Eastern part of the Adriatic Sea catches in that month. On the contrary, the tuna catches in August are most favourable.

REFERENCES

ALEGRIA, V. 1984. Preliminary analysis of tuna catches along the eastern Adriatic coast. *Bilješke - Note*; 57; 6 pp.

TIČINA, V. 1994. Morphological, feeding characteristics and catch of bluefin tuna (*Thunnus thynnus* L.) in the Adriatic Sea (in Croatian). M. Sc. Thesis, Zagreb; 84p.

Table 1. Bluefin tuna catches structure

RANGE OF TUNA WEIGHT GROUPS				
Kg	3.1 - 7	8 - 15	>15	
%	12	80	8	
Source: ALEGRIA, 1984				
Kg	3.1 - 6.4	6.5 - 20	21 - 30	>30
%	15	66	18	1
Source: TIČINA, 1994.				

Table 2. Bluefin tuna catches data, July - October, 1990 (TIČINA's collected data from "Jadran-ribolov" fishing organization).

MONTHS, 1990								
Weight group, kg	VII		VIII		IX		X	
	Num. of ind. (%)	Weight (%)	Num. of ind. (%)	Weight (%)	Num. of ind. (%)	Weight (%)	Num. of ind. (%)	Weight (%)
3.2	8.6	2.5			21.6	6.8		
7-9					50.0	47.2		
9-11	70.8	64.0						
12-13			100	100	24.3	35.9		
14-15					1.8	3.2	100	100
18	20.6	33.5						
20					2.9	6.8		
Total	100		100		100		100	

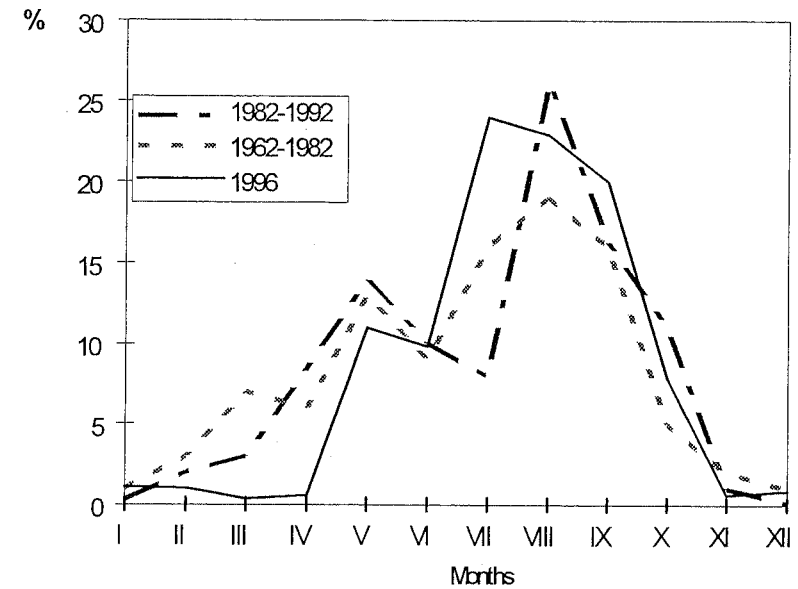


Figure 1. Monthly mean catches fluctuations of bluefin tuna in the eastern Adriatic in 1967 - 1981, (ALEGRIA, 1984); 1982 - 1992, (TIČINA, 1994) and in 1996.