

Illegal, Unreported Unregulated Anchovy Fishery in the Black Sea

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Trabzon Central Fisheries Institute (SUMAE)

(presented by) Ali Cemal GÜCÜ

Middle East Technical University Institute of Marine Sciences (METU-IMS)

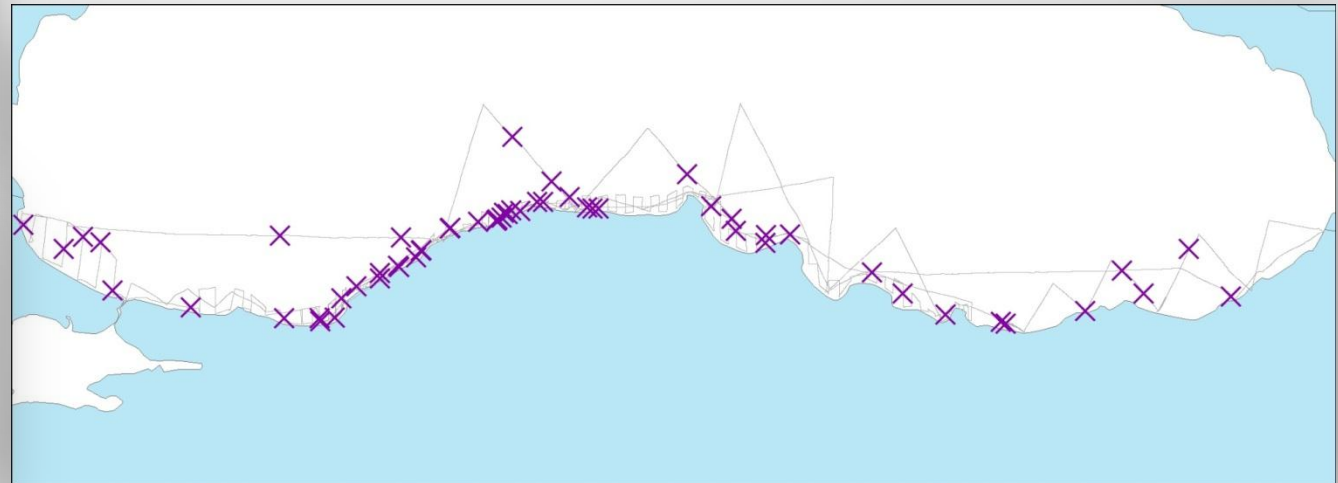
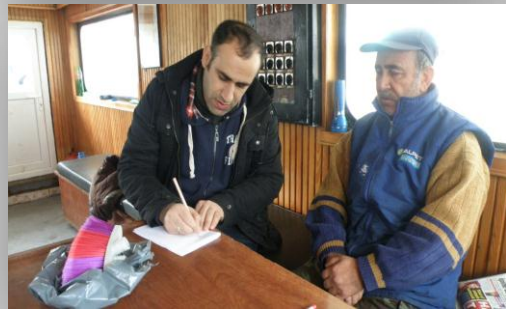
Assessment Of Black Sea Anchovy Using Acoustic Method And Establishing A Monitoring Model For National Fisheries Data Collection Program

Beneficier

**Turkish Ministry of
Food, Agriculture and Livestock**

Leading institutes:

**METU Institute of Marine Sciences
Trabzon Central Fisheries Research Institute**



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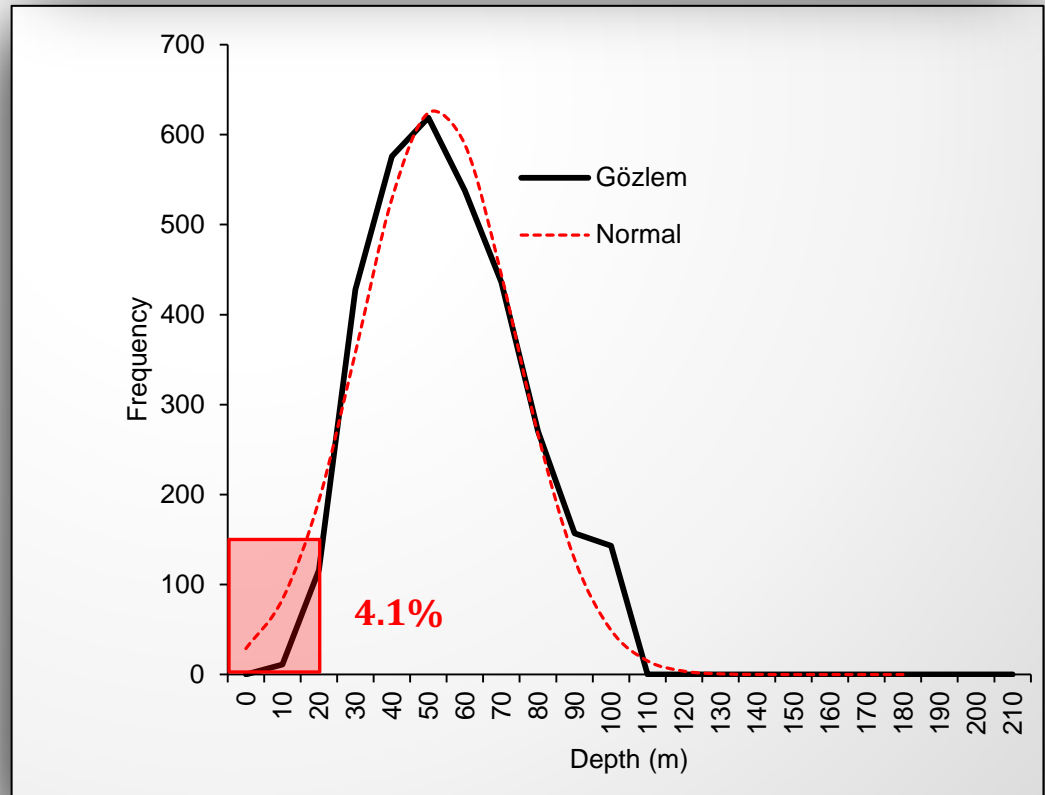
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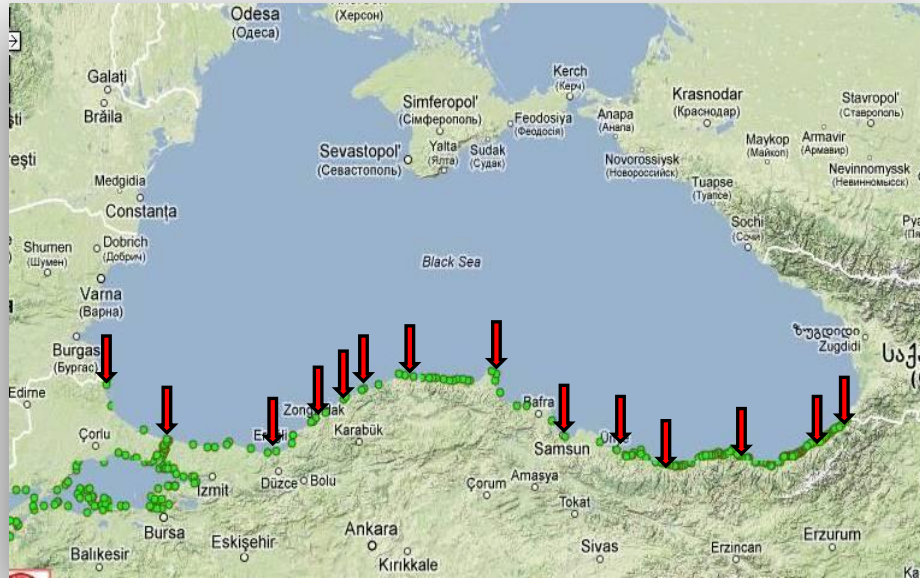
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- (1) Minimum size limitation (9 cm)
- (2) Closed season and area
- (3) Minimum depth limitation (24m)
- (4) Time limitation (16:00-06:00)





Coast guard bases in the Black Sea coast of Turkey



Year	Monetary fines	number of cases
2002	29 766	2 035
2003	33 100	167
2004	32 813	141
2005	28 781	368
2006	36 736	2 088
2007	37 934	786
2008	49 440	2 155
2009	53 060	2 651
2010	52 860	2 790
2011	73 218	7 074
Trabzon	130 tons of anchovy confiscated by the coast guard	



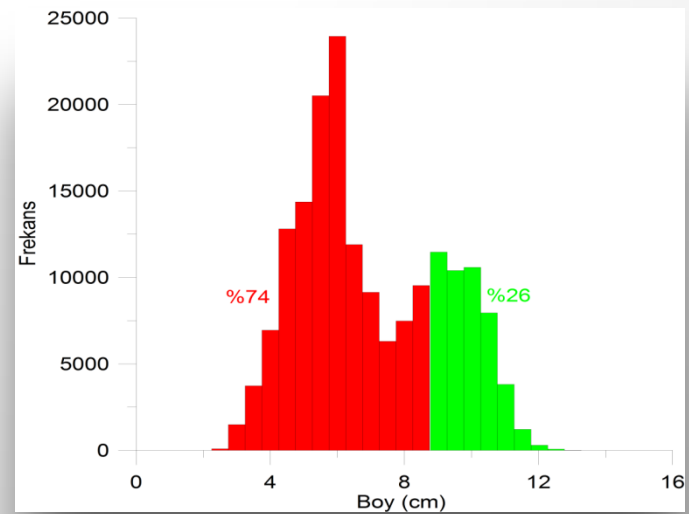


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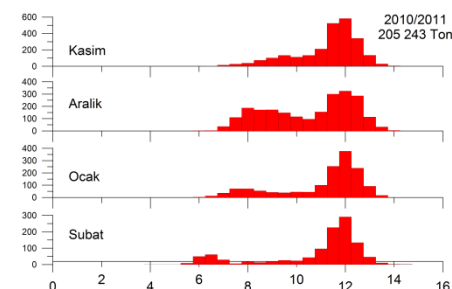
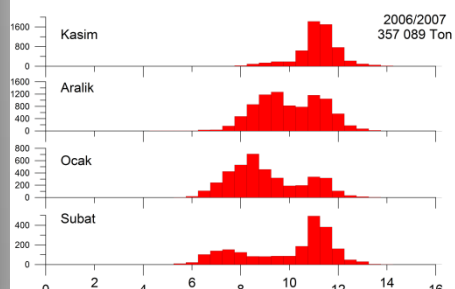
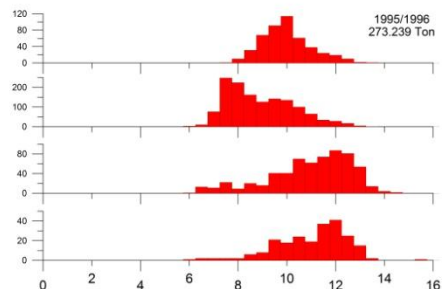
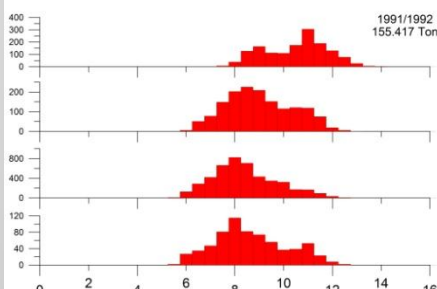
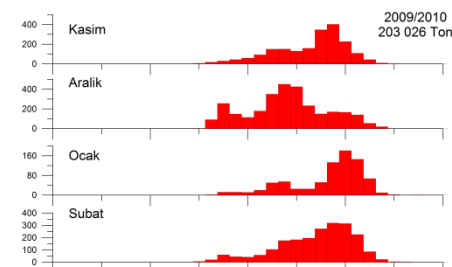
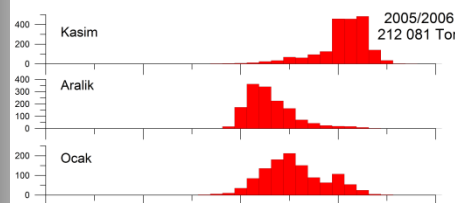
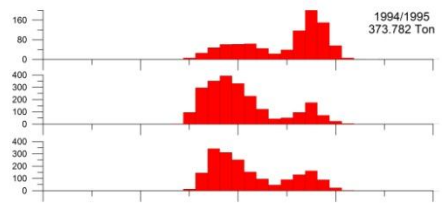
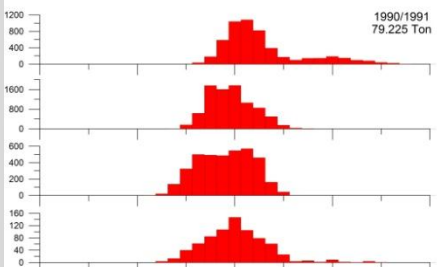
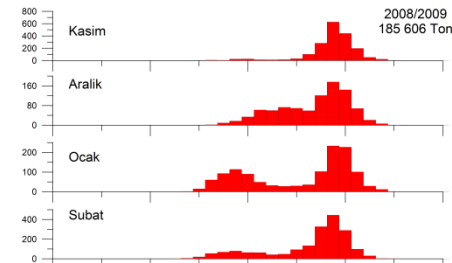
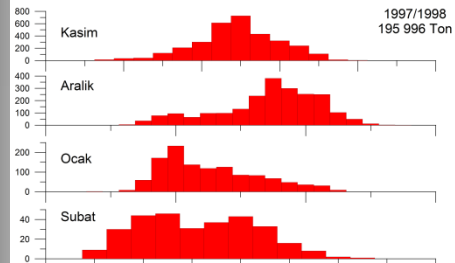
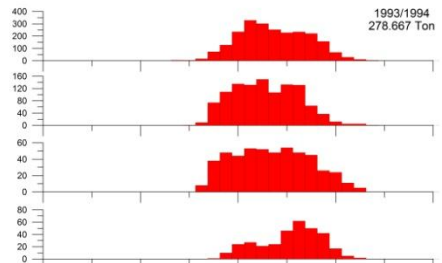
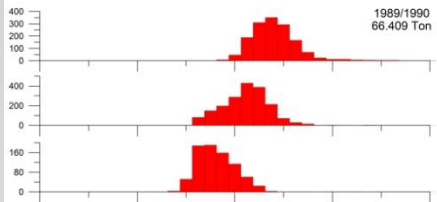
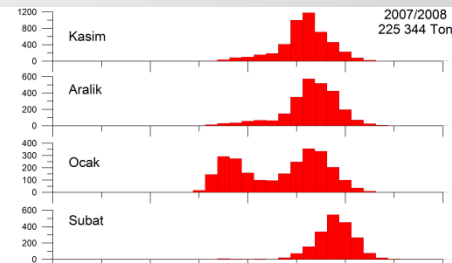
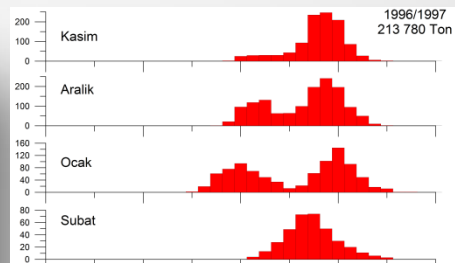
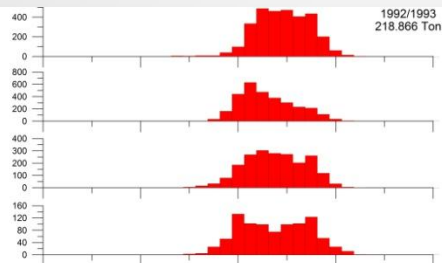
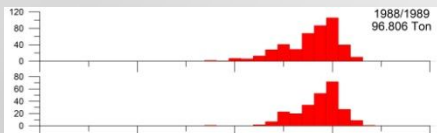
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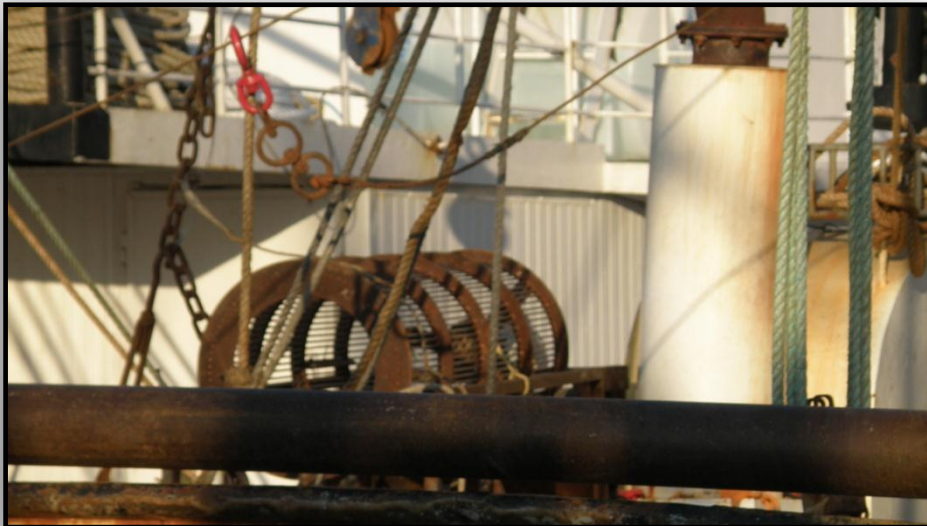
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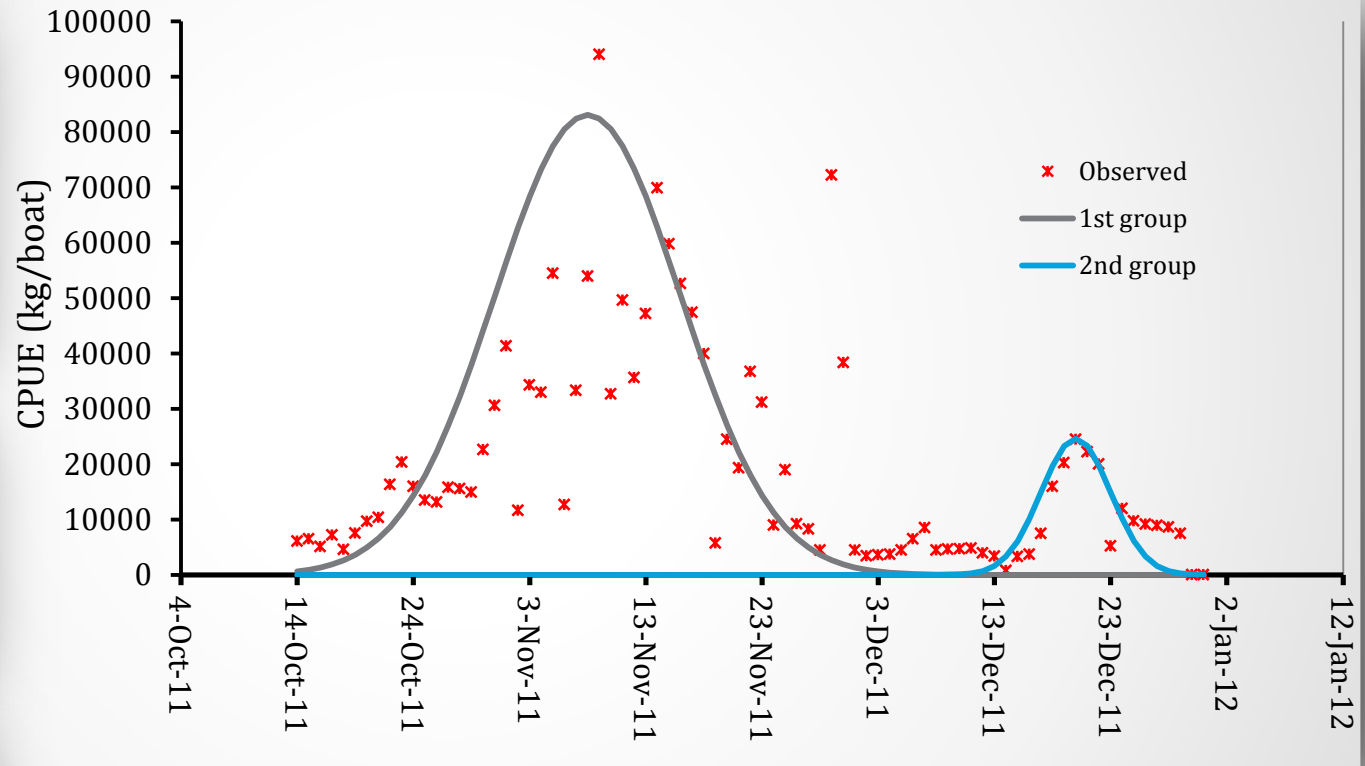
Fish graders



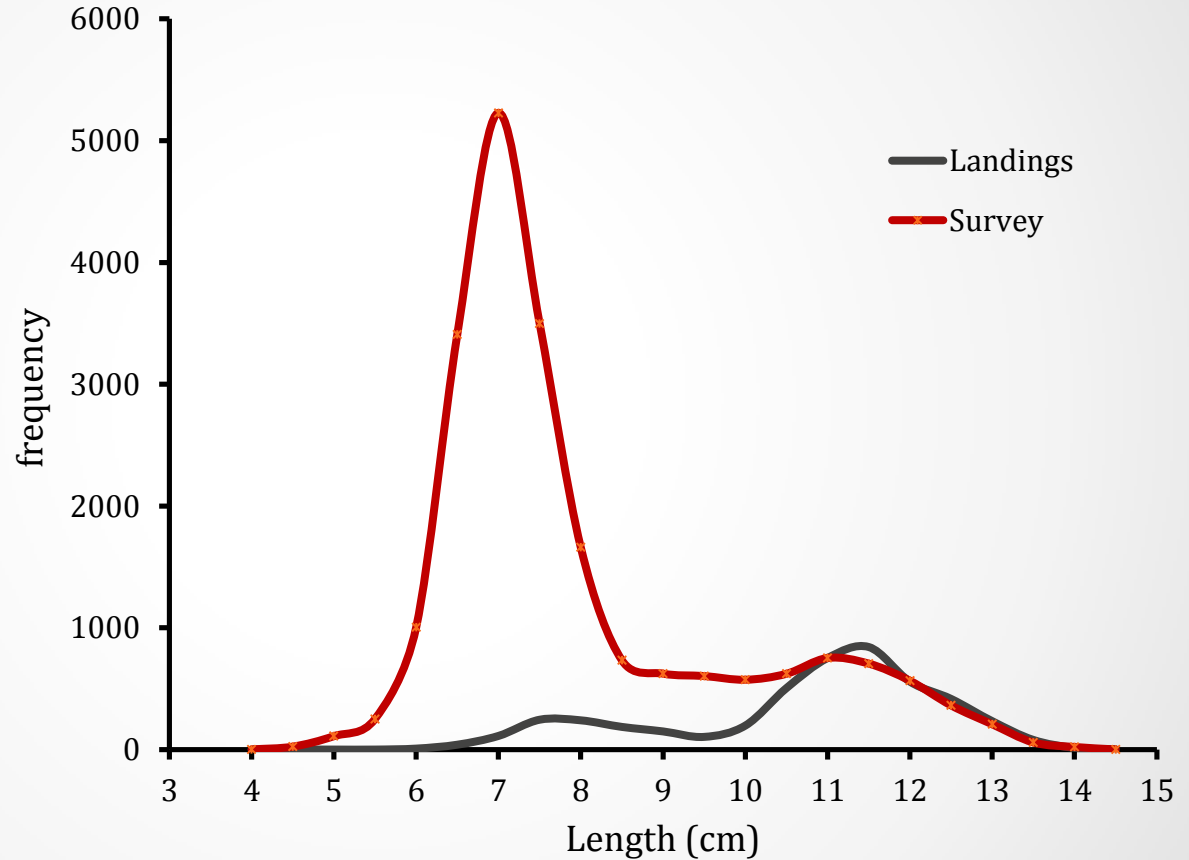
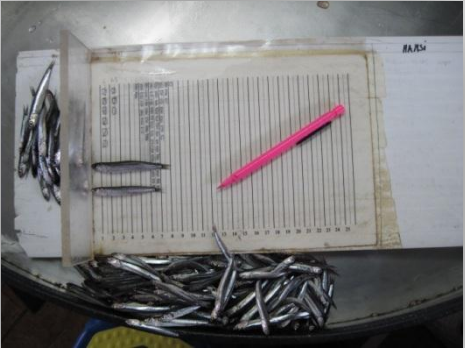
Resampled discarded anchovies



Changes in the CPUE of a fishing boat within the season



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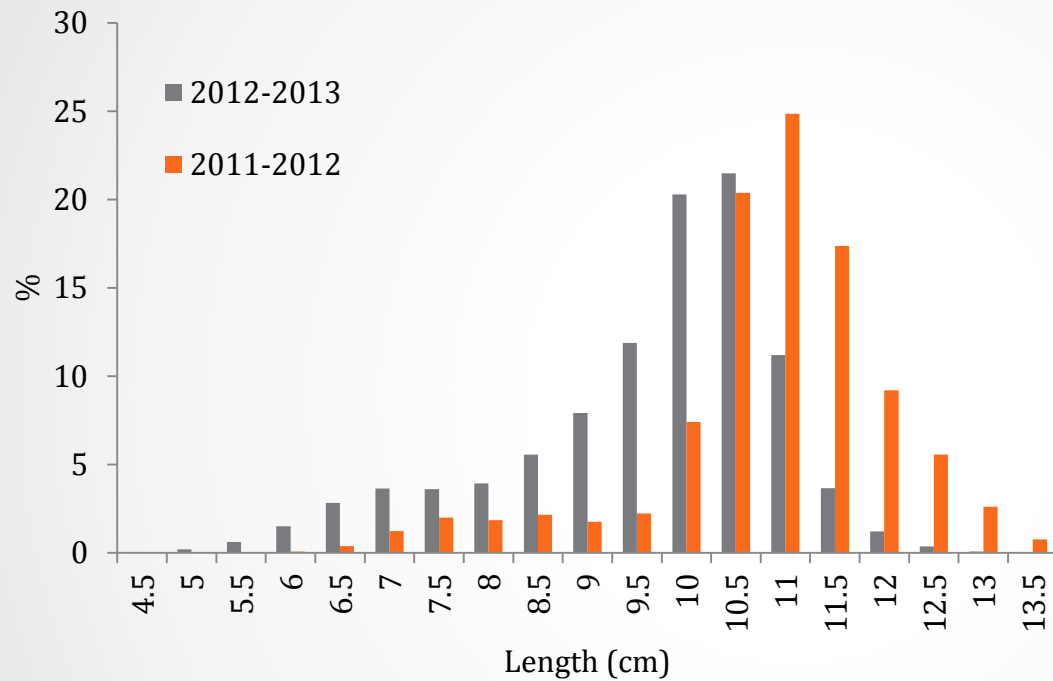
2011-2012 anchovy fishing season

	Landing (in weight)	Landing (in numbers)	Discard (in weight)	Discard (in numbers)
November	85%	55%	0%	0%
December	15%	45%	15%	77%
Season	-	-	5%	35%



Fishmeal and fish oil processing factories (Σ 13)

Length composition of the anchovies landed in 2011-2012 and 2012-2013 fishing season



2011-2012 anchovy fishing season

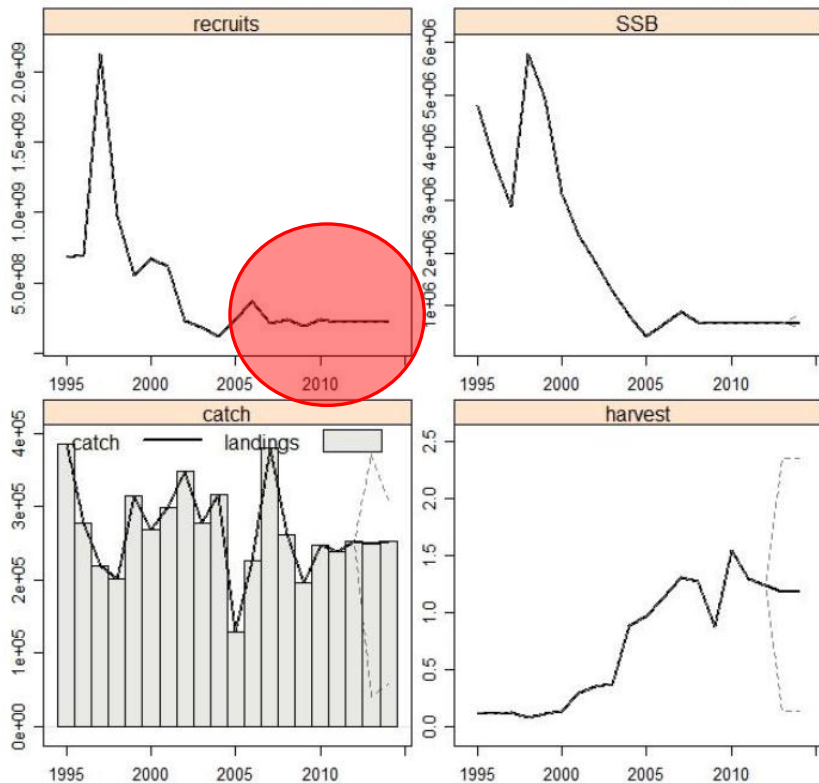
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2012-2013 anchovy fishing season

	Landing (in weight)	Landing (in numbers)	Discard (in weight)	Discard (in numbers)
November	0%	0%	0%	0%
Dec + Jan	?	?	41%	74%
Season	To be estimated at the end of the season			

Years	0	1	2	3
2006	23368	142640	67087	6172
2007	29180	255042	92125	5945
2008	6575	120777	113175	8081
2009	12878	110520	73142	7512
2010	6517	80509	123078	12380
2011	2724	126449	81633	3754

BLACK SEA ANCHOVY Total,2011,COMBSEX,PLUSGROUP



JRC SCIENTIFIC AND POLICY REPORTS

Scientific, Technical and Economic
Committee for Fisheries (STECF)

Assessment of Black Sea Stocks
(STECF-12-15)





Regulations applied to the Turkish fishermen by the Georgian Authorities

- (1) MPAs
- (2) Coastal protection (>300 m)
- (3) Minimum size (7 cm)
- (4) TAC (60 000 tons)
- (5) Detain 2/3rd of the landing

Means to control Turkish fishermen operating in the Georgian waters

- (1) VMS (AIS)
- (2) Interpreter/Observer
- (3) Three stage reporting/control at the ports

Note: 32 Turkish fishermen were arrested due to unreported fishing between 2009-2010

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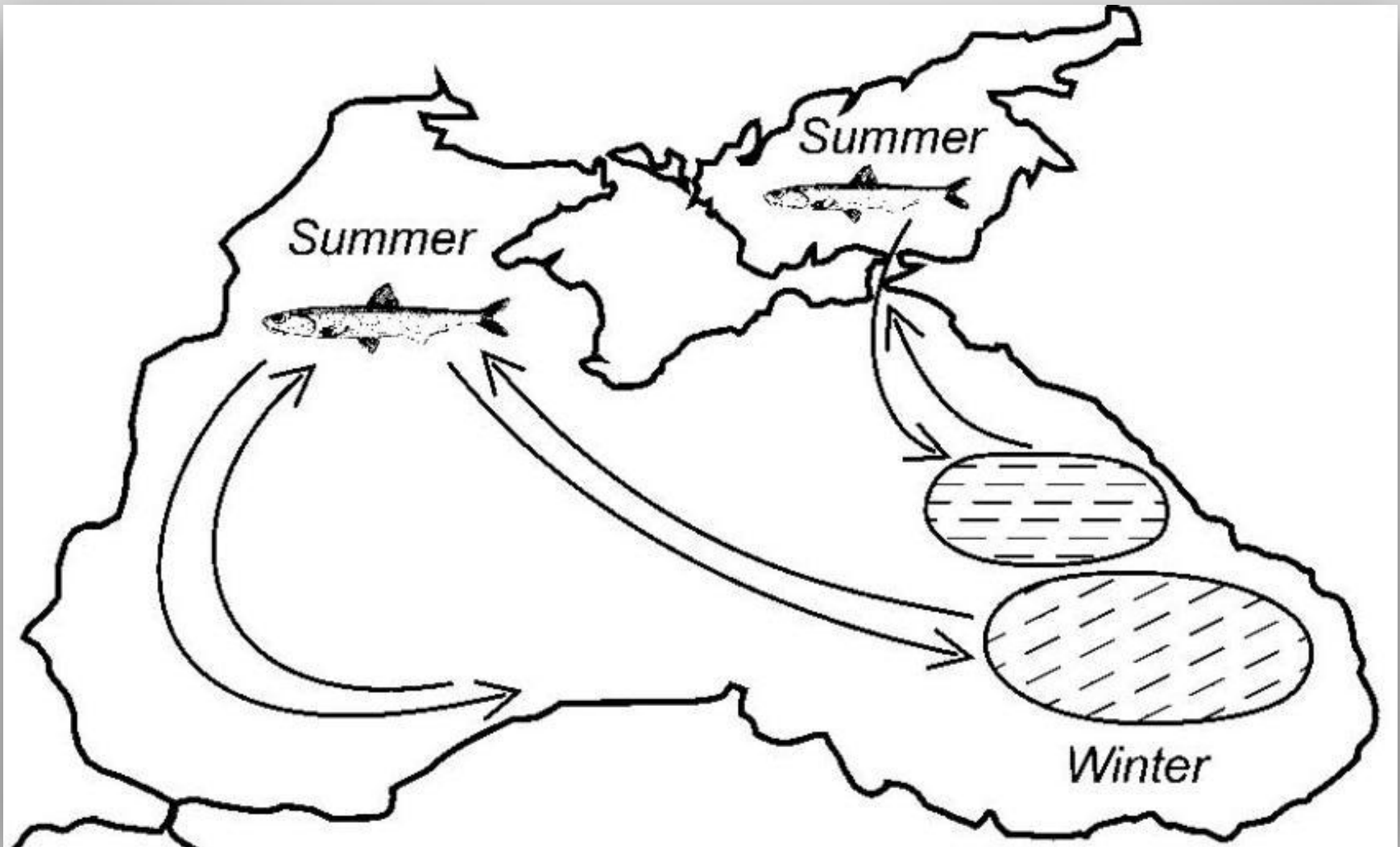
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Black Sea anchovy
Engraulis encrasicolus ponticus

Azov anchovy
Engraulis encrasicolus maeoticus



Shulman G.E., Anchovies of the Azov and the Black Sea: regularities of wintering migrations. Marine Ecology Journal 2002;1:67-77.

A part of the Turkish fishing fleet operates in the Georgian waters based bilateral agreements

The annual quota : 60 000 tons

Total boats legally involved (in 2011-12) :19

Daily individual quota : 3000 tons

Some 30 fishing vessel were also operated in the north of Georgia where there is no control on the fishery