

ANNEX XVII

Discard reasons found on each trip, by tow, aboard crustacean trawl (CT) and fish trawl (FT) vessels during the studied period.

Legend: BW - bad weather; DPQF - damaged or poor quality fish; FGP - fishing gear problem; LC – limitations of crane; LCV - low commercial value; MS - minimum size; NCV - no commercial value.

Bycatch and discards of commercial trawl fisheries in the South coast of Portugal

Season	Date	Métier	Tow	Target species	Discard reasons
Winter 1998	06-02-1999	CT	1	Norway lobster Blue-and-red shrimp	NCV + LCV (for <i>G. melastomus</i> , <i>B. splendens</i> , <i>C. conger</i> , <i>H. dactylopterus</i> and <i>P. phycis</i>) + FGP (earlier hauling of the net trawl after 8 hours towing)
	12-02-1999	FT	1	Mackerel	NCV
			2	Mackerel	NCV
			3	Mackerel	NCV + MLS (for <i>M. merluccius</i>)
			4	Mackerel	NCV (high percentage of <i>C. aper</i>) + MLS (for <i>M. merluccius</i>)
			5	Mackerel	FGP (net broken leading to the discarding of all species caught)
	22-02-1999	CT	1	Deep-water rose shrimp	NCV + MLS (for <i>M. merluccius</i>)
			2	Deep-water rose shrimp	NCV + MLS (for <i>M. merluccius</i>)
			3	Deep-water rose shrimp	NCV
	23-02-1999	CT	1	Norway lobster Blue-and-red shrimp	NCV + LCV (for <i>G. Melastomus</i>) + MLS (for <i>A. antennatus</i>)
			2	Deep-water rose shrimp	NCV + LCV (for <i>Lophius</i> spp., <i>Mullus</i> spp. and <i>Scorpaena</i> spp.) + MLS (for <i>M.</i>
	16-03-1999	FT	1	Mackerel	NCV
			2	Mackerel	NCV
			3	Mackerel	NCV
			4	Mackerel	NCV
			5	Mackerel	NCV
			6	Mackerel	NCV
			7	Mackerel	NCV (highest percentage of <i>Macroramphosus</i> spp.)
			8	Mackerel	NCV
	17-03-1999	FT	1	Mackerel	NCV
2			Mackerel	NCV + MLS (for <i>M. merluccius</i>)	
3			Mackerel	NCV + MLS (for <i>M. merluccius</i>)	
4			Mackerel	NCV + LCV (for <i>Micromesitius poutassou</i>)	
5			Mackerel	NCV + MLS (for <i>M. merluccius</i>)	

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Season	Date	Métier	Tow	Target species	Discard reasons
Winter 1998	19-03-1999	CT	1	Norway lobster Blue-and-red shrimp	NCV (highest percentage of chondrichthyes: <i>Etmopterus</i> spp., <i>D. licha</i> and <i>C. monstrosa</i>) + LCV (for <i>G. melastomus</i>) + MLS (for <i>I. coindetii</i> , <i>T. eblanae</i> , <i>M. Merluccius</i> and <i>Phycis</i> spp.)
			2	Norway lobster Blue-and-red shrimp	NCV
Spring 1999	11-05-1999	CT	1	Blue-and-red shrimp	NCV (highest percentage of <i>M. scolopax</i>) + LCV (for <i>M. poutassou</i>) + MLS (for <i>I. coindetii</i> , <i>T. eblanae</i> , <i>M. merluccius</i> , <i>Pagellus</i> spp. and <i>Phycis</i> spp.) + MLS and DPQF (for <i>A. antennatus</i>)
			2	Deep-water rose shrimp	NCV + MLS (for <i>C. conger</i> and <i>M. merluccius</i>)
			3	Blue-and-red shrimp	NCV + MLS (for <i>M. merluccius</i> , <i>C. conger</i> and <i>P. longirostris</i>) + MLS and DPQF (for <i>A. antennatus</i>)
	28-05-1999	CT	1	Norway lobster Blue-and-red shrimp	NCV + LCV (for <i>M. poutassou</i>) + MLS (for <i>Phycis</i> spp.)
			2	Norway lobster Blue-and-red shrimp	NCV + LVC (for <i>Phycis</i> spp. and <i>M. poutassou</i>)
	10-06-1999	CT	1	Blue-and-red shrimp	NCV (about 80% of <i>P. henslowi</i> and small juvenile deep-sea sharks) + MLS (for <i>Lophius</i> spp. and <i>M. merluccius</i>)
2			Blue-and-red shrimp	NCV (highest percentage of <i>P. henslowi</i> and small deep-sea sharks) + MLS (for <i>Mullus</i> spp. and <i>Pagellus</i> spp.)	
15-06-1999	CT	1	Blue-and-red shrimp	NCV (80% of <i>P. henslowi</i>) + MLS (for <i>I. Coindetii</i> and <i>T. eblanae</i>)	
		2	Blue-and-red shrimp	NCV + LCV (for <i>M. poutassou</i>)	
Summer 1999	20-07-1999	CT	1	Norway lobster Blue-and-red shrimp Deep-water rose shrimp	NCV + LCV and DPQF (for <i>M. poutassou</i>) + MLS (for <i>I. coindetii</i> , <i>T. eblanae</i> , <i>M. merluccius</i> and <i>Phycis</i> spp.)
			2	Norway lobster Blue-and-red shrimp Deep-water rose shrimp	NCV + MLS (for <i>C. conger</i> , <i>M. merluccius</i> and <i>Phycis</i> spp.)

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Season	Date	Métier	Tow	Target species	Discard reasons	
Summer 1999	04-08-1999	FT	1	Mackerel Hake	NCV + LCV and DPFQ (about 65% of <i>M. poutassou</i>)	
			2	Mackerel Hake		NCV
			3	Mackerel Hake		NCV
			4	Mackerel Hake		NCV
			5	Mackerel Hake		NCV
			6	Mackerel Hake		NCV
			7	Mackerel Hake		NCV
12-08-1999	CT	1	Blue-and-red shrimp Deep-water rose shrimp	NCV + LCV and MLS (mostly for <i>G. melastomus</i>)		
		2	Blue-and-red shrimp Deep-water rose shrimp	NCV + MLS (for <i>C. conger</i> , <i>M. merluccius</i> and <i>H. dactylopterus</i>)		
19-08-1999	CT	1	Norway lobster Deep-water rose shrimp	NCV + LCV (for <i>M. poutassou</i>)		
		2	Norway lobster Deep-water rose shrimp	NCV + LCV (for <i>M. poutassou</i>)		
26-08-1999	CT	1	Norway lobster Blue-and-red shrimp Deep-water rose shrimp	NCV + MLS (for <i>C. Conger</i> and <i>Phycis</i> spp.) + LCV and MLS (for <i>G. melastomus</i> and <i>M. poutassou</i>)		
		2	Norway lobster Blue-and-red shrimp Deep-water rose shrimp	NCV + MLS (for <i>I. coindetii</i> , <i>T. eblanae</i> , <i>C. conger</i> , <i>H. dactylopterus</i> , <i>Phycis</i> spp. and <i>G. melastomus</i>)		

Bycatch and discards of commercial trawl fisheries in the South coast of Portugal

Season	Date	Métier	Tow	Target species	Discard reasons	
Summer 1999	01-09-1999	FT	1	Hake Seabream	NCV (highest percentage of <i>Capros aper</i>) + LCV and MLS (for <i>G. melastomus</i>)	
			2	Hake Seabream		NCV
			3	Hake Seabream		NCV
			4	Hake Seabream		NCV (highest percentage of <i>Macroramphosus spp.</i>)
			5	Hake Seabream		NCV
			6	Hake Seabream		NCV
07-09-1999	CT	1	Norway lobster Blue-and-red shrimp Deep-water rose shrimp	NCV + MLS (for <i>Beryx spp.</i> , <i>H. dactylopterus</i> and <i>Phycis spp.</i>) + LCV (for <i>G. melastomus</i>)		
		2	Norway lobster Blue-and-red shrimp Deep-water rose shrimp		NCV + MLS (for <i>Beryx spp.</i> , <i>H. dactylopterus</i> and <i>M. merluccius</i>)	
10-09-1999	FT	1	Mackerel Hake Seabream	NCV (highest percentage of <i>Macroramphosus spp.</i>) + LCV (for <i>M. poutassou</i>) + MLS (for <i>M. merluccius</i>)		
		2	Mackerel Hake Seabream		NCV (highest percentage of <i>Macroramphosus spp.</i>) + MLS (for <i>M. merluccius</i>)	
		3	Mackerel Hake Seabream		NCV + MLS (for <i>M. merluccius</i>)	

Bycatch and discards of commercial trawl fisheries in the South coast of Portugal

Season	Date	Métier	Tow	Target species	Discard reasons
Summer 1999	10-09-1999	FT	4	Mackerel Hake Seabream	NCV + MLS (for <i>M. merluccius</i>)
			5	Mackerel Hake Seabream	NCV + MLS (for <i>M. merluccius</i>)
Autumn 1999	04-11-1999	CT	1	Blue-and-red shrimp Deep-water rose shrimp	NCV (highest percentage of Chondrichthyes) + BW (very strong SE winds originated the return of the vessel to the harbour)
	18-11-1999	FT	1	Mackerel Hake	NCV
			2	Mackerel Hake	NCV
			3	Mackerel Hake	NCV + MLS (for <i>Scomber</i> spp.)
			4	Mackerel Hake	NCV
			5	Mackerel Hake	NCV + DPQF (for commercial species)
			6	Mackerel Hake	NCV + MLS (for <i>Diplodus</i> spp. and for Triglidae and Mugilidae fishes)
	20-11-1999	CT	1	Deep-water rose shrimp	NCV
			2	Deep-water rose shrimp	NCV + BW + FGP (net broken due to haul of a 300 kg metal piece of a canyon)
	24-11-1999	FT	1	Mackerel Seabream	NCV
			2	Mackerel Seabream	NCV + DPQF (highest percentage of <i>Sardina pilchardus</i>)
			3	Mackerel Seabream	NCV (highest percentage of Gastropods)

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Season	Date	Métier	Tow	Target species	Discard reasons
Autumn 1999	24-11-1999	FT	4	Mackerel	NCV
				Seabream	
			5	Mackerel	NCV + DPQF (for <i>Scomber spp.</i>)
				Seabream	
			6	Mackerel	NCV
				Seabream	
			7	Mackerel	NCV + DPQF (for commercial species)
				Seabream	
8	Seabream	NCV + FGP (changing of net)			
09-12-1999	FT	1	Mackerel	NCV	
			2	Mackerel	NCV
			3	Mackerel	NCV
				Seabream	
			4	Mackerel	NCV (highest percentage of Holothurids)
5	Mackerel	NCV + DPQF (for <i>S. pilchardus</i>)			
15-12-1999	CT	1	Deep-water rose shrimp	NCV	
			2	Deep-water rose shrimp	NCV + DPQF and MLS (for commercial crustaceans)
Winter 1999	17-01-2000	FT	1	Mackerel	NCV (highest percentage of Jelly-fishes)
			2	Mackerel	NCV (highest percentage of Jelly-fishes and Holothurids)
			3	Mackerel	NCV (highest percentage of Gastropods and Holothurids) + DPQF (for commercial species)
				Hake	
4	Mackerel	NCV (highest percentage of Holothurids and <i>Atrina spp.</i>)			
21-02-2000	FT	1	Mackerel	NCV (highest percentage of Gastropods and Jelly-fishes)	
			2	Mackerel	NCV (highest percentage of <i>Holothuria spp.</i> and <i>Atrina spp.</i>) + MLS and DPQF (for <i>P. longirostris</i>)
			3	Mackerel	NCV (highest percentage of Gastropods and Holothurids)
				Hake	
4	Mackerel	NCV (highest percentage of Gastropods and Holothurids)			

Bycatch and discards of commercial trawl fisheries in the South coast of Portugal

Season	Date	Métier	Tow	Target species	Discard reasons
Winter 1999	21-02-2000	FT	5	Mackerel	NCV (highest percentage of Gastropods and Holothurids)
			6	Mackerel	NCV (highest percentage of <i>Holothuria spp.</i> , <i>Atrina spp.</i> and <i>Capros aper</i>)
	09-03-2000	CT	1	Blue-and-red shrimp	NCV
			2	Deep-water rose shrimp	NCV
	14-03-2000	CT	1	Deep-water rose shrimp	NCV + FGP (earlier hauling of the net trawl, after 4 hours towing, due to great amounts of
			2	Deep-water rose shrimp	NCV (highest percentage of <i>C. aper</i>) + LCV (for <i>M. poutassou</i>)
	15-03-2000	CT	1	Blue-and-red shrimp	NCV
				Deep-water rose shrimp	
2			Blue-and-red shrimp	NCV	
			Deep-water rose shrimp		
Spring 2000	24-05-2000	CT	1	Blue-and-red shrimp	NCV
				Deep-water rose shrimp	
	30-05-2000	CT	1	Norway lobster	NCV
				Blue-and-red shrimp	
			2	Norway lobster	NCV
				Blue-and-red shrimp	
	08-06-2000	CT	1	Norway lobster	NCV
				Blue-and-red shrimp	
			2	Norway lobster	NCV
				Blue-and-red shrimp	
14-06-2000	FT	1	Mackerel	NCV	
		2	Mackerel	NCV	
		3	Mackerel	NCV	
			Hake		
Spring 2000	15-06-2000	FT	1	Mackerel	NCV + MLS (for <i>S. cantharus</i>)
				Hake	

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Season	Date	Métier	Tow	Target species	Discard reasons
Spring 2000	15-06-2000	FT	2	Mackerel Hake	NCV
			3	Mackerel Hake	NCV
	19-06-2000	CT	1	Blue-and-red shrimp Deep-water rose shrimp	NCV + LCV and MLS (for Cephalopods)
			2	Blue-and-red shrimp Deep-water rose shrimp	NCV
	20-06-2000	FT	1	Mackerel Hake	NCV
			2	Mackerel Hake	NCV
			3	Mackerel Hake	NCV
			4	Mackerel Hake	NCV
			5	Mackerel Hake	NCV
			6	Mackerel Hake	NCV
Summer 2000	10-08-2000	CT	1	Deep-water rose shrimp	NCV
			2	Deep-water rose shrimp	NCV
	31-08-2000	CT	1	Norway lobster Blue-and-red shrimp	NCV + LC (causing earlier return of the trawl vessel to the harbour)
	11-09-2000	CT	1	Norway lobster Blue-and-red shrimp	NCV
			2	Norway lobster Blue-and-red shrimp	NCV

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Season	Date	Métier	Tow	Target species	Discard reasons
Summer 2000	12-09-2000	CT	1	Norway lobster Blue-and-red shrimp	NCV
			2	Norway lobster Blue-and-red shrimp	NCV
	13-09-2000	CT	1	Norway lobster Blue-and-red shrimp	NCV
			2	Norway lobster Blue-and-red shrimp	NCV
	19-09-2000	FT	1	Mackerel Hake	NCV
			2	Hake Seabream	NCV
			3	Mackerel Hake Seabream	NCV
			4	Hake	NCV
			5	Hake	NCV
	20-09-2000	FT	1	Mackerel Hake	NCV
2			Mackerel Hake	NCV	
3			Mackerel Hake	NCV	
4			Mackerel Hake	NCV	
5			Mackerel Hake	NCV	

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Season	Date	Métier	Tow	Target species	Discard reasons	
Summer 2000	21-09-2000	FT	1	Mackerel	NCV	
				Hake		
			2	Mackerel		
				Hake		
			3	Mackerel		
	Hake					
			4	Mackerel	NCV	
				Hake		
			5	Mackerel	NCV	
				Hake		
Autumn 2000	28-09-2000	CT	1	Norway lobster	NCV	
				Deep-water rose shrimp		
			2	Deep-water rose shrimp	NCV	
				3	Deep-water rose shrimp	NCV
	29-09-2000	CT	1	Deep-water rose shrimp	NCV	
			2	Deep-water rose shrimp	NCV	
3			Deep-water rose shrimp	NCV		
23-11-2000	CT	1	Deep-water rose shrimp	NCV		
		2	Blue-and-red shrimp	NCV		
Winter 2000	16-03-2001	CT	1	Deep-water rose shrimp	NCV	
			2	Deep-water rose shrimp	FGP (net broken leading to the discarding of all species caught)	
	17-03-2001	CT	1	Deep-water rose shrimp	NCV + MLS (for <i>M. merluccius</i>)	
			2	Deep-water rose shrimp	NCV + MLS (for <i>M. merluccius</i>)	
			3	Deep-water rose shrimp	NCV + MLS (for <i>C. conger</i> , <i>M. merluccius</i> and <i>Phycis</i> spp.)	
	18-03-2001	CT	1	Deep-water rose shrimp	NCV + MLS (for <i>M. merluccius</i>)	
			2	Deep-water rose shrimp	NCV + MLS (for <i>M. merluccius</i>)	
			3	Deep-water rose shrimp	NCV + MLS (for <i>M. merluccius</i>)	
	19-03-2001	CT	1	Deep-water rose shrimp	NCV + MLS (for <i>M. merluccius</i>)	
			2	Deep-water rose shrimp	NCV + MLS (for <i>C. conger</i> and <i>M. merluccius</i>)	
3			Deep-water rose shrimp	NCV + MLS (for <i>M. merluccius</i>)		