

## General statistics of the French purse-seine fishery in the Indian Ocean

by Renaud Pianet <sup>1</sup>

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### **RESUME**

Ce document présente un bref résumé des principales activités de la flottille des senneurs français dans l'océan Indien depuis le début de cette pêcherie en 1981 : prises par espèce et type de pêche (bancs libres et sur objets flottants), effort et échantillonnage des tailles et de la composition spécifique de la capture.

La description des principales procédures de collecte des statistiques, d'échantillonnage et d'estimation sont documentés dans un document spécifique (WPDCS/99/09) présenté à la réunion.

### **ABSTRACT**

This document presents a brief summary of the main general French purse-seiners activities in the Indian Ocean since the beginning of their fishery in 1981: catch by species and fishing type (log and free swimming schools), effort and sampling for sizes and species composition.

The description of statistics gathering, sampling and processing procedures are reported in a specific document presented at the meeting (WPDCS/99/09).

<sup>1</sup> Renaud Pianet, Laboratoire HEA -  
Centre IRD de Montpellier, BP 5045 - 34 032 MONTPELLIER Cedex  
Tel : (+33) 4 67 63 69 62 ; Fax : (+33) 4 67 63 87 78 ; e-mail : pianet@mpl.ird.fr

## 1- CATCH AND EFFORT STATISTICS

Year	Days at sea	Fishing day	YFT	SKJ	BET	ALB	Total
1981	87	84	199	163	10	0	372
1982	287	256	1028	1027	8	0	2063
1983	1529	1461	10505	9366	218	0	20089
1984	5197	4914	36735	27271	2325	256	66587
1985	6262	5823	39143	29837	4340	497	73817
1986	5733	5424	43301	36086	7059	171	86617
1987	5273	4892	46801	35577	6950	235	89563
1988	5669	5245	59913	36054	6167	201	102335
1989	5447	5069	38375	43096	3591	6	85068
1990	4841	4628	45323	29040	4592	35	78990
1991	4278	3839	39229	37803	5937	875	83843
1992	4572	4262	45354	44985	3820	1403	95562
1993	4682	4483	39439	48342	4971	310	93062
1994	4617	4355	35820	58457	5346	292	99915
1995	4813	4554	39453	48970	7151	350	95924
1996	4549	4412	35722	39946	6879	391	82938
1997	4572	4479	31206	31335	7793	539	70872
1998	4325	4268	23405	27814	8330	432	59980

Table 1 – Total effort and catch by species of the French purse seiners fishery in the Indian Ocean, 1981-1998.

Year	Floating objects					Free schools				
	YFT	SKJ	BET	ALB	Total	YFT	SKJ	BET	ALB	Total
1981	62	123	10	0	195	137	40	0	0	177
1982	391	912	8	0	1311	637	115	0	0	752
1983	3444	7715	212	0	11371	7061	1651	6	0	8718
1984	6692	19804	1491	0	27987	30043	7467	834	256	38600
1985	15021	26524	3803	20	45368	24122	3313	537	477	28449
1986	16318	28413	5663	0	50394	26983	7673	1396	171	36223
1987	22385	22891	5156	4	50436	24416	12686	1794	231	39127
1988	14659	25993	4031	0	44683	45254	10061	2136	201	57652
1989	15363	26976	2765	0	45104	23012	16120	826	6	39964
1990	10488	21689	2582	0	34759	34835	7351	2010	35	44231
1991	9781	35316	4547	0	49644	29447	2486	1390	875	34198
1992	13096	39196	3124	9	55425	32259	5789	695	1394	40137
1993	11997	40637	2832	5	55471	27443	7705	2138	305	37591
1994	13348	45886	4291	23	63548	22472	12571	1056	269	36368
1995	19133	39324	5861	17	64335	20320	9646	1290	333	31589
1996	17084	33730	5849	70	56734	18638	6216	1029	321	26204
1997	18149	26938	7363	67	52516	13057	4397	429	472	18355
1998	13744	22187	6971	13	42915	9661	5627	1359	419	17066

Table 2 - Total catch by species and fishing type (free and log schools) of the French purse seiners fishery in the Indian Ocean, 1981-1998.

## 2 – CATCH PER UNIT OF EFFORT STATISTICS

Year	Catch	Number of Sets			Catch per positive Set						
		Total	Positive	Nil	Total	YFT	SKJ	BET	ALB	Log	Free
1981	372	43	33	10	11.3	6.0	4.9	0.3	0.0	9.8	13.6
1982	2063	143	105	38	19.6	9.8	9.8	0.1	0.0	20.8	17.9
1983	20089	1067	765	302	26.3	13.7	12.2	0.3	0.0	25.7	27.0
1984	66587	3564	2257	1307	29.5	16.3	12.1	1.0	0.1	35.6	26.2
1985	73817	3769	2333	1436	31.6	16.8	12.8	1.9	0.2	38.8	24.5
1986	86617	4433	2425	2008	35.7	17.9	14.9	2.9	0.1	37.9	33.1
1987	89563	4402	2795	1607	32.0	16.7	12.7	2.5	0.1	32.1	32.0
1988	102335	4815	2822	1993	36.3	21.2	12.8	2.2	0.1	40.0	33.8
1989	85068	3583	2243	1340	37.9	17.1	19.2	1.6	0.0	34.4	42.8
1990	78990	4126	2527	1599	31.3	17.9	11.5	1.8	0.0	32.1	30.7
1991	83843	3630	2448	1182	34.2	16.0	15.4	2.4	0.4	32.4	37.4
1992	95562	4602	2980	1622	32.1	15.2	15.1	1.3	0.5	35.7	28.1
1993	93062	4154	2756	1398	33.8	14.3	17.5	1.8	0.1	34.6	32.6
1994	99915	4296	3079	1217	32.5	11.6	19.0	1.7	0.1	32.0	33.2
1995	95924	4465	3051	1414	31.4	12.9	16.1	2.3	0.1	31.9	30.5
1996	82938	3946	2878	1068	28.8	12.4	13.9	2.4	0.1	30.7	25.5
1997	70872	3607	2714	893	26.1	11.5	11.5	2.9	0.2	25.9	26.7
1998	59980	4615	3441	1174	17.4	6.8	8.1	2.4	0.1	17.7	16.8

Table 3 – Number of sets (total, positive and nil), catch per positive sets (total and by species, log and free schools combined) and for both log and free schools separated of the French purse seiners fishery in the Indian Ocean, 1981-1998.

Year	Effort (days)		Floating objects			Free schools			Nominal catch rates		
	Fishing	Searching	YFT	SKJ	BET	YFT	SKJ	BET	YFT	SKJ	BET
1981	86.6	83.8	62	123	10	137	40	0	2.4	1.9	0.1
1982	286.6	255.5	391	912	8	637	115	0	4.0	4.0	0.0
1983	1529.4	1461.2	3444	7715	212	7061	1651	6	7.2	6.4	0.1
1984	5196.8	4914.2	6692	19804	1491	30043	7467	834	7.5	5.5	0.5
1985	6262.1	5822.8	15021	26524	3803	24122	3313	537	6.7	5.1	0.7
1986	5732.6	5424.4	16318	28413	5663	26983	7673	1396	8.0	6.7	1.3
1987	5273.1	4892.0	22385	22891	5156	24416	12686	1794	9.6	7.3	1.4
1988	5668.7	5244.7	14659	25993	4031	45254	10061	2136	11.4	6.9	1.2
1989	5447.1	5069.0	15363	26976	2765	23012	16120	826	7.6	8.5	0.7
1990	4841.3	4627.6	10488	21689	2582	34835	7351	2010	9.8	6.3	1.0
1991	4277.7	3838.6	9781	35316	4547	29447	2486	1390	9.2	8.8	1.4
1992	4572.1	4261.8	13096	39196	3124	32259	5789	695	9.9	9.8	0.8
1993	4682.3	4483.3	11997	40637	2832	27443	7705	2138	8.4	10.3	1.1
1994	4617.1	4354.6	13348	45886	4291	22472	12571	1056	7.8	12.7	1.2
1995	4812.7	4553.5	19133	39324	5861	20320	9646	1290	8.2	10.2	1.5
1996	4548.8	4412.3	17084	33730	5849	18638	6216	1029	7.9	8.8	1.5
1997	4572.0	4478.6	18149	26938	7363	13057	4397	429	6.8	6.9	1.7
1998	4324.6	4267.7	13744	22187	6971	9661	5627	1359	5.4	6.4	1.9

Table 4 – Total annual effort (fishing and searching days), catch by species (log and free schools) and nominal catch rates (log and free schools combined) of the French purse seiners fishery in the Indian Ocean, 1981-1998.

Year	Number of explored CWP
1981	66
1982	115
1983	223
1984	508
1985	459
1986	396
1987	402
1988	392
1989	442
1990	429
1991	411
1992	404
1993	414
1994	438
1995	445
1996	522
1997	524

Table 5 – Number of explored CWP square by year of the French purse seiners fishery in the Indian Ocean, 1981-1998.

### 3 – SAMPLING STATISTICS

French Purse-Seiners Sampling	Year	Floating objects			Free school		
		YFT	SKJ	BET	YFT	SKJ	BET
Number of samples	1991	404	401	388	238	39	68
Number of fishes sampled		15492	95453	7089	21689	9536	1020
Number of samples	1992	520	512	454	322	111	86
Number of fishes sampled		31905	131085	8273	25238	22507	780
Number of samples	1993	349	334	323	250	51	49
Number of fishes sampled		21920	92351	6335	23653	15966	828
Number of samples	1994	510	516	448	166	65	52
Number of fishes sampled		33247	121376	9516	19358	16816	933
Number of samples	1995	463	470	375	110	55	35
Number of fishes sampled		26922	111154	7388	13218	12874	763
Number of samples	1996	222	226	183	158	32	31
Number of fishes sampled		37131	81772	18182	21229	11612	1353
Number of samples	1997	371	377	335	96	33	23
Number of fishes sampled		67049	126205	29392	18457	11969	1508

Table 6 - Number of samples and fishes sampled from the French purse seiners fishery in the Indian Ocean, 1981-1998.

Year	YFT			SKJ			BET			ALB		
	Log	Free	All	Log	Free	All	Log	Free	All	Log	Free	All
1981												
1982	4.7	27.4										
1983	10.2	18.4		3.0	2.9							
1984	5.5	22.8		2.8	3.1		4.6	12.2				
1985	4.5	25.0		3.0	3.2		5.1	12.5				
1986	11.4	22.5		3.3	3.4		6.7	11.0				
1987	10.2	25.8		3.3	4.3		6.8	11.7				
1988	5.1	27.0		2.9	2.9		5.3	11.0				
1989	8.0	15.0		3.2	3.2		5.3	9.4				
1990	6.1	31.8		2.8	3.0		4.3	25.2				
1991	7.9	37.4	20.3	2.8	2.7	2.8	5.2	23.3	7.0		31.5	31.5
1992	9.9	34.6	19.2	3.0	3.0	3.0	5.3	13.3	5.9		30.1	30.1
1993	10.8	39.3	21.9	2.7	3.0	2.8	4.4	16.9	6.7		31.4	31.4
1994	6.9	40.9	16.0	2.5	3.4	2.7	4.7	31.1	6.1		30.3	30.3
1995	9.7	28.0	13.9	2.4	3.0	2.5	5.3	22.3	6.1	29.4	29.1	29.1
1996	5.4	28.8	9.5	2.4	3.2	2.5	4.8	11.0	5.3	28.3	30.3	30.2
1997	4.9	29.1	7.1	2.3	3.2	2.4	3.8	13.6	4.0	28.3	27.1	27.1
1998	5.1	23.4	7.9	2.5	2.7	2.5	4.4	10.7	5.0		27.2	27.2

Table 7 – Mean weight by species and fishing type (log, free and combined) of the French purse seiners fishery in the Indian Ocean, 1981-1998.