

## STATISTICS OF THE EUROPEAN AND ASSOCIATED PURSE SEINE FISHING FLEET IN THE ATLANTIC OCEAN (1991-2015)

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### SUMMARY

*The document presents an overall summary of the fishing activities of the European and assimilated purse seine fleet operating in the eastern Atlantic Ocean over the period 1991-2015. We describe the annual changes in fleet technical characteristics (carrying capacity, size), fishing effort (fishing and searching days), extent of fishing grounds, catches and nominal Catch per Unit Effort by species, as well as the average individual weight by species. Maps are also presented indicating the fishing effort distribution in the Atlantic, as well as the spatio-temporal distribution of European and assimilated purse seine catches in 2015 compared to previous years (2010-2014).*

### RÉSUMÉ

*Le document présente un résumé général des activités de pêche de la flottille de senneurs européens et assimilés qui opérait dans l'océan Atlantique Est au cours de la période 1991-2015. Nous décrivons les changements annuels survenus dans les caractéristiques techniques de la flottille (capacité de transport, taille), l'effort de pêche (jours de pêche et jours de recherche), étendue des zones de pêche, prises et capture nominale par unité d'effort par espèce, ainsi que poids individuel moyen par espèce. Des cartes sont également présentées indiquant la distribution de l'effort de pêche dans l'Atlantique, ainsi que la distribution spatio-temporelle des prises des senneurs européens et assimilés en 2015 par rapport aux années antérieures (2010-2014).*

### RESUMEN

*Este documento presenta un resumen global de las actividades pesqueras de la flota de cerco europea y asociada que operó en el Atlántico oriental durante el periodo 1991-2015. Se describen los cambios anuales en las características técnicas de la flota (capacidad de transporte, tamaño), el esfuerzo pesquero (días de búsqueda y de pesca), la magnitud de los caladeros, las capturas y la captura por unidad de esfuerzo nominal por especies, así como el peso medio individual por especies. También se presentan mapas de pesca que indican la distribución del esfuerzo pesquero en el Atlántico, así como la distribución espacial y temporal de las capturas de cerco de la flota europea y asimilada en 2015, en comparación con años previos (2010-2014).*

### KEYWORDS

*Tuna fishery, yellowfin, skipjack, purse seiners, catch/effort, species composition, size composition*

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**Table 1.** Catches by species (tones) of European and associated purse-seine fleet.

<b>ALL</b>						
Year	YFT	SKJ	BET	ALB	Others	Total
1991	92476	125536	14188	416	1735	234351
1992	96706	87244	18230	2518	1255	205952
1993	90102	124875	30857	1450	1246	248530
1994	88062	105633	32379	1079	2239	229391
1995	84684	99208	25096	412	2302	211703
1996	82476	83928	25006	258	3799	195468
1997	68311	60204	15918	118	2733	147284
1998	73339	56439	12622	434	3065	145898
1999	58248	76845	15593	264	2004	152955
2000	64190	64493	13698	32	1741	144154
2001	77098	60918	14030	24	2460	154531
2002	75207	48068	14282	39	1008	138604
2003	66043	73424	14303	308	1561	155639
2004	53206	77033	10816	19	1784	142858
2005	49326	58509	9685	533	1528	119581
2006	49892	47556	10919	441	1216	110024
2007	43183	54178	10794	45	1972	110172
2008	62576	58269	12603	76	1802	135326
2009	67103	62960	16790	149	2578	149581
2010	62071	75957	19090	303	2329	159749
2011	51577	84445	21368	146	1967	159503
2012	56949	95341	17681	360	3112	173443
2013	50161	121364	16606	110	3454	191695
2014	53592	116788	18901	50	4746	194077
2015	62792	121607	17587	241	4753	206981

**Table 2.** Catches by species (tones), on logs, of European and associated purse-seine fleet.

<b>Objects</b>						
Year	YFT	SKJ	BET	ALB	Others	TOTAL
1991	15775	82330	12193	6	970	111274
1992	18121	65424	14660	24	695	98925
1993	19653	76822	22215	6	798	119495
1994	23400	67023	26478	0	1515	118416
1995	21245	75704	21598	5	1937	120490
1996	20246	71203	21860	0	3053	116362
1997	12378	38590	13280	0	2227	66475
1998	10869	29833	10383	0	1904	52989
1999	12360	39971	12695	181	985	66192
2000	12885	45054	11164	0	1487	70590
2001	11665	45584	11611	1	2222	71084
2002	11526	36947	11262	3	881	60620
2003	12660	43940	11198	101	1014	68914
2004	11913	52419	9086	0	1267	74685
2005	10818	48329	7827	28	1442	68443
2006	10328	40887	6479	1	1148	58843
2007	9921	50364	7597	2	1956	69841
2008	14256	51671	10335	5	1639	77906
2009	12191	58190	12744	1	2365	85490
2010	15890	68124	14960	13	2222	101208
2011	13260	77429	17778	16	1782	110266
2012	13357	88983	13458	15	2822	118635
2013	11100	107755	13980	15	3121	135971
2014	15654	110118	14597	19	4513	144902
2015	20062	112079	15357	21	4474	151994

**Table 3.** Catches by species (tones), on free schools, of European and associated purse-seine fleet.

<b>Free School</b>						
Year	YFT	SKJ	BET	ALB	Others	TOTAL
1991	76701	43206	1995	410	764	123077
1992	78585	21819	3569	2494	560	107027
1993	70448	48053	8642	1444	448	129035
1994	64662	38610	5901	1079	724	110975
1995	63439	23504	3497	407	365	91213
1996	62230	12725	3146	258	746	79106
1997	55933	21615	2638	118	505	80809
1998	62470	26605	2239	434	1161	92909
1999	45888	36874	2898	83	1020	86764
2000	51305	19439	2534	32	254	73564
2001	65433	15334	2419	23	238	83446
2002	63681	11121	3020	36	126	77984
2003	53382	29483	3105	207	547	86725
2004	41294	24614	1730	19	517	68173
2005	38508	10180	1859	505	86	51138
2006	39564	6669	4440	440	69	51181
2007	33261	3814	3197	43	15	40331
2008	48320	6598	2268	71	163	57420
2009	54912	4771	4047	148	213	64091
2010	46181	7833	4130	291	107	58541
2011	38316	7016	3590	130	185	49237
2012	43592	6358	4223	345	290	54808
2013	39061	13609	2626	95	333	55724
2014	37934	6564	4292	31	232	49053
2015	42679	9288	2229	220	279	54694

**Table 4.** Purse seine number by size categories and carrying capacity of the European and associated fleet.

<i>Year</i>	<i>50-400</i>	<i>401-600</i>	<i>601-800</i>	<i>801-1200</i>	<i>1201-2000</i>	<i>&gt; 2000</i>	<i>Total</i>	<i>C. capacity</i>
1991	5	28	11	18	8	1	<b>71</b>	41978
1992	3	27	9	16	9	1	<b>65</b>	44296
1993	3	24	10	16	10	1	<b>64</b>	41227
1994	3	24	9	14	8	1	<b>59</b>	41122
1995	1	24	9	14	7	0	<b>55</b>	38196
1996	2	23	9	13	7	0	<b>54</b>	35775
1997	1	23	9	13	6	0	<b>52</b>	30907
1998	1	20	7	10	5	1	<b>44</b>	29988
1999	1	21	5	9	5	0	<b>41</b>	25877
2000	1	20	7	10	3	0	<b>41</b>	27385
2001	1	18	7	12	6	0	<b>44</b>	30714
2002	1	19	5	10	6	0	<b>41</b>	25036
2003	1	16	3	11	4	0	<b>35</b>	25681
2004	1	14	3	11	5	0	<b>34</b>	25311
2005	0	10	2	10	5	0	<b>27</b>	21856
2006	0	10	2	7	5	0	<b>24</b>	17574
2007	0	9	3	8	7	0	<b>27</b>	19104
2008	0	9	4	9	9	0	<b>31</b>	23211
2009	0	7	4	14	11	0	<b>36</b>	30415
2010	0	6	4	13	11	0	<b>34</b>	32213
2011	0	6	4	13	10	0	<b>33</b>	31417
2012	0	5	4	13	10	0	<b>32</b>	29557
2013	0	5	4	14	9	0	<b>32</b>	29328
2014	0	5	3	10	18	0	<b>36</b>	34337
2015	1	0	4	9	23	1	<b>38</b>	41446

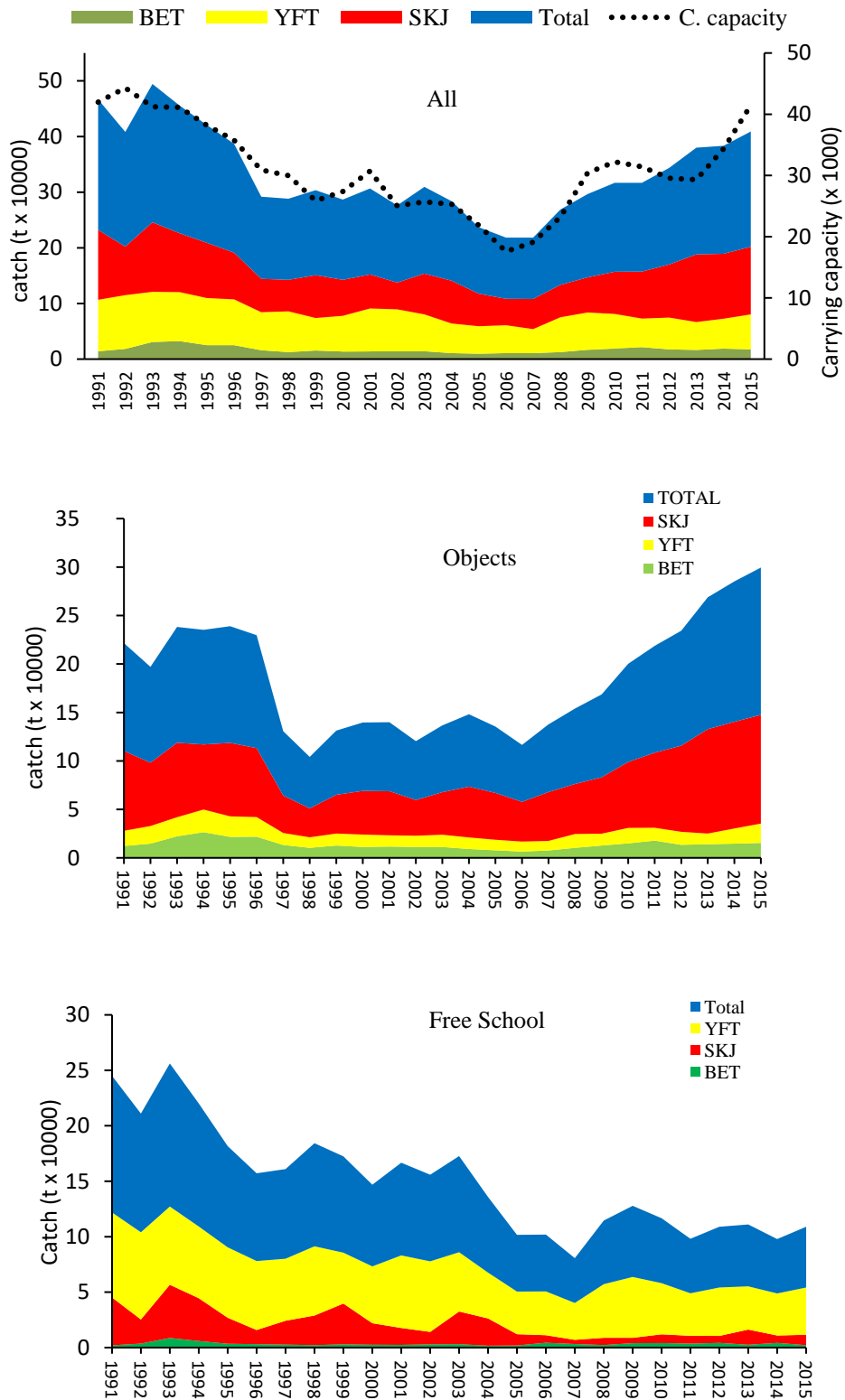
**Table 5.** Purse seine number from the European and associated fleet according to their flag.

Flag	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Neth. Antilles						3	3	3	3	3	3	2	3	3		1	1	1	3	3	3	3	3	2	
Belize								1		1	1								2	1	1	1	1	3	2
Cape Verde															2	2	2	2	2	2	2	2	2	3	4
Curaçao																									4
El Salvador											1														2
Spain	37	37	30	30	24	24	20	19	19	19	17	16	15	15	10	8	13	15	16	15	15	14	14	15	12
France	23	17	18	18	17	16	19	15	15	14	17	17	14	12	9	7	5	7	10	10	9	9	9	9	9
Ghana							1	1	1	1	1	1	1	1	1	1	1	1	1	1					
Guatemala													1	2	2	2	2	2	1	1	1	1	1	2	2
Guinea Conakry					2	2	2																		
Honduras			1																						
Italy	1	1																							
Liberia				2	1																				
Malaysia							1																		
Malta	1	1	1																						
Morocco	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1									
Norway	1																								
Panama	7	5	7	7	6	5	2	1	1	1	1	1			3	3	3	3	2	3	2	2	2	2	3
Seychelles					1						1	1													
St. Vincent	2	4	4	2	3	2	2	3	1	3	3														
Vanuatu		1	2	2	2	2	2	1																	
Venezuela												2	1												
Total Ps	73	67	64	62	57	55	53	45	41	43	46	41	36	34	28	25	27	31	37	35	33	32	32	36	38

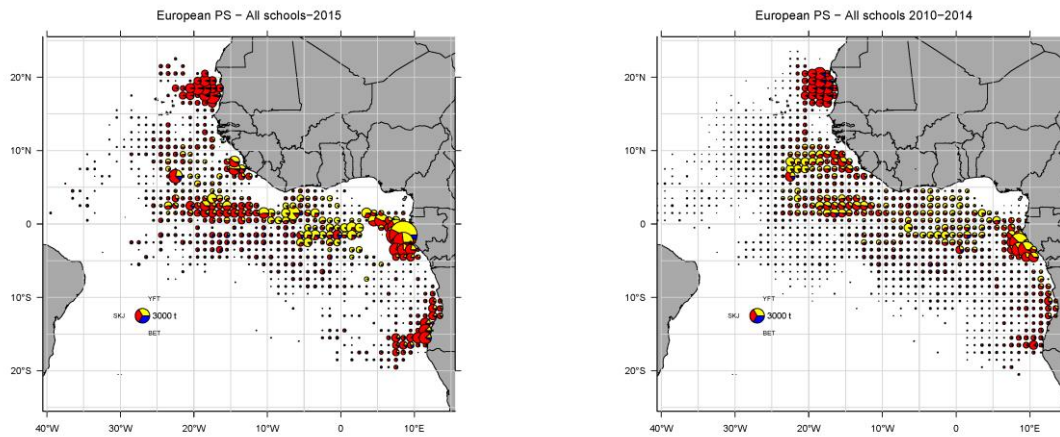
**Table 6.** Carrying capacity and fishing efforts (raw fishing days and searching days) of the European and associated purse seine fleet.

Year	C.Capacity	F. days	S. days
1991	41978	15636	13712
1992	44296	17459	15891
1993	41227	16428	14677
1994	41122	15905	14233
1995	38196	14789	13089
1996	35775	14672	13118
1997	30907	12784	11554
1998	29988	12594	11223
1999	25877	11732	10579
2000	27385	10579	9396
2001	30714	11346	10123
2002	25036	9826	8818
2003	25681	8964	7741
2004	25311	8522	7557
2005	21856	7115	6259
2006	17574	5727	5036
2007	19104	6130	5385
2008	23211	7086	6098
2009	30425	8850	7623
2010	32213	9262	8257
2011	31417	8956	7567
2012	29557	8556	7182
2013	29328	8255	7773
2014	32026	9577	8201
2015	41446	10207	9746

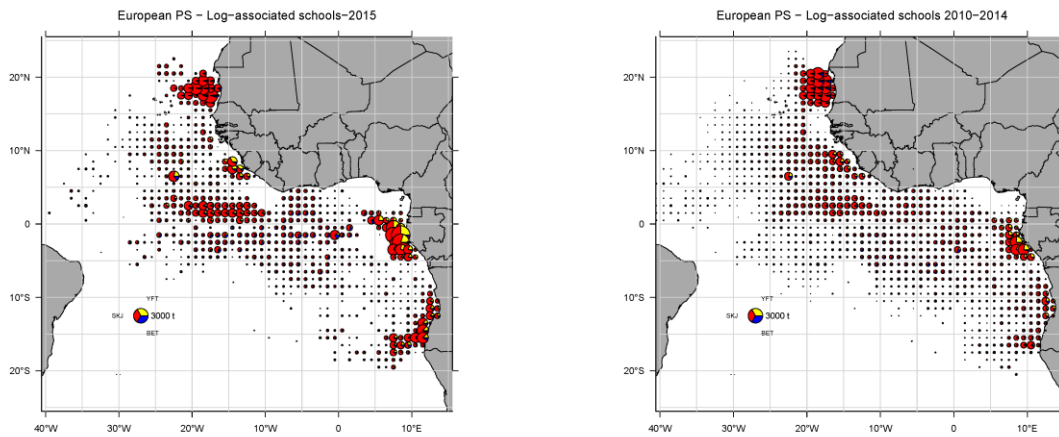




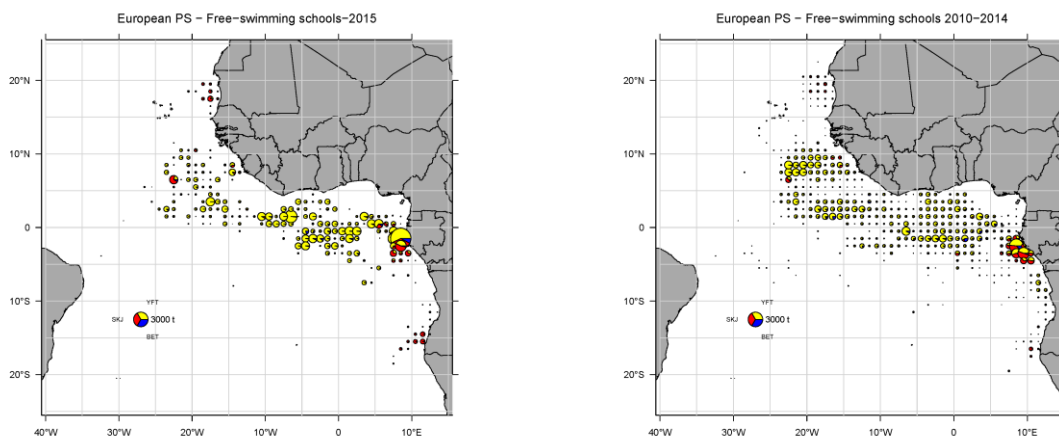
**Figure 1.** Catches by species and fishing effort in searching days of the European and associated purse-seine fleet according to their fishing mode: combined (top), Objets (middles) and free schools (bottom).



**Figure 2.** Distribution of the catches by species of the European and associated purse-seine fleet in 2015 (left) and on average over the 2010-2014 period (right).



**Figure 3.** Distribution of the catches by species of the European and associated purse-seine fleet, on log schools, in 2015 (left) and on average over the 2010-2014 period (right).



**Figure 4.** Distribution of the catches by species of the European and associated purse-seine fleet, on free schools, in 2015 (left) and on average over the 2010-2014 period (right).

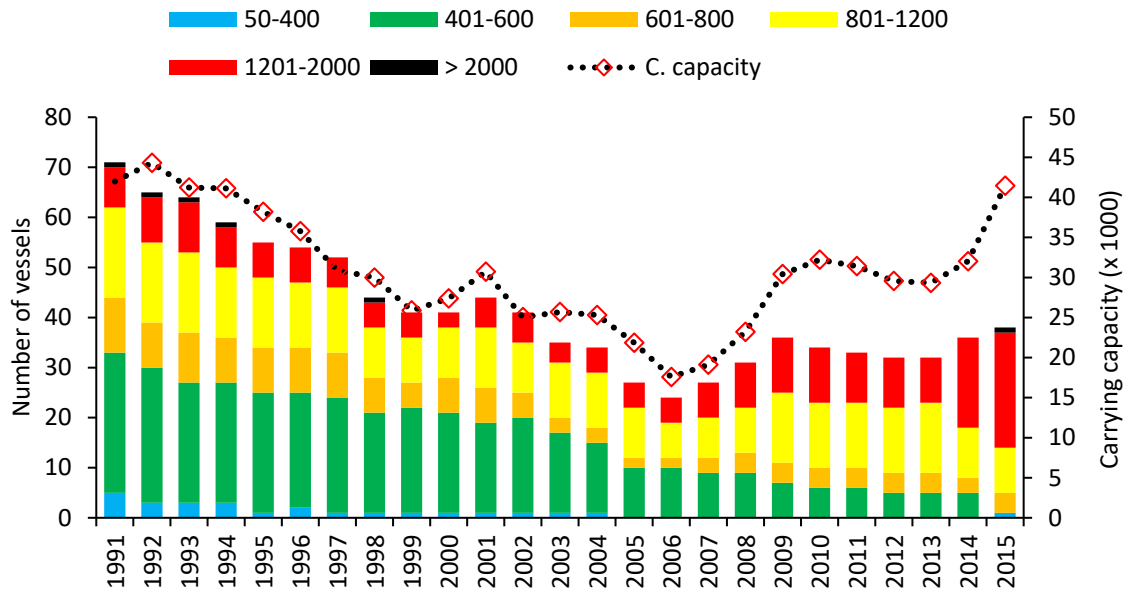


Figure 5. Boats number, TJB category and carrying capacity of European and associated purse-seine fleet.

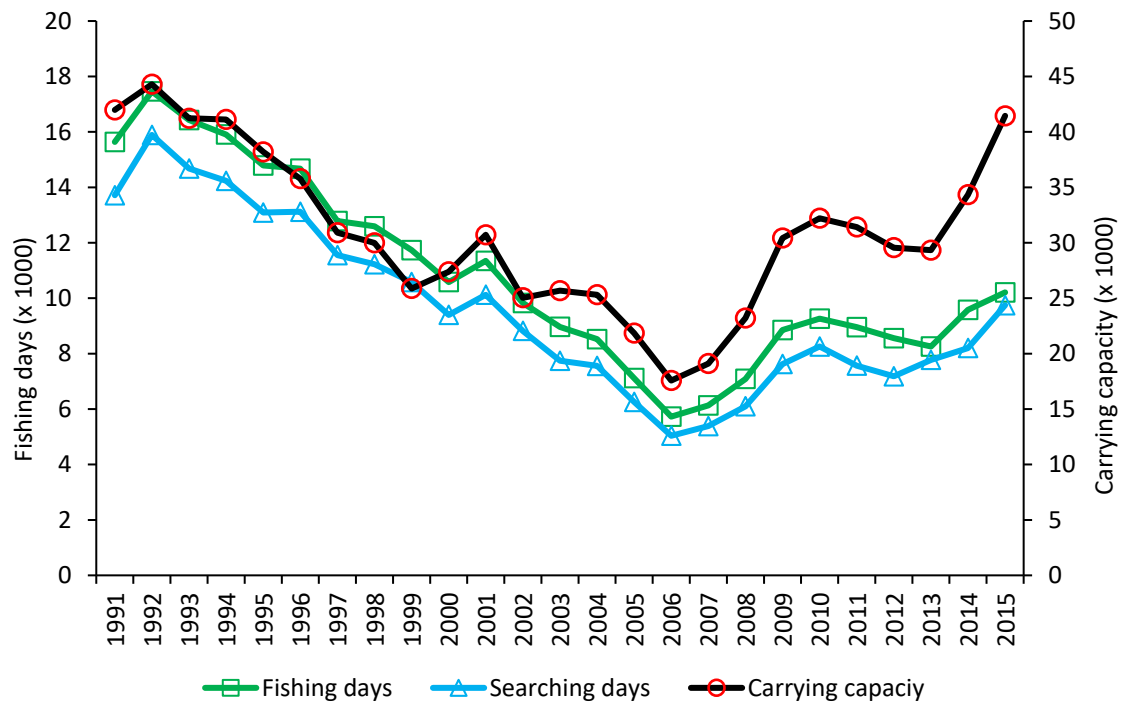
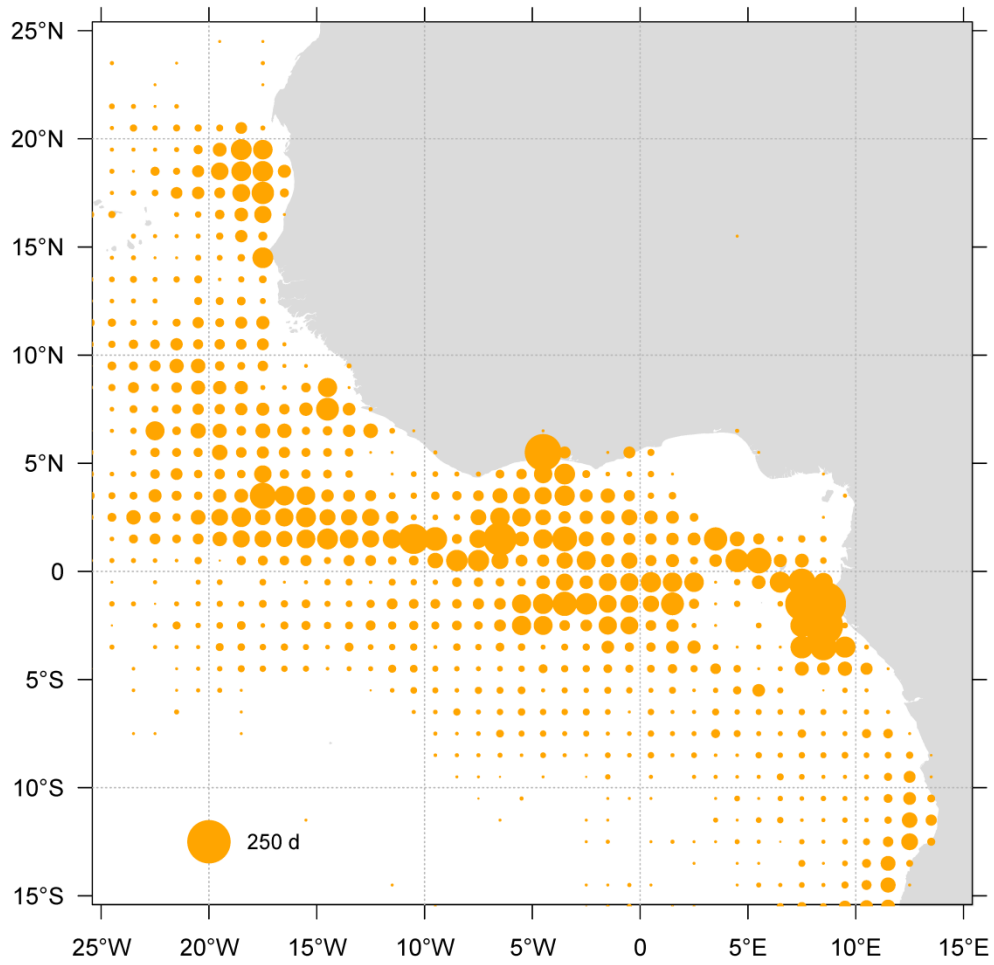
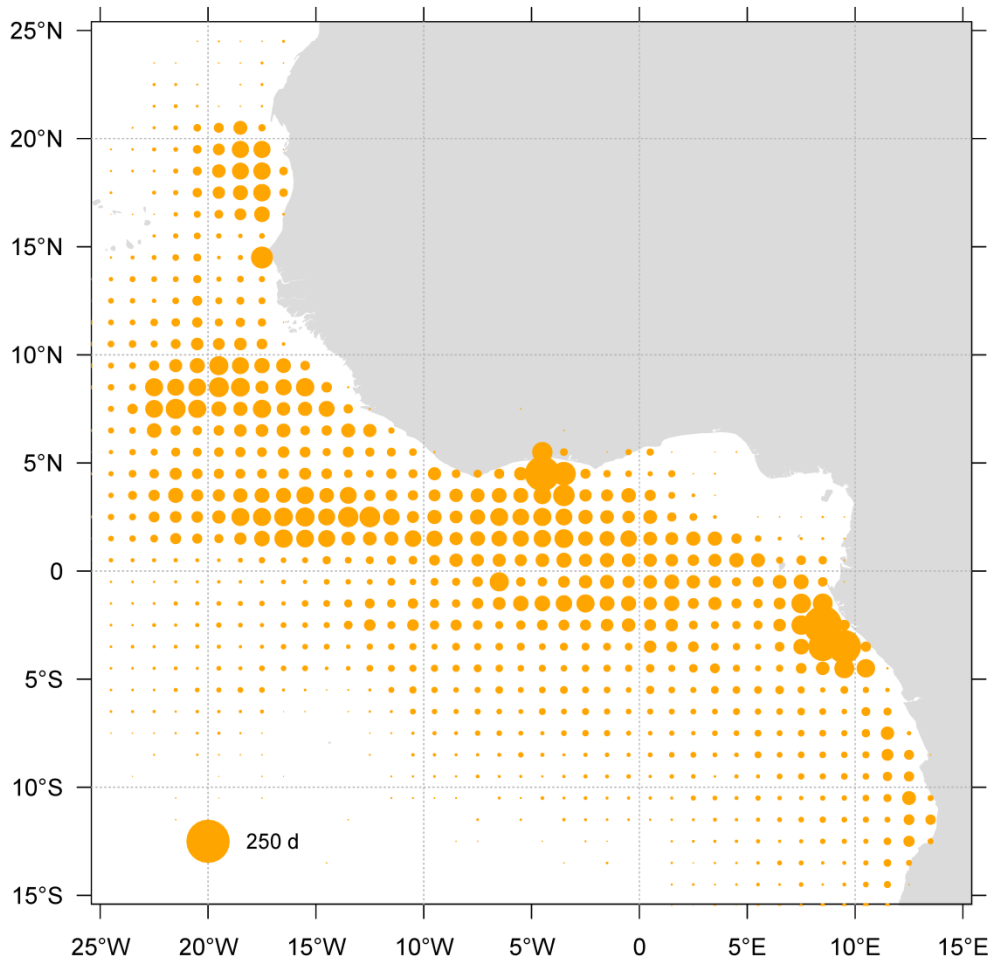


Figure 6. Fishing effort of European and Associated purse-seine fleet in number of fishing days, searching days and carrying capacity.



**Figure 7.** Distribution of the fishing effort (day at sea European and Associated purse-seine fleet in 2015).



**Figure 8.** Distribution of the fishing effort (day at sea European and Associated purse-seine fleet in the period 2010-2004.