

FIGURES

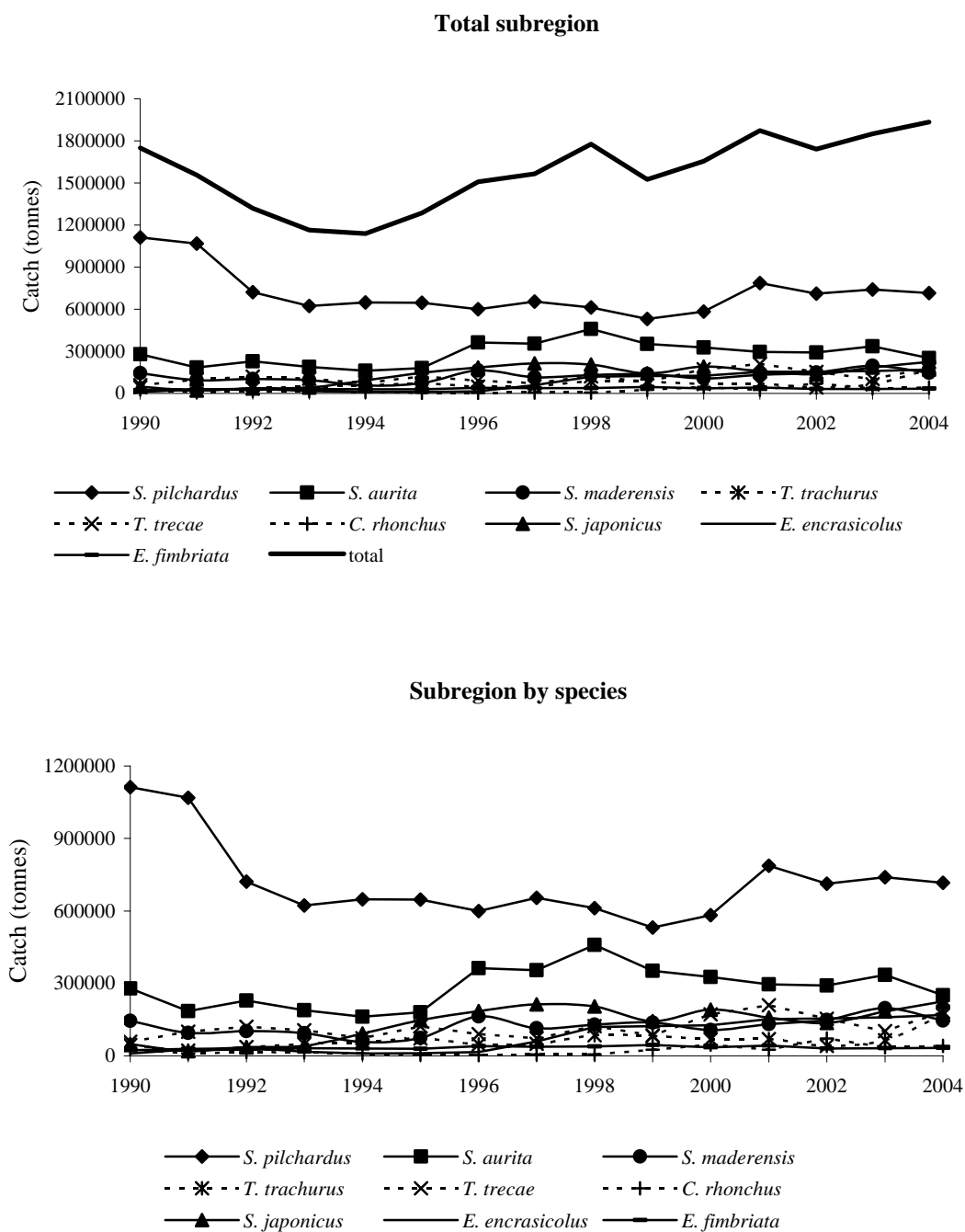


Figure 1.5.1a: Catches (1990–2004) in the subregion by species and year (weight in tonnes)/Captures totales (1990-2004) dans la sous-région par espèce et par année (poids en tonnes)

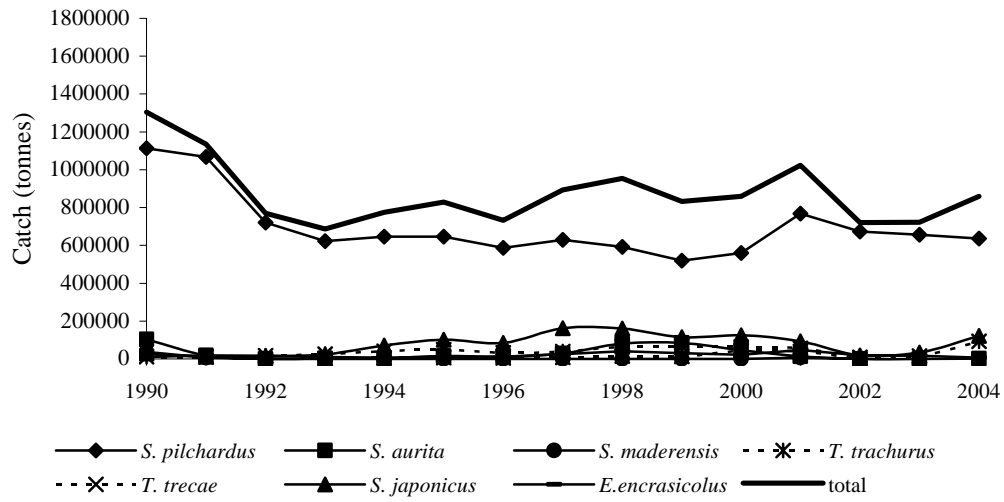


Figure 1.5.1b: Catches (1990–2004) in Morocco by species and year (weight in tonnes)/Captures (1990-2004) au Maroc par espèce et par année (poids en tonnes)

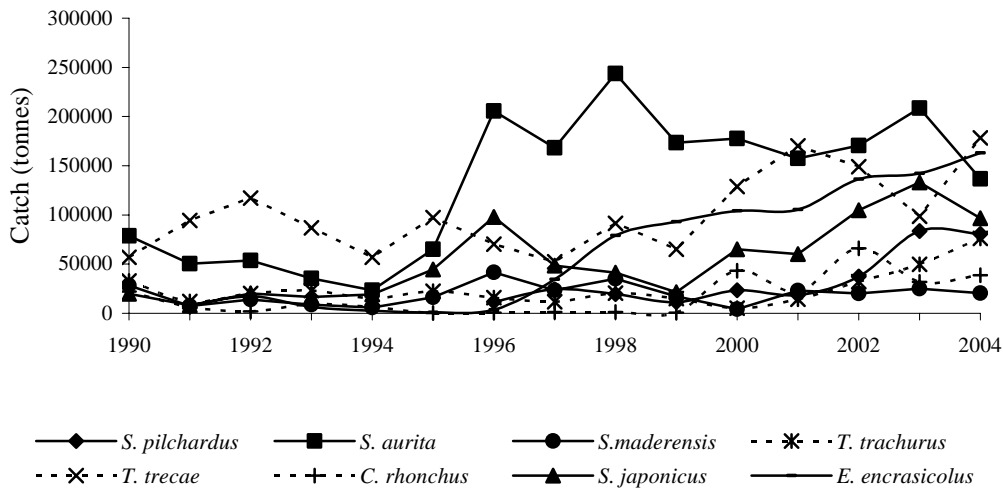


Figure 1.5.1c: Catches (1990–2004) in Mauritania by species and year (weight in tonnes)/Captures (1990-2004) en Mauritanie par espèce et par année (poids en tonnes)

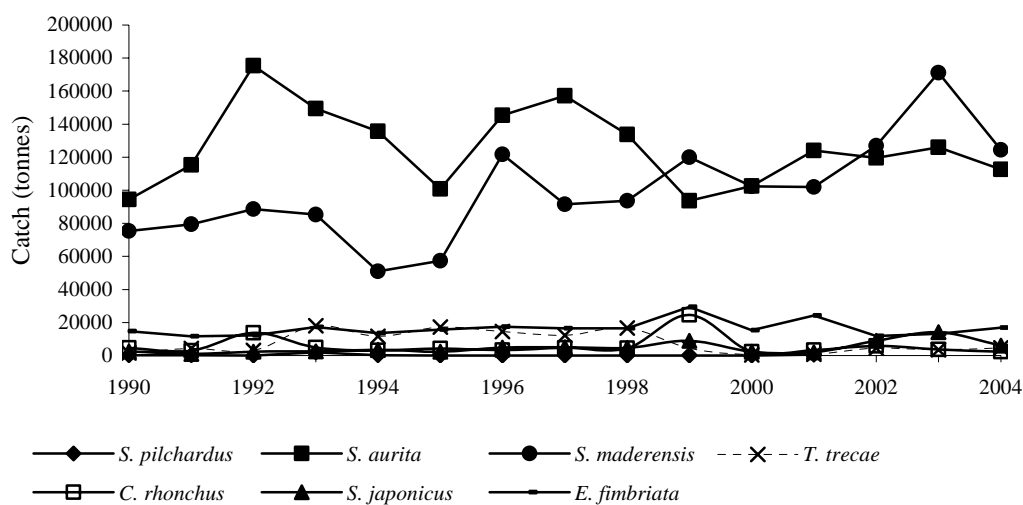


Figure 1.5.1d: Catches (1990–2004) in Senegal by species and year (weight in tonnes)/Captures (1990-2004) au Sénégal par espèce et par année (poids en tonnes)

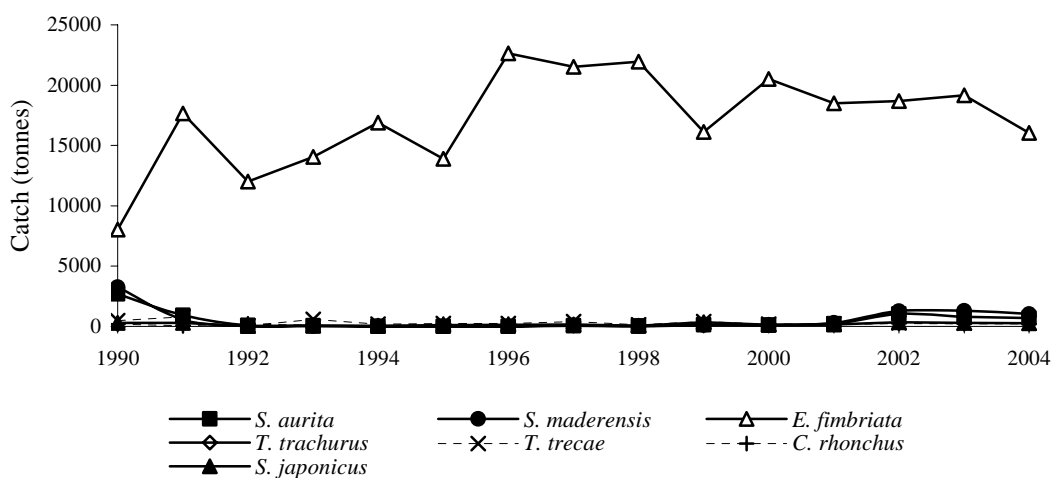


Figure 1.5.1e: Catches (1990–2004) in The Gambia by species and year (weight in tonnes)/Captures (1990-2004) en Gambie par espèce et par année (poids en tonnes)

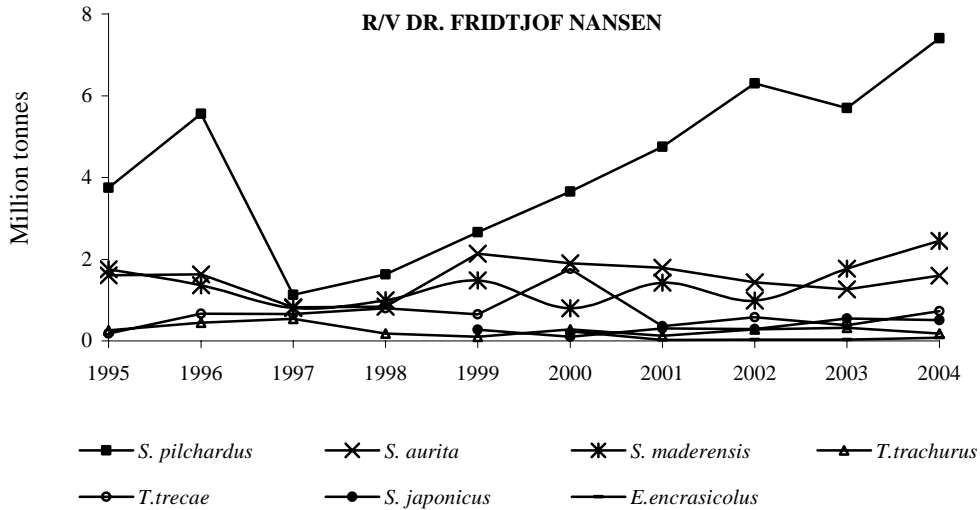


Figure 1.7.1a: Evolution of biomass in million tonnes estimated by R/V DR. FRIDTJOF NANSEN in the period 1995–2004/Evolution de la biomasse en millions de tonnes estimées par le N/R DR. FRIDTJOF NANSEN pendant la période 1995-2004

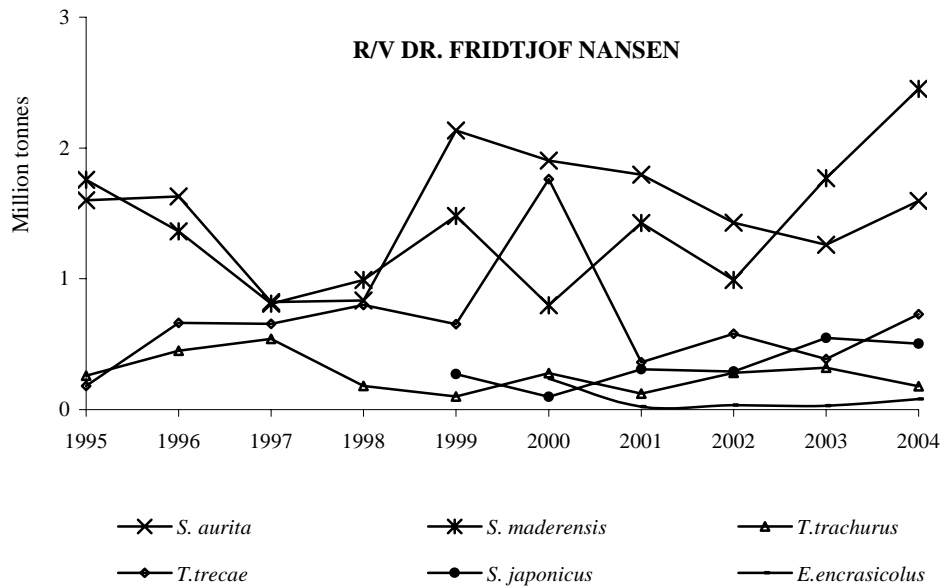


Figure 1.7.1b: Evolution of biomass of small pelagics without sardine in million tonnes estimated by R/V DR. FRIDTJOF NANSEN in the period 1995–2004/Evolution de la biomasse de petits pélagiques sans sardine en millions de tonnes estimées par le N/R DR. FRIDTJOF NANSEN pendant la période 1995-2004

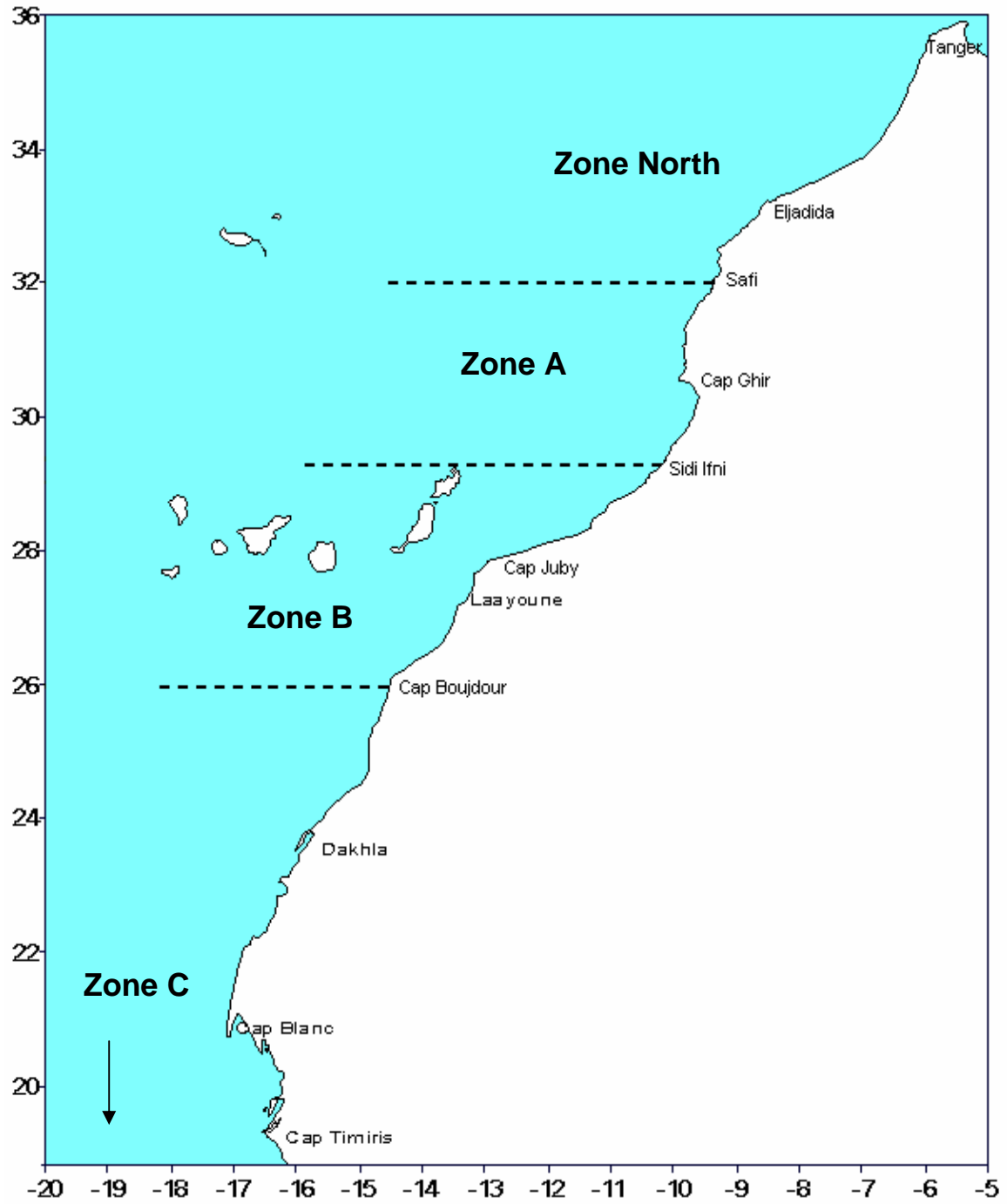


Figure 2.1.1: Stock units and sardine fisheries/Unités de stock et pêcheries de sardine

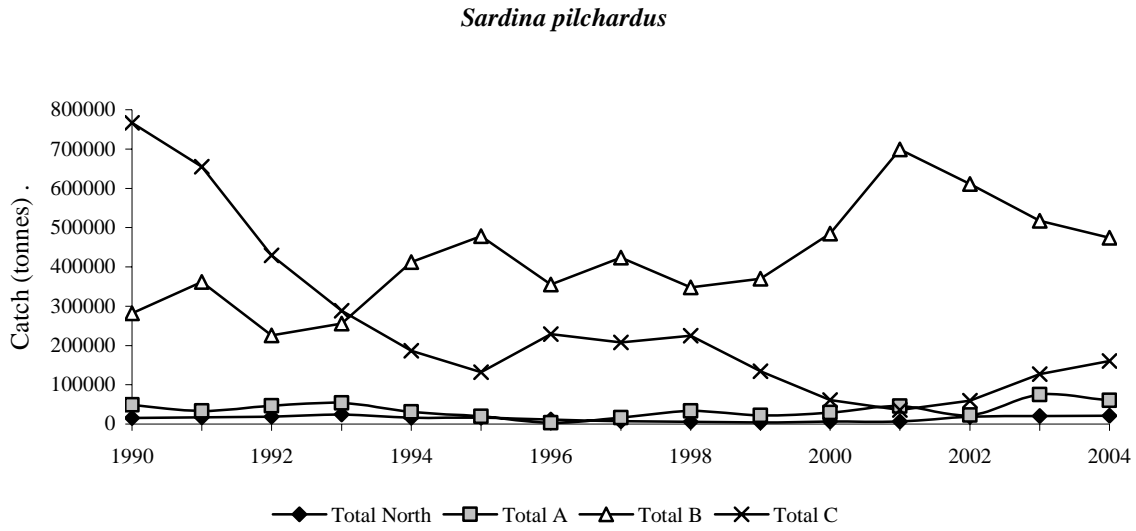


Figure 2.2.1a: Catches (1990–2004) of *Sardina pilchardus* by zone and year (weight in tonnes)/Captures (1990-2004) de *Sardina pilchardus* par zone et année (poids en tonnes)

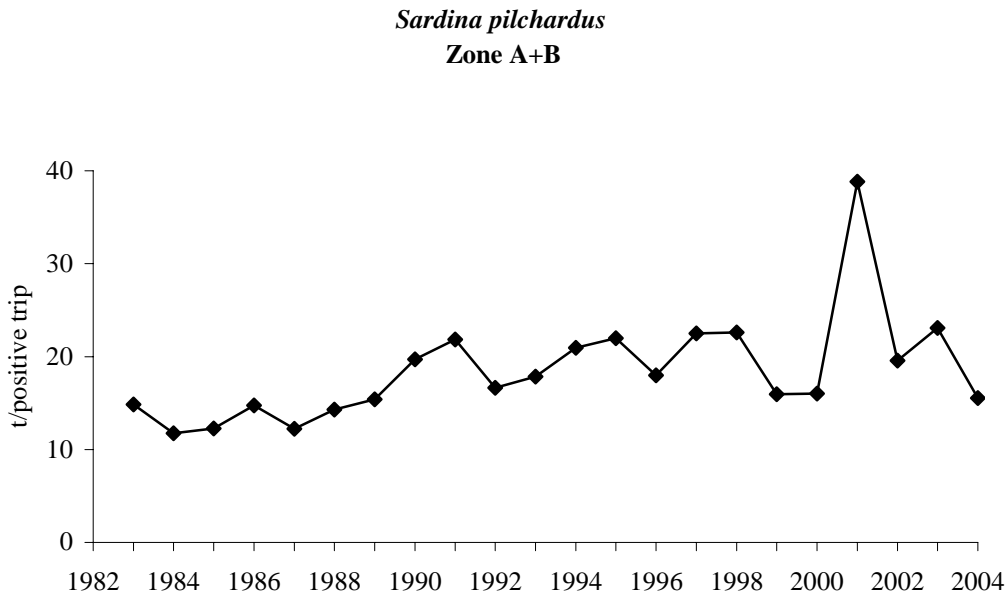


Figure 2.3.1a: CPUE of *Sardina pilchardus* (1983–2004) in Zone A+B (tonnes/positive trip)/CPUE (1983-2004) de *Sardina pilchardus* dans les Zones A+B (tonnes/jours de pêche avec sardine).

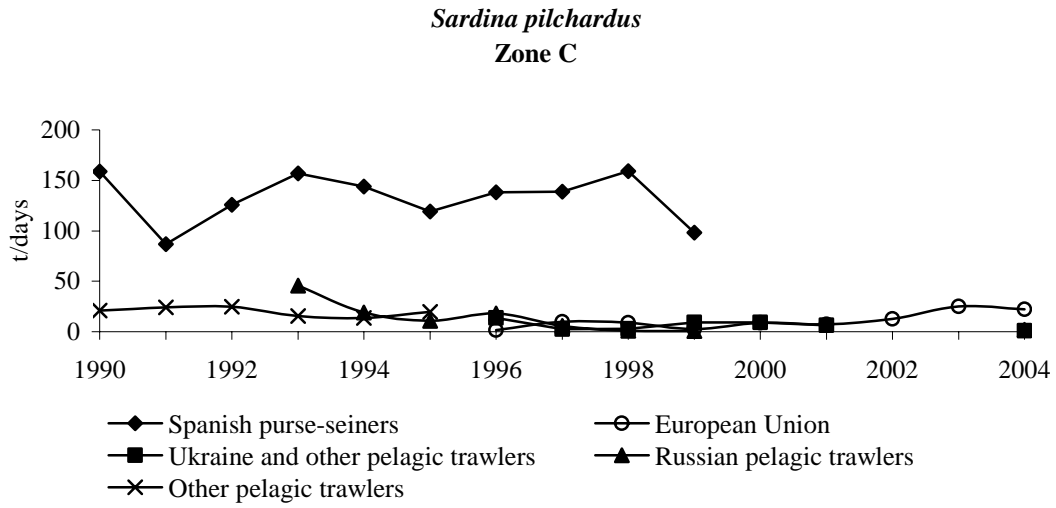


Figure 2.3.1b: CPUE of *Sardina pilchardus* (1992–2004) by fishery in Zone C (tonnes/fishing days)/CPUE de *Sardina pilchardus* (1992–2004) par pêcherie dans la Zone C (tonnes/jours de pêche)

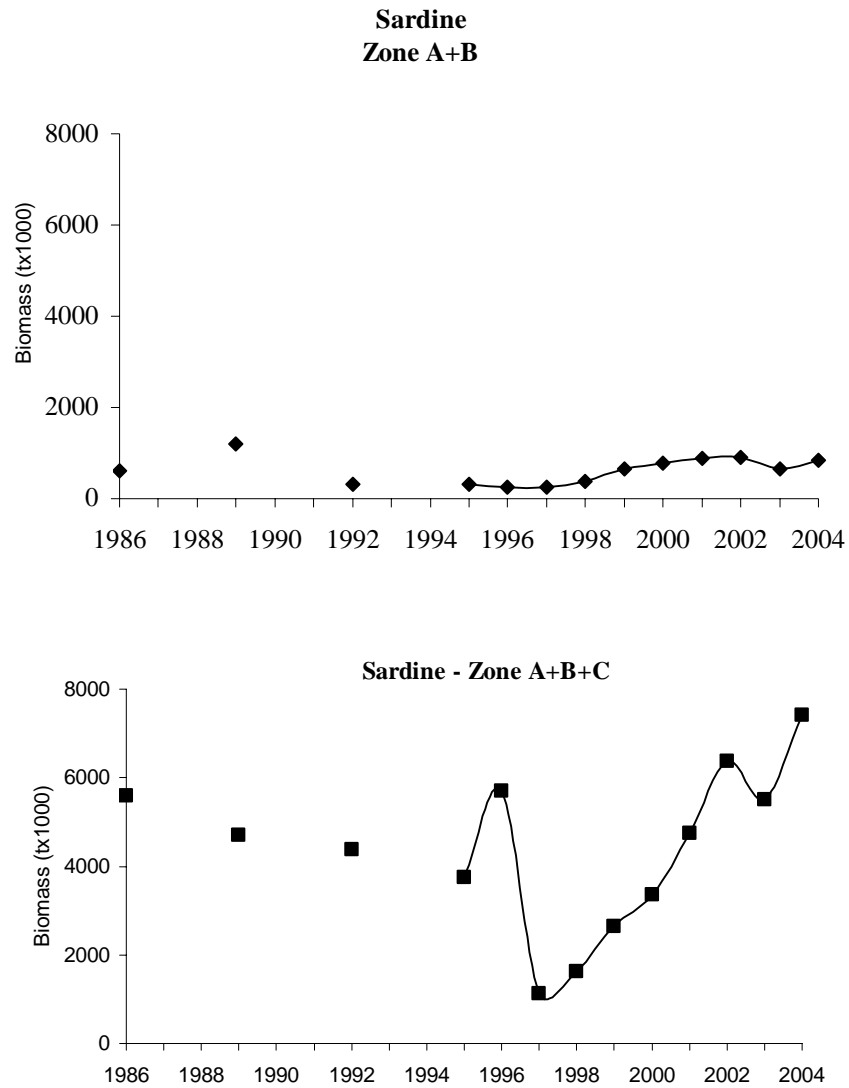


Figure 2.3.2: Biomass estimates of sardine (1986-2004) for Zones A, B and C from R/V DR. FRIDTJOF NANSEN (in thousand tonnes)/Estimations de la biomasse de sardine (1986-2004) pour les Zones A, B et C du N/R DR. FRIDTJOF NANSEN (en milliers de tonnes)

Sardine - Zone A+B

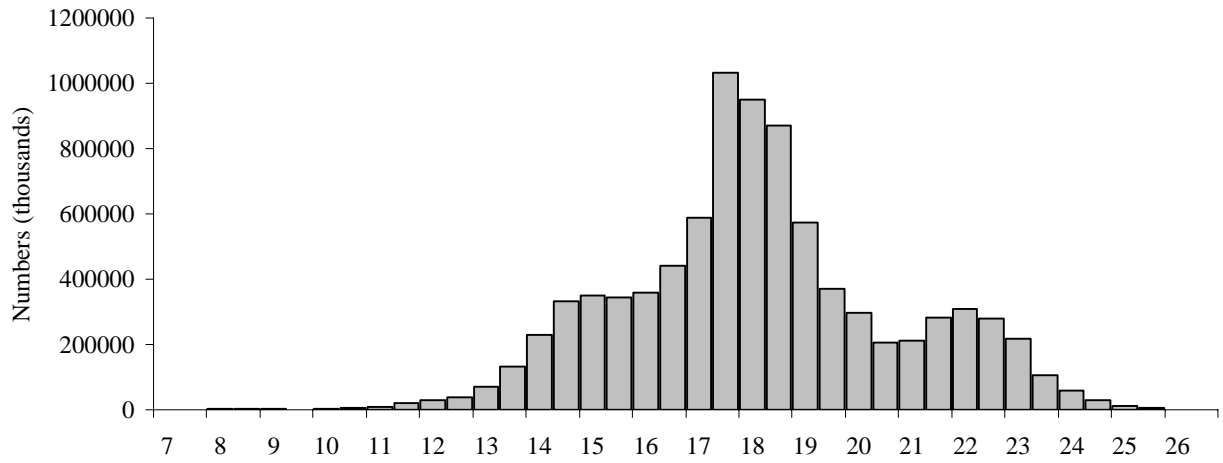


Figure 2.5.1a: Length composition of catches for 2004 in Zone A+B/Composition en taille de la capture pour 2004 en Zone A+B

Sardine - Zone C

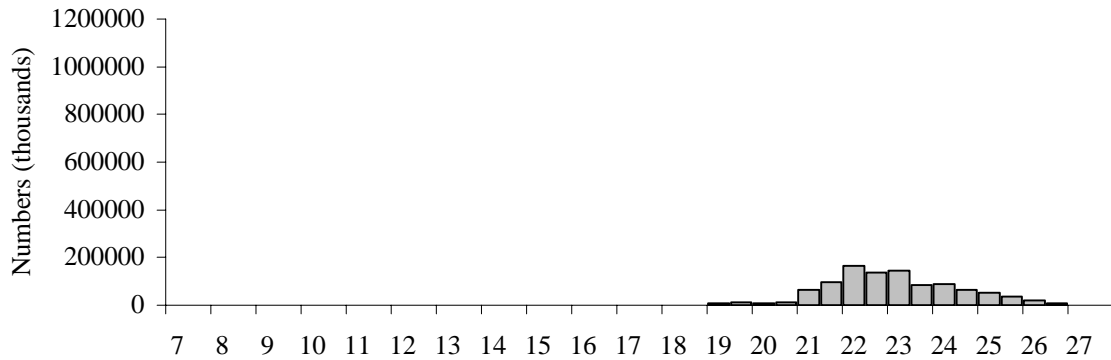


Figure 2.5.1b: Length composition of catches for 2004 in Zone C/Composition en taille de la capture pour 2004 en Zone C

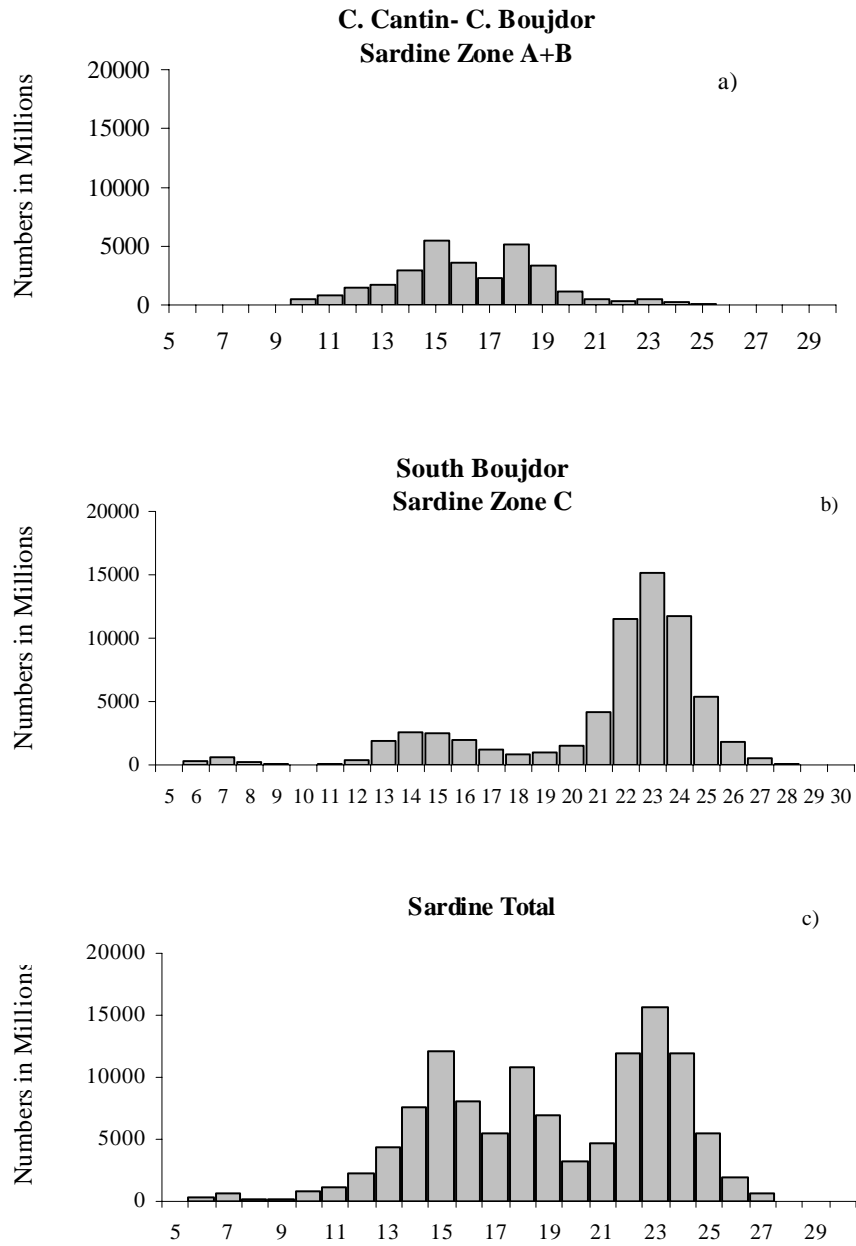


Figure 2.5.2a,b,c: Length composition of sardine (Nov.-Dec. 2004) – R/V DR. FRIDTJOF NANSEN/
Composition en taille de la sardine (nov.-déc. 2004) – N/R DR. FRIDTJOF NANSEN

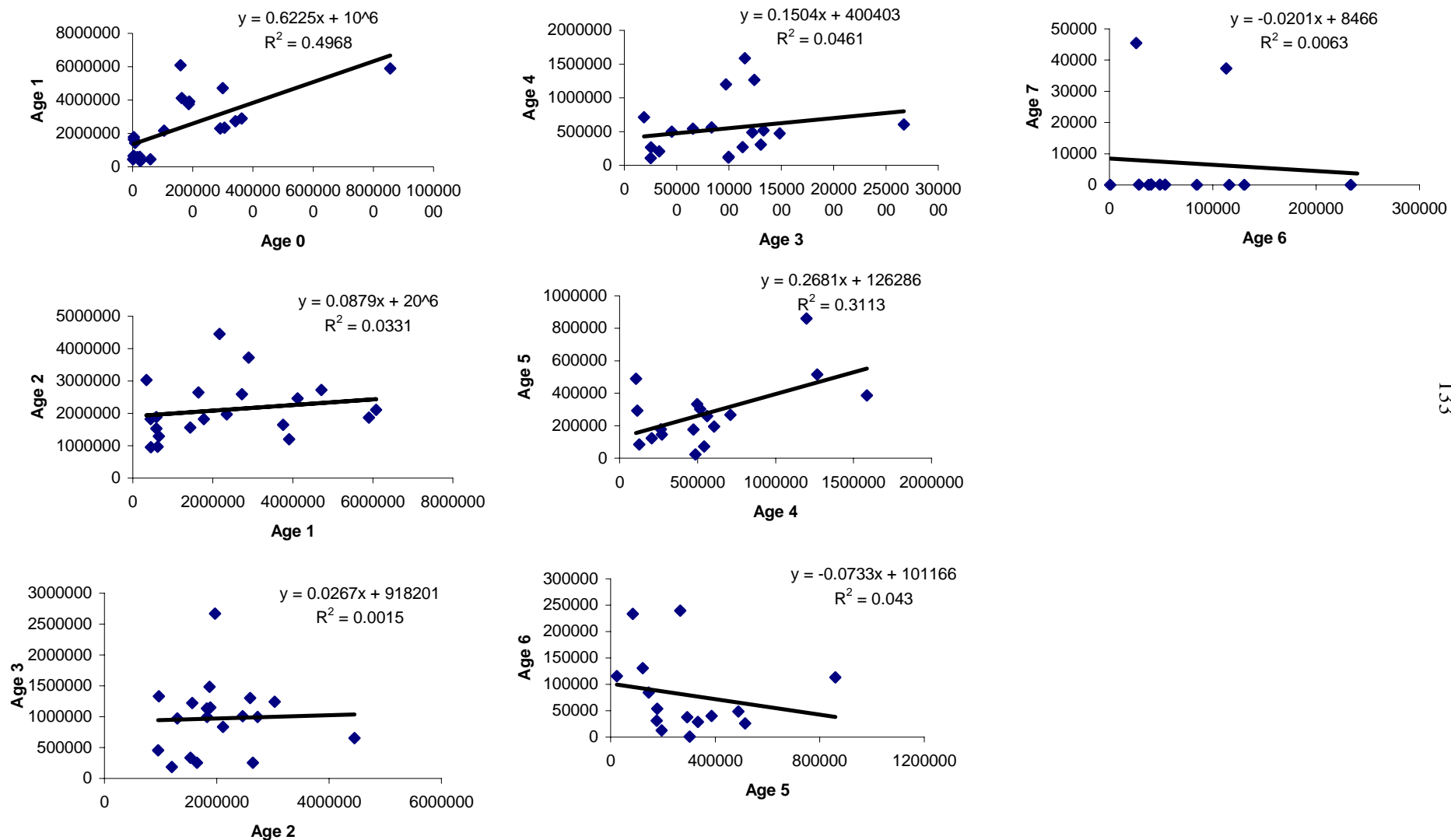


Figure 2.6.1: Exploratory analyses of the data for sardine in Zone A+B/Analyses exploratoires des données pour la sardine dans la Zone A+B

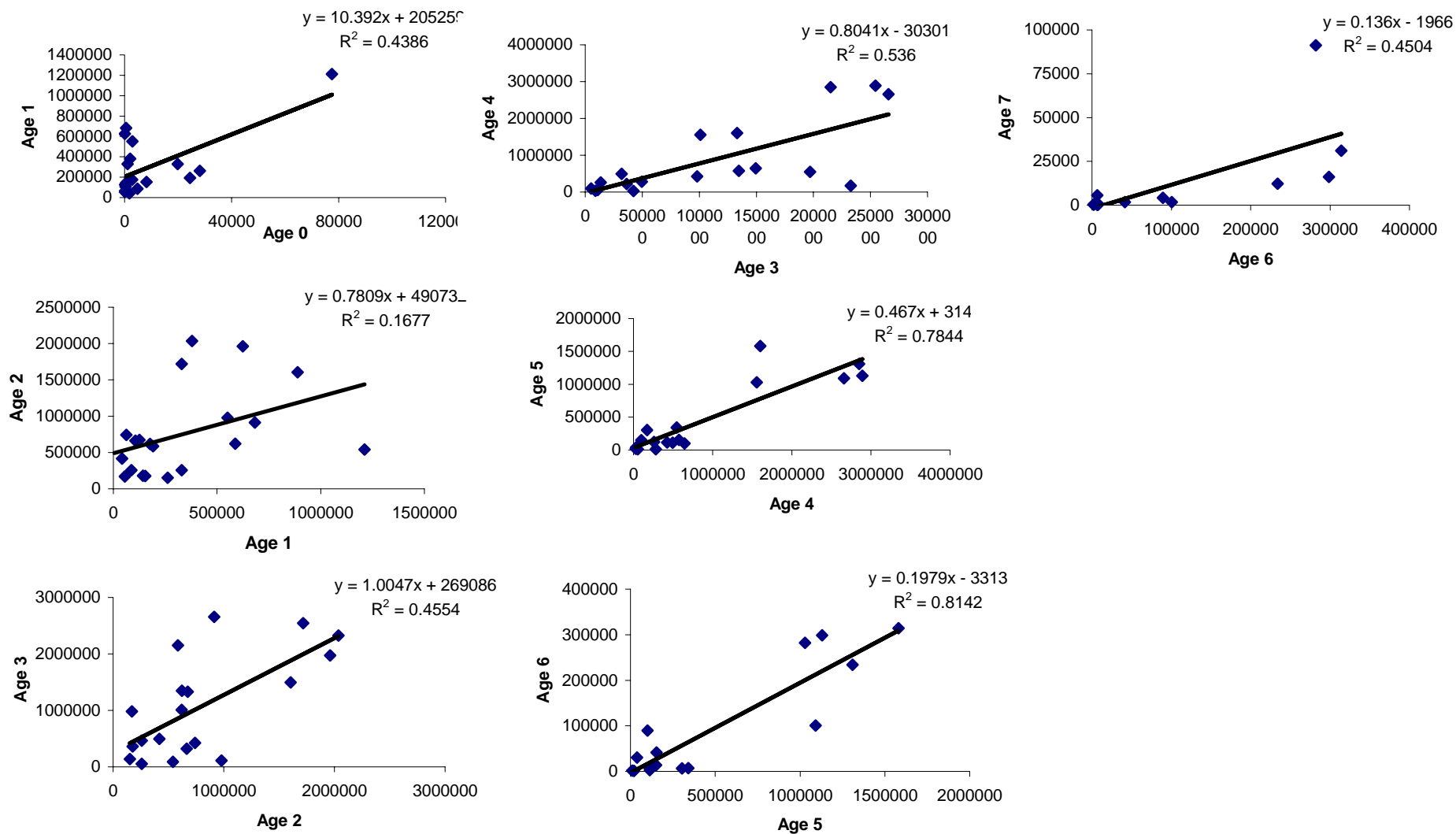


Figure 2.6.2: Exploratory analyses of the data for sardine in Zone C/Analyses exploratoires des données pour la sardine dans la Zone C

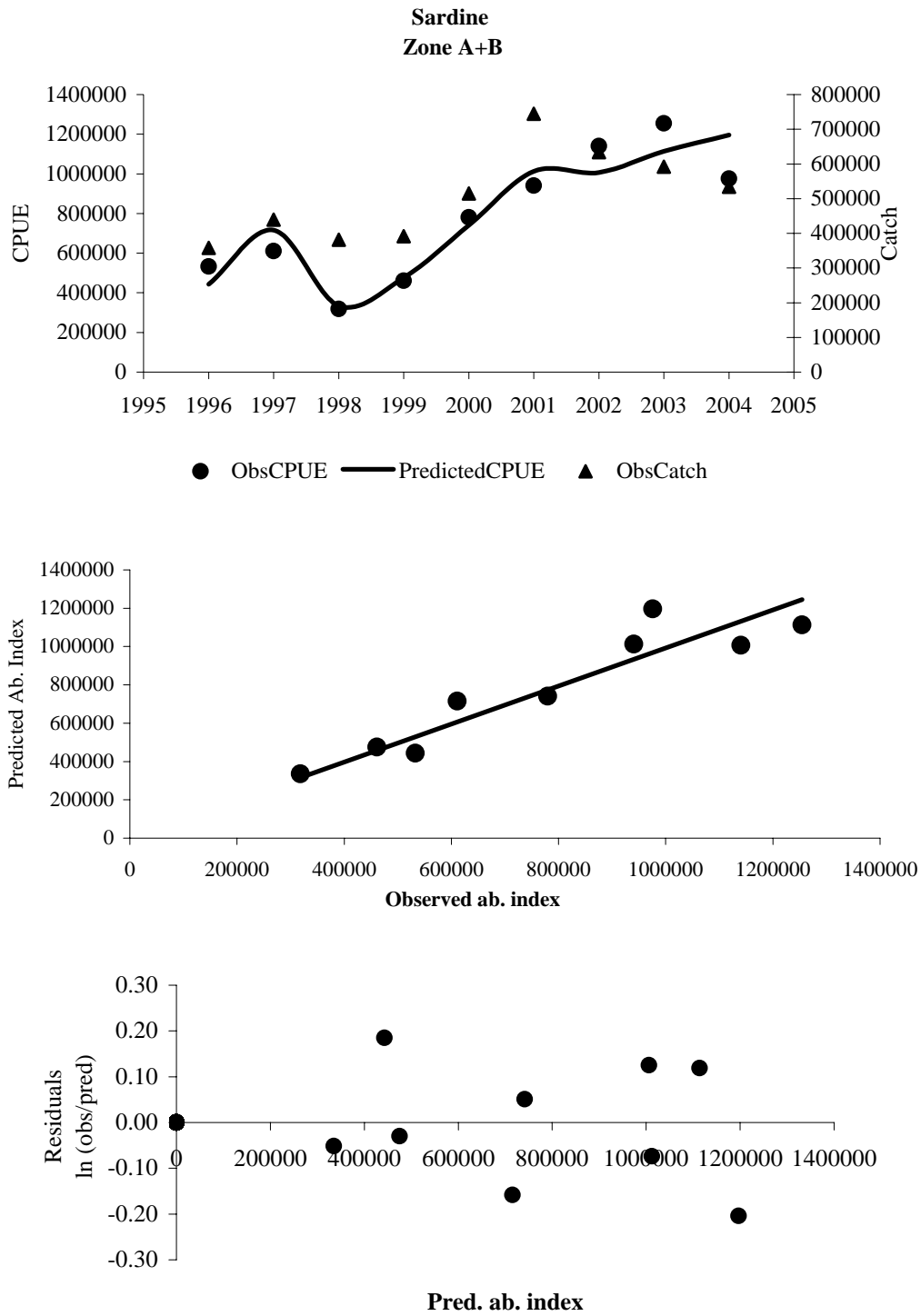


Figure 2.6.3a: Observed and predicted abundance indices for sardine Zone A+B using estimates from R/V DR. FRIDTJOF NANSEN (1995–2004) and diagnostics of the model fit/Indices d’abondance observés et prévus pour la sardine en Zone A+B en utilisant les estimations du N/R DR. FRIDTJOF NANSEN (1995-2004) et les diagnostics du modèle

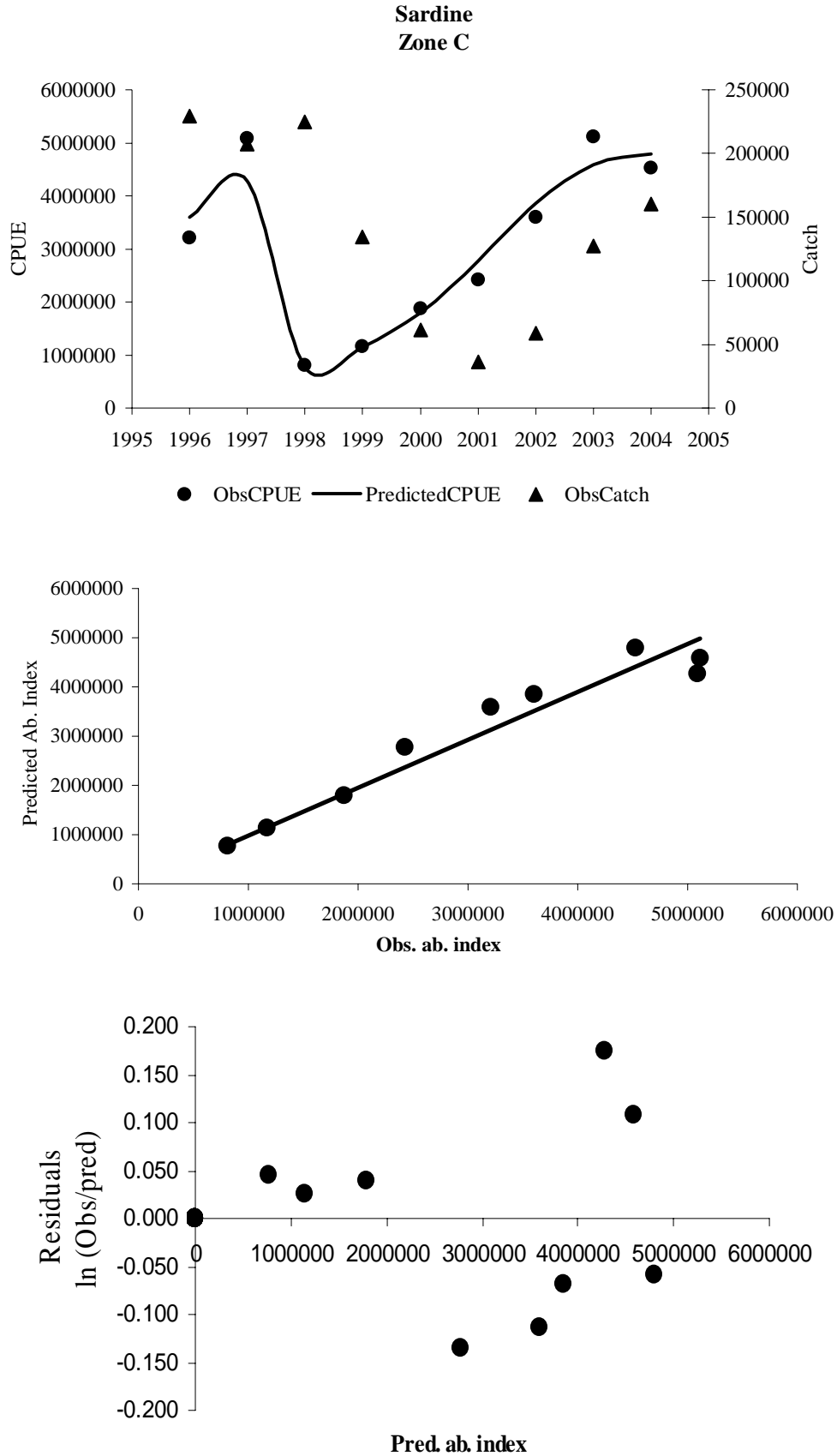


Figure 2.6.3b: Observed and predicted abundance indices for Sardine Zone C using estimates from R/V DR. FRIDTJOF NANSEN (1995–2004) and diagnostics of the model fit/Indices d’abondance observés et prévus pour la sardine en Zone C en utilisant les estimations du N/R DR. FRIDTJOF NANSEN (1995-2004) et les diagnostics du modèle

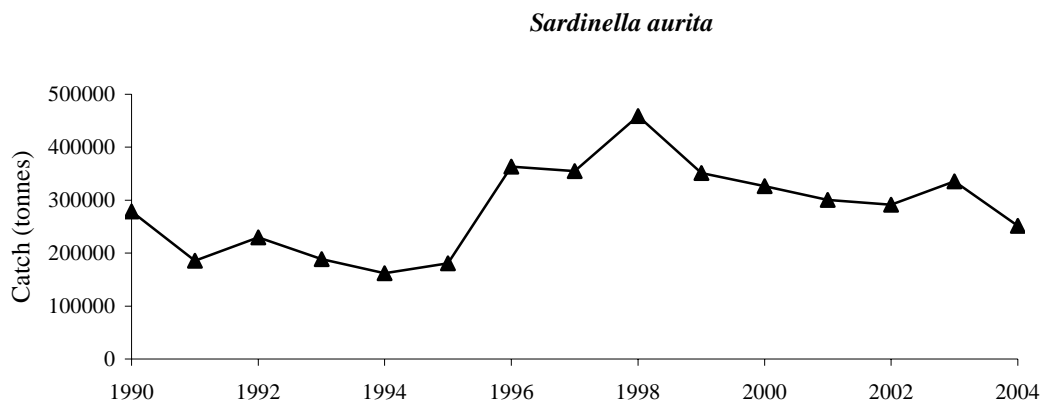


Figure 3.2.1a: Total catch of *Sardinella aurita* (1990–2004) in all region/Capture totale de *Sardinella aurita* (1990-2004) dans toute la région

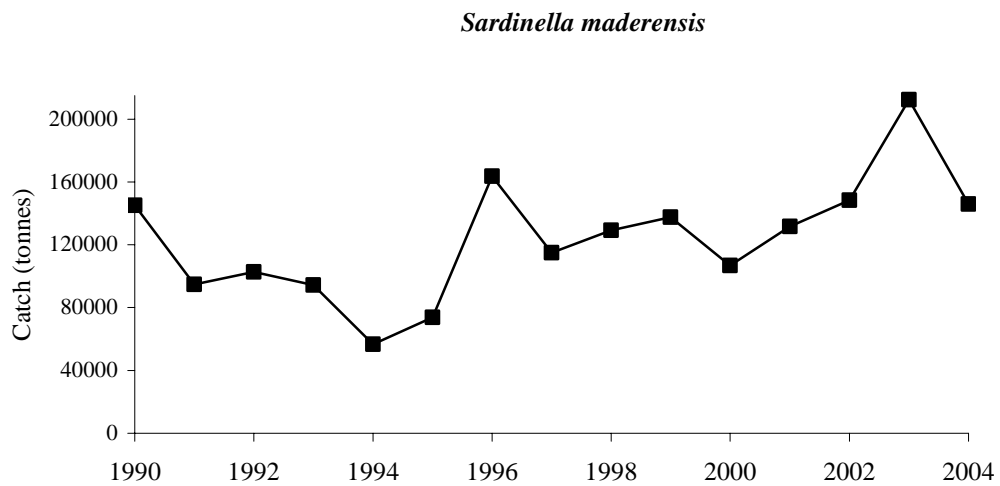
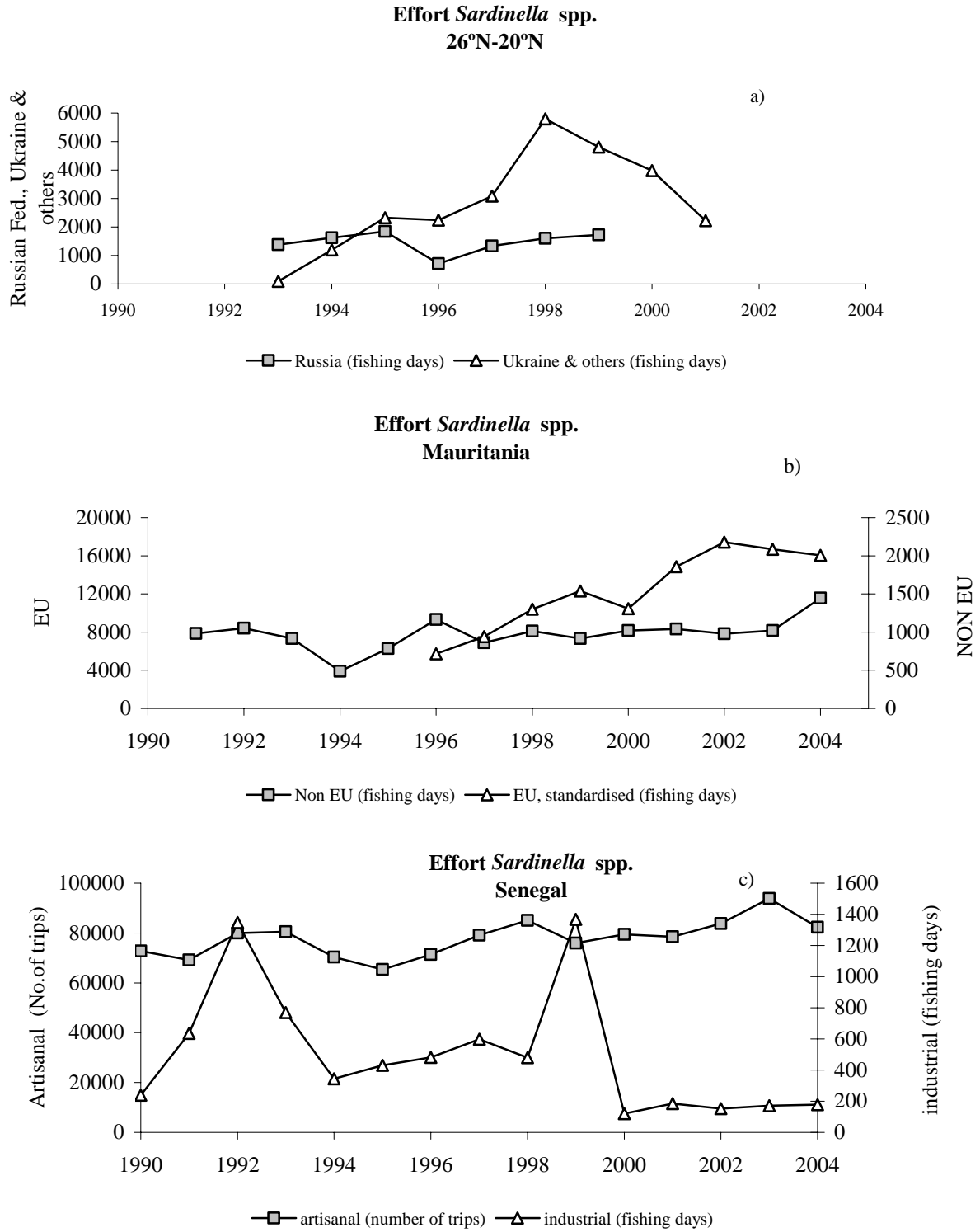


Figure 3.2.1b: Total catch of *Sardinella maderensis* (1990–2004) in all region/Capture totale de *Sardinella maderensis* (1990-2004) dans toute la région



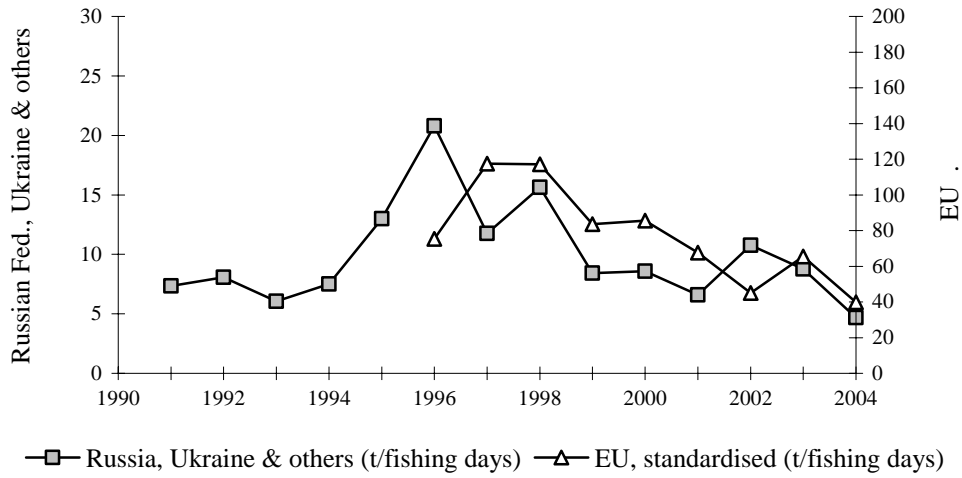


Figure 3.3.1a: CPUE of *Sardinella* spp. (1990–2004) by fishery in Mauritania (tonnes/fishing days)/CPUE de *Sardinella* spp. (1990-2004) par pêcheur en Mauritanie (tonnes/jours de pêche)

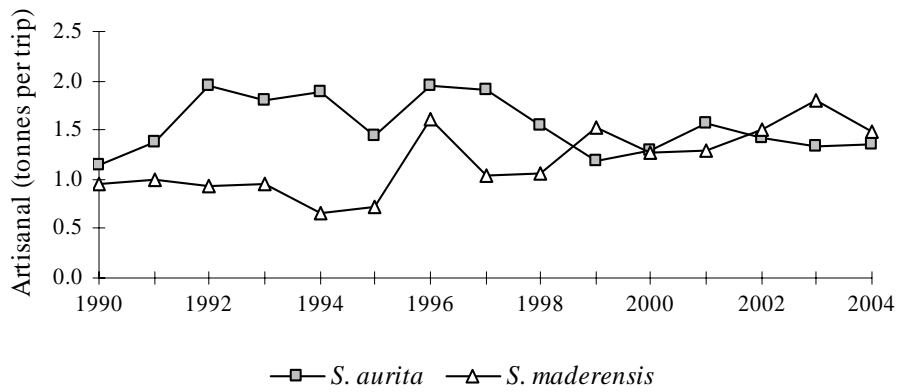


Figure 3.3.1b: CPUE of *Sardinella* spp. (1990–2004) by species for artisanal fishery in Senegal (tonnes/number of trips)/CPUE de *Sardinella* spp. (1990-2004) par espèces pour la pêche artisanale au Sénégal (tonnes/nombre de sorties)

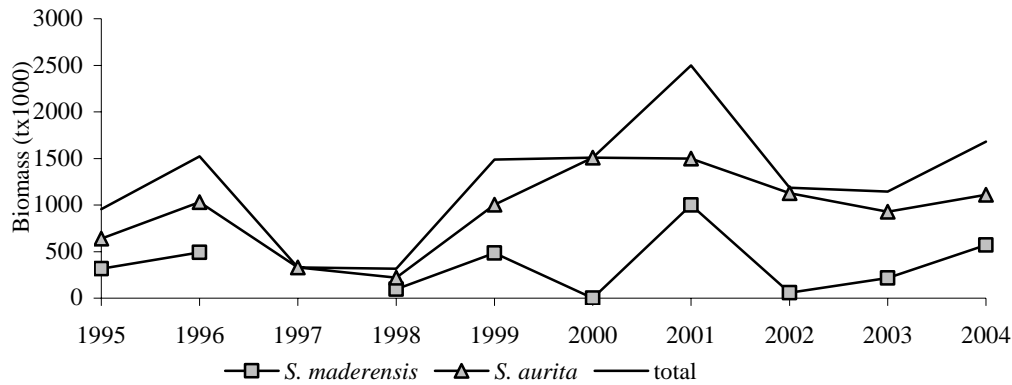


Figure 3.3.2a: Biomass estimates of *Sardinella aurita* and *S. maderensis* (1995–2004) north of Cape Blanc, R/V DR. FRIDTJOF NANSEN (weight in thousand tonnes)/Evaluations de la biomasse de *Sardinella aurita* et *S. maderensis* (1995-2004) pour la zone au nord du Cap Blanc, N/R DR. FRIDTJOF NANSEN (poids en milliers de tonnes)

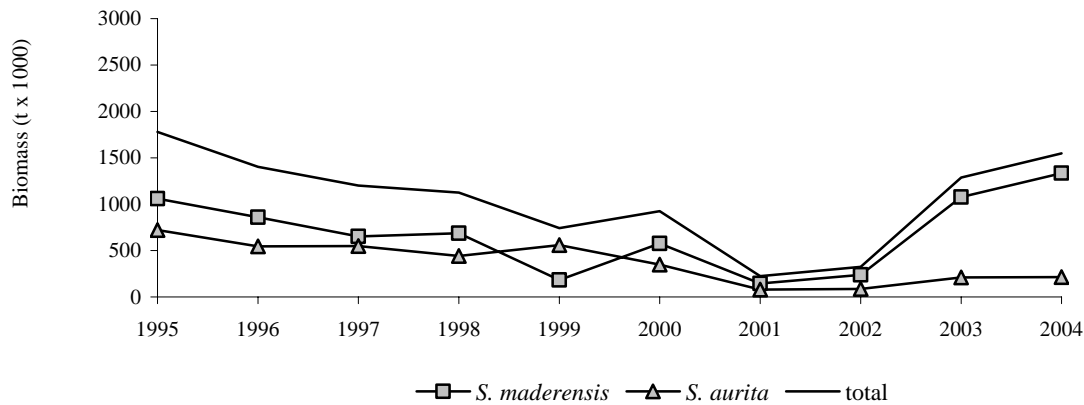


Figure 3.3.2b: Biomass estimates of *Sardinella aurita* and *S. maderensis* (1995–2004) for Mauritania, R/V DR. FRIDTJOF NANSEN (weight in thousand tonnes)/Evaluations de la biomasse de *Sardinella aurita* et *S. maderensis* (1995-2004) pour la Mauritanie, N/R DR. FRIDTJOF NANSEN (poids en milliers de tonnes)

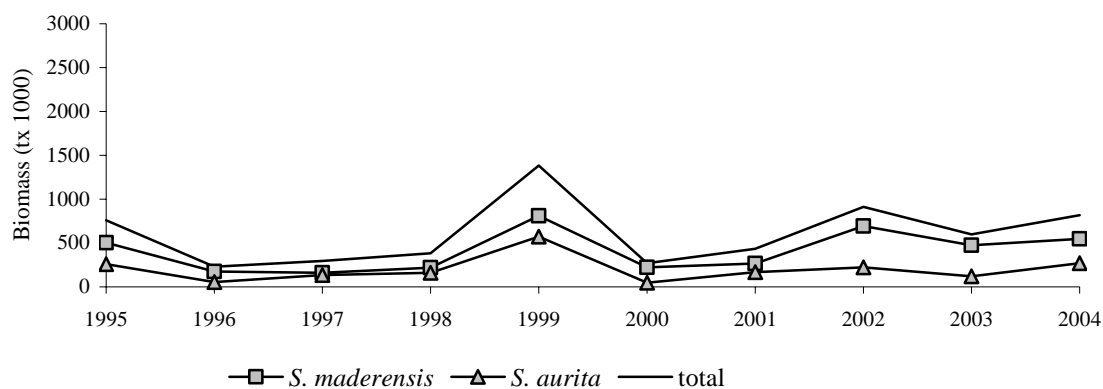


Figure 3.3.2c: Biomass estimates of *Sardinella aurita* and *S. maderensis* (1995–2004) for Senegal and The Gambia, R/V DR. FRIDTJOF NANSEN (weight in thousand tonnes)/Evaluations de la biomasse de *Sardinella aurita* et *S. maderensis* (1995-200) pour le Sénégal et la Gambie, N/R DR. FRIDTJOF NANSEN (poids en milliers de tonnes)

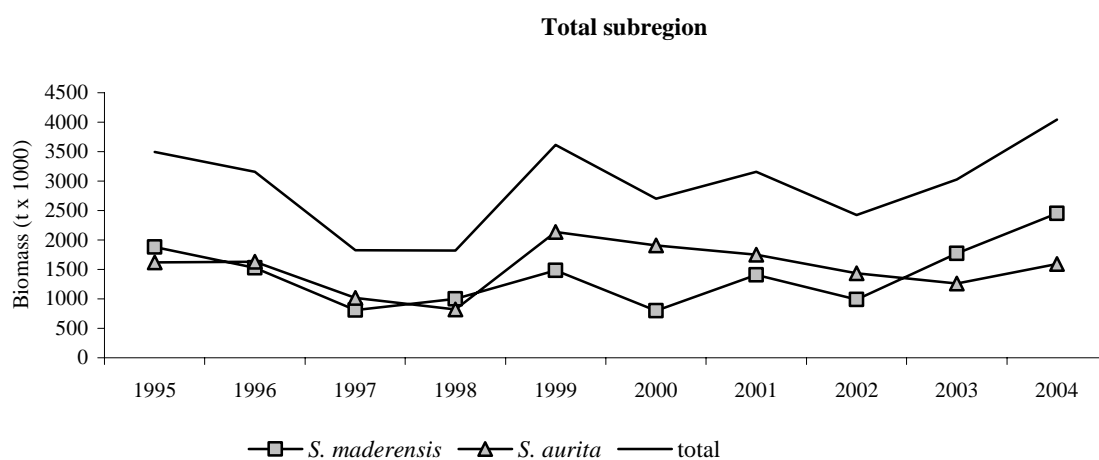


Figure 3.3.2d: Biomass estimates of *Sardinella aurita* and *S. maderensis* (1995–2004) for the subregion, R/V DR. FRIDTJOF NANSEN (weight in thousand tonnes)/Evaluations de la biomasse de *Sardinella aurita* et *S. maderensis* (1995-2004) pour la sous-région, N/R DR. FRIDTJOF NANSEN (poids en milliers de tonnes)

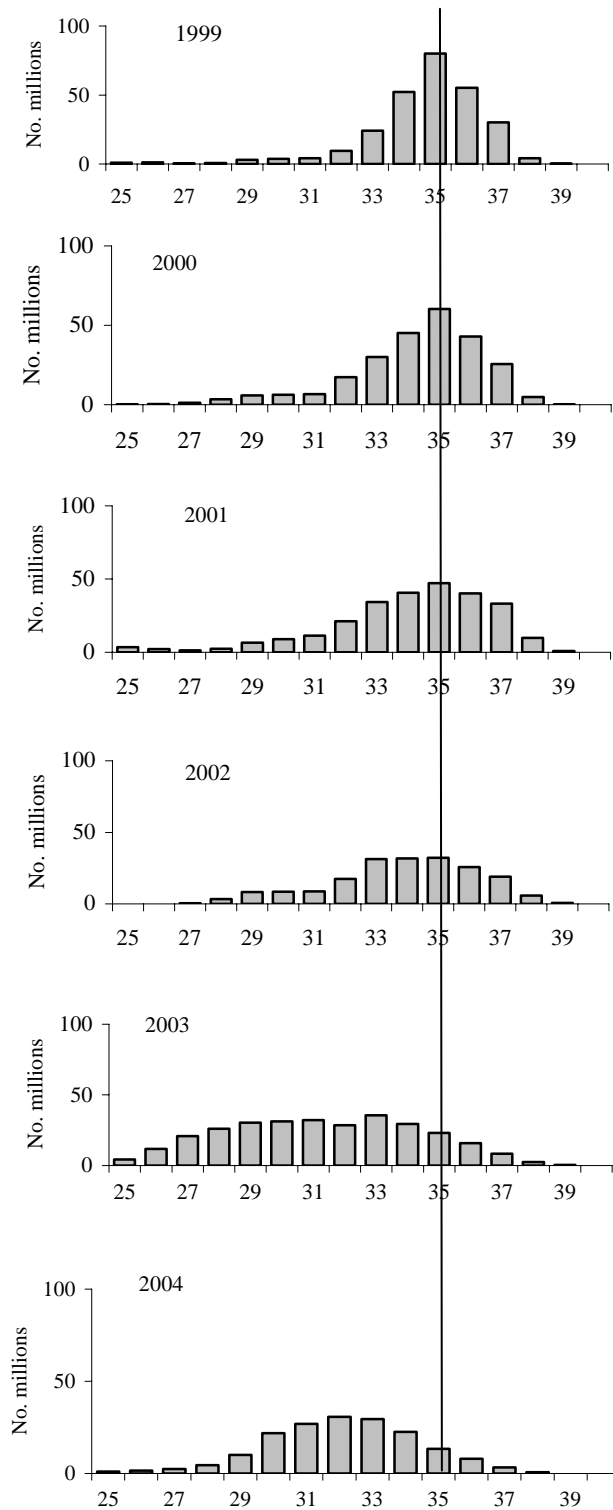


Figure 3.5.1: Length distributions of Dutch landings of *Sardinella aurita* in Mauritania (1999–2004)/Distributions en taille des débarquements hollandais de *Sardinella aurita* en Mauritanie (1999-2004)

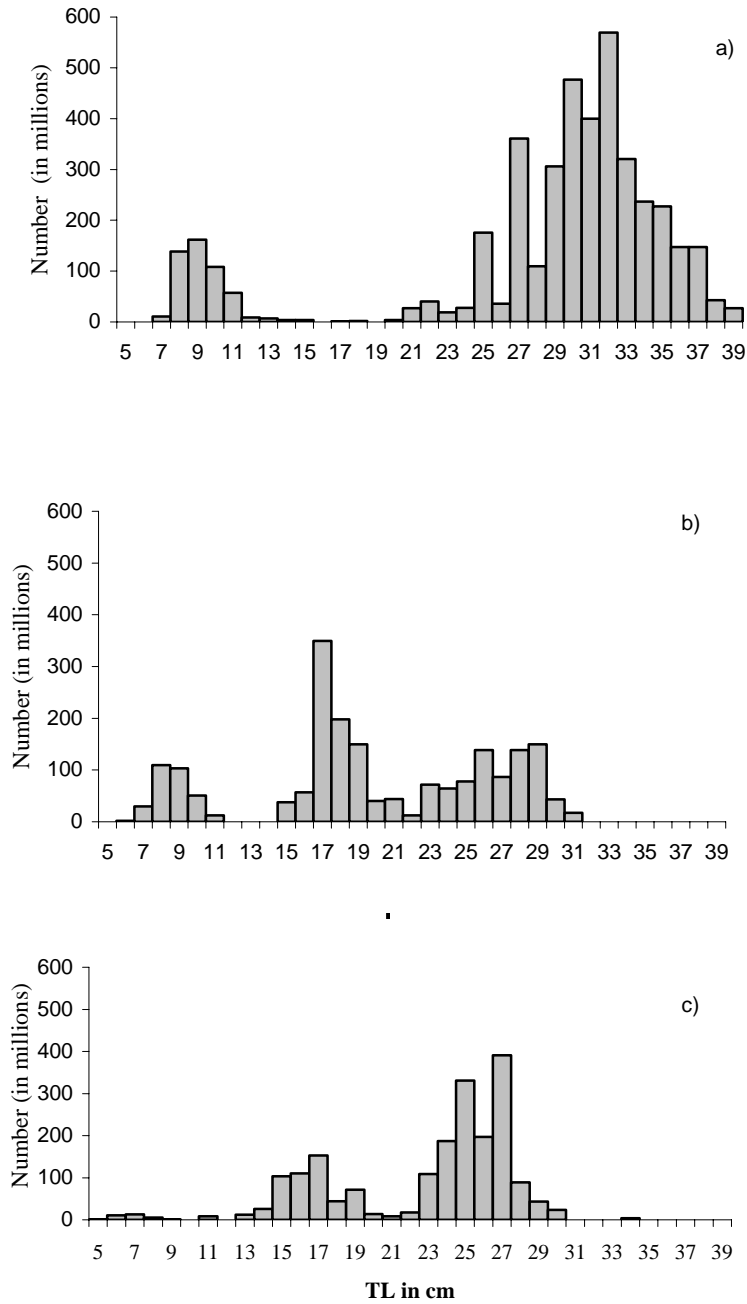


Figure 3.5.2: Length distribution of *Sardinella aurita* (2004) a) North of Cape Blanc, b) in Mauritania, c) in Senegal and The Gambia (in millions of individuals) – R/V DR. FRIDTJOF NANSEN/Distribution de fréquence des tailles (2004) de *Sardinella aurita* a) au nord du Cap Blanc, b) en Mauritanie, c) au Sénégal et en Gambie (en millions d'individus) – N/R DR. FRIDTJOF NANSEN

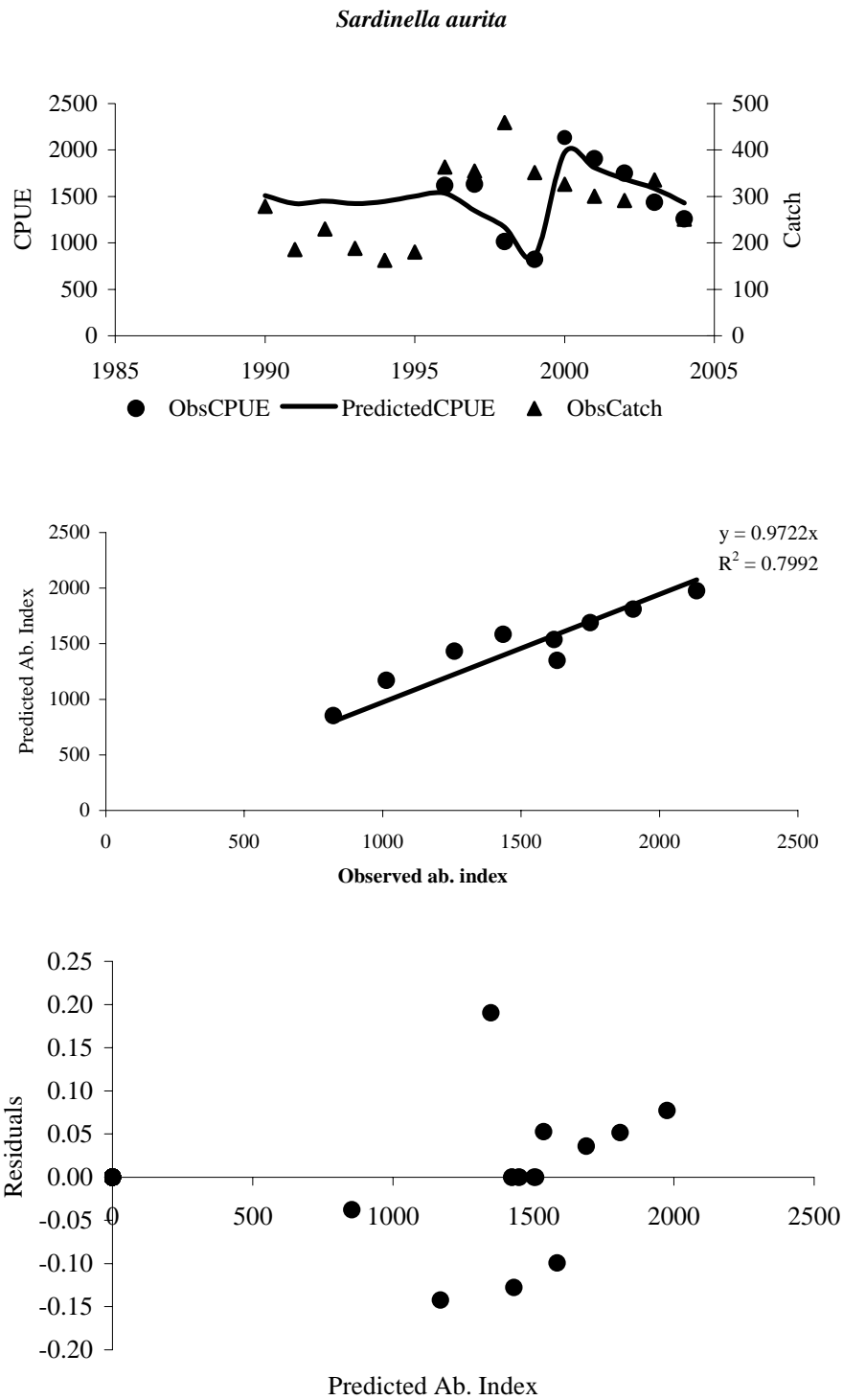


Figure 3.6.1: Observed and predicted CPUE index for *Sardinella aurita* using biomass estimates from R/V DR. FRIDTJOF NANSEN (1995–2004), and diagnostics of the model fit/Indices des CPUE observés et prévus pour *Sardinella aurita* en utilisant les estimations de biomasse du N/R DR. FRIDTJOF NANSEN (1995-2004) et les diagnostics du modèle

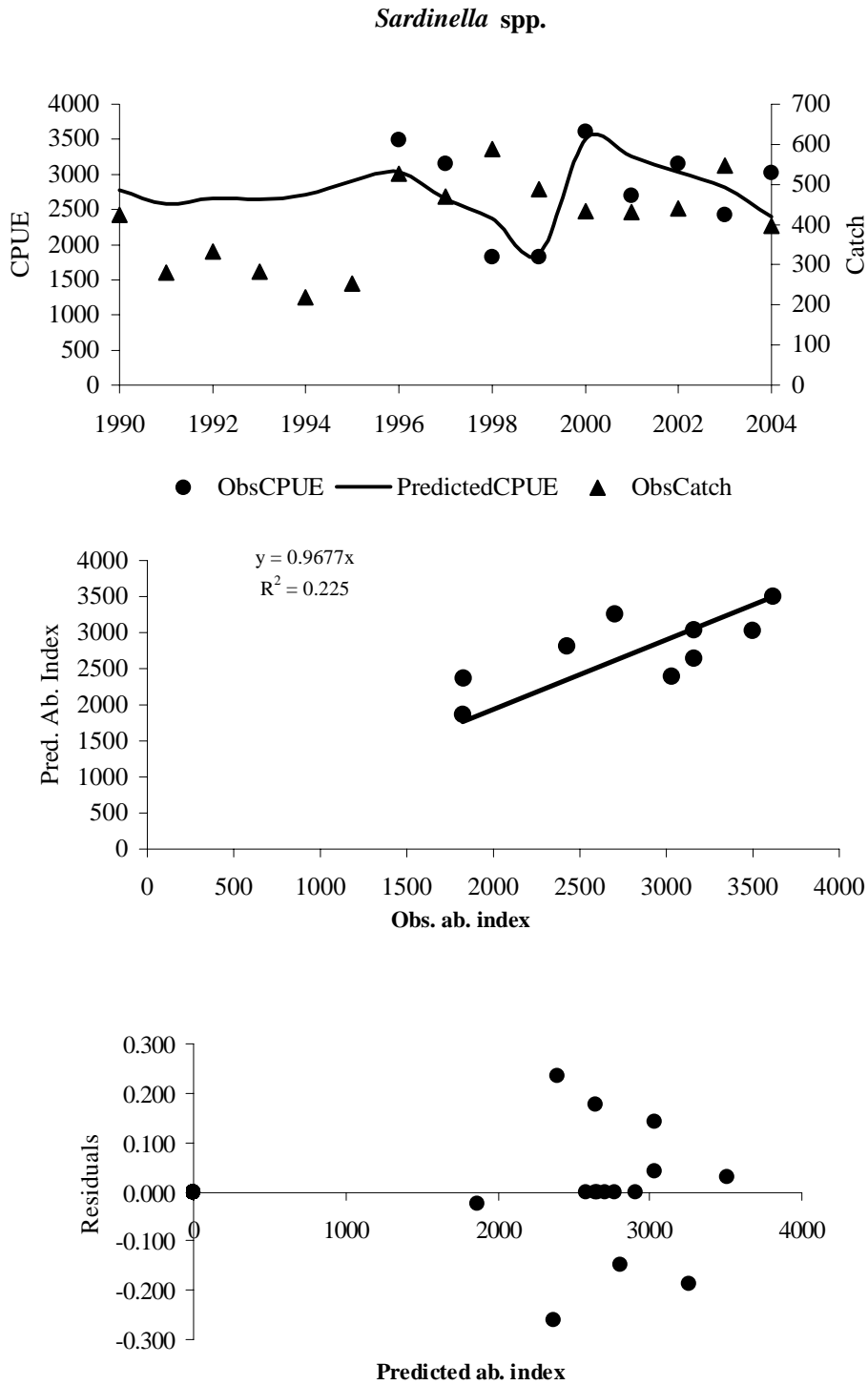


Figure 3.6.2: Observed and predicted CPUE index for *Sardinella* spp. using biomass estimates from R/V DR. FRIDTJOF NANSEN (1995–2004) and diagnostics of the model fit/Indices des CPUE observés et prévus pour *Sardinella* spp. en utilisant les estimations de biomasse du N/R DR. FRIDTJOF NANSEN (1995-2004) et les diagnostics du modèle

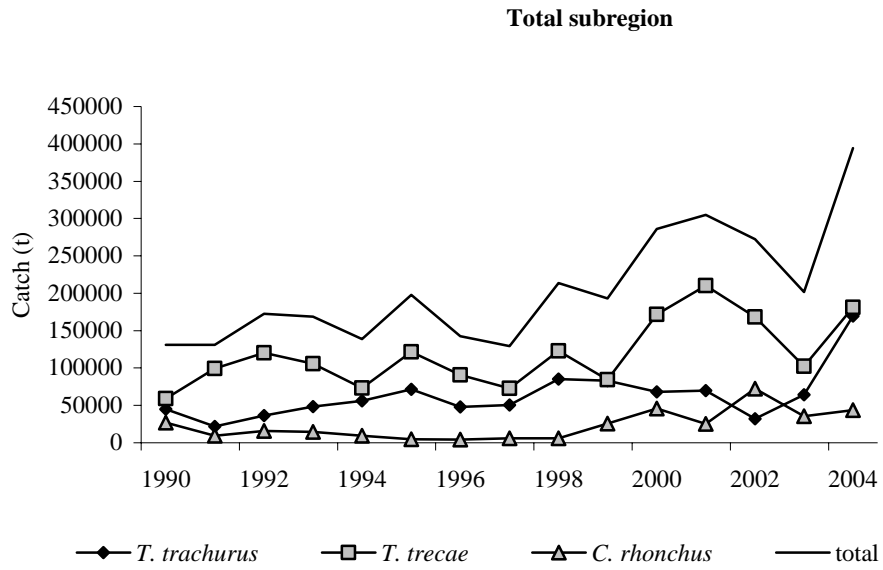


Figure 4.2.1: Total catches (tonnes) of horse mackerel in the subregion by species and year (1990–2004)/Captures totales (tonnes) de chinchards dans la sous-région par espèce et par année

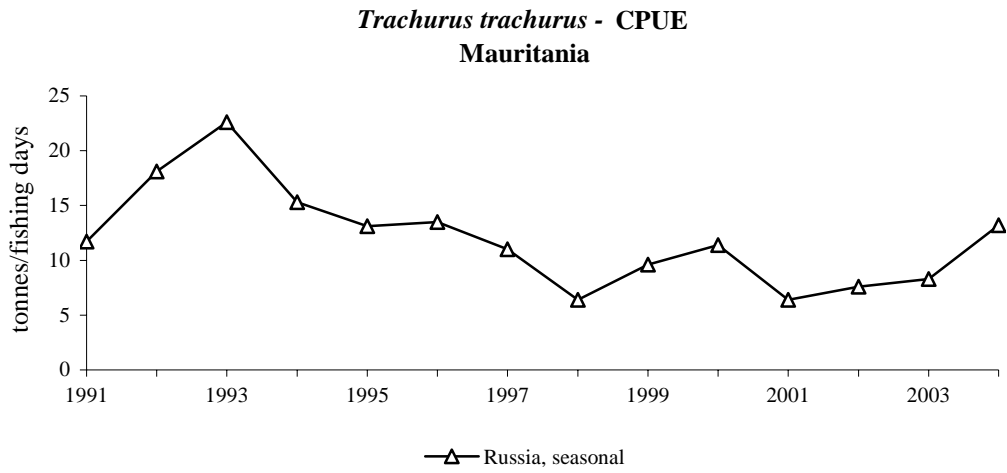


Figure 4.3.1a: CPUE of *Trachurus trachurus*, Mauritania (tonnes/fishing day)/CPUE de *Trachurus trachurus*, Mauritanie (tonnes/jours de pêche)

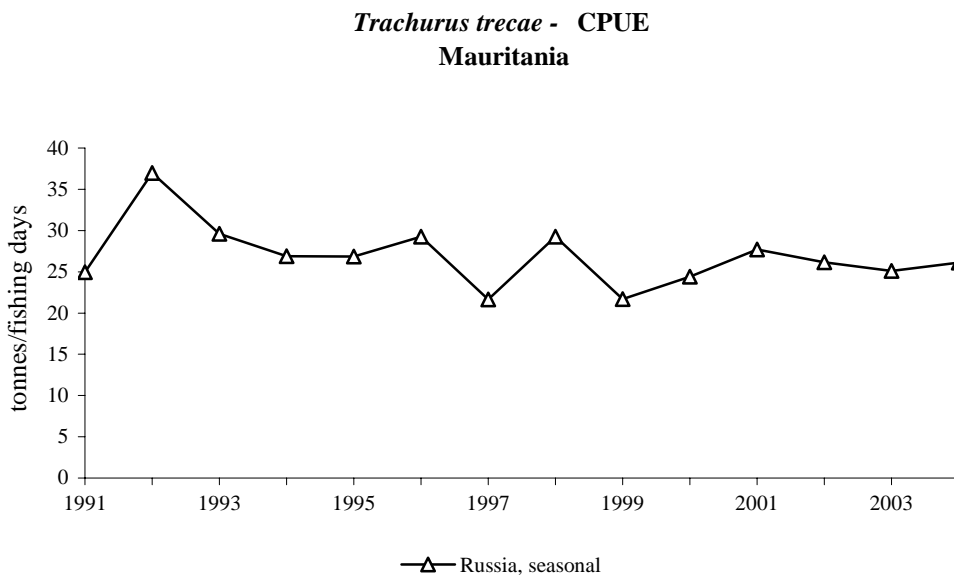


Figure 4.3.1b: CPUE of *Trachurus trecae*, Mauritania (tonnes/fishing day)/CPUE de *Trachurus trecae*, Mauritanie (tonnes/jours de pêche)

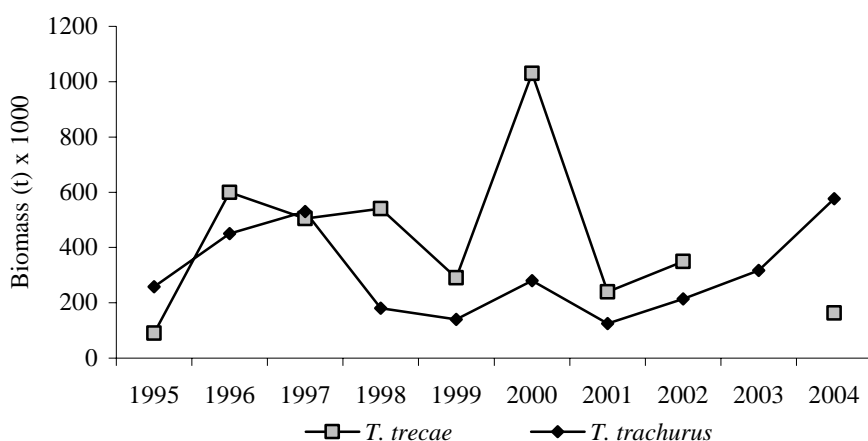


Figure 4.3.2a: Biomass estimates of *Trachurus trachurus* and *T. trecae* (1995–2004) for the zone north of Cape Blanc – R/V DR. FRIDTJOF NANSEN/Estimations de biomasse de *Trachurus trachurus* et *T. trecae* (1995-2004) pour la zone au nord du Cap Blanc – N/R DR. FRIDTJOF NANSEN

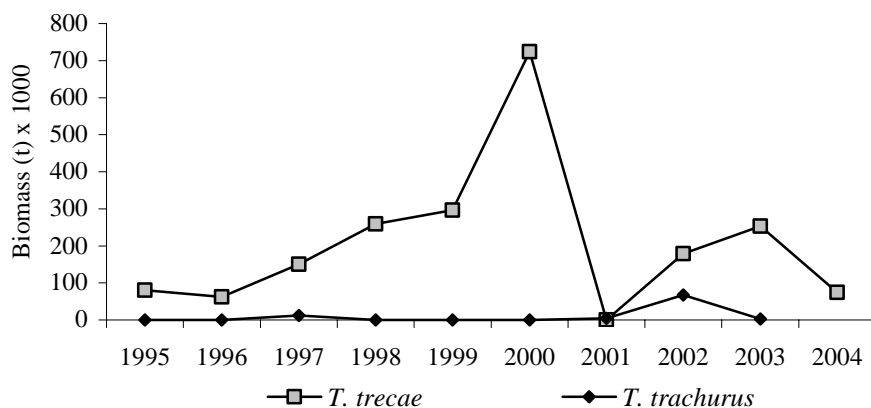


Figure 4.3.2b: Biomass estimates of *Trachurus trachurus* and *T. trecae* (1995–2004) for Mauritania – R/V DR. FRIDTJOF NANSEN/Estimations de biomasse de *Trachurus trachurus* et *T. trecae* (1995-2004) pour la Mauritanie – N/R DR. FRIDTJOF NANSEN

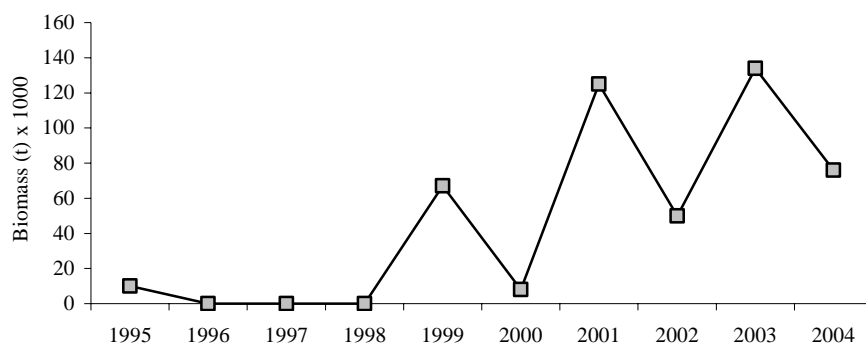


Figure 4.3.2c: Biomass estimates of *Trachurus trecae* (1995–2004) for Senegal+Gambia – R/V DR. FRIDTJOF NANSEN (Nov.–Dec.)/Estimations de biomasse de *Trachurus trecae* (1995-2004) pour le Sénégal et la Gambie – N/R DR. FRIDTJOF NANSEN (nov.-déc.)

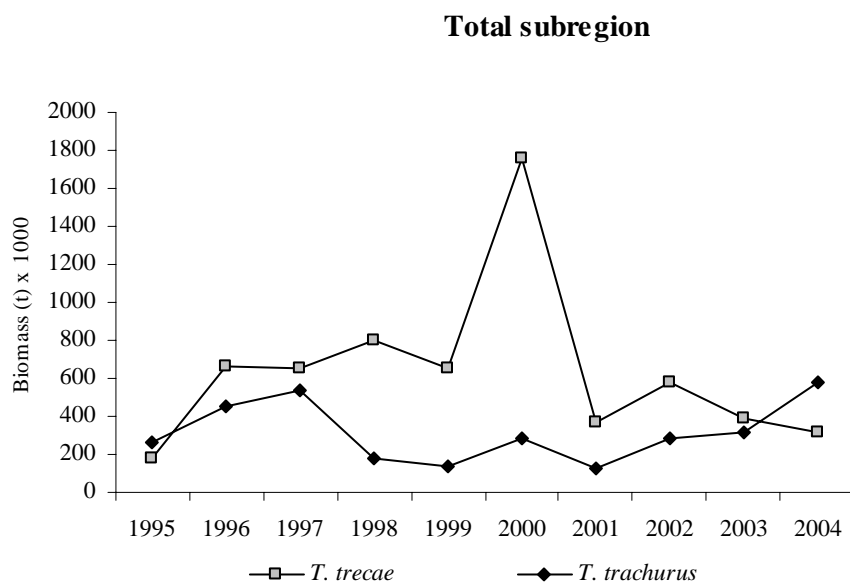


Figure 4.3.2d: Biomass estimates of *Trachurus trecae* and *T. trachurus* (1995–2003) for total subregion – R/V DR. FRIDTJOF NANSEN (Nov.–Dec.)/Estimations de biomasse de *Trachurus trachurus* et *T. trecae* (1995-2004) pour toute la sous-région – N/R DR. FRIDTJOF NANSEN (nov.-déc.)

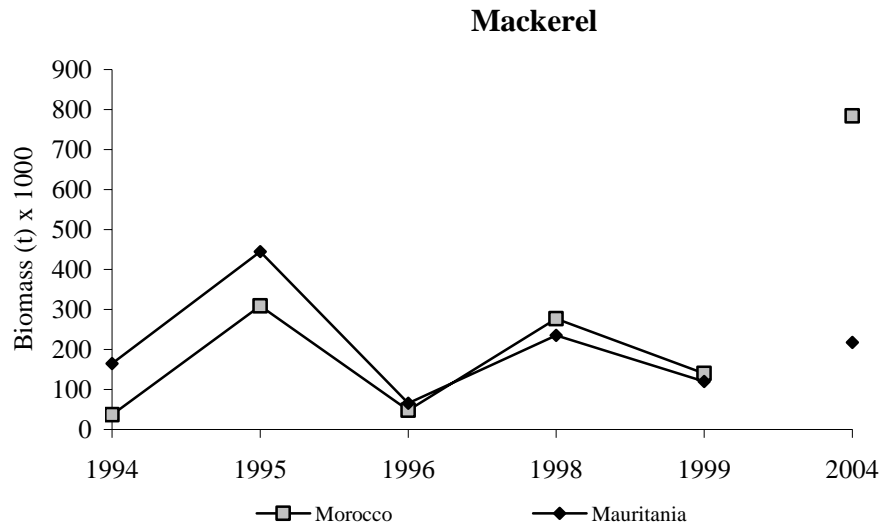


Figure 4.3.2e: Biomass estimates of horse mackerel (1995–1999 and 2004) for total subregion – R/V ATLANTIDA/Estimations de biomasse de chinchards (1995-1999 et 2004) pour toute la sous-région – N/R ATLANTIDA

Trachurus trecae
R/V DR. F. NANSEN
November/December 2004

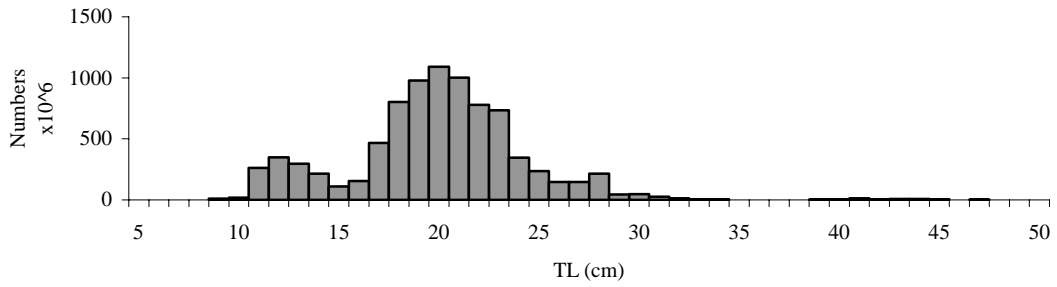


Figure 4.5.1a: Length composition (in millions of individuals) for *Trachurus trecae* (Nov.–Dec. 2004) – R/V DR. FRIDTJOF NANSEN/Composition en taille (en millions) de *Trachurus trecae* (nov.-déc. 2004) – N/R DR.FRIDTJOF NANSEN.

Trachurus trachurus
R/V DR. F. NANSEN
November/December 2004

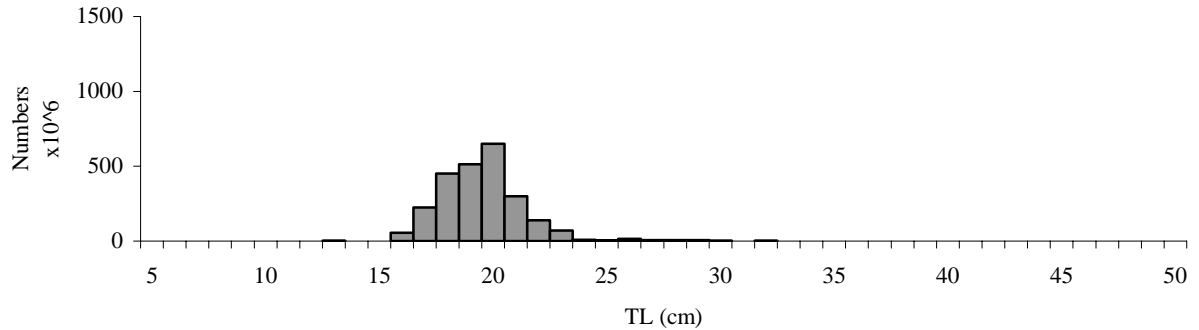


Figure 4.5.1b: Length composition (in millions of individuals) for *Trachurus trachurus* (Nov.–Dec. 2004) – R/V DR. FRIDTJOF NANSEN/Composition en taille (en millions) de *Trachurus trachurus* (nov.-déc. 2004) – N/R DR. FRIDTJOF NANSEN.

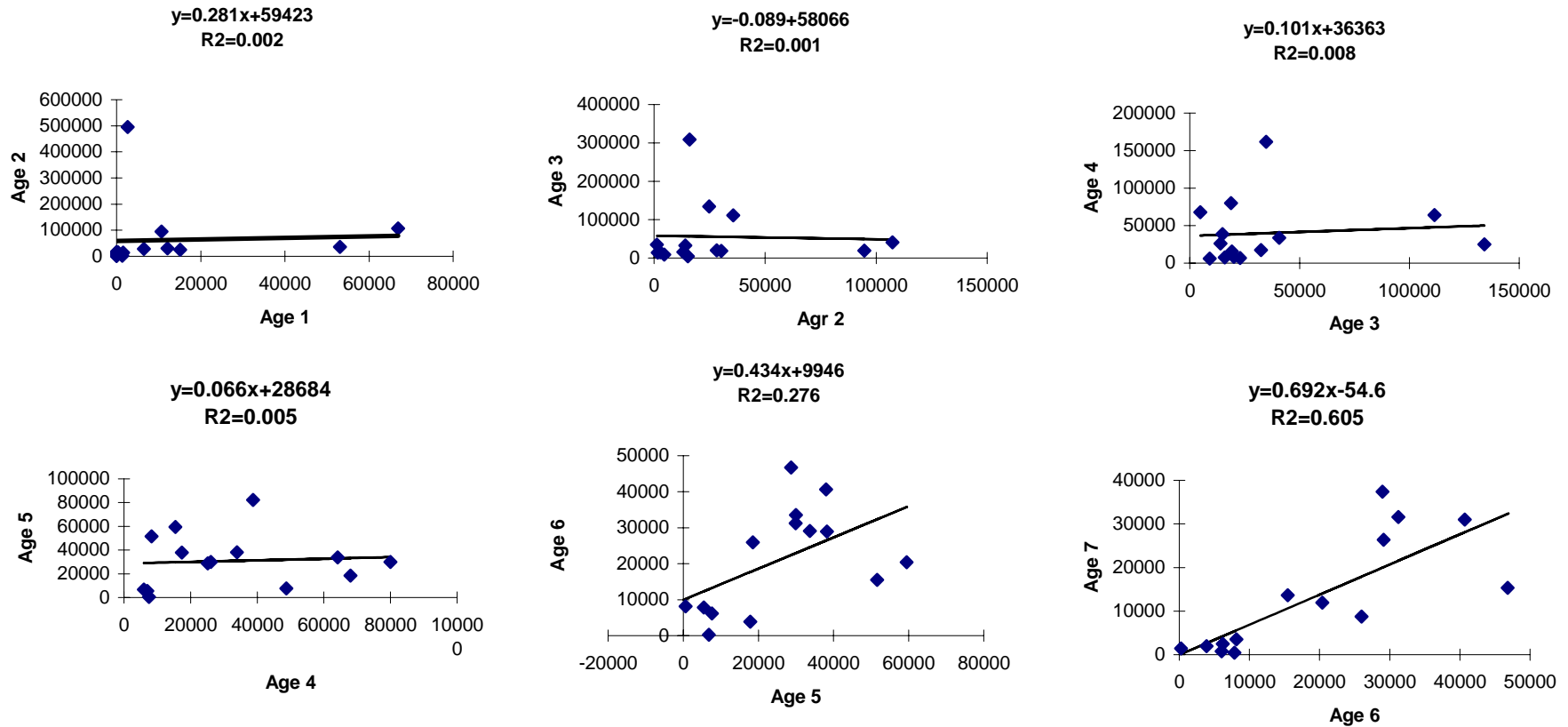


Figure 4.6.1: Exploratory analyses of the data for *Trachurus trachurus*/Analyses exploratoires des données pour le *Trachurus trachurus*

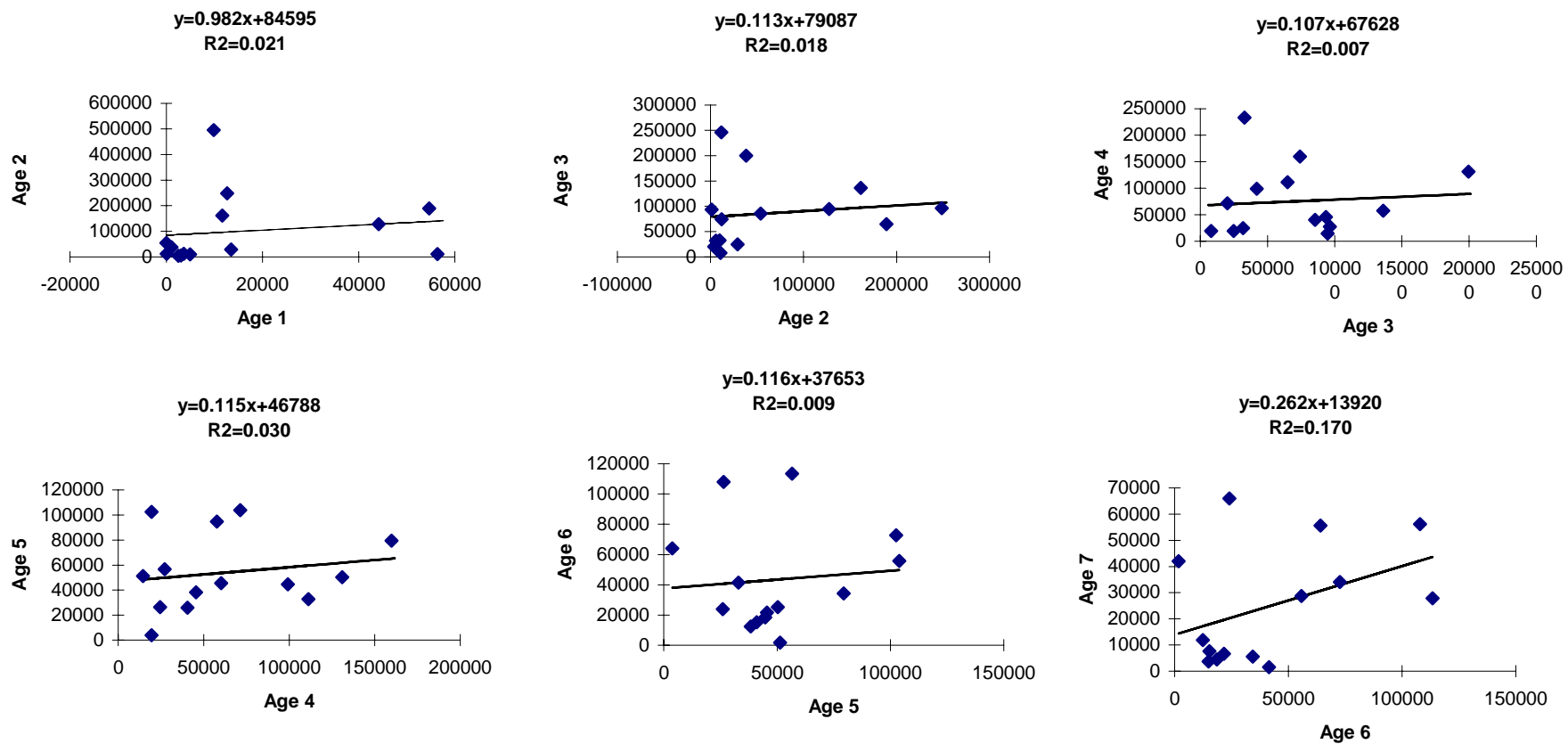


Figure 4.6.2: Exploratory analyses of the data for *Trachurus trecae*/Analyses exploratoires des données pour le *Trachurus trecae*

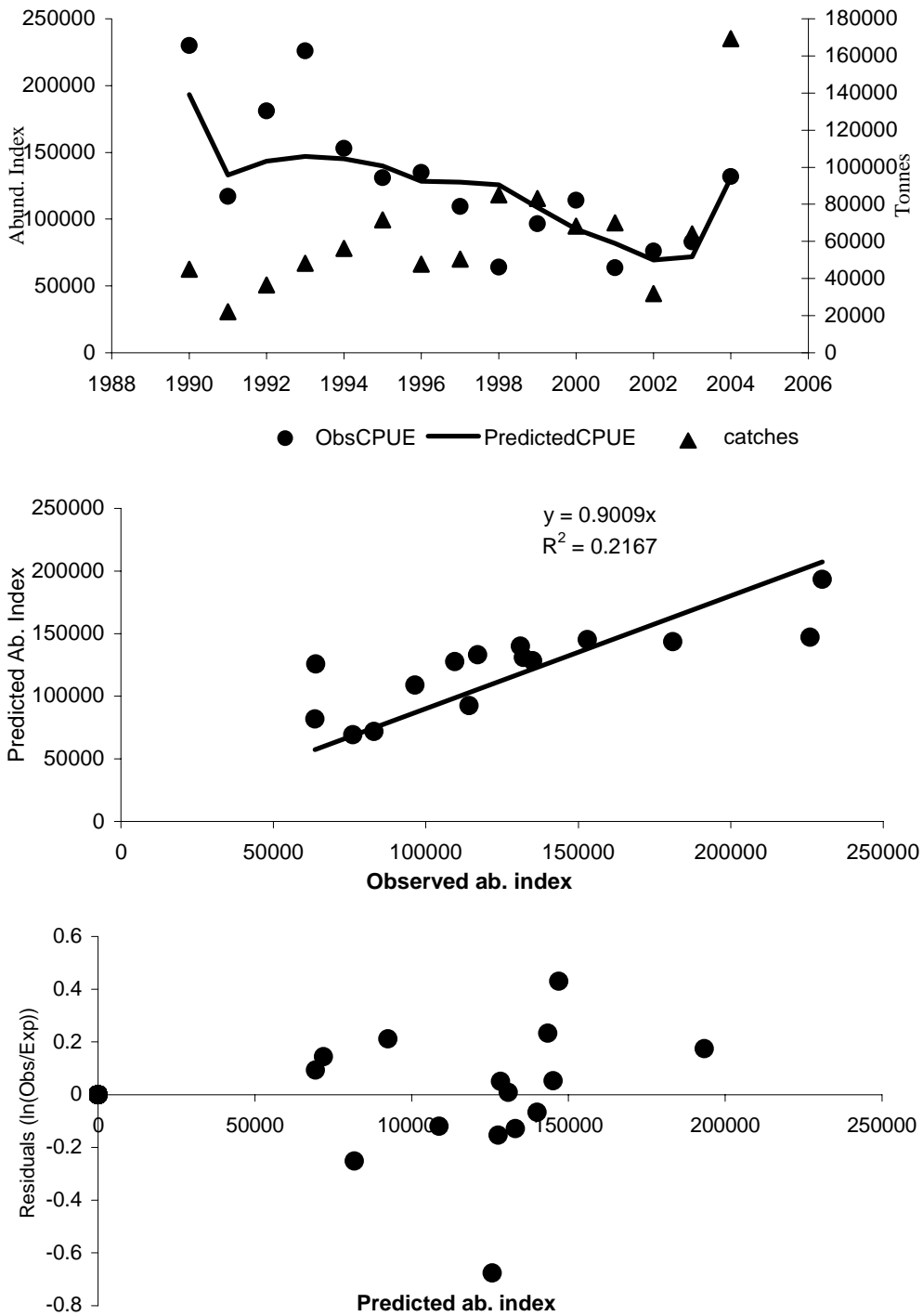


Figure 4.6.3a: Observed and predicted abundance indices for *T. trachurus* using estimates from Russian CPUE and diagnostics of the model fit/Indices d'abondance observés et prévus pour *T. trachurus* en utilisant les estimations de CPUE russes et les diagnostics du modèle

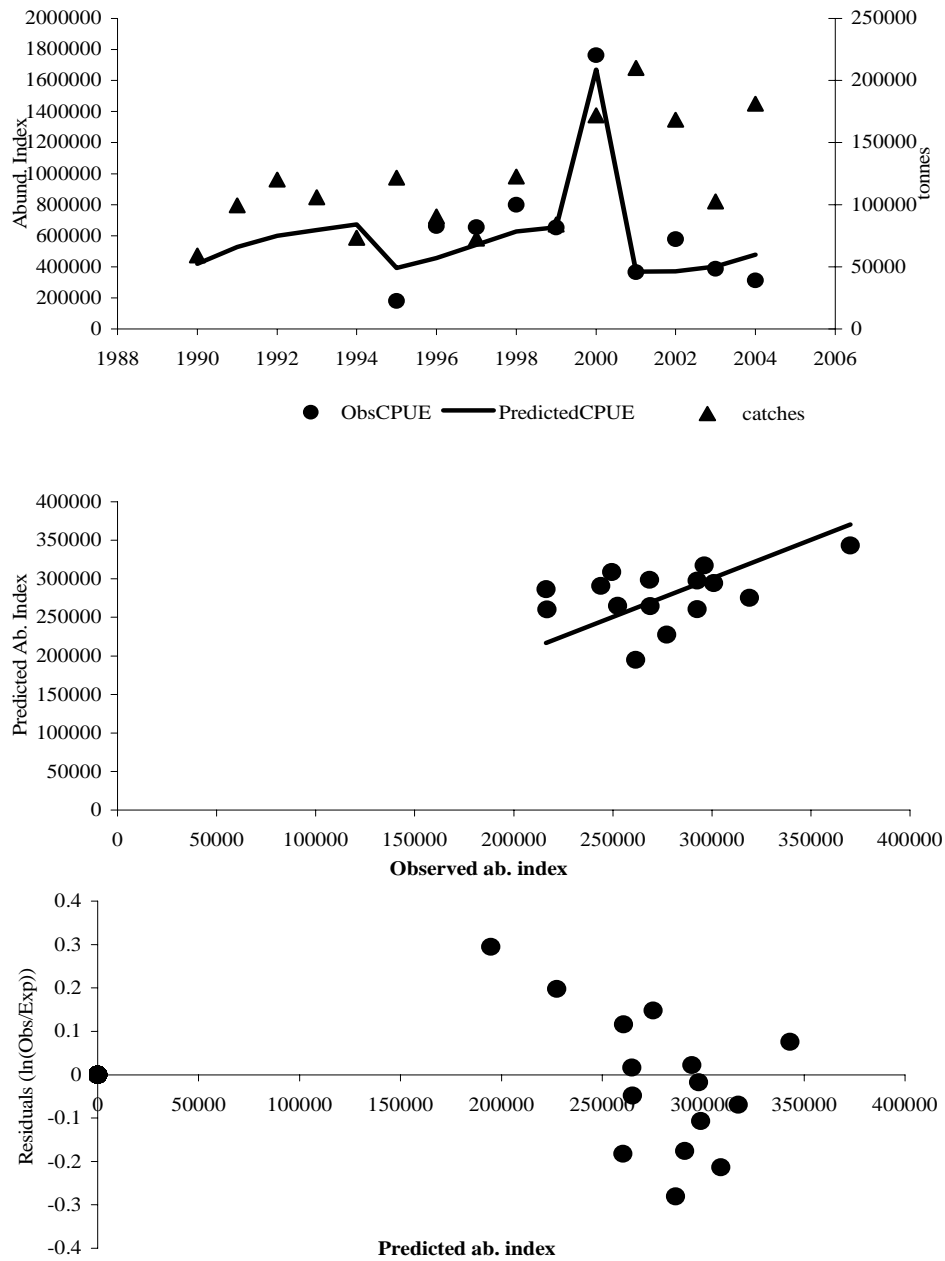


Figure 4.6.3b: Observed and predicted abundance indices for *T. trecae* using estimates from R/V DR. FRIDTJOF NANSEN and diagnostics of the model fit/Indices d'abondance observés et prévus pour *T. trecae* en utilisant les estimations du N/R DR. FRIDTJOF NANSEN et les diagnostics du modèle

Scomber japonicus

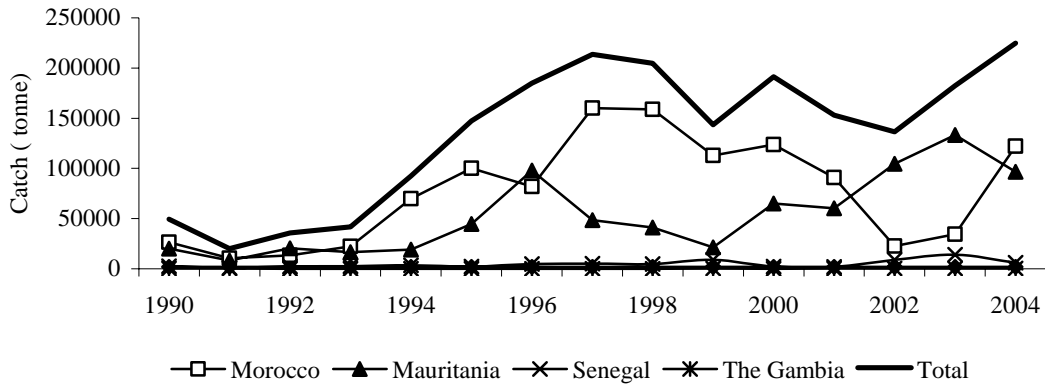


Figure 5.2.1: Total catches (tonnes) of *Scomber japonicus* in the subregion by species and year (1990–2004)/Captures totales (tonnes) de *Scomber japonicus* dans la sous-région par espèce et par année

Northern fishery

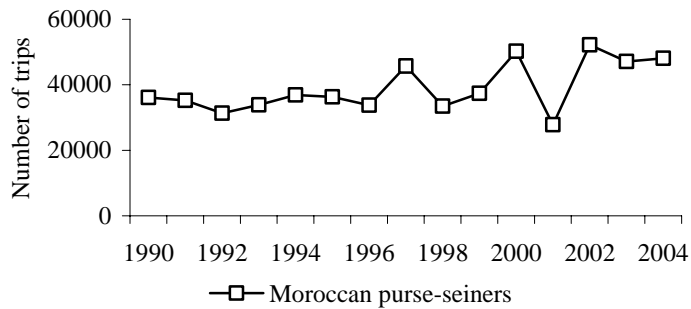


Figure 5.2.2a: Effort for *Scomber japonicus* by Moroccan purse-seiners – Northern stock/Effort de *Scomber japonicus* par les senneurs marocains – Stock nord

Southern fishery

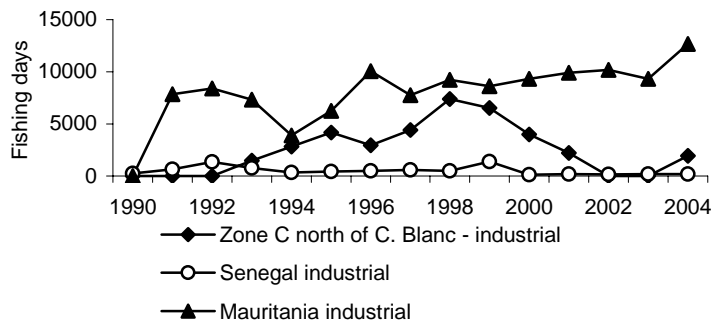


Figure 5.2.2b: Effort for *Scomber japonicus*, by all fleets – Stock South/Effort de *Scomber japonicus* pour toutes les flottilles – Stock sud

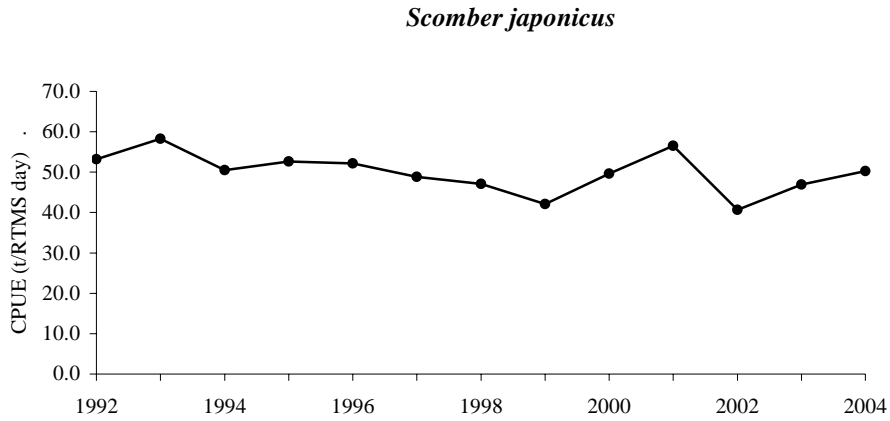


Figure 5.3.1: CPUE from Russian fleets of *Scomber japonicus*, Mauritania/CPUE de la flottille russe de *Scomber japonicus*, Mauritanie

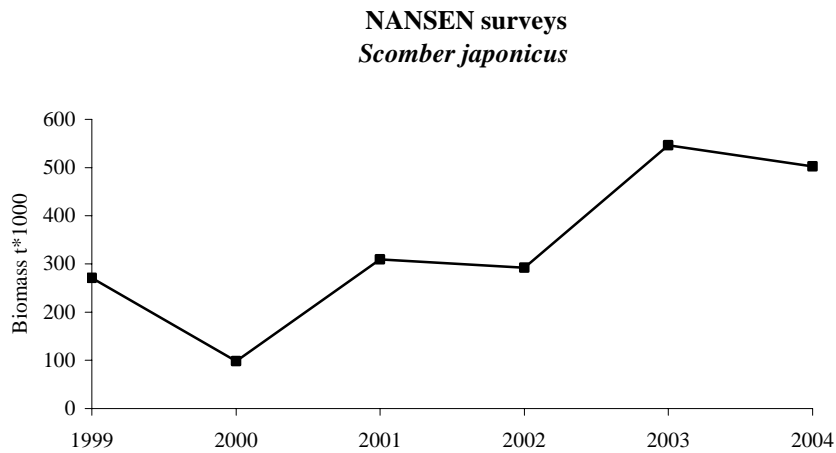


Figure 5.3.2: Biomass estimates of *Scomber japonicus* from the R/V DR. FRIDTJOF NANSEN surveys/ Estimations de la biomasse du *Scomber japonicus* à partir des campagnes du N/R DR. FRIDTJOF NANSEN

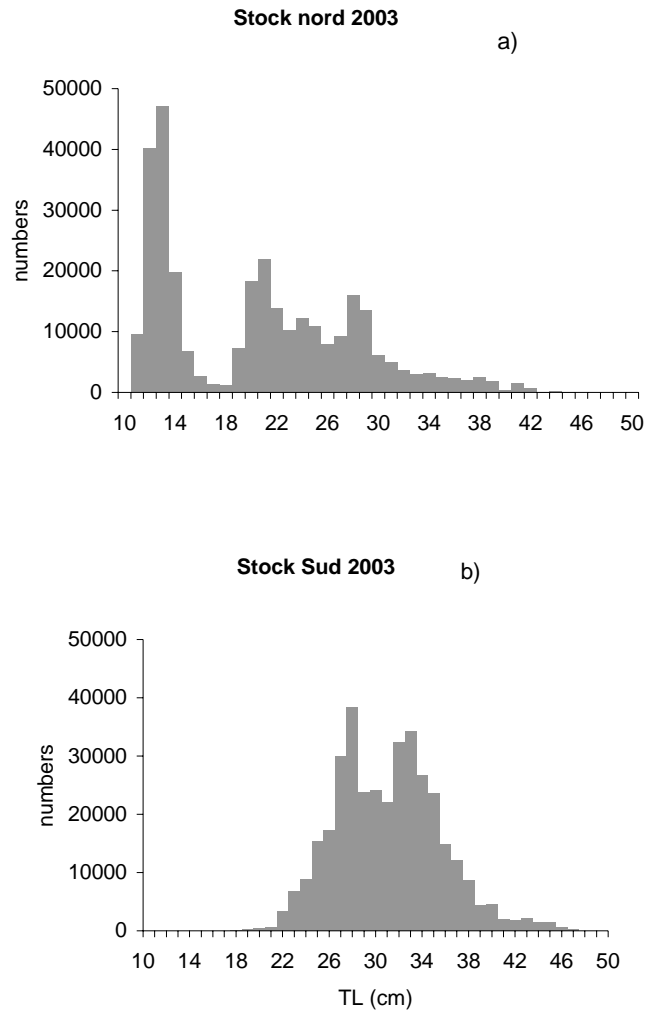


Figure 5.5.1: Length composition of landings of *Scomber japonicus* (2003 and 2004) in the northern and southern fisheries/Composition des tailles dans les débarquements de *Scomber japonicus* (2003 et 2004) dans les pêcheries nord et sud

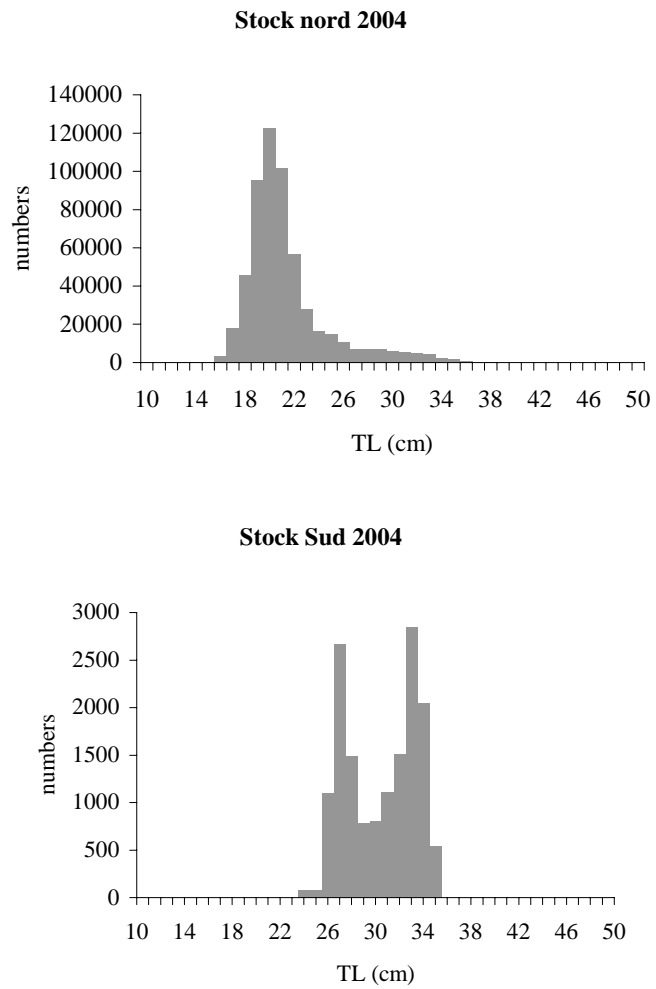


Figure 5.5.1 (cont.): Length composition of landings of *Scomber japonicus* (2003 and 2004) in the northern and southern fisheries/Composition des tailles dans les débarquements de *Scomber japonicus* (2003 et 2004) dans les pêcheries nord et sud

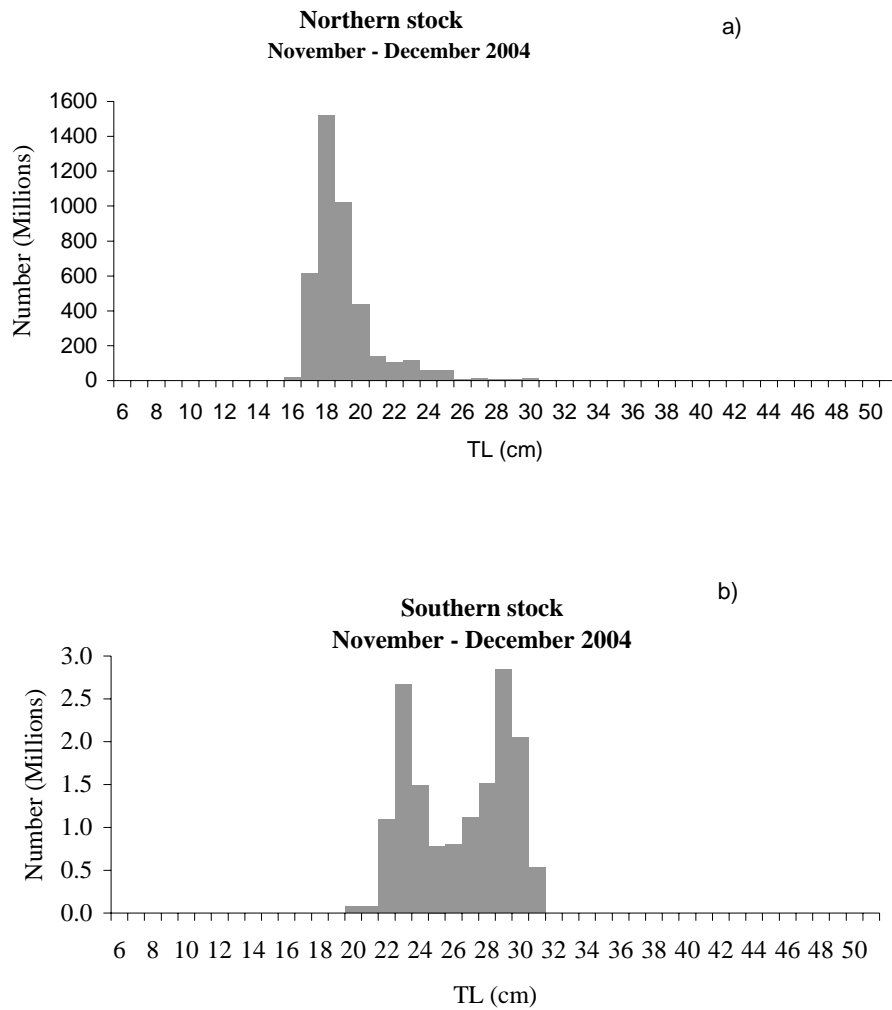


Figure 5.5.2: Length distribution of *Scomber japonicus* in 2004 – R/V FRIDTJOF NANSEN (in millions of fish)/Distribution de taille de *Scomber japonicus* en 2004 – N/R DR.FRIDTJOF NANSEN (en millions de poissons)

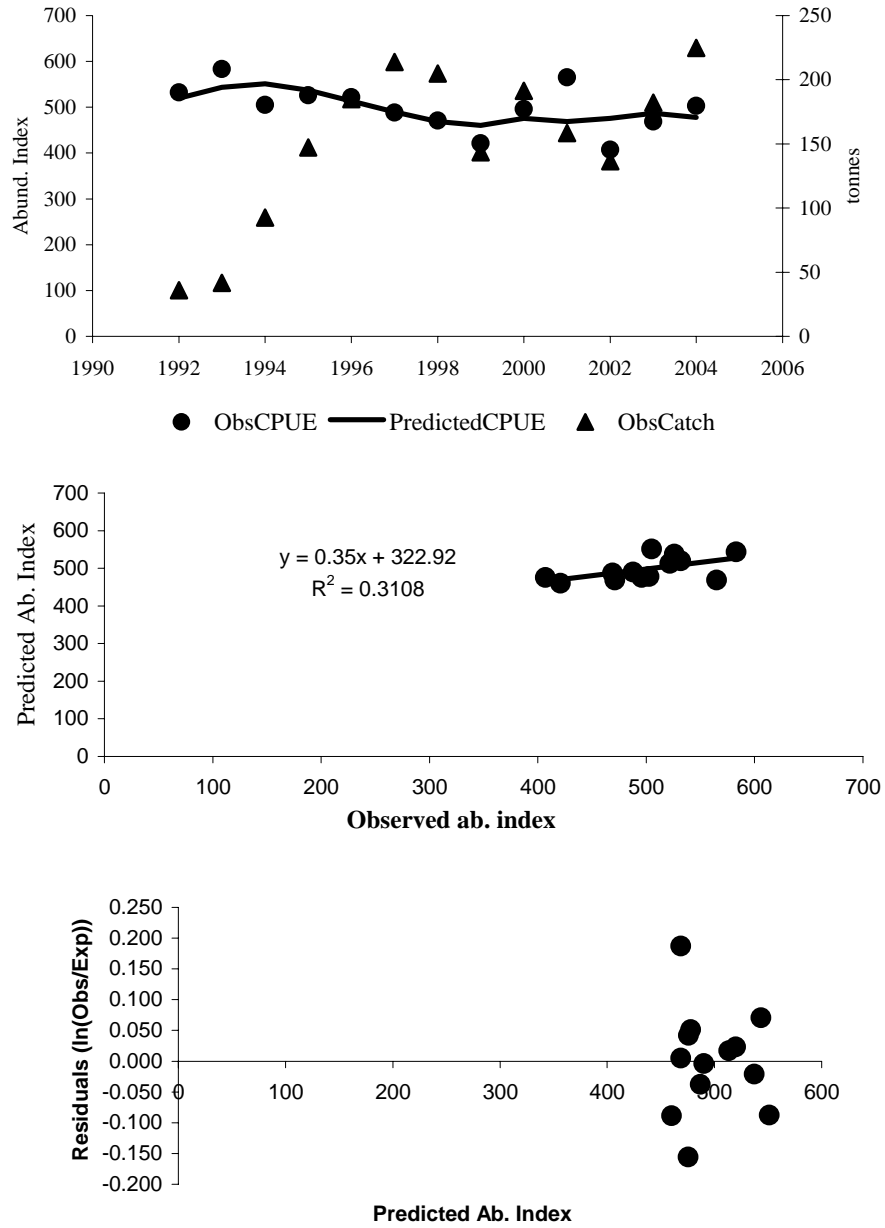


Figure 5.6.1: Observed and predicted abundance indices for *Scomber japonicus* using estimates from Russian CPUE and diagnostics of the model fit/Indices d'abondance observés et prévus pour *Scomber japonicus* en utilisant les estimations de CPUE russes et les diagnostics du modèle

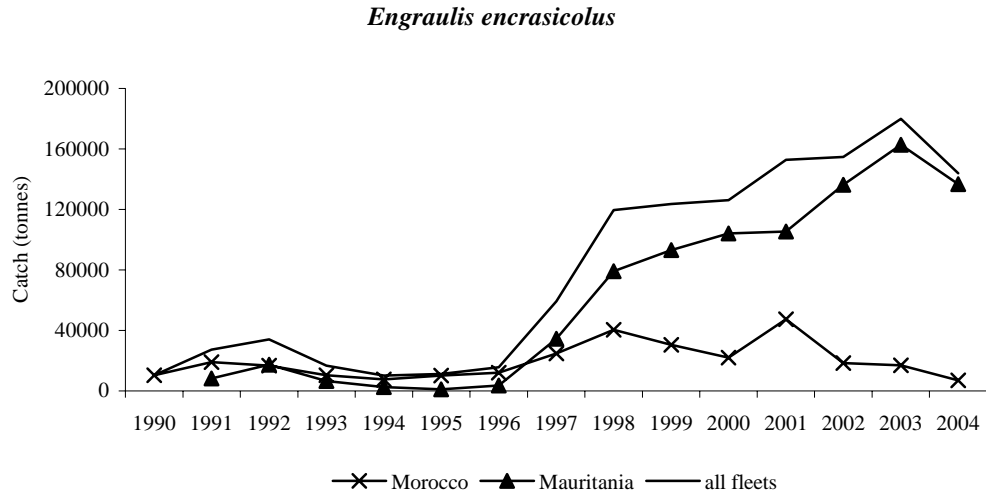


Figure 6.2.1: Total catches of *Engraulis encrasicolus* in the subregion by year (in tonnes) (1990–2004)/Captures totales de *Engraulis encrasicolus* dans la sous-région par année (en tonnes)

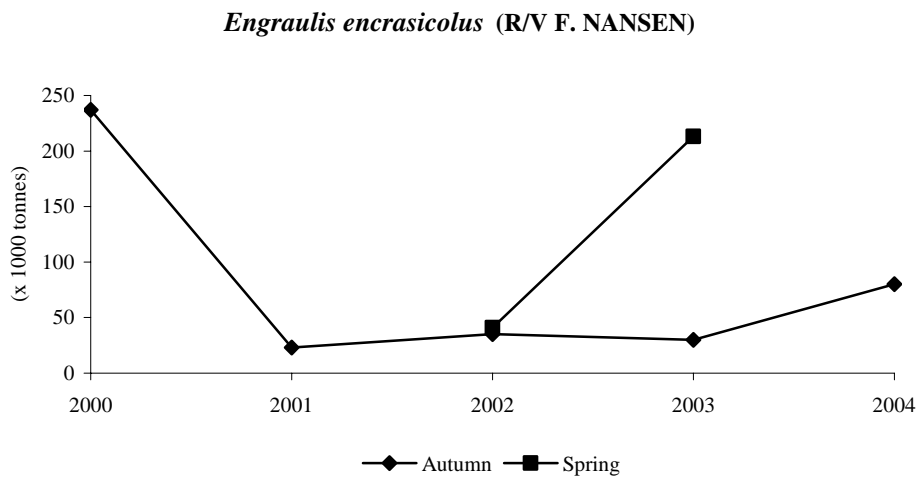


Figure 6.3.1: Biomass estimates of *Engraulis encrasicolus* (2000–2004) for Mauritania – R/V DR. FRIDTJOF NANSEN/Estimations de biomasse de *Engraulis encrasicolus* (2000-2004) pour la Mauritanie – N/R DR. FRIDTJOF NANSEN

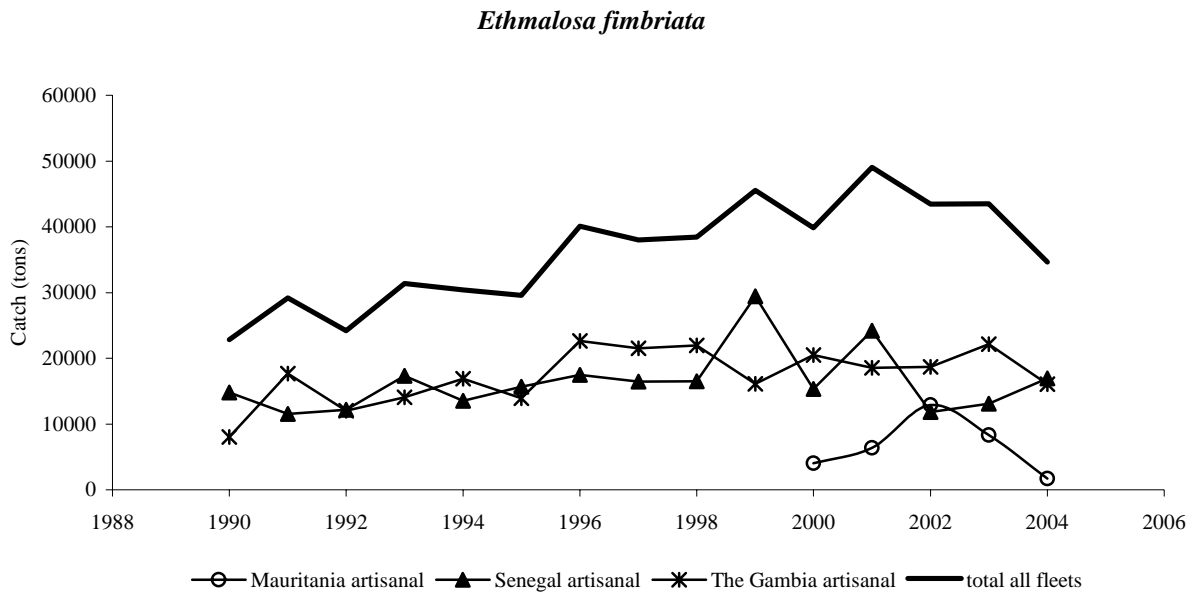


Figure 7.2.1: Catches (tonnes) of *Ethmalosa fimbriata* (1990–2004) by country, fleet and year/Captures (tonnes) d'*Ethmalosa fimbriata* (1990-2004) par pays, flottille et année