

## **TECHNICAL ANNEX**

### **Pre-treatment of data**

- Data on total landings by species or species groups, were extracted from the FISHSTAT-PC data set (FAO 1996) by using as filters, No 37 for the fishing area (this assured that national catches were included for the Mediterranean only), and including all species and all the countries mentioned above.

- The ASCII file thus obtained was read and elaborated by a series of Pascal programs written ad hoc to perform the subsequent analyses.

- In the programme FISHSTAT-PC, the Turkish catches include landings from both the Black Sea and for the Mediterranean and Aegean. This deficiency also cannot be easily corrected for the data series in question, but the following approximate separation was applied:

- Turkish reports to GFCM include landings from Black Sea+Marmara+Aegean+ Mediterranean prior to 1972, while the GFCM-PC data set separates them by each of these sub-areas from 1972 onwards. In order to have a rough estimate of Turkish landings for Marmara+Aegean+Mediterranean (considered to be the Mediterranean proper) prior to 1972, an approximate solution was sought which recognizes that the information for the first few years in FISHSTAT-PC is inevitably of lower reliability than later data.

- The solution chosen was to determine Turkish landings in the Mediterranean proper after 1971 using the GFCM-PC data set. For the earlier period, the ratio of landings in the Black Sea and in the Mediterranean proper was calculated for each recorded species in the first decade, when data was presented separately by sub-area, i.e. 1972-81. This ratio by species was used to estimate for the years 1950-71 the approximate percentage of each species landed in the two major areas and to use this percentage to estimate the early landings by Turkey in the Mediterranean proper. Obviously, this is not a very robust procedure but, as long as attention is not directed to the earlier part of the time series, appears to be the only one possible, given the information available.

- For Italy and Tunisia, it is clear that a significant proportion of national catches come from what is considered here to be the Eastern Mediterranean, namely, to the East of the Straits between Sicily and Tunisia which marks the boundary between Divisions 1.3 Sardinia and 2.2 Ionian. Also in this case, GFCM statistical data was used to separate Italian and Tunisian catches between Eastern Mediterranean (Adriatic and Ionian) and Western Mediterranean (Sardinia). The criteria used were the same that have been used to separate Turkish data.

- In the GFCM statistical data tuna fish are considered separately and not separated by subareas as for the other species. For this reason, it was impossible to use GFCM data set to separate the Italian and Tunisian FISHSTAT data of tuna fish between West and East. It was decided to simply split into 2 equal part the catch of these species between West and East.

### **The numerical filters used in this study**

The following analysis were then performed on the data:

1) Positive records were counted. If their number was less or equal to 10, the median year of those years with positive values for landings was computed. If the median year was prior to 1960, the species was inserted in the category 11 "Collapsed fisheries", which obviously signifies that there were data on landings earlier in the series, but not later. If the median year was after 1984, the species was inserted in the category 1 "New fisheries", implying that, at the least, no records of landings were registered in the early years of the time series.

2) Otherwise, if the median year fell within the interval 1960-1994, the species was inserted in the category 12 "Intermittent fisheries", implying that for less than or equal to 10 years spread somewhere throughout the time series were landings registered.

3) If the number of positive records exceeded 10, the initial zeros were eliminated. Similarly the final zeros were eliminated. Series of zeros included in the series (bracketed by two positive values) were kept. Thus the analysis is restricted to the time interval including and between the first and last years when landings were non-zero.

4) A parabolic equation ( $Y=a+bX+cX^2$ , where Y are the landings and X the years) was then fitted to the remaining values. If this equation was not highly significant ( $P > 0.01$ ), the species was categorized initially as "Stable or intermittent fishery". Only if the mean landings were greater than 3 times the standard deviation for the series was the species entered in the category 'Stable'. Otherwise the species was added to those already in the category 12: "Intermittent fisheries".

5) If the fitted equation tested as highly significant, the partial F-tests on the two coefficients b and c were taken into account. In fact one of the two independent variables (X and  $X^2$ ) could be redundant. In practice, the method used was the "Backward Elimination Procedure" described by Draper and Smith (1966). Two situations could then occur:

(a) both coefficients test as highly significant;

In this case, if all the coefficients of the equation ( $Y=a+bX+cX^2$ ) resulted significant, the position of the vertex of the parabola was checked:

a1) If the X coordinate of the vertex fell before 1950, this, in practice, is the same situation as b2). In this case, the coefficient c was checked: if it was positive, the species was added to category 2 "Rising, concave upwards"; if it resulted negative, the species was inserted in category 7 "Declining, concave downwards".

a2) the X coordinate of the vertex falls after 1994: if the c coefficient is positive, the species will be categorized as belonging to category 9: "Declining, concave upwards"; if c was negative, the species was inserted in category 4: "Rising, concave downwards".

a3) the X coordinate of the vertex falls in the interval 1950-1994. If the c coefficient is positive, the species will be placed in category 10 as "Recovering fisheries"; if c is negative, the species is inserted in category 5: "Dome shaped".

(b) one of the two coefficients was not highly significant.

In this case, the coefficient that was less significant was discarded and the curve recalculated with a reduced equation:

b1) if the coefficient eliminated was c, a line ( $Y=a'+b'X$ ) was considered as the best-fitting equation. The coefficient b' was then checked: if it was positive, the species was put in category 3: "Rising linear"; if b' resulted negative, the species was inserted in the category 8 "Declining linear".

b2) if the coefficient eliminated was b, a parabola ( $Y=a''+b''X^2$ ) with the vertex on the Y axis remained. The coefficient b'' was then checked: if it was positive, the species was placed in category 2: "Rising, concave upwards". If b'' resulted negative, the species was inserted in category 7: "Declining, concave downwards".

### **Recent short-term trends**

The categories 2 -10 were further analysed on the basis of the trend in the last 5 years (1990-1994). A linear regression was fitted to the landings of these years. If the regression resulted highly significant ( $P < 0.01$ ), the slope coefficient was checked: if it was positive, the species was categorized as "Recently rising"; if the coefficient resulted negative, the species was categorized as "Recently declining".

## **DATA ANNEX**

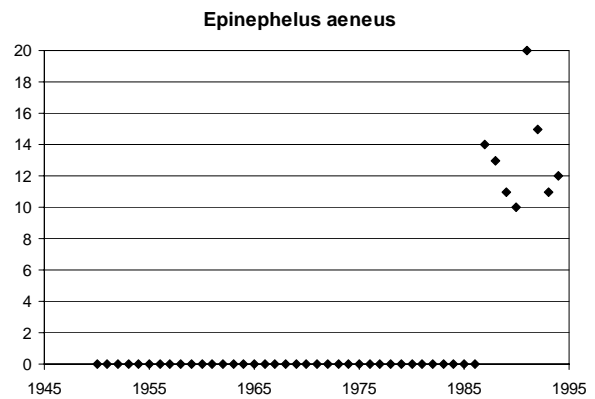
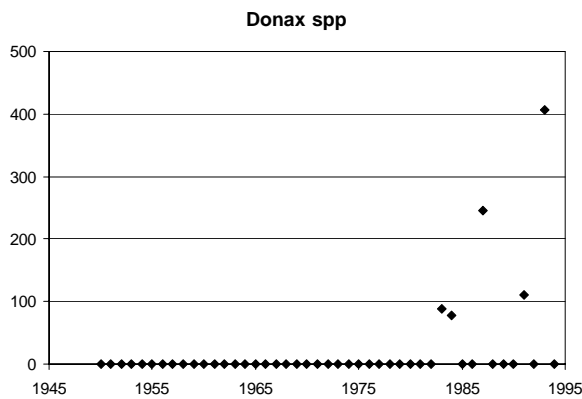
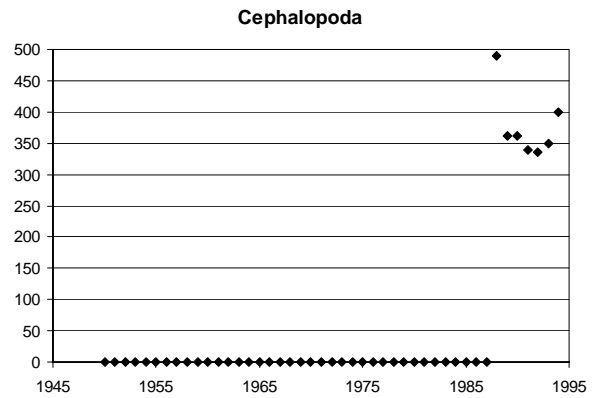
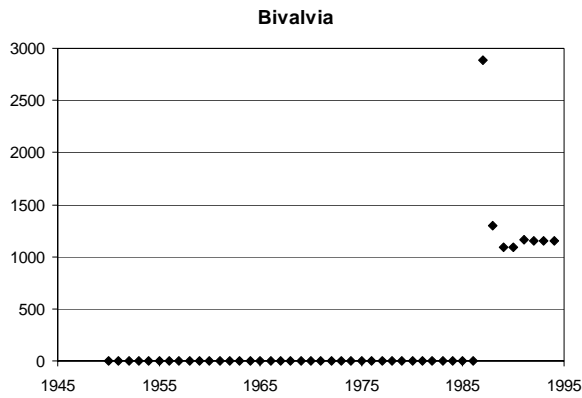
A more detailed categorization of landing trends is presented here, first for the West Mediterranean and after for the East Mediterranean.

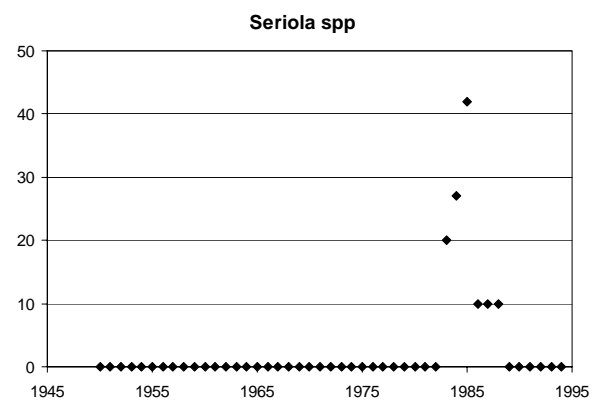
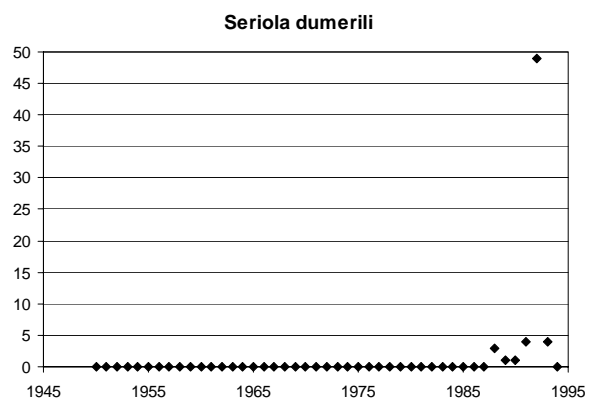
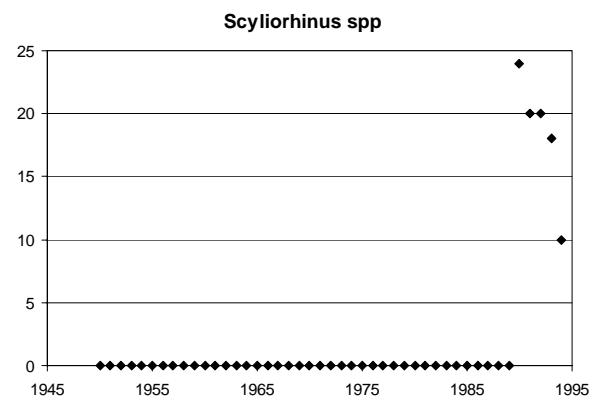
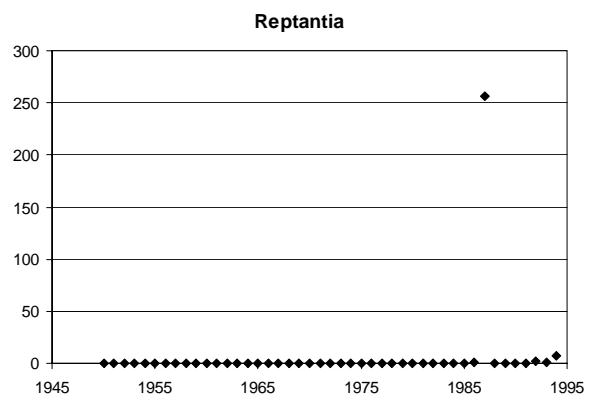
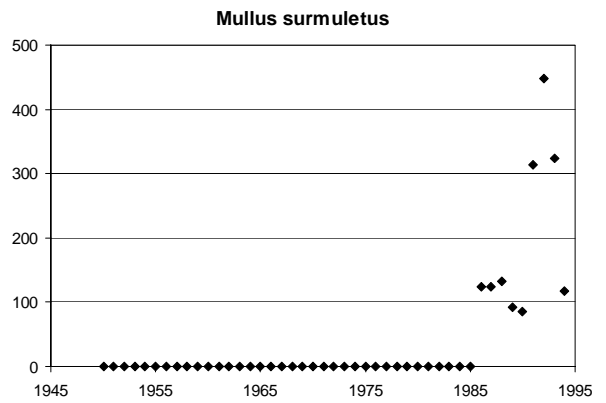
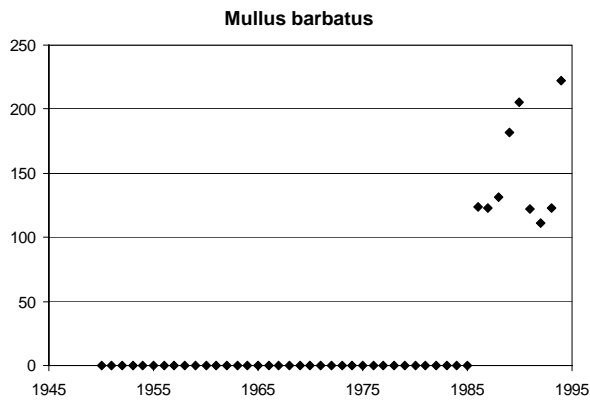
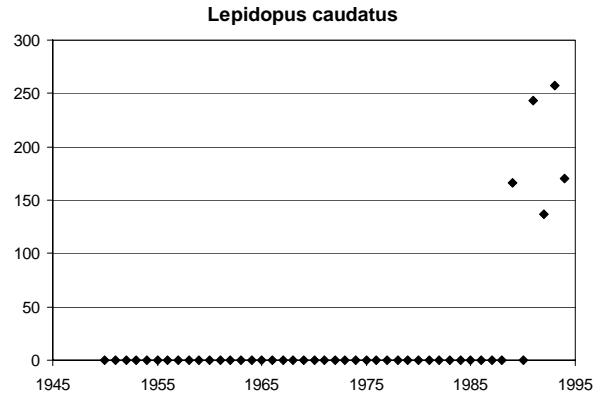
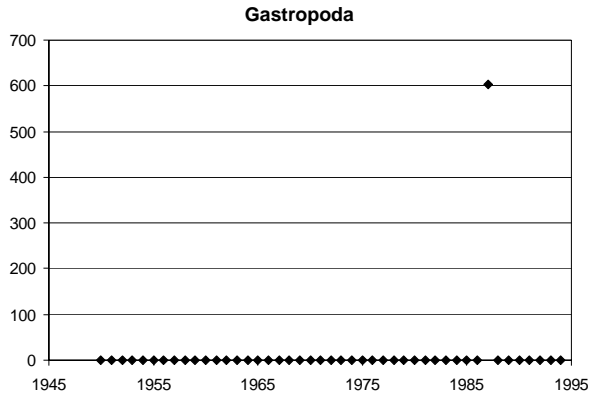
In both cases, the species (Latin and standard FAO common name, number of records and country recording catches, are given for the species in the category assigned according to figure 3. These tables are followed by plots of landing trends for the key species in the category. In these plots, a curve may have been fitted to the long-term time series, and a linear plot of the short-term trends over the last five years of the series may also be shown.

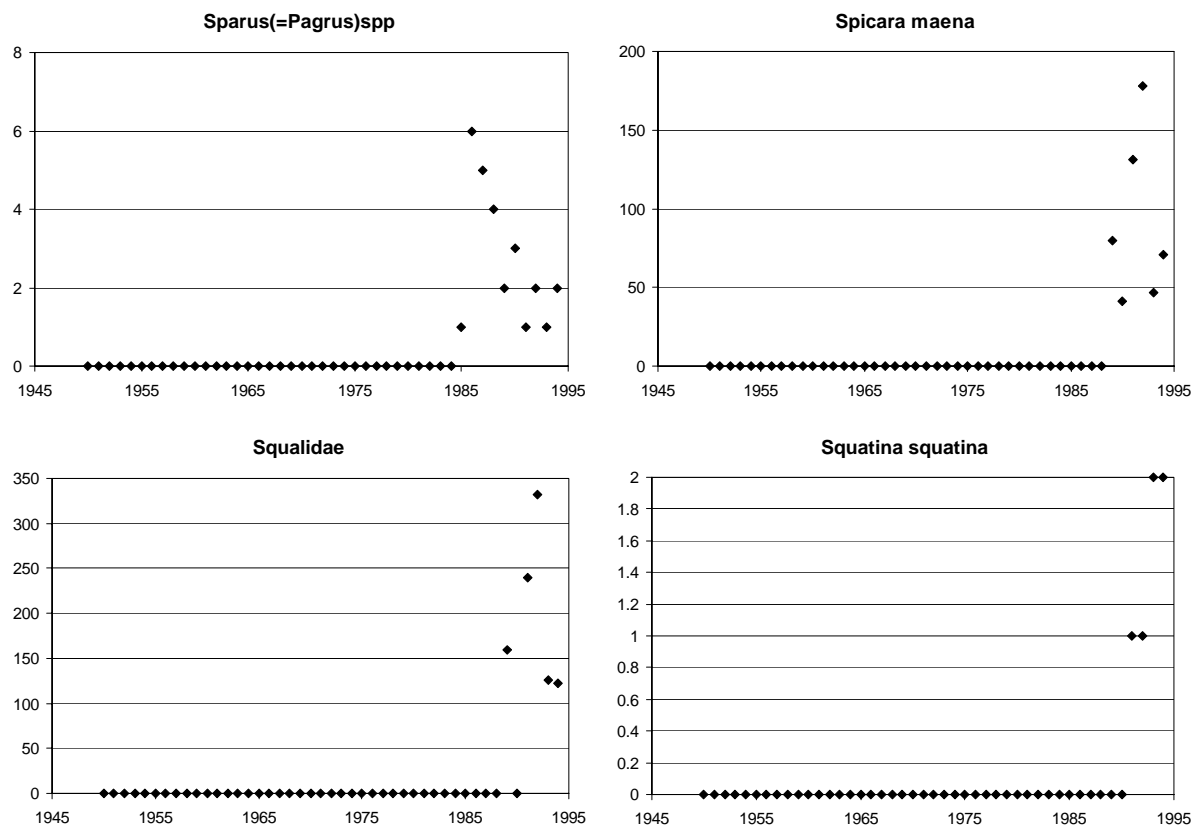
## A/ West Mediterranean. Tables and figures

West Mediterranean - Table 1 = New fisheries

Scientific name	English name	N. Positive Recs.	Country	Catch
Bivalvia	Clams nei	8	Spain	100.0%
Cephalopoda	Cephalopods nei	7	Spain	100.0%
Donax spp	Donax clams	5	France	100.0%
Epinephelus aeneus	White grouper	8	Morocco	100.0%
Gastropoda	Gastropods nei	1	Spain	100.0%
Lepidopus caudatus	Silver scabbardfish	5	Tunisia	100.0%
Mullus barbatus	Striped mullet	9	Tunisia	100.0%
Mullus surmuletus	Red mullet	9	Tunisia	100.0%
Reptantia	Marine crabs nei	5	Spain Morocco	95.9% 4.1%
Scyliorhinus spp	Catsharks, nursehound	5	Tunisia	100.0%
Seriola dumerili	Greater amberjack	6	Tunisia	100.0%
Seriola spp	Amberjacks nei	6	Tunisia	100.0%
Sparus(=Pagrus)spp	Pargo breams, nei	10	Morocco	100.0%
Spicara maena	Blotched picarel	6	Tunisia	100.0%
Squalidae	Dogfish sharks nei	5	Tunisia	100.0%
Squatina squatina	Angelshark	4	Tunisia	100.0%



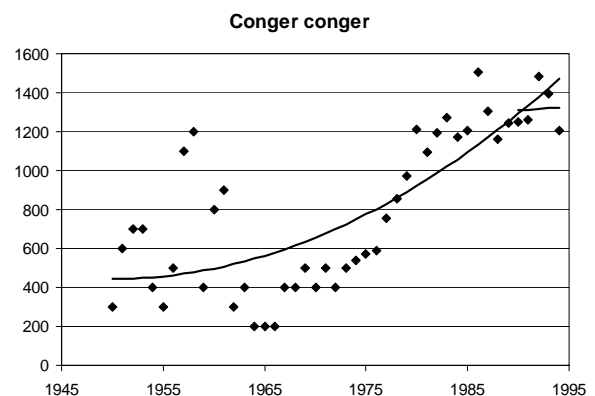
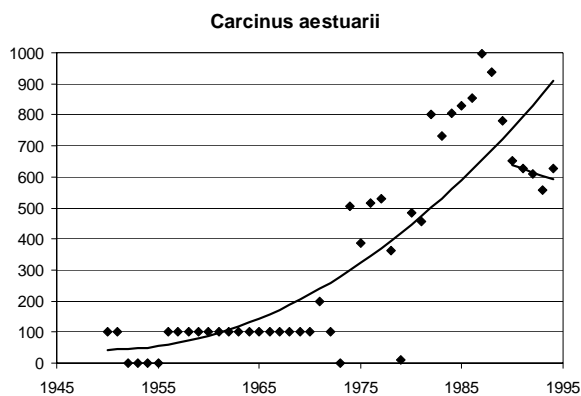




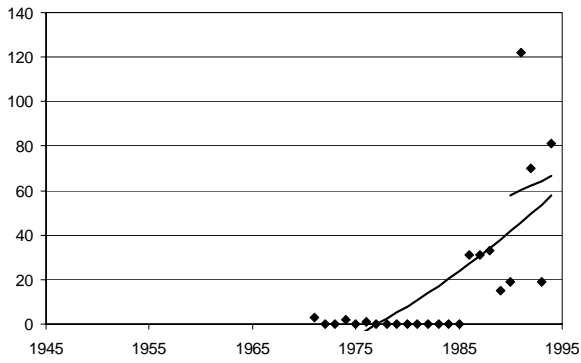
**West Mediterranean - Table 2 = Rising: concave upward**

Scientific name	English name	N. Positive Recs.	Country	Catch
<b>RECENTLY RISING</b>				
Dicentrarchus spp	Seabasses	35	Italy Tunisia Spain	95.6% 3.4% 1.0%
<b>NO RECENT TREND</b>				
Carcinus aestuarii	Mediterranean shore crab	40	Spain France	87.1% 12.9%
Conger conger	European conger	45	France Spain Morocco Tunisia	50.8% 49.1% 0.1% 0.0%
Coryphaena hippurus	Common dolphinfish	12	Tunisia	100.0%
Dentex dentex	Common dentex	44	Italy Spain Tunisia France	81.3% 14.2% 4.4% 0.2%
Epinephelus spp	Groupers nei	44	Tunisia	100.0%
Gadiformes	Gadiformes nei	31	Spain France	78.4% 21.6%
Lepidorhombus whiffiagonis	Megrim	37	Spain France	78.0% 22.0%
Lithognathus mormyrus	Sand steenbras	13	France	100.0%
Littorina littorea	Periwinkle	14	Spain	100.0%
Mollusca	Marine molluscs nei	44	Italy Spain	48.0% 44.5%

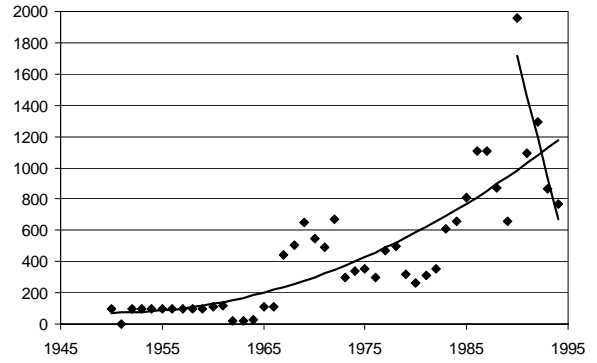
			Tunisia	5.7%
			Morocco	1.4%
			France	0.5%
<i>Mytilus galloprovincialis</i>	Mediterranean mussel	45	Italy	47.2%
			France	46.9%
			Spain	5.3%
			Morocco	0.3%
			Tunisia	0.3%
			Algeria	0.0%
<i>Oblada melanura</i>	Saddled seabream	14	Tunisia	69.5%
			France	30.5%
<i>Pagrus pagrus</i>	Red porgy	30	Spain	64.1%
			Tunisia	35.9%
<i>Sardina pilchardus</i>	European pilchard(=Sardine)	45	Spain	37.7%
			Algeria	28.2%
			France	12.4%
			Morocco	10.8%
			Italy	10.1%
			Tunisia	0.9%
<i>Sarpa salpa</i>	Salema	32	Tunisia	73.5%
			France	26.5%
<i>Sciaena spp</i>	Drums	31	Italy	96.2%
			Tunisia	3.8%
<i>Scomber japonicus</i>	Chub mackerel	42	Morocco	59.2%
			Tunisia	40.8%
<i>Scombroidei</i>	Tuna-like fishes nei	30	Tunisia	92.4%
			Spain	7.6%
			Italy	0.1%
<i>Sprattus sprattus</i>	European sprat	20	Spain	99.9%
			France	0.1%
<i>Todarodes sagittatus sagittat.</i>	European flying squid	33	Italy	92.2%
			Algeria	6.5%
			France	1.1%
			Spain	0.2%
<i>Xiphias gladius</i>	Swordfish	45	Italy	61.1%
			Spain	25.2%
			Algeria	10.3%
			Morocco	3.0%
			Tunisia	0.5%
<i>Zeus faber</i>	John dory	19	France	64.9%
			Tunisia	22.7%
			Morocco	12.5%



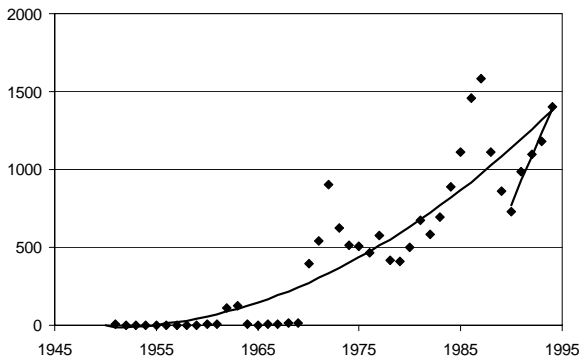
**Coryphaena hippurus**



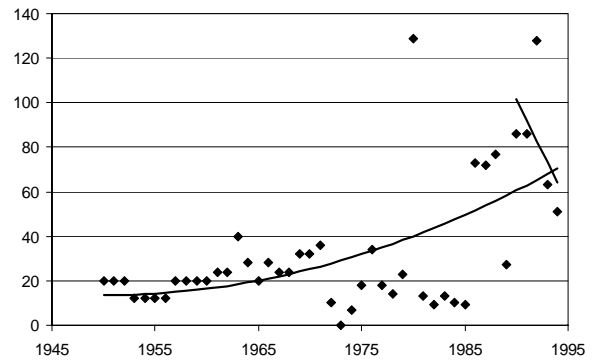
**Dentex dentex**



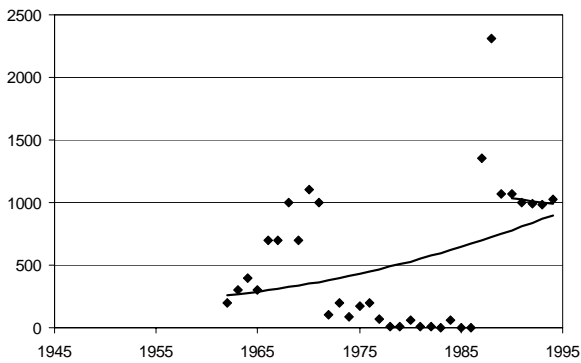
**Dicentrarchus spp**



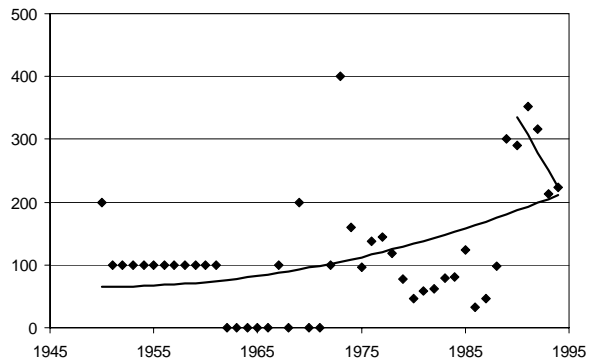
**Epinephelus spp**



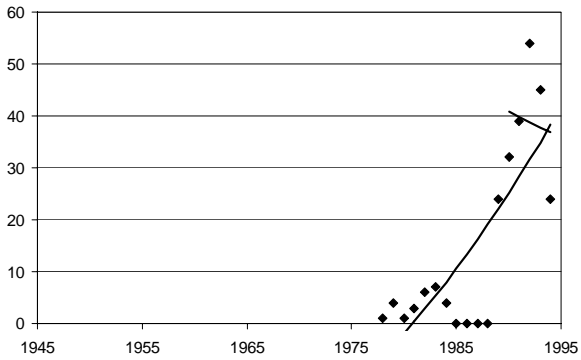
**Gadiformes**



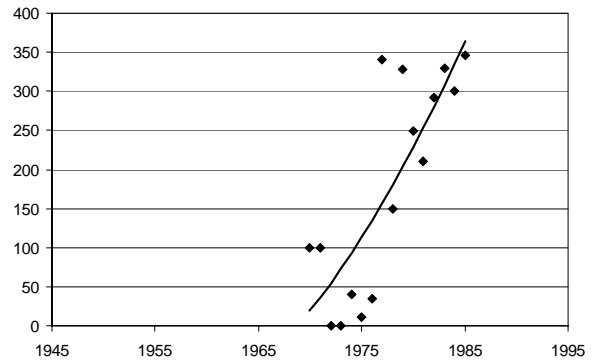
**Lepidorhombus whiffiagonis**

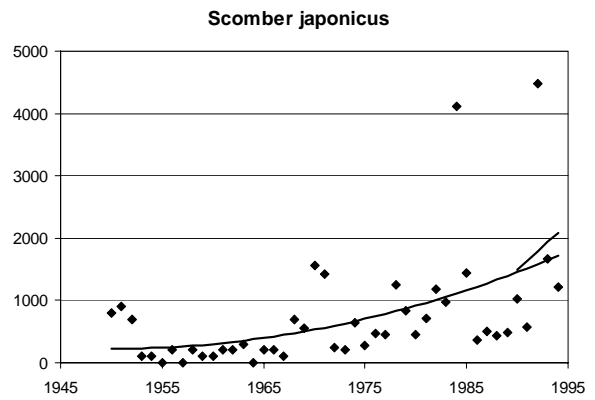
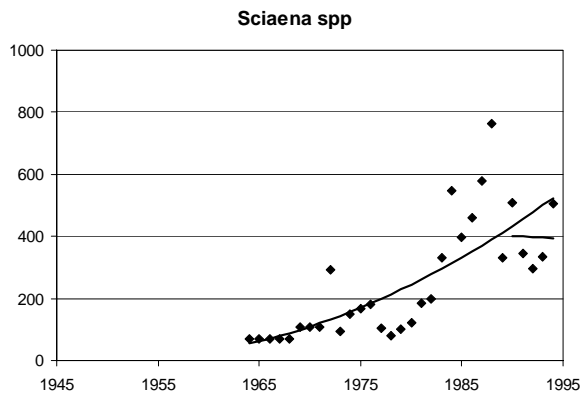
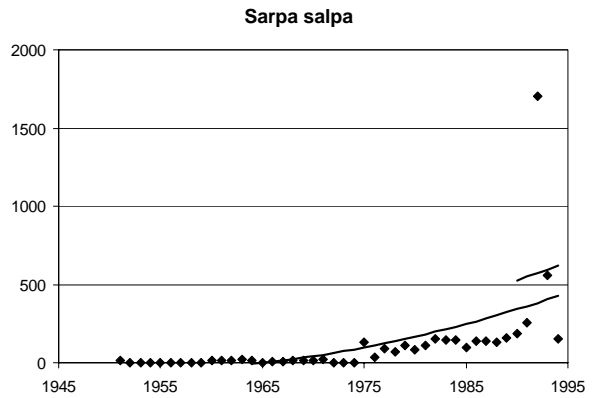
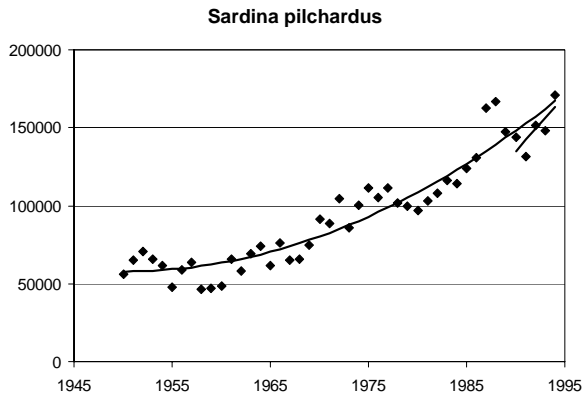
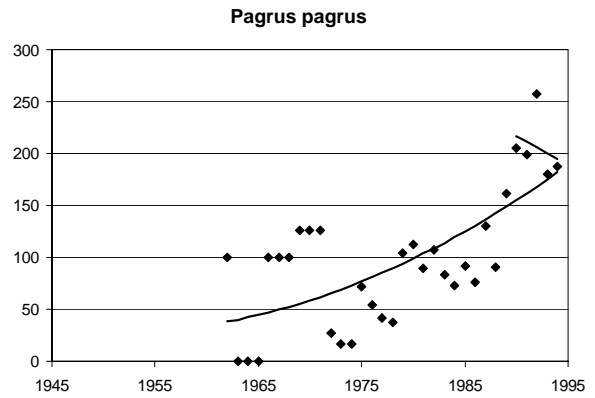
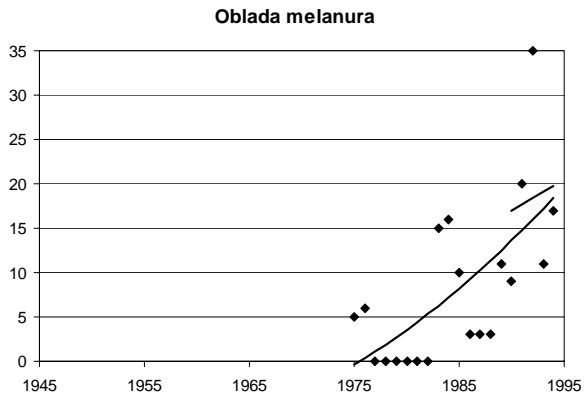
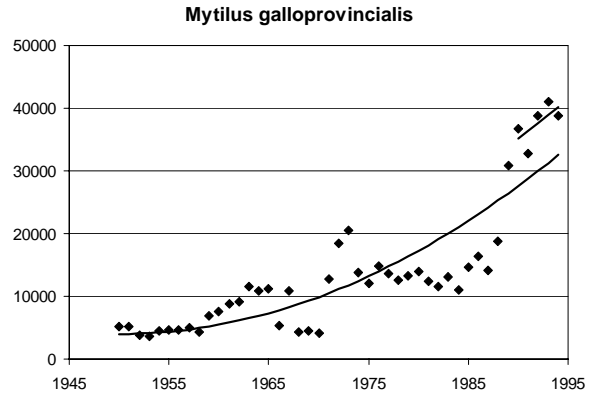
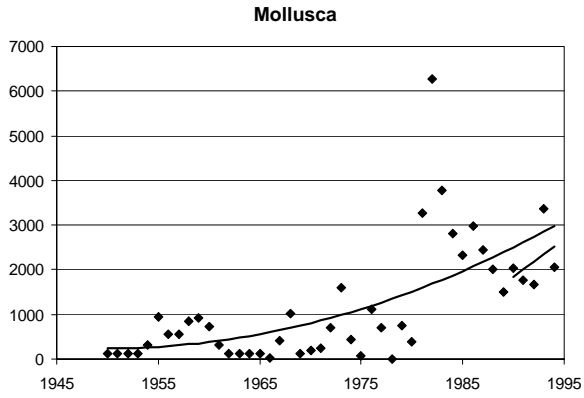


**Lithognathus mormyrus**

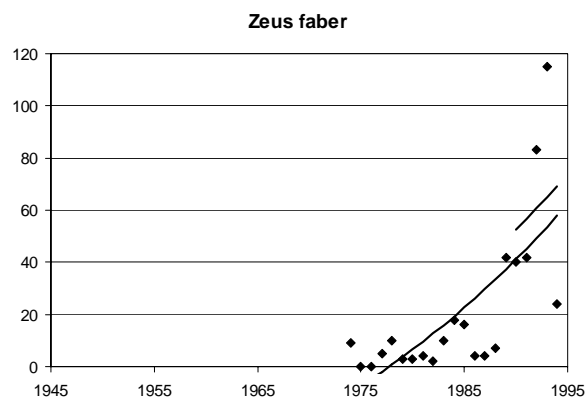
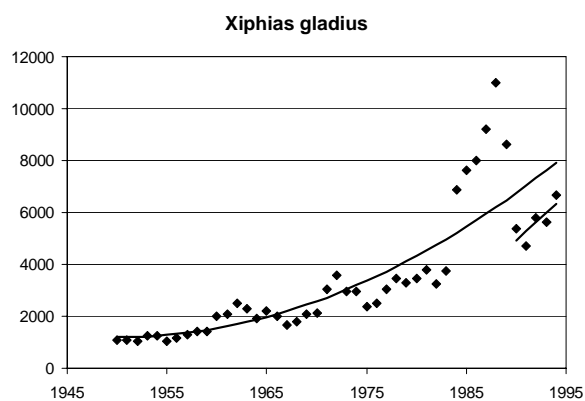
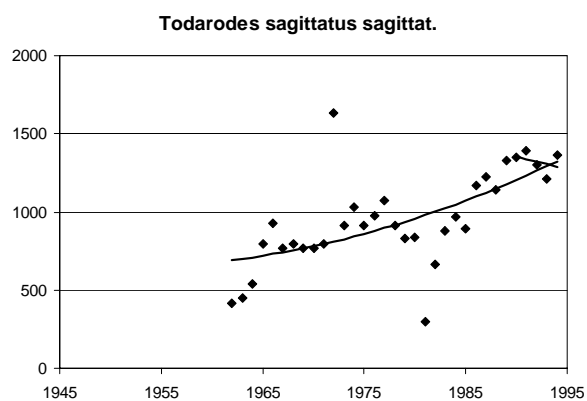
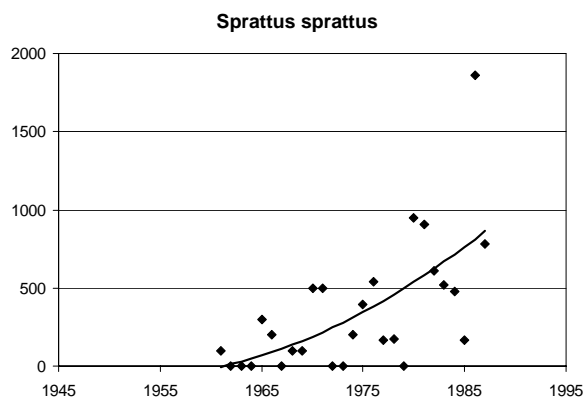
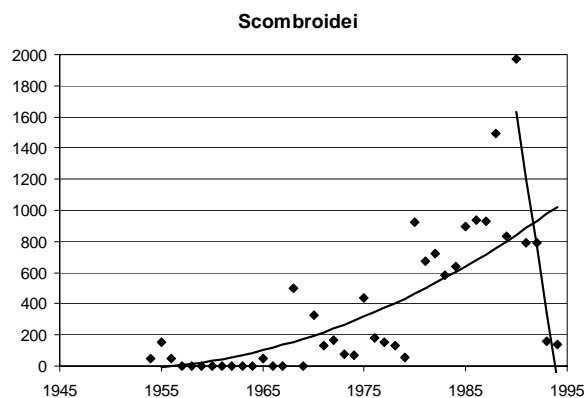


**Littorina littorea**







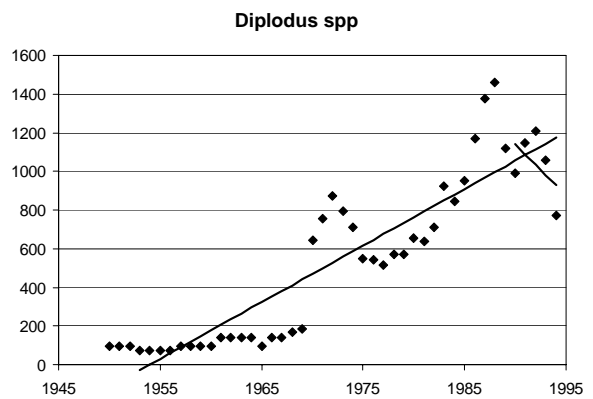
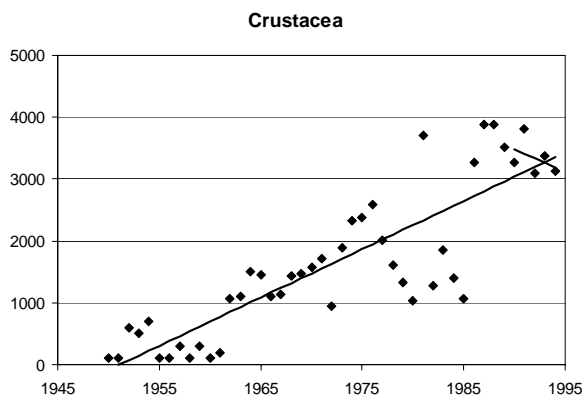
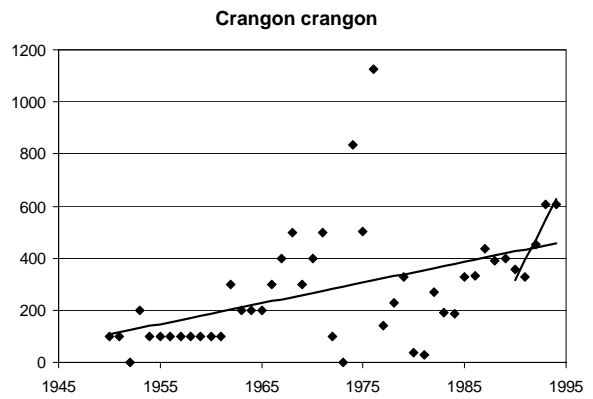
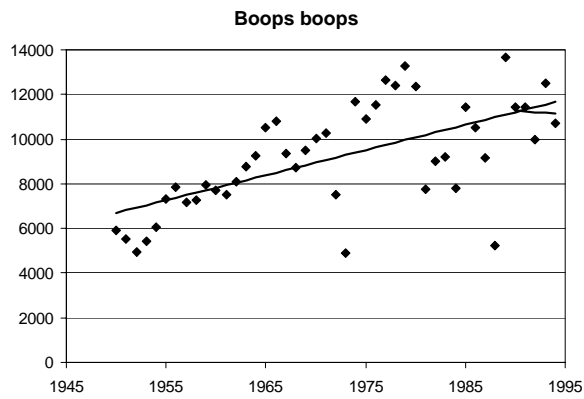
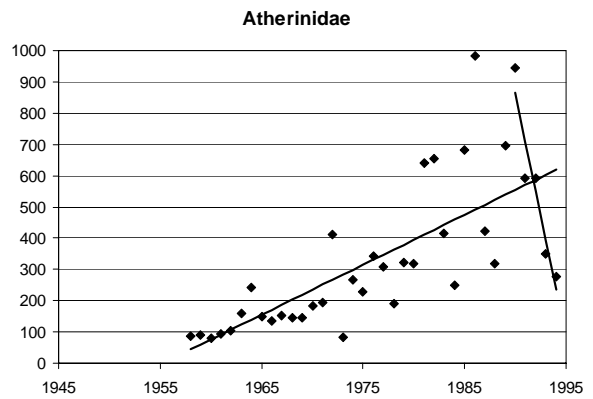
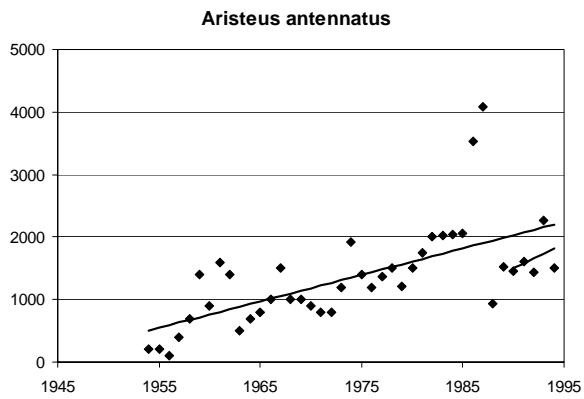


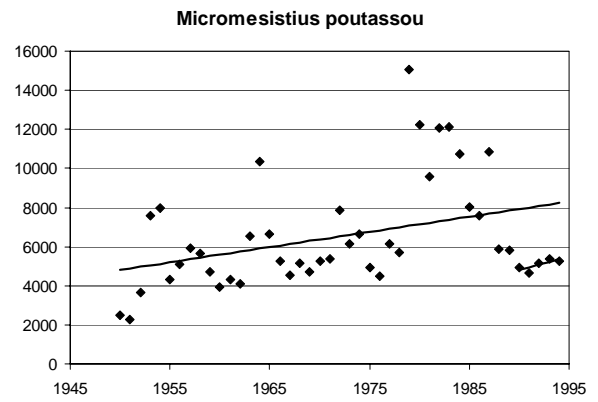
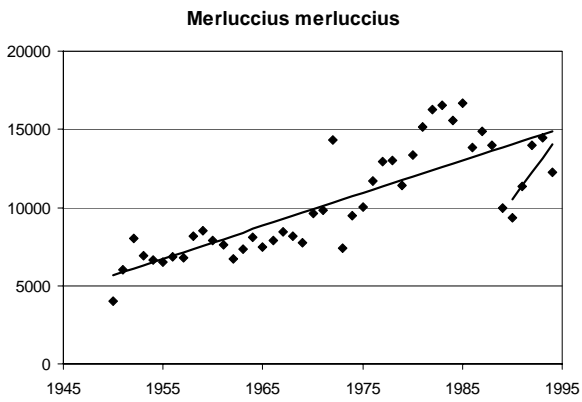
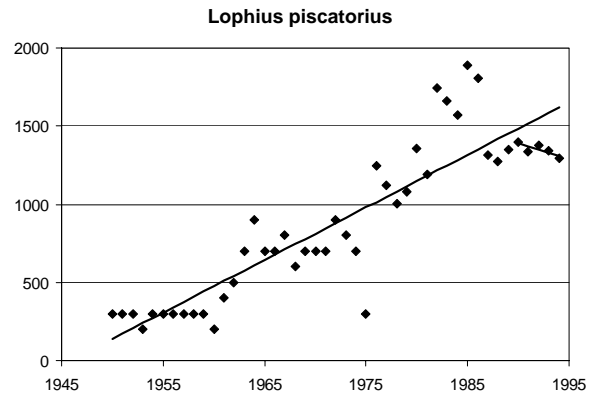
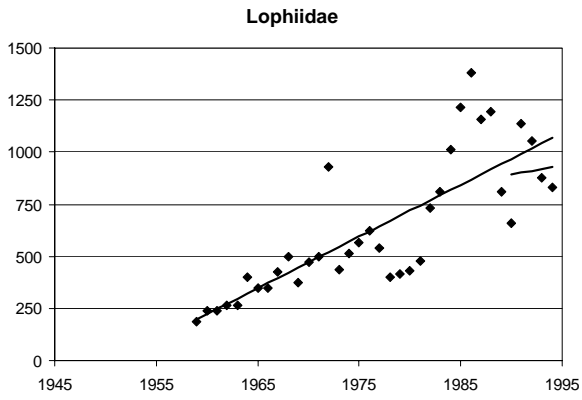
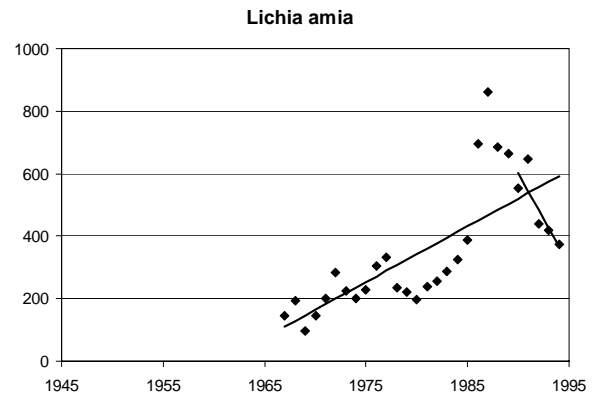
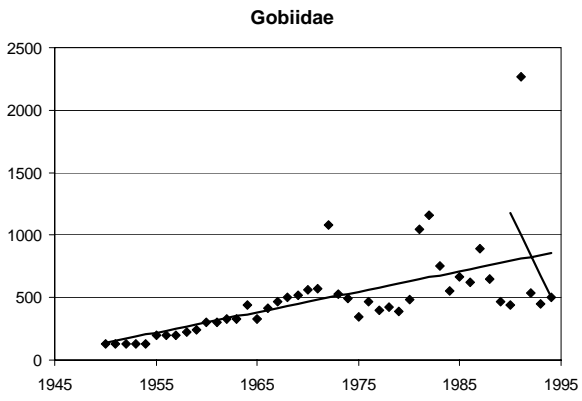
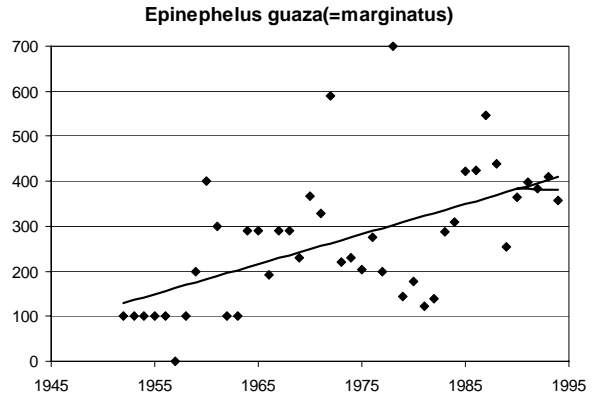
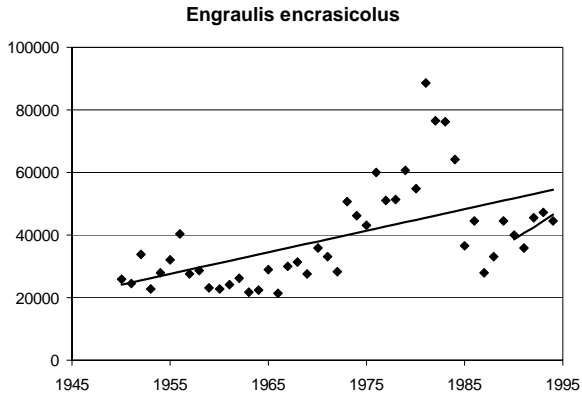
**West Mediterranean - Table 3 = Rising: linear**

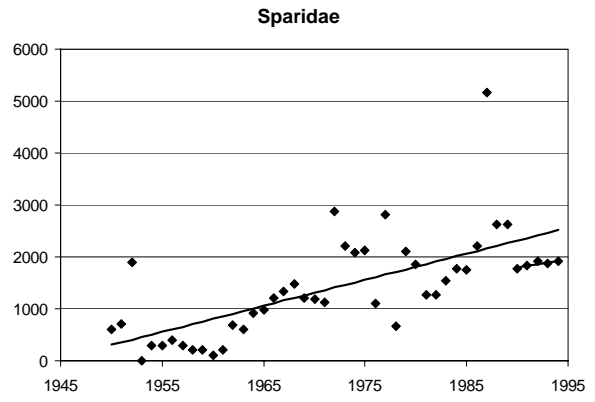
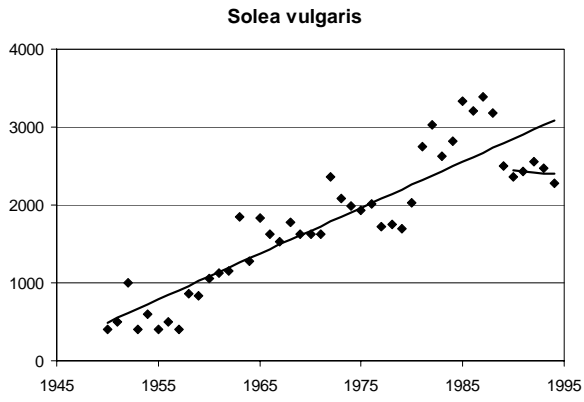
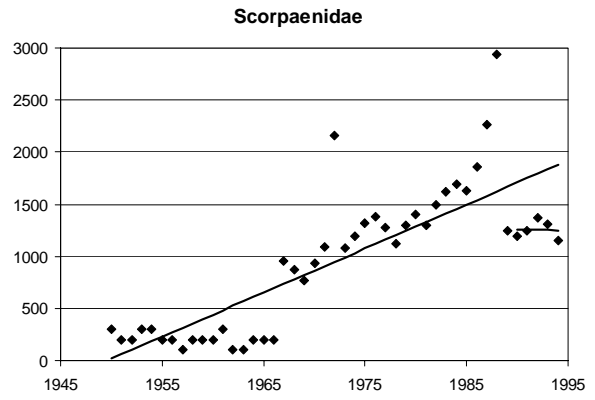
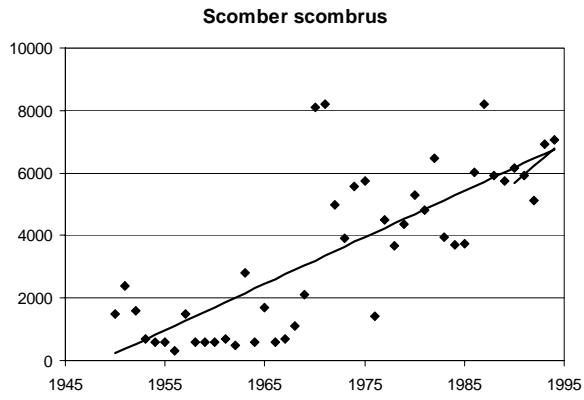
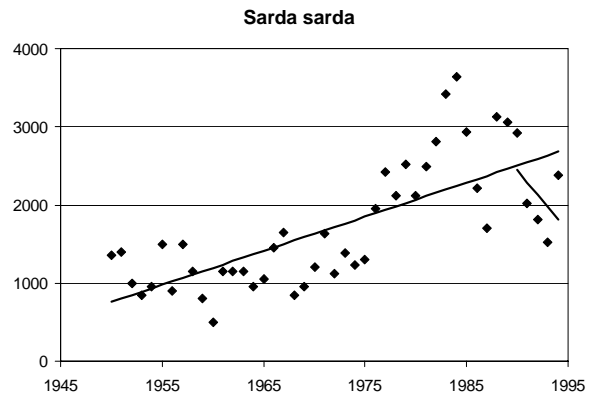
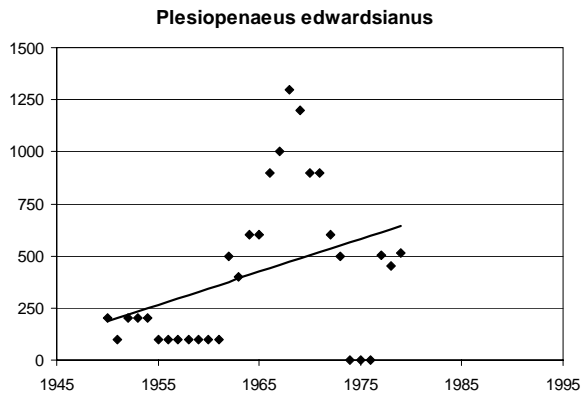
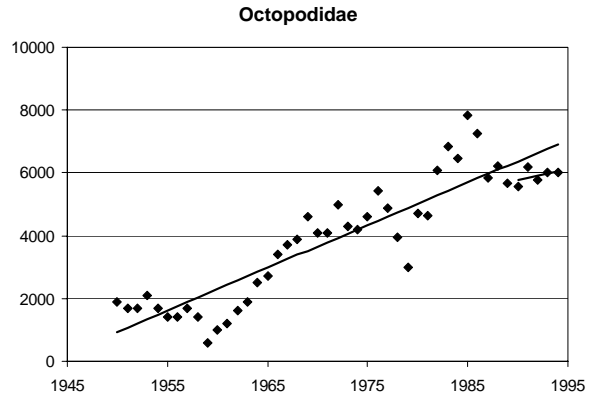
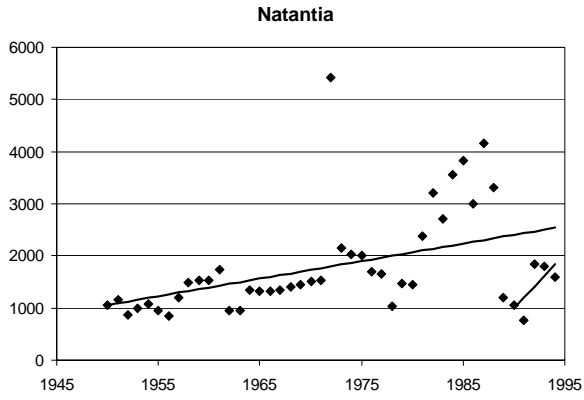
Scientific name	English name	N. Positive Recs.	Country	Catch
<b>RECENTLY RISING</b>				
Sparus aurata	Gilthead seabream	43	Italy	40.1%
			France	33.0%
			Spain	19.2%
			Tunisia	5.4%
			Morocco	2.3%
<b>NO RECENT TREND</b>				
Aristeus antennatus	Blue and red shrimp	41	Algeria	99.2%
			Tunisia	0.8%
Atherinidae	Silversides(=Sand smelts)	37	Italy	53.4%
			France	46.5%
			Tunisia	0.2%

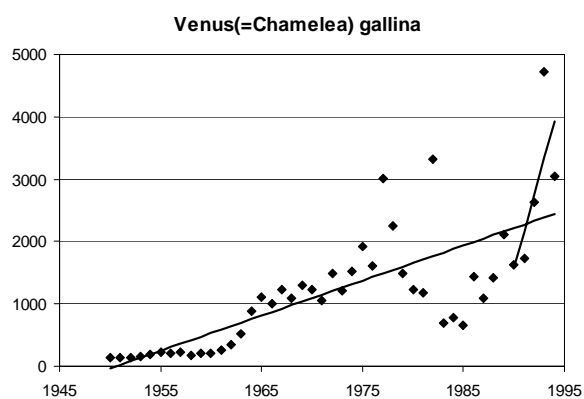
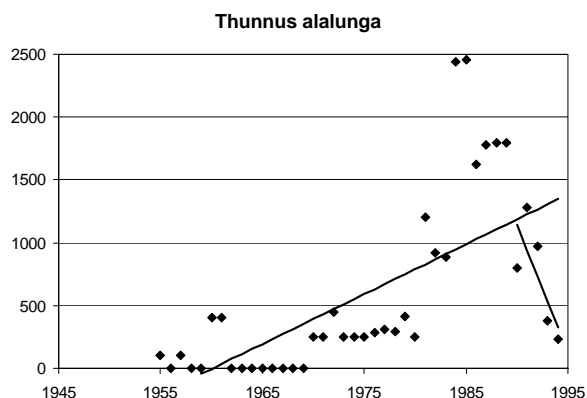
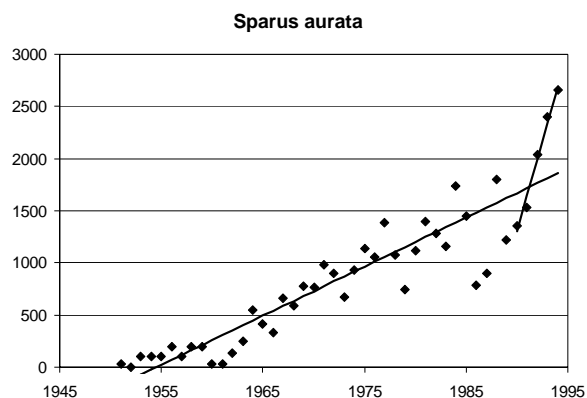
Boops boops	Bogue	45	Spain Italy Morocco Algeria France Tunisia	45.7% 32.9% 8.5% 8.5% 2.9% 1.6%
Crangon crangon	Common shrimp	43	Spain France	94.2% 5.8%
Crustacea	Marine crustaceans nei	45	Italy Spain France Algeria Morocco Tunisia	45.2% 45.1% 5.3% 3.8% 0.8% 0.0%
Diplodus spp	Sargo breams, nei	45	Italy Tunisia France Morocco	74.8% 15.1% 9.7% 0.4%
Engraulis encrasicolus	European anchovy	45	Spain Italy Algeria Morocco France Tunisia	47.3% 31.1% 8.8% 7.3% 5.5% 0.0%
Epinephelus guaza(=marginatus)	Dusky grouper	42	Italy Spain	69.3% 30.7%
Gobiidae	Gobies nei	45	Italy	100.0%
Lichia amia	Leerfish	28	Italy Tunisia Spain	97.3% 2.7% 0.0%
Lophiidae	Anglerfishes nei	36	Italy France	78.4% 21.7%
Lophius piscatorius	Angler(=Monk)	45	Spain Morocco	97.3% 2.7%
Merluccius merluccius	European hake	45	Spain Italy France Algeria Tunisia Morocco	41.7% 34.2% 10.5% 10.3% 2.3% 1.0%
Micromesistius poutassou	Blue whiting(=Poutassou)	45	Spain Italy France	84.1% 14.3% 1.7%
Natantia	Natantian decapods nei	45	Italy Morocco France	97.9% 2.1% 0.0%
Octopodidae	Octopuses	45	Spain Morocco	98.5% 1.5%
Plesiopenaeus edwardsianus	Scarlet shrimp	27	Spain	100.0%
Sarda sarda	Atlantic bonito	45	Italy Spain Algeria Tunisia Morocco France	32.2% 30.1% 19.8% 11.0% 6.8% 0.1%
Scomber scombrus	Atlantic mackerel	45	Spain France Algeria	59.3% 28.7% 12.0%
Scorpaenidae	Scorpionfishes, nei	45	Italy Spain France Tunisia Morocco	69.4% 18.2% 9.4% 2.8% 0.2%
Solea vulgaris	Common sole	45	Italy Spain France Algeria Morocco	40.0% 28.0% 17.0% 13.5% 0.9%

Sparidae	Porgies, seabreams, nei	44	Tunisia	0.7%
			Morocco	54.7%
			Italy	36.4%
			Spain	4.5%
			Tunisia	4.4%
Thunnus alalunga	Albacore	29	Italy	67.9%
			Spain	28.2%
			France	3.9%
Venus(=Chamelea) gallina	Striped venus	45	Italy	65.3%
			Spain	34.8%









West Mediterranean - Table 4 = Rising: concave downwards

No records.

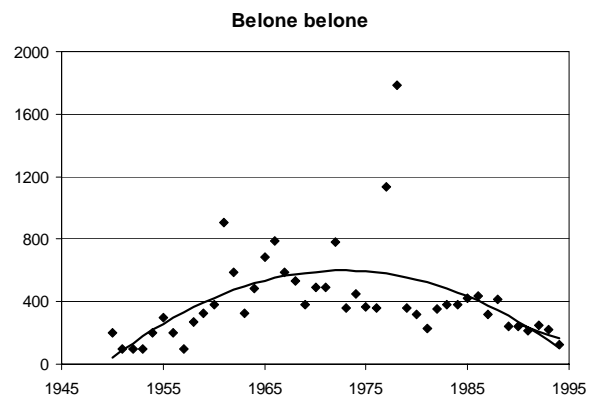
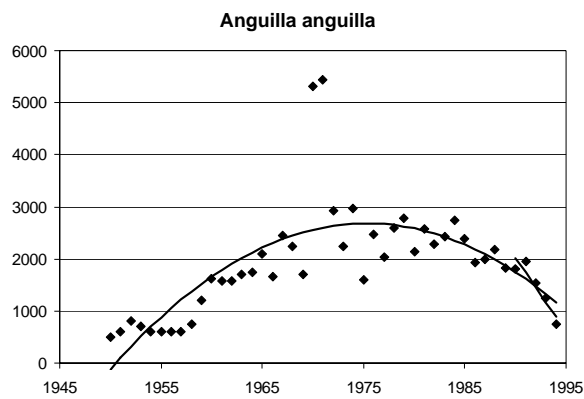
West Mediterranean - Table 5 = Dome shaped

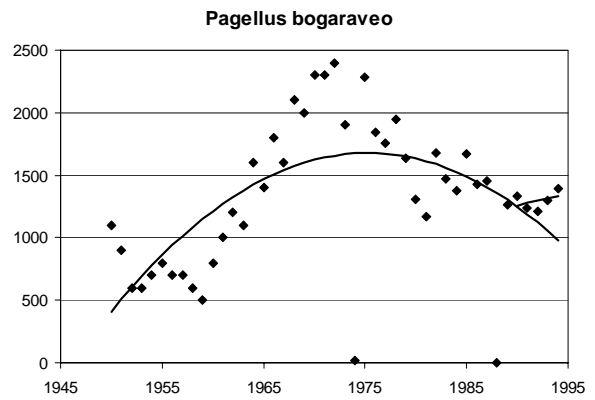
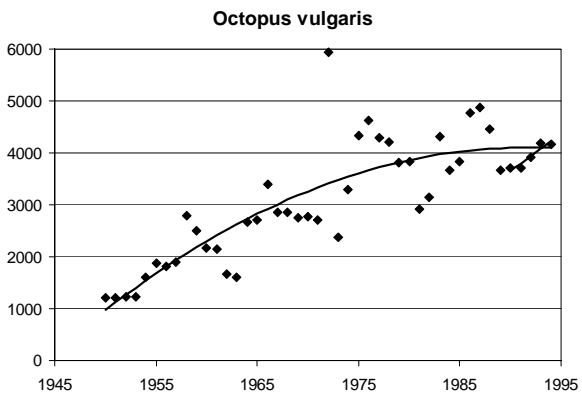
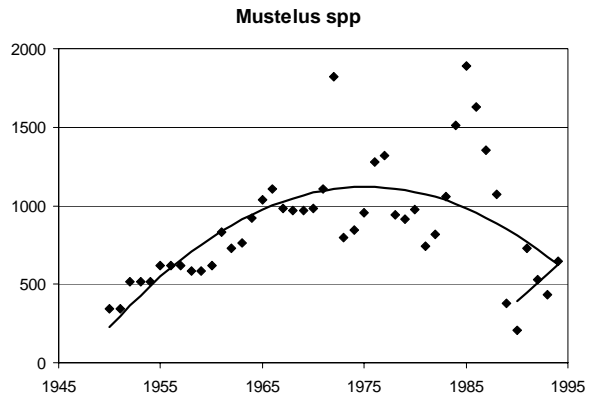
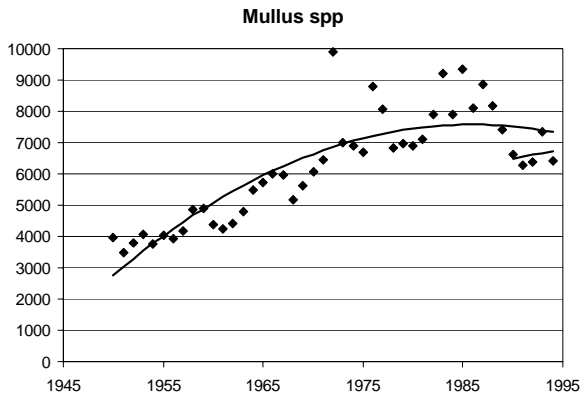
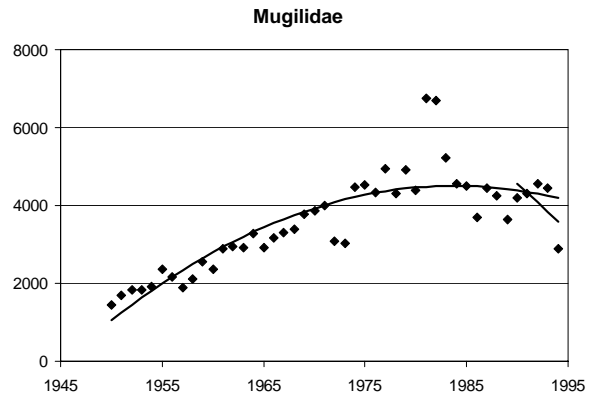
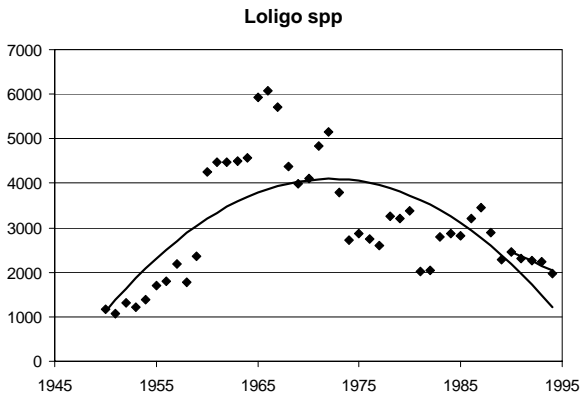
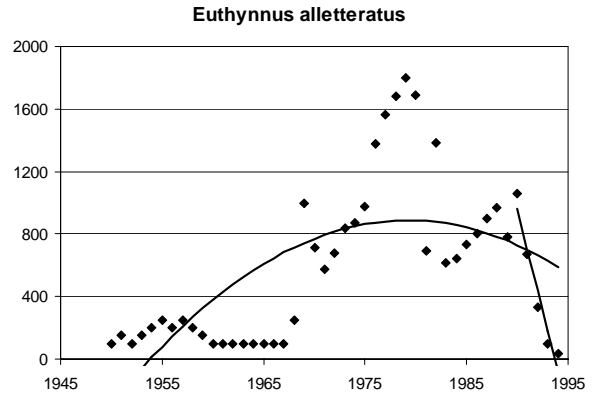
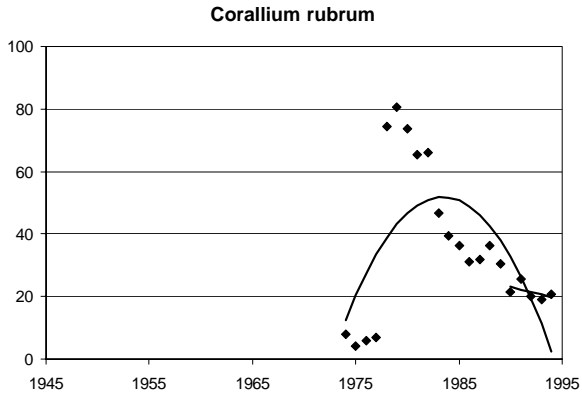
Scientific name	English name	N. Positive Recs.	Country	Catch
<b>NO RECENT TREND</b>				
Anguilla anguilla	European eel	45	France Italy Spain Tunisia Morocco	68.7% 23.2% 4.5% 3.1% 0.6%
Belone belone	Garfish	45	Italy Spain Tunisia	72.7% 24.8% 2.6%
Corallium rubrum	Sardinia coral	21	Italy Tunisia Spain France Algeria Morocco	36.3% 22.0% 19.1% 11.0% 6.6% 5.1%
Loligo spp	Common squids	45	Spain Italy France Tunisia	54.2% 36.6% 9.0% 0.3%
Mugilidae	Mulletts nei	45	Italy France Spain Tunisia Morocco	56.6% 29.3% 9.7% 3.8% 0.7%
Mullus spp	Surmulletts(=Red mullets)	45	Italy Spain Algeria France	39.5% 37.3% 14.4% 3.7%

Mustelus spp	Smoothhounds	45	Morocco	2.8%
			Tunisia	2.4%
			Italy	89.6%
			Tunisia	9.9%
			France	0.5%
Octopus vulgaris	Common octopus	45	Italy	82.6%
			France	15.5%
			Tunisia	1.9%
Pagellus bogaraveo	Blackspot(=red) seabream	44	Spain	99.1%
			France	0.9%
Pagellus erythrinus	Common pandora	45	Algeria	66.8%
			Spain	17.9%
			France	8.0%
			Tunisia	7.4%
Palinurus spp	Palinurid spiny lobsters nei	45	Italy	70.4%
			Spain	18.1%
			Algeria	8.5%
			Tunisia	2.9%
			Morocco	0.2%
Rajiformes	Skates and rays, nei	45	Italy	53.4%
			Spain	22.8%
			France	10.8%
			Algeria	7.8%
			Tunisia	3.2%
			Morocco	2.1%
Sepia officinalis	Common cuttlefish	45	Italy	86.0%
			France	6.4%
			Tunisia	4.5%
			Algeria	3.2%
Squilla mantis	Spottail mantis squillid	45	Italy	99.5%
			France	0.5%
Trisopterus luscus	Pouting(=Bib)	45	Spain	99.8%
			Morocco	0.2%

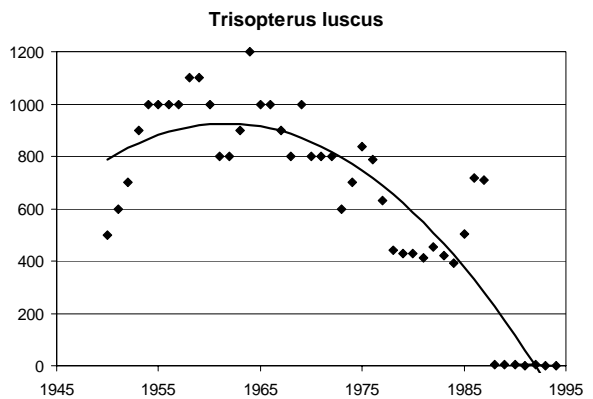
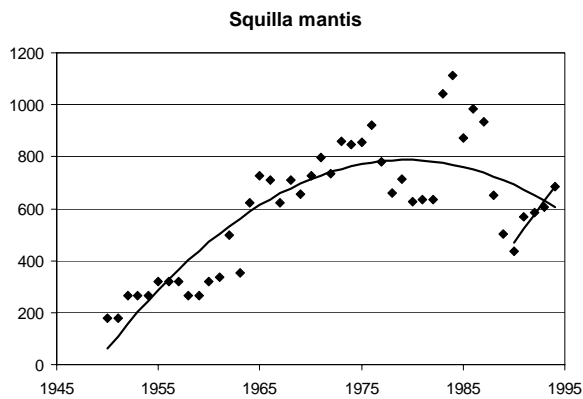
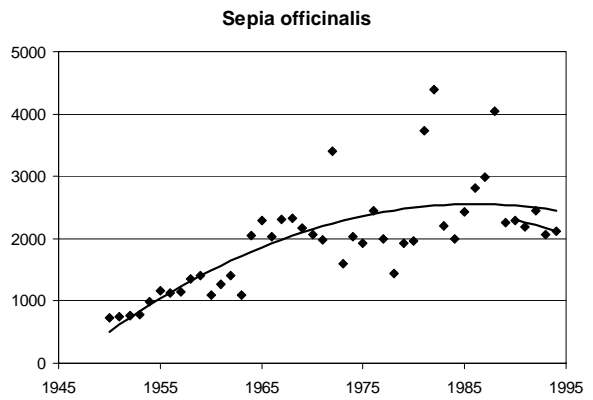
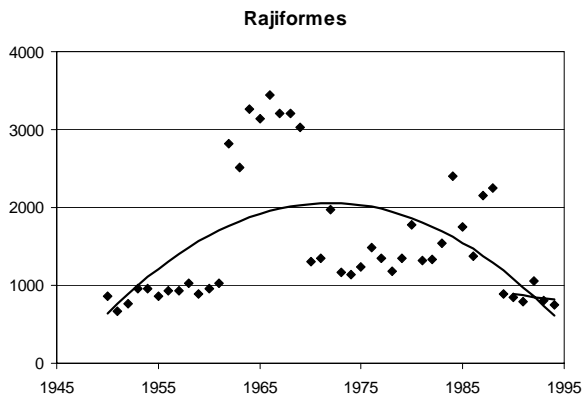
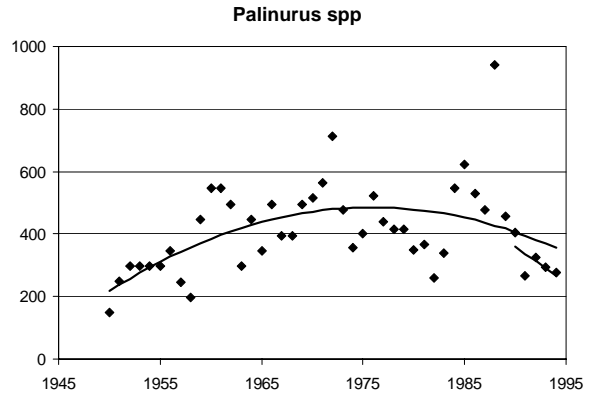
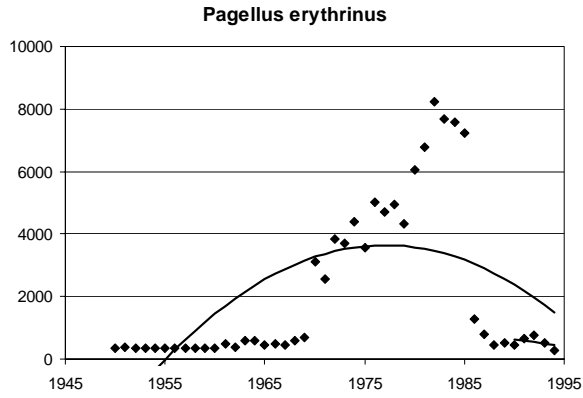
#### RECENTLY DECLINING

Euthynnus alletteratus	Little tunny(=Atl.black skipj)	45	Tunisia	58.8%
			Spain	40.3%
			Morocco	0.9%



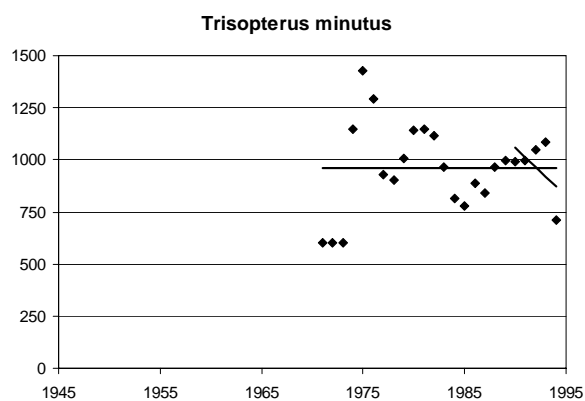
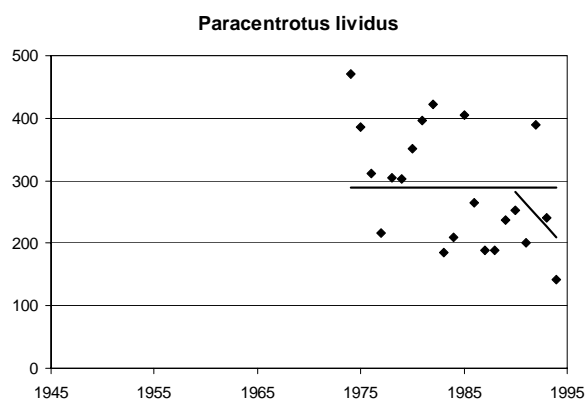
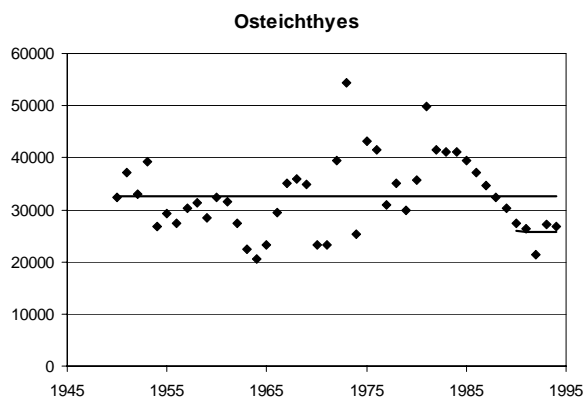
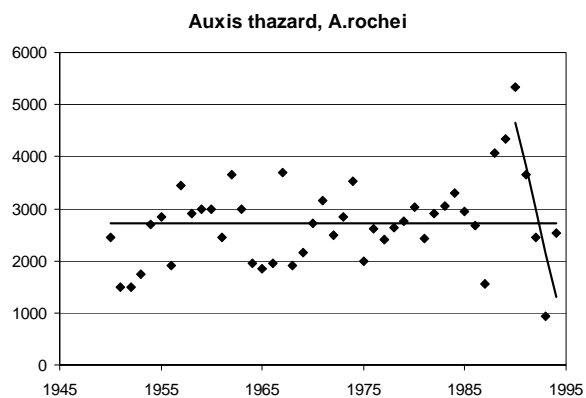






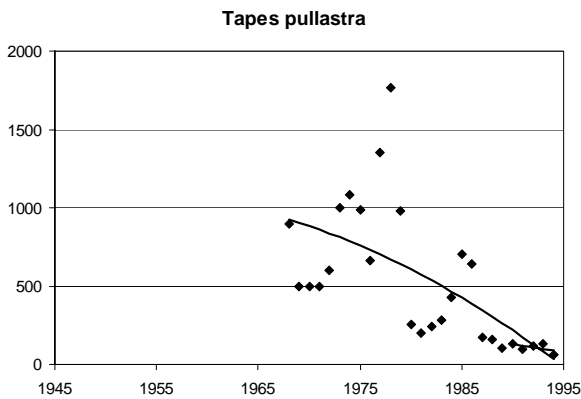
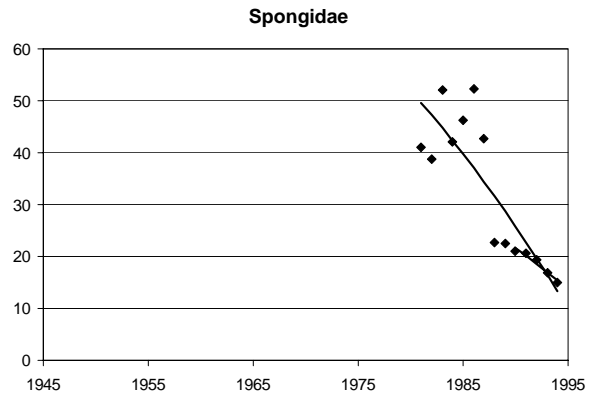
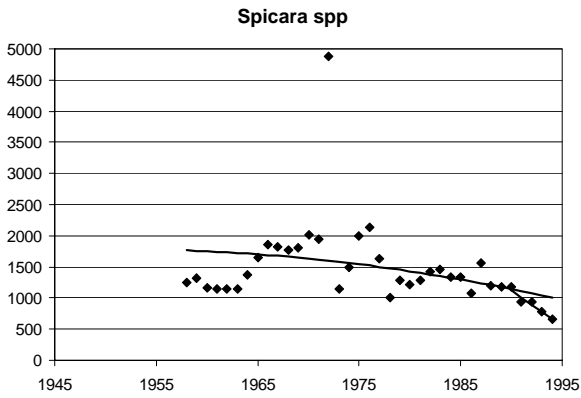
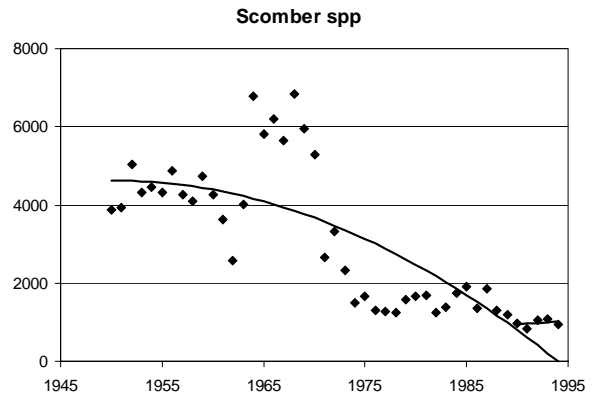
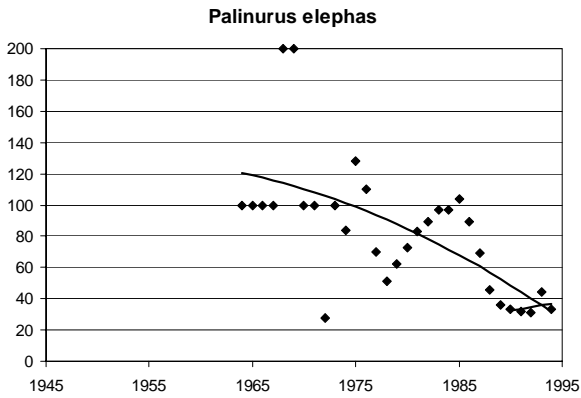
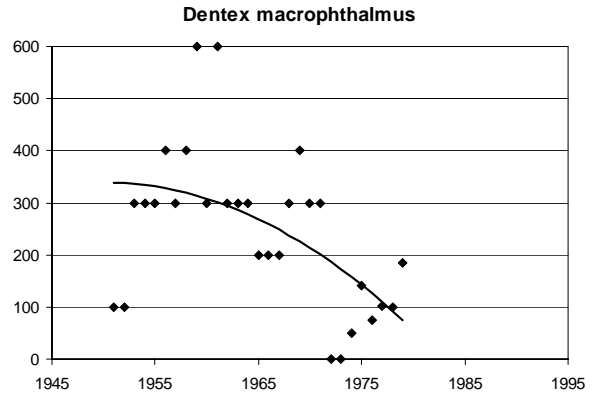
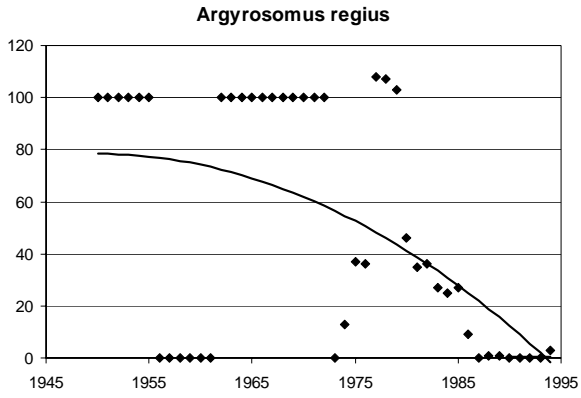
**West Mediterranean - Table 6 = Stable fisheries**

Scientific name	English name	N. Positive Recs.	Country	Catch
<b>NO RECENT TREND</b>				
Auxis thazard, A.rochei	Frigate and bullet tunas	45	Spain Italy Morocco Tunisia France	66.5% 16.6% 10.3% 6.5% 0.0%
Osteichthyes	Marine fishes nei	45	Spain Italy France Algeria Tunisia Morocco Monaco	47.6% 26.3% 12.8% 6.6% 3.6% 3.1% 0.0%
Paracentrotus lividus	Stony sea urchin	21	France	100.0%
Trisopterus minutus	Poor cod	24	France	100.0%



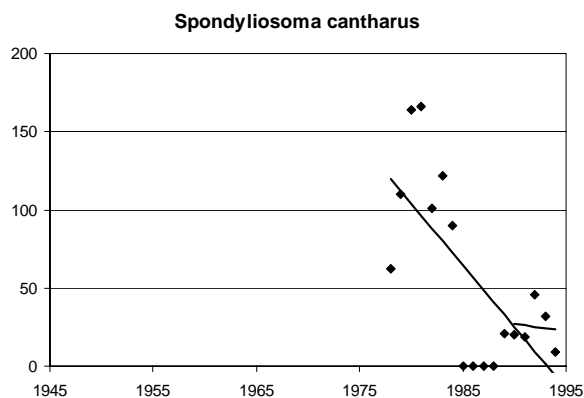
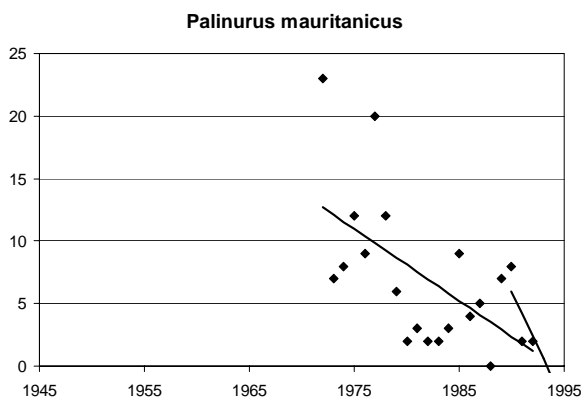
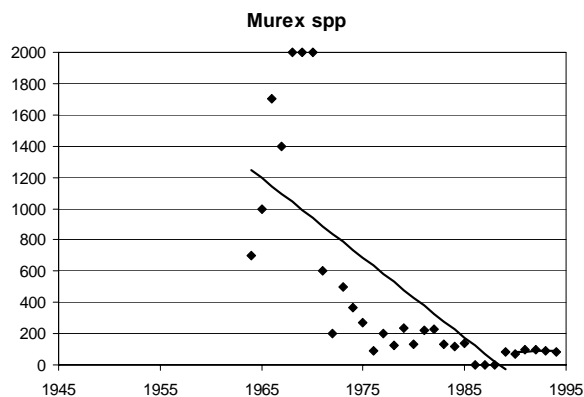
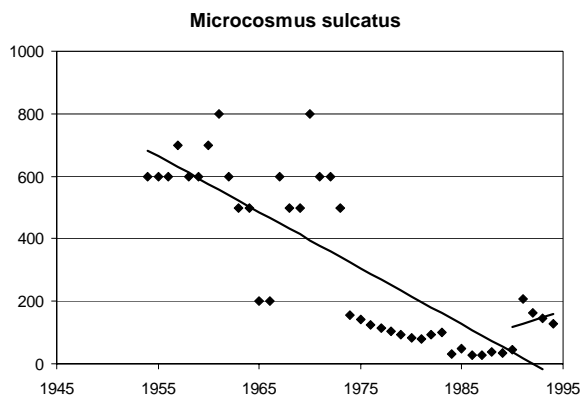
**West Mediterranean - Table 7 = Declining: concave downwards**

Scientific name	English name	N. Positive Recs.	Country	Catch
<b>NO RECENT TREND</b>				
Argyrosomus regius	Meagre	33	Spain Morocco	91.2% 8.8%
Dentex macrophthalmus	Large-eye dentex	27	Spain	100.0%
Palinurus elephas	Common spiny lobster	31	France	100.0%
Scomber spp	'Scomber' mackerels nei	45	Italy	100.0%
Tapes pullastra	Carpet shell	27	Spain France	69.3% 30.7%
<b>RECENTLY DECLINING</b>				
Spicara spp	Picarels	37	Italy France Tunisia	88.2% 6.1% 5.7%
Spongidae	Sponges nei	14	France Italy Spain	80.8% 16.7% 2.6%



**West Mediterranean - Table 8 = Declining: linear**

Scientific name	English name	N. Positive Recs.	Country	Catch
<b>NO RECENT TREND</b>				
<i>Microcosmus sulcatus</i>	Grooved sea squirt	41	France	100.0%
<i>Murex</i> spp	Murex	28	France	100.0%
<i>Palinurus mauritanicus</i>	Pink spiny lobster	20	France	100.0%
<i>Spondyliosoma cantharus</i>	Black seabream	13	France Morocco	88.2% 11.9%



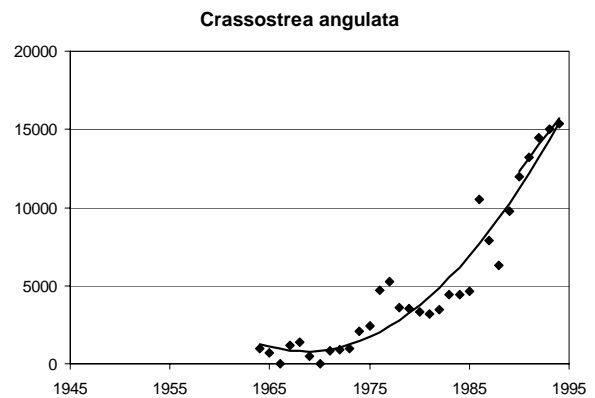
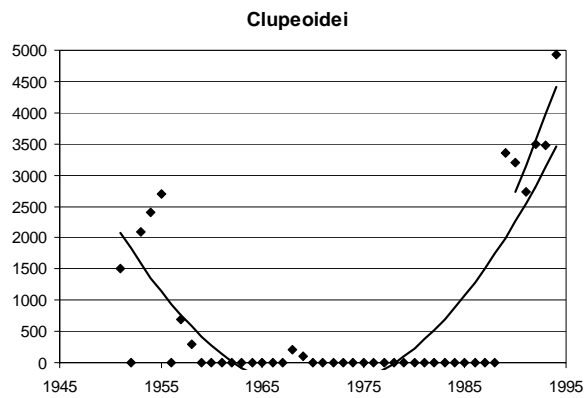
**West Mediterranean - Table 9 = Declining: concave upward**

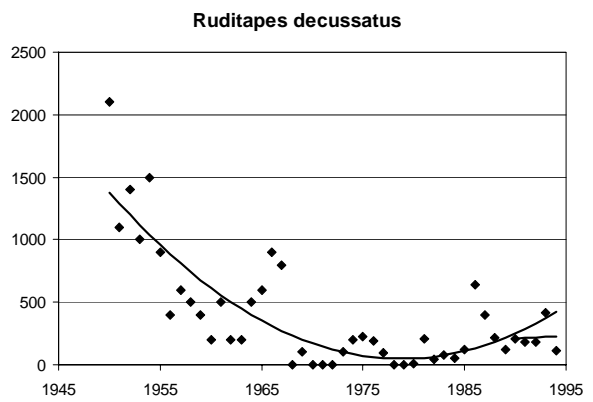
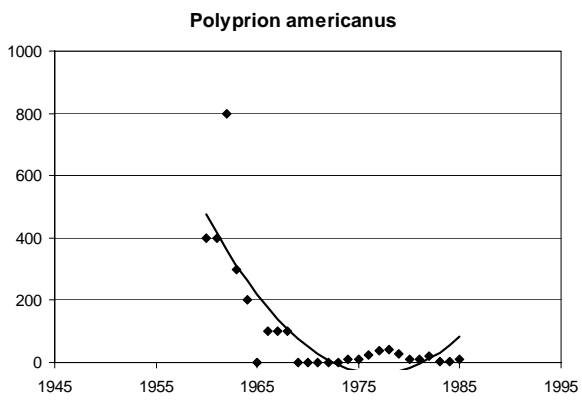
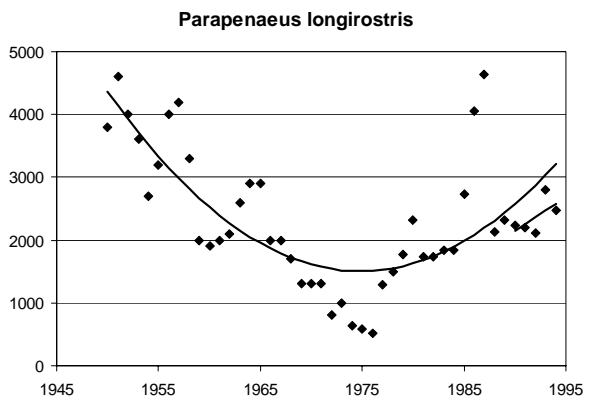
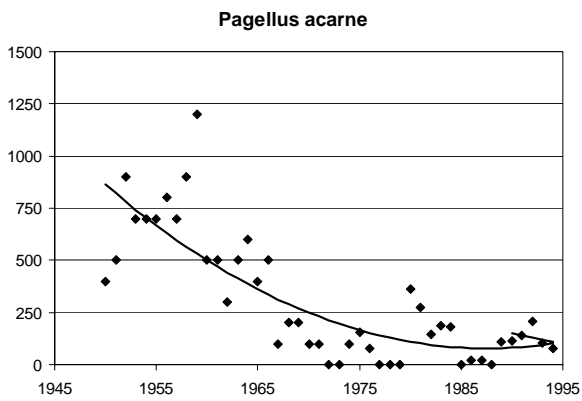
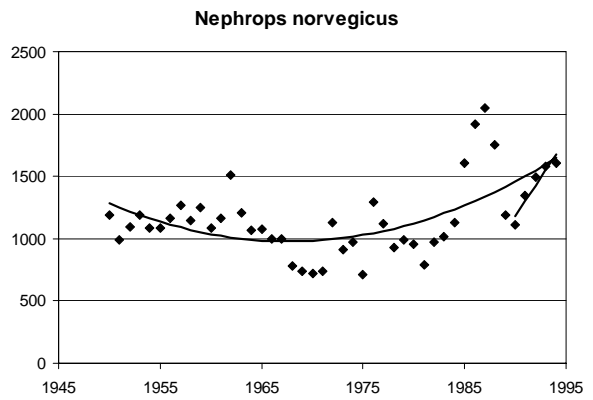
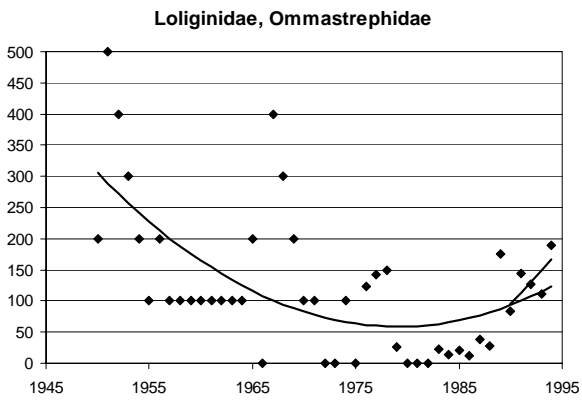
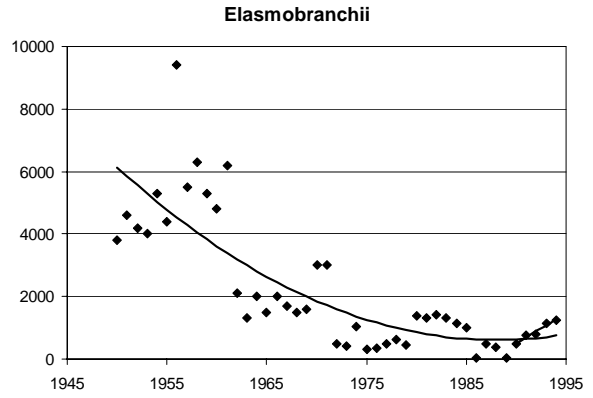
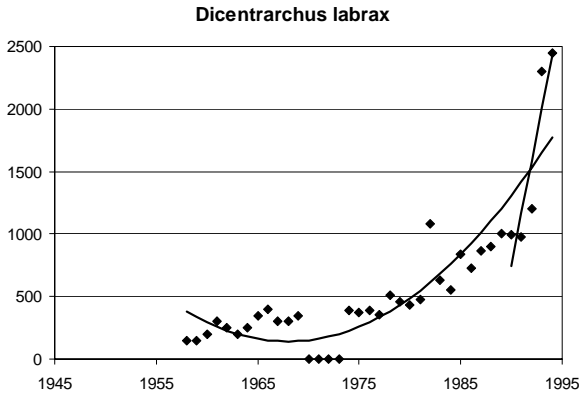
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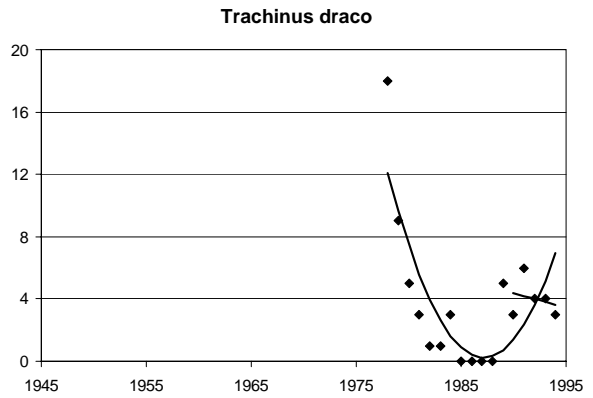
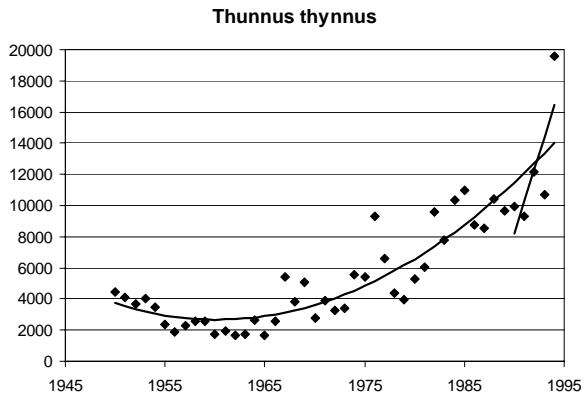
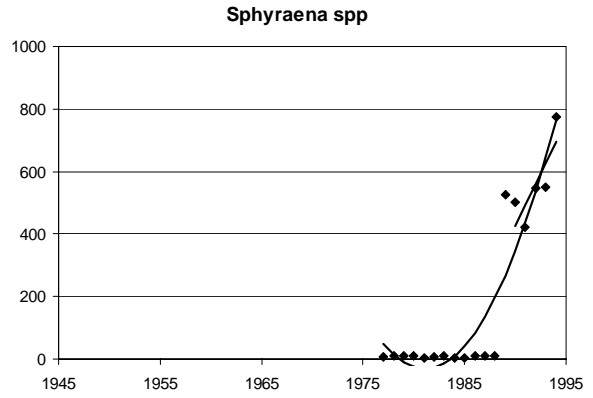
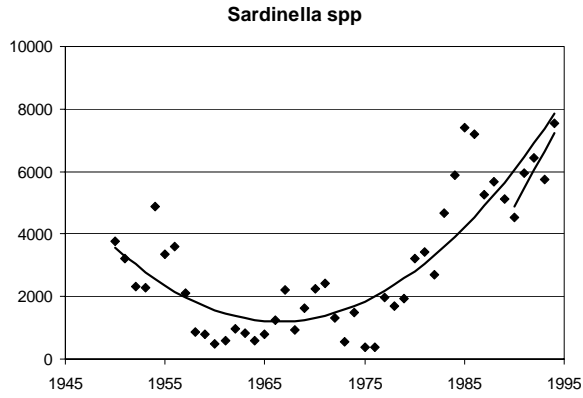
**West Mediterranean - Table 10 = Recovering fisheries**

Scientific name	English name	N. Positive Recs.	Country	Catch
<b>RECENTLY RISING</b>				
<i>Crassostrea angulata</i>	Portuguese cupped oyster	29	France Spain	100.0% 0.0%
<i>Elasmobranchii</i>	Sharks, rays, skates, etc	45	Spain France Algeria Morocco	70.8% 16.4% 11.9% 0.9%
<b>NO RECENT TREND</b>				
<i>Clupeoidei</i>	Clupeoids nei	16	Algeria Spain France	99.0% 1.0% 0.0%
<i>Dicentrarchus labrax</i>	European seabass	33	France	82.9%

			Italy	15.2%
			Morocco	1.9%
Loliginidae, Ommastrephidae	Squids nei	38	Spain	82.5%
			France	10.2%
			Morocco	7.3%
Nephrops norvegicus	Norway lobster	45	Spain	54.0%
			Italy	37.6%
			Algeria	8.0%
			France	0.3%
			Morocco	0.2%
			Tunisia	0.0%
Pagellus acarne	Axillary seabream	39	Spain	92.0%
			France	8.0%
Parapenaeus longirostris	Deepwater rose shrimp	45	Spain	69.9%
			Algeria	29.3%
			Tunisia	0.8%
			France	0.1%
Polyprion americanus	Wreckfish	20	Spain	100.0%
Ruditapes decussatus	Grooved carpet shell	40	Spain	87.0%
			France	11.5%
			Tunisia	1.2%
			Algeria	0.3%
Sardinella spp	Sardinellas nei	45	Spain	41.0%
			Algeria	36.1%
			Morocco	14.2%
			Tunisia	8.8%
Sphyaena spp	Barracudas	18	Algeria	95.6%
			Tunisia	4.4%
Thunnus thynnus	Northern bluefin tuna	45	France	39.8%
			Italy	34.2%
			Spain	12.7%
			Algeria	5.8%
			Morocco	4.7%
			Tunisia	2.8%
Trachinus draco	Greater weever	13	France	100.0%

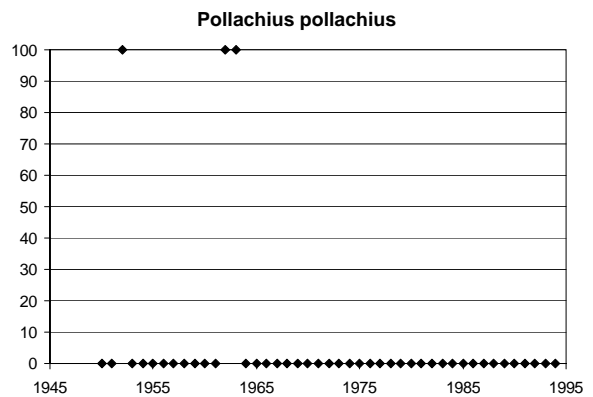
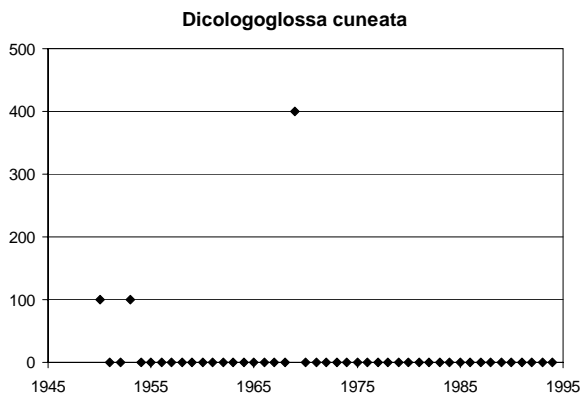






**West Mediterranean - Table 11 = Collapsed fisheries**

Scientific name	English name	N. Positive Recs.	Country	Catch
<i>Dicologlossa cuneata</i>	Wedge sole	3	Spain	100.0%
<i>Pollachius pollachius</i>	Pollack	3	Spain	100.0%



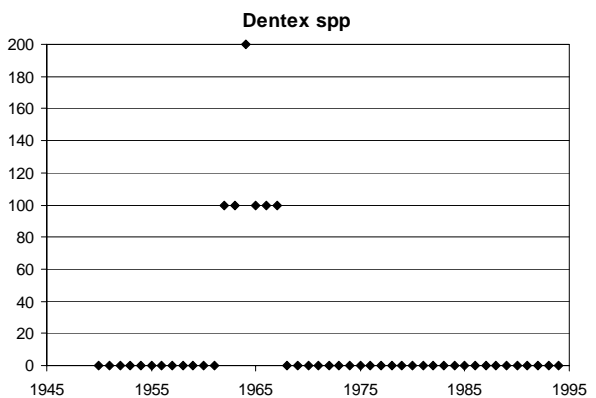
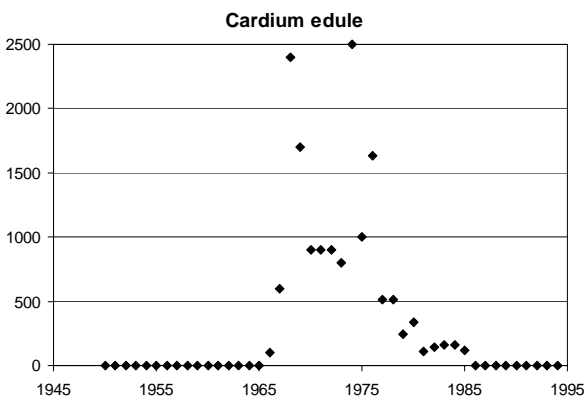
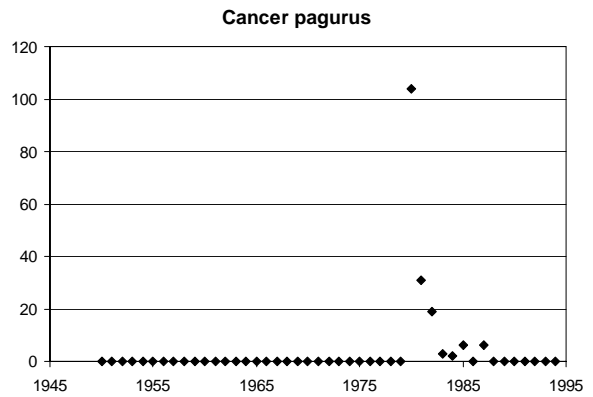
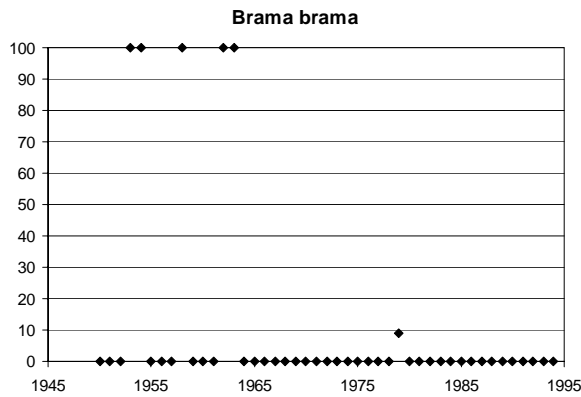
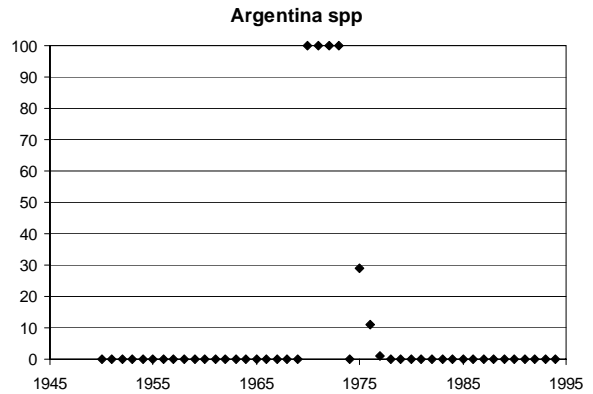
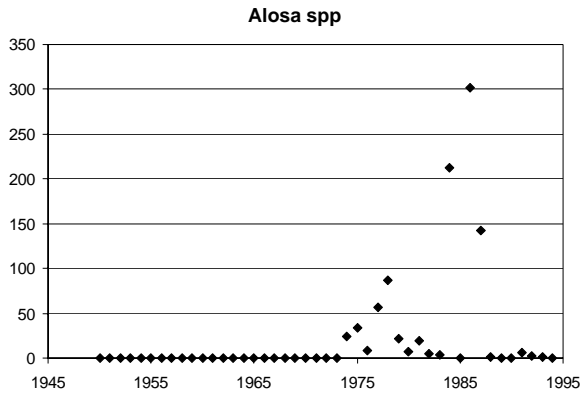
**West Mediterranean - Table 12 = Intermittent fisheries**

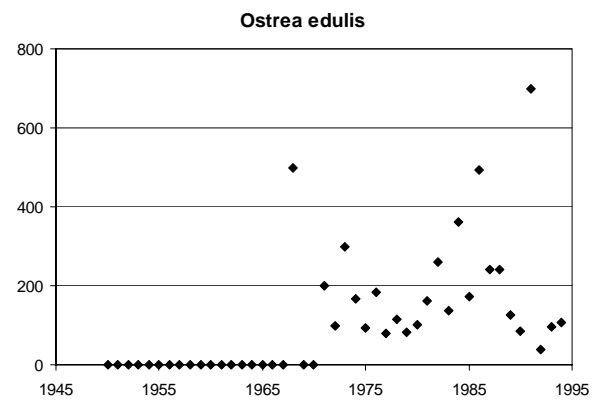
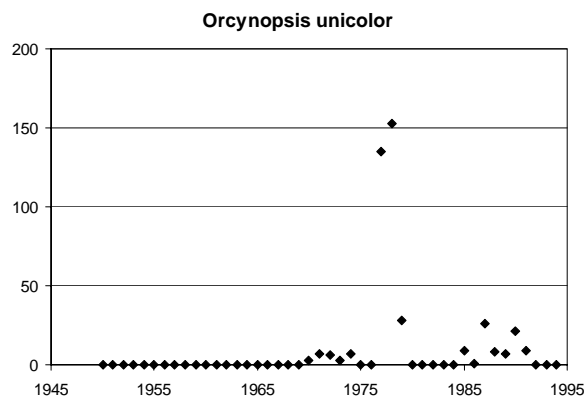
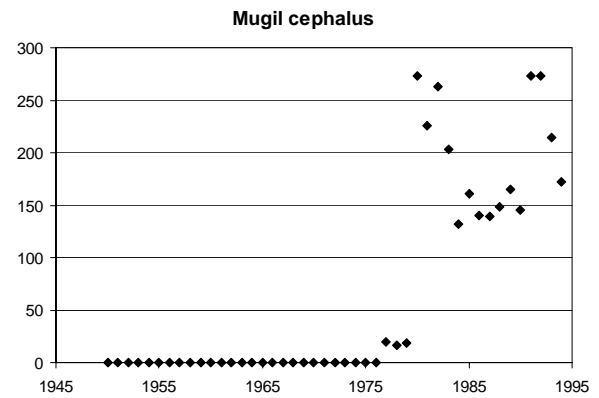
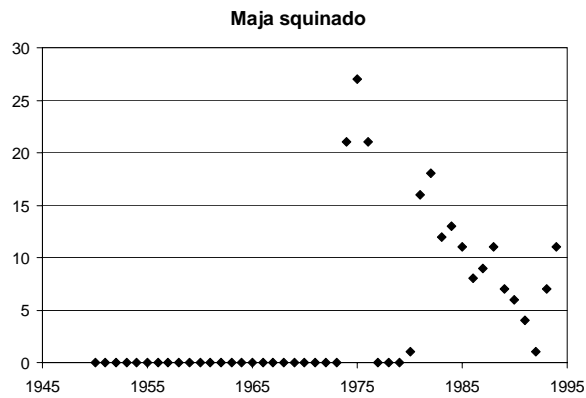
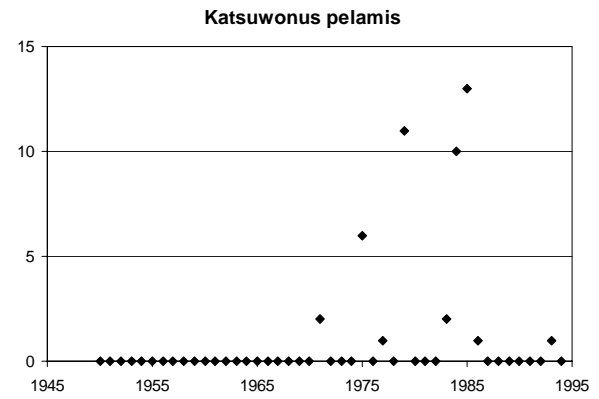
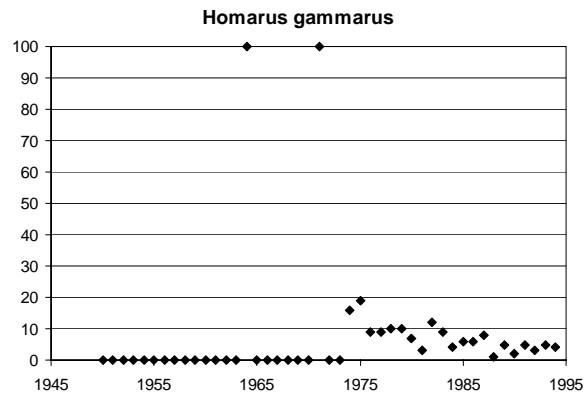
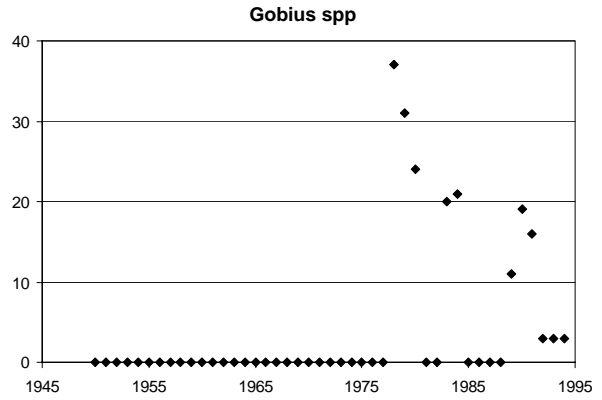
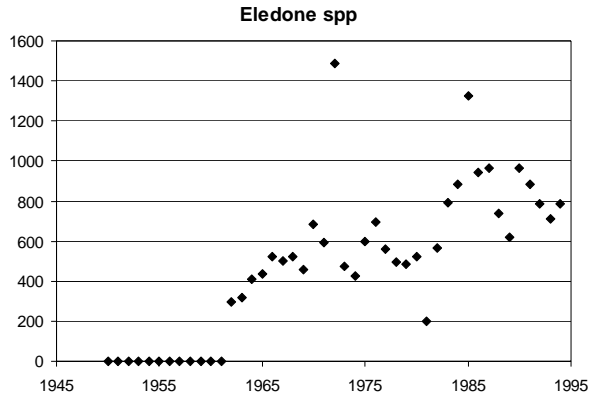
Scientific name	English name	N. Positive Recs.	Country	Catch
<i>Alosa spp</i>	Shads nei	17	Morocco Tunisia	95.3% 4.7%

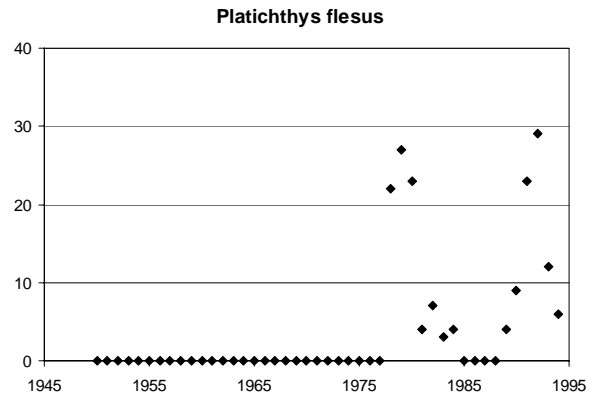
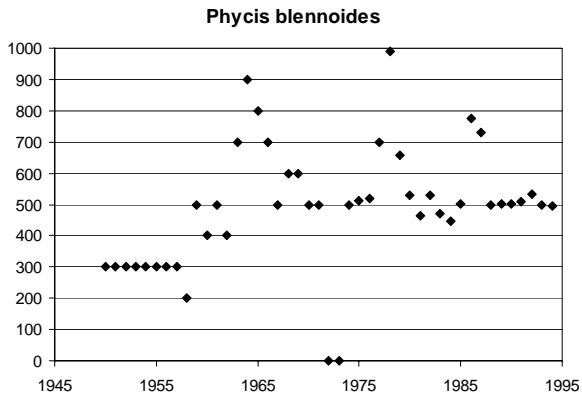
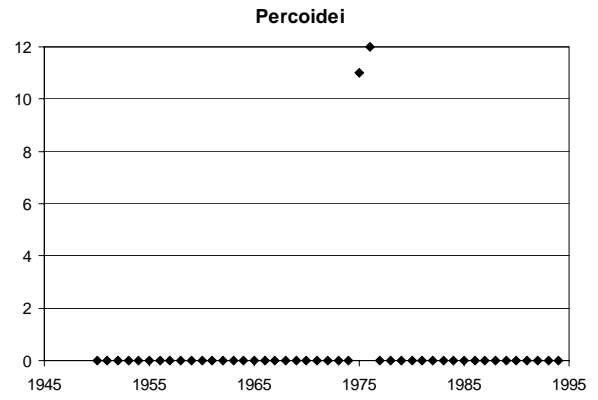
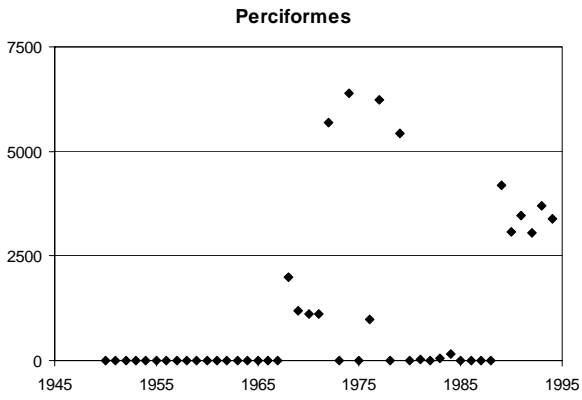
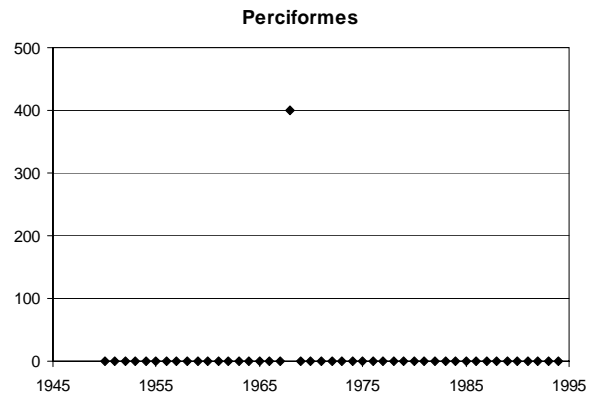
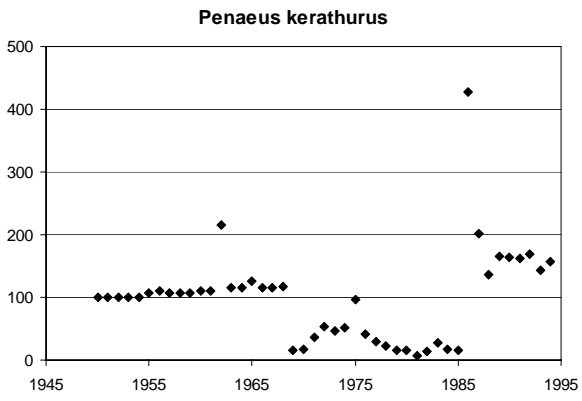
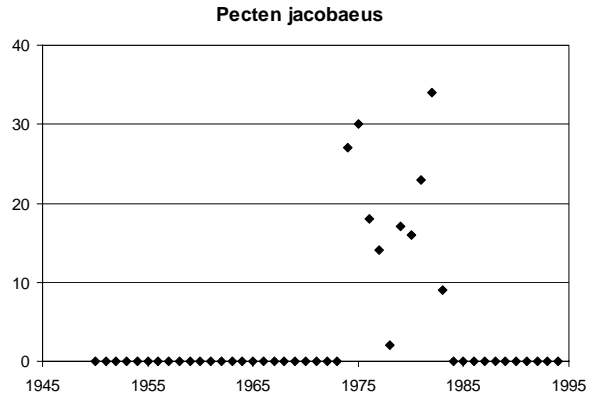
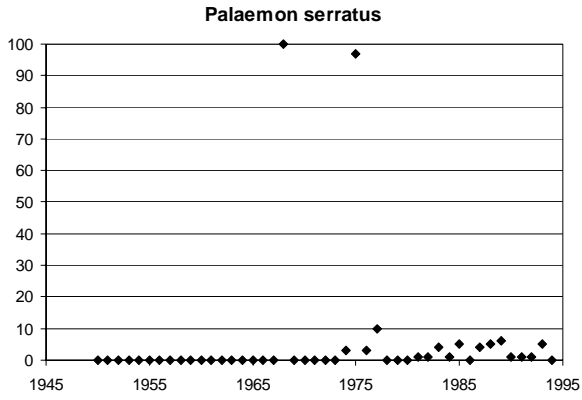
Argentina spp	Argentines	7	France	100.0%
Brama brama	Atlantic pomfret	6	Spain	100.0%
Cancer pagurus	Edible crab	7	Spain	100.0%
Cardium edule	Common cockle	20	Spain	100.0%
Dentex spp	Dentex nei	6	Spain	100.0%
Eledone spp	Horned and musky octopuses	33	Italy	100.0%
Gobius spp	Atlantic gobies	11	France	100.0%
Homarus gammarus	European lobster	23	France Tunisia Algeria Spain Morocco	37.1% 31.2% 28.3% 2.6% 0.9%
Katsuwonus pelamis	Skipjack tuna	9	Morocco Spain	76.6% 23.4%
Maja squinado	Spinous spider crab	18	France Spain	97.6% 2.5%
Mugil cephalus	Flathead grey mullet	18	Tunisia	100.0%
Orcynopsis unicolor	Plain bonito	15	Morocco	100.0%
Ostrea edulis	European flat oyster	25	France Spain	89.2% 10.8%
Palaemon serratus	Common prawn	17	France	100.0%
Pecten jacobaeus	Great mediterranean scallop	10	France Spain	97.9% 2.1%
Penaeus kerathurus	Caramote prawn	45	Spain Tunisia	70.0% 30.0%
Perciformes	Pelagic percomorphs nei	1	Spain	100.0%
Perciformes	Demersal percomorphs nei	22	Spain Algeria France	58.8% 38.1% 3.2%
Percoidei	Percoids nei	2	Tunisia	100.0%
Phycis blennoides	Greater forkbeard	43	Spain Morocco Tunisia	98.8% 1.1% 0.1%
Platichthys flesus	European flounder	13	France	100.0%
Plectorhinchus mediterraneus	Rubberlip grunt	21	Spain	100.0%
Pleuronectes platessa	European plaice	10	France	100.0%
Pleuronectiformes	Flatfishes nei	33	Italy Spain Tunisia France Morocco	67.0% 21.0% 8.2% 2.6% 1.2%
Pomatomus saltatrix	Bluefish	19	Tunisia Spain Morocco	49.0% 45.6% 5.5%
Psetta maxima maxima	Turbot	24	France Spain	90.2% 9.8%
Sciaenidae	Croakers, drums nei	1	France	100.0%
Scombridae	Mackerels, nei	20	Spain	100.0%
Scombroidei	Mackerel-like fishes nei	19	France Algeria	62.3% 37.7%
Sepiidae, Sepiolidae	Cuttlefishes, bobtail squids	45	Spain Morocco	94.8% 5.2%
Serranidae	Groupers, seabasses nei	19	Spain Tunisia	68.2% 31.8%
Solen spp	Razor clams	7	Spain	100.0%

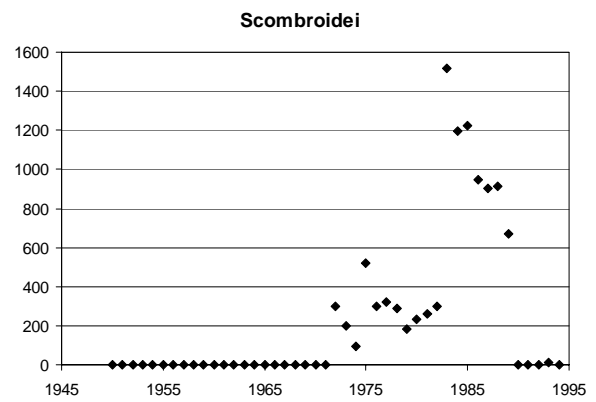
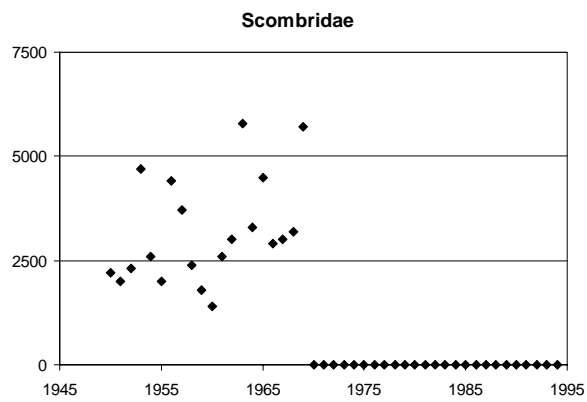
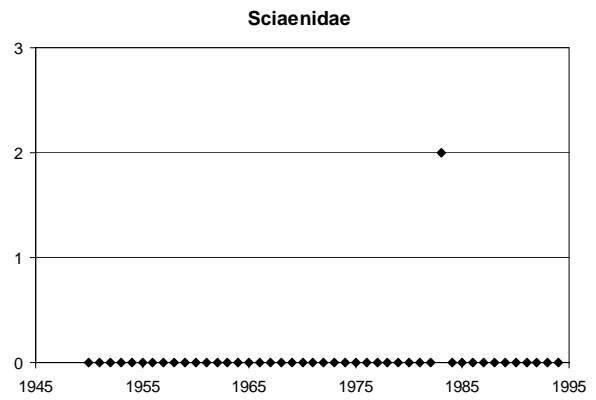
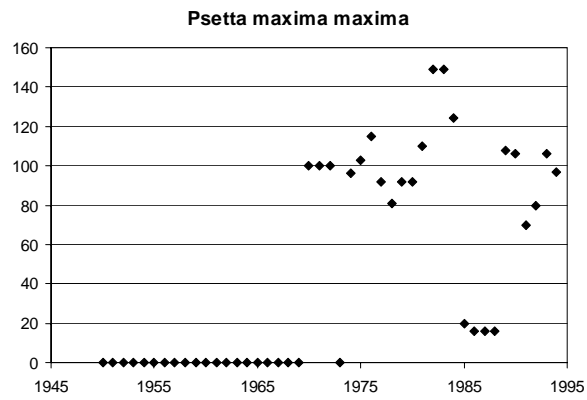
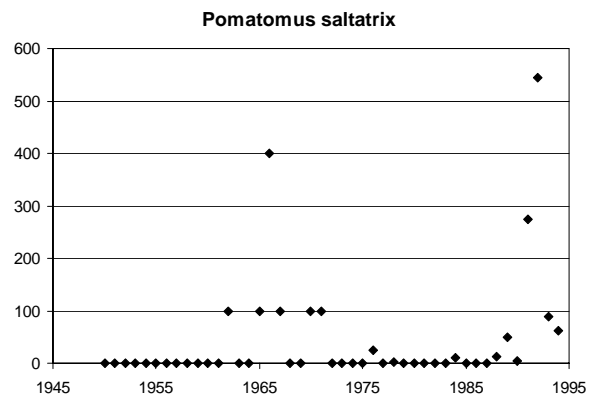
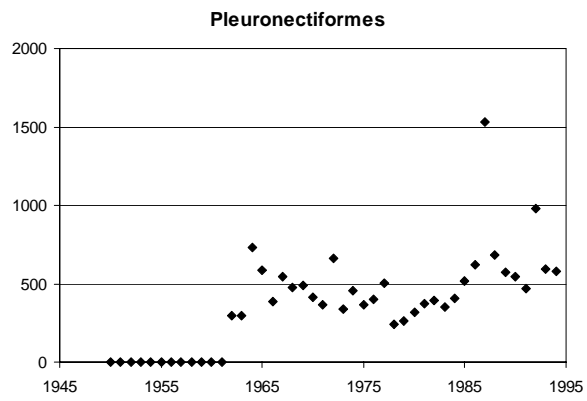
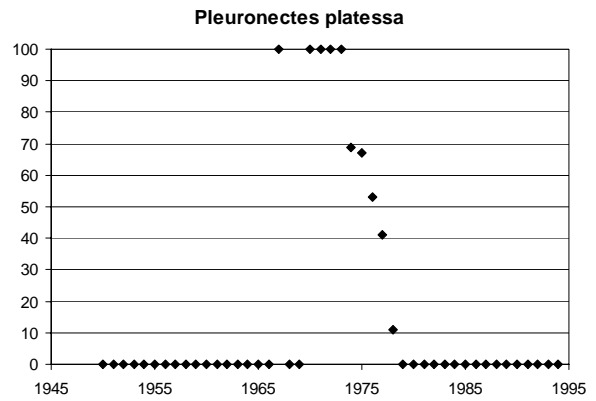
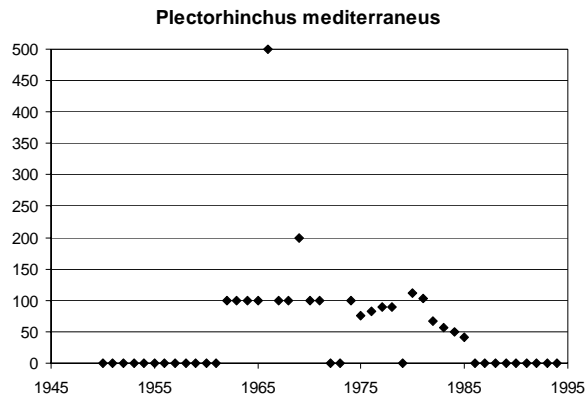


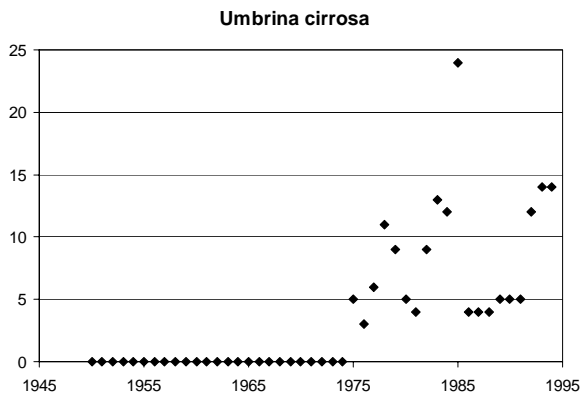
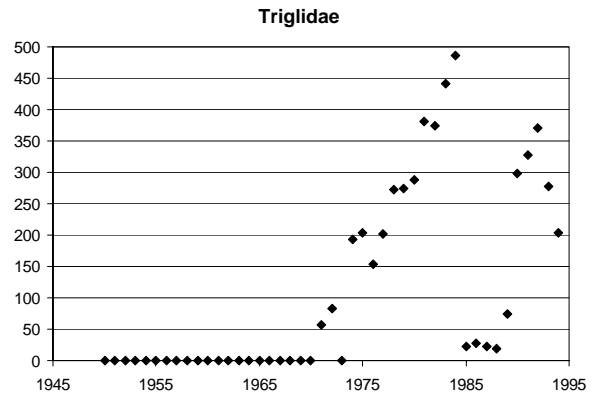
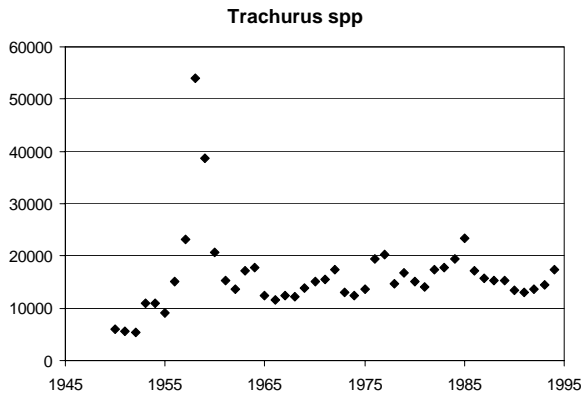
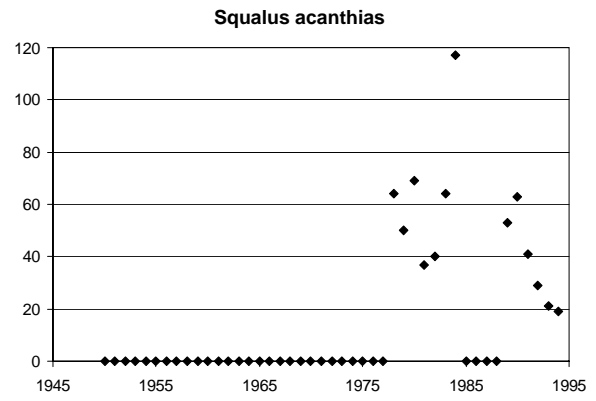
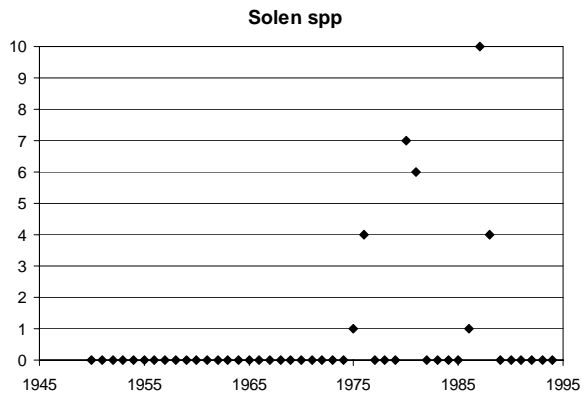
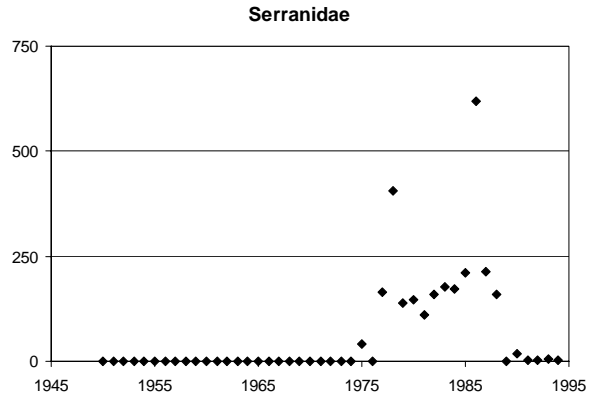
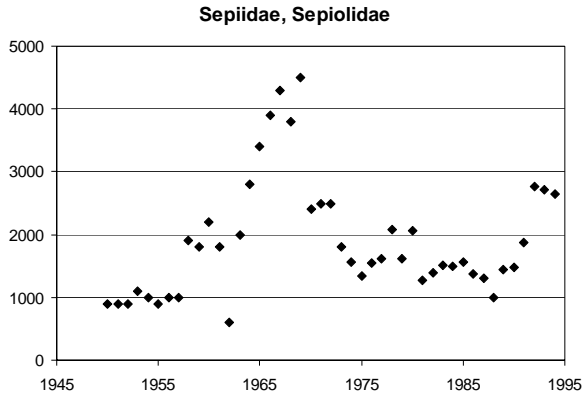
<i>Squalus acanthias</i>	Picked dogfish	13	France	100.0%
<i>Trachurus</i> spp	Jack and horse mackerels nei	45	Spain	59.4%
			Morocco	12.1%
			Italy	11.6%
			Algeria	10.4%
			Tunisia	4.5%
			France	2.0%
Triglidae	Gurnards, searobins nei	23	France	87.2%
			Tunisia	8.2%
			Morocco	4.6%
<i>Umbrina cirrosa</i>	Shi drum	20	Tunisia	100.0%







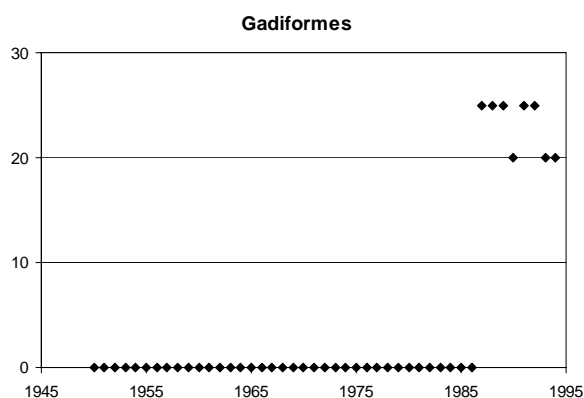
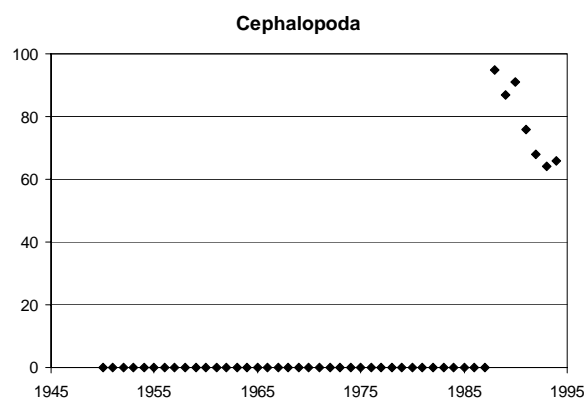
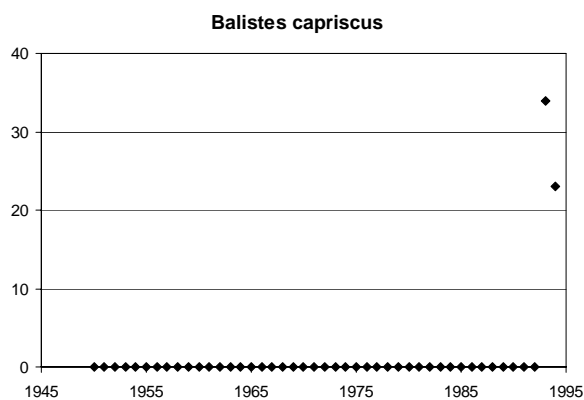
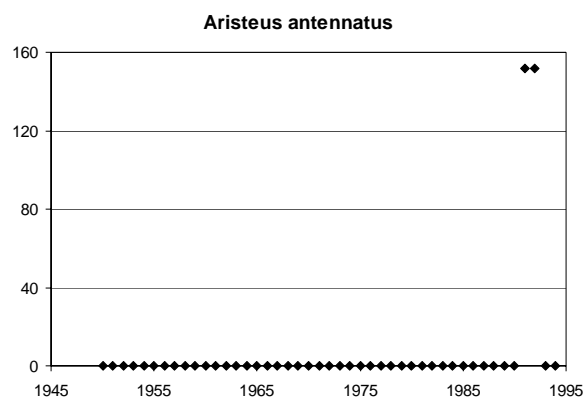


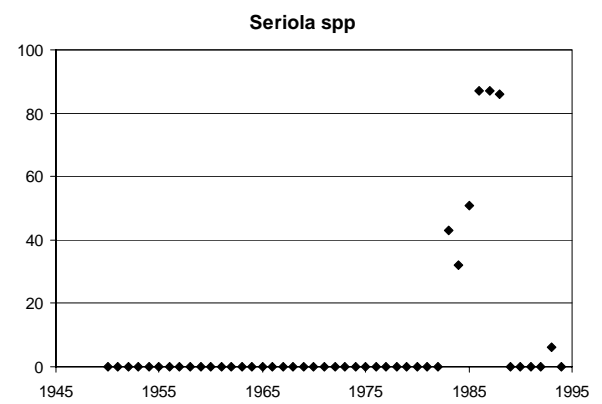
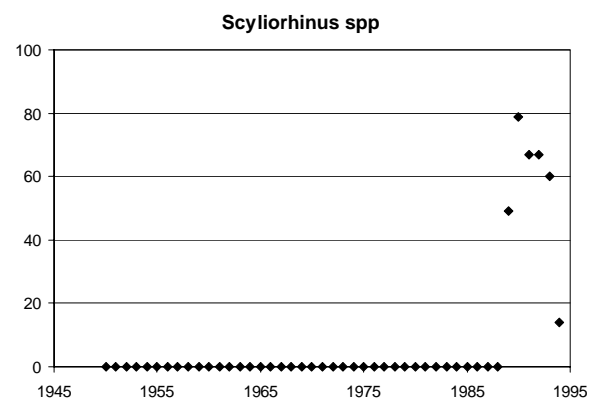
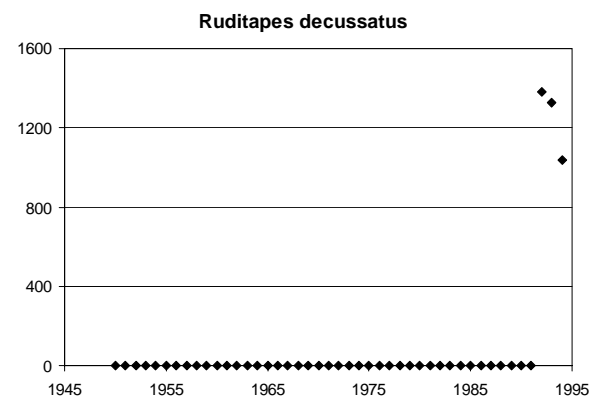
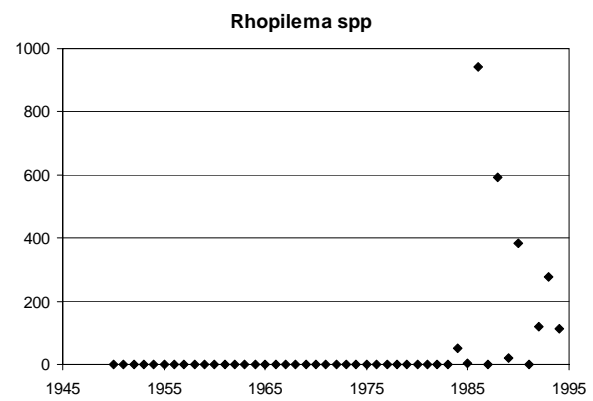
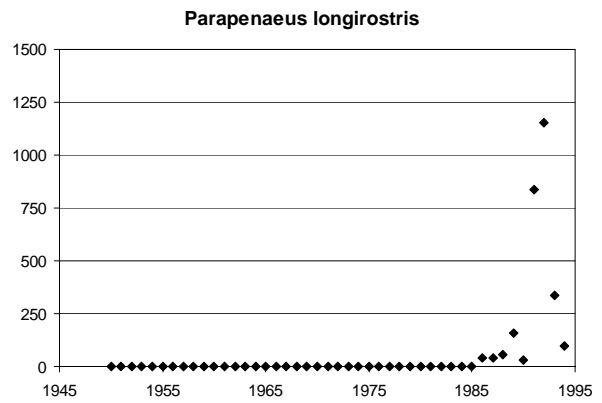
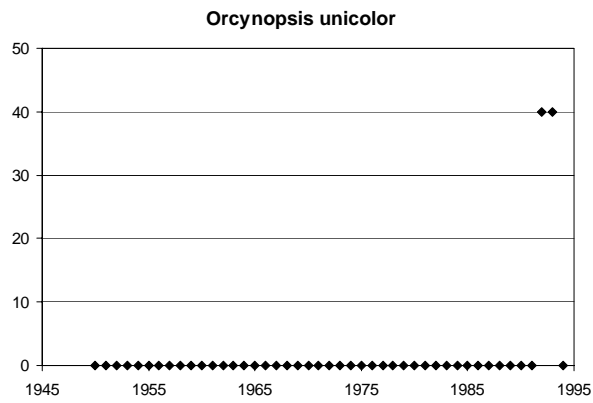
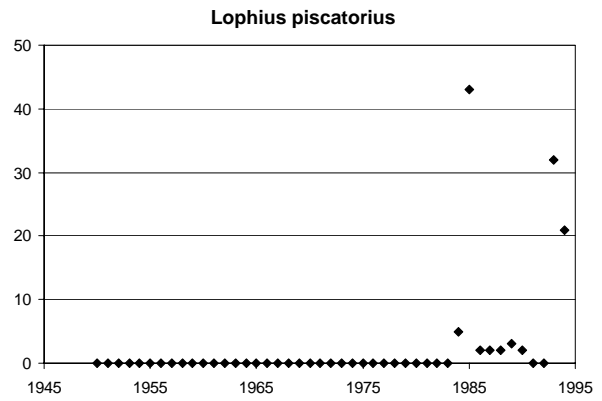
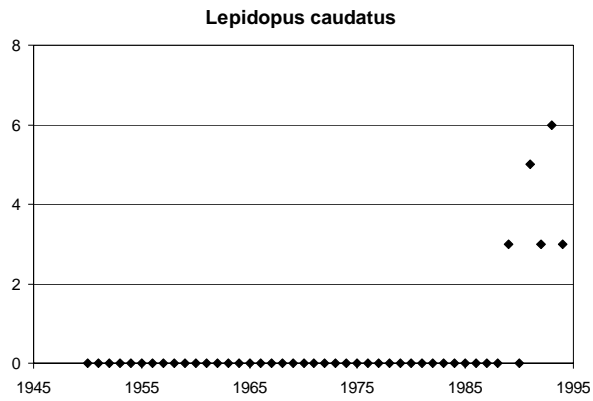


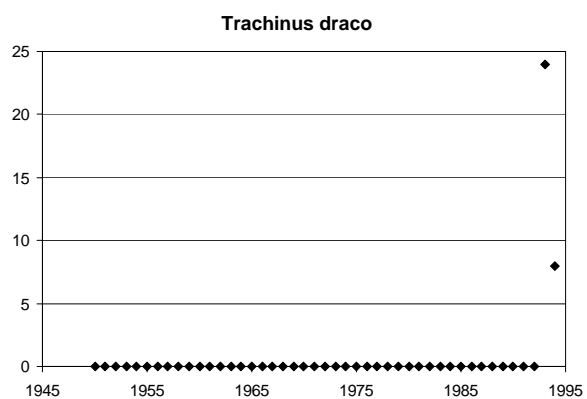
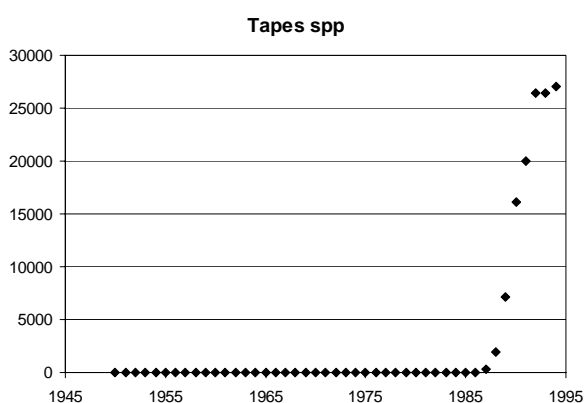
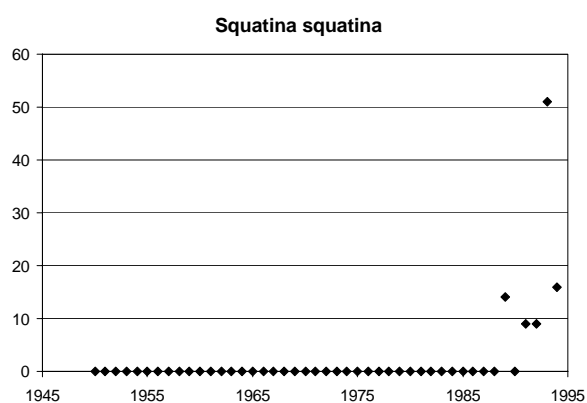
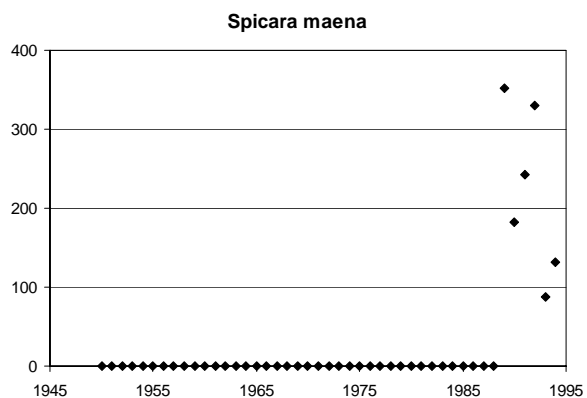
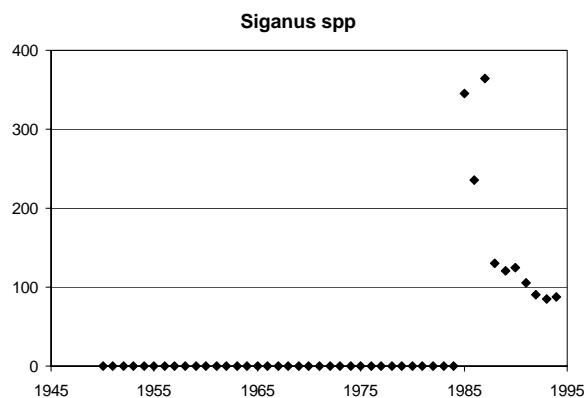
## B/ East Mediterranean. Tables and figures

East Mediterranean - Table 1 = New fisheries

Scientific name	English name	N. Positive Recs.	Country	Catch
<i>Aristeus antennatus</i>	Blue and red shrimp	2	Tunisia	100.0%
<i>Balistes capriscus</i>	Grey triggerfish	2	Tunisia	100.0%
Cephalopoda	Cephalopods nei	7	Israel	100.0%
Gadiformes	Gadiformes nei	8	Lebanon	100.0%
<i>Lepidopus caudatus</i>	Silver scabbardfish	5	Tunisia	100.0%
<i>Lophius piscatorius</i>	Angler(=Monk)	9	Malta Tunisia	52.7% 47.3%
<i>Orcynopsis unicolor</i>	Plain bonito	2	Libya	100.0%
<i>Parapenaeus longirostris</i>	Deepwater rose shrimp	9	Tunisia Israel	89.3% 10.7%
<i>Rhopilema</i> spp	Jellyfishes	10	Turkey	100.0%
<i>Ruditapes decussatus</i>	Grooved carpet shell	3	Tunisia	100.0%
<i>Scyliorhinus</i> spp	Catsharks, nursehound	6	Tunisia	100.0%
<i>Seriola</i> spp	Amberjacks nei	7	Tunisia	100.0%
<i>Siganus</i> spp	Spinefeet(=Rabbitfishes)	10	Israel	100.0%
<i>Spicara maena</i>	Blotched picarel	6	Tunisia	100.0%
<i>Squatina squatina</i>	Angelshark	5	Tunisia	100.0%
<i>Tapes</i> spp	Carpet shells nei	10	Italy	100.0%
<i>Trachinus draco</i>	Greater weever	2	Tunisia	100.0%







**East Mediterranean - Table 2 = Rising: concave upward**

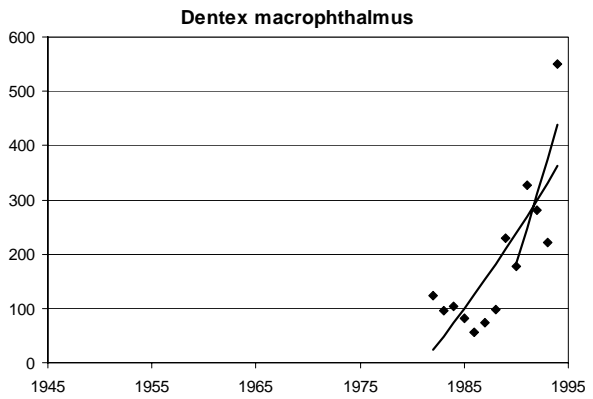
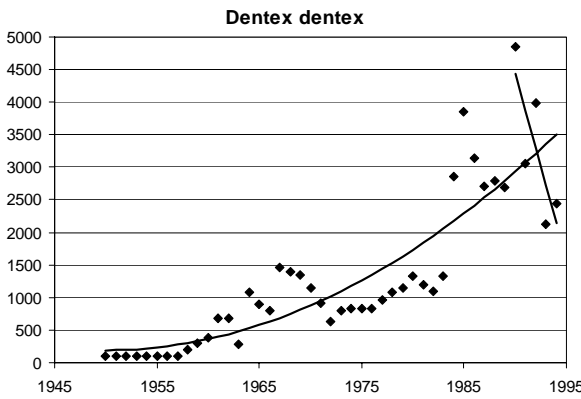
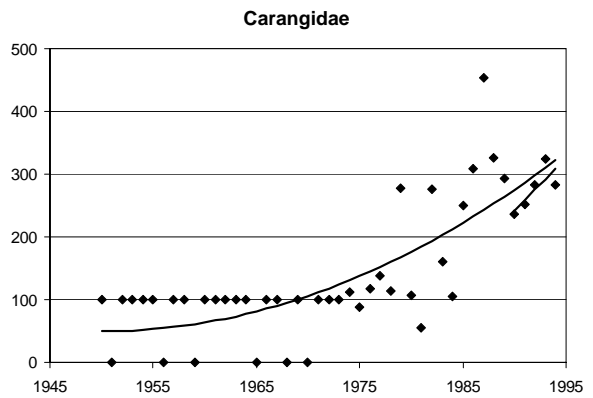
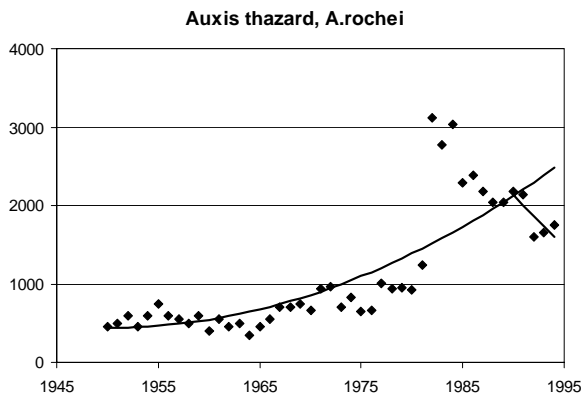
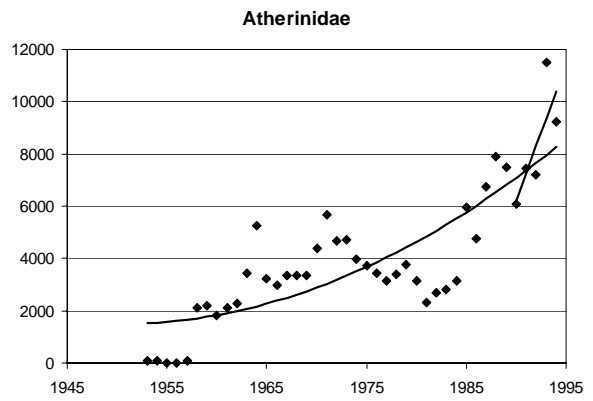
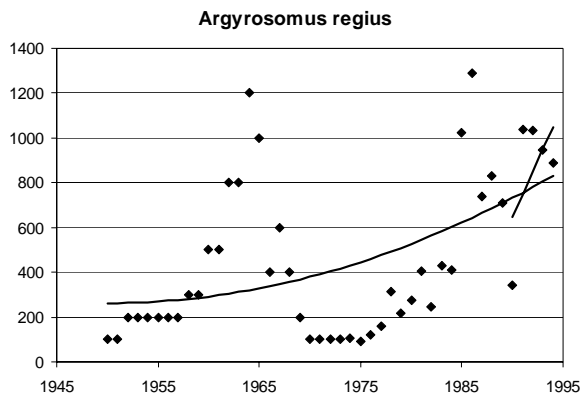
Scientific name	English name	N. Positive Recs.	Country	Catch
<b>RECENTLY RISING</b>				
Micromesistius poutassou	Blue whiting(=Poutassou)	45	Italy	41.1%
			Greece	31.8%
			Turkey	27.0%
<b>NO RECENT TREND</b>				
Argyrosomus regius	Meagre	45	Egypt	76.9%
			Turkey	18.4%
			Israel	4.7%
			Malta	0.0%
Atherinidae	Silversides(=Sand smelts)	40	Italy	59.8%
			Turkey	20.9%
			Egypt	16.0%

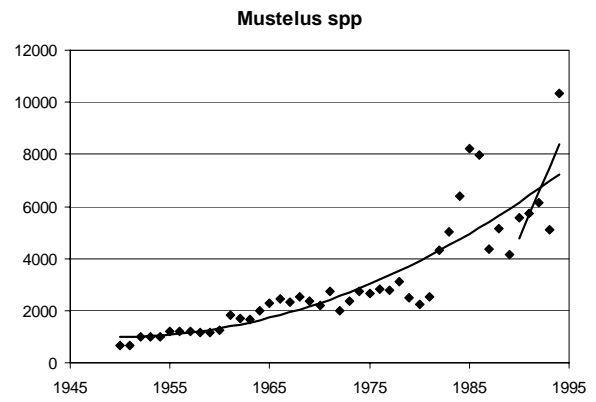
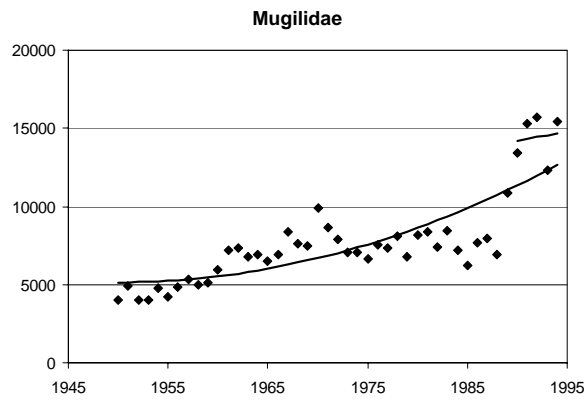
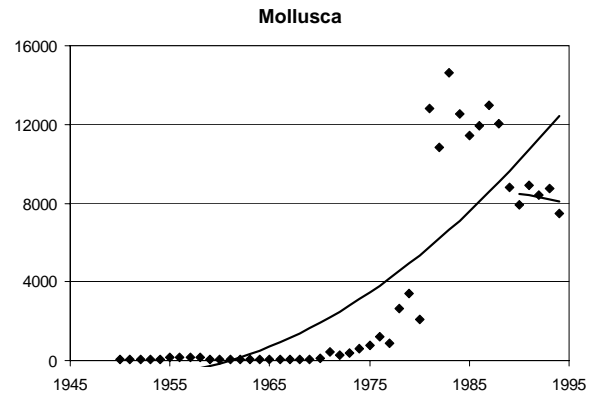
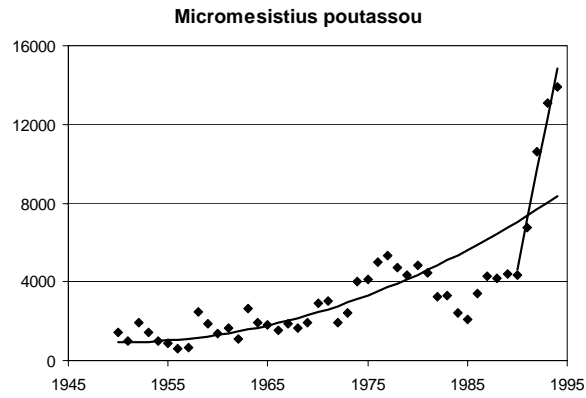
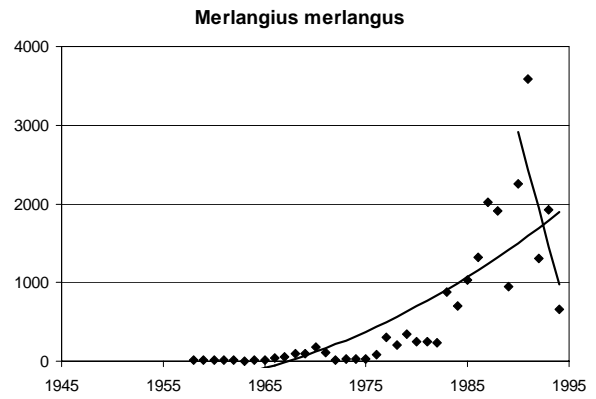
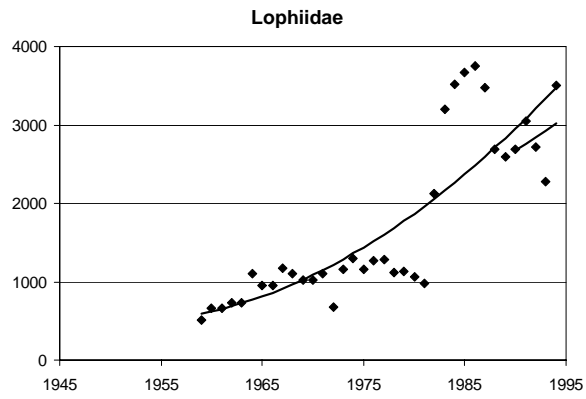
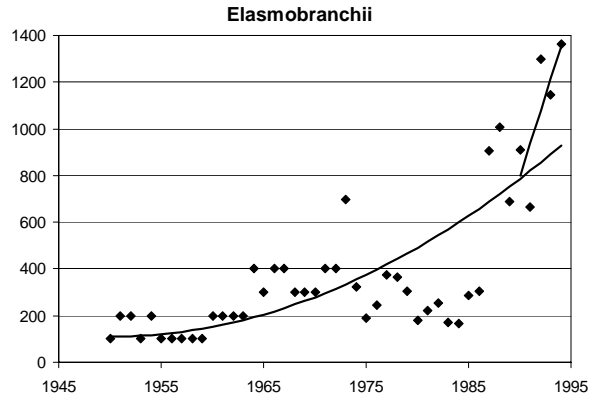
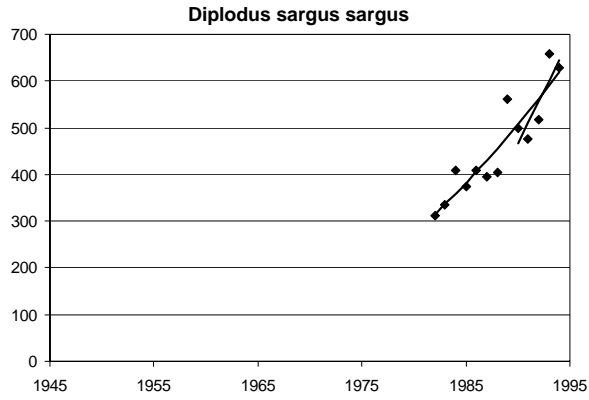


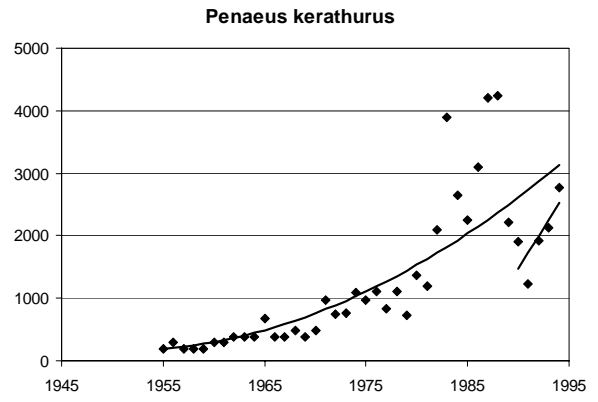
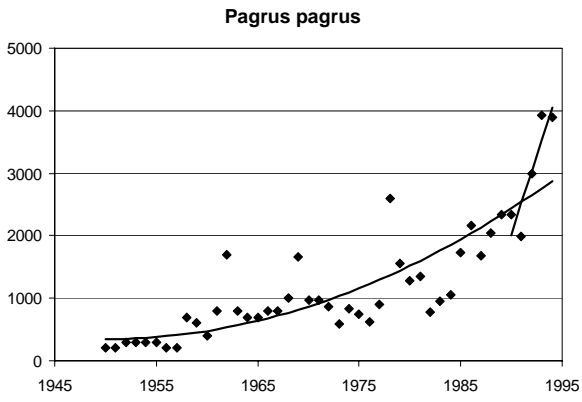
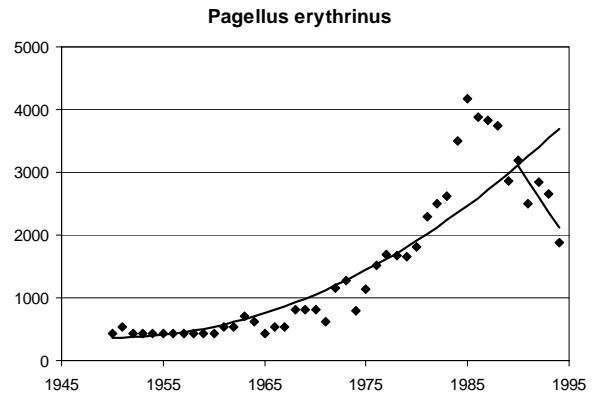
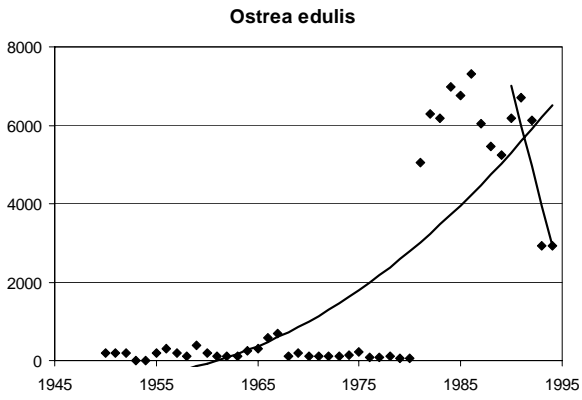
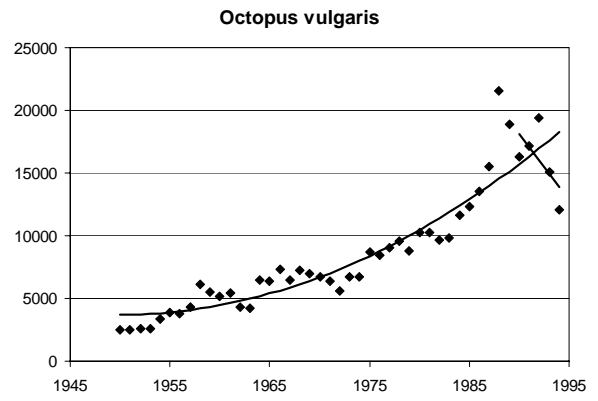
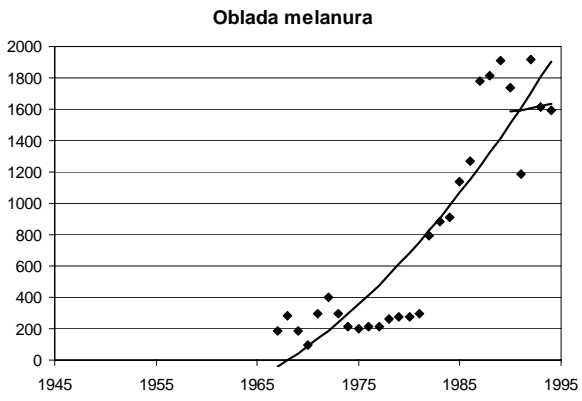
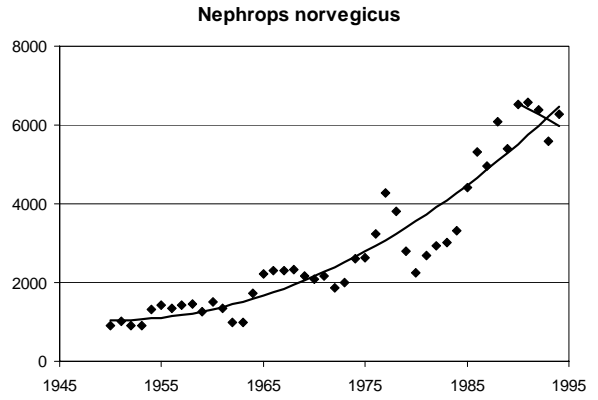
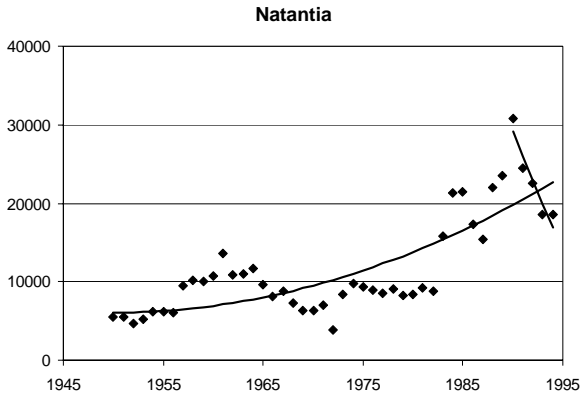
			Yugoslav SFR	2.8%
			Croatia	0.4%
			Tunisia	0.1%
			YugoslaviaFR	0.0%
Auxis thazard, A.rochei	Frigate and bullet tunas	45	Greece	40.8%
			Italy	39.9%
			Tunisia	15.7%
			Yugoslav SFR	2.9%
			Malta	0.5%
			Croatia	0.2%
			YugoslaviaFR	0.0%
Carangidae	Carangids nei	39	Malta	63.0%
			Israel	20.9%
			Lebanon	16.1%
Dentex dentex	Common dentex	45	Italy	56.3%
			Greece	16.0%
			Tunisia	12.5%
			Turkey	10.2%
			Yugoslav SFR	4.4%
			Egypt	0.3%
			Croatia	0.2%
			Malta	0.1%
			YugoslaviaFR	0.0%
Dentex macrophthalmus	Large-eye dentex	13	Greece	100.0%
Diplodus sargus sargus	White seabream	13	Greece	100.0%
Elasmobranchii	Sharks, rays, skates, etc	45	Egypt	59.1%
			Israel	30.9%
			Cyprus	6.7%
			Lebanon	2.2%
			Malta	1.1%
Lophiidae	Anglerfishes nei	36	Italy	87.7%
			Greece	12.3%
Merlangius merlangus	Whiting	36	Turkey	100.0%
Mollusca	Marine molluscs nei	45	Italy	69.0%
			Greece	16.0%
			Tunisia	9.1%
			Yugoslav SFR	2.5%
			Turkey	2.2%
			Croatia	1.2%
			Lebanon	0.1%
			YugoslaviaFR	0.0%
Mugilidae	Mulletts nei	45	Italy	43.5%
			Turkey	33.6%
			Tunisia	16.8%
			Egypt	3.4%
			Israel	2.4%
			Lebanon	0.3%
			Malta	0.0%
Mustelus spp	Smoothhounds	45	Italy	76.1%
			Tunisia	12.1%
			Turkey	8.5%
			Greece	3.0%
			Syria	0.4%
Natantia	Natantian decapods nei	45	Italy	55.1%
			Egypt	23.8%
			Turkey	13.2%
			Greece	7.3%
			Israel	0.5%
			Malta	0.1%
			Cyprus	0.0%
Nephrops norvegicus	Norway lobster	45	Italy	72.2%
			Greece	17.6%
			Yugoslav SFR	8.8%
			Croatia	1.3%
			YugoslaviaFR	0.0%
Oblada melanura	Saddled seabream	28	Greece	57.9%
			Turkey	20.9%
			Yugoslav SFR	17.1%
			Croatia	2.5%
			Tunisia	1.1%
			Cyprus	0.5%
			YugoslaviaFR	0.0%

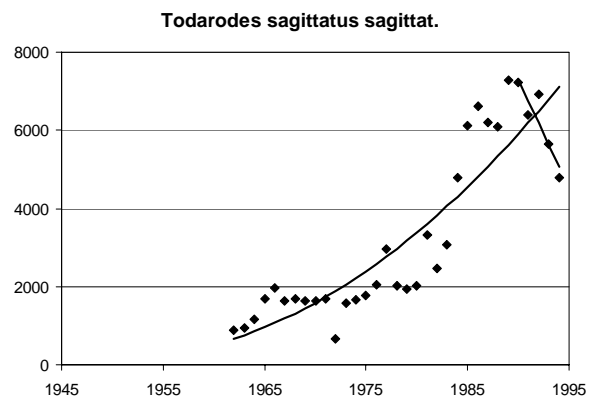
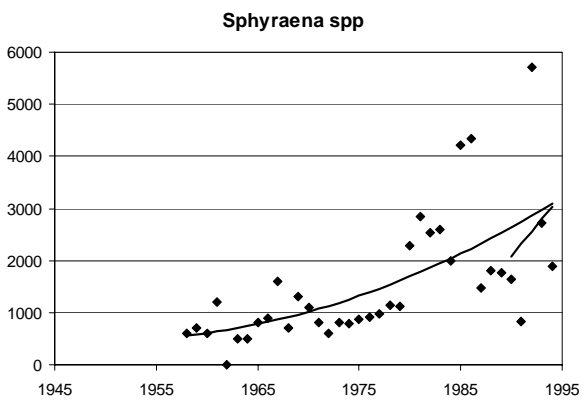
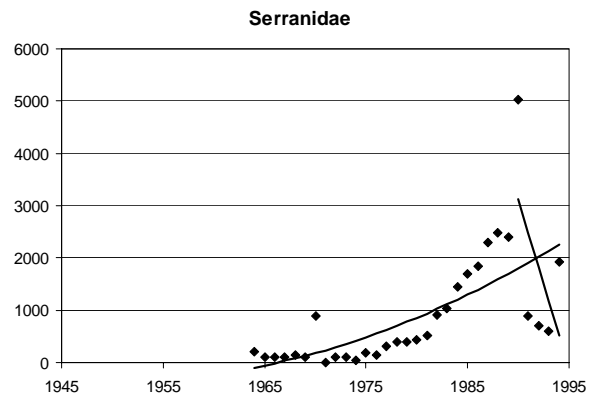
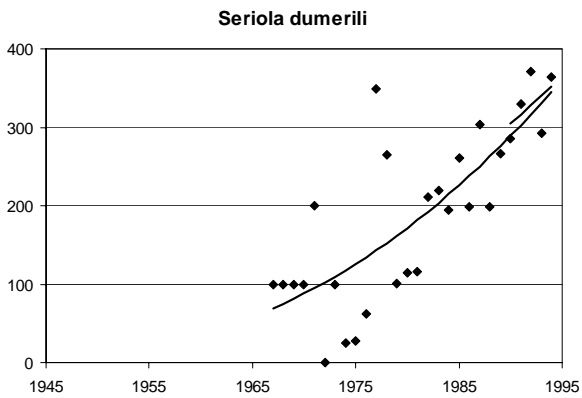
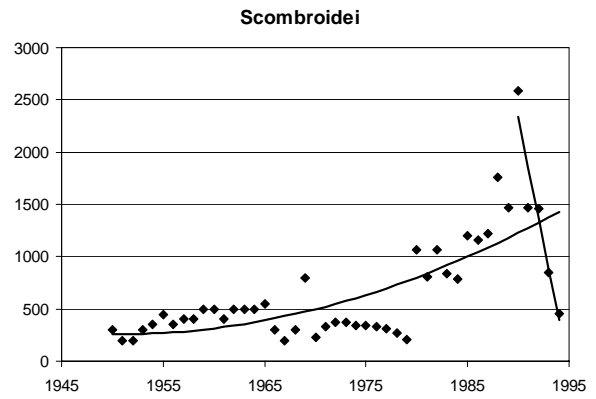
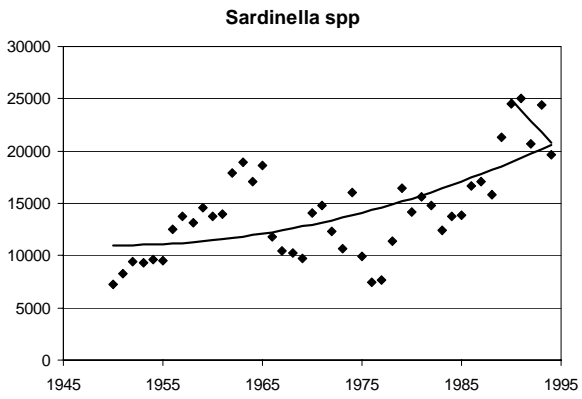
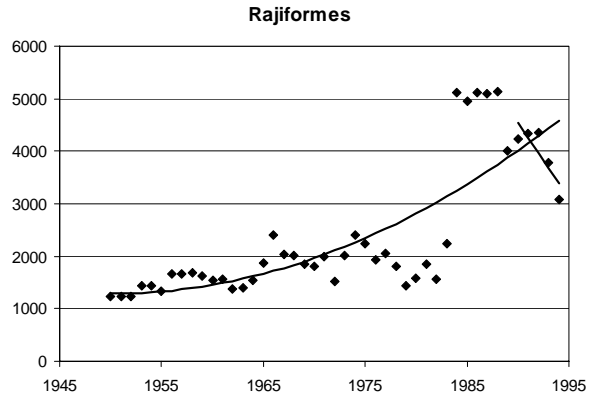
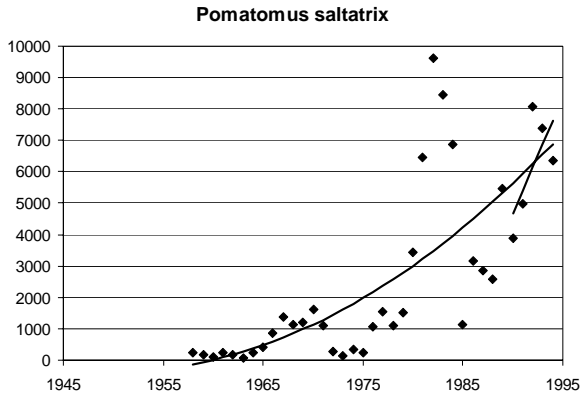
			Malta	0.0%
Octopus vulgaris	Common octopus	45	Italy Tunisia Greece Turkey Yugoslav SFR Croatia YugoslaviaFR	63.0% 29.0% 4.4% 2.2% 1.3% 0.2% 0.0%
Ostrea edulis	European flat oyster	43	Italy Greece Turkey Yugoslav SFR Tunisia Croatia	46.1% 30.8% 16.2% 6.6% 0.2% 0.1%
Pagellus erythrinus	Common pandora	45	Tunisia	94.7%
			Israel Cyprus Malta	2.6% 2.0% 0.7%
Pagrus pagrus	Red porgy	45	Turkey Egypt Greece Tunisia Cyprus Malta	44.4% 40.4% 8.6% 5.3% 1.2% 0.1%
Penaeus kerathurus	Caramote prawn	40	Tunisia Greece	93.0% 7.0%
Pomatomus saltatrix	Bluefish	37	Turkey Tunisia Greece Egypt Israel	84.9% 8.2% 3.8% 3.1% 0.0%
Rajiformes	Skates and rays, nei	45	Italy Tunisia Turkey Yugoslav SFR Malta Albania Croatia YugoslaviaFR	70.1% 10.7% 7.4% 7.2% 2.2% 1.7% 0.6% 0.0%
Sardinella spp	Sardinellas nei	45	Egypt Tunisia Libya Yugoslav SFR Israel Syria Croatia YugoslaviaFR	32.9% 23.0% 17.3% 17.1% 8.9% 0.7% 0.2% 0.0%
Scombroidei	Tuna-like fishes nei	45	Tunisia Lebanon Greece Malta Italy	47.3% 39.7% 11.7% 1.3% 0.0%
Seriola dumerili	Greater amberjack	27	Israel Greece Syria Yugoslav SFR Tunisia Croatia Malta YugoslaviaFR	44.5% 24.0% 13.5% 8.2% 6.8% 1.9% 0.6% 0.5%
Serranidae	Groupers, seabasses nei	30	Tunisia Egypt Greece Turkey Lebanon Cyprus Malta	40.9% 26.3% 18.7% 9.1% 3.1% 1.7% 0.1%
Sphyraena spp	Barracudas	36	Turkey	81.3%
			Israel Egypt Tunisia Syria Lebanon	8.7% 5.6% 2.0% 1.2% 1.2%

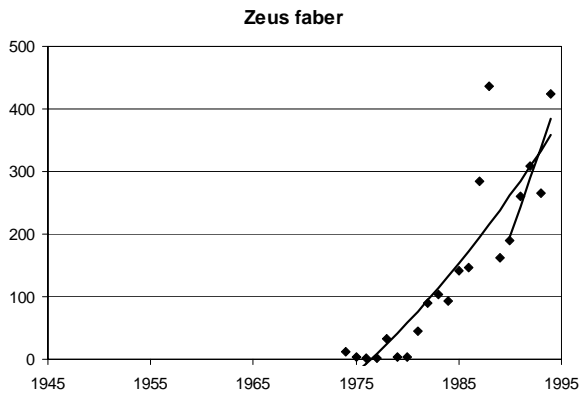
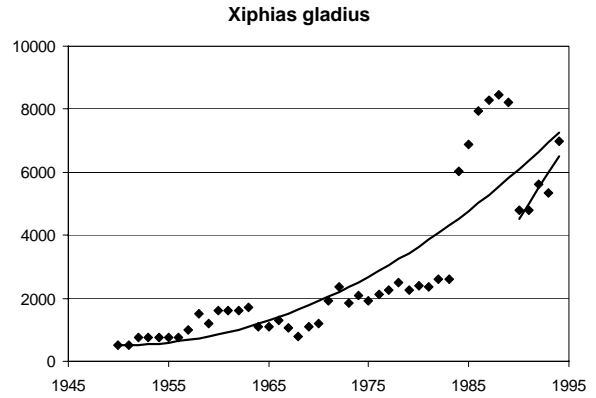
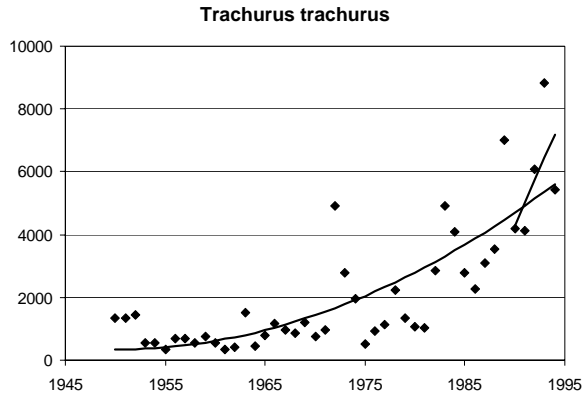
<i>Todarodes sagittatus sagittat.</i>	European flying squid	33	Italy	100.0%
<i>Trachurus trachurus</i>	Atlantic horse mackerel	45	Turkey	81.0%
			Greece	13.5%
			Israel	5.0%
			Syria	0.5%
<i>Xiphias gladius</i>	Swordfish	45	Italy	76.0%
			Greece	13.9%
			Turkey	4.7%
			Malta	3.0%
			Cyprus	1.8%
			Tunisia	0.6%
<i>Zeus faber</i>	John dory	21	Greece	60.9%
			Turkey	34.7%
			Tunisia	4.3%
			Malta	0.1%











**East Mediterranean - Table 3 = Rising: linear**

Scientific name	English name	N. Positive Recs.	Country	Catch
<b>NO RECENT TREND</b>				
Belone belone	Garfish	42	Italy	43.3%
			Turkey	20.1%
			Greece	16.0%
			Tunisia	15.0%
			Yugoslav SFR	4.6%
			Croatia	1.1%
			Cyprus	0.0%
			YugoslaviaFR	0.0%
Boops boops	Bogue	45	Greece	41.2%
			Italy	36.0%
			Turkey	6.0%
			Egypt	5.6%
			Yugoslav SFR	5.5%
			Tunisia	1.6%
			Malta	1.4%
			Albania	1.0%
			Cyprus	0.9%
			Israel	0.6%
			Croatia	0.3%
YugoslaviaFR	0.0%			
Coryphaena hippurus	Common dolphinfish	45	Malta	81.1%
			Tunisia	19.0%
Diplodus spp	Sargo breams, nei	45	Tunisia	44.0%
			Turkey	33.0%
			Italy	23.0%
			Malta	0.0%
Eledone spp	Horned and musky octopuses	33	Italy	100.0%
Lichia amia	Leerfish	31	Italy	51.9%
			Turkey	37.8%
			Tunisia	10.4%

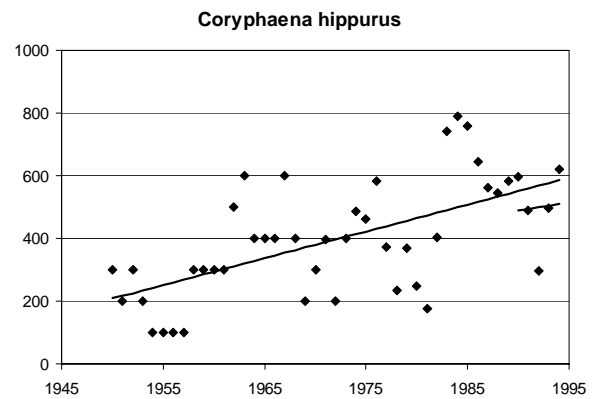
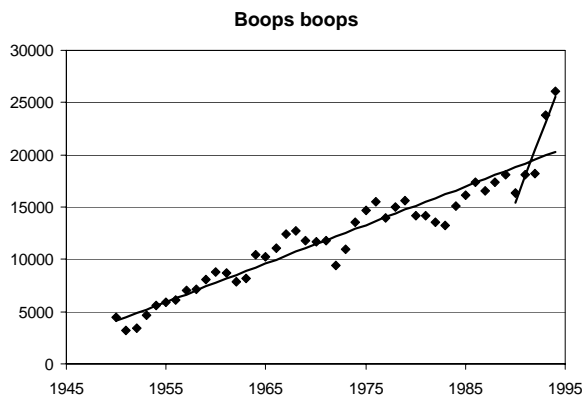
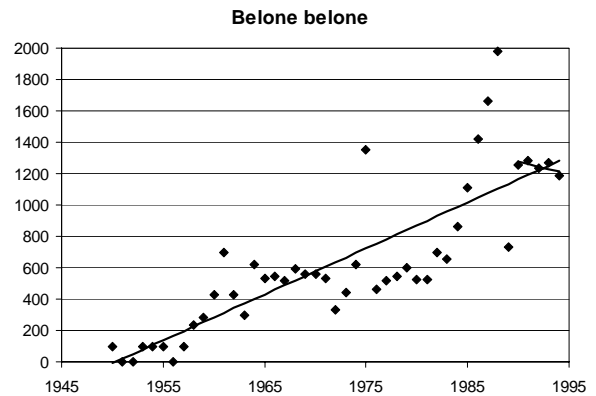
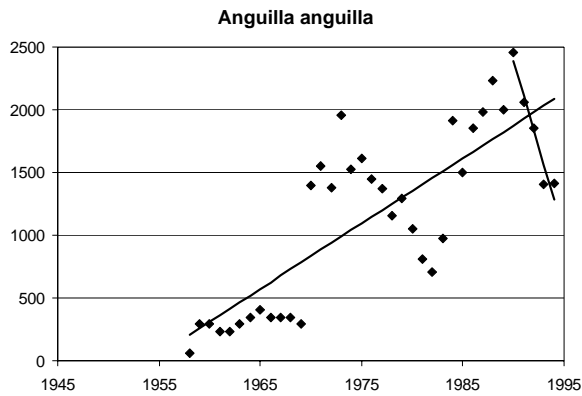
Loligo spp	Common squids	45	Italy Turkey Greece Yugoslav SFR Tunisia Croatia Malta YugoslaviaFR	74.9% 8.9% 8.4% 4.8% 2.5% 0.5% 0.0% 0.0%
Pagellus acarne	Axillary seabream	21	Cyprus	100.0%
Pleuronectiformes	Flatfishes nei	37	Italy Turkey Tunisia Yugoslav SFR Croatia Lebanon YugoslaviaFR	52.1% 36.2% 6.0% 4.4% 1.1% 0.1% 0.1%
Sardina pilchardus	European pilchard(=Sardine)	45	Italy Yugoslav SFR Greece Turkey Tunisia Croatia Albania YugoslaviaFR Cyprus	41.8% 21.8% 15.9% 9.9% 8.6% 1.1% 0.9% 0.0% 0.0%
Sciaena spp	Drums	32	Italy Tunisia Turkey Cyprus	55.2% 31.0% 13.5% 0.3%
Scorpaenidae	Scorpionfishes, nei	44	Italy Greece  Turkey Tunisia Yugoslav SFR Croatia Lebanon Cyprus Malta YugoslaviaFR	57.3% 23.5%  7.3% 5.9% 5.1% 0.6% 0.2% 0.2% 0.1% 0.0%
Sepia officinalis	Common cuttlefish	45	Italy Greece Tunisia Turkey	66.4% 15.7% 13.5% 4.4%
Sepiidae, Sepiolidae	Cuttlefishes, bobtail squids	45	Egypt Yugoslav SFR Cyprus Croatia Malta YugoslaviaFR	72.6% 17.5% 8.0% 1.3% 0.5% 0.0%
Solea vulgaris	Common sole	45	Italy Greece Egypt Tunisia Israel Malta	63.6% 24.9% 5.8% 4.2% 1.6% 0.0%
Sparidae	Porgies, seabreams, nei	36	Tunisia Italy Turkey Israel Cyprus Egypt Lebanon Albania Malta	48.0% 30.7% 7.1% 6.5% 2.7% 2.5% 1.5% 0.9% 0.2%
Spicara spp	Picarels	45	Greece Italy Turkey Yugoslav SFR Cyprus Albania Tunisia Croatia Malta Lebanon YugoslaviaFR	66.1% 16.2% 7.1% 5.7% 2.8% 1.1% 0.6% 0.3% 0.1% 0.0% 0.0%

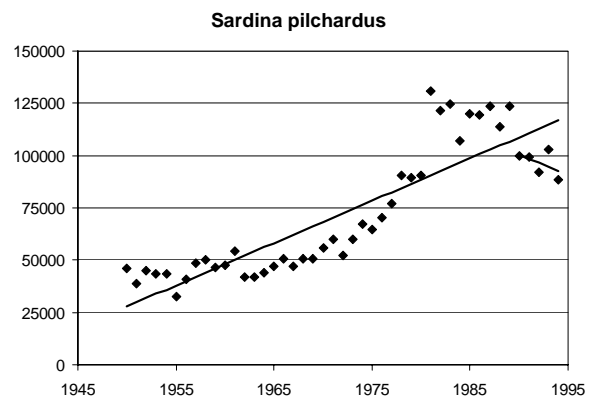
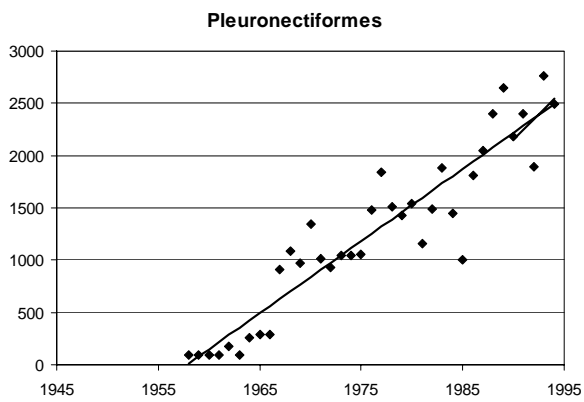
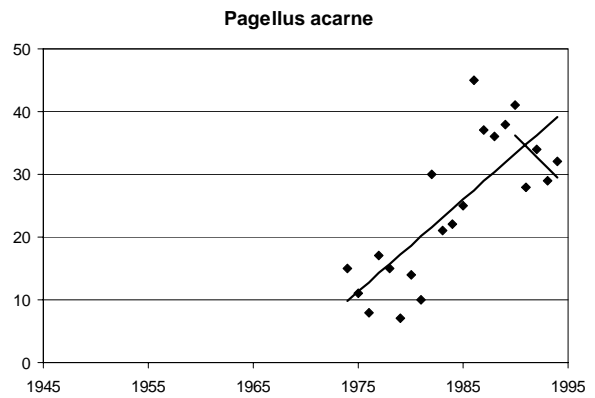
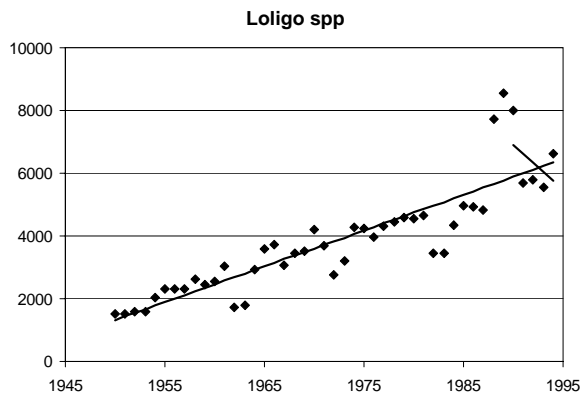
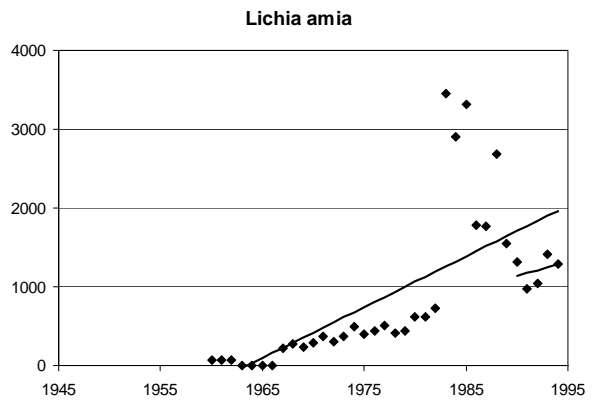
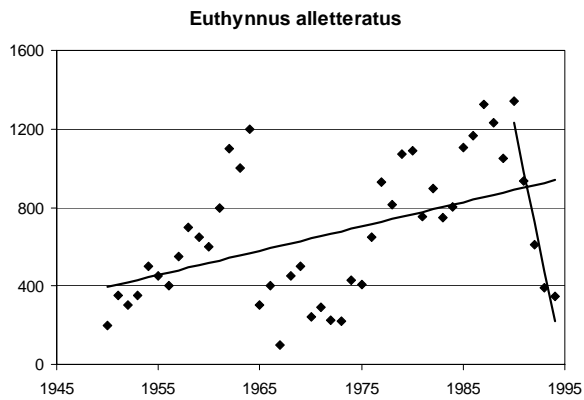
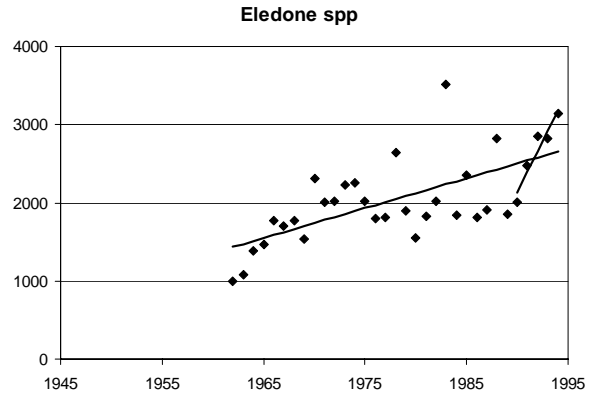
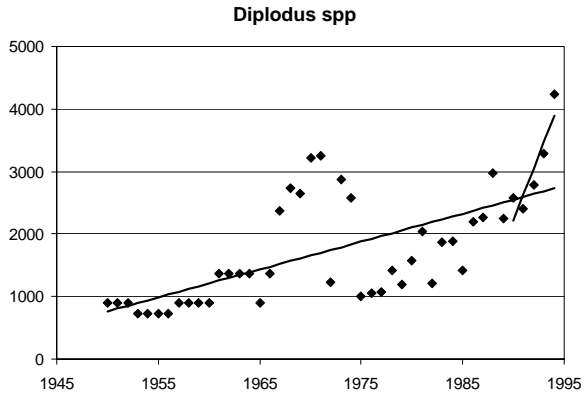


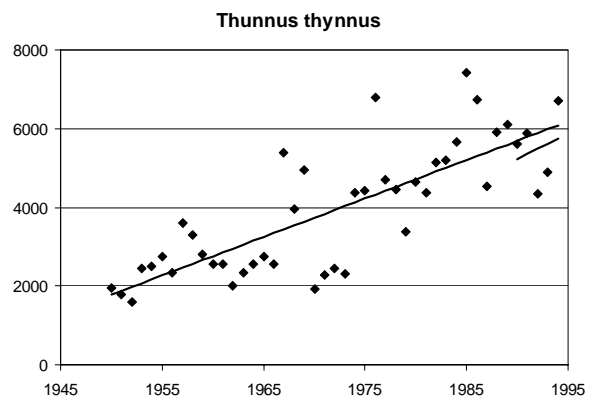
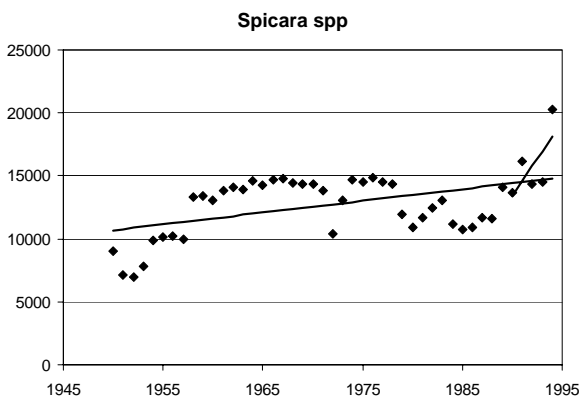
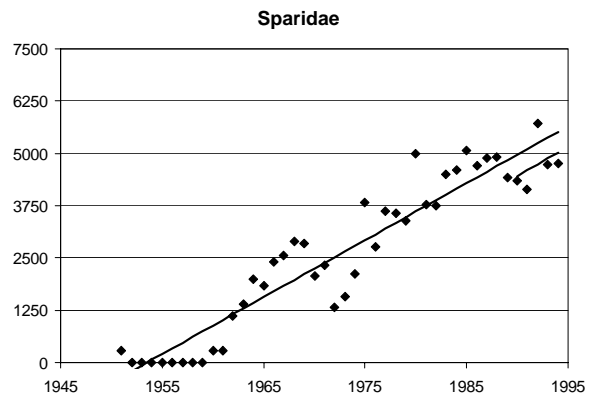
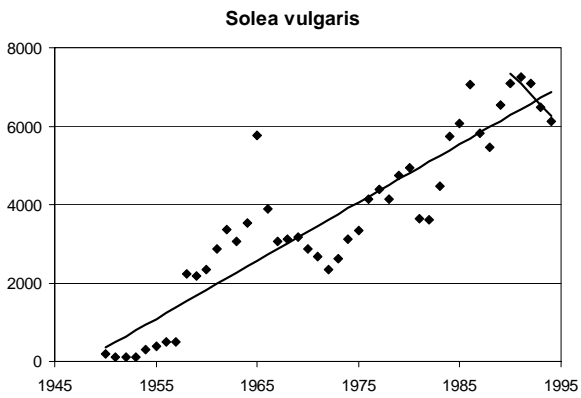
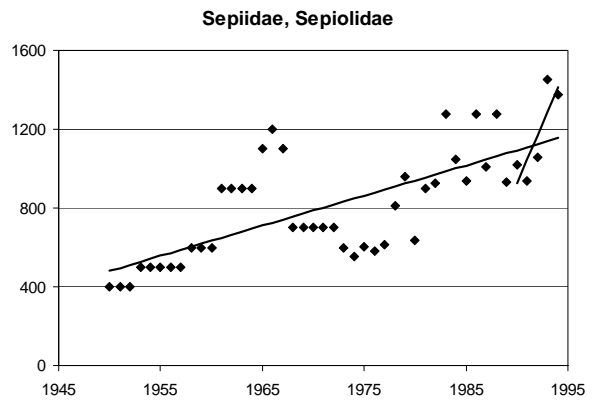
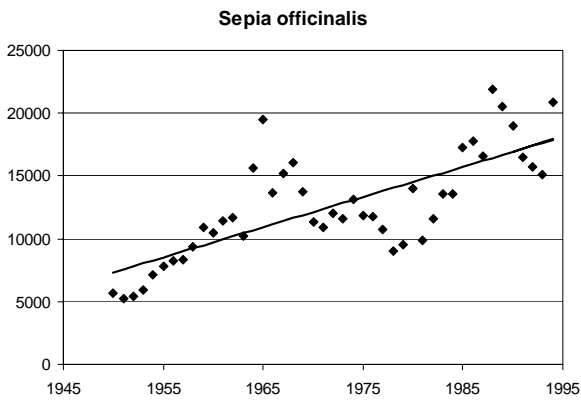
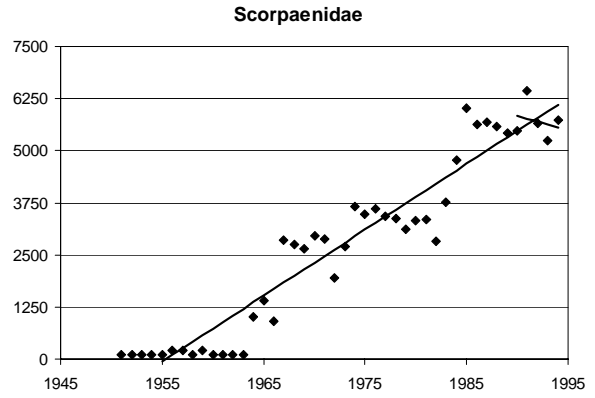
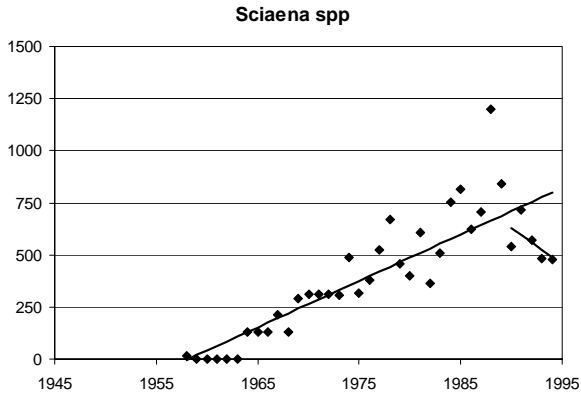
Thunnus thynnus	Northern bluefin tuna	45	Italy	49.7%
			Turkey	14.4%
			Yugoslav SFR	11.5%
			Libya	10.0%
			Greece	8.1%
			Tunisia	4.1%
			Malta	1.6%
			Croatia	0.5%
Trachurus mediterraneus	Mediterranean horse mackerel	45	Greece	58.3%
			Turkey	31.1%
			Yugoslav SFR	8.8%
			Malta	1.3%
			Croatia	0.5%
			YugoslaviaFR	0.0%
Trachurus spp	Jack and horse mackerels nei	45	Italy	78.1%
			Tunisia	20.7%
			Egypt	1.3%
Venus(=Chamelea) gallina	Striped venus	45	Italy	92.6%
			Turkey	7.2%
			Albania	0.2%

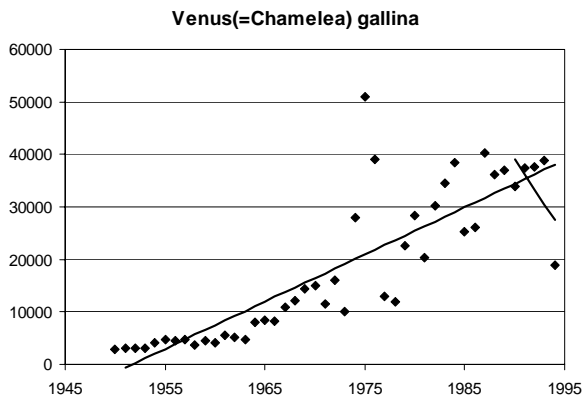
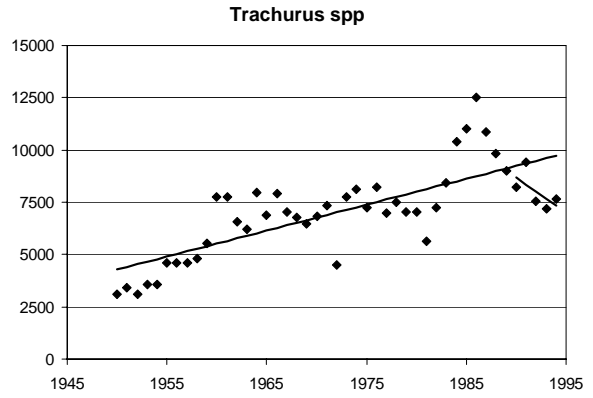
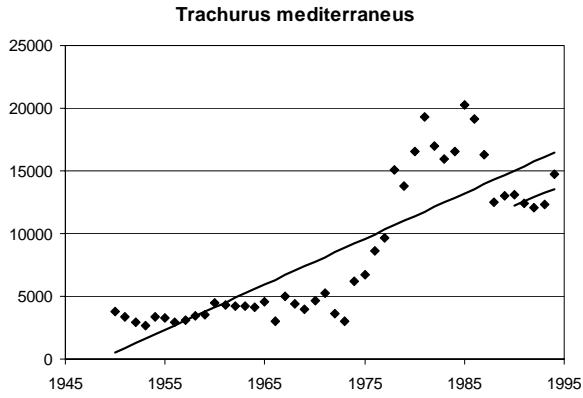
### RECENTLY DECLINING

Anguilla anguilla	European eel	37	Italy	87.7%
			Tunisia	9.6%
			Yugoslav SFR	2.1%
			Greece	0.6%
			Croatia	0.0%
			YugoslaviaFR	0.0%
			Malta	0.0%
Euthynnus alletteratus	Little tunny(=Atl.black skipj)	45	Tunisia	51.5%
			Israel	38.5%
			Syria	6.5%
			Yugoslav SFR	1.7%
			Cyprus	1.5%
			YugoslaviaFR	0.2%
			Croatia	0.1%
			Malta	0.1%







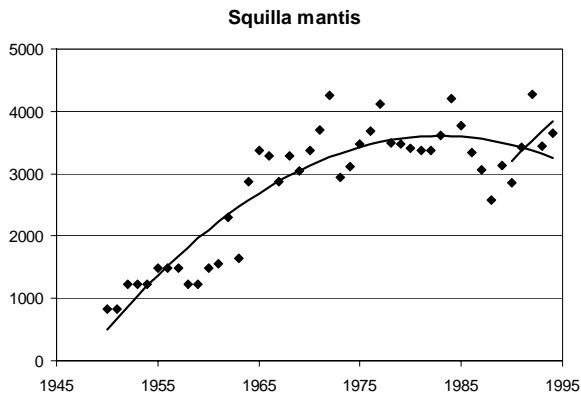
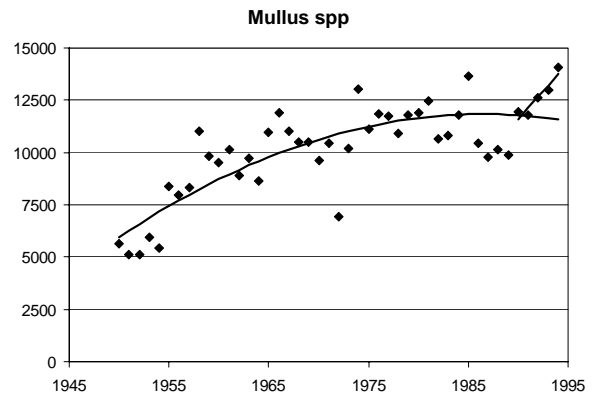
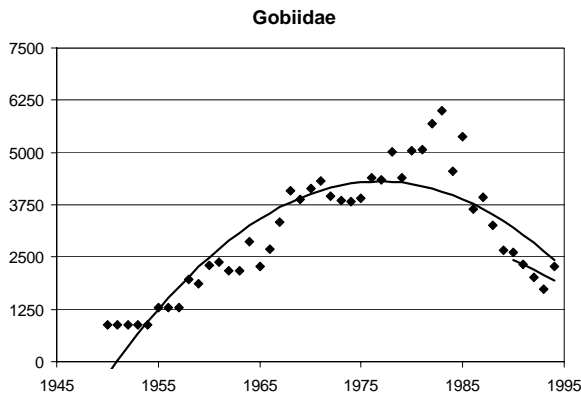
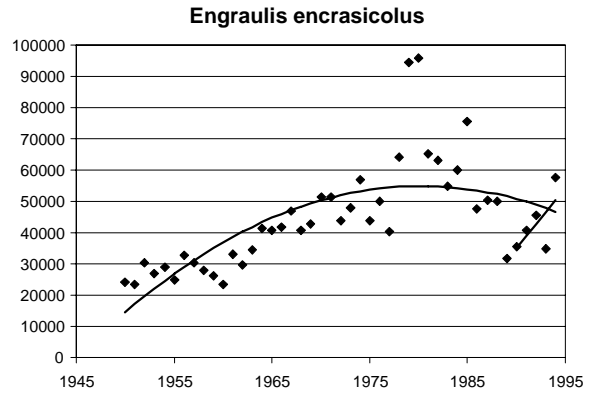
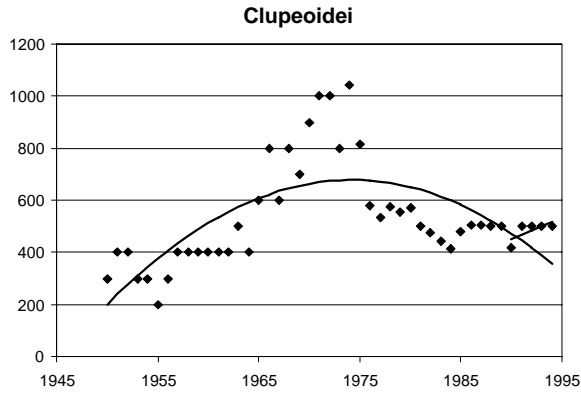


**East Mediterranean - Table 4 = Rising: concave downwards**

**No records.**

**Eastern Mediterranean - Table 5 = Dome shaped**

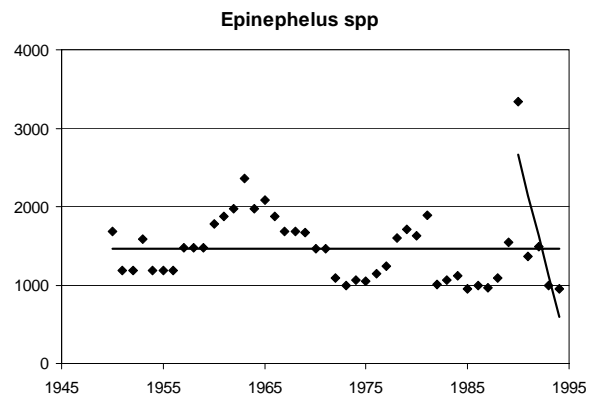
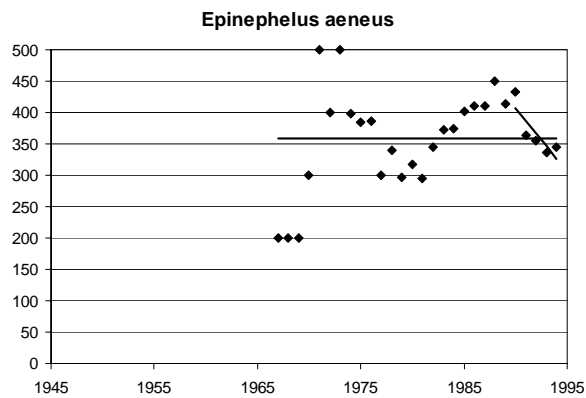
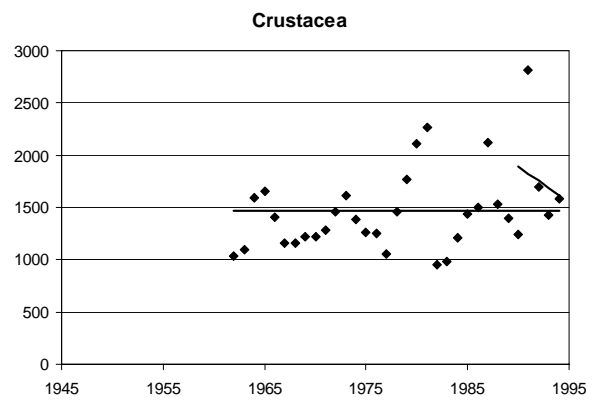
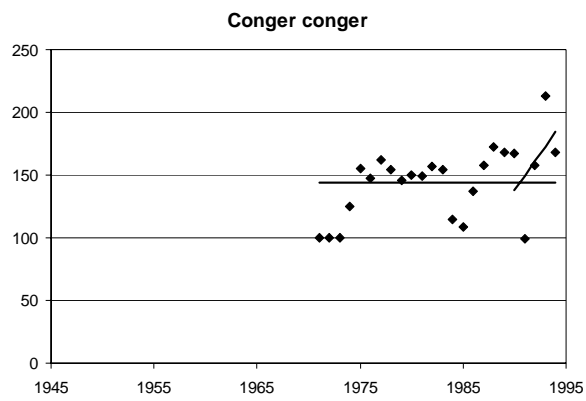
Scientific name	English name	N. Positive Recs.	Country	Catch
<b>NO RECENT TREND</b>				
Clupeoidei	Clupeoids nei	45	Lebanon Malta	99.7% 0.3%
Engraulis encrasicolus	European anchovy	45	Italy Greece Turkey Yugoslav SFR Tunisia Croatia	62.3% 20.6% 12.5% 4.4% 0.2% 0.1%
Gobiidae	Gobies nei	45	Italy Turkey Malta	81.3% 18.7% 0.0%
Mullus spp	Surmulletts(=Red mullets)	45	Italy Greece Tunisia Egypt Israel Cyprus Albania Syria Lebanon Malta	50.2% 25.4% 11.1% 8.7% 2.8% 0.6% 0.6% 0.4% 0.2% 0.1%
Squilla mantis	Spottail mantis squillid	45	Italy	100.0%

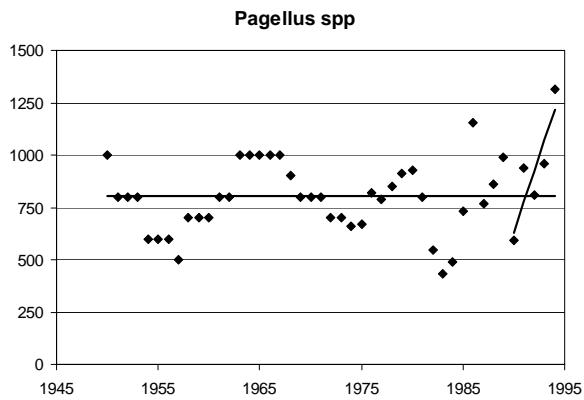
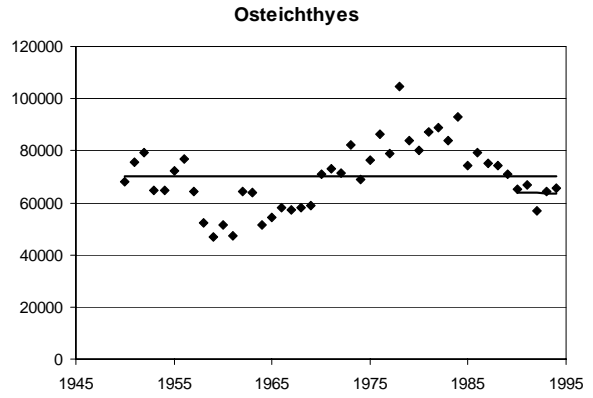
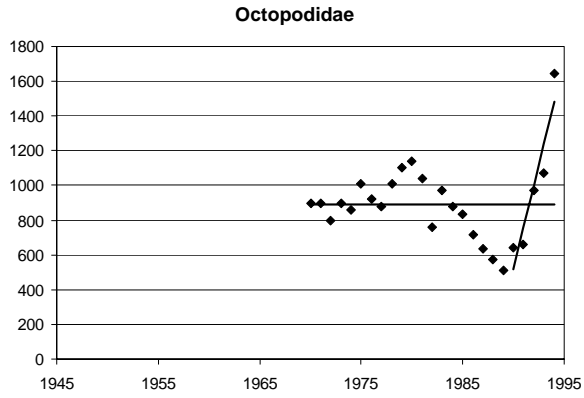


**East Mediterranean - Table 6 = Stable fisheries**

Scientific name	English name	N. Positive Recs.	Country	Catch
<b>NO RECENT TREND</b>				
Conger conger	European conger	24	Yugoslav SFR Croatia Malta Lebanon YugoslaviaFR Tunisia	79.8% 14.1% 4.3% 1.2% 0.4% 0.3%
Crustacea	Marine crustaceans nei	33	Italy Syria Lebanon Tunisia	96.5% 3.1% 0.4% 0.0%
Epinephelus aeneus	White grouper	28	Israel	100.0%

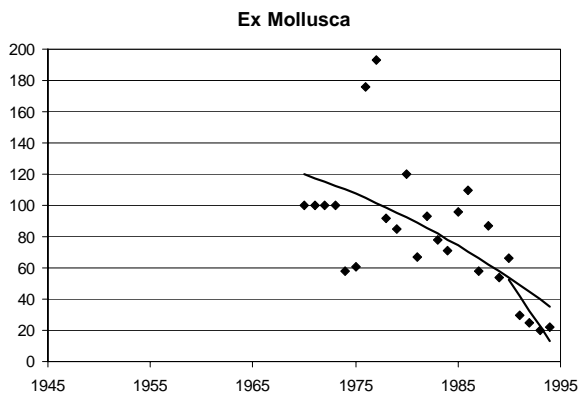
Epinephelus spp	Groupers nei	45	Tunisia Egypt Greece Cyprus	38.7% 31.3% 26.9% 3.2%
Octopodidae	Octopuses	25	Greece Cyprus Malta	83.5% 14.6% 1.9%
Osteichthyes	Marine fishes nei	45	Italy Greece Tunisia Egypt Albania Turkey Libya Yugoslav SFR Israel Lebanon Syria Cyprus Slovenia Malta Croatia YugoslaviaFR	50.4% 14.0% 12.4% 8.3% 4.0% 2.9% 2.4% 2.0% 1.1% 1.1% 0.7% 0.3% 0.3% 0.1% 0.1% 0.0%
Pagellus spp	Pandoras nei	45	Greece Syria	96.8% 3.2%





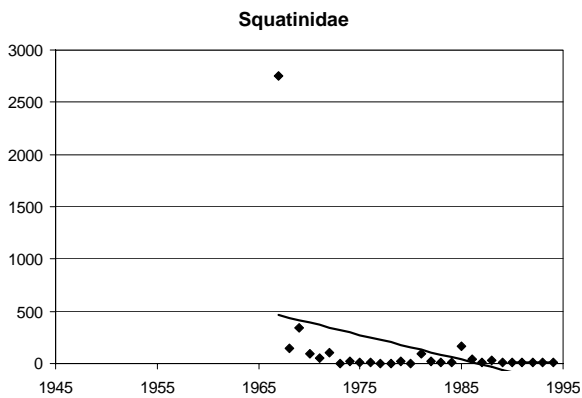
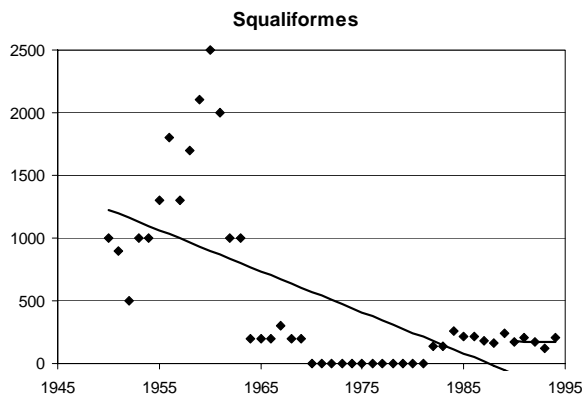
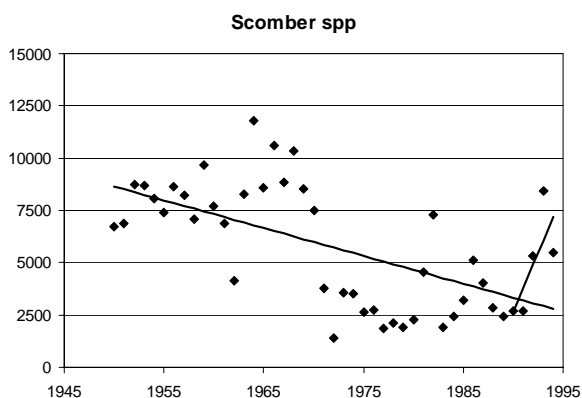
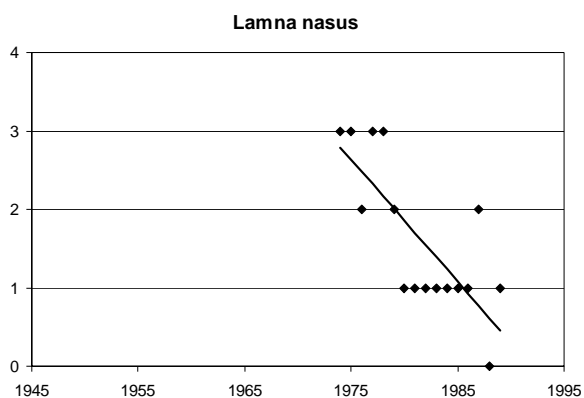
**East Mediterranean - Table 7 = Declining: concave downwards**

Scientific name	English name	N. Positive Recs.	Country	Catch
<b>NO RECENT TREND</b>				
Ex Mollusca	Marine shells nei	25	Yugoslav SFR Croatia YugoslaviaFR	96.8% 2.5% 0.7%



**East Mediterranean - Table 8 = Declining: linear**

Scientific name	English name	N. Positive Recs.	Country	Catch
<b>NO RECENT TREND</b>				
Lamna nasus	Porbeagle	15	Malta	100.0%
Scomber spp	'Scomber' mackerels nei	45	Italy Yugoslav SFR Croatia YugoslaviaFR	80.7% 18.0% 1.3% 0.0%
Squaliformes	Large sharks nei	33	Greece	100.0%
Squatinae	Angelsharks, sand devils	27	Turkey Malta	99.7% 0.3%



**East Mediterranean - Table 9 = Declining: concave upward**

No records.

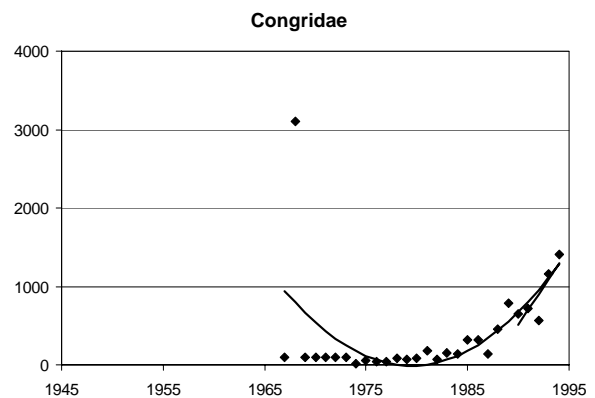
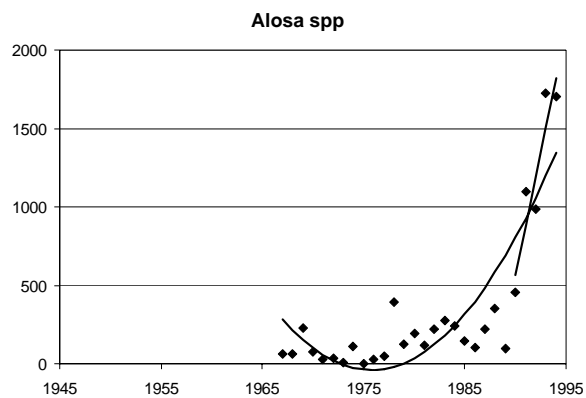
**East Mediterranean - Table 10 = Recovering fisheries**

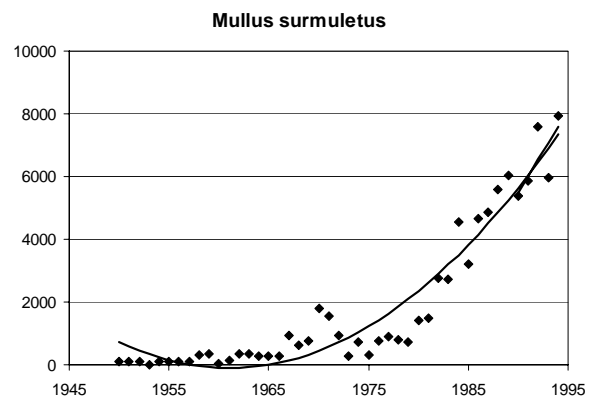
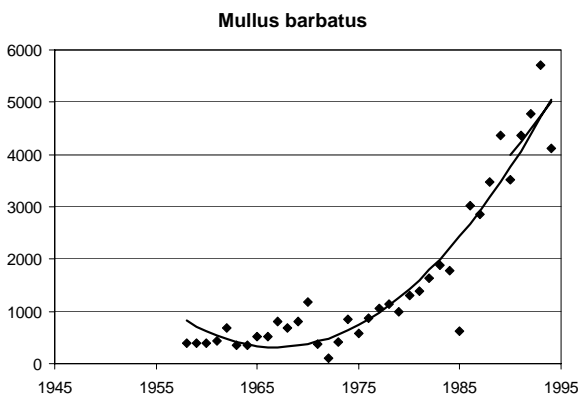
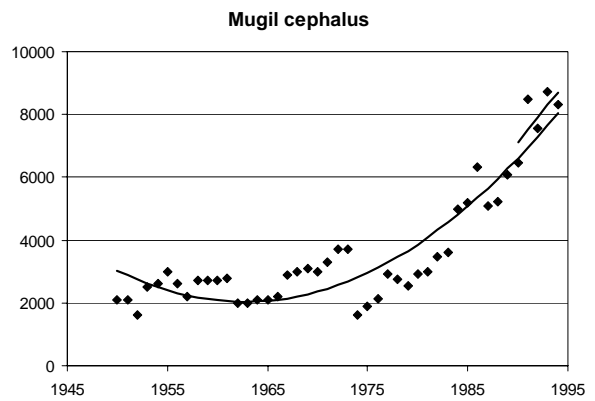
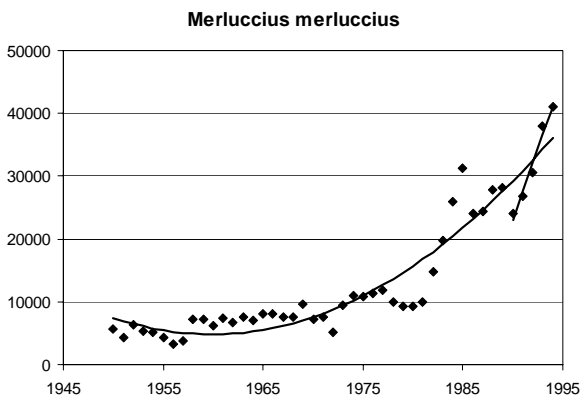
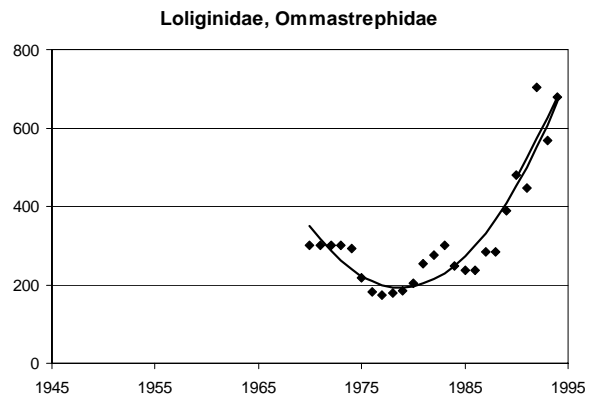
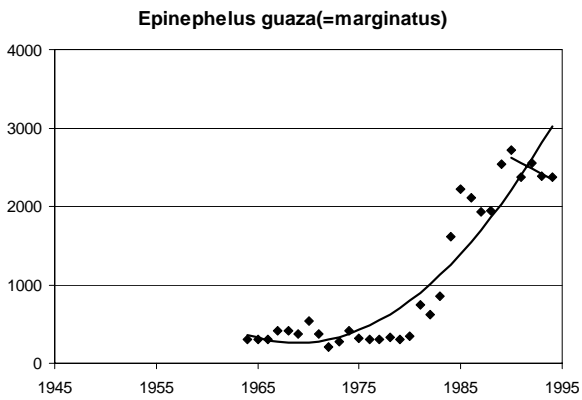
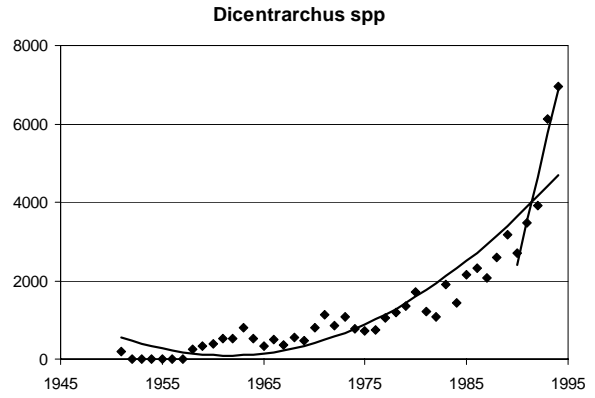
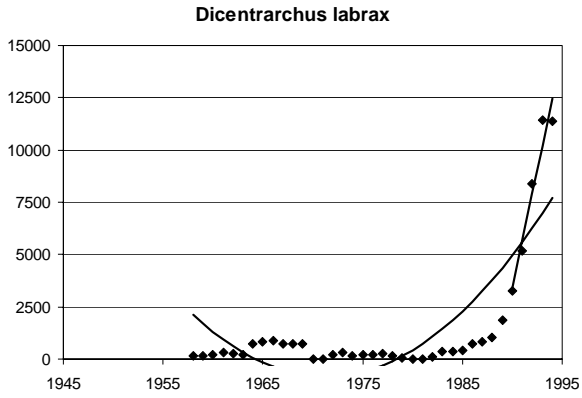
Scientific name	English name	N. Positive Recs.	Country	Catch
<b>RECENTLY RISING</b>				
Dicentrarchus labrax	European seabass	33	Greece Italy Egypt Israel Malta Cyprus Slovenia	56.0% 31.6% 6.3% 3.4% 2.5% 0.2% 0.1%

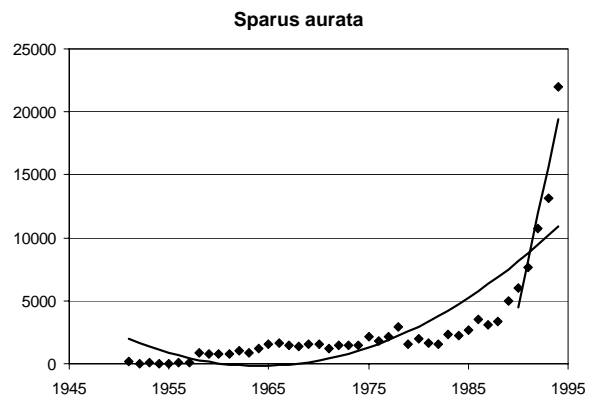
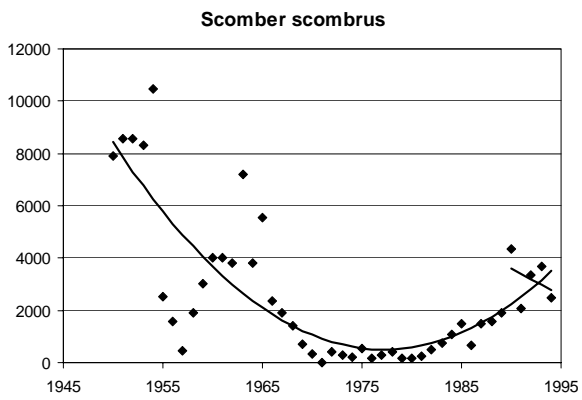
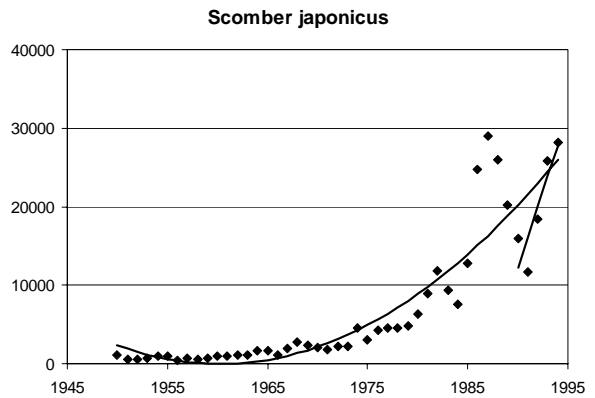
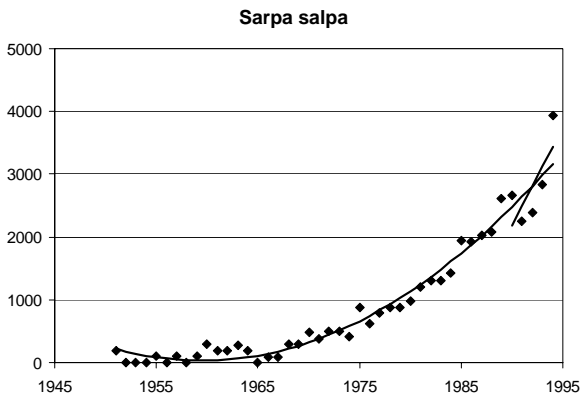
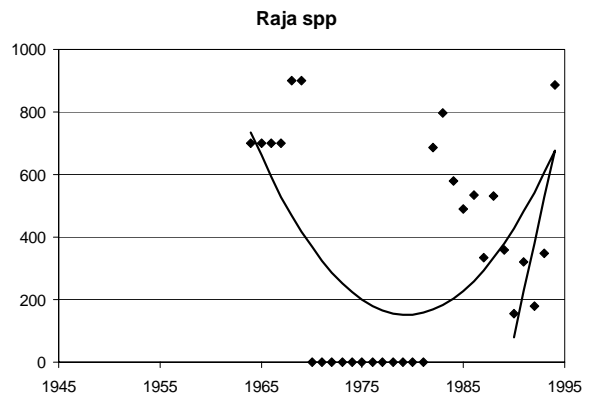
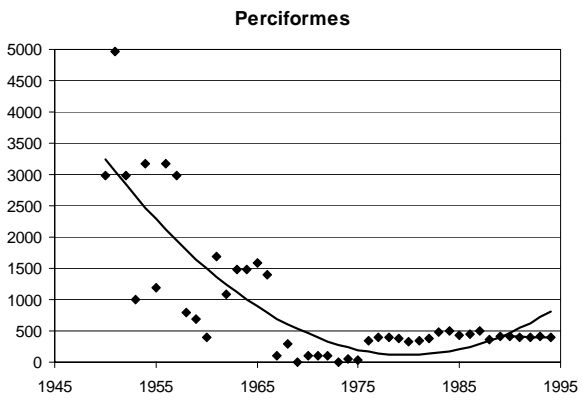
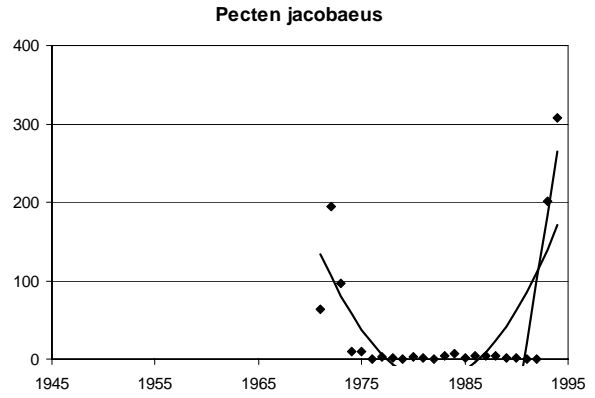
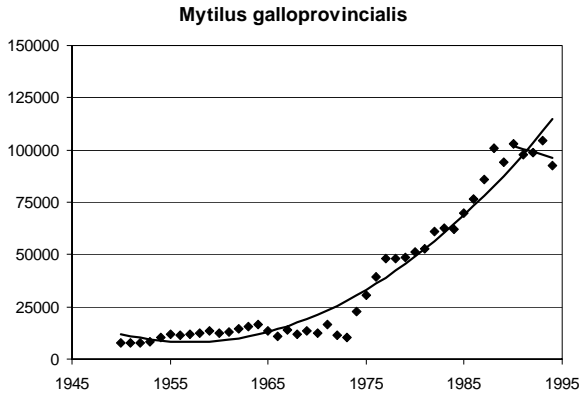


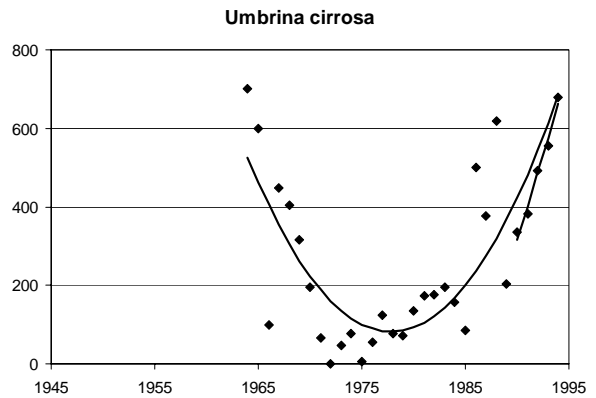
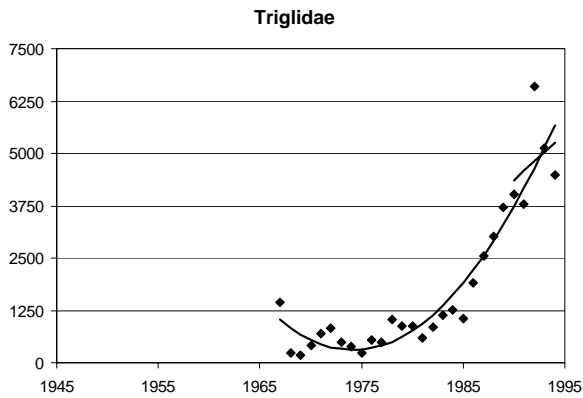
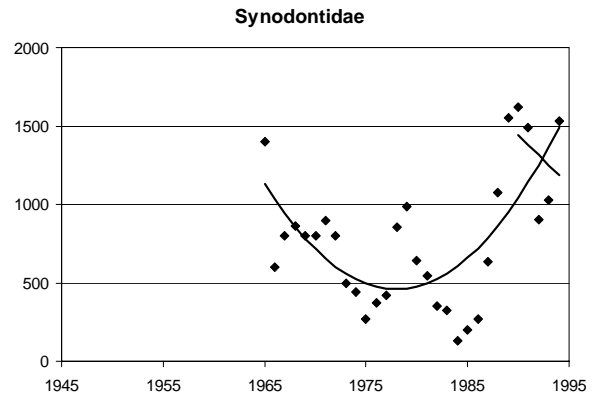
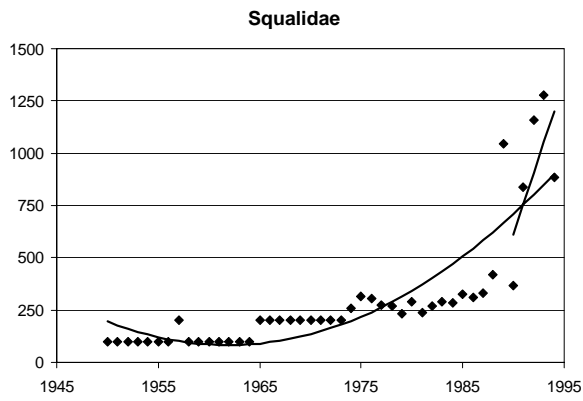
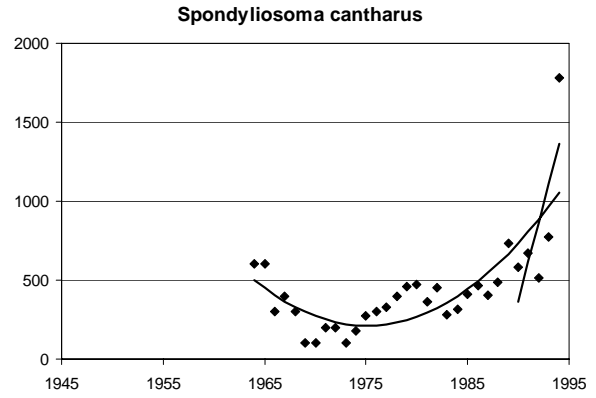
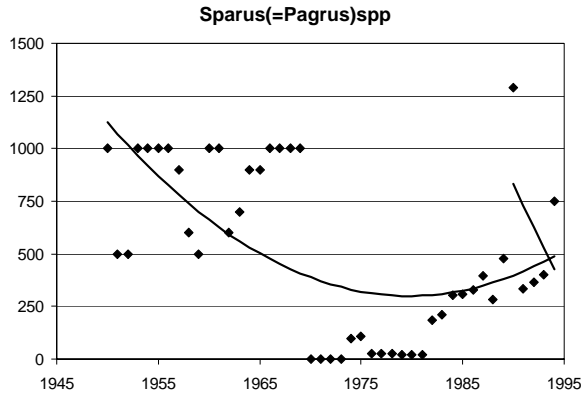
Dicentrarchus spp	Seabasses	38	Turkey Italy Tunisia Yugoslav SFR Croatia YugoslaviaFR	44.8% 32.7% 18.4% 2.8% 1.3% 0.0%
Merluccius merluccius	European hake	45	Italy Greece Yugoslav SFR Israel Tunisia Turkey Croatia Albania Syria Egypt Malta Cyprus YugoslaviaFR	78.6% 12.2% 3.6% 1.8% 1.5% 0.7% 0.7% 0.5% 0.3% 0.1% 0.1% 0.0% 0.0%
Umbrina cirrosa	Shi drum	30	Turkey Greece Tunisia	68.2% 27.2% 4.7%
<b>NO RECENT TREND</b>				
Alosa spp	Shads nei	27	Turkey Greece Tunisia Malta	71.7% 25.4% 2.9% 0.0%
Congridae	Conger eels nei	28	Turkey	100.0%
Epinephelus guaza(=marginatus)	Dusky grouper	31	Italy Turkey Greece Malta	79.2% 16.8% 3.8% 0.1%
Loliginidae, Ommastrephidae	Squids nei	25	Greece	100.0%
Mugil cephalus	Flathead grey mullet	45	Greece Egypt Tunisia Italy Yugoslav SFR Israel Croatia Cyprus YugoslaviaFR	45.0% 22.3% 14.9% 7.8% 6.1% 3.7% 0.2% 0.0% 0.0%
Mullus barbatus	Striped mullet	37	Turkey Tunisia Cyprus	79.5% 15.9% 4.6%
Mullus surmuletus	Red mullet	44	Turkey Greece Tunisia Yugoslav SFR Cyprus Croatia YugoslaviaFR	38.9% 34.5% 12.7% 8.7% 3.8% 1.5% 0.0%
Mytilus galloprovincialis	Mediterranean mussel	45	Italy Greece Turkey Albania Yugoslav SFR Croatia Slovenia YugoslaviaFR	92.2% 4.2% 1.9% 0.9% 0.7% 0.0% 0.0% 0.0%
Pecten jacobaeus	Great mediterranean scallop	19	Turkey	100.0%
Perciformes	Demersal percomorphs nei	43	Turkey Syria Cyprus Malta	84.1% 14.8% 0.8% 0.3%
Raja spp	Skates	19	Greece	100.0%
Sarpa salpa	Salema	38	Tunisia Turkey Greece Yugoslav SFR Croatia Egypt	48.0% 26.8% 12.5% 11.1% 1.2% 0.3%

			Cyprus	0.0%
			YugoslaviaFR	0.0%
<i>Scomber japonicus</i>	Chub mackerel	45	Turkey	52.7%
			Greece	33.1%
			Tunisia	12.4%
			Israel	1.5%
			Malta	0.4%
<i>Scomber scombrus</i>	Atlantic mackerel	44	Turkey	84.9%
			Greece	13.7%
			Syria	1.4%
<i>Sparus aurata</i>	Gilthead seabream	41	Turkey	31.3%
			Greece	21.3%
			Italy	20.8%
			Israel	8.3%
			Egypt	8.2%
			Tunisia	7.1%
			Yugoslav SFR	1.6%
			Malta	0.8%
			Cyprus	0.4%
			Croatia	0.2%
			Slovenia	0.0%
			YugoslaviaFR	0.0%
<i>Sparus(=Pagrus)spp</i>	Pargo breams, nei	41	Greece	97.0%
			Syria	3.0%
<i>Spondyliosoma cantharus</i>	Black seabream	31	Greece	70.5%
			Turkey	21.3%
			Yugoslav SFR	7.4%
			Croatia	0.7%
			YugoslaviaFR	0.0%
<i>Squalidae</i>	Dogfish sharks nei	45	Yugoslav SFR	65.2%
			Tunisia	25.4%
			Croatia	8.6%
			Malta	0.8%
			YugoslaviaFR	0.1%
<i>Synodontidae</i>	Lizardfishes nei	30	Egypt	93.7%
			Turkey	6.3%
<i>Triglidae</i>	Gurnards, searobins nei	28	Turkey	34.0%
			Egypt	31.7%
			Greece	29.6%
			Syria	3.4%
			Tunisia	1.4%









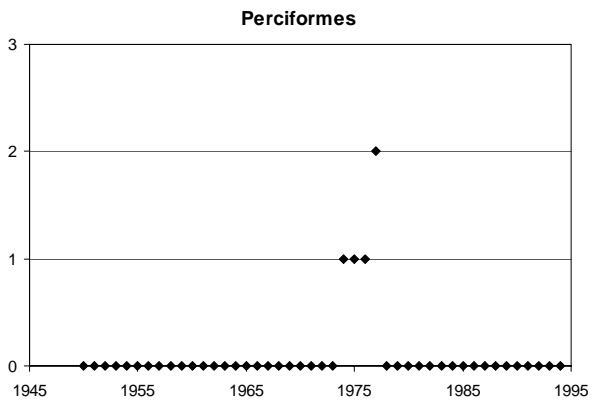
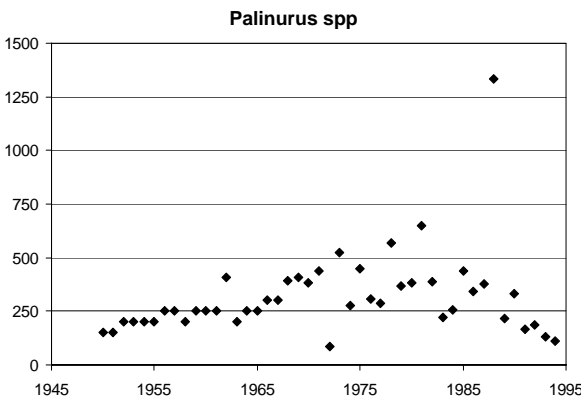
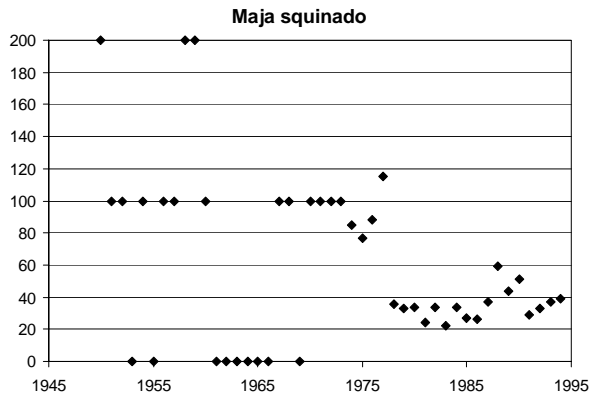
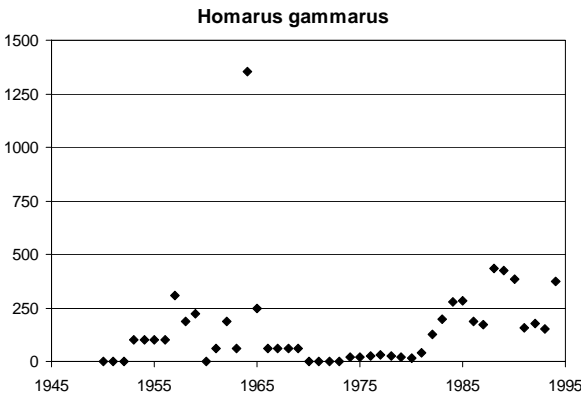
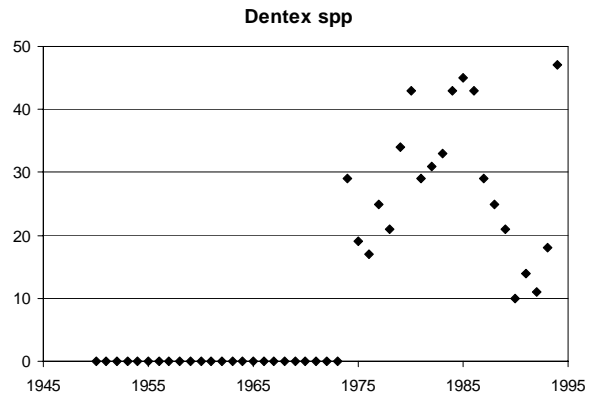
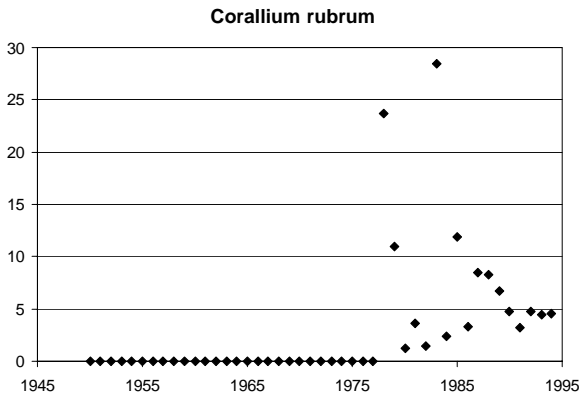
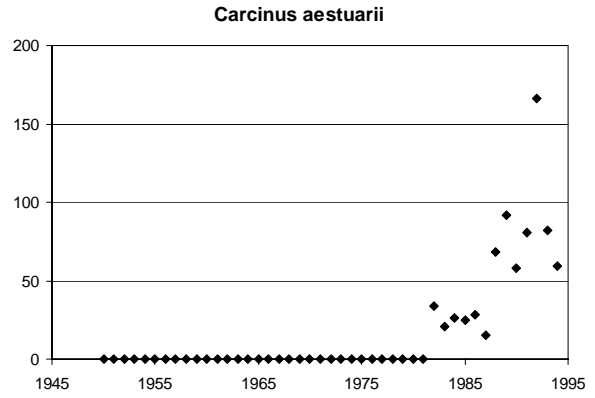
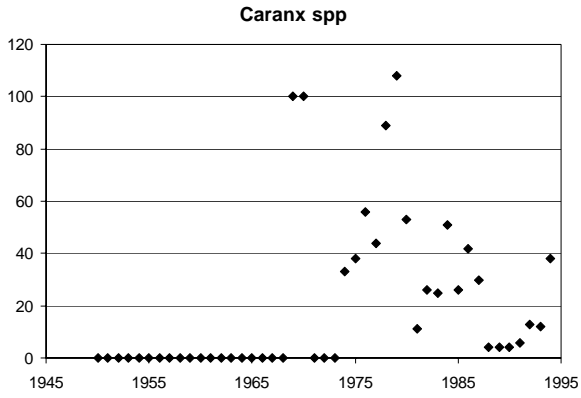
**East Mediterranean - Table 11 = Collapsed fisheries**

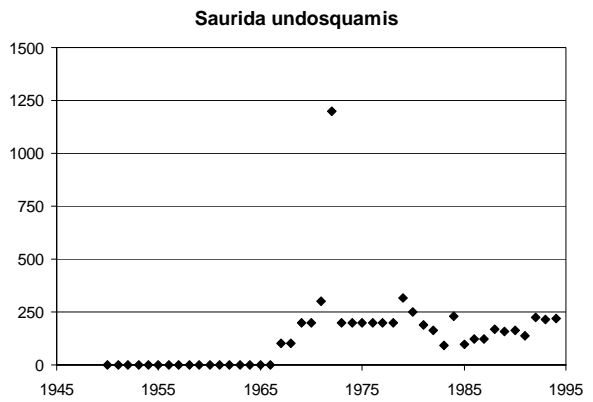
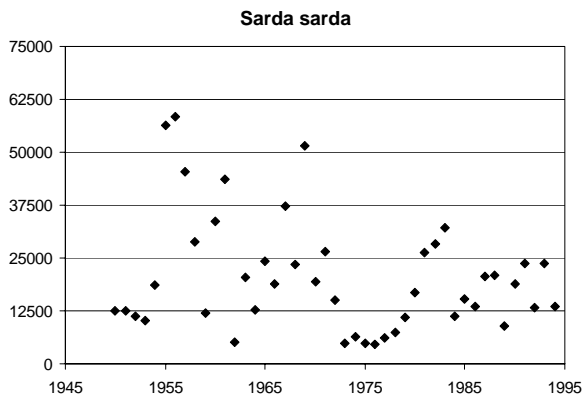
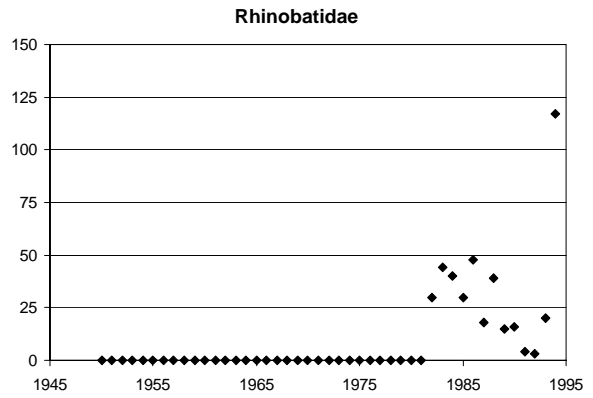
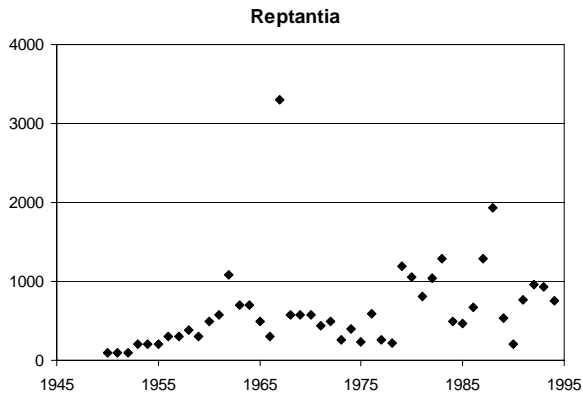
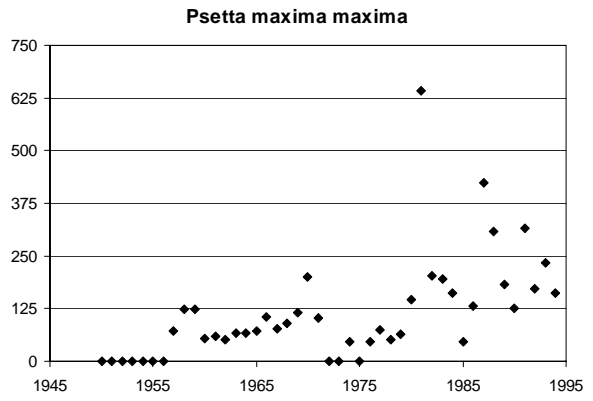
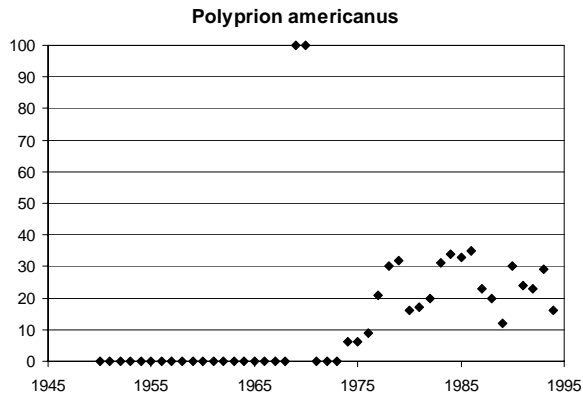
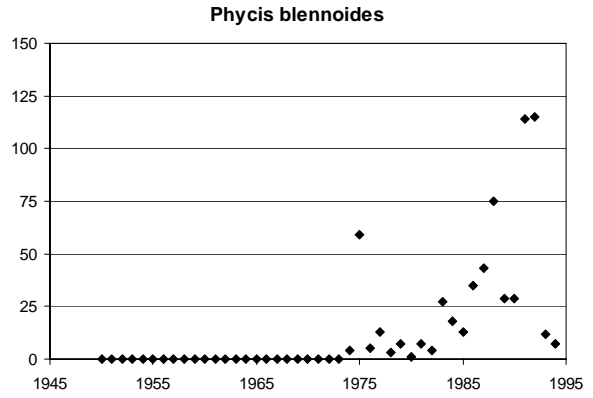
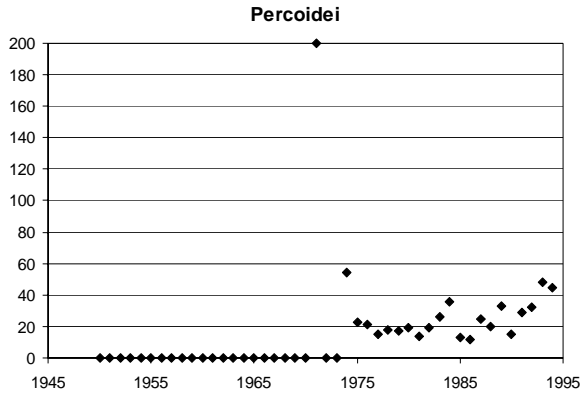
**No records.**

**East Mediterranean - Table 12 = Intermittent fisheries**

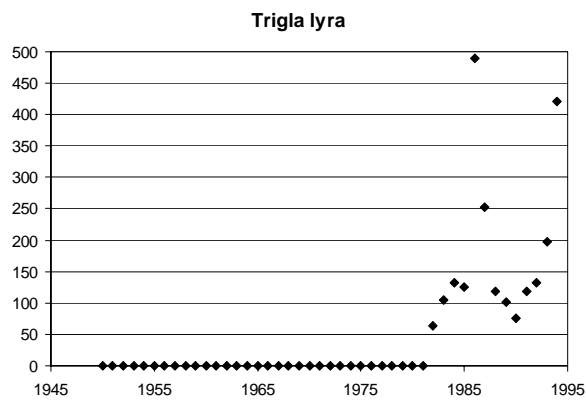
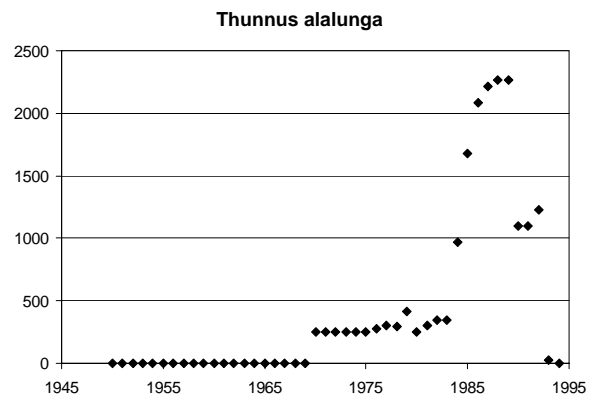
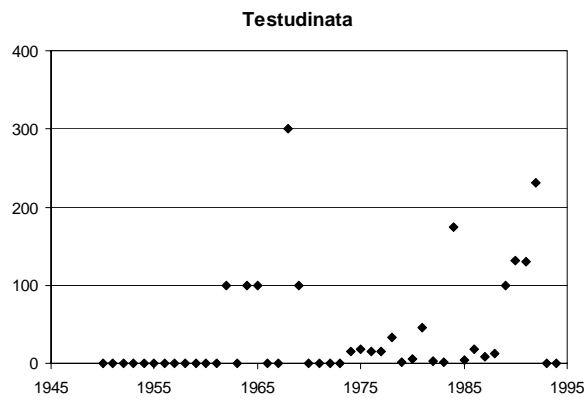
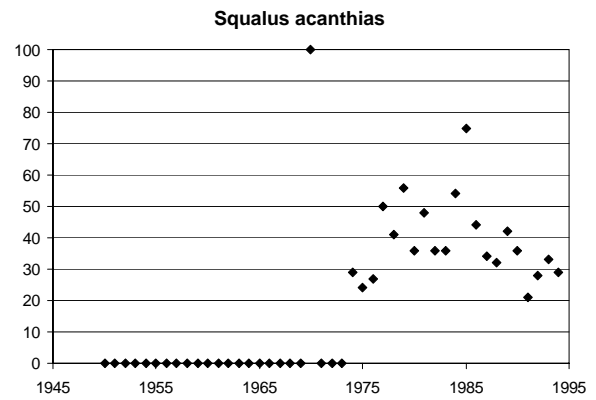
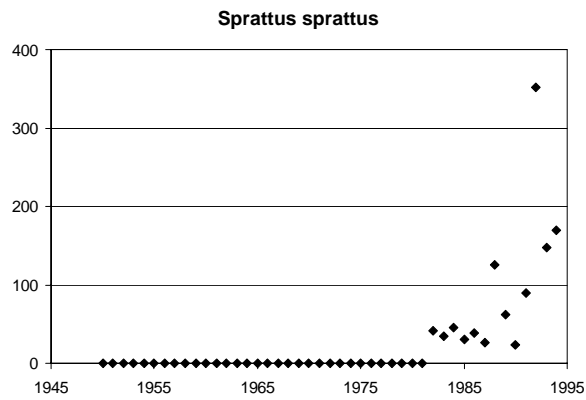
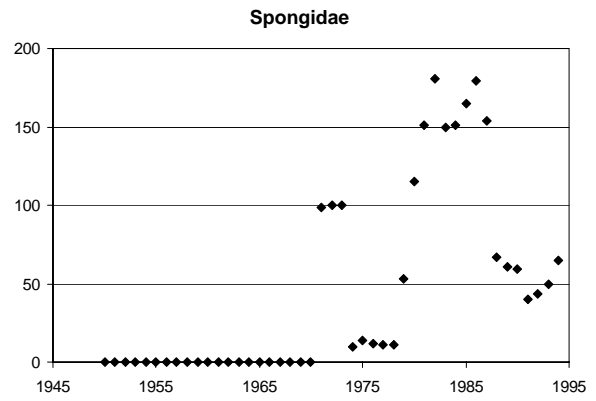
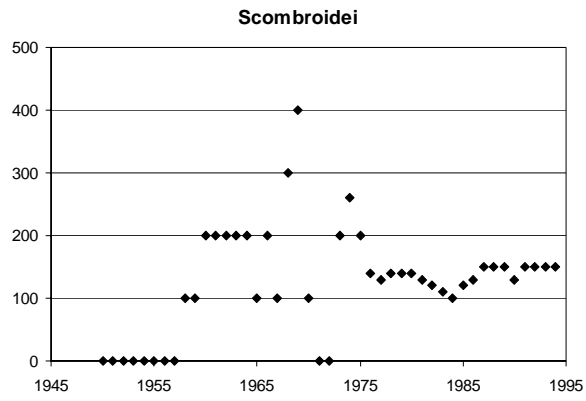
Scientific name	English name	N. Positive Recs.	Country	Catch
Caranx spp	Jacks, crevalles, nei	23	Egypt	62.5%
			Cyprus	37.5%
Carcinus aestuarii	Mediterranean shore crab	13	Greece	100.0%
Corallium rubrum	Sardinia coral	17	Italy	63.7%
			Greece	20.6%
			Croatia	7.6%
			Yugoslav SFR	5.1%
			Albania	2.2%
			Turkey	1.0%

Dentex spp	Dentex nei	21	Cyprus	100.0%
Homarus gammarus	European lobster	37	Turkey Greece Yugoslav SFR Croatia YugoslaviaFR	55.5% 29.4% 13.6% 1.4% 0.0%
Maja squinado	Spinous spider crab	36	Yugoslav SFR Croatia	96.1% 3.9%
Palinurus spp	Palinurid spiny lobsters nei	45	Italy Turkey Tunisia Cyprus	94.9% 3.0% 1.9% 0.2%
Perciformes	Pelagic percomorphs nei	4	Cyprus	100.0%
Percoidei	Percoids nei	22	Cyprus Tunisia	93.2% 6.8%
Phycis blennoides	Greater forkbeard	21	Turkey Tunisia	63.2% 36.8%
Polyprion americanus	Wreckfish	23	Malta	100.0%
Psetta maxima maxima	Turbot	35	Turkey Greece Tunisia Malta	72.6% 27.3% 0.1% 0.0%
Reptantia	Marine crabs nei	45	Egypt Turkey	62.2% 37.9%
Rhinobatidae	Guitarfishes	13	Greece	100.0%
Sarda sarda	Atlantic bonito	45	Turkey Greece Italy Tunisia Egypt Yugoslav SFR Croatia Libya Malta YugoslaviaFR	87.7% 8.1% 2.7% 0.9% 0.4% 0.2% 0.0% 0.0% 0.0% 0.0%
Saurida undosquamis	Brushtooth lizardfish	28	Israel	100.0%
Scombroidei	Mackerel-like fishes nei	35	Lebanon	100.0%
Spongidae	Sponges nei	24	Tunisia Turkey Greece Libya Lebanon Egypt Yugoslav SFR Syria Cyprus Croatia Greece	41.7% 22.2% 18.0% 7.8% 4.7% 3.2% 1.3% 0.9% 0.2% 0.1% 100.0%
Sprattus sprattus	European sprat	13	Greece	100.0%
Squalus acanthias	Picked dogfish	22	Malta	100.0%
Testudinata	Marine turtles nei	24	Turkey Egypt	59.0% 41.0%
Thunnus alalunga	Albacore	25	Italy Greece	81.6% 18.4%
Trigla lyra	Piper gurnard	13	Greece	100.0%









## ANNEX 1: Assignment of species to key ecological or biological categories

### Estuarine resources

Alosa spp  
 Anguilla anguilla  
 Lithognathus mormyrus  
 Mugil cephalus  
 Mugilidae

### Benthic and coastal resources

Bivalvia  
 Carcinus aestuarii  
 Cardium edule  
 Crangon crangon  
 Crassostrea angulata  
 Dicentrarchus labrax  
 Dicentrarchus spp  
 Donax spp  
 Gastropoda  
 Gobiidae  
 Gobioides spp  
 Littorina littorea  
 Microcosmus sulcatus  
 Mollusca  
 Murex spp  
 Mytilus galloprovincialis  
 Ostrea edulis  
 Palaemon serratus  
 Paracentrotus lividus  
 Pecten jacobaeus  
 Reptantia  
 Ruditapes decussatus  
 Siganus spp  
 Solen spp  
 Spongidae  
 Tapes pullastra  
 Tapes spp  
 Umbrina cirrosa  
 Venus gallina

### Demersal resources

Argentina spp  
 Argyrosomus regius  
 Atherinidae  
 Conger conger  
 Congridae  
 Dentex dentex  
 Dentex macropthalmus  
 Dentex spp  
 Dicologlossa cuneata  
 Diplodus sargus  
 Diplodus spp  
 Elasmobranchii  
 Eledone spp  
 Epinephelus aeneus  
 Epinephelus guaza  
 Epinephelus spp  
 Homarus gammarus  
 Lepidorhombus whiffiagonis  
 Maja squinado  
 Merlangius merlangus  
 Mullus barbatus  
 Mullus spp  
 Mullus surmuletus  
 Mustelus spp  
 Oblada melanura  
 Octopodidae  
 Octopus vulgaris  
 Pagellus acarne  
 Pagellus bogaraveo  
 Pagellus erythrinus  
 Pagellus spp  
 Pagrus pagrus  
 Palinurus elephas  
 Palinurus mauritanicus  
 Palinurus spp  
 Penaeus kerathurus  
 Platichthys flexus  
 Plectorhinchus mediterraneus  
 Pleuronectes platessa  
 Pleuronectiformes  
 Pollachius pollachius  
 Polyprion americanus  
 Psetta maxima maxima

Raja spp  
 Rajiformes  
 Rhinobatidae  
 Sarpa salpa  
 Saurida undosquasmis  
 Sciaena spp  
 Sciaenidae  
 Scorpaenidae  
 Scyliorhinus spp  
 Sepia officinalis  
 Sepiidae-sepiolidae  
 Serranidae  
 Solea vulgaris  
 Sparidae,  
 Sparus (=pagrus) spp  
 Sparus aurata  
 Spondylosoma cantharus  
 Squatina squatina  
 Squatinidae  
 Synodontidae  
 Trachinus draco  
 Trigla lyra  
 Triglidae  
 Trisopterus luscus  
 Trisopterus minutus  
 Zeus faber

### Slope resources

Aristeus antennatus  
 Cancer pagurus  
 Corallium rubrum  
 Gadiformes  
 Lophiidae  
 Lophius piscatorius  
 Merluccius merluccius  
 Micromesistius potassou  
 Nephrops norvegicus  
 Parapenaeus longirostris  
 Phycis blennoides  
 Plesiopenaeus edwardsianus  
 Squilla mantis

### Pelagic resources

Balistes capricus  
 Belone belone  
 Boops boops  
 Brama brama  
 Carangidae  
 Caranx spp  
 Clupeoidei  
 Engraulis encrasicolus  
 Lepidopus caudatus  
 Lichia amia  
 Loliginidae-Ommastrophidae  
 Loligo spp  
 Pomatomus saltatrix  
 Sardina pilchardus  
 Sardinella spp  
 Scomber spp  
 Scomber japonicus  
 Scomber scombrus  
 Scombridae  
 Scombroidei  
 Seriola dumerilii  
 Seriola spp  
 Sphyaena spp  
 Spicara maena  
 Spicara spp  
 Sprattus sprattus  
 Squalus acanthias  
 Squalidae  
 Todarodes sagittatus  
 Trachurus mediterraneus  
 Trachurus spp  
 Trachurus trachurus

### Highly Migratory Resources

Auxis thazard-A. Rochei  
 Coryphaena hippurus  
 Euthynnus alletteratus  
 Katsuwonus pelamis  
 Lamna nasus  
 Orcynopsis unicolor  
 Sarda sarda  
 Scombroidei  
 Thunnus alalunga  
 Thunnus thynnus  
 Xiphias gladius