

Regional Study  
South West Scotland

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**Seafish Report No.448**

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November 1994

# **Sea Fish Industry Authority**

## **Seafish Technology**



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#### Summary

The fisheries of South West Scotland are encompassed by the Ayr and Campbeltown statistical districts. Geographically they cover the Scottish Solway coast, the Firth of Clyde and Kintyre and the Inner Hebrides as far North as Colonsay.

The Solway is dominated by the Queen scallop fishery centred on Kirkcudbright. The Clyde's centres are Ayr, Campbeltown and Tarbert with a mix of white fish, shellfish and herring. The white fish include valuable hake but the herring fishery is tiny compared with a few years ago mainly due to a scarcity of the typical large fish much sought after by kipperers. *Nephrops* dominate the shellfish trade contributing some 30% of the Ayr district total value landed.

Campbeltown district including the Inner Hebrides is dominated by shellfish landings in terms of total value. These contribute about 90% of the total of which 50% is from *Nephrops*. Though much of the shellfish is trucked out of the Region, there are *Nephrop* processors in Campbeltown, Ayr and Scotland's central belt. White fish is processed in Campbeltown and Ayr and Queen scallops at Campbeltown, Kirkcudbright and Newton Stewart. There are major concerns at the time of writing over disappointing levels of Queen scallop landings.

The conflicting interests of trawlers and exercising submarines were highlighted by the tragic incident involving the Carradale vessel "ANTARES". This issue is still of major concern in the area despite much effort towards a resolution.

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## **1. Introduction**

The latest in a series of regional studies covers the area from the English border near Gretna to Crinan at the North end of Knapdale in Argyll and includes the islands within the Firth of Clyde and those West of Kintyre viz Islay Gigha Jura and Colonsay.

This area effectively coincides with the Ayr and Campbeltown fishery districts as administered by Scottish Office. The Firth of Clyde fishery was studied in 1988.

The latter fishery is fairly self contained and has been the subject of strict controls on fishing methods as a result. Changes in the state of the fish stocks has however dictated that the local fleet are now seasonally scattered outwith the Firth.

The principal landing places by volume and by value are Ayr, the Tarberts and Kirkcudbright. The introduction of ro ro ferry links to the various islands has vastly improved fish transport links particularly for shellfish including the live export trade but the additional transport costs are still a burden particularly to island fishermen. The Solway or Irish Sea Coast is predominantly a molluscan shellfish fishery and the West coast a mixture of scallops and crustacea. The Clyde shows a mix of demersal, shellfish and some pelagic landings with shellfish dominating.

## **2. Objectives**

The objective of these regional studies is to provide an independent overview of the state of the fish business locally. This covers not only the catching but also the merchanting and processing in the area concerned. Trends in production and other aspects are considered and strengths and weaknesses of the industry examined. The provision of support facilities is also covered.

### 3. The Fishing Fleet

Scottish Office records identify a total fleet of 418 boats based in the two statistical districts in 1993 (see Tables 1 and 2).

Significantly the biggest single size group are of those boats of under 30 feet in length. This is a reflection of the scattered nature of the districts' communities with only a handful of large harbours. There are 194 boats of under 30ft. In the size groupings above 30 feet there are 95 vessels of 30 to 40ft and 83 of 40 to 60ft with 22, 60 to 80ft. Boats of over 80ft in length based in Ayr are Anglo Spanish flag of convenience vessels. The seasonal influx of East Coast trawlers which could effectively double the Clyde fleet until recent years is no longer a factor due to the restriction on Clyde herring quotas but more importantly the poor demand for herring recently.

The fleet, particularly in the 40 to 60ft trawler size range is mainly old vessels. Of the total fleet of 418 boats, 149 are of over 20 years old. These are a mixture of secondhand East Coast seiner/trawlers and Clyde ring net trawlers. The ring net method was favoured by Clyde fishermen for the herring fishery until overtaken by the pair trawl method in the seventies.

A few custom built scallop dredgers have entered the Irish Sea fishery in recent years. This is the only area to have introduced any number of over 40ft length new vessels in recent years. The shellfish fleet of vessels of less than 10m is predominantly of fairly new vessels. Older trawlers, generally with modest horsepower typically 150HP in a fifty foot boat are however, perfectly suitable for towing nephrops<sup>1</sup> or prawn trawls.

Steel boats are preferred for working multiple dredge rigs and more horsepower per foot length is desirable.

A few boats in the 40 to 60ft length range pair trawl for herring in the summer months and trawl for prawns and whitefish during the rest of the year.

For a number of years there has been an upper length limit of 70ft for trawlers working with otter trawl rigs.

Until 1984 a further restriction was the general three mile limit ban on inshore trawling, which restricted both white fish and prawn trawling. This restriction was lifted throughout Scotland with the exception of certain restricted areas on both East and West coasts, mainly lochs and bays where all mobile gear is prohibited.

There is a weekend ban on trawling in the Firth of Clyde and a complete ban on mobile gear in the Gareloch and Loch Ryan.

There are mixed feelings about the weekend ban policy which some would like extended to the

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<sup>1</sup> - nephrops are known as prawns in the Scottish fishery.



whole of the West Coast. Shellfish fishermen on Islay point out that their operations are so disrupted by weather due to the exposed nature of their coastline that a weekend ban would make their operations unviable.

### **3.1 Fishing Vesels and Submarines**

It is only right and appropriate that this report should record the condolences of the writer and the Authority to the relatives of those who died on the "ANTARES" only four years ago. The issue of the consequences of trawl gear fouling submarines had given cause for concern due to a number of non-fatal incidents previously. Much effort has been put into resolving the problem by fishermen's representatives and MOD Navy. It is to be hoped that this risk need no longer be added to the everyday hazards encountered as part of fishing.

## **4. Fish Stocks**

Traditionally Firth of Clyde waters yielded the much sought after Loch Fyne herring the main source for many UK kipperers.

White fish including cod, hake and whiting were found in commercial quantities and with an impressive growth rate, cod in particular, were much in demand by anglers.

The eighties have, however, seen a serious decline in the stocks of both herring and whitefish. Herring which have been taken have not been of the typical large, fat variety formerly associated with Loch Fyne but more typical of the smaller Minch herring. Catches of these fish are therefore in direct competition with huge landings made in the North of Scotland by the North East and Shetland fleets. Prices have suffered and the fishery is no longer attractive or lucrative to more than two or three pair trawler teams (at the time of writing only pair team are working). Since the mid eighties both angling interests and commercial fishermen have found stocks of white fish in the Clyde in serious decline. Hake, however, still provided £1.0m of income in 1993.

A report by Consultants PIEDA, prepared on behalf of the Anglers Association claimed a direct correlation between the removal of the three mile limit to trawlers, particularly prawn trawlers using small mesh netting, and the decline in catches though this has never been scientifically proven. Similar observations have been made about Moray Firth catches since nephrops trawling was allowed there. Increasingly, trawlermen turned from white fish trawling and herring fishery to nephrops trawling which provided until recently a steady income. The prawns, though generally small were suitable for the scampi market.

Seasonally many of the boats moved to grounds West of Kintyre and in the Minches.

Meanwhile other boats at slack periods for prawns rigged up for queen scallop trawling in the Firth and king scallop dredging around the Inner Hebridean Islands.

During the early part of 1994 prawn catches dropped and more boats changed over to scallop dredging. The prawn fishery improved in midsummer. The resultant situation is of a Clyde fleet which is travelling outside the Firth seasonally to a much greater extent than hitherto. This, coupled with the non appearance of the East coast herring fleet has implications for the profitability of harbours and ancillary industries in the Clyde. Seasonally there is still considerable effort on prawns with up to 120 boats including some 20 from Ulster, participating, the North Irish Sea scallop fishery has been one of the success stories of recent years. The establishment of a scallop processing factory in Kircudbright with links to Hebridean and English processors encouraged new investment in vessels. Several of these boats are part owned and have been built in North Humberside, though crewed locally.

Isle of Man grounds have for many years yielded good scallop catches and indeed from as far South as the North Wales coast. Interestingly there have been periodic heavy fisheries for queen scallops in Cardigan Bay over the years.

At the time of writing there is increasing concern about declining landings of queen scallops and requests are being made for restrictions on fishing effort. There is no significant demersal or pelagic fishery out of Solway harbours but there is a significant shrimp fishery, *Crangon spp.* from Annan in the Inner Solway. This fishery is also prosecuted by Cumbrian boats out of Silloth.

Fisheries West of Kintyre and around Islay, Gigha and Colonsay are dominated by scallop dredging with a significant crustacean fishery around the Islands. Scallop landings take place mainly on the mainland at Crinan or West Loch Tarbert or Taynloan but crustacea shellfish processing is planned to be carried out on Islay with boats landing locally. A new factory is under construction. Similarly crustacea are landed for local hotels and restaurants as well as for the home market and for the 'live' export trade.

A range of species including velvet crab (*Liocarcinus puber*) green or shore crabs (*Carcinus maenas*) brown crab *spp* *Cancer pagurus*, lobster *spp.* (*Homarus gammarus*) and to a lesser extent nephrops are taken by creel boats.

The principal harbour in these islands is Port Ellen in South West Islay but landings are made at numerous small piers. Landings at piers are however very much weather dependent as there are virtually no harbours as such. Crustacea are taken live by pick-up truck from landing places to be sorted and put aboard vivier lorries, mainly Spanish, at harbours and ferry piers on the mainland. The velvet crab fishery provided an income of nearly £1m for fishermen many with boats of less than 20ft in 1993, in Campbeltown district.

## **5. Piers and Harbour Facilities**

### **5.1 Piers and Fishmarkets, The Mainland**

There are fishmarkets at Ayr, Campbeltown and Tarbert. Shellfish is often bought on contract by processors though prawns are put on auction sales at Campbeltown Tarbert and Ayr. Herring is sold at Tarbert and at Ayr by the traditional sample method.

Piers in use are a mixture of "steamer" piers in the Clyde and the Islands and old stone built commercial harbours in the Solway.

Ayr's South harbour is a substantial jetty built originally to link the railway network to the fish trade. It is, however, exposed to Westerly winds and in particular to the effects of swell from that direction. The fishmarket is an open sided structure unsatisfactory for the implementation of new strict hygiene regulations. There is no longer a rail link to the pier. A Seafish Consultancy Report prepared for ABP in 1989 recommended moving the fish market and berthage to the safe harbour of Troon some 7 miles North of Ayr. Recently ABP announced their intention of seeking funding to carry out this plan. Ayr fish merchants have however mounted a campaign to retain an Ayr market and are presently seeking support both political and financial.

Campbeltown has a modern fishery pier and a basic market hall. Tarbert has a new market. The latter is only recently completed and is part of an impressive range of development carried out by the Harbour Trust. The harbours on the Solway coast all dry-out across low water and are therefore unreliable harbours of refuge. Portpatrick is the only deepwater harbour near the Solway. Silloth in Cumbria is an impounded dock and Maryport suffers from the same rise and fall limitations with a locked in conformation.

Remedial works are in progress at Garlieston and the quay is being rebuilt at Port William in Wigtownshire. Fishermen at Kirkcudbright have requested the Regional Council to consider the provision of an ice supply and a drying out grid.

Girvan has considerable sheltered berthage but a difficult approach in bad weather.

Troon has a fine old stone built basin and sheltered berthage inside the breakwaters. It has a tradition of being used as a safe haven for boats laid up at weekends.

The upper Firth of Clyde provides no sheltered berthage easily accessed by fishing boats until the Tail of the Bank is reached and Greenock's East India harbour, though the future of this facility has been in question due to development plans. A few fishing boats use the large yacht marina at Largs (where there is a boat hoist) and the steamer pier at Rothesay on Bute.

West Loch Tarbert has become a busy landing place in recent years with the increase in fishing effort to the West of Kintyre. Fishermen have utilised the old steamer pier now made redundant by the construction of the ro ro jetty further south in the Loch. Substantial improvements have been carried out to the pier and further work is planned by the Regional

Council. The canal basin at Crinan is also used by vessels landing for onward transport. Tayinloan Jetty the ferry pier for Gigha is also used by fishing boats.

### **5.3 Islay, Jura Colonsay and Gigha**

Port Askaig offers limited sheltered berthage adjacent to the ferry piers. The combination of strong tidal currents and bad weather in winter can make this area unsuitable and it is mainly used by small shellfish potters. The distillery pier at Caol Isla just to the North offers a safe haven however. Port Ellen has sheltered berthage for about a dozen larger inshore boats and a number of small open boats. There is a need for proper storage facilities for fishing gear and a little used warehouse owned by Caledonian MacBrayne would appear to offer a possibility if satisfactory agreement can be reached.

There are piers at Bruichladdich, Port Charlotte and Bowmore. The former are exposed to South Westerlies and the latter is tidal and some distance from the sea. The Islay shellfish boats are scattered at various locations mainly old steamer (distillery) jetties around the island. Many of the smaller boats can easily be hauled ashore. The Islands of Colonsay Jura and Gigha all have steamer jetties alongside which boats may lie. As mentioned previously, with the exception of Port Ellen none of these provide any real storm protection for small craft in all weathers.

### **5.4 Slipways and Repair Facilities**

The Clyde has of course a long tradition of shipbuilding and ship repairing. This was, however, geared to the merchant shipping and warship requirements. The yacht and workboat fleets were serviced by a number of yards in the Upper Firth from Rothesay to Greenock and at Renfrew, some of these yards catered for fishing boats on an occasional basis. Nobles of Girvan is a long established builder and repairer of fishing boats and even in these difficult times is still a busy yard, drawing in business from not only the Clyde but also Northern Ireland and North West England. Campbeltown shipyard, MacMillans slip at Campbeltown, Ardmaleish slip on Bute and facilities at Ardrossan have all built, fitted out or repaired boats and are still in business though in some cases with non fishery business recently. There is a Highlands and Islands Enterprise owned yard at Portnahaven on Islay, though the famous Dickies yard at Tarbert is now closed.

There is a slip at Crinan at the Western end of the canal, associated with a yacht builder. Significantly there are no proper slipping facilities on the Solway Coast (See also 5.1).

## **6. Processing and Marketing**

Fish and shellfish produced in the region include a wide range of species and perhaps the most homogeneous landings are those of scallops into Kirkcudbright and specifically to West Coast Sea Products where 270 people are employed. This company now owns a factory at Newton Stewart in Galloway in conjunction with Scofro Foods Limited. 70 are employed, also in scampi production. West Coast S.P are presently concerned about the financial implications of installing waste water treatment plant. This is a requirement called for by the local river purification board.

Ayr has a long established fish processor wholesaler retailer in Pieronis, employing about 50 people, and the emergence of the importance of the nephrops trade is recognised by Scotprime who is associated with a large National company, employing about 70 staff employed at Ayr and Girvan. A similar branch of a National concern is Mull of Kintyre Seafoods at Campbeltown.

The urban developments in the Lanarkshire area include the Motherwell food park. This site and those at Bellshill and Uddingston offer convenient locations for fish and shellfish processors buying from a range of landing places owing to their central location and good motorway links.

Scottish Fishermens' Organisations and Dawnfresh are two important processors in that area drawing in particularly nephrops supplies from a range of landing sites.

The trend has been to locate fish processing away from traditional quayside locations and into industrial estates. Pinneys of Scotland at Annan is such an example.

Very limited white fish processing is carried out though there are a couple of small firms cutting and smoking in Campbeltown. Any quantities of white fish landed either go to Aberdeen or other East Coast processors. Some fish has traditionally been sent Fleetwood market.

Glasgow wholesale market takes fish from Ayr but mainly receives supplies from North East Scotland. Hake landed at Ayr has traditionally been shipped out to Spain and a substantial proportion of crustacean landings are shipped "live" to France and Spain.

Brown crab is often trucked to Burgons of Eyemouth for processing although some has recently gone to a new factory in Ireland.

A bold new venture supported by Highlands and Islands Enterprise is the building of a new shellfish processing plant at Glenegadale in Islay. It is hoped that this venture will ensure a local outlet for crab for Islay fishermen avoiding transport costs which can presently account for up to 25% of landed value.

The scattered low volume though often high value species comprising landings in the area dictates the modest level of processing investment in coastal areas. This is particularly true of the Islands but it is also relative to the Argyllshire area in terms of communications with the main population centres.

## 7. Fish Landings and Prospects

Tables 3,4 and 5 indicate landings at different harbours, a breakdown of species landed by district and the trend in landings at the two fishery districts over the last few years respectively.

Landings by weight and by value are up in 1993 compared with the previous year for Campbeltown district. The value for Ayr district is also slightly higher though the weight is down.

Compared with 1989, Campbeltown landings are slightly lower in 1993. Ayr district shows a significant decline though landings peaked in 1991.

Whiting quotas are down by about 40% over the period for area VI West of Scotland and *Nephrops* by 20% (See Table 6).

Compared with 1989, Campbeltown landings are slightly lower in 1993. Ayr District shows a significant decline though landings peaked in 1991.

Whiting quotas are down by about 40% over the period for area VI West of Scotland and *Nephrops* by 20% (See Table 6).

The main fish stocks thus affected are of course cod, haddock, whiting, hake and nephrops as far as the SW Scotland fleet are concerned.

1994 provisional sectoral allocations for Area VIIA, Irish Sea are, cod, 2710 tonnes, haddock (area VII in total) 600 whiting, 4830, hake (area VI and VII) 5990 and nephrops (Area VII in total) 6565 tonnes.

These compare with 1992 quotas as follows:- Cod 3815, haddock, 650 whiting 4695, hake 7140 and nephrops 6565 respectively. There is thus a significant increase in the cod quota and in the hake quota.

For area VI, West of Scotland, corresponding figures for 1994 are, cod 7020 tonnes, haddock 13936, whiting 5503 hake and nephrops 11380 tonnes.

By comparison 1992 quotas were as follows; cod 6915, haddock 10150, whiting 4835, hake 7140 and nephrops 11720 tonnes. Probably of more significance has been a general downward trend in catch per unit effort on white fish in the Firth of Clyde as reported by local fishermen in recent years. (See also reference in section 4 to declining stocks).





**Table 2 - Disposition of Fleet of Vessels of Over 10m length**

Ayr District		Campeltown District	
Largs and Greenock	8	West Loch Tarbert	3
Cumbraes	1	Gigha	1
Troon and Sallcoats	8	Port Ellen	5
Ayr	55	Port Askaig	1
Girvan	14	Campbeltown	9
Stranraer	1	Carradale	17
Portpatrick	1	Tarbert	18
Whithorn	4	Ardrishaig	2
Kirkcudbright	20	Bute	10
Annan	5		

Source: SOAFD December 1993

**Table 3 Landings into Scotland by U.K. vessels, weight and value, landing district and creek by species group, 1993**

Landing district and creek	Weight (tonnes)				Value (£'000)			
	Demersal	Pelagic	Shellfish	All fish	Demersal	Pelagic	Shellfish	All fish
<b>Campbeltown</b>	724	1416	4669	7009	756.3	179.5	7628.2	8583.9
West Loch Tarbert	69	+	1842	1911	61.3	+	2575.3	2636.6
Gigha	+	+	139	139	0.3	-	184.5	184.8
Port Eilen	-	-	345	345	-	-	551.7	551.7
Port Askaig	1	-	380	381	0.8	-	579.6	580.2
Brulchladdich	-	-	4	4	-	-	9.6	9.6
Jura	+	-	+	21	0.3	-	35.1	35.4
Colonsay	-	-	+	0	-	-	1.0	1.0
Campbeltown	477	44	1174	1695	459.1	5.2	1449.4	1913.7
Carradale	57	1	263	321	61.3	0.3	593.9	655.5
Tarbert	107	1367	515	1989	157.7	173.0	1287.4	1618.1
Ardrisalg	+	+	23	23	+	+	10.1	10.1
Bute	14	3	134	151	15.6	0.9	332.8	349.9
Arran	-	-	29	29	-	-	17.9	17.9
<b>Ayr</b>	3209	541	8242	11992	3598.9	87.1	6850.9	10534.9
Largs & Greenock	52	108	161	321	72.3	17.9	466.8	557.0
Cumbraes	1	+	7	8	1.0	+	8.7	9.7
Troon & Saltcoats	510	10	416	936	518.9	1.8	528.6	1049.3
Ayr	2101	419	1040	3560	2402.4	66.6	2205.7	4874.7
Dunure	-	-	16	16	-	-	12.1	12.1
Maldens	+	-	1	1	0.1	-	1.0	1.1
Girvan	263	4	1019	1286	252.4	0.7	793.0	1046.1
Ballantrae	4	-	3	7	9.8	-	4.7	14.5
Stranraer	26	+	43	69	38.4	+	24.8	61.2
Portpatrick	123	+	146	269	157.6	+	155.7	313.3
Drummore	8	-	77	85	12.5	-	39.4	51.9
Whithorn	83	+	1046	1129	81.1	0.1	455.0	536.2
Kirkcudbright	37	-	4122	4159	52.4	-	1935.2	1987.6
Annan	-	-	146	146	-	-	220.3	220.3

Source: SOAFD

Table 4 Landings by species by district 1993

Species	Campbeltown		Ayr	
	Tonnes	£'000	Tonnes	£'000
<b>Demersal</b>	725	756.2	3,209	3596.9
Blue ling	-	-	72	54.8
Brill	2	1.9	10	28.2
Calfish	+	0.1	1	1.0
Cod	203	219.1	482	577.5
Conger eels	4	1.3	33	13.0
Dabs	+	0.1	46	13.7
Dogfish	22	19.6	302	278.1
Dover sole	6	5.9	22	75.4
Flounders	-	-	2	0.3
Forkbeard	-	-	3	2.4
Greenland halibut	-	-	-	-
Gurnards red	1	0.4	4	2.0
Gurnards grey	+	+	-	-
Haddock	36	26.6	589	472.3
Hake	161	307.7	488	1065.6
Halibut	+	0.1	+	1.8
John dory	-	-	1	0.2
Lemon sole	2	2.7	8	9.0
Ling	4	2.0	201	149.4
Livers	-	-	20	29.9
Megrims	3	3.9	29	32.1
Monks	28	41.9	104	163.1
Mullet	-	-	1	1.8
Norway pout	-	-	-	-
Plaice	8	3.7	82	50.3
Pollack	1	0.5	13	12.9
Pouting	-	-	+	+
Roes	2	1.9	4	5.3
Roundnose grenadier	-	-	-	-
Redfish	-	-	3	3.4
Saithe	16	3.9	67	28.3
Sandeels	-	-	-	-
Shark	+	+	37	97.3
Skate	31	17.1	154	154.5
Tusk	-	-	3	2.5
Turbot	3	3.6	4	14.8
Whiting	105	37.5	261	109.3
Witches	38	22.6	113	91.8
Other demersal	49	32.1	50	54.9
<b>Pelagic</b>	1,416	179.4	541	87.1
Argentines	-	-	+	0.5
Blue whiting	-	-	-	-
Herring	408	60.4	460	73.5
Horse mackerel	+	+	4	0.6
Mackerel	3	0.6	52	9.4
Sprats	1,005	118.4	25	3.1
Other pelagic	-	-	-	-
<b>Shellfish</b>	4,869	7628.2	8243.0	6850.8
Brown shrimps	-	-	146	220.5
Cockles	+	0.2	120	22.3
Crawfish	2	23.0	-	-
Edible crabs	242	201.3	40	36.4
Lobsters	37	383.3	10	90.9
Mussels	-	-	-	-
Norway lobsters	2,165	4210.3	1,412	3258.1
Octopus	-	-	1	0.3
Periwinkle	249	168.9	239	139.9
Pink shrimps	+	+	-	-
Queen scallops	571	233.7	5,639	2127.4
Scallops	1,023	1459.0	370	721.9
Squat lobsters	2	0.8	8	2.8
Squid	8	10.0	40	66.3
Velvet crab	566	936.7	5	6.3
Whelks	4	1.0	182	43.2
Other crustaceans	+	+	31	114.5
Other molluscs	-	-	-	-
<b>Total wetfish</b>	2,141	935.6	3,750	3684.0
<b>Total landings</b>	7,010	8563.8	11,993	10534.8

Source: SOAFD

**Table 5: Landings into Scotland by U.K. Vessels, landing district by weight and value 1989-1993**

Landing District	Weight (tonnes)					Value (£'000)				
	1989	1990	1991	1992	1993	1989	1990	1991	1992	1993
Campbeltown	7394	5952	5478	6678	7009	7837	8140	7887	7876	8564
Ayr	15990	14918	17022	13686	11992	11958	12462	12558	10032	10535

Source: SOAFD

**Table 6 Landings by U.K. vessels, total allowable catches, U.K. quotas and uptake, 1989-1993**

Stock species	Sea Area	year	Total allowable catch	UK Quota		UK uptake	
				after exchanges etc	per cent of TAC	Tonnes	Per cent of quota
Cod	VI & Vb(EC)	1989	18430	9700	52.6	9853	101.6
		1990	16000	8375	52.3	8609	102.8
		1991	16000	8330	52.1	8202	98.5
		1992	13500	6915	51.2	6936	100.3
		1993	14000	7210	51.5	6990	96.9
	VIIa	1989	15000	6500	43.3	6743	103.7
		1990	15300	7330	47.9	6502	88.7
		1991	10000	3785	37.7	4116	109.3
		1992	10000	3815	38.2	3929	103
		1993	11000	4125	37.5	3759	91.1
Haddock	VI,Vb(EC)	1989	35000	28210	80.6	28458	93.8
		1990	24000	19385	80.8	19211	99.1
		1991	15200	12250	80.6	13777	112.5
		1992	12500	10150	81.2	9901	97.5
		1993	17600	14180	80.6	13918	98.2
	VII,VIII(EC)	1989	6000	600	10	635	105.8
		1990	6000	730	12.2	808	110.7
		1991	6000	600	10	598	99.7
		1992	6000	650	10.8	682	104.9
		1993	6000	600	10	670	111.7
Whiting	VI & Vb(EC)	1989	16400	9400	57.3	6208	66
		1990	11000	6775	61.6	5493	81.1
		1991	9000	5550	61.7	5824	104.9
		1992	7500	4835	64.5	4882	101
		1993	8700	5610	64.5	5502	98.1
	VIIa	1989	18170	9330	51.3	6792	72.8
		1990	15000	7395	49.3	5435	73.5
		1991	10000	4185	41.9	4512	107.8
		1992	10000	4695	47	4378	93.2
		1993	8500	4390	51.6	4227	96.3
Plaice	VI & Vb(EC)	1989	2000	1210	60.5	1218	1007
		1990	2000	1210	60.5	1207	99.8
		1991	2400	1460	60.8	1518	104
		1992	2400	1460	60.8	1372	94
		1993	2400	1460	60.8	1175	80.5

Stock species	Sea Area	year	Total allowable catch	UK Quota		UK uptake	
				after exchanges etc	per cent of TAC	Tonnes	Per cent of quota
	Vla	1989	5800	3050	52.6	2482	81.4
		1990	5100	2613	51.2	2482	81.4
		1991	4500	2370	52.7	1691	71.4
		1992	3800	1895	49.9	1451	76.6
		1993	2800	1190	42.5	1198	100.7
Sole	Vla	1989	1480	625	42.2	652	104.3
		1990	1500	589	39.3	606	102.9
		1991	1500	585	37.7	612	108.3
		1992	1350	505	37.4	515	102
		1993	1000	385	36.5	386	100.3
Hake	Vb(EC)VI,VII	1989	33750	6260	18.5	5879	93.9
		1990	36880	6671	18.1	5784	86.7
		1991	37580	7150	19	7012	98.1
		1992	38750	7140	18.4	6686	93.6
		1993	40200	7180	17.9	6731	93.6
Herring	Via(Clyde)	1989	3200	3200	100	2032	63.5
		1990	2600	2600	100	2179	83.8
		1991	2900	2900	100	781	26.9
		1992	2300	2300	100	823	35.8
		1993	1000	1000	100	867	86.7
	Vla(Marx & Mourne)	1989	6000	4440	74	3978	69.6
		1990	7000	5180	74	3561	68.7
		1991	6000	4440	74	3672	82.7
		1992	7000	5180	74	4888	94.4
		1993	7000	5180	74	3937	76
Anglers (Monks)	VI & Vb	1989	8600	3370	39.2	3418	101.4
		1990	8600	3335	38.8	3267	98
		1991	8600	3230	37.6	3115	96.4
		1992	8600	3100	36	2949	95.1
		1993	8600	3000	34.9	2741	91.4
	VII	1989	33080	6315	19.1	5786	91.6
		1990	33080	6340	19.2	459	76.8
		1991	33080	6280	19	3716	59.2
		1992	33080	6240	18.9	4076	65.3
		1993	19240	4390	22.8	4153	94.6

Stock species	Sea Area	year	Total allowable catch	UK Quota		UK uptake	
				after exchanges etc	per cent of TAC	Tonnes	Per cent of quota
Norway Lobster	Vb & VI	1989	18000	15620	97.8	10975	70.3
		1990	18000	15620	97.8	10079	64.5
		1991	13500	13185	97.7	10489	79.6
		1992	12000	11720	97.7	10817	92.3
		1993	12600	12305	97.7	11363	92.3
	VII	1989	28000	8530	32.8	6128	71.8
		1990	28000	8530	32.8	6217	72.9
		1991	19000	6785	35.7	6987	103
		1992	20000	6585	32.8	5839	88.9
		1993	20000	6585	32.8	6162	93.9

Source: MAFF

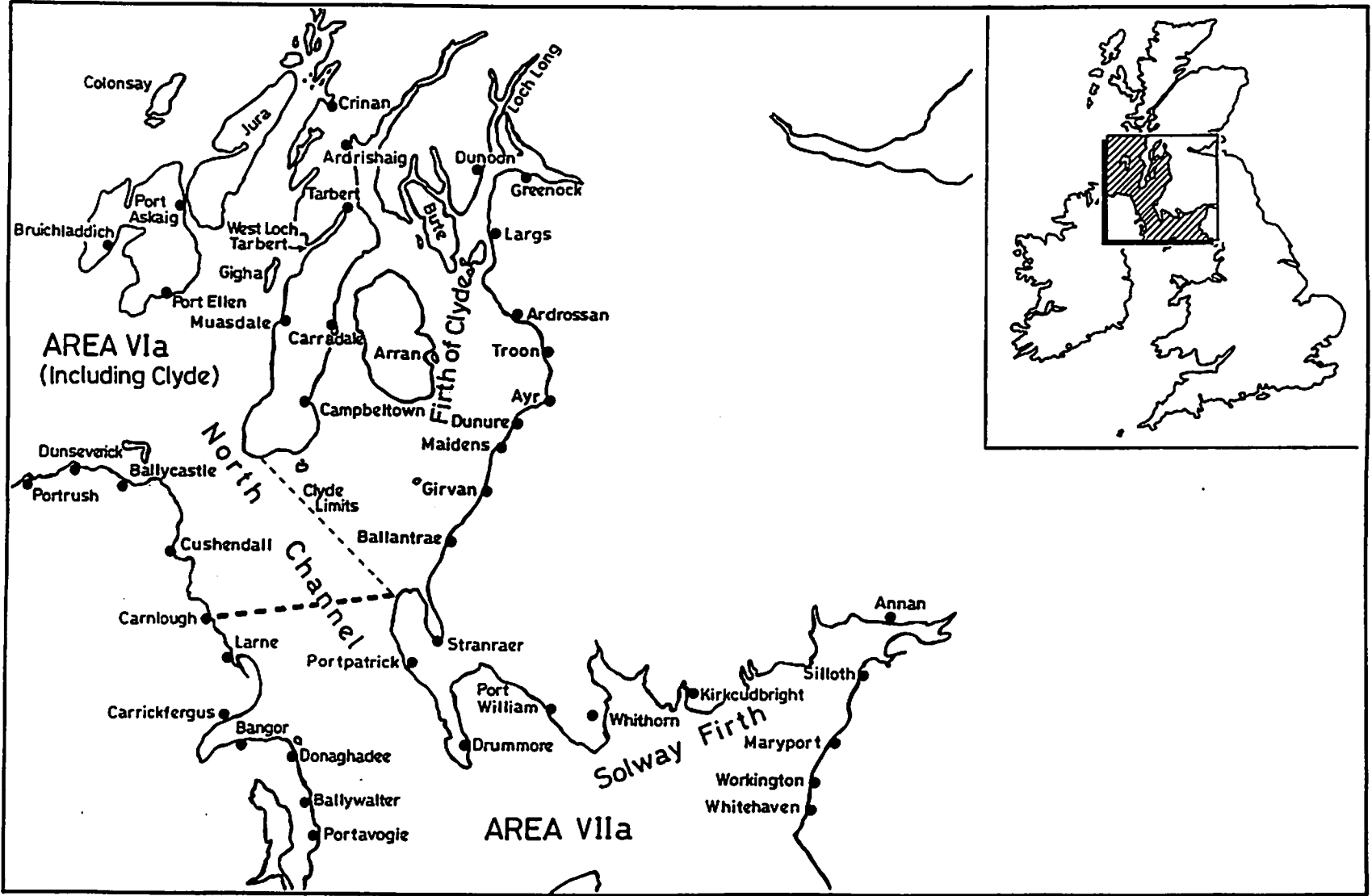
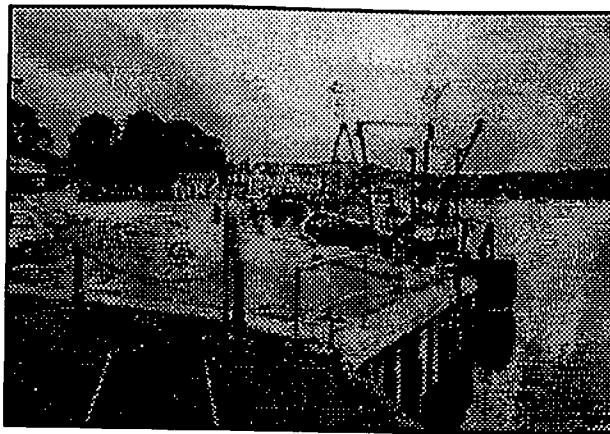


Figure 1 - Study Area

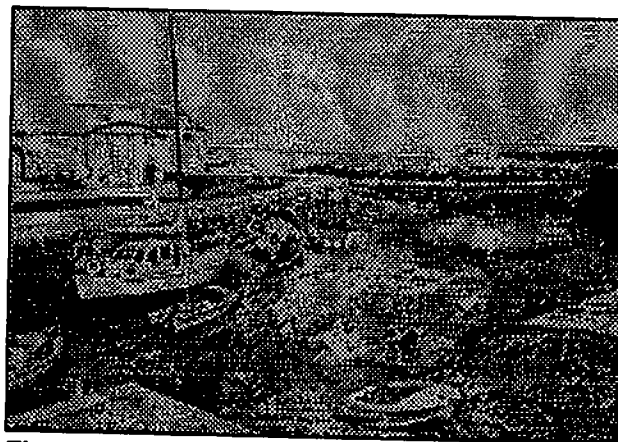




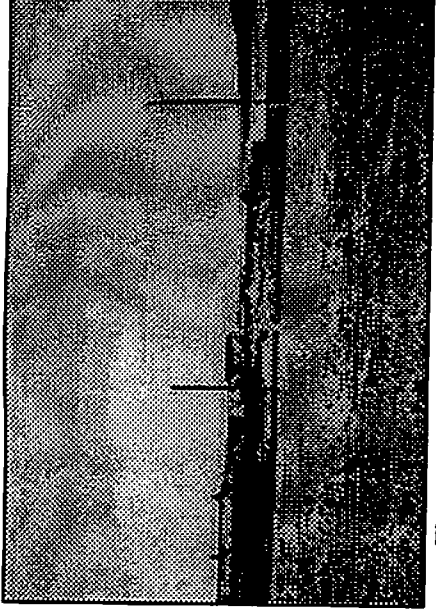
**Figure 2 - Kircudbright**



**Figure 3 - Garlieston**



**Figure 4 - Port William**



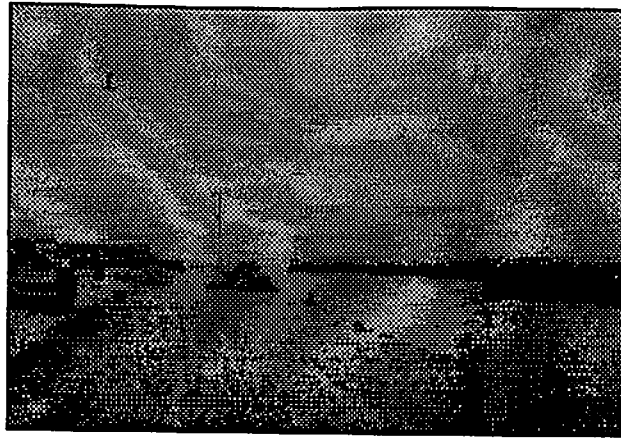
**Figure 5 - Isle of Whithorn**



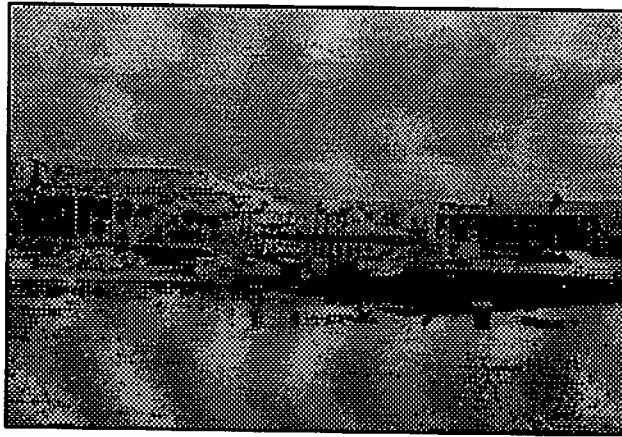
**Figure 6 - Portpatrick**



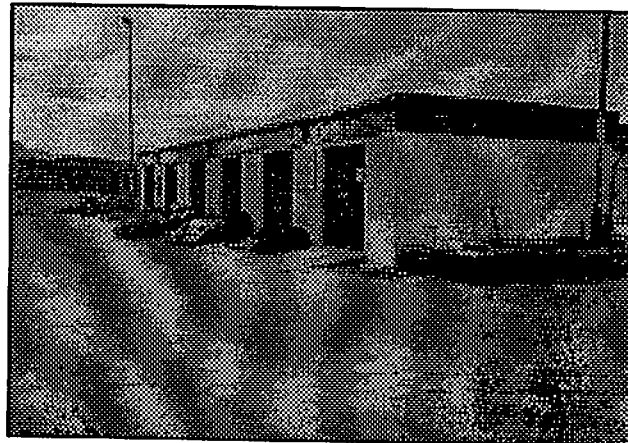
**Figure 7 - Fishermen's Stores Portpatrick**



**Figure 8 - Breakwaters at Girvan**



**Figure 9 - The Harbour Girvan**



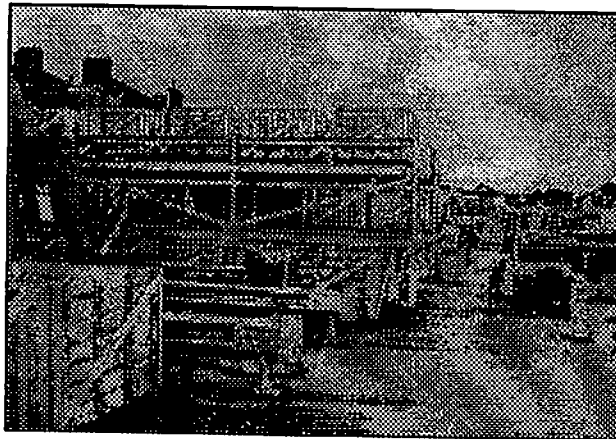
**Figure 10 - Fishermen's Stores Girvan**



**Figure 11 - Tarbert Market**



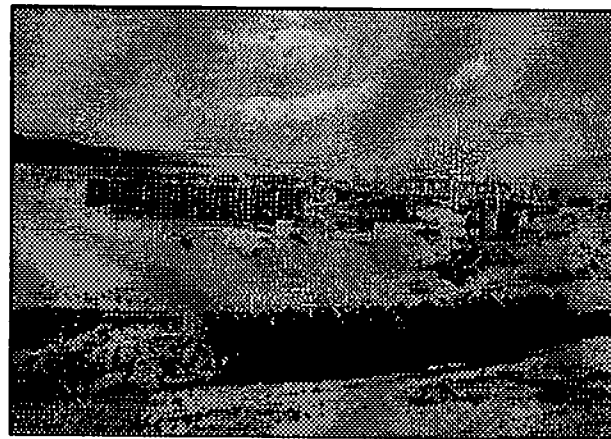
**Figure 12 - Tarbert Market, Velvet Crab Sorting**



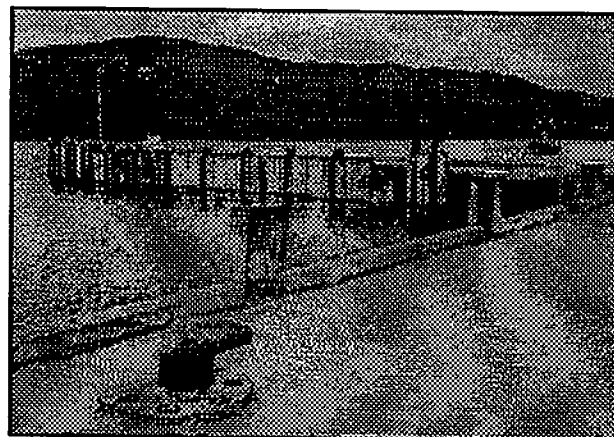
**Figure 13 - Tarbert, Gear Storage Racks**



**Figure 14 - Crinan Slipway**



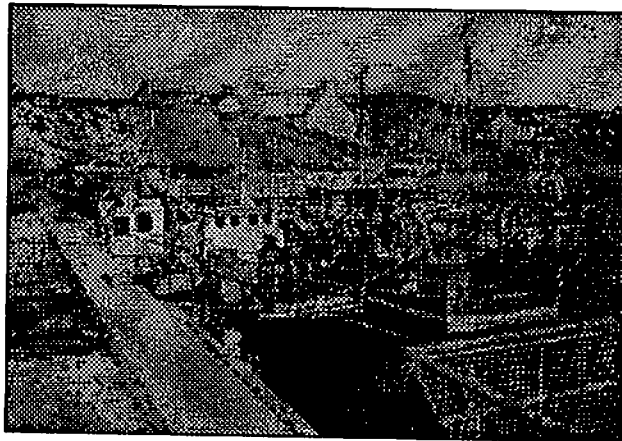
**Figure 15 - Carradale**



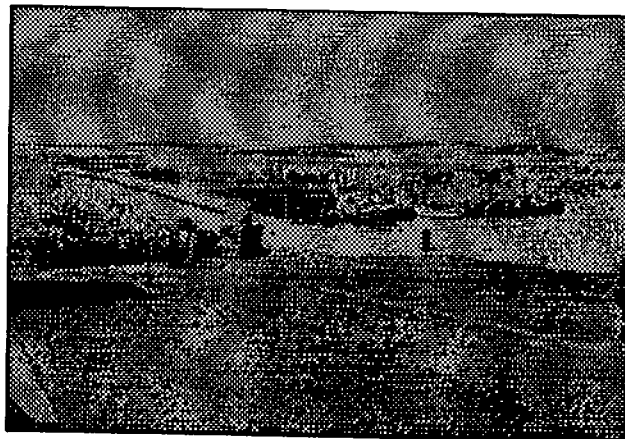
**Figure 16 - Refurbished West Loch Tarbert Pier**



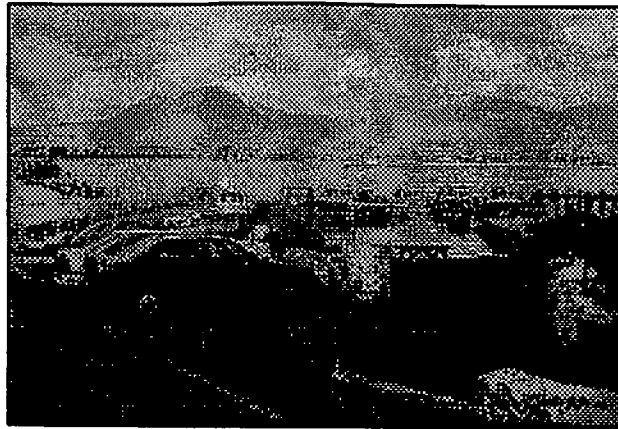
**Figure 17 - Colonsay Jetties**



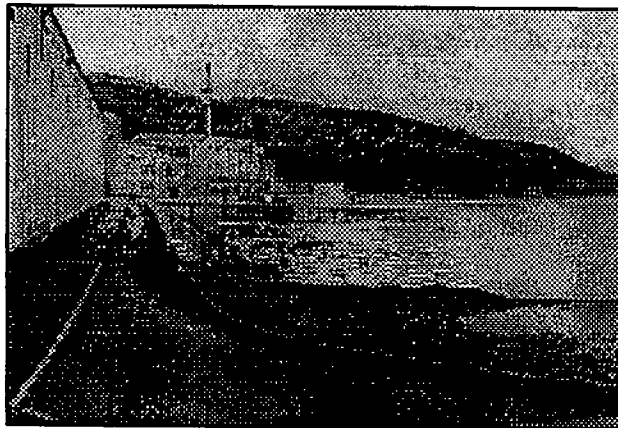
**Figure 18 - Port Ellen**



**Figure 19 - Bowmore**



**Figure 20 - Port Askaig Dock**



**Figure 21 - Caol Isla Pier**



**Figure 22 - Bruichladdich**