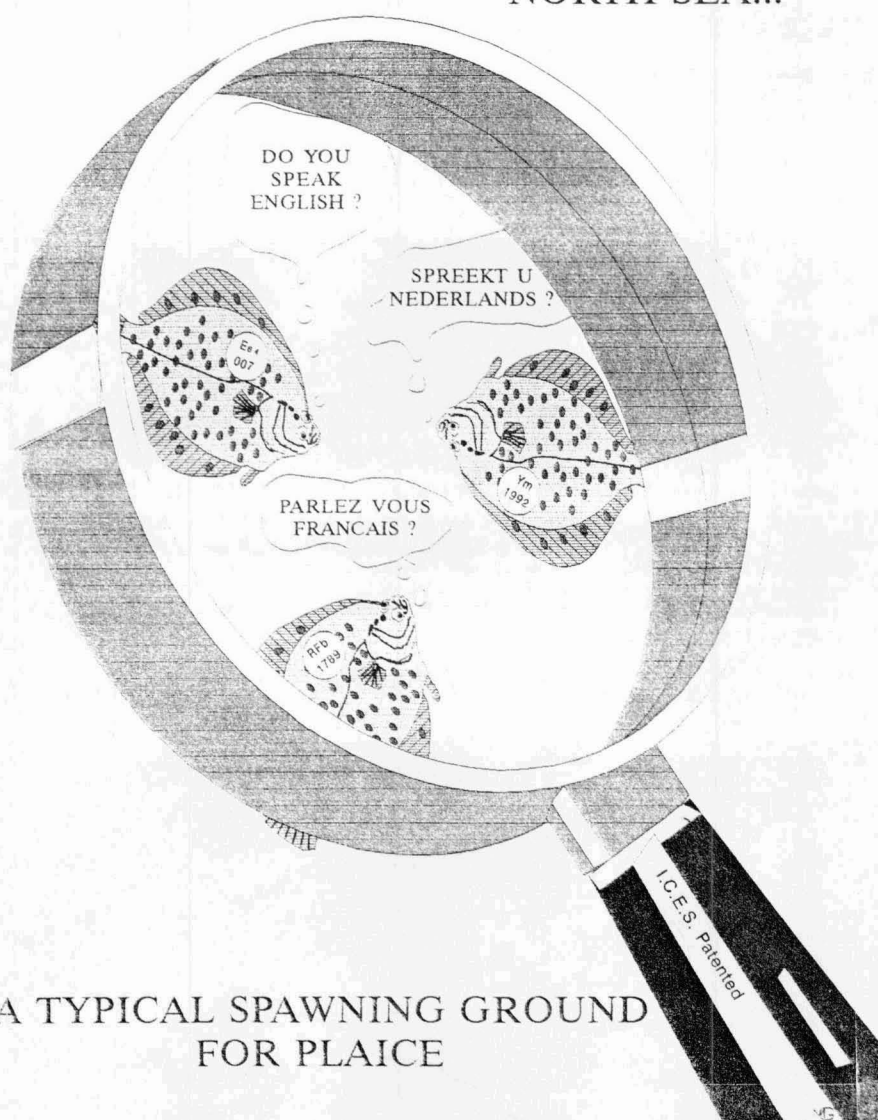


C.M. 1992/G:10

REPORT OF THE ICES STUDY GROUP ON TAGGING EXPERIMENTS FOR JUVENILE PLAICE

IJmuiden, Netherlands, 16-22 March 1992

SOMEWHERE IN THE
NORTH SEA...



A TYPICAL SPAWNING GROUND
FOR PLAICE

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PLAICE TAGGING STUDY GROUP

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REPORT OF THE ICES STUDY GROUP ON TAGGING EXPERIMENTS FOR JUVENILE PLAICE

1. INTRODUCTION

The ICES Study Group on Tagging Experiments for Juvenile Plaice met at the Netherlands Institute for Fisheries Research (RIVO), IJmuiden, The Netherlands on 16-20 March 1992.

1.1. List of Participants

P. van Leeuwen	Netherlands
M. Giret	France
E. Visser	Netherlands
J. Riley	UK (England)
R. Millner	UK (England)
A. Rijnsdorp	Netherlands
F. van Beek (chairman)	Netherlands

1.2. Terms of reference

The terms of reference were to:

- a) analyse the relation between nursery grounds and spawning areas for all stocks from which data are available
- b) provide information on the movement of plaice between different management areas
- c) estimate dispersion rates of plaice for the purpose of evaluating the effect of closed areas

1.3. Background

In the late 1970's the ICES Flatfish Working Group was developing an interest in additional technical measures for the protection of juvenile flatfish and instigated national programmes of tagging juvenile fish (overall length < 25 cm) chiefly in the period 1979-1982. The recapture data for plaice from these experiments together with that from historic data sets plus later releases designed to fill gaps in the geographic cover of all significant plaice nursery areas, were analysed at the Study Group

principally to predict the impact geographically, of locally applied technical protection methods. The estimation of the impact of the plaice boxes proposed in 1987 (Anon 1987) had to make some assumptions on the patterns of movement of fish within the nursery area and from the nurseries to the fisheries. A more sophisticated analysis of the effects of closed areas is only possible if data on the patterns of movement and dispersion rates are available. The Working Group studying the returns from juvenile sole tagging (Anon, 1989) proposed that similar experiments for plaice should be identified.

The progress made here was seen as further steps down the trail initiated by Borley (1916) who, being concerned about damage to plaice stocks by fishing, first looked systematically at tagged plaice recaptures and concluded, "it is clear, that restrictive legislation applied to the fishing off one coast, is not confined in its effect to the waters in, or adjacent to, those in which they are enforced." The group intended to provide quantitative detail to add to Borley's generalisation and to the results of earlier tagging programs (Borley 1916; Carruthers 1924; Blegvad 1935; Hickling 1938; Bagge 1970; de Veen 1970, 1978; Lockwood and Lucassen 1984). Experience gained in the analysis of the juvenile sole data (Anon 1989) was applied to the plaice data in that the basic plaice recapture distribution from the nursery release sites were amended to take account of the 0-group production of each area and recapture rates were corrected for fishing effects as appropriate.

2. MATERIAL AND METHODS

2.1. Tagging methods

As Bagge (1970) and more recent trials have confirmed that the Petersen button (Petersen 1893) is both a practical and effective tag, it was used in all the releases. The disc size, either 16 or 14 mm diameter and the metal of the fixing, titanium or stainless steel, varied between releases. No valid comparisons of these alternatives was possible from the data available.

Every attempt was made to release apparently undamaged and lively fish. An analysis of recapture of fish released with varying degrees of catching damage by MAFF Lowestoft staff between 1980-82 was made (Table 2.1.1). Skin damage was scored on a 3 point scale and liveliness on a 2 point scale. This indicated that slight skin damage has no effect on the chances of recapture but fish sluggish on release suffer increased tagging mortality particularly if they also have moderate skins damage. No allowance have been in this report for the condition of the fish on release nor for regional variations in the proportion of tagged plaice recaptured when for a variety of reasons, the fish was not subsequently reported or for which inadequate data were provided.

2.2. Data considered by the Study Group

2.2.1. General

Data on tagged fish are kept in various laboratories in various formats. For the purpose of this Study Group, the tagging experiments relevant to this group were made available in a specified exchange format, in order to be able to use the same analysis programs for all experiments. This exchange format of the data is in ASCII file in which on each line release and recapture information of a tagged fish is stored on specified positions (fixed format). The format is shown in Figure 2.2.1.1.

Tagged plaice data were available from releases made in the North Sea and in the eastern and western English Channel since 1962. The length distribution of all tagged and recaptured plaice is shown in Table 2.2.1.1.

Exclusion by length group: In order to follow the dispersion of immature fish and to ensure that the fish tagged on the nursery grounds had not come from other areas only fish < 25 cm were used in further analyses. The number of plaice < 25 cm released in each area and percentages recaptured are summarised in Table 2.2.1.2.

Exclusion by time of recapture: Table 2.2.1.3 gives the annual recapture rate as a percent of all recaptures. In many areas, there is a high percent recapture in the first year before the individual plaice have had a chance to disperse away from the nursery area. In order to avoid weighting the dispersion pattern by the early recaptures only fish that were recaptured more than 12 months after the date of release were used. The only exception was the analysis of dispersion parameters which examined data from the first year as well as subsequent years.

2.2.2. UK Data

Releases were made between 1978 and 1982 in 2 main areas in the North sea centred around the Wash-Humber and the Thames and 2 areas in the Channel centred around Rye bay in the east of VIId and Poole in the west of VIId.

2.2.3. French Data

Releases were made between 1976 and 1980 at 4 sites from the North Sea to the western Channel: the French-Belgian border, Baie de Somme, Baie de Seine and Baie du Mont St Michel.

2.2.4. Dutch Data

Since the early sixties around 200 000 plaice were tagged by the Netherlands for various purposes, mostly in the North Sea. The release and recapture information of these tagging experiments are being brought into a computerized data base. This work has not been completed yet. For the purpose of this Study Group priority has been given to tagging experiments carried out in nursery areas. The Dutch sub-set of data considered by this group is thus only a part of the potentially available data. The Dutch contribution to this Study Group consists of releases made between 1962 and 1987 in estuaries and sites along the continental coast of the North Sea extending from Hvide Sande on the Danish coast to the Belgian coast.

For a number of experiments final recapture percentages are underestimated, because not all recaptures are included in the database or in the case of recent experiments tagged fish are still in the sea.

2.3. Description of the tagged plaice release and recaptured allocation areas

The demonstration of the relation between nursery and spawning areas required in the terms of reference, necessitated that these areas be delimited. This was achieved by portioning the coastal nursery areas on the basis of ICES rectangles or part of rectangles where this was realistic. The open sea spawning areas was divided using ICES Divisions and rectangles.

2.3.1. Nursery release areas, juvenile plaice production

Fifteen nursery release areas covering most of the coastline of IVb and c, and VIId and e were selected on the basis of geographical features and the presence of significant numbers of juvenile plaice identified in annual pre-recruit surveys in these areas. Most of the information on the distribution of juvenile plaice in its nurseries originates from the Demersal Young Fish Surveys (DYFS), carried out by Belgium, The Netherlands and Germany (Anon, 1985; Van Beek et al, 1989) along the continental North Sea coast and in its estuaries and English pre-recruit surveys along the UK coast in the North Sea and the English Channel (Anon, 1985; Millner et al, 1988). In the English Channel, information from the International Beam Trawl Surveys (IBTS) carried out by England, France and Belgium (Anon, 1990; Millner & Whiting, 1990) and French pre-recruit surveys was used. The release areas, together with their names and identification numbers are shown in Figure 2.3.1.1.

The release areas show large differences in the abundance of juvenile plaice that can be assumed to reflect differences in recruit production. The level of recruit production of the various nursery areas (nursery power) was estimated from the available pre-recruit survey data.

For the continental side of the North Sea the nursery power was estimated from the mean 1-group plaice density in the autumn surveys carried out between 1970-1990, and the surface area of the nurseries (Table 2.3.1.1). The 1-group density is considered to give a better representation than the 0-group density because a part of the 0-groups will be still distributed on the tidal flats outside the survey area.

For the UK side of the North Sea and eastern English Channel, the nursery power was estimated from 0-group density in autumn surveys carried out between 1981-1990 (Table 2.3.1.2).

In order to link the French side of the Channel with the UK side, 2-group plaice abundance estimates were used from three beam trawl surveys carried out in August 1989 - 1991 (Table 2.3.1.3).

The three data sets were converted to the same scale in order to calculate a relative contribution of each nursery to the total recruit production of the total North Sea (Division IV) and English Channel (Division VIId and e). Table 2.3.1.4. illustrates this procedure. In the first step, the estimates of the continental and UK side of the North Sea (Table 2.3.1.1. and 2.3.1.2.) were combined, assuming that the UK side contributed 10% and the continental side 90% of the North Sea recruitment (Anon 1985). The observations in column A were converted to a relative contribution summing to 100% for the total North Sea (column B). For the Hvide Sande nursery a recruit production of 50% of the Sylt nursery was assumed, based on a limited number of survey data. The contribution of the UK northeast coast (north of Flamborough Head) was equally estimated on a limited number of survey data. In the second step, the observed plaice production values in the nurseries on the UK coast of the Channel (Rye and Pool Bay, column A), obtained simultaneously with the North Sea nurseries Wash and Thames, were scaled to column B. In the third step, the Channel nurseries on the UK and French coasts were scaled using observed plaice densities of column C (BTS surveys 1989-1991; Table 2.3.1.3). The final contribution is given in column D of Table 2.3.1.4., assuming a production value for Baie Mont St Michel.

The nursery power values indicate that about 87% of the production of plaice recruits occurs on the continental coasts of the North Sea, 10% on the UK east coast and just under 3% only on the Channel nursery grounds (Table 2.3.1.4).

2.3.2. Recapture areas: Spawning grounds, Management areas

Recaptures in the North Sea were allocated to sea areas, designed as much as possible, to subdivide geographically, plaice spawning grounds. The information used for this subdivision were the centres of spawning described by plankton surveys by many nations (Harding et al, 1978; Heessen & Rijnsdorp, 1989; Simpson, 1959). Other criteria used in this subdivision were the RIVO plaice biological sampling areas. The recapture areas are shown in Figure 2.3.2.1

In the analysis four management recapture areas were considered: the North Sea (IV), the Eastern English Channel (VII d), the Western English Channel (VII e) and other areas combined where recaptures were reported from (IIIa, VII f, g and VII j).

2.4. Distribution of fishing effort

The pattern of recaptures will both depend on the distribution of the tagged fish and the distribution of fishing effort. In 1987 the North Sea Flatfish Working Group collated effort information by statistical rectangle and by quarter in order to estimate discard mortality rates in plaice (Anon, 1987). Quarterly fishing hours were available from the Dutch beam trawl fleet in 1974-1977 and from the UK otter trawl fleet in 1974-1977. It was assumed that the effort distribution of the Danish and German fleet was similar to that of the Netherlands, and that of the Belgium fleet to the UK. The UK effort (E_{UK}) was representative for 30% of the plaice landings and the Netherlands effort (E_N) for the remaining 70%. A combined effort index (E_{TOT}) was then calculated by according to $E_{combined} = 70\% E_N + 30\% E_{UK}$.

The pattern of effort distribution calculated as such is not strictly representative for the northern North Sea, since this area is the main fishing area of the Scottish demersal fleets. Scottish plaice landings is about 10% of the total international landings in the 1980s. The average quarterly fishing effort over the period 1987-1991 of the three main Scottish demersal fleets (seine, otter trawl, pair trawl) were made available during the working group by courtesy of Dr R. Cook (Aberdeen) and were combined with the already available effort ($E_{combined}$) using the same procedure. It was thus assumed that the three demersal fleets in Scotland had equal catchability for plaice. The result is given in Appendix IV. The relative fishing effort in the six sub-areas distinguished in the North Sea is given in Table 2.4.1 and clearly shows that the demersal fishing effort is mainly concentrated in the southern and southeastern North Sea throughout the year. During summer the effort shows a slight shift to the north and a small increase in relative effort in the central North Sea around in the areas of Fisher Bank and Flamborough.

2.5. Computer Programs

2.5.1. General

Two computer programmes were developed for the analysis of the data. Programme TAGANA2 reads the exchange format files. It calculates for each recapture the individual migration parameters, time in sea, distance travelled and direction of dislocation relative to the North Pole. The formulae used by this programme are described in the section below. In addition it calculates from release- and recapture positions the corresponding ICES rectangles. This information is written in an outputfile together with length, sex and maturation parameters. This output file is

used as input for programme TAGANA3. TAGANA2 also produces administrative output on the contents of the file such as, number of releases and recaptures, periods in which the experiments were carried out, missing information and a table with the release length distribution of the releases and recaptures.

Programme TAGANA3 produces tables with the migration parameters by experiments, such as the mean direction of displacement, velocity, mean time in sea, average distance travelled by the individual fish, distance of displacement of the population and coefficients of dispersion (formulae used are also given in the section below). The tables for the experiments considered are given in Appendix I. The units used in the calculations were months and nautical miles. The parameters are presented for the release quarter and the subsequent 15 quarters after release.

TAGANA3 allows for a number of options with regard to the selection of data to be analysed. There options are :

- a) selection by sex
- b) selection by release quarter
- c) selection of release length range
- d) selection of release year range and
- e) selection of recaptures caught after a certain period in sea

Except for option d) all other options have been used by the Study Group.

Other output from TAGANA3 is a table, presenting number of recaptures by rectangle and quarters for 4 years after the release quarter. These tables are presented in Appendix II. This information is also produced in maps, which were used for visual inspection.

All computer programmes were written in PASCAL and run on a VAX at RIVO IJmuiden.

2.5.2. Dispersion parameters

This section gives an overview of the migration parameters used in the calculations of the Study Group.

Parameters calculated for a single fish (reference)

The distance of displacement of a single fish: r , which is the distance between release and recapture position in nautical miles is calculated as

$$r = 2 * M * \arcsin \left\{ \frac{\sqrt{2 - 2 * \cos(a) * \cos(b) * \cos(c-d) - \sin(a) * \sin(b)}}{2} \right\} \quad 2.5.1$$

where M = miles per radian = 3437.746771

a: release latitude in radians

b: recapture latitude in radians

c: release longitude in radians

d: recapture longitude in radians

The direction of displacement of a single fish (θ) in degrees compass points is calculated using the following procedures and formulae. In cases where release and recapture latitude are the same, the direction of displacement is East or West (90° , 270°). Similar release and recapture longitudes indicate displacement in North or

south direction (0° , 180°). In all other cases where release and recapture positions were not the same (most cases) θ was calculated as:

$$\theta_r = \frac{\pi}{2} - \arcsin\left(\frac{b-a}{x}\right) \quad 2.5.2a$$

or if $d < c$

$$\theta_r = 2\pi - \frac{\pi}{2} - \arcsin\left(\frac{b-a}{x}\right) \quad 2.5.2b$$

or expressed in degrees

$$\theta_d = \frac{360 * \theta_r}{2\pi}$$

$$\text{where } x = 2 * \arcsin \left\{ \frac{\sqrt{2-2*\cos(a)*\cos(b)*\cos(c-d)-*\sin(a)*\sin(b)}}{2} \right\}$$

Parameters calculated for a group of fish (experiment)

The migration parameters for the various experiments were calculated according to formulae given by Jones (1965) and Anon (1971).

The distance of displacement of a single fish: r , can be broken down in a North/South component: $r \cos\theta$ and East/West component: $r \sin\theta$, The mean direction of displacement ψ of a group of fish then becomes:

$$\tan \psi = \frac{\sum r \sin\theta}{\sum r \cos\theta} \quad 2.5.3$$

The velocity, V , with which the centre of the population is moving in direction ψ , expressed in miles per month is given by:

$$V = \frac{\sqrt{(\sum r \sin\theta)^2 + (\sum r \cos\theta)^2}}{\sum t} \quad 2.5.4$$

where t is the time in sea in months after release for each fish

the mean number of days' absence T is given by

$$T = \frac{\sum t}{n} \quad 2.5.5$$

The distance of displacement of the population (R) then becomes:

$$R = V T \quad 2.5.6$$

The average distance travelled by a group of fish (D) is the mean of the distances travelled by all individual fish (n) given by:

$$D = \frac{\sum r}{\sum n} \quad 2.5.7$$

The monthly coefficient of dispersion of fish about their centre of density (a^2) is given by:

$$a^2 = \frac{1}{n} \left\{ \sum \frac{r^2}{t} - \frac{(\sum r \cos \theta)^2 + (\sum r \sin \theta)^2}{\sum t} \right\} \quad 2.5.8$$

whereas the coefficient of dispersion of fish about their centre of density after a mean time, T, becomes:

$$a^2 T \quad 2.5.9$$

2.6. Other formulas used by the Study Group

The recaptures in a certain area can originate from different nurseries. The chance to recapture a fish, tagged in a particular nursery, depends on the number of fish tagged in that nursery. In order to take account of different levels of tagging in the various nurseries the recaptures can be expressed as a fraction of the number released:

$$\frac{n_j}{N_j} \quad 2.6.1$$

where n_j is the number of recaptures from nursery j and N_j the number of releases in that nursery.

In a particular recapture area, i , this fraction becomes:

$$\frac{n_{ij}}{N_j} \quad 2.6.2$$

The contribution of the recruitment from a nursery area to a recapture area also depends on the importance of the nursery to the total population. In order to estimate the relative contribution of several nurseries to the recruitment or population in a selected area these fractions should be weighted by the "power" of the nursery, P_j . The power of the nursery area gives the proportion of recruits from a nursery area relative to the total production of all nursery areas considered, based on abundance estimates of juvenile plaice from pre-recruit surveys and the surface area of the nursery ground (see section 2.2.3.). The recruitment from nursery j to recapture area i can then be compared by:

$$r_{ij} = \frac{n_{ij}}{N_j} * P_j \quad 2.6.3$$

and

$$R_i = \sum_{j=1}^{15} r_{ij} \quad 2.6.4$$

where R_i is the total in the selected recapture area i when there are 15 nursery areas. As fishermen or anglers, who return the recaptures will not discriminate between the origin of the recaptures in a selected area, in other words, the effort or fishing mortality is the same for all recaptures, the ratios $r_{ij} * R_i^{-1}$ can be considered representative for the composition of the origin of the population in the recapture area. In fact the ratios calculated in this way would be similar to the ratios of the straight recaptures from the different nurseries, if the level tagging intensity in nurseries would have been proportional to the importance of the nursery to the total recruitment.

A problem occurs when not all nurseries are covered by tagging experiments. Fish originating from these areas will not be recognised and considered. This will lead to overestimates of the importance of the other nurseries.

It should be pointed out that in the calculations carried out by the Study Group the actual release numbers, N_j , were replaced by an estimate of "remaining releases in sea after one year": N_j^{1+} (Table 2.2.1.2). The Study Group considered this appropriate because it analysed only recaptures over 12 months in the sea while a great part of the recaptures is made in the first year close to the release sites and because the percentage of recaptures in the 1st year differs considerable between release areas. The estimated remaining releases after 1 year were calculated using the formulae:

$$N_j^{1+} = N_j * \frac{n_j^{1+}}{n_j}$$

where n_j^{1+} is the number of recaptures made after the first year.

A further amendment was made to the release numbers in the Hvide Sande, Sylt and Norderney nurseries. The recapture data from the experiments carried out in these areas were not all included in the data base. Also a number of tagging experiments in these areas were carried out recently and a significant number of recaptures of these experiments can be expected in the future. The low recapture percentages in these areas are artificial resulting in an underestimate of the contribution of these areas compared to other areas. In order to take account of this deficiency, the release numbers were set at a lower level producing a recapture percentage of 25% equivalent to the converged experiments in the adjacent areas (Waddensea E, Waddensea W and Dutch coast).

The formulae discussed above estimate the origin of the fish in a selected recapture ground, which may represent a spawning area or management area.

Another question is the dispersion of the fish tagged in a particular nursery area to various recapture grounds. The number of recaptures in different recapture areas depends now also on the amount of effort, which usually varies considerably between recapture areas. In order to take account for different levels of effort in different recapture areas formula 2.6.3 should be extended to:

$$r_{ij} = \frac{n_{ij}}{N_j} * P_j * E_i \quad 2.6.5$$

where E_i is the effort in recapture area i . The ratios of these corrected fractions should now be compared within a nursery area, $r_{ij} * R_j^{-1}$, where the sum of these ratios, when there are 3 recapture areas is given by:

$$R_j = \sum_{i=1}^3 r_{ij} \quad 2.6.6$$

The absence of effort in a potential recapture area makes it impossible to estimate the contribution of a nursery to that area. This will not affect the ratios between the other areas but will bias the absolute estimates of contribution of a nursery to the other areas.

3. RESULTS AND CONCLUSIONS

3.1. Migration and dispersion

The normal pattern of recaptures indicates that the plaice tagged as 1 to 2 year olds passed through two phases. Firstly a dispersion phase lasting between one and two years at the end of which the area of distribution of recaptures was fully described. In the second phase additional recaptures accumulated in this area and within which relatively minor seasonal movements could be identified.

The number of recaptures in each experiment usually fell progressively with time (see Table 2.2.1.3 and Appendix I) but this was not always the case. Norderney and the Wash area were exceptions. Most recaptures, however, took place during the dispersion phase by the end of which most fish would have achieved sexual maturity. The summary maps of recaptures for each experiment by quarter (see Appendix III) exclude plaice caught within one year of release but must still include a proportion of immature and/or fish in the dispersion phase and this could partially mask any seasonal movements.

3.1.1. Recapture patterns by release area

The quarterly recapture summary maps are reviewed by release nursery area with particular reference to the Figure 3.1.1.1. showing the centres of distribution of recaptures after Jones (Jones 1965). In the figure the points are numbered by quarter years (i.e. 1 represents recaptures in Jan-March inclusive) and where feasible the four quarter points have been joined up in sequence and would therefore be a summary measure of seasonal movements. The changes in position over the year appear to be minor and mostly add up to about 100 - 200 miles. They cover therefore, a small proportion of the total sea area described in the dispersion phase. The recapture pattern of plaice (free in excess of one year) are reviewed below to identify points additional to the general patterns described above.

Hvide Sande The centres of recapture are situated between 2 and 3° to the west of the release position. Recaptures in the spawning quarter (Q1) tend to the south and west.

Sylt Recaptures in Q1 indicate the fish from this area participate in three spawning areas all to the east of 2°E. Recaptures in Q3 and Q4 tended to be more offshore than in Q1 and Q2.

Norderney Recaptures in Q1 are in three spawning areas with the centre of distribution just to the east of 2°E in the transitional area. Most recaptures in Q3 and Q4 were in the German Bight.

Eastern Waddensea Recaptures in Q1 indicate that most recruits from this areas spawn in the transitional area or in the Southern Bight. Subsequent recaptures predominate N of 54°N and E of 2°E.

Western Waddensea Significant recaptures in the Channel in Q1 with fish possibly participating in six spawning centres from Start Point in VIIe to the German Bight. Recaptures in Q3 and Q4 indicated the return of most plaice to the North Sea (IVc).

Dutch Coast Generally similar to the Western Waddensea. 71% recaptures in the 1st year reduces data available here.

Zeeland Estuary Recaptures in Q1 indicate significant participation of recruits in spawning in VIId and e, the Southern Bight and the southern edge of the transitional area with some recaptures in the Channel persisting throughout the year indicating permanent residence there.

French Belgian Coast (IVc) Limited numbers of recaptures show patterns similar to those from the Zeeland Estuary except that only one recapture was made in the Channel in Q4.

Wash Area Recaptures in Q1 predominately from the Flamborough spawning area centred 2°N of the release rectangles but stretching coastwise north to the Firth of Forth. Recapture patterns in Q2-3 similar to Q1 but with some extreme additional movements north the Moray Firth and slight offshore movements eastwards. Unique recapture pattern with time, only 8% recaptured in the 1st year.

Thames Area Recaptures in Q1 predominate in the centres of spawning (Lee and Ramster 1981) to the east of the Southern Bight and the southern part of the Flamborough spawning area. Penetration into the Channel is minimal in Q2 and Q3 and there are many recaptures from further north up to the Moray Firth, east to the Dutch coast and south and west chiefly from the eastern Channel.

Rye Area 65% recaptures in the 1st year severely reduced the number of subsequent recaptures. Those in Q1 indicate most spawning in VIId. Recaptures in Q2-4 indicate seasonal movement into the North Sea. Movement to the south and west minimal.

Poole Area Recaptures from rectangle of release predominate in all quarters. Some recaptures in Q4 and Q1 in VIIe suggest spawning in that Division.

Baie de Somme Recaptures in Q1 chiefly from the French side of the Channel spawning areas. One from southern Ireland, none from the North Sea. Recaptures in Q2-4 indicate exclusively a westerly distribution and a permanent occupation of VIId and e only.

Baie de Seine A high first year recapture rate (67%) reduced subsequent recapture but those in Q1 indicate exclusively a spawning locally on the southwestern edge of the VIId spawning concentration. Recaptures in other quarters suggest that any permanent movement out of the eastern Channel is to VIIe or further west.

Baie du Mt St Michel With 83% of recaptures made within the 1st year the identification of seasonal patterns is frustrated. In total one recapture is recorded from outside Division VIIe, in de Baie de Somme, indicating that this small nursery area probably produces recruits only in the Channel

3.1.2. Dispersion in relation to release area

This section will discuss the dispersion of the juvenile plaice. Three parameters describing the dispersion were distinguished: 1) the average distance between release and recapture position (R in miles); 2) the dispersion rate (a^2 in $\text{miles}^2 \cdot \text{month}^{-1}$) and 3) surface area encompassed by the recaptures ($a^2 \cdot t$ in miles^2). The parameter estimates for the different release areas are given in Appendix II. A first inspection of the dispersion parameters of the different experiments did show a large variability within each experiment and it was therefore decided to calculate average parameter values for different release areas. For the three parameters distinguished, a weighted average was calculated for each area by weighting over the number of observations. Based on the depth distribution and the nature of the sea bed five areas were distinguished:

- 1) North Sea continental coast between 51°N and 58°N (release areas 1-8);
- 2) North Sea UK coast (release areas 9 and 10);
- 3) French coast of the Channel (areas 13-15);
- 4) Rye bay (area 11) and
- 5) Pool Bay (area 12).

Relationships between the parameters and the time after release is shown in Figures 3.1.2.1 a-c. The x-axis is expressed in relative quarters after release and thus do not match with the absolute quarters of the year.

Figure 3.1.2.1.a shows that the average distance R from the release position increases continuously with time since release, although in some areas there is a tendency to level off after about 2 years. The average distance differs substantially between areas, being larger in the North Sea compared to the Channel, with Pool Bay on the UK side showing a particularly low distance between release and recapture position.

No clear trend in the rate of dispersion was apparent with time in sea after release (Figure 3.1.2.1.b). However, a more detailed inspection of the pattern within the different release areas show some similarity. In the continental North Sea release the dispersion rate slightly increases up to 3 years after release and then gradually decreases. This pattern of an increase and then a decrease is also observed in the UK coast of the North Sea and the French coast of VII d. An increase in the rate of dispersion is shown in the Rye Bay release. The overall level of dispersion rate differs substantially between the areas. Now the UK side of the North Sea and Channel show higher dispersion rates than the continental coasts, with Pool Bay as an exception. In this area the dispersion rate is very low. de Veen (1970) gave an estimate of dispersion rates in juvenile plaice of about $20 \text{ miles}^2 \cdot \text{day}^{-1}$, which roughly compared with the dispersion rates observed in plaice released on the UK coast of the North Sea.

The size of the distribution area of the recaptures shows an increase with the time in the sea (Figure 3.1.2.1.c). The rate of increase is largest in the UK North Sea and Rye Bay release. The continental North Sea and VII d are intermediate, while Pool Bay again shows an exceptional result and a very small distribution area. The increase in the distribution area seems to increase up to 2-3 years after release and seems then to level off. The level reached in the UK North Sea and Rye Bay releases appears to be larger than that of the continental release.

3.1.3. Seasonal and sexual differences in dispersion

In the above section dispersion parameters were compared without taking account of possible seasonal and sexual differences. The extensive number of recaptures of the tagging experiments carried out along the continental coast of the North Sea did allow the investigation of seasonal and sexual patterns in dispersion. For an exploratory exercise the recapture data of the western Wadden Sea release was chosen. The size range of released fish was further restricted to fish <20 cm, because we were interested in the dispersion of juvenile plaice from the nursery grounds and among the males ≥ 20 cm a substantial proportion may already be mature.

We will first focus on the migration parameters obtained from releases in different quarters of the year (Figure 3.1.3.1). In contrast to the figures in the previous section, the x-axis now denotes the quarter of the year in the year of release (1-4) and the following year (5-8). The average distance between the recapture position and the release position increases with the time after release, but the pattern of increase differs between the releases in the 1st and 2nd quarter compared to those in the 3rd and 4th quarter. The latter fish are recaptured close (20 miles) to the release area up to the autumn of the following year, whereas those released in the 1st and 2nd quarter are already recaptured at an average distance of 80 miles from the release area. This pattern is apparent in both male and female plaice.

The dispersion rates estimated from the quarterly recapture patterns indicate a wide variability between the different quarterly releases. There appears to be a slight tendency for the dispersion rate to peak in quarter 5 corresponding to the spawning period. The trend over time of the total distribution area of the recaptures shows a similar pattern as the distance between recapture and release position.

Comparison of the releases in the different quarters is hampered by the unbalanced number of recaptures in the different experiments. In order to explore seasonal patterns in migration parameters further, the recaptures of the different experiments were pooled by the quarter of the year. The results are plotted in Figure 3.1.3.2 and show that the seasonal pattern already vaguely apparent in the disaggregated data, is revealed more clearly in the pooled data. It also allows us to compare the differences between males and females. The average distance between recapture and release position tends to peak in the 1st quarter in the first and second year after tagging and does not indicate a difference between the sexes. The average dispersion rate of male and female shows a surprisingly consistent pattern with a peak in the 1st quarter and a generally lower level 2nd to 4th quarter. No clear difference between male and female emerges, except that the male shows a higher dispersion rate in the year after release. The increase in the size of the distribution area does not appear to be different between male and females. The increase in the size of the distribution area is relatively small in the year of release and becomes only substantial just prior to the spawning season in the first year after release.

3.2. Relations between nursery grounds and spawning areas

3.2.1. Origin of plaice in spawning areas

Table 3.2.1.1. gives the number of recaptures n_{ij} in the different spawning areas i from nursery area j in the first quarter. The contribution of the different nursery grounds to the recaptures on a spawning area in the first quarter was calculated according to formulae 2.6.3 and 2.6.4.

Table 3.2.1.2. presents the results (in percentages) and show that for instance the spawning area in the German Bight receives in the first quarter its recruits mainly from the Sylt nursery area (80%), with a minor contribution of Hvide Sande (10%), Norderney (5%) and the Waddensea 5%. The Southern Bight spawning ground receives 58% of its recruits from the Wadden Sea. However, also the nursery grounds in the eastern North Sea contribute 24%. Recruitment to the Southern Bight spawning from the UK coast is negligible (4%). The spawning grounds in the western North Sea (Flamborough) are supplied for 78% of recruits by the nursery grounds along the UK coast (Wash, Thames estuary and Rye Bay), while only 22% originates from the continental coast, in particular from the nursery areas in the German Bight. (Norderney).

The spawning areas in the English Channel receives a substantial proportion of its recruits from the nursery grounds in the North Sea and only a minor proportion from nursery areas in the Channel itself. Division VII d receives 57% and division VII e receives 56% from the North Sea, in particular from the western Waddensea and the Scheldt estuary.

The North Sea nurseries also indirectly feed the UK North Sea coast. Since eggs and larvae spawned from these North Sea recruits in the eastern Channel, subsequently drift onto the English east coast nurseries and juveniles also move from the channel to the English east coast. Consequently the continental North Sea nurseries can be seen to have an important influence directly on the Channel but also indirectly on the UK North Sea coastal areas.

For completeness the information for the other quarters is also given in Table 3.2.1.2.

3.2.2. The contribution of a nursery area to different spawning areas

In the above section the recaptures made in a spawning area were analysed for the contribution by the different nursery areas. To answer the question how the recruitment from a particular nursery ground is partitioned over the different spawning areas, we have to take account of the differences in fishing effort. Information on the distribution of fishing effort was available for the North Sea but not for the English Channel.

In order to estimate the contribution of a nursery area to the different spawning areas the observed numbers of recaptures were weighted over the fishing effort by spawning area according to formulae 2.6.5 and 2.6.6, and standardized to a column total of 100. Table 3.2.2.1 presents this information and shows for instance that 11% of the plaice tagged in the eastern Wadden Sea recruit to the German Bight, 23% to the Transition Area and 57% to the Southern Bight. The plaice tagged in the western Wadden Sea provide only 2% of the recruits to the German Bight, 15% to the Transition Area and 80% to the Southern Bight.

Data for the other quarters are also given in Table 3.2.2.1.

3.3. Movement of plaice between different management areas

Three different plaice management areas were considered in this report: the North Sea (IV), the Eastern English Channel (VIId) and the Western English Channel (VIIe). The juvenile tagging results indicate that to some extent exchange occurs to adjacent areas as Skagerak/Kattegat (IIIa), VIIh,j,k and the Bristol Channel/Celtic Sea (VIIIf,g). However since no information on juvenile plaice tagging experiments from these

areas were available to the Study Group, the relationships between these areas and those considered by the Study Group could not be quantified. Since significant nursery areas are known in IIIa and there are no natural physical barriers between the Skagerak area and the North Sea, the lack of information from IIIa is the most prominent.

3.3.1 Origin of plaice in Management areas

The origin of the recaptures by management area was analysed for each quarter of the year separately based on the results presented in Table 3.2.2.1 and discussed in section 2.2.1. Table 3.3.1.1 shows the summed contribution of the nursery areas in the different management areas to the recaptures made in these management areas. This table gives the results for the total year and the separate quarters. The data for the total year indicate that the recruitment from the nursery areas in the North Sea provide almost all recruitment to this area, but also a significant part to the management areas in the English Channel. Inspection of the contributions in the separate quarters does not show a clear difference between the quarters.

3.3.2. Contribution of nurseries to management areas

In order to estimate the contribution of a nursery area to the different management areas information is needed on the relative level of fishing effort in these management areas. No information is available on the demersal fishing hours in the Divisions VIIId and e, but the population assessments carried out for the plaice stock in these areas indicate that the level of fishing mortality is not much different and similar to the North Sea. The proportions of recaptures in the North Sea and Divisions VIIId and e from juvenile tagging experiments carried out in these areas are therefore directly comparable. These proportions are corrected for the different levels of tagging in the various nursery areas and weighted by the power of the nursery areas (see section 2.6). The results are shown in Table 3.3.2.1.

This table shows for instance that 1.4 and 0.4 % of the juvenile plaice tagged in North Sea nurseries is recaptured in Divisions VIIId and e respectively. Under the assumptions made, these percentages can be considered as representative for the part of the North Sea plaice production which leaves the North Sea and contributes to the stocks in the English Channel. From section 3.3.1 it appears that in the English Channel this North Sea contribution represents between 38 and 53% to the stocks present in Divisions VIIId and e respectively (Table 3.3.1.1).

Assessments, carried out by the ICES North Sea Flatfish Working Group (Anon. 1992) indicate an average recruitment level of plaice in the North Sea of 500 million 1-year-old recruits compared to 30 and 5 million in VII d and VII e respectively. The indication by the tagging experiments that 1.4% and 0.4% of North Sea plaice migrates to VII d and e which constitute 38% and 53% of the local stocks correspond with estimates of recruitment in VII d and e of 18.4 and 3.5 million respectively, which is less than a factor 2 different from the Flatfish Working Group estimates.

This result must be considered as remarkably good given the uncertainties in the assessments by the Flatfish Working Group, especially in the Channel. Further it must be considered that the recent time periods over which the FWG calculate average recruitment only partially overlap the period over which the tagging experiments were carried out. Also the assumptions made by this Study group, concerning factors influencing the estimates, such as fishing mortality in the three areas and nursery power, are rather crude, incomplete and preliminary.

4. Management considerations

The results of the tagging experiments have some important implications for the management of the plaice in the North Sea and the Channel.

1 - the recruitment from the nursery grounds of the plaice box (continental coast of the North Sea) will enhance the plaice stock in the southern and eastern North Sea , but not directly in the western North Sea.

2.- the plaice population in VIId and VIIe receive a substantial proportion of their recruitment from the North Sea nursery areas and the plaice box, therefore, is expected to enhance the level of recruitment in the Channel.

5. Recommendations

The covering of nursery areas by tagging experiments in on juvenile plaice shows gaps in Danish coastal areas (Jammer Bight, Skagerak and Kattegat) and eastern Scottish coastal waters. Tagging experiments together with the analysis of historic tagging data in these areas should be carried out in order to provide information on the importance of these areas to the recruitment in the North Sea.

The preliminary analysis on plaice tagging data in nursery areas is based on a subset of historical data, which is available in a computerized data base. More historical experiments can be made available in future.

Estimates of the "nursery power" of nursery areas, presently not available from certain areas as Jammer Bight, Skagerak and Kattegat should be made available from survey data.

Adequate effort distribution data of the commercial fleets are required, especially in the English Channel, in order to be able to calculate the contribution of recruits from a particular nursery area to several spawning populations and management areas.

Effort distribution data are also required to estimate the bias in the dispersion parameters caused by the pattern of effort distribution.

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Table 2.1.1. Fish conditions on release in relation to recapture based on fished released at <25 cm in the UK experiments in the period 1980-1982.

		Plaice numbers		
Symtom	Score	Numbers released	Numbers recaptured	% Recaptured
Skin damage:				
nil	1	1314	502	38.2
slight	2	1748	664	38.0
moderate	3	307	84	27.4
Skin damage:				
lively	1	3110	1175	37.8
sluggish	2	259	75	29.0
Skin damage x Liveliness				
1	1	1285	494	38.4
2	1	1559	600	38.5
3	1	266	81	30.5
1	2	29	8	37.6
2	2	189	64	33.8
3	2	37	3	8.1

Table 2.2.1.1 Length distribution at tagging and recapture

A: Length distribution at tagging

Release area:															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
length cm															
10					5	7		1	0	4	1	0	1		
11	1			4	37	37	1		0	17	1	0	1		
12	10			42	206	148	12	2	22	103	18	2			
13	18	3		140	538	395	59	7	25	182	28	11	7		
14	26	20		610	852	528	313	20	40	199	31	50	31		
15	85	94		1272	1449	665	589	29	81	219	53	76	62		1
16	156	264	5	1541	2089	820	779	54	126	242	65	111	83	2	7
17	247	373	29	1347	2659	871	760	108	143	282	69	78	87	14	4
18	369	385	105	1017	2525	875	723	158	126	361	84	71	93	21	13
19	518	477	148	744	2082	852	733	200	78	416	60	68	146	64	13
20	675	586	169	308	1816	838	672	187	48	394	64	43	166	71	20
21	815	655	140	151	1450	814	578	187	19	424	79	16	214	77	27
22	722	448	59	45	1106	736	507	170	13	404	123	16	261	94	19
23	515	309	27	6	871	673	428	128	2	441	138	10	276	68	29
24	265	179	44	5	650	550	363	88	1	400	157	18	296	89	29
25	243	137	26	2	369	472	292	62	0	263	87	9	265	89	32
26	205	108	31	2	132	384	224	48	0	177	87	20	324	71	23
27	219	121	15		80	304	158	26	0	152	26	22	228	60	25
28	139	91	10		52	297	97	23	0	100	28	17	190	54	15
29	142	70	1		23	187	64	16	0	83	17	13	124	33	14
30	81	60	1		15	136	38	14	0	55	8	9	66	27	16
31	31	51			2	81	22	11	0	46	14	9	52	30	21
32	11	23			5	50	13	3	0	33	5	5	40	15	10
33	7	21				33	6	2	0	17	5	9	28	19	9
34	6	14				21	3	3	0	16	1	3	27	17	11
35		9				26	2	0	0	14	2	1	35	17	8
36	1	14			2	16	1	2	0	7	1	3	30	11	7
37	1	5				9		1	0	5	0	0	17	8	6
38		5				9	1	1	0	3	0	0	16	4	3
39	1	7				5			0	4	0	0	11	8	4
40	1	2				1			0	1	0	1	12	3	5
41	1	4				1			0	1	0	0	10	2	4
42		1				4			0	1	0	1	3	1	3
43		3				2			0	0	0	0	5		1
44		1				4	1		0	0	0	0	7	1	1
45						6			0	0	0	0	5	3	1
46						3			0	1	0	0	6	1	
47		1				1			0	0	0	0	3		
48		1							0	0	0	0	1		1
49						2			0	0	0	0	3		1
50 +	1	1			4	4			0	0	0	0	9	1	
unknown		1	3	1	18	20	82	45					15		
Total	5512	4544	813	7237	19037	10887	7519	1598	724	5067	1252	692	3256	975	383
<25 cm rel.4422	3794		729	7233	18353	8829	6599	1339	724	4088	971	570	1724	500	162

B: Length distribution of all recaptures

Release area:															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
length cm															
10										1					
11					4	3	1			2					
12				5	22	11	1	1	3	24	5				
13				23	78	45	4		4	36	13	1			
14				120	155	68	48	6	10	46	8	8	4		
15				309	304	127	117	8	18	57	22	16	7		
16	4	2		385	424	149	183	10	31	83	37	27	6		
17	1	2	2	355	598	181	178	25	43	95	32	28		1	
18	6	8	9	285	636	203	175	36	44	136	37	22	7	5	1
19	30	16	13	207	645	213	188	38	26	168	26	21	19	12	1
20	50	10	39	101	556	195	198	40	15	147	33	11	16	13	3
21	76	36	22	49	472	192	180	36	6	170	36	8	19	17	4
22	112	24	7	16	407	195	159	37	4	183	57	6	28	18	6
23	69	21	3	3	326	168	178	31	1	184	60	8	37	9	7
24	20	12	9	2	230	137	156	21		197	81	6	29	12	7
25	4	12	4		118	132	121	13		122	45	4	31	20	11
26	6	13	1		75	109	102	13		118	51	16	42	10	6
27	5	14	3		51	65	67	6		90	58	8	30	10	6
28	6	10	1		26	77	50	6		66	44	16	22	14	7
29	16	14			9	37	25	5		48	24	6	12	7	4
30	6	13			10	35	17			25	11	2	9	5	3
31	2	7			1	14	9	3		28	17	6	8	3	8
32	2	1			2	9	6			19	11		5	2	2
33	2	3				7	3	1		11	4	8	5		3
34		2				5	2			11	5	4	5	2	1
35		2				9				4	2	2	8	5	2
36	1	1			1	3		1		3	1	2	6	1	2
37		1				3				4			3	2	1
38		2				1				1			1		1
39						2				4				2	1
40	1												1		2
41		2								1			2	1	1
42		1								1					
43		1				2							1		
44							1								
45															
46													1		
47															
48															
49						1							1		1
50+					1										
unknown					8	19	82	45					15		
Total	419	230	113	1860	5159	2418	2251	382	205	2085	720	236	380	171	91

Table 2.2.1.2. Number of plaice <25cm released by nursery area and recapture rates in the first year and total in all years combined.

Release areas		Total Number	Recaptures 1st year ($n_j - n_j^{1+}$)		Total recaptures (n_j)		remaining releases after
#	name	Released (N_j)	-----		-----		1 year in sea (N_j^{1+})
			No	%	No	%	
1	Hvidesande	4422	130	2.9	365	8.3	940 ⁴⁾
2	Sylt	3794	44	1.2	125	3.3	324 ⁴⁾
3	Norderney	729	31	4.3	102	14.0	284 ⁴⁾
4	WaddenSea E	7233	953	13.2	1765	24.4	3328
5	WaddenSea W	18353	3372	18.4	4724	25.7	5253
6	Dutch coast	8829	1359	15.4	1806	20.5	2185
7	Scheldt estuary	6599	1206	18.3	1741	26.4	2028
8	French-Belgian coast	1339	210	15.7	253	18.9	228
9	Wash	724	27	3.7	203	28.0	628
10	Thames	4088	974	23.8	1455	35.6	1351
11	Rye Bay	971	324	33.4	433	44.6	244
12	Poole Bay	570	112	19.6	158	27.7	166
13	Baie de Somme	1724	99	5.7	168	9.7	708
14	Baie de Seine	500	69	13.8	98	19.6	148
15	Baie du Mt St Michel	162	24	14.8	29	17.9	28
		1)	3)		2)		

1) corresponds with release numbers in table 2.1.1.1

2) corresponds with recapture numbers in Appendix I

3) recaptures in the 1st year differ from recaptures in the first 4 quarters in Appendix I since they are calculated separately as recaptures >12 months in sea

4) numbers have been changed in order to match with 25% total recaptures

Table 2.2.1.3. Percentage recapture values for each release area of plaice (<25 cm at release) by years after release.

Release areas		% recaptures in quarters after release quarter				
#	name	0-3	4-7	8-11	11-15	16+
1	Hvidesande	31	32	28	7	0
2	Sylt	23	37	22	10	7
3	Norderney	28	33	21	16	3
4	WaddenSea E	45	35	14	3	2
5	WaddenSea W	64	28	5	1	1
6	Dutch coast	71	22	4	1	+
7	Scheldt estuary	52	38	8	1	1
8	French-Belgian coast	79	15	3	2	1
9	Wash	8	33	22	15	21
10	Thames	58	29	8	3	3
11	Rye Bay	65	24	6	2	3
12	Poole Bay	61	34	4	1	1
13	Baie de Somme	53	30	9	4	3
14	Baie de Seine	67	18	7	3	4
15	Baie Mont St Michel	83	13	3	0	0

Table 2.3.1.1. Production of 1-group plaice along the continental coast of the North Sea (from van Beek et al. 1990).
(area codes refer to RIVO otolith sampling areas)

Area	#	Surface area	Density	Production	Total production	%
French/Belgium coast					959	0.7
	400	2058	0.466	959		
Scheldt estuary					7181	5.4
	401	1732	3.162	5477		
	634	220	6.781	1492		
	637	304	0.699	212		
Dutch coast					6261	4.7
	402	2323	1.061	2465		
	403	1050	3.615	3796		
Wadden Sea west					25623	19.3
	404a	1254	8.751	10973		
	610	571	6.826	3898		
	612	47	7.650	360		
	616	366	27.598	10101		
	617	91	3.205	292		
Wadden Sea east					11567	8.7
	404a	1254	8.751	10973		
	618	60	1.214	73		
	619	50	0.566	28		
	620	268	1.836	492		
Norderney					11626	8.7
	405	1253	9.279	11626		
Sylt					69348	52.3
	406	4513	3.873	17479		
	407	2118	24.490	51870		

a #404 was allocated for 50% to the western and 50% to the eastern Wadden Sea.

Table 2.3.1.2. Production of 0-group plaice along the UK coast of the North Sea and VIId (revised from Millner *et al.* 1988; Millner and Whiting, 1990).

Area #	Surface area	Production Index	%
N E Coast + Scotland	> 1000	50	1.0
Humber Wash	4247	2968	57.3
Thames	2748	1536	29.7
Rye Bay	2005	475	9.2
Poole	1499	145	2.8

Table 2.3.1.3. Production of 2-group plaice in VIId from beam trawl survey data. Catch rates are mean numbers per 30 minutes per 4m beam trawl averaged over all stations in a rectangle over years 1988-91

Rectangle	Mean catch rate	Allocation for nursery area		Production index
30E8	0.83	0.83	Poole Bay	2.79
30E9	1.96	1.96		
30F0	8.48	8.48	Rye Bay	10.48
30F1	4.90	{ 2.0		
		{		
		{ 2.9		
29F1	5.9	5.9	Baie de Somme	9.11
29F0	0.6	{ 0.3		
		{		
		{ 0.3		
28E9	1.10	1.10		
28E8	1.36	1.36	Baie de Seine	3.89
27E9	1.13	1.13		
27E8	no data	est 1.50	Baie du	1.50
28E7	no data		Mt St Michel	

Table 2.3.1.4. Calculation of the power of the nursery areas in the North Sea and English Channel from the surface area and the density of juvenile plaice recorded during different pre-recruit surveys. Column A gives production figures for 1-group along the continental coast from Table 2.3.1.1. and for 0-group along the UK coast. Column B gives the relative nursery power within the North Sea. Column C gives abundance estimates of 2-group plaice in the nursery areas in the Channel which, are standardized to the North Sea level by the production values for the two nursery areas common to both series: Rye Bay and Poole Bay. Column D gives the final estimate of the relative power of the different nursery areas. For Hvide Sande and Baie de Mont Saint Michel production was assumed).

Release areas	A	B	C	D
1 Hvide Sande)*	34674	18.66		18.15
2 Sylt	69348	37.32		36.30
3 Norderney	11626	6.26		6.09
4 WaddenSea E	11567	6.22		6.05
5 WaddenSea W	25623	13.79		13.41
6 Dutch coast	6261	3.37		3.28
7 Scheldt estuary	7181	3.86		3.76
8 French-Belgian coast	959	0.52		0.50
Sum	167239	90.0		
UK NE coast	50	0.11		}
9 Wash	2968	6.52		6.45}
10 Thames	1536	3.37		3.28
Sum	4554	10.0		
Sum North Sea	-	100.0	-	97.27
11 Rye Bay	475	1.04	10.48	1.01
12 Poole Bay	145	0.32	2.79	0.31
13 Baie de Somme	-	0.91	9.11	0.88
14 Baie de Seine	-	0.39	3.89	0.38
15 Baie Mont St Michel)*	-	0.15	1.50	0.15
Sum Channel	-	2.80	-	2.73
Sum North Sea + Channel	-	-	-	100

Table 2.4.1. Relative index of fishing effort (%) by quarter and sub-area in the North Sea.

	Q1	Q2	Q3	Q4	Total year
Moray Firth	0.16	0.14	0.13	0.15	0.58
Flamborough	3.15	4.43	3.94	3.49	15.01
Fisher Bank	1.97	4.42	4.87	2.97	14.23
German Bight	7.65	7.04	7.80	6.12	28.61
Transition Area	5.54	5.57	5.48	4.70	21.29
Southern Bight	4.76	6.69	5.38	3.44	20.27
Total	23.23	28.30	27.60	20.87	100.00

Table 3.1.2.1 Average dispersion rate (a^2 in miles 2 .month $^{-1}$) during the first year after release.

Release Area	a^2	N
North Sea		
continental coast	169	6203
UK coast	278	804
English Channel		
Rye Bay (VIId)	133	275
Pool Bay (VIId)	21	94
French coast VIId	60	178
French coast VIIe	198	32

Table 3.2.1.1 Number of recaptures >12 months in sea by subarea and release area

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Sum of
	Hvide Sande recaptures	Sylt	Nord- emey	Wad east	Wad west	Dutch coast	Scheldt estuary	4 C Dover	Wash	Thames estuary	7 D Rye	7 D Poole	7 D B/Somme	7 D B/Seine	7 E B/Michel	
1st quarter (spawning period)																
Skag/Kat	1			3	1											5
Fish.B	15	2		3						3						23
Ger.Bight	7	10	3	25	8	1	3									57
Transit	1		1	38	46	9	4		2	7						108
Flam			2	3	5	2	1		19	15	1					48
South B	4	1	4	80	206	42	56	3	1	13						410
VIIId				2	10	5	14	3	1	2		2	10	4		62
VIIe					4	1	3			1	1	2	2		1	11
VIIj													1			1
total	28	13	10	154	280	60	81	6	23	41	11	4	13	4	1	730
no position	4	3	4	7	25	6	6	0	19	36	6	2	0	0	0	118
2nd quarter																
Skag/Kat	3															3
Fish.B	52	13	1	4	5		3			3						81
Ger.Bight	14	11	12	98	39	5	1		1	2						183
Transit	6		3	48	120	35	8			2	1					223
Morray							2		1	1						4
Flam			2	8	4	2			27	27	3					73
South B	1	1	2	60	293	117	157	6	1	41						679
VIIId				1	12	4	12	3		18	27	19	17	6	1	120
VIIe					3	1	8			3		1	6	4	2	28
total	76	25	20	219	476	164	191	9	30	97	31	20	23	10	3	1394
no position	17	4	6	36	35	1	11	0	14	39	3	2	0	0	0	168
3rd quarter																
Skag/Kat																0
Fish.B	39	8	1	6	4		2			3						63
Ger.Bight	14	7	10	139	26	5	5			2						208
Transit	1	6	3	39	81	34	10	1	2	11	2					190
Morray					1				1	1						3
Flam		1		8	9	5	4		32	33	1					93
South B				17	159	71	90	8		58	4					407
VIIId					3	2	2	4		14	33	8	9	6		81
VIIe					1	1	4	2		5	1		8		1	23
VIIh														1		1
total	54	22	14	209	284	118	117	15	35	127	41	8	17	7	1	1069
no position	10	1	8	27	34	7	14	0	14	42	3	0	0	0	0	160
4th quarter																
Skag/Kat		1														1
Fish.B	17	3		4	1					2						27
Ger.Bight	14	5	1	66	16	4	2		1	3						112
Transit	1	2	1	25	46	11	8	1		10	1					106
Morray																0
Flam			1	7	5	1	2	1	21	31						69
South B	1	1	1	39	114	65	84	10		23						338
VIIId					4	1	4	1		9	7	7	14	4		51
VIIe							2			1		3	2	1		9
VIIh																0
VIIIf,g										1						1
total	33	12	4	141	186	82	102	13	22	80	8	10	16	5	0	714
no position	13	1	5	19	31	11	13	0	19	18	6	0	0	0	0	136
Total year																
Skag/Kat	4	1		3	1											9
Fish.B	123	26	2	17	10		5			11						194
Ger.Bight	49	33	26	328	89	15	11		2	7						560
Transit	9	8	8	150	293	89	30	2	4	30	4					626
Morray					1		2		2	2	0					7
Flam		1	5	26	23	10	7	1	99	106	5					283
South B	6	3	7	196	772	295	387	27	2	135	4					1834
VIIId				3	29	12	32	11	1	43	76	36	50	20	1	304
VIIe					8	3	17	2		10	2	6	18	5	5	75
VIIh														1		1
VIIIf,g										1						1
VIIj													1			1
total	191	72	48	723	1226	424	491	43	110	345	91	42	69	26	5	3894
no position	44	9	23	89	125	25	44	0	66	135	18	4	0	0	0	582

Table 3.2.1.2. Origin of plaice in spawning areas in percentages

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	Hvide Sande	Sylt	Nord-emej	East Wadsea	West Wadsea	Dutch coast	Scheldt estuary	FR/Belg Coast	Wash	Thames estuary	7 D Rye	7 D Poole	7 D B/Somme	7 D B/Seine	7 E B/St.Mt
1st quarter (spawning period)															
Skag/Kat	70.7			20.0	9.3										100
Fish.Bight	55.0	42.6		1.0						1.4					100
Ger.Bight	9.7	80.4	4.6	3.3	1.5	0.1	0.4								100
Transit	6.8		7.5	24.2	41.1	4.7	2.6		7.2	5.9					100
Moray Fyrth															-
Flamborough			14.2	1.8	4.2	1.0	0.6		64.7	12.1	1.4				100
South Bight	6.6	9.6	7.4	12.5	45.3	5.4	8.9	0.6	0.9	2.7					100
VIIId				2.5	17.2	5.1	17.5	4.4	6.9	3.3	25.2	2.5	8.4	6.9	100
VIIe					28.8	4.2	15.7			6.9	11.7	10.5	7.0		15.1
VIIh															-
VIIIf.g															-
VIIa															-
VIIj													100.0		100
2nd quarter															
Skag/Kat	100.0														100
Fish.Bight	39.9	57.9	0.9	0.3	0.5		0.2			0.3					100
Ger.Bight	13.1	59.8	12.5	8.6	4.8	0.4	0.1		0.5	0.2					100
Transit	17.8		9.9	13.4	47.1	8.1	2.3			0.7	0.6				100
Morray							22.6		62.6	14.8					100
Flamborough			10.1	3.4	2.4	0.7			65.1	15.4	2.9				100
South Bight	1.2	6.9	2.6	6.7	46.1	10.8	18.0	0.8	0.6	6.1					100
VIIId				0.6	10.2	2.0	7.4	2.2		14.6	37.2	11.8	7.0	5.1	1.8
VIIe					12.4	2.4	24.1			11.8		3.0	12.1	16.7	17.4
VIIh															-
VIIIf.g															-
VIIa															-
VIIj															-
3rd quarter															
Skag/Kat															-
Fish.Bight	44.2	52.6	1.3	0.6	0.6		0.2			0.4					100
Ger.Bight	16.8	48.7	13.3	15.7	4.1	0.5	0.6			0.3					100
Transit	1.7	57.9	5.5	6.1	17.8	4.4	1.6	0.2	1.8	2.3	0.7				100
Morray					16.7		0.0		67.3	15.9					100
Flamborough		19.4		2.5	4.0	1.3	1.3		56.9	13.9	0.7				100
South Bight				3.5	45.9	12.0	18.9	2.0		15.9	1.9				100
VIIId					3.3	1.3	1.6	3.7		14.4	58.1	6.4	4.8	6.5	100
VIIe					5.4	3.2	15.6	9.2		25.6	8.7		21.0		11.3
VIIh														100.0	100
VIIIf.g															-
VIIa															-
VIIj															-
4th quarter															
Skag/Kat		100.0													100
Fish.Bight	48.3	49.5		1.1	0.4					0.7					100
Ger.Bight	26.0	53.9	2.1	11.5	3.9	0.6	0.4		1.0	0.7					100
Transit	3.9	45.8	4.4	9.3	24.0	3.4	3.0	0.4		5.0	0.8				100
Morray															-
Flamborough			6.2	3.7	3.7	0.4	1.1	0.6	62.5	21.8					100
South Bight	2.3	13.2	2.5	8.4	34.4	11.5	18.4	2.6		6.6					100
VIIId					9.0	1.3	6.6	1.9		19.4	25.7	11.6	15.4	9.1	100
VIIe							22.1			14.5		33.4	14.8	15.3	100
VIIh															-
VIIIf.g										100.0					100
VIIa															-
VIIj															-
Total year															
Skag/Kat	39.1	56.8		2.8	1.3										100
Fish.Bight	43.8	53.7	0.8	0.6	0.5		0.2			0.5					100
Ger.Bight	15.5	60.6	9.1	9.8	3.7	0.4	0.3		0.3	0.3					100
Transit	6.7	34.7	6.6	10.6	28.9	5.2	2.2	0.2	1.6	2.7	0.6				100
Moray Fyrth					8.1		11.7		64.9	15.3					100
Flamborough		6.8	6.5	2.9	3.6	0.9	0.8	0.1	61.6	15.6	1.3				100
South Bight	2.6	7.4	3.3	7.9	43.7	9.8	15.9	1.3	0.5	7.3	0.4				100
VIIId				0.7	9.5	2.3	7.6	3.1	1.3	13.4	40.5	6.2	8.0	6.6	0.7
VIIe					12.7	2.8	19.5	2.7	0.0	15.1	5.1	6.9	13.9	8.0	13.3
VIIh														100.0	100
VIIIf.g										100.0					100
VIIa															-
VIIj													100.0		100

Table 3.2.2.1 Contribution of a plaice nursery area to different spawning areas in the North Sea

	1	2	3	4	5	6	7	8	9	10
	Hvide Sande	Sylt	Nord-erney	Wad east	Wad west	Dutch coast	Scheldt estuary	4 C Dover	Wash	Thames estuary
1st quarter (spawning period)										
Fish.B	79.7	40.1	0.0	5.2	0.0	0.0	0.0	0.0	14.8	0.0
Ger.Bight	9.6	51.6	19.1	11.1	1.9	1.2	3.0	0.0	0.0	0.0
Transit	1.9	0.0	8.8	23.3	15.3	14.5	5.5	5.5	12.3	0.0
Morray	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flam	0.0	0.0	31.0	3.2	2.9	5.7	2.4	91.4	46.3	100.0
South B	8.8	8.3	41.0	57.1	79.8	78.7	89.2	3.2	26.6	0.0
Sum	100	100	100	100	100	100	100	100	100	100
2nd quarter										
Fish.B	78.5	63.2	7.0	2.6	1.6	0.0	1.7	0.0	3.3	0.0
Ger.Bight	13.3	33.6	52.9	40.7	7.6	2.8	0.4	1.0	1.4	0.0
Transit	7.2	0.0	16.7	25.2	29.5	25.2	3.6	0.0	1.7	21.0
Morray	0.0	0.0	0.0	0.0	0.0	0.0	35.7	52.8	34.5	0.0
Flam	0.0	0.0	14.0	5.3	1.2	1.8	0.0	45.0	29.5	79.0
South B	1.0	3.2	9.3	26.2	60.1	70.1	58.7	1.1	29.6	0.0
Sum	100	100	100	100	100	100	100	100	100	100
3rd quarter										
Fish.B	80.2	42.2	10.1	3.9	1.4	0.0	2.0	0.0	2.1	0.0
Ger.Bight	18.0	23.1	63.0	56.8	5.7	3.0	3.1	0.0	0.9	0.0
Transit	1.8	28.2	26.9	22.7	25.3	29.1	8.8	2.3	6.8	26.8
Morray	0.0	0.0	0.0	0.0	13.2	0.0	0.0	47.5	25.9	0.0
Flam	0.0	6.5	0.0	6.5	3.9	6.0	4.9	50.2	28.2	18.6
South B	0.0	0.0	0.0	10.1	50.5	61.9	81.1	0.0	36.3	54.6
Sum	100	100	100	100	100	100	100	100	100	100
4th quarter										
Fish.B	67.2	39.7	0.0	4.4	0.7	0.0	0.0	0.0	3.6	0.0
Ger.Bight	26.9	32.1	17.1	35.0	5.5	2.9	1.2	2.6	2.6	0.0
Transit	2.5	16.7	22.3	17.3	20.7	10.6	6.3	0.0	11.3	100.0
Morray	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flam	0.0	0.0	30.1	6.5	3.0	1.3	2.1	97.4	47.1	0.0
South B	3.4	11.4	30.5	36.8	70.0	85.2	90.4	0.0	35.5	0.0
Sum	100	100	100	100	100	100	100	100	100	100
total year										
Fish.B	78.0	51.2	6.7	3.8	1.2	0.0	1.4	0.0	3.9	0.0
Ger.Bight	15.5	32.3	43.2	36.9	5.3	2.6	1.5	0.7	1.2	0.0
Transit	3.8	10.5	17.9	22.6	23.4	21.0	5.6	1.8	7.2	26.2
Morray	0.0	0.0	0.0	0.0	2.9	0.0	13.7	33.2	17.6	0.0
Flam	0.0	1.9	15.8	5.6	2.6	3.3	1.9	63.4	36.0	46.4
South B	2.7	4.1	16.4	31.1	64.6	73.0	75.9	0.9	34.0	27.5
Sum	100	100	100	100	100	100	100	100	100	100

Table 3.3.1.1. Origin of plaice in management areas.
Management areas (A) receive their recruits from nurseries (B)

A management areas	B receives recruits originating from nurseries in management area:			
	North Sea	VIIId	VIIe	total
<i>Total year</i>				
North Sea	99.7	0.3	0.0	100
VIIId	38.0	61.3	0.7	100
VIIe	52.8	33.9	13.3	100
others	98.1	1.9	0.0	100
<i>1st quarter</i>				
North Sea	99.9	0.1	0.0	100
VIIId	57.0	43.0	0.0	100
VIIe	50.6	29.3	15.1	100
others	95.6	4.4	0.0	100
<i>2nd quarter</i>				
North Sea	99.8	0.2	0.0	100
VIIId	37.0	61.3	1.8	100
VIIe	50.8	31.8	17.4	100
others	100.0	0.0	0.0	100
<i>3rd quarter</i>				
North Sea	99.5	0.5	0.0	100
VIIId	24.3	75.7	0.0	100
VIIe	59.0	29.7	11.3	100
others	0.0	100.0	0.0	100
<i>4th quarter</i>				
North Sea	99.9	0.1	0.0	100
VIIId	38.2	62.8	0.0	100
VIIe	36.5	63.5	0.0	100
others	100.0	0.0	0.0	100

Table 3.3.2.1. Contribution of nurseries to management areas.
Nurseries (B) send recruits to management areas (A)

A to: management area	B nurseries in management area		
	North Sea	VIIId send recruits	VIIe
<i>Total year</i>			
North Sea	97.2	9.1	0.0
VIIId	1.4	80.9	20.0
VIIe	0.4	9.3	80.0
others	1.0	0.7	0.0
<i>total</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>
<i>1st quarter</i>			
North Sea	96.6	5.2	0.0
VIIId	2.2	80.2	0.0
VIIe	0.5	13.0	100.0
others	0.7	1.6	0.0
<i>total</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>
<i>2nd quarter</i>			
North Sea	97.3	7.5	0.0
VIIId	1.5	83.6	33.3
VIIe	0.4	8.9	66.7
others	0.8	0.0	0.0
<i>total</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>
<i>3rd quarter</i>			
North Sea	98.6	12.9	0.0
VIIId	0.9	79.6	0.0
VIIe	0.5	6.3	100.0
others	0.0	1.2	0.0
<i>total</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>
<i>4th quarter</i>			
North Sea	95.4	4.9	0.0
VIIId	1.2	82.5	0.0
VIIe	0.2	12.6	0.0
others	3.2	0.0	0.0
<i>total</i>	<i>100.0</i>	<i>100.0</i>	<i>0.0</i>

Figure 2.2.1.1 Plaice tagging exchange format

<u>alphanumeric</u>	1	<u>species</u>
	2	
	3	
exp number	4	
	5	
	6	
	7	
	8	release day
	9	
release month	10	
	11	
	12	release year
	13	
	14	
	15	
<u>tag series</u>	16	
	17	
	18	
	19	
	20	
	21	rel lat degr
	22	
rel lat min	23	
	24	
	25	rel lon degr
	26	
rel lon min	27	
	28	
<u>treatment</u>	29	<u>rel EW code</u>
	30	
	31	
	32	
	33	
	34	
	35	tag number
	36	
	37	
	38	
release length	39	
	40	
	41	
	42	
	43	
	44	<u>rel sex</u>
rel maturity	45	
	46	rel condition
rel pigm	47	
	48	rec length
	49	
	50	
	51	
	52	
<u>recapture sex</u>	53	
	54	rec maturity
birth year	55	
	56	
	57	rec day
	58	
rec month	59	
	60	
	61	rec year
	62	
	63	
	64	
rec lat degr	65	
	66	
	67	rec lat min
	68	
rec lon degr	69	
	70	
	71	rec lon min
	72	
<u>rec EW code</u>	73	
	74	<u>gear</u>
	75	
<u>nationality</u>	76	
	77	
	78	
	79	<u>market</u>
	80	
otolith size	81	
	82	
	83	
	84	L1
	85	

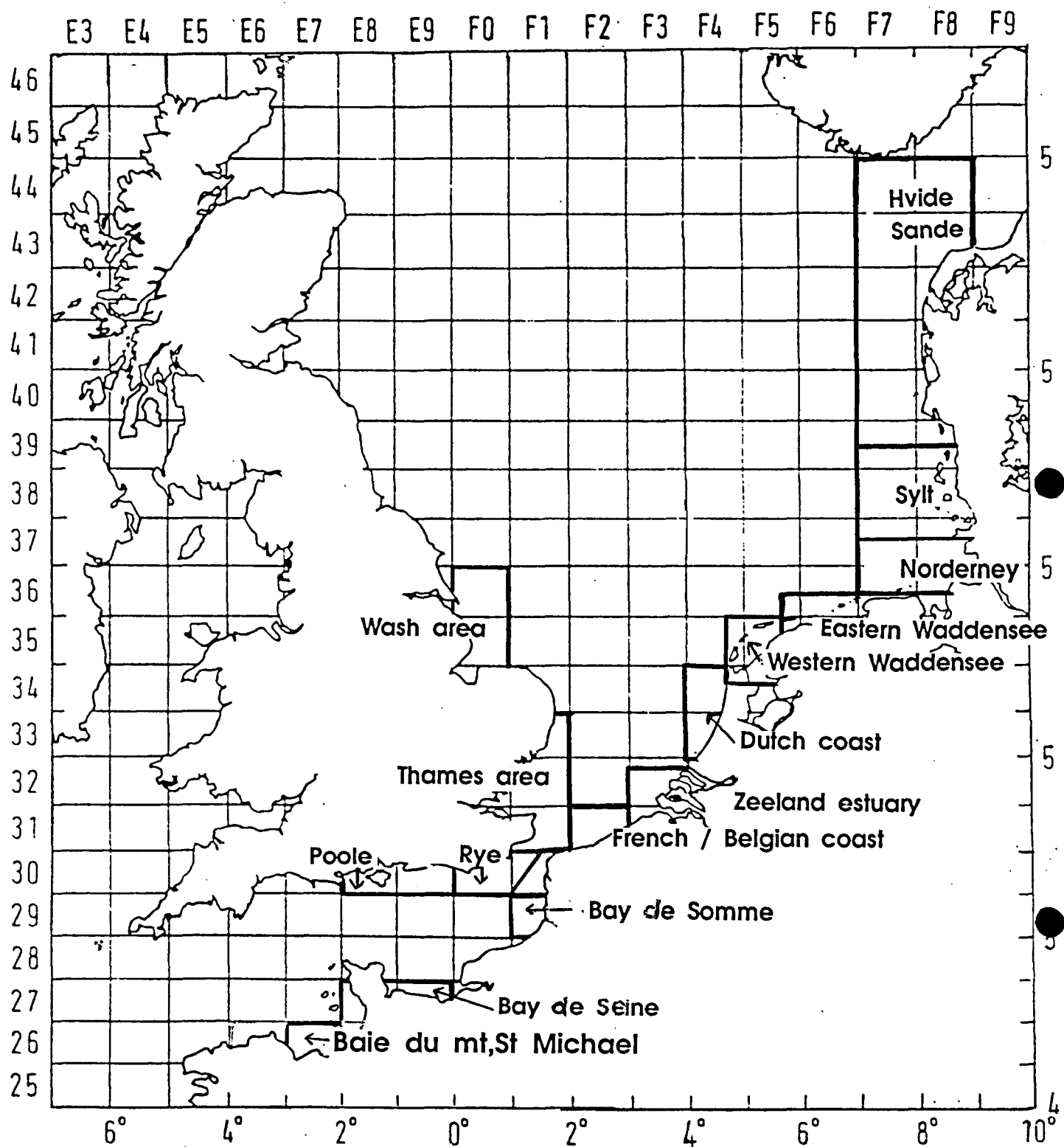


Fig. 2.3.1.1. Division of Plaice nursery areas.

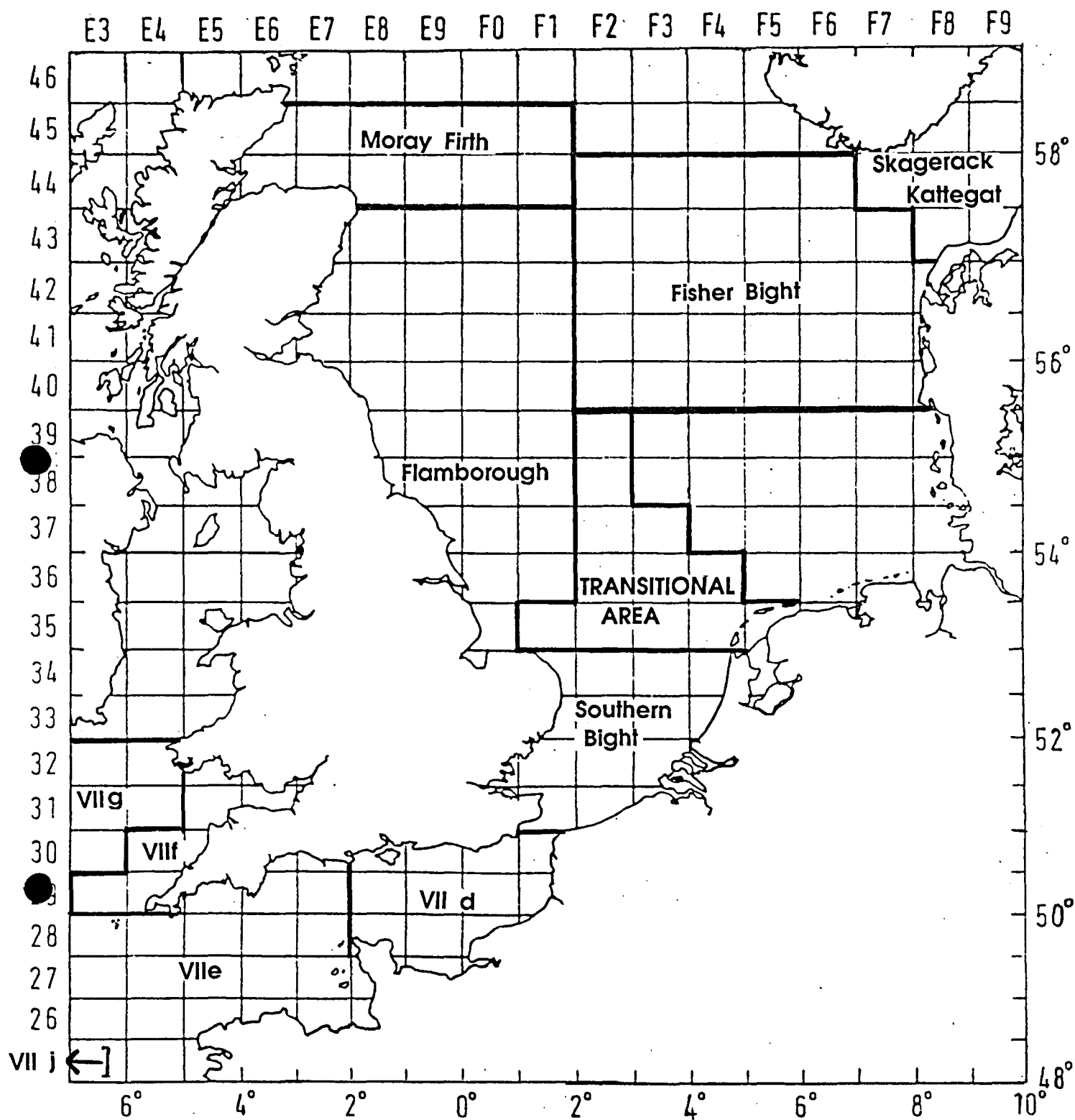


Fig. 2.3.2.1. Division of plaice spawning area

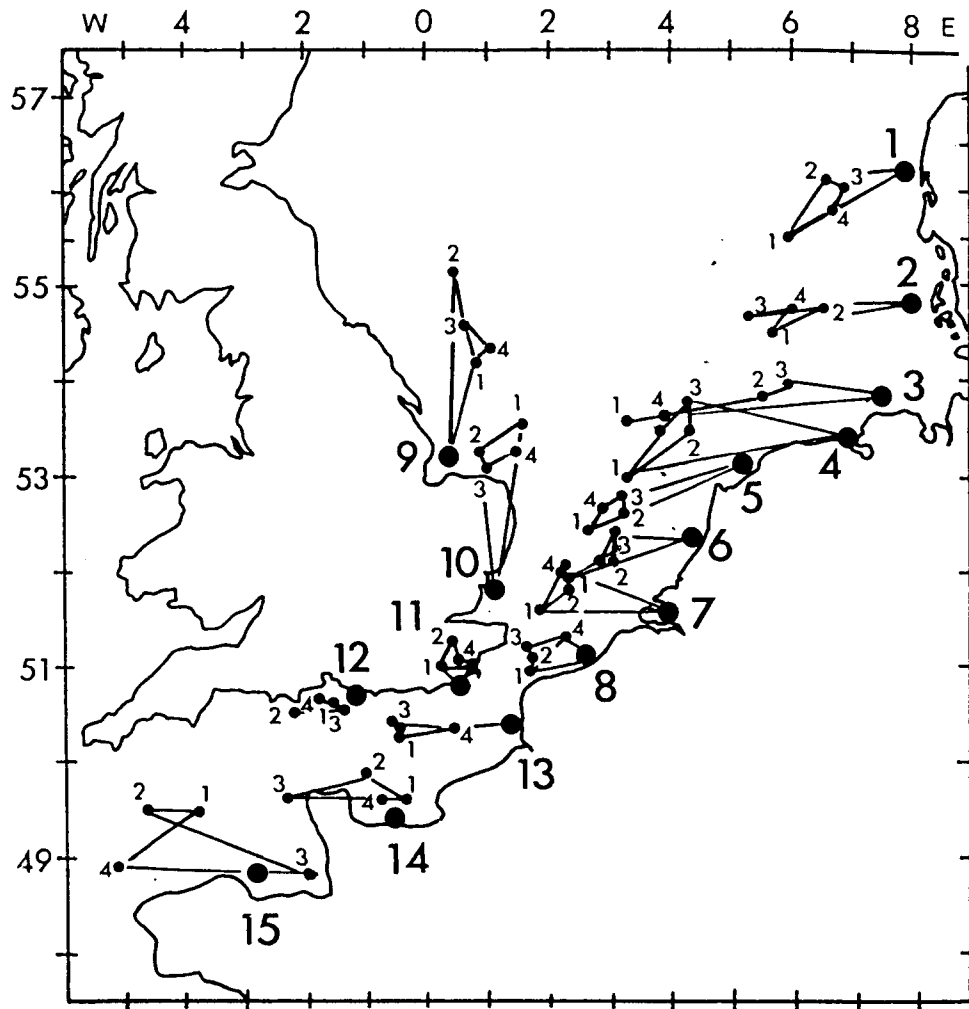


Figure 3.1.1.1. Quarterly centres of distribution of recaptures of plaice tagged in different nursery release areas (recaptures >12 months in sea only)

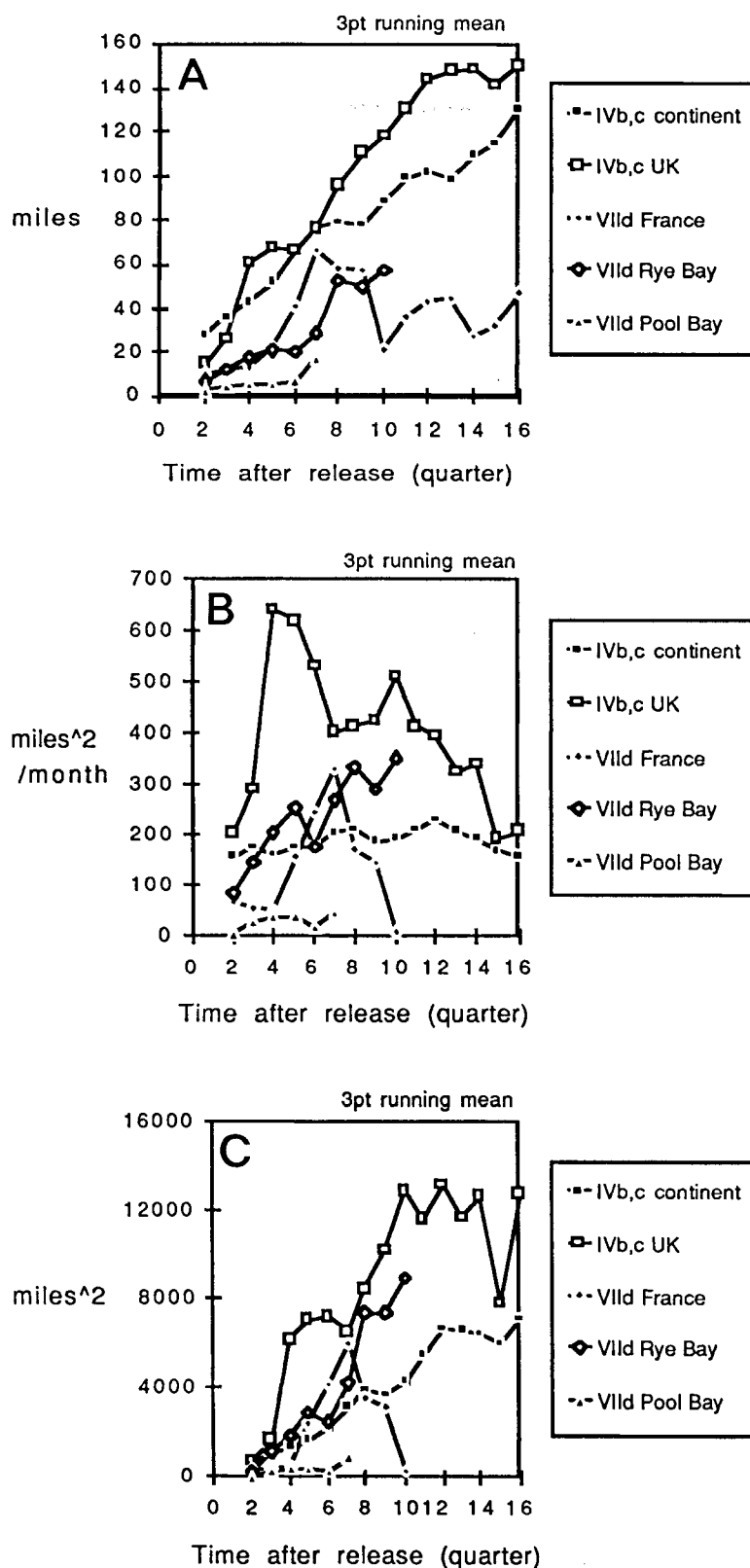


Fig. 3.1.2.1. Migration parameters (3pt running mean) in relation with the number of quarters after release. A. distance from position of release (miles); B - dispersion rate (miles².month⁻¹); C- surface area over which recaptures are distributed.

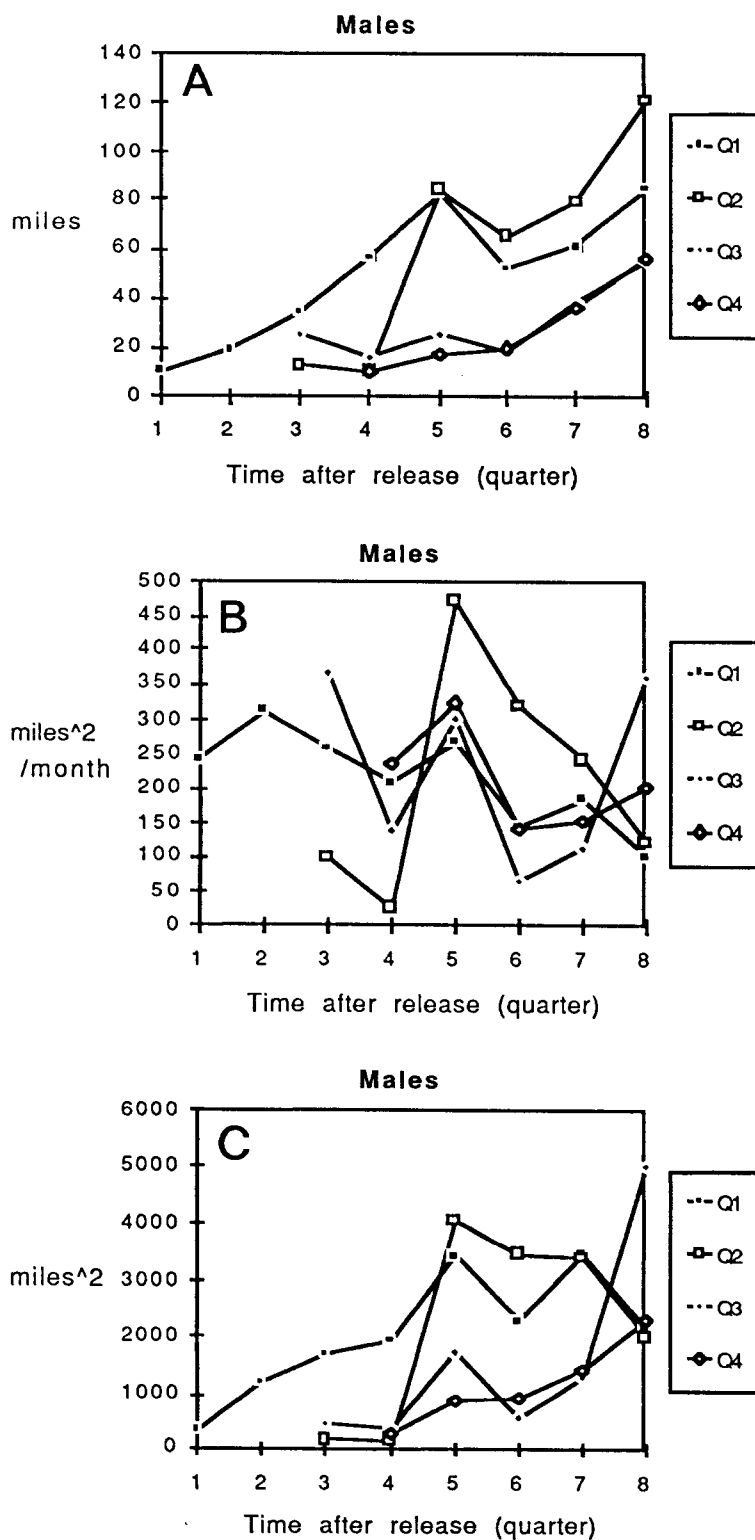


Fig. 3.1.3.1a. Migration parameters of males in relation time after release in absolute quarters for separate experiments carried out in Q1, Q2, Q3 and Q4.

A. distance from position of release (miles); B - dispersion rate (miles².month⁻¹); C- surface area over which recaptures are distributed.

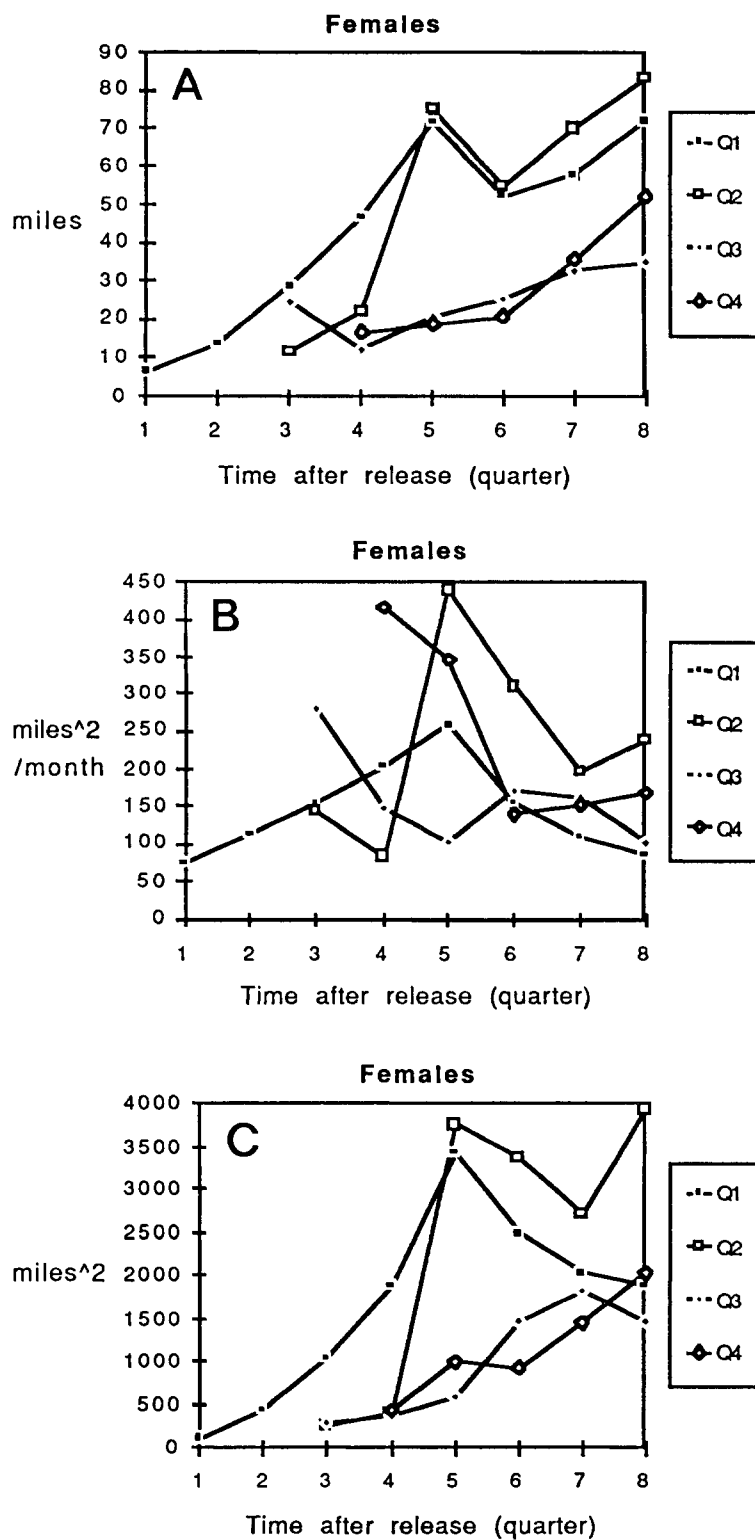


Fig. 3.1.3.1b. Migration parameters of females in relation time after release in absolute quarters for separate experiments carried out in Q1, Q2, Q3 and Q4. A. distance from position of release (miles); B - dispersion rate (miles².month⁻¹); C- surface area over which recaptures are distributed.

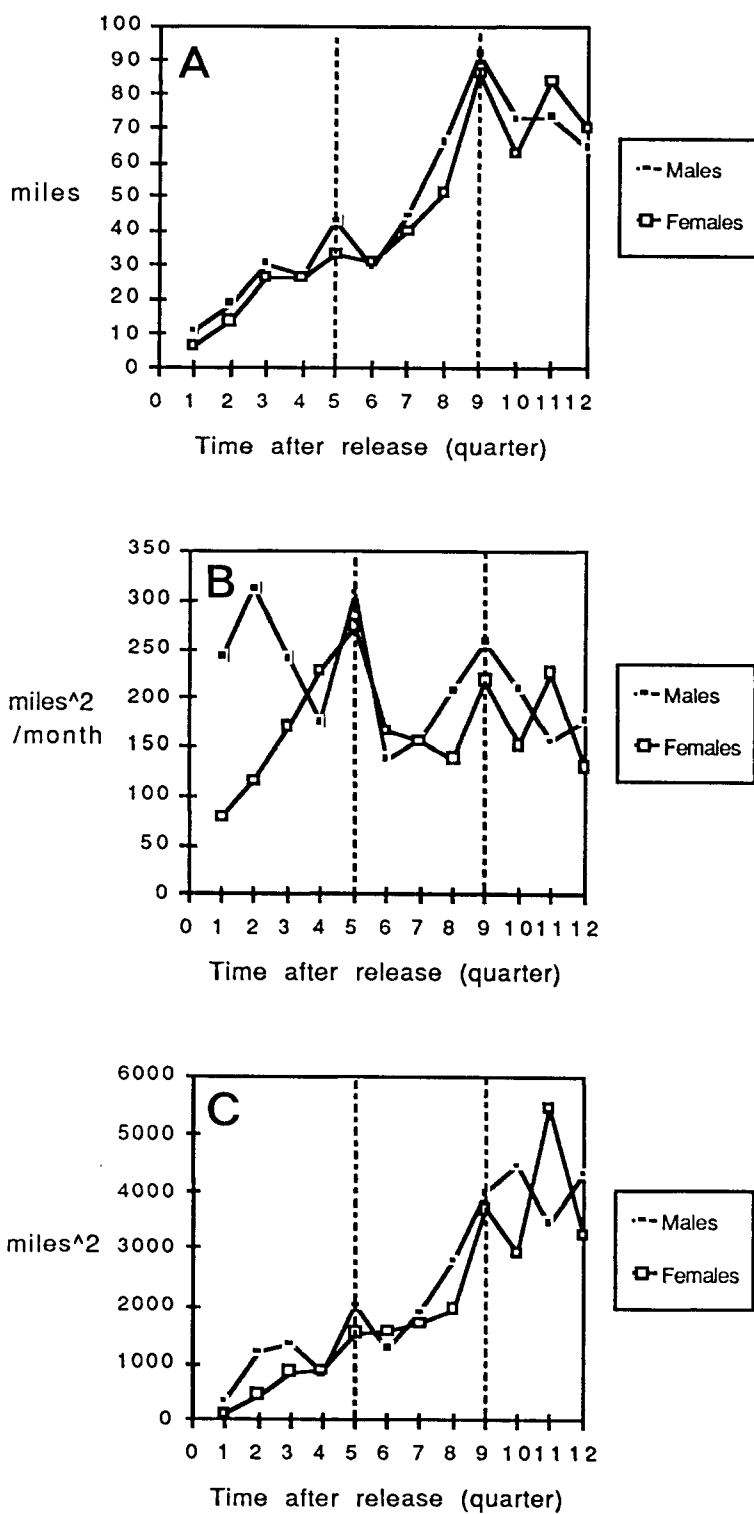


Fig. 3.1.3.2. Migration parameters of male and female plaice in relation time after release in absolute quarters averaged over the separate experiments carried out in Q1, Q2, Q3 and Q4. A. distance from position of release (miles); B - dispersion rate (miles².month⁻¹); C- surface area over which recaptures are distributed.

APPENDIX I

Recaptures by quarter and rectangle

Release Rectangles: REC43F8 REC40F7 (Hvide Sande, 2nd quarter)

year:	0			1				2				3				4	4+	
quarter:	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	4+	Total
Rectangle																		
REC45G1	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	1
REC44F7	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1
REC43F3	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1
REC43F4	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	1
REC43F7	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1
REC43F8	.	1	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	3
REC43F9	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC42F6	.	.	.	.	.	.	.	.	1	1	.	.	.	.	.	.	.	2
REC41F5	.	.	.	1	.	.	.	.	.	1	.	1	.	.	.	.	.	3
REC41F6	.	.	.	.	.	.	.	3	.	.	1	.	1	.	.	.	.	5
REC41F7	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	1
REC41F8	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	1
REC40F3	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	1
REC40F4	.	.	.	.	1	.	.	.	.	1	.	.	.	.	.	.	.	2
REC40F5	.	.	.	.	.	.	.	1	.	1	.	.	.	.	.	.	.	2
REC40F7	.	.	.	.	1	1	1	.	.	4	1	.	3	.	.	.	.	11
REC40F8	.	.	.	.	2	.	.	.	.	1	.	.	.	.	.	.	.	3
REC39F2	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	1
REC39F4	.	.	.	.	1	.	.	1	1	.	.	.	.	.	.	.	.	3
REC39F6	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1
REC39F7	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	1
REC39F8	.	.	.	.	1	.	.	.	3	.	.	.	1	.	.	.	.	5
REC38F2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	1
REC38F5	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	1
REC38F7	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	1
REC37F4	.	.	.	.	.	.	.	1	.	.	1	.	.	.	.	.	.	2
REC37F6	.	.	.	.	.	1	.	.	1	.	.	.	.	.	.	.	.	2
REC37F7	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	1
REC36F2	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	1
REC36F5	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1
REC35F4	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC34F3	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	1
Total	0	1	1	4	8	3	1	8	12	9	3	1	9	2	1	0	0	63
No position	0	0	0	0	2	0	2	0	1	0	1	2	1	1	0	0	0	10

Not used: 2

Release Rectangles: REC40F7 (Hvide Sande, 3rd quarter)

year:	0		1				2				3				4			4+													
quarter:	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Total
Rectangle																															
REC45E6	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC44F2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC44F4	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC44F8	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC44F9	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC43F3	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC43F5	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC43F7	.	.	.	.	.	.	2	1	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	4
REC43F8	.	.	.	1	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2
REC43F9	1	.	.	2	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	4
REC42F5	.	.	.	2	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	4
REC42F6	.	.	.	.	.	1	.	2	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	4
REC42F7	.	.	1	1	2	.	1	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	6
REC42F8	.	.	.	1	2	.	.	2	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	7
REC41F3	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC41F5	.	.	.	1	.	.	1	1	.	.	.	.	1	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	6
REC41F6	.	1	.	.	1	.	.	.	1	2	1	.	.	.	1	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	7
REC41F7	.	.	.	1	.	.	.	1	.	.	.	1	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	6
REC41F8	1	2	4	17	.	.	3	8	2	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	39
REC40F2	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC40F4	.	.	.	.	.	.	.	3	1	1	.	.	.	1	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	6
REC40F5	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC40F6	.	.	1	.	.	.	.	2	2	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	6
REC40F7	4	.	1	16	7	2	.	8	4	2	1	1	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	48
REC40F8	.	.	.	25	.	.	.	2	.	1	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	29
REC39F2	.	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2
REC39F3	.	.	.	1	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2
REC39F4	.	.	.	1	.	.	.	.	2	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	4
REC39F6	.	.	4	.	.	2	.	2	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	10
REC39F7	.	.	.	1	.	1	.	2	1	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	7
REC39F8	1	.	.	1	1	3	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	7
REC38F2	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC38F6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC38F7	.	.	.	.	1	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2
REC38F8	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC37F4	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC37F5	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	2
REC37F6	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC37F7	.	.	.	.	1	.	1	.	.	2	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	5
REC36F5	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC35F2	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC35F4	.	.	.	.	.	.	.	1	.	.	.	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3
REC34F3	.	.	.	.	.	.	1	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2
REC34F4	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC33F3	.	.	.	.	.	.	1	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2
Total	7	3	12	74	16	12	12	43	19	14	7	12	11	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	244	
No position	0	0	1	11	3	3	1	4	4	7	1	11	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48	

Not used: 1

Release Rectangles: REC38F7 (Sylt, 2nd quarter)

year:	0			1				2				3				4	4+	Total
quarter:	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1		
Rectangle																		
REC42F7	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1
REC41F4	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1
REC41G1	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	1
REC40F4	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1
REC40F7	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1
REC39F6	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1
REC38F4	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	1
REC38F6	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC38F7	.	2	.	.	2	.	.	.	1	.	.	.	.	.	.	.	.	5
REC38F8	.	1	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	2
REC37F2	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.	.	2
REC37F4	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1
REC37F7	.	2	2	1	4	1	.	.	1	.	.	.	.	.	.	.	.	11
REC37F8	.	4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	4
REC36F5	.	.	.	.	.	1	.	.	1	.	.	.	.	.	.	.	.	2
REC36F7	.	.	.	.	1	1	.	.	.	.	.	.	.	.	.	.	.	2
REC35F2	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1
REC35F4	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.	.	.	2
REC35F5	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC34F4	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	1
REC33F3	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1
Total	0	9	3	2	11	5	3	1	4	3	1	1	0	0	0	0	0	43
No position	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	3

Not used: 6

year:	0		1				2					3				4			4+	
quarter:	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2			Total	
Rectangle																				
REC44F4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1
REC43F6	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	1	1
REC43F7	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1	1
REC43F8	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1
REC41F6	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	1	1
REC41F7	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	1	1
REC40F2	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.	.	2	2
REC40F3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1
REC40F4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1
REC40F5	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1	1
REC40F6	.	.	.	1	1	1	1	1	.	.	.	1	.	.	.	.	.	.	6	6
REC40F7	1	.	.	1	.	.	1	3	1	1	.	1	.	.	.	.	.	.	9	9
REC40F8	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	1	1
REC39F1	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	1	1
REC39F6	.	.	.	.	.	.	.	1	.	1	1	1	.	.	1	.	1	.	6	6
REC39F7	1	.	.	1	3	1	.	1	.	.	.	.	.	.	.	.	.	.	7	7
REC39F8	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	1	2	2
REC38F6	.	.	.	.	.	.	.	.	.	.	3	.	1	.	1	.	1	.	6	6
REC38F7	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1
REC37F4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1	1
REC37F5	.	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.	.	2	2
REC37F6	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1	1
REC37F7	.	.	.	1	.	.	.	1	.	.	.	.	1	.	.	.	.	.	3	3
REC36F2	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	1	1
REC36F4	.	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.	2	2
REC36F5	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1
REC36F6	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1	1
REC35F5	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1
REC34F2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	1	1
Total	2	0	1	7	5	4	2	10	2	2	5	7	7	0	3	0	7		64	64
No position	0	0	1	1	0	1	1	0	1	0	0	2	0	0	1	0	1		9	9
Not used:	0																			

[illegible]

Release Rectangles: REC37F8 (Norderney 3rd quarter)

year:	0	1				2				3			4			4+	
quarter:	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	Total
Rectangle																	
REC37F5	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC37F7	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC36F3	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1
Total	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3
No position	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Not used: 1

Release Rectangles: REC37F7 (Norderney, 4th quarter)

year:	0	1				2				3			4			4+	
quarter:	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	Total
Rectangle																	
REC43F7	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1
REC40F0	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	1
REC40F4	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	1
REC40F5	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	1
REC39E8	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1
REC39F4	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	1
REC39F8	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	1
REC38F4	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1
REC38F5	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1
REC38F6	.	.	.	1	.	.	.	.	.	.	.	.	.	.	1	.	2
REC38F7	.	.	.	.	.	.	3	.	.	.	.	.	.	.	.	1	4
REC37F1	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	1
REC37F2	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1
REC37F4	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1
REC37F5	.	1	.	.	.	.	.	.	1	.	.	.	.	.	.	.	2
REC37F6	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	1
REC37F7	1	.	.	1	1	.	2	4	.	1	2	.	.	2	.	.	14
REC37F8	.	.	1	.	.	.	1	.	.	.	.	.	.	.	.	.	2
REC36F0	.	.	.	.	.	1	1	.	.	.	.	.	.	.	.	.	2
REC36F2	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	1
REC36F3	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	1
REC36F4	.	.	1	.	.	.	1	.	1	.	.	.	.	.	.	.	3
REC36F5	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC36F6	.	.	.	1	.	1	.	.	1	.	.	.	.	.	.	.	3
REC36F7	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.	2
REC35F3	.	.	.	.	.	.	1	1	.	1	.	.	.	.	.	.	3
REC35F4	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1	.	2
REC34F2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1
REC34F3	.	1	2	1	.	1	.	.	1	.	.	.	1	.	.	.	7
REC34F4	.	.	1	.	.	.	.	.	1	.	.	.	.	.	.	.	2
REC33F3	.	3	.	.	.	.	1	.	.	.	.	.	.	.	.	.	4
REC32F2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1
REC30E9	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
Total	1	7	6	7	2	4	12	6	3	3	4	5	0	2	4	2	71
No position	0	0	3	2	0	3	2	4	2	1	1	2	3	0	3	2	28

Not used: 1

Release Rectangles: REC35F6 REC35F7 (Eastern part of Dutch Waddensea 3rd quarter)

year:	0		1				2				3		4		4+		Total
quarter:	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	
Rectangle																	
REC43F9	.	.	.	1	.	.	2	.	.	.	.	.	.	.	.	.	3
REC42F6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1
REC42F8	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1
REC41F3	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1
REC41F6	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1
REC41F7	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1
REC41F8	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1
REC40F2	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.	2
REC40F4	.	.	.	.	.	.	.	1	.	1	.	.	.	.	.	.	2
REC40F5	.	.	.	.	.	.	.	.	1	.	.	1	.	.	.	.	2
REC40F6	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	1
REC39F1	.	.	.	.	.	.	.	.	.	.	2	3	.	.	1	.	6
REC39F2	.	.	.	.	.	.	.	1	.	1	.	.	.	.	.	2	4
REC39F3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1
REC39F4	.	.	.	.	.	.	.	.	1	2	.	.	.	.	.	.	3
REC39F5	.	.	.	.	.	.	.	.	.	1	1	.	.	.	.	.	2
REC39F6	.	.	.	.	1	.	.	.	.	1	1	.	.	.	.	.	3
REC39F7	.	.	.	2	1	.	.	1	.	.	.	1	.	.	.	.	5
REC39F8	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1
REC38F0	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	1	2
REC38F1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1
REC38F2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1
REC38F3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1
REC38F4	.	.	.	.	.	.	1	.	.	3	4	.	.	.	.	.	8
REC38F5	.	.	.	.	1	.	.	1	1	2	.	.	.	.	.	.	5
REC38F6	.	.	1	.	2	1	.	2	4	1	.	.	.	.	.	.	11
REC38F7	.	.	.	2	.	.	.	2	2	1	.	1	.	.	.	.	8
REC38F8	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1
REC37F0	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1	2
REC37F1	.	.	.	.	.	.	.	.	.	1	.	.	1	.	.	1	3
REC37F2	.	.	.	.	.	.	.	.	.	1	1	.	.	.	.	2	4
REC37F3	.	.	.	2	1	.	.	.	1	1	.	.	1	.	1	2	9
REC37F4	.	.	.	.	4	.	2	1	5	1	.	1	.	.	1	.	15
REC37F5	.	.	.	1	9	1	2	.	9	1	1	1	.	.	.	.	25
REC37F6	.	1	.	3	15	2	.	3	12	.	.	2	1	.	.	.	39
REC37F7	.	.	.	5	11	.	.	7	11	.	.	2	1	.	.	1	38
REC37F8	.	.	.	5	3	.	.	3	.	.	.	.	.	.	.	.	11
REC36F0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	2
REC36F2	.	.	1	1	.	.	1	.	2	.	.	.	.	.	2	1	10
REC36F3	.	.	.	1	2	1	5	.	1	.	1	.	.	.	1	.	12
REC36F4	.	.	.	2	1	1	5	3	1	.	1	.	.	.	.	2	17
REC36F5	.	1	1	13	34	10	4	23	13	3	.	2	3	.	.	1	111
REC36F6	58	20	5	29	30	4	.	16	14	.	1	2	1	2	.	.	182
REC36F7	3	4	2	9	4	2	.	1	1	.	.	1	.	.	.	.	27
REC36F8	.	.	1	.	.	.	1	.	.	.	.	.	.	.	.	.	2
REC35F2	.	.	.	.	.	1	.	.	1	1	.	.	.	.	.	.	3
REC35F3	.	.	2	2	3	3	5	4	1	.	2	1	1	1	.	.	25
REC35F4	.	2	2	10	8	4	2	17	5	.	.	2	.	.	.	.	52
REC35F5	.	1	1	11	18	1	1	2	.	.	.	.	.	.	.	.	35
REC35F6	145	15	8	89	19	2	2	3	.	.	.	.	.	.	.	.	283
REC35F7	16	4	3	.	.	1	.	.	.	1	.	.	.	.	.	.	25
REC34F2	.	.	2	.	1	.	.	.	1	.	.	.	.	1	.	.	5
REC34F3	.	.	2	2	1	.	12	5	.	.	1	1	1	.	2	1	29
REC34F4	.	.	1	6	2	1	1	6	2	1	.	.	.	.	.	.	20
REC34F5	.	.	.	.	1	.	.	.	.	.	.	.	1	.	.	.	2
REC33F2	.	.	1	.	.	1	1	.	.	.	.	.	.	.	.	1	4
REC33F3	.	.	1	3	5	4	14	6	1	5	3	.	.	1	.	1	45
REC33F4	.	.	.	3	1	1	2	1	1	.	.	.	.	.	.	.	9
REC32F1	.	.	.	.	.	.	.	1	.	.	.	1	.	.	.	.	2
REC32F2	.	.	.	2	.	1	7	1	.	2	1	.	.	.	.	.	14
REC32F3	.	.	.	10	3	2	2	3	.	.	1	1	.	1	1	1	25
REC32F4	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	1
REC31F1	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1
REC31F2	.	.	.	4	.	.	.	1	.	.	.	.	.	.	.	.	5
REC30F0	.	.	2	.	.	.	1	.	.	.	.	.	.	.	.	.	3
REC30F1	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1
Total	222	48	36	224	181	45	72	117	94	34	18	24	16	6	8	9	1178
No position	8	0	7	7	4	5	2	10	8	5	1	7	4	3	0	2	78
Not used:	8																

Release Rectangles: REC35F6 (Eastern part of Dutch Waddensea 4th quarter)

year:	0	1				2				3			4			4+	Total
quarter:	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	
Rectangle																	
REC44F4	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	1
REC44F9	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	1
REC43F8	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1
REC42F3	.	.	.	.	.	1	.	.	1	.	.	.	.	.	.	.	2
REC42F8	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC41F5	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1
REC40E9	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	1
REC40F4	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1
REC40F6	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	1
REC40F7	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	1
REC39F1	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1
REC39F2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1
REC39F4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1
REC39F5	.	.	.	.	.	.	1	1	.	.	.	.	.	.	.	.	2
REC39F6	.	.	.	.	.	.	.	1	1	.	1	.	.	.	1	.	4
REC39F7	.	.	.	1	.	.	.	1	.	.	.	.	.	.	.	.	2
REC38E9	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	1
REC38F1	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1
REC38F2	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	1
REC38F4	.	.	.	.	.	.	.	1	1	.	.	.	.	.	.	1	3
REC38F5	.	.	.	2	.	1	.	1	.	.	.	.	.	.	.	1	5
REC38F6	.	.	.	1	2	.	.	2	.	.	1	.	.	.	.	.	6
REC38F7	.	.	.	1	.	.	2	.	1	.	.	.	.	.	.	.	4
REC37F1	.	.	1	.	.	.	.	.	.	1	.	2	.	.	.	2	6
REC37F2	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	1
REC37F3	.	.	.	.	.	1	2	.	.	.	1	.	.	.	.	.	4
REC37F4	.	1	.	.	2	.	.	3	2	1	.	.	.	.	.	.	9
REC37F5	.	.	.	7	.	.	1	.	.	.	.	.	.	.	.	.	8
REC37F6	.	.	1	3	2	.	.	.	.	.	.	.	.	.	.	.	6
REC37F7	.	.	1	8	3	.	2	2	1	.	.	.	.	.	.	.	17
REC37F8	.	.	.	1	.	.	2	.	.	.	.	.	.	.	.	.	3
REC36F1	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1
REC36F2	.	1	.	.	1	.	.	2	1	.	.	.	.	.	.	.	5
REC36F3	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	1	2
REC36F4	.	.	.	6	.	1	2	2	.	.	.	1	.	.	.	.	12
REC36F5	.	.	5	33	11	1	1	4	.	1	1	.	.	.	1	.	58
REC36F6	4	3	6	6	4	.	4	1	.	.	.	.	.	.	.	.	28
REC36F7	.	1	1	6	.	.	1	2	.	.	.	.	.	.	.	.	11
REC35F2	.	.	.	1	.	.	1	.	.	.	.	.	.	1	.	.	3
REC35F3	.	1	3	6	2	2	3	.	2	.	.	.	.	.	.	.	19
REC35F4	.	1	4	.	2	5	1	1	.	1	1	.	.	.	.	.	16
REC35F5	.	1	4	7	.	.	.	.	.	.	.	.	.	.	.	.	12
REC35F6	15	.	11	1	.	.	.	1	.	.	.	.	.	.	.	.	28
REC35F7	.	6	1	1	.	.	.	.	.	.	.	.	.	.	.	.	8
REC34F2	.	.	.	.	.	2	1	.	1	.	.	.	.	1	.	1	6
REC34F3	.	1	2	2	3	3	3	.	2	1	2	.	.	.	.	.	19
REC34F4	1	1	12	5	.	3	3	2	.	.	.	.	.	.	.	.	27
REC34F5	.	1	.	.	.	.	.	1	.	.	.	.	.	.	.	.	2
REC33F2	.	1	.	.	1	.	.	.	.	1	.	.	.	.	.	.	3
REC33F3	.	3	4	8	4	9	8	1	1	1	2	.	.	.	.	1	42
REC33F4	.	2	3	1	.	.	.	2	.	.	.	.	.	.	.	.	8
REC32F2	.	1	1	.	1	1	3	.	.	1	.	.	.	.	.	2	10
REC32F3	.	1	8	9	2	1	3	1	2	1	2	.	.	1	.	.	31
REC31F0	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1
REC31F1	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC31F2	.	.	2	2	.	1	1	.	.	.	.	.	.	.	.	.	6
REC31F3	.	1	.	1	.	.	.	.	.	.	.	.	.	.	.	.	2
REC30F0	.	1	.	.	.	.	1	.	.	.	.	.	.	.	.	.	2
REC29F1	.	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	2
Total	20	31	71	120	41	32	49	33	19	10	14	5	0	4	2	3	462
No position	0	2	5	3	1	1	13	6	3	1	2	3	1	1	0	0	47

Not used: 14

Release Rectangles: REC35F5 REC34F5 (Western part of Dutch Waddensea, 1st quarter)

year:	0				1				2				3				4+	Total
quarter:	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
Rectangle																		
REC44E7	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	1
REC41F3	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC40F1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1
REC40F2	.	.	.	.	.	.	.	.	.	.	1	.	.	.	1	.	.	2
REC40F6	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2
REC40F7	.	.	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3
REC39F1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	1
REC39F2	.	.	1	.	.	1	.	.	.	1	.	.	.	.	.	.	.	3
REC39F3	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC39F4	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC39F5	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	1
REC39F7	.	1	2	.	.	1	.	.	.	.	.	.	.	.	.	.	.	4
REC38F1	.	.	.	.	1	1	.	.	.	.	1	.	.	.	.	.	2	5
REC38F2	.	.	1	.	.	1	.	.	.	.	.	.	.	.	.	.	.	2
REC38F4	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	1
REC38F5	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC38F6	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC38F7	.	1	.	.	.	1	2	.	.	.	.	.	.	.	.	.	.	4
REC37F1	.	1	.	1	.	.	.	.	.	.	.	.	.	1	.	.	.	3
REC37F2	.	.	.	.	1	2	.	.	.	.	.	1	.	.	.	.	1	5
REC37F3	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1
REC37F4	.	2	1	1	1	1	1	.	.	.	.	.	.	.	.	.	.	7
REC37F5	1	.	.	2	.	.	3	.	.	.	.	.	.	.	.	.	.	6
REC37F6	1	1	2	2	.	3	.	.	.	.	.	.	.	.	.	.	.	9
REC37F7	.	1	2	.	1	2	1	.	.	.	.	.	.	.	.	.	.	7
REC37F8	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC36F0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	1
REC36F2	.	.	1	1	.	.	2	.	.	.	.	1	.	.	.	.	1	6
REC36F3	1	.	10	2	2	.	1	.	.	.	.	.	.	.	.	.	.	16
REC36F4	1	5	7	4	1	3	.	.	.	.	.	.	.	.	.	.	.	21
REC36F5	8	27	18	5	1	6	3	1	.	1	.	.	.	.	.	.	1	71
REC36F6	.	2	2	1	.	2	.	.	.	.	1	.	.	.	.	.	.	8
REC36F8	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC35F1	.	.	.	.	1	.	1	.	.	.	.	.	.	.	.	.	.	2
REC35F2	.	.	.	.	.	.	3	.	.	.	.	.	.	.	.	.	.	3
REC35F3	1	1	20	9	5	3	6	5	.	.	.	.	1	.	.	.	.	51
REC35F4	16	99	103	25	10	30	13	2	1	3	.	.	.	.	.	.	.	302
REC35F5	112	181	51	5	8	11	1	1	.	.	.	.	.	.	.	.	.	370
REC34F2	.	.	.	.	9	3	3	.	1	.	.	.	.	.	.	.	.	16
REC34F3	.	4	22	13	23	12	10	9	3	3	1	.	.	.	.	.	.	100
REC34F4	10	80	101	12	8	36	8	1	1	2	.	.	.	.	.	.	.	259
REC34F5	6	33	6	.	1	.	.	.	.	.	.	.	.	.	.	.	.	46
REC33F2	.	.	1	1	5	1	.	1	.	.	.	.	.	.	.	.	2	11
REC33F3	2	12	21	15	30	18	10	3	2	3	.	.	1	.	.	.	.	117
REC33F4	2	31	12	9	5	9	1	.	2	2	.	.	.	1	.	.	.	74
REC32F2	.	.	.	.	8	3	1	2	.	.	.	.	.	.	.	.	.	14
REC32F3	1	3	9	4	3	7	4	2	2	.	.	.	.	3	.	.	.	38
REC31F1	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	1
REC31F2	1	2	.	.	3	4	.	2	.	.	.	.	.	.	.	.	.	12
REC31F4	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1
REC30E6	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1
REC30E9	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1
REC30F0	.	.	.	.	.	1	.	.	.	1	.	.	.	1	.	.	.	3
REC30F1	.	.	.	.	1	.	.	.	.	1	.	.	.	.	.	.	.	2
REC29E5	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1
REC29F1	.	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	2
REC28E9	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	1
Total	164	491	399	113	131	164	76	29	14	18	5	2	3	6	3	0	8	1626
No position	0	5	6	2	8	4	8	2	2	1	1	0	1	2	1	1	2	46

Not used: 41

Release Rectangles: REC36F5 REC35F5 (Western part of Dutch Waddensea, 2nd quarter)

year:	0			1				2				3				4	4+	
quarter:	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1		Total
Rectangle																		
REC40F7	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	1
REC39F1	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1
REC38F1	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1
REC38F2	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	1
REC37F2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1
REC37F4	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1
REC37F6	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC36F1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1
REC36F2	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1
REC36F3	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	1
REC36F4	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC36F5	.	2	.	.	3	1	.	.	.	.	1	.	1	.	.	.	1	9
REC36F6	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC35F1	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	1
REC35F2	.	.	.	1	1	.	.	.	.	.	.	.	1	.	.	.	.	3
REC35F3	.	.	1	1	.	2	1	.	.	2	.	.	.	.	.	.	.	7
REC35F4	.	5	3	1	8	4	4	.	.	2	1	.	.	.	.	.	.	28
REC35F5	.	29	14	4	15	2	.	.	.	.	.	.	.	.	.	.	.	64
REC34F2	.	.	.	1	.	1	1	1	.	.	.	.	.	.	.	.	.	4
REC34F3	.	.	2	4	6	2	.	2	.	2	.	1	.	.	.	1	.	20
REC34F4	.	4	2	.	12	12	1	.	3	2	.	.	.	.	.	.	.	36
REC34F5	.	1	2	1	2	.	.	.	.	.	.	.	.	.	.	.	.	6
REC33F2	.	.	1	.	.	1	.	.	1	.	1	.	.	.	.	.	.	4
REC33F3	.	.	.	1	2	5	2	1	3	.	.	1	.	1	.	.	.	16
REC33F4	.	.	.	1	7	2	.	.	3	.	.	.	.	.	.	.	.	13
REC32F2	.	.	.	2	2	4	2	1	.	1	.	.	.	.	.	.	.	12
REC32F3	.	.	.	1	4	.	.	2	2	.	.	.	2	.	.	.	.	11
REC32F4	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1
REC31F1	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	1
REC31F2	.	.	.	3	4	1	.	.	.	1	.	.	.	.	.	.	.	9
REC31F3	.	.	.	.	3	.	.	.	.	.	.	.	.	.	.	.	.	3
REC30F0	.	.	.	2	.	.	.	1	.	1	.	.	.	.	.	.	.	4
REC30F1	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1
Total	0	43	25	24	70	40	13	8	13	13	4	2	4	2	0	1	3	265
No position	0	2	0	3	3	0	5	0	0	4	0	0	0	1	0	0	2	20

Not used: 24

2

Release Rectangles: REC35F5 REC34F5 (Western part of Dutch Waddensea, 4th quarter)

year:	0	1				2					3				4				4+	
quarter:	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3				Total
Rectangle																				
REC45F2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1
REC44F9	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1
REC41F5	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	2
REC40F2	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1	.	2
REC40F6	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1
REC40F7	.	.	1	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	2
REC39F1	.	.	.	.	.	.	1	.	1	.	.	.	1	.	.	.	.	.	.	3
REC39F4	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC39F5	.	1	.	.	.	1	.	.	1	.	.	.	.	.	.	.	.	.	.	3
REC39F6	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC39F7	.	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2
REC38F5	.	.	.	.	.	.	.	.	1	.	1	.	.	.	.	.	.	.	.	2
REC38F6	.	.	.	1	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3
REC37F0	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	2
REC37F1	.	.	.	.	1	.	.	1	1	.	.	.	.	.	.	.	.	.	.	3
REC37F2	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1
REC37F3	.	.	.	1	1	.	.	.	3	.	.	.	.	.	.	.	.	.	.	5
REC37F4	1	.	.	1	.	.	3	.	1	.	.	1	.	.	.	.	.	.	.	7
REC37F5	.	4	2	2	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.	10
REC37F6	.	.	2	2	.	.	4	.	.	.	.	.	.	.	.	.	.	.	.	8
REC37F7	.	.	2	2	.	.	.	1	.	.	1	1	.	.	.	.	.	.	.	7
REC37F8	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC36F1	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1
REC36F2	.	.	1	3	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	5
REC36F3	.	.	.	2	1	.	1	1	.	.	.	.	.	.	.	.	.	.	.	5
REC36F4	1	1	2	5	2	.	3	2	.	.	.	2	.	.	.	.	.	.	.	18
REC36F5	1	13	38	25	7	.	5	1	1	.	1	1	.	.	.	.	.	.	.	93
REC36F6	.	3	2	1	5	2	2	.	1	.	.	.	.	.	.	.	.	.	.	16
REC35F1	.	.	.	.	.	1	.	3	.	.	.	1	.	.	.	.	.	.	.	5
REC35F2	.	1	.	1	1	2	.	1	3	1	.	.	.	.	.	.	.	.	.	10
REC35F3	.	3	3	19	6	6	6	6	.	1	1	.	1	.	.	.	.	1	.	53
REC35F4	2	13	94	57	14	4	13	4	5	.	2	.	.	.	1	.	.	.	.	209
REC35F5	13	45	166	36	13	4	9	1	3	.	.	.	.	.	.	.	.	.	.	290
REC35F6	1	4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	5
REC35F7	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC34F1	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC34F2	.	.	1	2	1	3	.	.	.	1	2	.	.	.	.	.	.	.	.	10
REC34F3	.	4	9	21	16	24	12	8	5	.	2	3	.	.	.	.	.	1	.	105
REC34F4	2	15	103	117	13	5	19	7	3	.	2	.	.	.	.	.	.	1	1	288
REC34F5	34	57	51	8	3	1	.	1	1	.	.	.	.	.	.	.	.	.	.	156
REC33F2	.	2	1	1	1	3	1	1	.	.	1	1	.	1	.	1	.	.	.	13
REC33F3	.	11	15	17	13	20	22	9	5	8	4	1	.	.	.	.	1	.	.	126
REC33F4	.	9	23	31	5	4	9	3	1	.	.	.	.	.	.	.	.	.	.	85
REC32F0	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1
REC32F2	.	2	.	4	8	11	6	3	1	5	3	.	1	.	.	.	.	.	.	44
REC32F3	.	3	11	11	10	3	7	1	1	.	.	.	1	.	.	.	.	1	.	49
REC31F1	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1
REC31F2	.	7	3	2	.	2	2	.	.	.	.	.	.	.	.	.	.	.	.	16
REC31F3	.	1	1	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3
REC31F4	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC30E8	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1
REC30F0	.	2	.	.	.	2	3	.	.	2	1	.	1	.	.	.	.	.	.	11
REC30F1	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	1	2
REC29E5	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC29E6	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1
Total	55	202	535	375	125	102	134	60	38	19	21	11	5	1	1	3	7			1694
No position	2	5	9	19	9	3	16	6	8	2	6	2	4	0	1	2	0			94

Not used: 46

Release Rectangles: REC34F5 (Dutch coast 1st quarter)

year:	0				1				2				3				4+	Total
quarter:	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
Rectangle																		
REC38F1	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	1
REC37F1	.	1	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	2
REC37F2	.	.	.	.	1	1	.	.	.	.	.	.	.	.	.	.	.	2
REC37F4	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC37F7	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1
REC36F0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	1
REC36F2	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC36F4	.	.	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	2
REC36F5	.	1	.	.	.	1	1	1	.	1	.	.	.	.	.	.	.	5
REC36F6	.	1	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	2
REC35F1	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	1
REC35F2	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	1
REC35F3	.	1	7	3	2	1	1	.	.	.	.	.	.	.	.	.	.	15
REC35F4	2	26	21	4	3	4	.	.	.	.	.	.	.	.	.	.	.	60
REC35F5	1	1	.	1	1	1	.	.	.	.	.	.	.	.	.	.	.	5
REC34F2	.	.	.	.	1	.	1	.	.	.	.	.	.	.	.	.	.	2
REC34F3	.	1	7	6	2	.	1	3	.	.	.	.	.	.	.	.	.	20
REC34F4	4	52	61	5	3	8	4	.	1	.	.	.	.	.	.	.	.	138
REC34F5	3	23	4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	30
REC33F2	.	.	1	.	3	.	.	.	.	.	.	.	.	.	.	.	.	4
REC33F3	.	7	8	3	5	4	6	1	1	1	.	.	.	.	.	.	.	36
REC33F4	.	22	10	6	2	4	1	.	1	.	.	.	.	1	.	.	.	47
REC32F2	.	.	.	.	2	.	1	1	.	.	.	.	.	.	.	.	.	4
REC32F3	.	.	6	1	1	6	1	1	.	.	.	.	.	.	.	.	.	16
REC31F2	.	.	.	.	.	2	.	1	.	.	.	.	.	.	.	.	.	3
REC31F4	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	1
Total	10	137	127	31	27	32	20	8	3	2	1	0	0	2	1	0	0	401
No position	0	1	3	0	1	0	1	1	1	1	0	0	0	0	1	1	0	11

Not used: 0

Release Rectangles: REC34F4 REC33F4 (Dutch coast 2nd quarter)

year:	0				1				2				3				4	4+	Total
quarter:	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1			
Rectangle																			
REC41E7	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1
REC39F1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	1
REC39F2	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	1
REC38F5	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC38F7	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC37F0	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1
REC37F2	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1
REC37F4	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1
REC36F3	.	.	.	.	1	1	.	.	.	.	.	.	.	.	.	.	.	.	2
REC36F4	.	1	.	.	1	1	.	.	.	1	.	.	.	.	.	.	.	.	4
REC36F5	.	1	1	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	3
REC35F2	.	2	.	.	1	3	1	.	.	.	.	.	.	.	.	.	.	.	7
REC35F3	.	1	.	.	1	2	.	.	.	3	.	.	.	.	2	.	.	.	9
REC35F4	4	11	1	.	3	3	1	.	2	.	.	.	.	.	1	.	.	.	26
REC34F3	1	2	1	1	1	2	.	1	2	2	.	.	.	.	.	.	.	.	13
REC34F4	14	14	5	.	16	3	.	.	4	3	.	.	1	.	.	.	1	.	61
REC34F5	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC33F2	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC33F3	.	4	1	1	3	5	.	1	.	.	.	.	1	.	.	1	.	.	17
REC33F4	4	7	10	.	3	4	.	.	.	1	.	.	.	1	.	.	.	.	30
REC32F2	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC32F3	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.	.	.	2
REC31F2	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC30F0	.	.	.	.	1	.	.	1	1	.	.	1	.	.	.	.	.	.	4
REC29F1	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC28E9	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	1
Total	24	43	20	2	36	25	2	3	11	11	4	1	2	5	0	2	1	.	192
No position	1	0	2	1	2	0	0	0	0	0	1	0	0	0	0	0	0	.	7

Not used: 37

Release Rectangles: REC34F4 REC34F5 REC33F4 (Dutch coast 3rd quarter)

year:	0		1		2		3		4		4+		Total
quarter:	3	4	1	2	3	4	1	2	3	4	1	2	
Rectangle													
REC40F7	.	.	.	1	.	.	.	.	.	.	.	.	1
REC39F7	.	.	.	.	.	.	.	.	.	.	1	.	1
REC38F1	.	.	.	.	.	.	.	.	.	.	.	1	2
REC38F2	.	.	.	.	.	1	.	.	.	.	.	.	1
REC38F7	.	.	.	1	.	.	.	.	.	.	.	.	1
REC37F2	.	.	.	.	.	1	.	.	.	.	.	.	1
REC37F4	.	.	1	.	.	.	.	.	.	.	.	.	1
REC37F5	.	.	.	.	.	.	1	.	.	.	.	.	1
REC37F7	.	.	.	2	.	.	.	1	.	.	.	.	3
REC36F0	.	.	.	.	1	.	.	.	.	.	.	.	1
REC36F2	.	.	.	.	.	.	.	1	.	.	.	.	1
REC36F3	.	.	.	.	.	.	1	.	.	.	.	.	2
REC36F4	.	.	.	3	1	.	.	.	.	.	.	.	4
REC36F5	.	.	.	1	1	.	.	1	.	.	.	.	3
REC36F6	.	.	1	.	3	.	.	.	1	.	.	.	5
REC36F7	.	.	.	2	1	.	.	.	1	.	.	.	4
REC35F2	.	.	.	.	1	.	.	2	1	.	.	1	5
REC35F3	.	.	.	2	1	.	.	1	1	.	.	1	8
REC35F4	1	.	4	13	12	2	.	11	2	1	.	1	48
REC35F5	.	1	1	3	1	.	.	2	.	.	.	.	8
REC35F7	.	.	.	.	.	1	.	.	1	.	.	.	2
REC34F2	.	.	.	.	1	2	1	.	.	1	.	.	5
REC34F3	.	1	4	5	4	6	2	3	1	.	1	1	30
REC34F4	1	6	7	76	33	11	2	23	5	1	1	2	168
REC34F5	16	35	47	74	5	8	.	3	.	1	1	.	191
REC33F2	.	.	.	1	.	.	1	1	.	.	.	.	3
REC33F3	2	1	3	11	4	6	1	11	1	1	1	1	46
REC33F4	.	2	5	29	18	5	1	9	6	1	1	2	80
REC32F1	.	.	.	.	.	.	.	1	.	.	.	.	1
REC32F2	.	1	.	.	.	1	1	.	.	.	.	.	3
REC32F3	.	2	5	6	3	.	2	4	1	.	1	.	26
REC31F2	.	.	2	3	.	2	1	3	.	.	.	.	11
REC31F3	.	.	.	.	.	.	.	1	.	.	.	.	1
REC30E7	.	.	.	.	.	.	.	.	1	.	.	.	1
REC30F0	.	.	.	1	.	.	1	.	.	.	1	.	4
REC30F1	.	.	.	.	1	.	.	1	.	.	.	.	2
REC29E6	.	.	.	.	.	.	.	.	.	1	.	.	1
REC29F0	.	.	.	.	.	.	.	.	1	.	.	.	1
REC29F1	.	.	.	.	.	1	.	1	.	.	.	.	2
REC28F1	.	.	.	.	.	.	.	1	.	.	.	.	1
REC27E9	.	.	.	1	.	.	.	.	.	.	.	.	1
Total	20	49	80	235	91	47	15	81	22	7	6	6	681
No position	0	1	0	1	2	4	3	0	1	2	0	0	16

Not used: 7

Release Rectangles: REC34F5 (Dutch coast 4th quarter)

year:	0	1				2				3			4				4+	
quarter:	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3		Total
Rectangle																		
REC37F0	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1
REC37F1	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1
REC37F2	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	1
REC36F4	.	.	.	1	.	.	.	1	.	.	.	1	.	.	.	.	.	3
REC36F5	.	.	1	2	.	.	.	.	.	.	.	.	.	.	.	.	.	3
REC35F1	.	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.	2
REC35F2	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1
REC35F3	.	.	1	4	1	.	2	1	.	.	1	.	.	.	.	.	.	10
REC35F4	.	9	33	14	4	1	3	.	1	.	.	.	.	.	.	.	.	65
REC35F5	3	2	4	2	1	1	.	.	.	.	.	.	.	.	.	.	.	13
REC34F1	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC34F2	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC34F3	.	.	2	7	2	1	.	.	1	.	.	.	.	.	.	.	.	13
REC34F4	1	7	55	73	5	3	7	2	2	.	1	.	.	.	.	1	.	157
REC34F5	29	52	47	6	1	1	.	.	.	.	.	.	.	.	.	.	.	136
REC33F2	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1
REC33F3	.	.	2	4	3	1	2	1	3	.	.	.	.	.	.	.	.	16
REC33F4	.	2	10	21	1	.	3	1	1	.	.	.	.	.	.	.	.	39
REC32F2	.	.	.	.	.	1	.	1	.	2	.	.	.	.	.	.	.	4
REC32F3	.	1	5	4	2	1	.	1	.	.	.	.	.	.	.	.	.	14
REC31F2	.	1	.	1	.	.	1	.	.	.	.	.	.	.	.	.	.	3
REC31F4	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC29E6	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	1
Total	33	74	162	140	21	12	20	11	8	2	2	1	0	0	0	1	0	487
No position	0	1	2	2	4	0	0	1	1	0	0	0	0	0	0	0	0	11

Not used: 37

Release Rectangles: REC32F4 (Scheldt Estuary, 1st quarter)

year:	0				1				2				3				4+	
quarter:	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		Total
Rectangle																		
REC42F3	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1
REC40F7	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	1
REC39F1	.	.	.	.	.	.	1	.	.	.	1	.	.	.	.	.	.	2
REC38F4	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	1
REC37F0	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC37F2	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1
REC37F3	.	.	1	.	.	.	1	.	.	.	.	.	.	.	.	.	.	2
REC36F1	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1
REC36F2	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1
REC36F3	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1
REC36F7	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1
REC35F2	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2
REC35F3	.	.	.	1	.	.	.	2	.	.	.	.	.	.	.	.	.	3
REC35F4	.	1	.	1	.	1	.	.	.	.	.	.	.	.	.	.	.	3
REC34F2	.	.	.	.	.	1	.	.	1	.	.	.	.	.	.	.	.	2
REC34F3	.	.	2	1	1	.	2	1	.	1	.	1	.	.	.	.	.	9
REC34F4	.	1	3	.	1	.	.	1	.	.	.	.	.	.	.	.	.	6
REC33F2	.	.	.	.	1	3	.	.	.	.	.	.	.	.	.	.	.	4
REC33F3	.	3	11	2	1	3	2	.	.	1	.	.	.	.	.	.	.	23
REC33F4	.	2	3	1	.	2	.	.	.	.	.	.	.	.	.	.	.	8
REC32F2	.	2	5	1	3	1	1	2	.	1	.	.	.	1	.	.	.	17
REC32F3	4	41	58	7	.	14	13	1	.	3	.	.	.	1	.	.	.	142
REC32F4	13	13	4	.	1	5	.	.	.	.	.	.	.	.	.	.	.	36
REC31F1	.	.	.	.	1	1	.	.	.	.	.	.	.	.	.	.	.	2
REC31F2	2	17	7	5	1	2	.	2	.	1	.	.	.	.	.	.	.	37
REC31F3	.	4	4	.	1	1	.	.	.	.	.	.	.	.	.	.	.	11
REC30F1	.	.	1	.	.	.	1	.	.	.	.	.	.	.	.	.	.	2
REC29E5	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	1
REC29E6	.	.	.	.	.	1	.	1	.	.	.	.	.	.	.	.	.	2
REC29F1	.	.	1	.	.	.	.	.	.	1	.	.	.	.	.	.	.	2
REC28F0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
Total	19	84	102	20	13	36	26	10	2	9	1	1	0	2	0	0	1	326
No position	0	3	5	2	3	1	1	0	0	0	0	1	0	0	0	0	0	16
Not used:	2																	

Release Rectangles: REC32F4 (Scheldt Estuary, 2nd quarter)

year:	0			1				2				3				4	4+	
quarter:	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1		Total
Rectangle																		
REC42F6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1
REC38F1	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	1
REC37F1	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	1
REC37F4	.	.	.	.	.	1	.	.	.	.	1	.	1	.	.	.	.	3
REC35F2	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC35F3	.	.	.	1	.	.	2	.	.	.	.	.	.	.	.	.	.	3
REC35F4	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1
REC34F2	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1
REC34F3	.	1	2	1	1	.	.	1	.	1	.	.	.	.	.	.	.	7
REC33F3	.	2	3	1	2	2	1	1	.	.	.	.	.	.	.	.	.	12
REC33F4	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC32F2	.	.	.	3	1	1	.	1	.	.	.	.	.	.	.	.	.	6
REC32F3	.	37	4	.	8	4	1	.	2	.	.	.	.	.	.	.	.	56
REC31F2	.	3	.	2	.	.	.	1	.	.	.	.	.	.	.	.	.	6
REC31F3	.	1	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	2
REC30E6	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	1
REC30F1	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1
REC29E5	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1
REC28E9	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	1
Total	0	45	10	9	12	11	4	5	3	2	2	0	1	1	0	0	1	106
No position	0	0	0	1	0	2	2	0	0	0	0	0	1	0	0	0	2	8

Not used: 4

Release Rectangles: REC32F4 (Scheldt Estuary, 3rd quarter)

year:	0			1				2				3				4	4+	
quarter:	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2		Total
Rectangle																		
REC44E8	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	1
REC40F2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1
REC40F6	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1
REC38F2	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1
REC37F2	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	1
REC35F0	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC35F2	.	.	1	.	.	.	.	1	1	.	.	.	.	.	.	.	1	4
REC35F3	.	.	.	.	2	1	.	1	.	.	.	.	.	.	.	.	.	4
REC35F4	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1
REC34F2	.	.	.	.	.	1	1	.	4	1	.	1	.	.	.	.	1	9
REC34F3	.	.	.	.	6	2	.	2	1	1	.	.	.	1	.	.	.	13
REC34F4	.	.	.	.	1	.	.	2	3	.	.	.	.	.	.	.	.	6
REC33F2	.	.	.	1	1	.	.	.	1	1	1	.	.	.	.	.	.	5
REC33F3	.	.	.	10	18	7	.	10	4	5	.	3	2	1	.	.	.	60
REC33F4	1	3	.	5	1	.	.	3	1	.	.	1	.	.	.	.	.	15
REC32F1	.	.	.	.	.	.	.	1	1	.	.	.	.	.	.	.	.	2
REC32F2	.	.	1	4	8	2	4	4	.	3	2	.	.	.	.	.	.	28
REC32F3	3	2	9	103	130	12	3	15	8	4	1	5	1	.	.	1	.	297
REC32F4	20	30	27	10	4	1	2	.	1	.	.	.	.	.	.	.	.	95
REC31E7	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1
REC31F1	.	.	.	.	1	.	1	.	.	.	.	.	.	.	.	.	.	2
REC31F2	.	.	6	11	12	3	1	6	1	.	.	2	.	.	.	.	1	43
REC31F3	.	.	1	4	7	.	.	2	.	.	.	.	.	.	.	.	.	14
REC30F0	.	.	.	.	1	.	1	2	1	.	1	1	.	.	.	.	.	7
REC30F1	.	.	1	2	1	.	.	1	.	.	.	.	.	.	.	.	.	5
REC29E5	.	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.	2
REC29E6	.	.	.	.	.	.	.	1	.	.	.	.	.	.	1	.	.	2
REC29F1	.	.	.	1	.	.	.	2	.	.	.	.	.	.	1	.	.	4
REC28E4	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	1
REC28E5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1
REC28E9	.	.	.	.	.	.	2	.	.	.	1	.	.	.	.	.	.	3
REC27E9	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
Total	24	35	46	152	196	29	15	56	27	15	6	14	3	4	2	1	6	631
No position	0	0	0	1	3	1	1	2	2	2	0	2	2	1	0	0	1	18

Not used: 19

Release Rectangles: REC32F3 REC32F4 REC31F3 (Scheldt Estuary, 4th quarter)

year:	0	1				2				3				4			4+	Total
quarter:	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3		
Rectangle																		
REC44E7	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	1
REC40F2	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1
REC39F2	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	1
REC39F6	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1
REC38F4	.	.	.	1	.	1	.	.	.	.	.	.	.	.	.	.	.	2
REC38F6	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1
REC37F1	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1
REC37F2	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	1
REC37F7	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1
REC36F0	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	1
REC36F3	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1
REC36F5	.	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.	2
REC35F1	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC35F2	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1
REC35F3	.	.	.	3	1	1	2	2	.	.	.	.	.	1	.	.	.	10
REC35F4	.	.	1	.	1	1	.	.	1	.	.	.	.	.	.	.	.	4
REC34F2	.	.	.	3	.	1	.	1	1	2	.	.	.	.	.	.	.	8
REC34F3	.	.	1	11	2	.	1	1	3	.	.	.	.	.	1	.	.	20
REC34F4	.	.	.	2	1	.	1	.	.	.	.	.	.	.	.	.	.	4
REC33F2	.	.	.	1	.	4	.	.	.	1	1	.	.	.	.	.	.	7
REC33F3	.	1	6	25	14	5	3	5	3	1	1	1	.	.	.	.	.	65
REC33F4	.	.	3	3	5	.	.	1	.	.	.	.	.	.	.	.	.	12
REC32F1	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	1
REC32F2	.	2	2	4	4	1	4	.	.	2	1	.	.	.	.	.	.	20
REC32F3	1	6	95	146	30	5	32	11	5	.	2	.	.	.	2	.	.	335
REC32F4	4	12	13	.	.	.	1	.	.	.	.	.	.	.	.	.	.	30
REC31F1	.	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.	2
REC31F2	.	3	11	4	12	7	4	.	.	2	.	.	.	.	.	.	.	43
REC31F3	.	.	3	1	.	.	.	1	.	.	.	.	.	.	.	.	.	5
REC30F0	.	.	.	.	.	3	3	.	2	.	.	.	.	.	.	.	.	8
REC30F1	.	.	.	.	.	1	1	.	.	.	.	.	.	.	.	.	.	2
REC29E5	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1
REC29E6	.	.	.	.	.	.	2	1	.	.	.	.	.	.	1	.	1	5
REC28E9	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC28F0	.	.	.	.	.	1	.	.	.	1	.	.	.	.	.	.	.	2
REC27E9	.	.	.	.	.	.	1	.	.	1	.	.	.	.	.	.	.	2
Total	5	25	135	205	70	33	56	32	16	10	7	2	1	1	4	0	1	603
No position	0	1	0	12	3	1	4	4	6	0	1	0	0	0	0	0	1	33

Not used: 0

Release Rectangles: REC31F1 REC31F2 (North Sea French/Belgian border 2nd quarter)

year:	0	1			2			3			4			4+			
quarter:	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	Total
Rectangle																	
REC33F3	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1
REC32F1	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1
REC32F3	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1
REC31F1	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1
REC31F2	.	8	3	2	1	.	.	.	.	.	.	.	.	.	.	.	14
REC30F1	.	.	.	.	1	2	.	.	.	.	.	.	.	.	.	.	3
REC29F1	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1
Total	0	8	3	2	6	2	0	0	1	0	0	0	0	0	0	0	22
No position	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Not used: 6

Release Rectangles: REC31F1 REC31F2 (North Sea French/Belgian border 3rd quarter)

year:	0		1				2				3		4		4+		Total
quarter:	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	
Rectangle																	
REC37F1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1
REC37F3	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1
REC35F2	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	1
REC34F2	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	1
REC33F3	.	.	.	.	.	1	.	1	.	.	.	.	.	.	.	.	2
REC32F2	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1
REC32F3	.	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	2
REC31F1	15	1	.	1	.	1	.	.	1	.	.	.	.	.	.	.	19
REC31F2	41	75	8	28	4	7	2	2	3	.	.	.	.	1	.	.	171
REC30F0	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1
REC30F1	4	5	1	4	2	1	1	.	.	.	.	.	.	.	.	.	18
REC29E5	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1
REC29E6	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1
REC29F1	1	1	.	1	2	.	.	1	.	.	.	.	.	.	.	.	6
REC28E9	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1	2
REC28F0	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1	2
REC27E9	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1
Total	61	82	9	35	9	11	5	6	7	0	0	0	1	1	1	1	231
No position	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Not used: 30

Release Rectangles: REC33F1 REC32F1 REC31F0 REC31F1 (Thames Estuary 2nd quarter)

year:	0		1				2				3		4		4+	Total	
quarter:	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	
Rectangle																	
REC45E7	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1
REC45F2	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	1	2
REC44E8	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	1
REC44E9	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1
REC44F1	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	1
REC43E8	.	.	.	.	1	.	.	.	.	.	1	.	.	.	.	.	3
REC42E7	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1
REC42E8	.	.	.	.	.	2	.	.	2	.	.	.	.	.	.	.	4
REC42E9	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1
REC41E7	.	.	.	.	1	.	.	.	.	.	.	.	1	.	.	.	2
REC41E8	.	.	.	.	2	.	.	.	1	.	.	.	.	1	.	.	4
REC41E9	.	.	.	.	1	.	.	.	.	.	.	.	1	.	.	.	2
REC41F0	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	1
REC41F1	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	1
REC41F2	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	1
REC40E7	.	.	.	1	.	.	.	.	.	1	.	.	.	.	.	.	2
REC40E8	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1
REC40E9	.	.	.	.	.	1	1	.	.	3	.	.	1	.	1	.	7
REC40F0	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1
REC40F1	.	.	.	.	.	1	.	.	1	.	.	.	.	.	.	.	2
REC40F2	.	.	.	.	1	.	.	.	2	1	.	.	.	.	.	1	5
REC40F4	.	.	.	.	.	.	1	1	.	.	.	.	.	.	.	.	2
REC40F5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1
REC40F6	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1
REC39E8	.	.	.	2	2	1	.	.	.	.	.	.	.	.	.	.	5
REC39E9	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	2
REC39F0	.	.	.	.	.	1	.	.	.	1	.	1	1	.	.	2	6
REC39F1	.	.	.	.	1	1	.	.	.	.	1	.	.	.	.	.	3
REC39F2	.	.	.	.	2	1	1	.	.	.	.	.	.	.	.	1	5
REC39F3	.	.	.	.	1	1	.	.	.	.	.	.	.	.	.	.	2
REC39F5	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1
REC38E8	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1
REC38E9	.	.	.	2	4	.	1	1	3	.	.	1	.	.	1	1	14
REC38F0	.	.	.	.	1	.	1	.	.	.	.	1	.	.	.	1	4

Release Rectangles: REC35F0 (Wash, 2nd quarter)

year:	0		1		2		3		4		4+		Total
quarter:	2	3	4	1	2	3	4	1	2	3	4	1	
Rectangle													
REC44E8	.	.	.	.	.	.	.	.	.	.	.	1	1
REC42E7	.	.	.	.	.	.	.	.	1	.	.	.	2
REC42E8	.	.	.	.	.	.	.	.	.	.	1	.	1
REC42E9	.	.	.	.	.	.	.	.	.	.	.	1	1
REC41E7	.	.	.	.	.	.	.	1	.	.	.	.	2
REC41E8	.	.	.	.	1	.	.	1	.	.	1	.	4
REC41E9	.	.	.	.	.	.	.	.	.	.	.	1	1
REC40E7	.	.	.	.	.	1	.	.	.	.	.	.	1
REC40E8	.	.	.	1	.	.	.	.	.	.	.	1	2
REC39E8	.	.	.	.	1	.	1	.	.	.	.	.	2
REC39F5	.	.	.	.	.	1	.	.	.	.	.	.	1
REC38E8	.	.	.	.	1	2	.	.	.	.	.	.	3
REC38E9	.	.	.	2	.	.	1	.	1	1	.	.	6
REC38F0	.	.	1	.	.	.	.	1	.	.	.	1	4
REC37E9	.	.	.	.	1	.	.	.	.	.	.	1	2
REC37F0	.	.	.	.	1	.	1	.	1	.	.	.	4
REC36F0	.	.	.	.	.	.	.	.	.	1	.	.	1
REC36F1	.	.	.	.	.	.	1	.	.	.	.	.	2
REC36F2	.	.	.	.	1	.	.	.	.	.	.	.	1
REC35F0	2	.	.	.	.	.	.	.	.	.	.	.	2
REC35F1	.	.	.	.	.	1	.	.	.	.	.	.	1
REC33F2	.	.	.	.	.	.	.	.	.	.	1	.	1
REC30E8	.	.	.	.	.	.	.	.	.	.	.	.	1
Total	2	0	1	3	4	6	4	1	5	4	1	0	46
No position	0	0	0	0	2	3	3	3	2	1	3	2	32

Not used: 1

Release Rectangles: REC36F0 REC35F0 (Wash, 3rd quarter)

year:	0		1		2		3		4		4+		Total
quarter:	3	4	1	2	3	4	1	2	3	4	1	2	
Rectangle													
REC44E6	.	.	1	.	.	.	.	.	.	.	.	.	1
REC44E7	.	.	.	.	1	.	.	.	.	.	.	.	1
REC43E8	.	.	.	1	.	.	.	.	.	.	.	.	1
REC42E8	.	.	.	.	.	.	.	.	.	.	.	1	1
REC41E7	.	.	.	.	1	.	2	2	1	.	.	.	9
REC41E8	.	.	.	.	.	1	.	.	.	1	.	1	3
REC40E8	.	.	.	.	.	.	1	.	.	.	.	.	3
REC40E9	.	.	.	.	.	.	.	.	.	.	.	1	2
REC39E8	.	.	.	1	1	3	1	2	1	.	.	.	11
REC39F0	.	.	.	.	.	.	.	.	.	.	.	1	1
REC39F1	.	.	.	.	.	.	.	2	.	.	.	.	2
REC39F3	.	.	.	.	.	.	.	.	.	.	.	1	1
REC38E8	.	.	.	.	1	1	2	1	.	1	.	.	6
REC38E9	.	.	1	.	2	.	1	2	.	.	1	.	10
REC37E9	1	.	.	2	2	2	2	1	1	1	1	.	16
REC37F0	.	.	1	.	1	.	1	.	.	.	.	1	5
REC37F1	.	1	.	.	.	.	.	.	.	.	.	.	2
REC37F2	.	.	.	.	.	.	.	.	.	1	.	.	1
REC36F0	1	.	.	.	1	1	.	.	1	1	.	1	6
REC36F1	.	.	.	.	1	.	.	1	.	.	.	.	2
REC36F2	.	.	.	.	.	1	.	.	.	.	.	.	1
REC35F2	.	.	.	.	.	.	.	.	.	.	1	.	1
REC33F2	.	.	.	.	.	.	.	.	.	.	.	1	1
REC32F1	.	.	.	.	1	.	.	.	.	.	.	.	1
Total	2	1	3	4	12	8	10	9	7	3	2	3	88
No position	0	0	0	0	2	0	1	0	3	4	4	1	37

Not used: 1

Release Rectangles: REC30F0 REC30F1 (Rye, 2nd quarter)

year:	0			1				2				3				4	4+	
quarter:	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1		Total
Rectangle																		
REC41E9	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1
REC40E9	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	1
REC38E9	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1
REC38F1	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1
REC38F2	.	.	.	.	.	1	.	.	1	1	.	.	.	.	.	.	.	3
REC37F0	.	.	.	1	.	1	.	.	.	.	.	.	.	.	.	.	.	2
REC36F3	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	1
REC36F4	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC35F0	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	1
REC34F2	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1
REC34F3	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC33F1	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC33F2	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1
REC33F3	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC32F1	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2
REC32F2	1	.	3	1	.	.	.	.	.	.	.	.	.	.	.	.	.	5
REC31F1	3	2	3	2	3	.	.	.	.	.	.	.	.	.	.	.	2	15
REC31F2	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC30E9	.	2	1	1	2	.	.	.	1	2	.	.	.	.	.	.	.	9
REC30F0	75	97	34	21	46	22	4	3	3	5	1	3	2	1	.	.	5	322
REC30F1	.	2	1	1	1	.	.	.	.	.	.	.	.	.	.	.	.	5
REC29E5	.	.	.	1	.	1	.	.	.	.	.	.	.	.	.	.	.	2
REC29E7	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1
REC28E9	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1
Total	79	106	44	30	54	25	5	5	6	9	1	3	3	1	0	1	8	380
No position	0	0	0	8	2	0	4	2	0	2	0	1	1	1	1	0	5	27

Not used: 14

Release Rectangles: REC30F0 (Rye, 3rd quarter)

year:	0			1				2				3				4		4+
quarter:	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2		Total
Rectangle																		
REC31F1	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1
REC30F0	4	2	5	4	2	.	.	2	.	1	1	.	1	.	.	.	.	22
REC30F1	.	.	.	1	.	.	1	.	.	.	.	.	.	.	.	.	.	2
REC29F1	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1
Total	4	2	5	5	3	0	1	2	0	2	1	0	1	0	0	0	0	26
No position	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Not used: 0

Release Rectangles: REC30E8 REC30E9 (Poole, 2nd quarter)

year:	0			1				2				3				4	4+
quarter:	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	Total
Rectangle																	
REC30E6	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1
REC30E8	22	48	6	10	23	7	7	2	3	.	.	.	1	.	.	2	131
REC30E9	.	3	.	.	3	.	.	.	.	.	.	.	.	.	.	.	6
REC30F0	.	4	.	.	4	.	.	.	.	.	.	.	.	.	.	.	8
REC29E5	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1
REC29E6	.	.	.	.	.	1	.	1	.	1	.	.	.	.	.	.	3
REC29E7	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	1
REC28E6	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1
Total	22	55	6	11	30	7	9	3	4	0	1	1	1	0	0	0	152
No position	0	0	2	0	2	0	0	2	0	0	0	0	0	0	0	0	6

Not used: 3

Release Rectangles: REC28E8 REC27E8 (Bay de Seine, 2nd quarter)

year:	0			1				2				3				4	4+	
quarter:	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1		Total
Rectangle																		
REC28E3	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	1
REC28E7	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	1
REC28E8	.	4	1	.	1	.	.	.	.	.	.	.	.	.	.	.	.	6
REC28E9	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1	2
REC27E8	.	1	1	.	.	.	.	1	.	.	.	.	.	.	.	.	.	3
REC27E9	.	1	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	2
Total	0	6	2	0	1	0	0	1	1	0	1	0	0	1	1	0	1	15
No position	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not used:	1																	

Release Rectangles: REC28E8 REC27E8 REC27E9 (Bay de Seine, 4th quarter)

year:	0	1				2				3			4				4+	
quarter:	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3		Total
Rectangle																		
REC29E5	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1
REC29E6	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.	.	2
REC29E8	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1
REC28E6	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	1
REC28E8	.	1	2	3	.	2	1	.	.	.	.	.	.	.	.	.	.	9
REC28E9	.	1	1	2	.	.	.	.	.	.	1	.	.	.	.	.	.	5
REC27E3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1
REC27E8	2	.	9	3	1	.	.	.	.	.	.	.	.	.	.	.	1	16
REC27E9	2	6	16	8	3	1	2	2	2	1	.	1	1	.	.	.	.	45
REC27F0	1	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	2
Total	5	8	28	17	4	3	6	3	2	1	1	1	1	0	0	0	3	83
No position	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not used:	4																	

Release Rectangles: REC29F1 REC28F1 (Bay de Somme, 3rd quarter)

year:	0		1				2				3			4			4+	
quarter:	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2		Total
Rectangle																		
REC30F0	.	.	.	.	.	.	1	1	.	.	.	.	.	.	.	.	.	2
REC30F1	1	.	.	1	1	.	.	.	.	.	.	.	.	.	.	.	.	3
REC29E5	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1
REC29E6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1
REC29F1	6	7	3	7	10	1	.	1	.	2	.	.	.	.	.	.	.	37
REC28E4	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1
REC28E9	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	.	.	2
REC28F0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	2
REC28F1	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC27E9	.	.	.	.	.	.	.	.	.	.	1	1	.	.	.	.	.	2
REC26E7	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	1
Total	7	7	3	9	11	1	2	4	0	2	1	1	0	0	2	0	3	53
No position	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not used:	1																	

Release Rectangles: REC29F1 (Bay de Somme, 4th quarter)

year:	0	1				2				3			4				4+	
quarter:	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3		Total
Rectangle																		
REC31E0	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1
REC30E9	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1
REC30F0	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	1
REC30F1	1	.	1	4	1	.	2	.	.	.	.	.	.	.	.	.	.	9
REC29E5	.	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.	2
REC29E6	.	.	.	.	1	.	2	2	.	.	.	.	.	.	.	.	.	5
REC29E7	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	1	2
REC29F0	.	.	1	.	1	.	.	.	1	.	.	.	.	.	.	1	.	4
REC29F1	9	7	21	6	1	1	4	1	2	1	.	.	1	.	.	1	.	55
REC28E3	.	.	.	.	.	.	1	1	.	.	.	.	.	.	.	.	.	2
REC28E5	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	1
REC28E6	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1
REC28E8	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	1
REC28E9	.	.	2	.	.	3	.	.	.	.	.	.	.	.	.	.	.	5
REC28F0	.	.	1	1	.	.	1	.	1	.	2	.	.	.	.	.	1	7
REC28F1	.	.	1	.	.	.	.	.	3	.	.	.	.	.	.	.	.	4
REC27E8	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	1
REC27E9	.	2	5	1	.	.	3	1	.	.	.	.	.	1	.	.	.	13
Total	10	9	32	12	4	6	15	8	7	1	3	1	1	1	0	2	3	115
No position	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Not used: 3

Release Rectangles: REC26E7 (Bay du St. Michel, 2nd quarter)

year:	0		1				2				3			4		4+	
quarter:	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	Total
Rectangle																	
REC26E7	1	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	2
Total	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2
No position	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Not used: 0

Release Rectangles: REC28E8 REC26E8 (Bay du St. Michel, 4th quarter)

year:	0	1				2				3			4				4+	
quarter:	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3		Total
Rectangle																		
REC30E6	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC29E5	.	.	.	1	.	.	1	.	.	.	.	.	.	.	.	.	.	2
REC29E6	.	.	.	.	.	1	1	.	.	.	.	.	.	.	.	.	.	2
REC28E6	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC28F0	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	1
REC27E8	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
REC26E8	.	1	18	.	.	.	.	.	.	.	.	.	.	.	.	.	.	19
Total	0	1	20	2	0	1	3	0	0	0	0	0	0	0	0	0	0	27
No position	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Not used: 0

APPENDIX II

Summary of Tagging Data of plaice in the length range <25.0 cm

release area: Hvide Sande
release period: 2nd quarter
source: Netherlands

No. of								
Quarter	returns	D	Ψ	a^2	V	t	$V \cdot t$	$t \cdot a^2$
0 3	1	11.9	294.8	0.0	11.9	1.0	11.9	0.0
0 4	1	5.1	192.2	0.0	1.3	4.0	5.1	0.0
1 1	4	84.0	235.0	1118.6	8.1	8.8	70.6	9787.6
1 2	8	66.8	268.6	512.8	4.6	11.0	51.0	5641.3
1 3	3	64.6	236.6	387.8	1.4	14.0	19.4	5429.4
1 4	1	5.6	270.0	0.0	0.3	17.0	5.6	0.0
2 1	8	98.2	258.8	279.8	3.7	20.8	76.0	5805.6
2 2	12	71.1	248.8	218.4	2.0	23.1	46.0	5041.2
2 3	9	48.7	269.8	78.6	1.6	25.9	42.1	2034.4
2 4	3	71.8	242.4	156.1	2.3	28.7	64.8	4474.5
3 1	1	98.2	284.8	0.0	3.1	32.0	98.2	0.0
3 2	9	95.1	234.2	378.5	1.5	35.1	51.1	13288.7
3 3	2	159.3	234.9	211.7	3.7	37.5	139.0	7937.9
3 4	1	199.5	246.4	0.0	4.8	42.0	199.5	0.0

release area: Hvide Sande
release period: 3rd quarter
source: Netherlands

No. of								
Quarter	returns	D	Ψ	a^2	V	t	$V \cdot t$	$t \cdot a^2$
0 3	7	28.8	30.1	1425.4	10.9	1.1	12.4	1629.0
0 4	3	32.4	338.3	239.7	8.4	3.0	25.1	719.0
1 1	12	48.0	244.8	297.7	4.4	7.8	34.4	2332.1
1 2	74	31.6	332.8	327.9	1.1	9.9	10.9	3257.0
1 3	16	44.5	264.4	293.4	1.5	12.8	19.0	3759.5
1 4	12	62.3	241.7	236.0	2.6	15.9	41.6	3756.7
2 1	12	101.8	234.9	679.1	3.3	19.5	64.7	13243.1
2 2	43	65.5	274.9	304.8	1.9	21.8	42.3	6655.4
2 3	19	58.7	253.6	117.7	1.8	25.1	45.1	2954.1
2 4	14	65.9	226.8	189.3	1.4	27.5	39.5	5204.7
3 1	7	130.7	221.5	360.1	4.0	30.7	121.4	11061.3
3 2	12	81.6	284.4	239.3	1.4	33.8	45.7	8077.0
3 3	11	64.8	282.0	113.2	1.5	37.5	54.4	4249.7
3 4	2	102.8	241.6	141.4	2.1	39.5	84.0	5583.6

release area: Sylt
release period: 2nd quarter
source: Netherlands

No. of								
Quarter	returns	D	Ψ	a^2	V	t	$V \cdot t$	$t \cdot a^2$
0 3	9	20.1	163.2	81.1	7.6	2.1	16.0	171.1
0 4	3	51.8	223.4	333.3	10.6	4.7	49.6	1555.3
1 1	2	43.4	261.2	135.6	4.1	8.0	32.7	1084.9
1 2	11	50.5	288.2	339.8	2.3	11.5	26.7	3923.4
1 3	5	70.1	268.6	363.3	2.4	13.6	32.2	4941.2
2 4	3	201.9	248.1	239.6	11.8	16.3	193.4	3913.4
2 1	1	127.1	260.9	0.0	6.7	19.0	127.1	0.0
2 2	4	79.9	223.4	219.9	3.3	23.3	77.1	5112.2
2 3	3	162.6	236.2	33.1	6.1	26.3	161.7	871.9
2 4	1	152.5	45.4	0.0	5.4	28.0	152.5	0.0
3 1	1	114.8	275.0	0.0	3.5	33.0	114.8	0.0

release area: Sylt
release period: 3rd quarter
source: Netherlands

No. of								
Quarter	returns	D	Ψ	a^2	V	t	$V \cdot t$	$t \cdot a^2$
0 3	2	24.6	324.4	369.3	23.3	1.0	23.3	369.3
1 1	1	109.1	8.2	0.0	15.6	7.0	109.1	0.0
1 2	7	53.5	235.9	266.7	4.7	8.7	41.0	2323.8
1 3	5	49.5	256.0	209.0	3.7	11.6	43.0	2424.1
1 4	4	79.9	271.3	385.3	2.9	15.0	43.8	5779.8
2 1	2	54.5	302.4	15.6	2.8	18.5	52.3	289.0
2 2	10	57.0	264.5	107.7	2.0	21.5	43.3	2316.0
2 3	2	53.0	284.3	14.0	2.2	24.0	52.7	336.1
2 4	2	44.9	271.4	20.0	1.6	26.5	42.8	531.1
3 1	5	58.4	242.0	3.8	1.9	30.2	58.0	114.9
3 2	7	87.2	292.3	151.6	2.4	32.6	77.1	4936.4
3 3	7	143.5	248.8	260.5	3.3	36.1	120.7	9416.4
4 1	3	124.0	236.7	223.9	2.9	41.3	118.4	9255.9
4+	7	104.5	275.0	122.1	1.5	59.3	87.7	7241.5

release area: Sylt
release period: 4th quarter
source: Netherlands

No. of								
Quarter	returns	D	Ψ	a^2	V	t	$V \cdot t$	$t \cdot a^2$
1 2	1	67.7	8.2	0.0	8.5	8.0	67.7	0.0
1 3	1	28.6	168.3	0.0	2.6	11.0	28.6	0.0
2 2	2	99.2	324.1	195.0	5.3	18.5	97.5	3606.7
3 4	1	65.7	315.7	0.0	1.8	37.0	65.7	0.0
4 2	1	38.7	342.8	0.0	0.9	44.0	38.7	0.0

release area: Norderney
release period: 3rd quarter
source: Netherlands

No. of								
Quarter	returns	D	Ψ	a^2	V	t	$V \cdot t$	$t \cdot a^2$
0 3	2	44.0	290.4	719.5	21.6	2.0	43.1	1439.0
1 2	1	158.9	259.1	0.0	15.9	10.0	158.9	0.0

release area: Norderney
release period: 4th quarter
source: Netherlands

No. of								
Quarter	returns	D	Ψ	a^2	V	t	$V \cdot t$	$t \cdot a^2$
0 4	1	9.6	58.6	0.0	9.6	1.0	9.6	0.0
1 1	7	184.5	239.1	2098.0	40.8	4.4	180.7	9291.3
1 2	6	126.4	240.7	859.7	17.6	6.5	114.3	5588.2
1 3	7	96.1	290.2	791.6	6.4	10.0	64.5	7916.3
1 4	2	104.8	273.4	682.8	8.5	12.0	102.1	8193.0
2 1	4	159.0	255.1	377.1	10.1	15.5	155.8	5845.5
2 2	12	78.0	259.0	429.4	3.4	19.2	64.2	8229.3
2 3	6	70.9	267.1	299.3	2.9	21.8	63.6	6535.5
2 4	3	96.5	244.6	55.4	3.9	24.7	95.6	1367.7
3 1	3	118.6	264.5	105.4	4.0	28.0	111.7	2951.5
3 2	4	131.2	288.0	559.5	3.4	31.3	105.0	17484.3
3 3	5	62.4	305.7	104.2	1.7	34.4	58.9	3585.1
4 1	2	189.6	258.5	82.8	4.7	39.5	184.2	3271.4
4 2	4	86.6	278.0	227.9	1.6	43.0	67.8	9801.5
4 3	2	95.6	259.6	50.2	1.9	45.5	88.7	2285.3
4+	3	174.3	260.4	347.7	2.6	57.0	150.5	19818.3

release area: eastern part of Dutch Waddensea
 release period: 3rd quarter
 source: Netherlands

No. of								
Quarter	returns	D	Ψ	a^2	V	t	$V*t$	$t*a^2$
0 3	222	4.9	324.2	45.5	3.0	1.0	3.0	45.5
0 4	48	14.8	305.1	149.1	3.7	2.7	10.2	406.8
1 1	36	69.7	257.6	997.0	9.7	6.0	58.6	6010.0
1 2	224	49.1	273.6	566.6	3.5	8.8	30.6	4963.2
1 3	181	60.3	292.2	235.5	4.0	11.9	47.3	2801.6
1 4	45	84.5	268.4	286.1	4.9	14.7	71.6	4203.2
2 1	72	137.8	257.6	475.4	6.3	18.1	114.1	8610.6
2 2	117	81.2	275.3	223.1	3.0	21.2	63.0	4719.0
2 3	94	78.8	304.7	145.2	2.6	23.7	62.4	3443.5
2 4	34	129.9	286.5	293.4	4.0	26.6	106.1	7801.0
3 1	18	130.4	280.1	224.8	3.6	30.1	106.9	6756.2
3 2	24	107.3	303.2	320.8	2.4	33.2	78.2	10652.2
3 3	16	131.3	294.9	224.2	3.3	36.1	118.6	8100.5
3 4	6	104.7	255.7	115.8	2.4	39.3	94.3	4554.4
4 1	8	132.9	273.0	61.1	3.0	41.5	124.4	2537.3
4 2	9	142.9	270.7	113.1	3.0	44.8	134.0	5062.4
4+	24	157.3	288.6	113.3	2.2	65.9	145.3	7464.8

release area: eastern part of Dutch Waddensea
 release period: 4th quarter
 source: Netherlands

No. of								
Quarter	returns	D	Ψ	a^2	V	t	$V*t$	$t*a^2$
0 4	20	6.8	283.8	185.7	4.0	1.3	5.0	232.1
1 1	31	105.2	250.4	2277.5	21.7	4.0	86.8	9110.1
1 2	71	88.7	250.3	774.3	11.5	7.0	80.7	5419.9
1 3	120	84.9	274.4	550.1	6.3	9.9	62.3	5418.4
1 4	41	92.5	272.5	336.2	5.9	13.0	76.8	4361.8
2 1	32	133.2	255.2	248.6	7.6	16.1	122.6	3992.9
2 2	49	124.7	260.3	482.9	5.1	18.9	97.1	9107.0
2 3	33	95.8	294.5	283.3	3.1	21.8	67.7	6181.2
2 4	19	140.2	287.5	382.8	4.6	24.3	111.1	9308.0
3 1	10	144.2	261.0	180.0	4.8	27.6	133.8	4967.6
3 2	14	147.2	280.1	373.5	3.7	30.9	115.4	11523.7
3 3	5	186.8	299.1	282.1	5.1	33.2	170.4	9365.5
4 1	4	188.0	291.9	715.8	2.4	40.0	96.7	28633.6
4 2	2	83.5	330.5	64.1	1.6	43.0	68.9	2756.5
4 3	3	152.7	295.5	53.4	3.2	46.0	148.9	2458.2
4+	8	167.8	270.0	154.2	2.3	62.1	144.5	9582.0

release area: Western Waddensea
 release period: 1st quarter
 source: Netherlands

No. of								
Quarter	returns	D	Ψ	a^2	V	t	$V*t$	$t*a^2$
0 1	164	15.8	280.0	506.9	3.8	1.5	5.9	785.1
0 2	491	24.5	257.1	338.2	4.0	3.7	14.8	1258.3
0 3	399	40.1	262.1	257.9	4.1	6.6	27.2	1702.9
0 4	113	54.5	255.7	226.6	4.4	9.2	40.6	2083.6
1 1	131	83.0	240.9	268.5	5.8	13.0	75.4	3482.4
1 2	164	63.0	244.5	236.5	2.9	15.7	45.4	3719.1
1 3	76	66.1	261.1	185.1	2.4	18.5	45.1	3420.1
1 4	29	74.3	241.6	83.5	3.2	21.5	68.7	1793.1
2 1	14	93.6	237.8	222.0	3.2	25.2	79.5	5596.6
2 2	18	97.1	242.5	340.4	3.0	28.0	84.6	9530.6
2 3	5	163.7	319.1	547.7	4.7	30.6	144.6	16759.8
2 4	2	151.9	255.8	180.3	4.0	33.5	134.5	6039.6
3 1	3	97.4	268.7	57.6	2.4	37.0	89.8	2130.7
3 2	6	131.4	236.6	185.1	2.9	39.5	114.4	7310.7
3 3	3	176.2	310.0	69.9	4.0	42.3	167.9	2960.4
4+	8	128.6	292.7	128.6	1.7	63.1	108.6	8120.1

release area: Western Waddensea
 release period: 2nd quarter
 source: Netherlands

No. of								
Quarter	returns	D	Ψ	a^2	V	t	$V*t$	$t*a^2$
0 3	43	16.0	277.1	227.5	4.5	1.8	8.0	402.0
0 4	25	28.3	238.8	168.6	5.1	5.0	25.4	842.9
1 1	24	92.2	233.0	677.7	10.0	8.5	85.2	5788.5
1 2	70	62.2	227.7	295.9	5.3	10.8	57.5	3195.3
1 3	40	72.0	238.7	208.3	4.6	13.9	64.1	2895.2
1 4	13	89.4	238.1	164.2	5.2	16.5	86.1	2715.8
2 1	8	124.2	230.8	173.4	5.9	20.5	121.3	3554.8
2 2	13	84.7	229.2	170.3	2.7	23.2	63.6	3942.3
2 3	13	100.4	246.8	183.7	3.4	26.2	90.2	4804.5
2 4	4	78.6	277.8	181.0	2.2	28.3	61.2	5112.6
3 1	2	81.3	232.9	19.6	2.6	31.0	79.6	607.2
3 2	4	91.7	240.1	123.5	2.2	35.0	77.8	4324.0
3 3	2	86.9	250.0	33.5	2.2	37.5	81.6	1255.9
4 1	1	60.4	252.7	0.0	1.3	45.0	60.4	0.0
4+	3	89.5	283.2	91.5	1.2	66.0	82.0	6042.0

release area: Western Waddensea
 release period: 3rd quarter
 source: Netherlands

No. of								
Quarter	returns	D	Ψ	a^2	V	t	$V*t$	$t*a^2$
0 3	63	19.1	66.2	448.5	7.2	1.3	9.0	562.4
0 4	81	21.0	95.9	298.3	0.8	2.8	2.2	821.3
1 1	107	30.7	204.7	321.8	1.8	5.8	10.4	1879.6
1 2	299	31.7	234.9	226.6	2.1	8.7	18.1	1970.6
1 3	141	39.2	243.9	144.7	2.5	11.4	28.8	1655.8
1 4	50	52.8	233.4	204.9	2.9	14.5	42.3	2975.4
2 1	18	80.7	236.1	213.2	3.9	17.9	69.5	3813.7
2 2	99	60.6	236.1	176.5	2.4	20.4	48.4	3602.8
2 3	32	73.3	248.1	242.8	2.2	23.2	50.7	5638.4
2 4	12	78.3	267.6	325.7	2.0	26.0	51.2	8467.9
3 1	8	104.6	230.4	214.1	3.4	30.0	103.4	6422.7
3 2	7	49.8	228.9	33.5	1.5	32.3	46.9	1080.1
3 3	7	68.7	286.3	145.8	0.9	35.9	33.7	5228.9
3 4	4	92.9	238.6	81.9	2.0	38.5	77.8	3152.4
4 1	1	181.7	308.9	0.0	4.3	42.0	181.7	0.0
4 2	3	47.2	223.0	28.1	1.1	44.0	46.4	1236.8
4+	8	131.9	254.0	220.8	1.7	70.0	115.9	15459.5

release area: Western Waddensea
 release period: 4th quarter
 source: Netherlands

No. of								
Quarter	returns	D	Ψ	a^2	V	t	$V*t$	$t*a^2$
0 4	55	15.9	108.4	447.3	3.6	1.2	4.1	520.5
1 1	202	35.0	235.6	693.3	8.0	3.2	25.1	2186.3
1 2	535	27.9	244.9	213.6	2.9	6.4	18.8	1373.2
1 3	375	44.1	247.4	187.2	3.6	9.5	34.3	1771.2
1 4	125	63.0	239.9	260.1	4.2	11.9	49.9	3093.8
2 1	102	94.4	240.0	278.6	5.4	15.5	84.4	4318.5
2 2	134	74.9	241.1	277.6	3.2	18.1	57.8	5035.9
2 3	60	81.2	251.6	192.5	3.2	21.0	67.0	4033.6
2 4	38	69.7	268.1	168.2	2.2	24.0	51.9	4040.7
3 1	19	131.5	238.9	386.9	3.6	27.4	99.6	10609.4
3 2	21	90.7	241.2	192.6	2.4	30.1	71.2	5806.6
3 3	11	83.8	270.5	162.9	1.5	33.7	50.2	5495.5
3 4	5	153.8	246.1	290.9	3.5	36.0	126.5	10471.7
4 1	1	117.2	238.0	0.0	3.1	38.0	117.2	0.0
4 2	1	35.9	270.0	0.0	0.9	41.0	35.9	0.0
4 3	3	97.4	311.4	242.2	1.1	45.7	48.5	11059.7
4+	7	143.5	282.0	368.1	1.4	61.6	88.2	22663.9

release area: Dutch coast
release period: 1st quarter
source: Netherlands

No. of								
Quarter	returns	D	Ψ	a^2	V	t	$V*t$	$t*a^2$
0 1	10	11.8	282.2	75.7	5.7	1.5	8.5	113.6
0 2	137	27.0	244.3	324.3	6.3	3.4	21.1	1086.6
0 3	127	35.9	246.2	110.0	5.1	6.3	31.9	694.5
0 4	31	45.5	250.0	137.9	4.1	8.5	35.2	1178.6
1 1	27	66.4	246.6	245.8	4.2	12.4	52.0	3041.2
1 2	32	60.0	235.0	170.7	3.3	14.7	49.0	2512.9
1 3	20	66.4	245.1	105.0	3.2	17.9	57.7	1874.1
1 4	8	77.6	236.1	104.6	3.2	21.3	67.2	2223.6
2 1	3	59.1	232.9	34.3	2.3	25.0	56.4	857.8
2 2	2	53.4	270.0	95.5	0.7	27.0	18.3	2579.5
2 3	1	159.9	306.9	0.0	5.5	29.0	159.9	0.0
3 2	2	95.7	287.0	133.9	2.1	39.0	82.4	5221.1
3 3	1	180.2	287.4	0.0	4.4	41.0	180.2	0.0

release area: Dutch coast
release period: 2nd quarter
source: Netherlands

No. of								
Quarter	returns	D	Ψ	a^2	V	t	$V*t$	$t*a^2$
0 2	24	17.2	150.5	273.1	9.0	1.2	10.9	330.0
0 3	43	26.9	303.5	478.9	3.1	2.7	8.6	1314.2
0 4	20	33.6	210.3	253.2	3.4	4.8	16.4	1228.2
1 1	2	28.7	271.0	5.2	3.2	9.0	28.7	46.4
1 2	36	45.3	293.4	396.3	1.2	11.3	14.1	4491.9
1 3	25	35.1	322.3	85.1	1.9	13.6	25.5	1154.3
1 4	2	49.4	315.9	61.4	2.5	16.5	41.7	1012.3
2 1	3	75.0	239.2	236.4	3.4	20.7	70.4	4886.3
2 2	11	65.7	315.4	443.4	1.8	22.8	42.1	10117.0
2 3	11	47.0	329.4	108.1	1.5	26.1	39.9	2819.5
2 4	4	99.3	291.1	328.4	1.4	29.5	41.0	9689.1
3 1	1	172.2	231.2	0.0	5.4	32.0	172.2	0.0
3 2	2	14.4	180.5	5.7	0.1	35.5	3.0	201.2
3 3	5	64.5	329.9	125.1	1.5	37.2	56.9	4652.3
4 1	2	127.0	222.9	231.1	2.9	43.5	126.9	10051.0
4+	1	36.1	19.7	0.0	0.31	35.0	36.1	0.0

release area: Dutch coast
release period: 3rd quarter
source: Netherlands

No. of								
Quarter	returns	D	Ψ	a^2	V	t	$V*t$	$t*a^2$
0 3	20	30.6	93.9	529.2	20.2	1.1	22.2	582.1
0 4	49	17.6	136.3	193.8	2.6	2.6	6.7	502.4
1 1	80	29.8	144.6	246.0	0.8	5.8	4.9	1433.0
1 2	235	29.4	234.5	245.9	1.1	8.6	9.7	2108.1
1 3	91	36.2	251.9	159.3	1.9	11.2	21.3	1779.0
1 4	47	46.9	246.2	213.0	2.3	14.1	32.2	3009.2
2 1	15	80.8	239.1	248.1	3.8	18.0	67.7	4466.3
2 2	81	55.0	236.3	159.0	2.0	20.2	41.4	3217.4
2 3	22	68.2	237.2	250.7	2.1	23.1	49.3	5799.1
2 4	7	47.1	312.7	112.7	0.8	25.7	20.2	2897.8
3 1	6	85.4	231.2	316.7	2.6	30.5	80.3	9660.4
3 2	6	43.5	227.8	28.7	1.2	32.3	40.2	928.5
3 3	8	80.6	265.9	191.1	1.3	35.9	45.3	6856.7
3 4	3	84.2	246.8	84.9	1.7	38.3	66.0	3253.1
4 1	1	181.7	308.9	0.0	4.3	42.0	181.7	0.0
4 2	3	47.2	223.0	28.1	1.1	44.0	46.4	1236.8
4+	7	95.5	266.4	62.1	1.2	70.3	82.1	4367.9

release area: Dutch coast
 release period: 4th quarter
 source: Netherlands

No. of								
Quarter	returns	D	Ψ	a^2	V	t	$V \cdot t$	$t \cdot a^2$
0 4	33	14.6	87.6	279.8	12.1	1.1	13.2	305.2
1 1	74	10.6	241.1	192.3	2.6	2.4	6.2	459.9
1 2	162	21.7	246.7	125.1	2.7	6.4	17.2	802.5
1 3	140	32.7	240.1	93.2	2.8	9.6	27.1	898.4
1 4	21	44.5	252.6	88.0	3.1	12.0	37.3	1059.7
2 1	12	57.5	257.4	204.0	3.0	16.1	48.3	3281.1
2 2	20	57.7	245.9	278.6	2.7	18.1	49.2	5056.9
2 3	11	81.3	263.4	164.7	3.2	20.9	66.8	3443.2
2 4	8	48.7	234.4	25.3	1.9	24.3	46.4	613.6
3 1	2	124.5	227.6	0.2	4.5	27.5	124.5	5.1
3 2	2	43.3	261.6	11.9	1.3	31.0	40.9	369.1
3 3	1	48.1	355.7	0.0	1.4	35.0	48.1	0.0
4 3	1	18.1	270.0	0.0	0.4	46.0	18.1	0.0

release area: Scheldt Estuary
 release period: 1st quarter
 source: Netherlands

No. of								
Quarter	returns	D	Ψ	a^2	V	t	$V \cdot t$	$t \cdot a^2$
0 1	19	13.9	255.3	371.3	8.1	1.7	13.6	625.3
0 2	84	37.5	267.7	205.0	7.8	4.3	33.1	873.5
0 3	102	45.6	282.4	181.6	5.6	6.7	37.4	1212.6
0 4	20	64.9	294.8	330.9	5.2	9.6	50.1	3176.8
1 1	13	76.6	300.0	288.3	5.0	12.7	62.8	3659.0
1 2	36	57.1	291.0	316.1	2.8	15.9	44.6	5031.8
1 3	26	80.6	304.9	451.7	3.1	18.4	57.6	8321.2
1 4	10	111.5	293.1	694.4	3.2	21.2	68.7	14721.7
2 1	2	149.1	345.1	156.6	5.6	25.5	142.8	3993.6
2 2	9	71.7	280.8	123.4	2.1	27.7	56.9	3413.9
2 3	1	232.3	331.4	0.0	7.7	30.0	232.3	0.0
2 4	1	56.0	344.7	0.0	1.7	33.0	56.0	0.0
3 2	2	53.0	273.2	2.5	1.3	39.5	52.3	100.4
4+	1	174.3	231.7	0.0	2.2	81.0	174.3	0.0

release area: Scheldt Estuary
 release period: 2nd quarter
 source: Netherlands

No. of								
Quarter	returns	D	Ψ	a^2	V	t	$V \cdot t$	$t \cdot a^2$
0 3	45	37.2	278.9	452.3	16.5	2.0	33.7	924.7
0 4	10	43.0	317.2	133.4	8.9	4.6	40.9	613.7
1 1	9	80.6	269.4	545.5	7.8	8.2	64.0	4485.5
1 2	12	42.1	279.2	50.4	3.4	11.0	37.7	554.2
1 3	11	83.5	290.7	647.2	4.4	13.7	60.2	8883.8
1 4	4	69.6	327.0	64.4	3.8	16.8	64.4	1078.9
2 1	5	74.6	274.1	109.5	3.0	20.8	61.7	2277.0
2 2	3	100.0	259.4	459.1	4.5	22.0	98.2	10100.4
2 3	2	94.3	319.9	9.8	3.7	25.5	94.1	251.0
2 4	2	172.6	342.1	104.1	5.7	29.0	163.9	3020.3
3 2	1	162.0	1.5	0.0	4.8	34.0	162.0	0.0
3 3	1	203.0	329.0	0.0	5.3	38.0	203.0	0.0
4+	1	304.9	15.4	0.0	5.1	60.0	304.9	0.0

release area: Scheldt Estuary
 release period: 3rd quarter
 source: Netherlands

No. of								
Quarter	returns	D	Ψ	a^2	V	t	$V*t$	$t*a^2$
0 3	24	6.4	293.8	125.8	2.4	1.5	3.7	194.0
0 4	35	8.7	65.0	43.2	1.2	3.0	3.7	128.3
1 1	46	22.2	263.6	176.6	3.3	5.7	18.7	1009.8
1 2	152	36.9	271.7	95.3	3.9	8.7	33.7	831.1
1 3	196	42.2	283.2	112.9	3.3	10.8	35.8	1220.6
1 4	29	45.3	293.3	76.5	2.7	14.0	38.3	1068.6
2 1	15	82.7	257.0	244.1	4.4	17.4	76.5	4247.2
2 2	56	71.2	276.5	279.7	2.8	20.1	56.1	5633.1
2 3	27	62.1	303.3	114.4	2.1	23.4	50.2	2673.2
2 4	15	51.8	299.4	29.4	1.9	25.3	47.2	742.3
3 1	6	94.5	258.0	142.5	3.0	28.7	86.4	4085.5
3 2	14	80.0	307.5	310.2	2.0	32.1	62.6	9949.3
3 3	3	50.7	297.6	13.3	1.3	35.3	47.5	468.9
3 4	4	144.1	288.7	544.1	2.9	37.3	107.9	20267.2
4 1	2	197.2	244.5	71.9	4.6	42.0	194.9	3019.0
4 2	1	43.5	290.1	0.0	0.9	46.0	43.5	0.0
4+	6	168.0	284.2	378.0	1.8	63.0	112.9	23815.4

release area: Scheldt Estuary
 release period: 4th quarter
 source: Netherlands

No. of								
Quarter	returns	D	Ψ	a^2	V	t	$V*t$	$t*a^2$
0 4	5	3.0	270.0	15.9	2.1	1.4	3.0	22.2
1 1	25	31.3	257.6	648.3	7.4	3.9	29.0	2541.2
1 2	135	34.5	273.9	91.5	4.8	6.4	30.9	585.7
1 3	205	41.5	294.0	94.8	3.9	9.1	35.7	867.4
1 4	70	47.2	287.9	91.3	3.2	12.0	38.1	1091.5
2 1	33	83.4	287.9	368.6	3.8	15.7	59.7	5774.6
2 2	56	66.7	271.8	269.0	3.0	18.6	56.0	5009.5
2 3	32	85.0	326.1	374.5	2.7	21.8	59.4	8167.8
2 4	16	71.7	307.1	142.9	2.4	24.4	58.5	3482.6
3 1	10	118.7	259.3	297.3	3.7	28.1	103.7	8354.5
3 2	7	108.5	309.1	608.8	3.0	30.3	92.3	18437.6
3 3	2	57.3	294.8	0.6	1.7	34.5	57.2	20.0
3 4	1	185.1	318.2	0.0	5.1	36.0	185.1	0.0
4 1	1	105.2	345.9	0.0	2.7	39.0	105.2	0.0
4 2	4	91.7	266.7	187.7	1.9	42.0	78.2	7881.9
4+	1	223.3	251.2	0.0	3.7	61.0	223.3	0.0

release area: North Sea, French/Belgian Border
 release period: 2nd quarter
 source: France

No. of								
Quarter	returns	D	Ψ	a^2	V	t	$V*t$	$t*a^2$
0 3	8	3.5	2.3	10.9	0.8	2.1	1.7	23.2
0 4	3	10.2	64.8	11.6	2.5	4.0	10.2	46.6
1 1	2	7.6	68.4	8.0	0.8	7.0	5.4	55.7
1 2	6	32.4	282.6	122.3	0.3	11.0	3.0	1345.8
1 3	2	27.7	260.6	6.8	1.9	14.5	27.4	98.7
2 2	1	69.2	31.5	0.0	3.0	23.0	69.2	0.0

release area: North Sea, French/Belgian Border
 release period: 3rd quarter
 source: France

	No. of							
Quarter	returns	D	Ψ	a^2	V	t	$V \cdot t$	$t \cdot a^2$
0 3	61	6.3	271.3	87.6	1.2	1.1	1.3	97.7
0 4	82	3.7	58.4	23.4	0.4	2.3	0.8	54.9
1 1	9	18.8	71.3	58.4	1.7	6.4	11.1	376.6
1 2	35	17.2	57.8	62.5	0.2	9.3	1.5	580.1
1 3	9	35.6	210.1	121.4	2.3	12.4	28.5	1510.8
1 4	11	28.4	6.9	151.5	1.3	14.8	20.0	2244.4
2 1	5	28.7	271.0	61.2	0.6	18.6	11.9	1138.4
2 2	6	46.4	43.9	104.4	1.3	22.0	27.7	2296.2
2 3	7	76.1	287.4	517.8	1.6	23.6	36.8	12205.1
3 3	1	118.6	16.0	0.0	3.1	38.0	118.6	0.0
3 4	1	7.7	24.2	0.0	0.2	39.0	7.7	0.0
4 1	1	100.2	222.4	0.0	2.3	43.0	100.2	0.0
4 2	1	109.4	223.0	0.0	2.5	44.0	109.4	0.0
4+	2	133.6	334.8	307.7	1.0	61.5	64.1	18926.5

release area: Wash
 release period: 2nd quarter
 source: UK, England

	No. of							
Quarter	returns	D	Ψ	a^2	V	t	$V \cdot t$	$t \cdot a^2$
0 2	2	0.6	90.0	0.0	0.6	1.0	0.6	0.0
0 4	1	86.2	4.3	0.0	14.4	6.0	86.2	0.0
1 1	3	104.9	6.4	144.7	12.6	8.3	104.6	1206.2
1 2	4	100.7	16.0	419.8	8.3	10.8	89.7	4512.8
1 3	6	93.2	0.8	229.5	5.7	14.5	82.3	3328.3
1 4	4	103.9	43.8	325.9	5.9	16.5	96.6	5377.9
2 1	1	115.0	1.1	0.0	5.5	21.0	115.0	0.0
2 2	5	120.7	1.9	124.4	5.1	23.2	118.5	2887.2
2 3	4	101.6	4.9	228.9	3.5	26.5	93.6	6064.9
2 4	1	39.8	28.5	0.0	1.3	30.0	39.8	0.0
3 2	3	158.3	6.6	461.1	3.0	35.3	104.7	16293.6
3 3	1	203.5	4.0	0.0	5.4	38.0	203.5	0.0
4 1	2	71.1	359.0	4.8	1.6	43.5	71.0	208.7
4+	9	162.3	3.2	276.7	2.0	62.3	125.4	17245.1

release area: Wash
 release period: 3rd quarter
 source: UK, England

	No. of							
Quarter	returns	D	Ψ	a^2	V	t	$V \cdot t$	$t \cdot a^2$
0 3	2	33.8	353.9	282.1	22.5	1.5	33.7	423.2
0 4	1	51.7	48.9	0.0	12.9	4.0	51.7	0.0
1 1	3	146.5	353.3	1053.7	18.7	7.7	143.6	8078.5
1 2	4	104.8	5.2	519.9	10.7	9.8	104.4	5068.6
1 3	12	88.9	9.0	601.8	5.4	12.8	69.4	7722.9
1 4	8	88.6	2.5	80.3	5.7	15.5	88.0	1244.5
2 1	10	92.0	3.5	184.0	4.4	19.4	85.8	3568.7
2 2	9	106.4	358.8	88.4	4.8	22.0	105.7	1943.9
2 3	7	94.4	13.5	134.2	3.5	25.3	88.4	3393.8
2 4	3	51.1	12.5	21.2	1.7	28.3	48.5	601.7
3 1	2	77.2	36.1	64.4	2.0	31.0	63.1	1996.8
3 2	3	156.6	349.6	32.8	4.5	34.0	153.5	1114.7
3 3	4	81.3	13.8	96.2	1.9	37.0	69.8	3558.7
3 4	1	41.3	7.4	0.0	1.1	39.0	41.3	0.0
4 1	4	99.3	8.6	38.5	2.3	43.3	98.9	1664.0
4 2	1	80.0	358.9	0.0	1.8	45.0	80.0	0.0
4+	14	105.0	15.9	71.4	1.1	79.5	91.2	5674.3

release area: Thames
release period: 2nd quarter
source: UK, England

No. of									
Quarter	returns	D	Ψ	a^2	V	t	$V*t$	$t*a^2$	
0 2	110	7.9	87.9	199.8	2.8	1.0	2.9	201.6	
0 3	491	12.2	95.8	146.8	1.1	2.4	2.7	356.1	
0 4	94	31.6	45.5	484.9	2.3	5.3	12.0	2574.3	
1 1	93	84.0	354.4	826.2	6.6	8.8	58.4	7257.7	
1 2	155	56.5	3.1	638.8	2.4	11.8	28.1	7562.7	
1 3	96	61.0	8.8	480.8	2.7	14.5	39.5	6976.2	
1 4	58	83.9	15.0	473.2	3.5	17.3	60.5	8166.7	
2 1	24	90.2	13.4	274.2	3.3	20.5	67.5	5633.3	
2 2	35	113.2	352.7	656.4	3.2	23.6	74.3	15473.0	
2 3	16	155.9	342.6	688.1	4.2	26.4	112.1	18190.8	
2 4	10	139.6	3.4	551.1	3.4	29.4	101.4	16202.9	
3 1	9	131.1	345.8	228.5	3.3	32.4	106.8	7415.1	
3 2	11	194.6	344.5	671.7	4.1	35.6	147.6	23937.8	
3 3	9	134.3	353.2	187.5	3.4	38.1	128.0	7146.9	
3 4	6	167.4	341.8	311.0	3.2	41.8	134.7	13011.8	
4 1	3	249.8	22.5	354.7	5.3	45.3	238.9	16080.6	
4+	27	170.1	353.6	247.0	2.3	64.3	146.8	15891.7	

release area: Rye
release period: 2nd quarter
source: UK, England

No. of									
Quarter	returns	D	Ψ	a^2	V	t	$V*t$	$t*a^2$	
0 2	79	4.5	197.8	106.8	0.3	1.0	0.3	106.8	
0 3	106	5.5	13.9	47.6	0.4	3.1	1.2	146.8	
0 4	44	13.7	48.0	144.2	1.4	5.9	8.3	851.9	
1 1	30	33.6	17.4	545.5	1.6	9.3	14.8	5091.3	
1 2	54	13.7	19.6	100.6	0.4	11.9	4.6	1192.9	
1 3	25	27.2	340.2	307.0	1.1	14.6	15.4	4495.0	
1 4	5	51.4	26.4	414.6	1.9	18.2	34.4	7545.8	
2 1	5	28.1	203.2	57.4	1.1	21.6	24.2	1240.5	
2 2	6	95.8	358.0	647.6	3.3	24.3	80.4	15758.2	
2 3	9	49.9	18.1	296.3	1.3	26.8	35.0	7933.7	
2 4	1	8.0	240.0	0.0	0.3	30.0	8.0	0.0	
3 1	3	8.5	232.5	1.1	0.2	33.3	8.2	35.4	
3 2	3	60.4	359.6	142.6	1.3	35.7	46.3	5086.7	
3 3	1	3.3	252.4	0.0	0.1	38.0	3.3	0.0	
4 1	1	231.2	357.4	0.0	5.0	46.0	231.2	0.0	
4+	8	51.0	356.1	248.2	0.7	57.8	40.2	14331.6	

release area: Rye
release period: 3rd quarter
source: UK, England

No. of									
Quarter	returns	D	Ψ	a^2	V	t	$V*t$	$t*a^2$	
0 3	4	4.0	243.5	5.5	1.9	1.8	3.3	9.6	
0 4	2	6.8	256.5	6.5	1.6	4.0	6.5	26.1	
1 1	5	5.7	226.7	3.5	0.6	7.2	4.7	25.2	
1 2	5	3.6	89.4	2.0	0.1	10.2	0.8	20.8	
1 3	3	15.1	54.9	25.7	0.9	12.7	11.0	325.9	
2 1	1	26.5	107.6	0.0	1.4	19.0	26.5	0.0	
2 2	2	4.1	231.5	0.7	0.1	22.0	3.2	14.3	
2 4	2	18.0	173.7	9.2	0.5	27.5	14.6	253.1	
3 1	1	8.6	234.3	0.0	0.3	31.0	8.6	0.0	
3 3	1	15.4	251.0	0.0	0.4	37.0	15.4	0.0	

release area: Poole
release period: 2nd quarter
source: UK, England

No. of								
Quarter	returns	D	Ψ	a^2	V	t	$V*t$	$t*a^2$
0 2	22	2.2	191.6	3.3	1.7	1.0	1.7	3.3
0 3	55	2.6	212.4	1.8	0.7	2.7	1.9	4.8
0 4	6	3.1	112.2	0.5	0.5	6.0	3.1	3.0
1 1	11	14.6	249.5	159.3	1.4	9.4	12.7	1492.0
1 2	30	2.5	160.0	0.5	0.2	12.1	1.9	5.6
1 3	7	3.8	201.3	1.6	0.1	15.0	2.0	24.0
1 4	9	22.1	260.7	64.7	1.2	17.9	21.9	1157.3
2 1	3	32.9	235.2	94.7	1.4	21.3	30.3	2020.7
2 2	4	27.2	258.0	86.4	1.1	23.0	26.4	1987.3
2 4	1	103.7	254.3	0.0	3.5	30.0	103.7	0.0
3 1	1	40.6	249.8	0.0	1.3	32.0	40.6	0.0
3 2	1	1.0	179.0	0.0	0.0	37.0	1.0	0.0
4+	2	2.3	205.4	0.0	0.0	67.5	2.2	0.3

release area: Bay de Seine
release period: 2nd quarter
source: France

No. of								
Quarter	returns	D	Ψ	a^2	V	t	$V*t$	$t*a^2$
0 3	6	7.6	123.3	37.7	1.3	2.8	3.6	106.9
0 4	2	5.8	235.8	4.3	0.6	6.0	3.5	26.0
1 2	1	4.4	242.8	0.0	0.4	12.0	4.4	0.0
2 1	1	1.2	213.0	0.0	0.1	22.0	1.2	0.0
2 2	1	126.5	272.7	0.0	5.5	23.0	126.5	0.0
2 4	1	191.4	269.1	0.0	6.6	29.0	191.4	0.0
3 3	1	31.6	104.7	0.0	0.8	38.0	31.6	0.0
3 4	1	19.1	54.8	0.0	0.5	42.0	19.1	0.0
4+	1	4.6	282.4	0.0	0.1	47.0	4.6	0.0

release area: Baye de Seine
release period: 4th quarter
source: France

No. of								
Quarter	returns	D	Ψ	a^2	V	t	$V*t$	$t*a^2$
0 4	5	4.1	269.1	17.2	0.4	1.6	0.7	27.6
1 1	8	6.8	342.8	10.8	0.6	4.5	2.5	48.4
1 2	28	11.0	57.6	35.8	0.4	7.2	3.0	258.1
1 3	17	14.8	51.5	39.3	0.3	9.6	2.7	376.6
1 4	4	17.0	72.6	24.4	0.7	12.5	8.3	304.8
2 1	3	5.5	2.4	0.4	0.3	16.3	5.0	6.8
2 2	6	35.1	310.4	64.4	1.8	19.3	34.2	1245.6
2 3	3	75.9	284.8	391.5	3.5	21.3	75.6	8351.4
2 4	2	3.6	202.8	0.5	0.1	24.0	1.6	12.8
3 1	1	8.9	154.0	0.0	0.3	28.0	8.9	0.0
3 2	1	26.1	40.1	0.0	0.8	31.0	26.1	0.0
3 3	1	5.9	90.0	0.0	0.2	35.0	5.9	0.0
3 4	1	7.2	270.0	0.0	0.2	38.0	7.2	0.0
4+	3	86.6	289.0	180.4	0.8	73.0	61.3	13165.9

release area: Bay de Somme
release period: 3rd quarter
source: France

	No. of							
Quarter	returns	D	Ψ	a^2	V	t	$V*t$	$t*a^2$
0 3	7	8.1	351.6	88.6	7.1	1.0	7.1	88.6
0 4	7	4.8	40.2	11.1	0.4	2.3	0.9	25.4
1 1	3	3.3	260.3	1.1	0.3	6.7	2.0	7.1
1 2	9	7.8	336.5	12.5	0.3	8.7	2.5	108.6
1 3	11	10.0	322.1	11.0	0.3	12.0	3.1	132.3
1 4	1	3.2	232.0	0.0	0.2	14.0	3.2	0.0
2 1	2	79.5	244.2	227.9	3.2	17.5	55.2	3987.7
2 2	4	96.4	269.1	377.2	4.4	21.3	93.3	8015.3
2 4	2	11.9	231.0	3.2	0.5	26.0	11.9	84.0
3 1	1	74.9	227.1	0.0	2.6	29.0	74.9	0.0
3 2	1	52.5	203.9	0.0	1.6	32.0	52.5	0.0
4 1	2	52.7	231.7	5.4	1.2	41.0	50.8	221.0
4+	3	44.9	260.0	32.9	0.7	60.3	42.4	1986.4

release area: Bay de Somme
release period: 4th quarter
source: France

	No. of							
Quarter	returns	D	Ψ	a^2	V	t	$V*t$	$t*a^2$
0 4	10	13.6	9.5	171.1	4.6	1.4	6.5	239.5
1 1	9	20.7	233.7	203.1	2.7	4.7	12.5	947.6
1 2	32	19.8	242.4	106.1	2.0	7.5	14.9	792.5
1 3	12	23.3	306.8	71.9	1.0	9.9	9.6	713.2
1 4	4	44.4	280.1	133.9	2.8	13.3	37.1	1773.9
2 1	6	110.2	266.4	1335.0	6.4	16.5	105.7	22027.4
2 2	15	62.6	261.9	242.0	2.7	18.9	50.9	4582.1
2 3	8	118.5	264.1	208.1	5.4	21.6	116.8	4500.4
2 4	7	21.8	241.8	12.1	0.9	24.7	21.2	299.2
3 1	1	12.8	270.0	0.0	0.4	29.0	12.8	0.0
3 2	3	41.4	233.3	16.0	1.3	31.7	41.2	505.9
3 3	1	167.2	263.5	0.0	4.8	35.0	167.2	0.0
3 4	1	14.6	236.7	0.0	0.4	37.0	14.6	0.0
4 1	1	64.1	224.1	0.0	1.6	41.0	64.1	0.0
4 3	2	29.0	263.1	8.6	0.6	47.0	29.0	402.0
4+	3	51.0	282.5	10.9	0.8	62.0	47.7	673.9

release area: Bay du St. Michel
release period: 2nd quarter
source: France

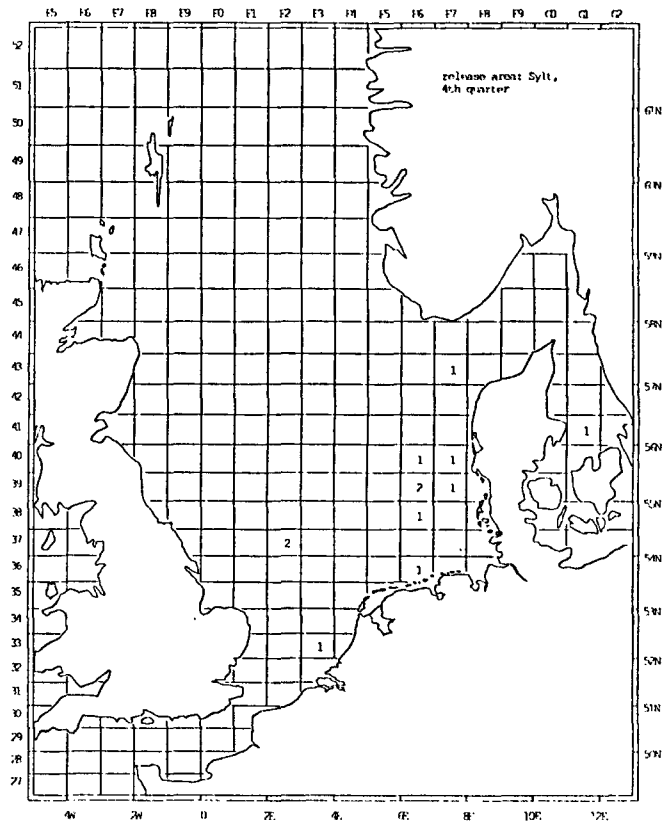
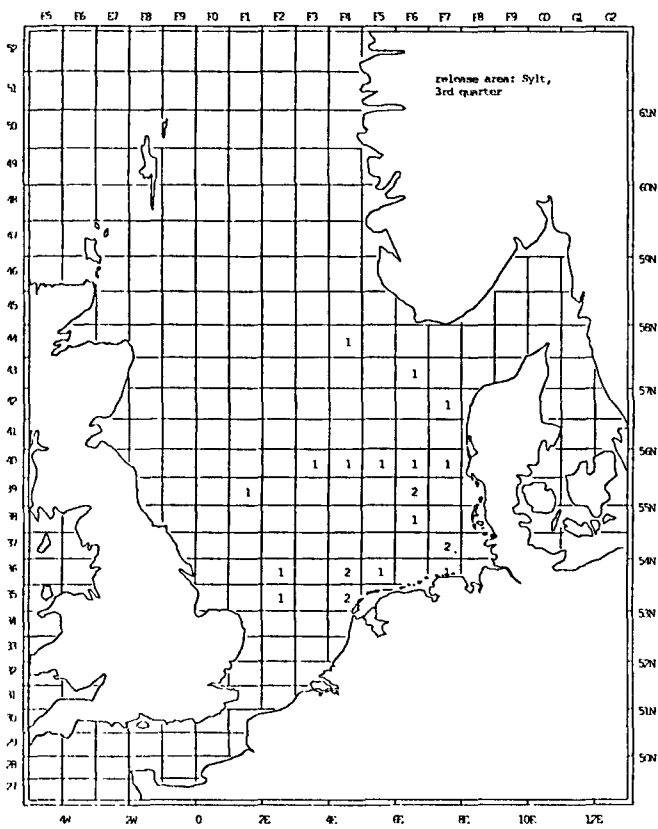
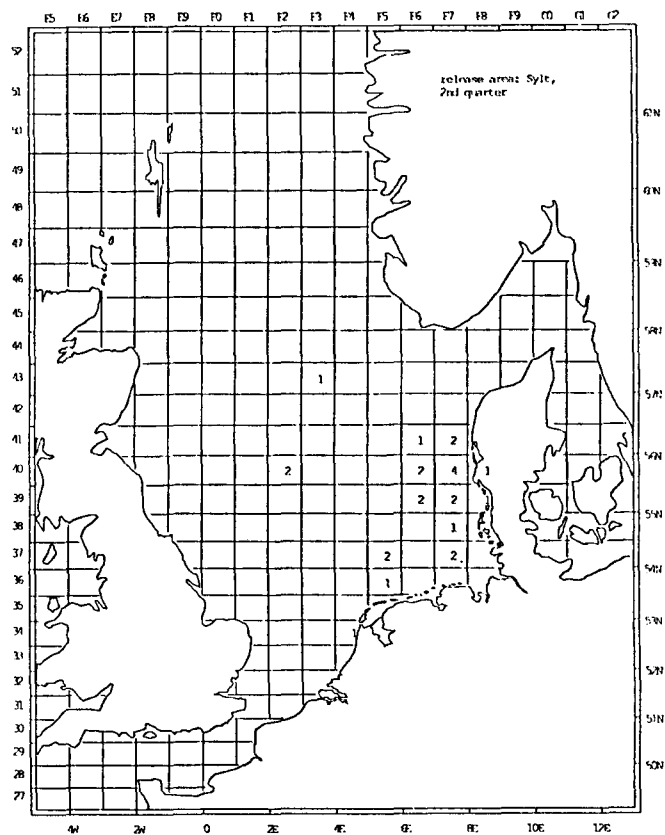
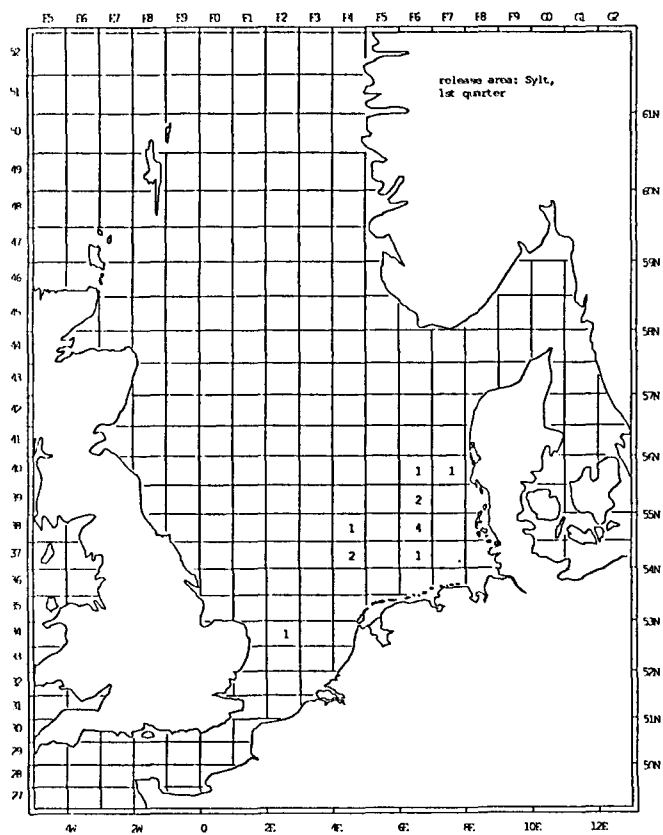
	No. of							
Quarter	returns	D	Ψ	a^2	V	t	$V*t$	$t*a^2$
0 2	1	0.0	0.0	0.0	0.0	1.0	0.0	0.0
2 3	1	11.1	186.8	0.0	0.4	28.0	11.1	0.0

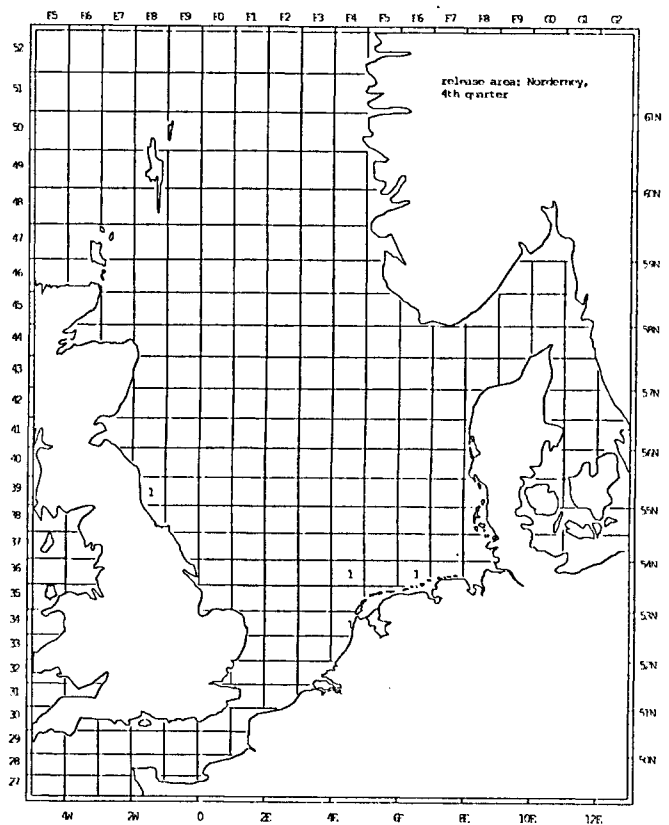
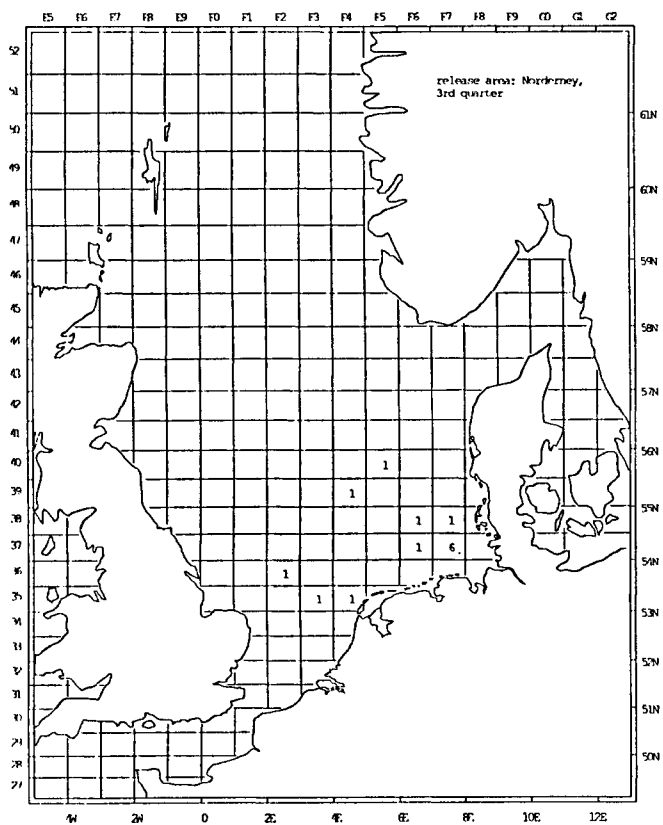
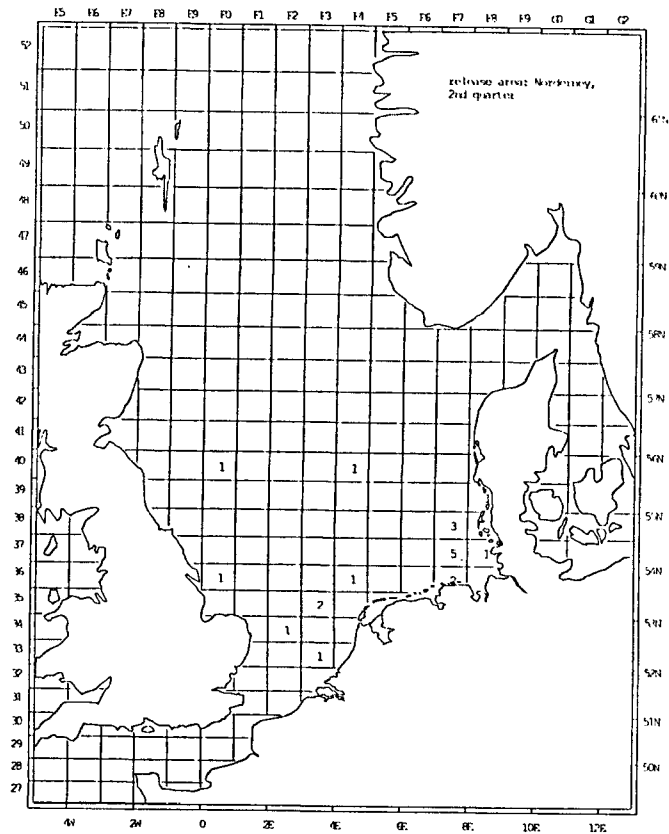
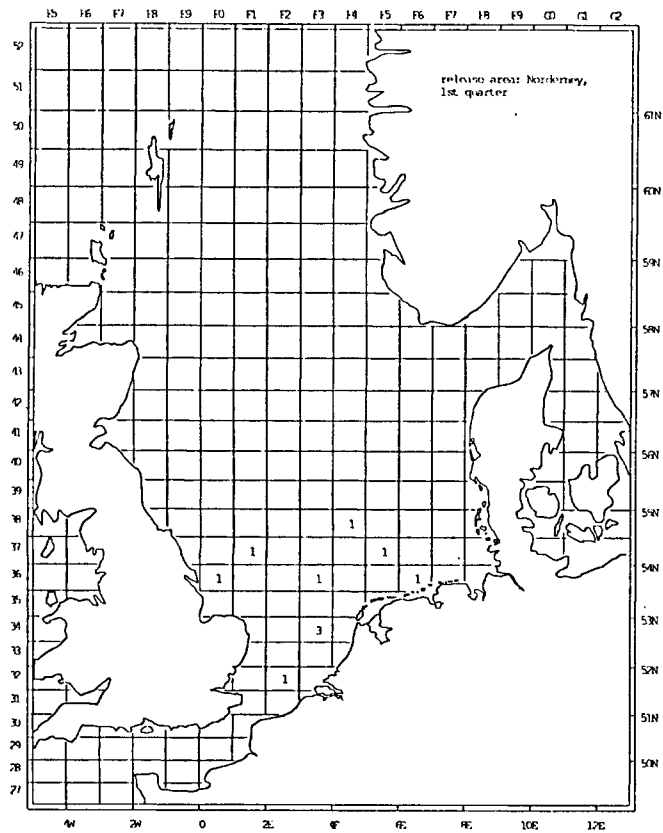
release area: Bay du St. Michel
release period: 4th quarter
source: France

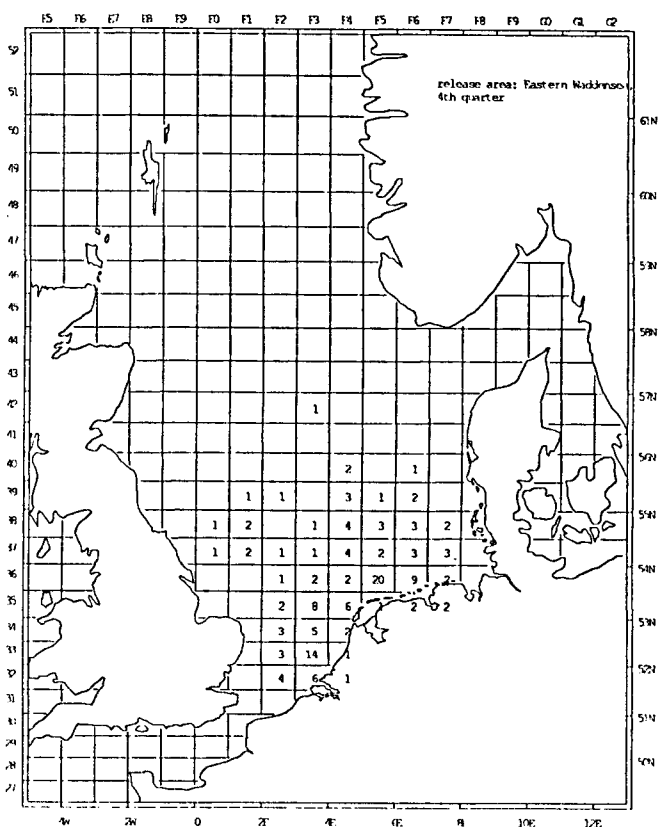
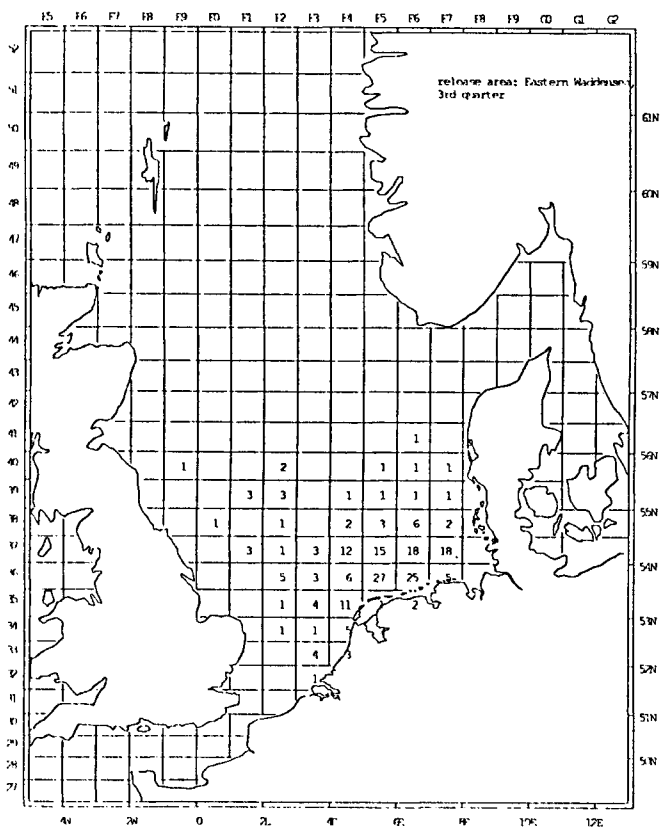
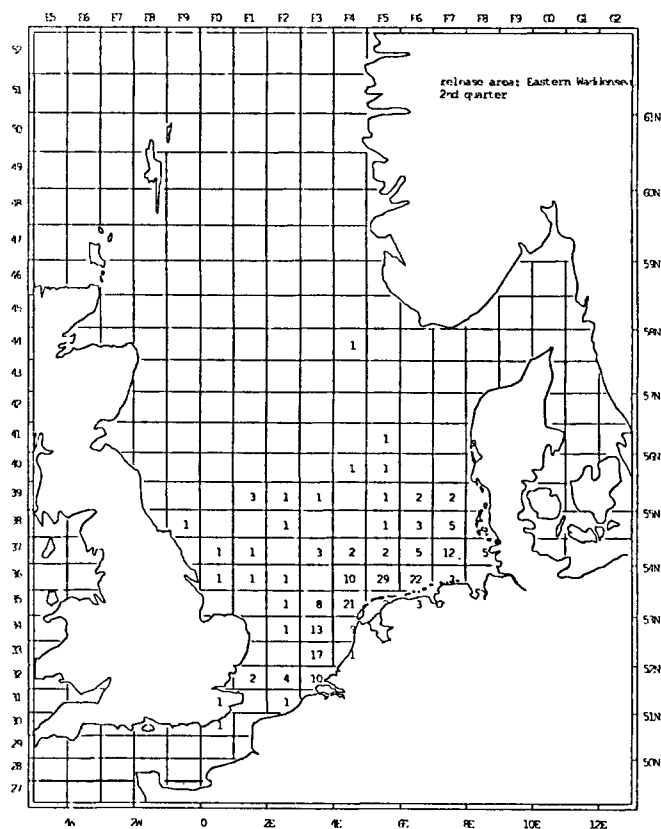
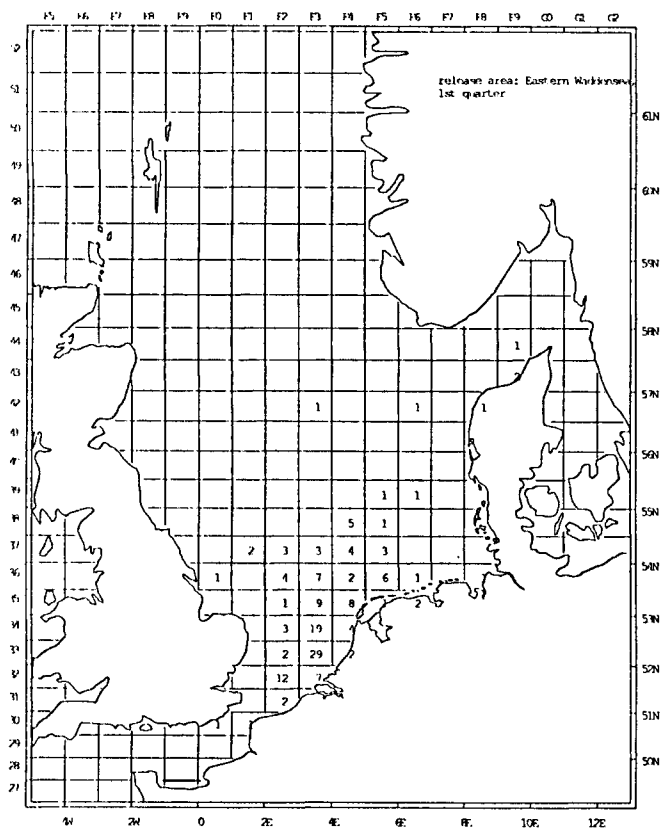
	No. of							
Quarter	returns	D	Ψ	a^2	V	t	$V*t$	$t*a^2$
1 1	1	7.2	326.6	0.0	1.8	4.0	7.2	0.0
1 2	20	16.9	351.7	291.7	0.8	6.3	5.0	1852.1
1 3	2	138.4	303.9	117.8	13.8	10.0	138.0	1178.1
2 1	1	130.9	315.3	0.0	8.2	16.0	130.9	0.0
2 2	3	112.8	316.3	104.5	6.1	18.0	110.5	1881.5

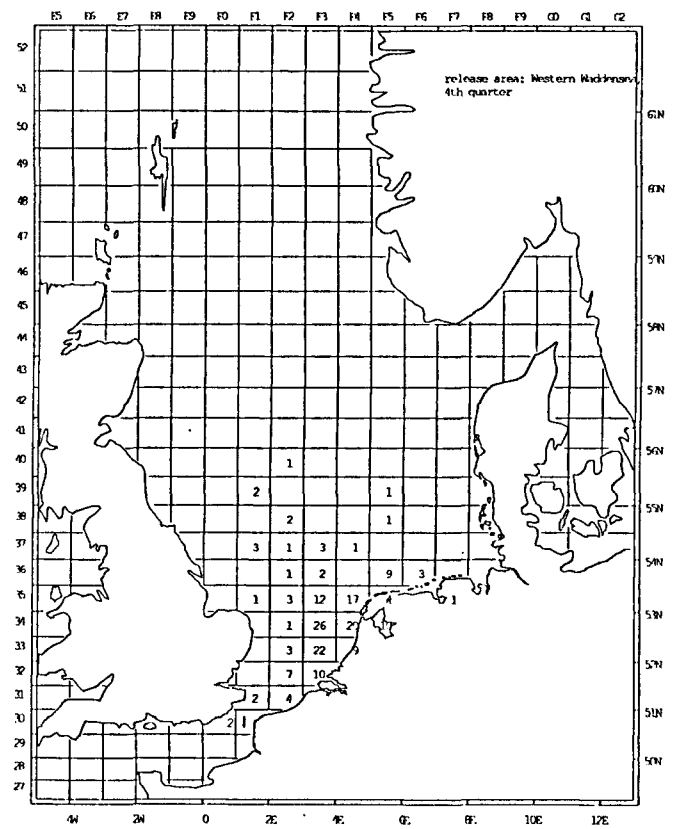
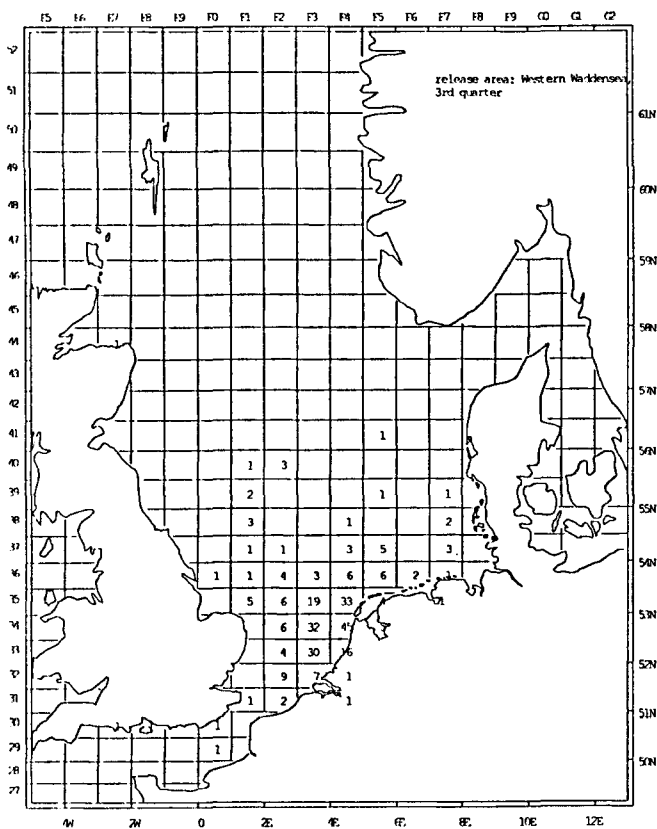
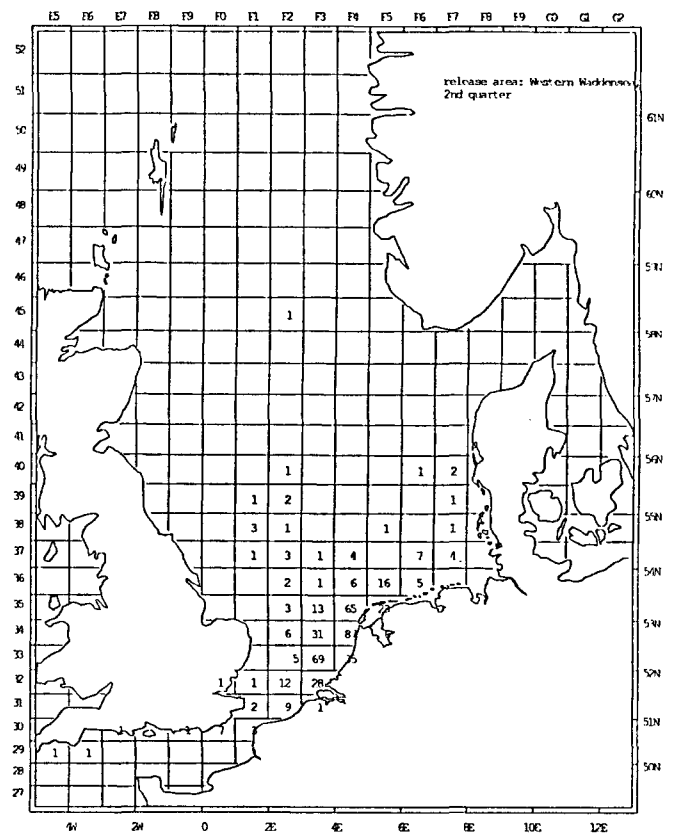
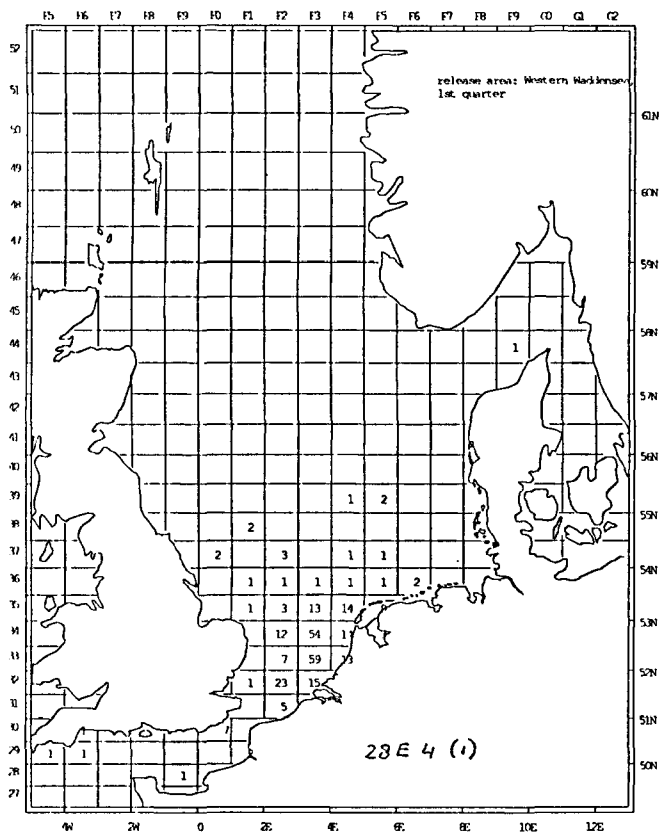
APPENDIX III

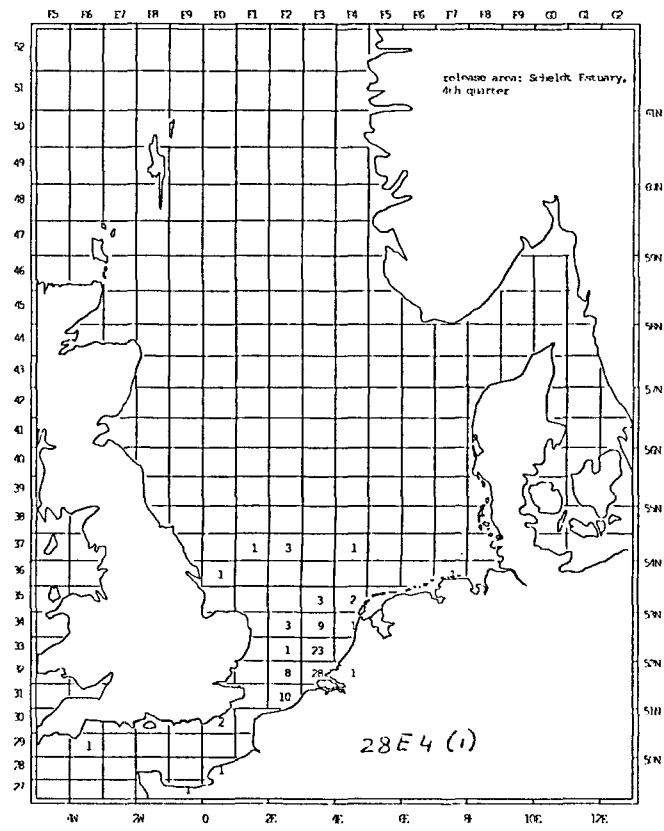
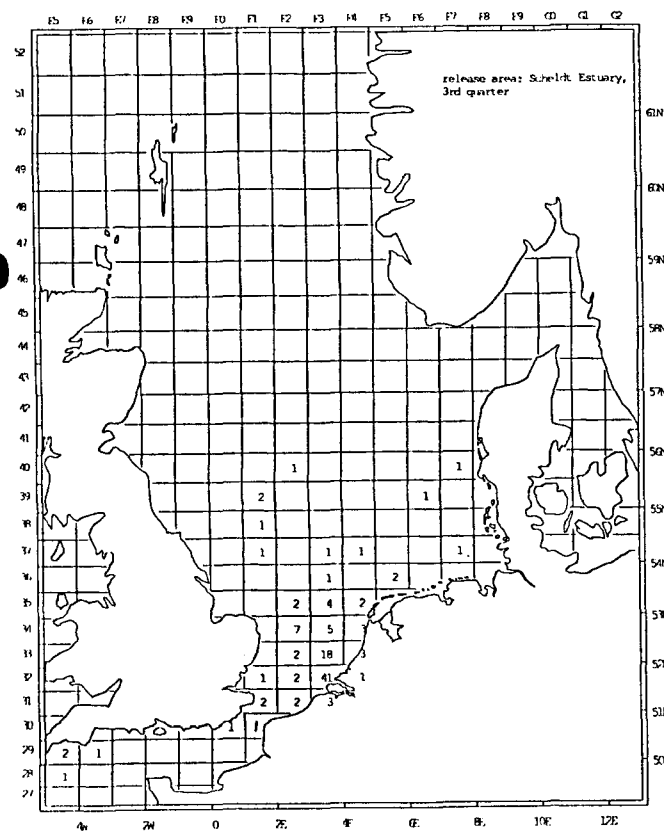
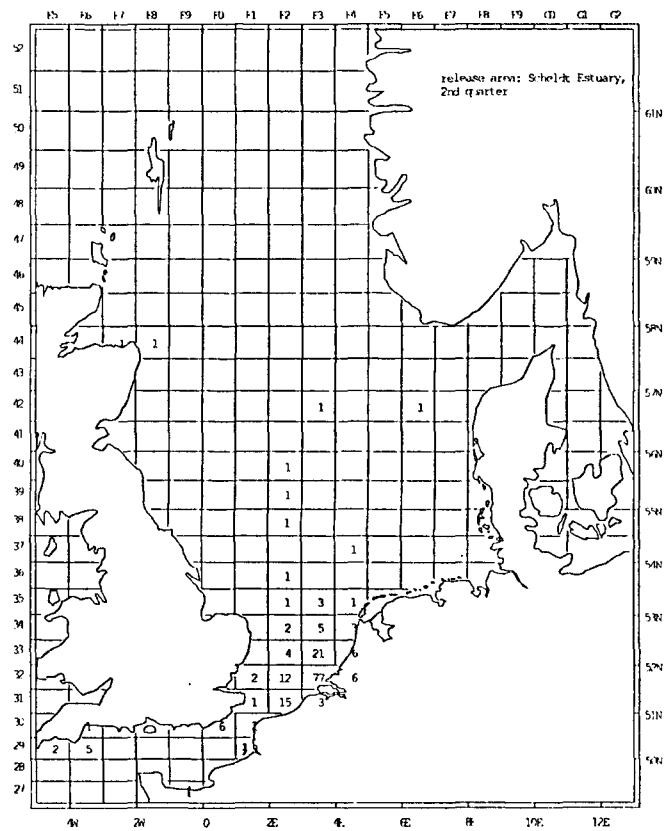
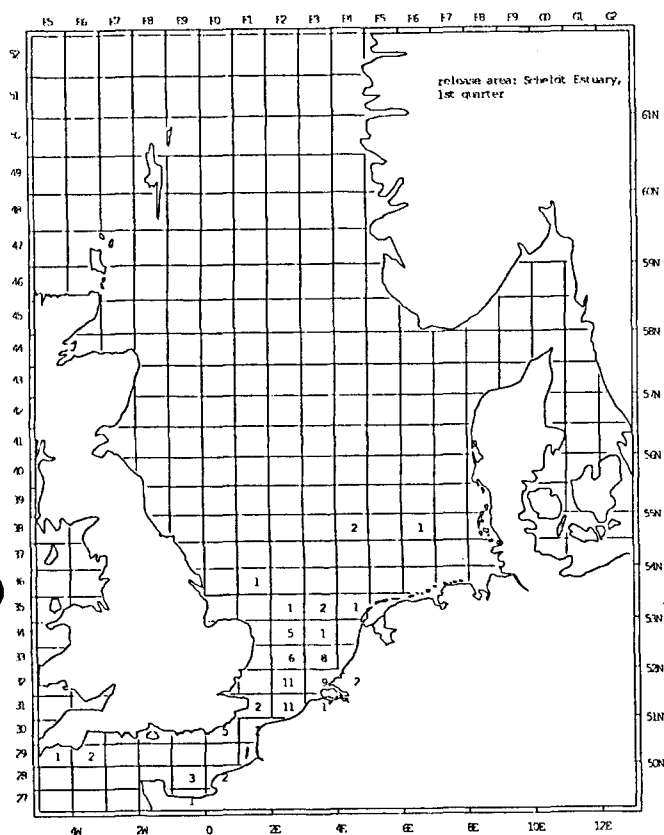
Maps of quarterly recaptures of plaice, by nursery release area and tagged with a length < 25 cm, which have been in sea for more than 12 months.

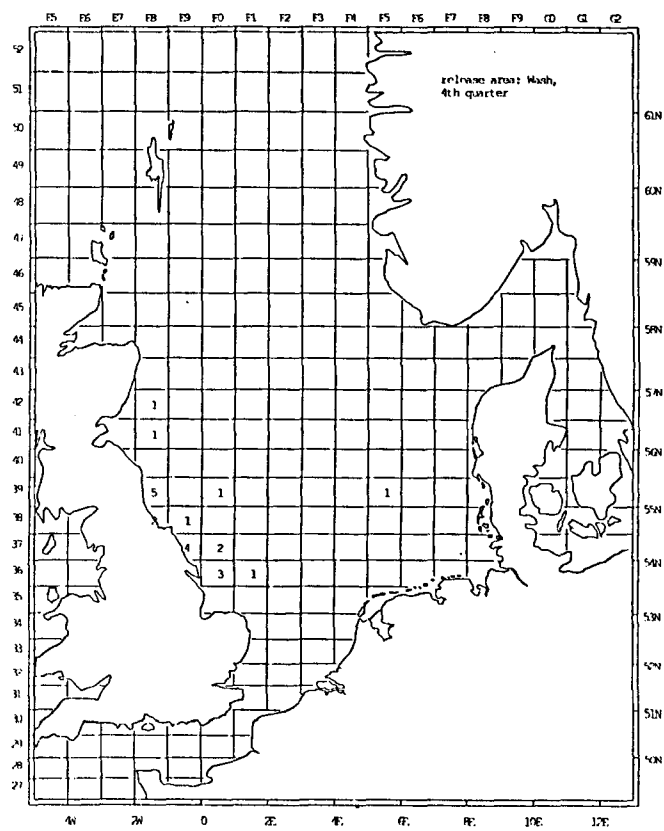
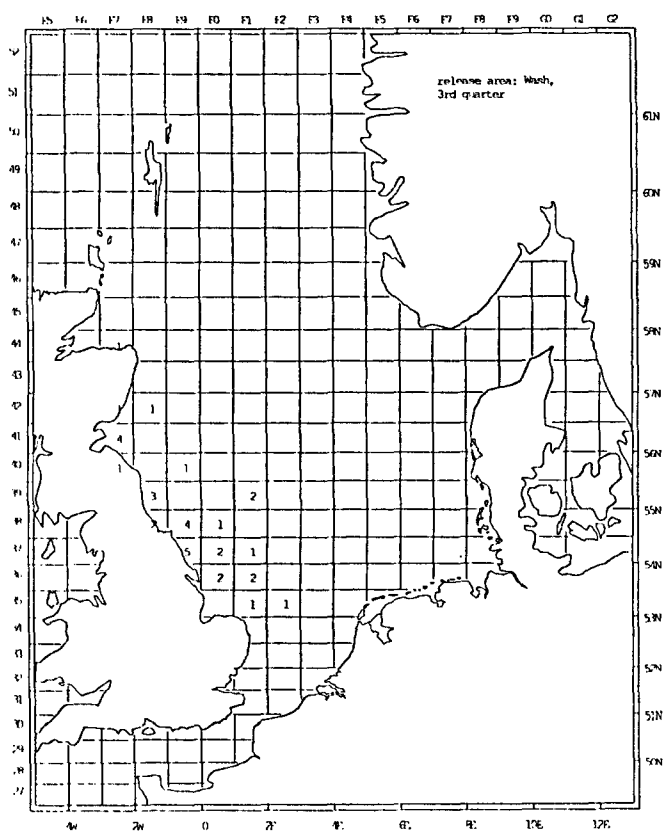
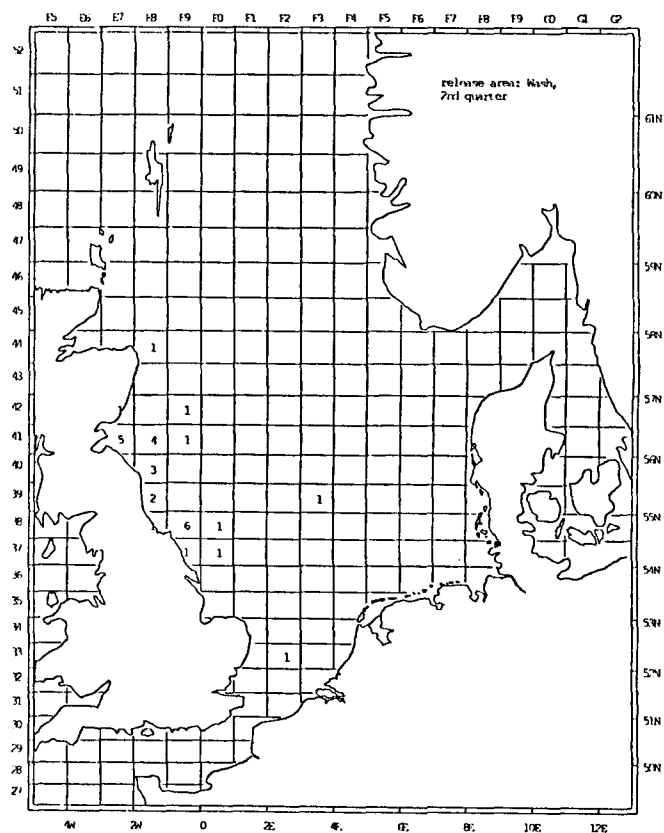
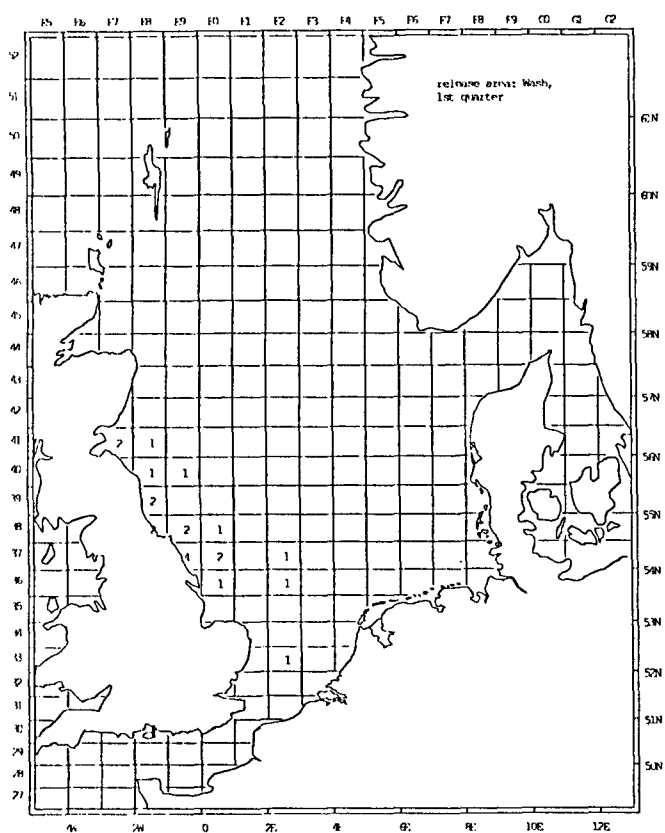


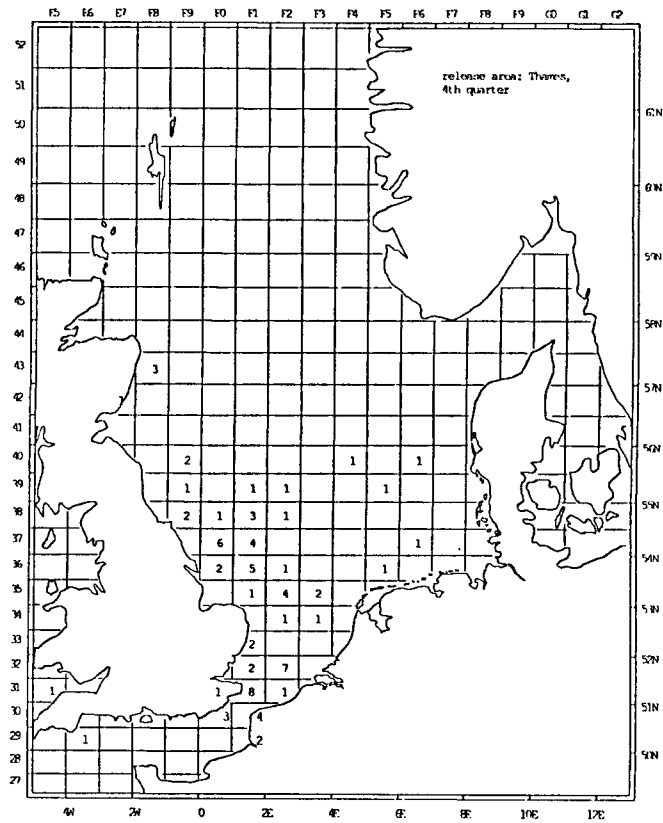
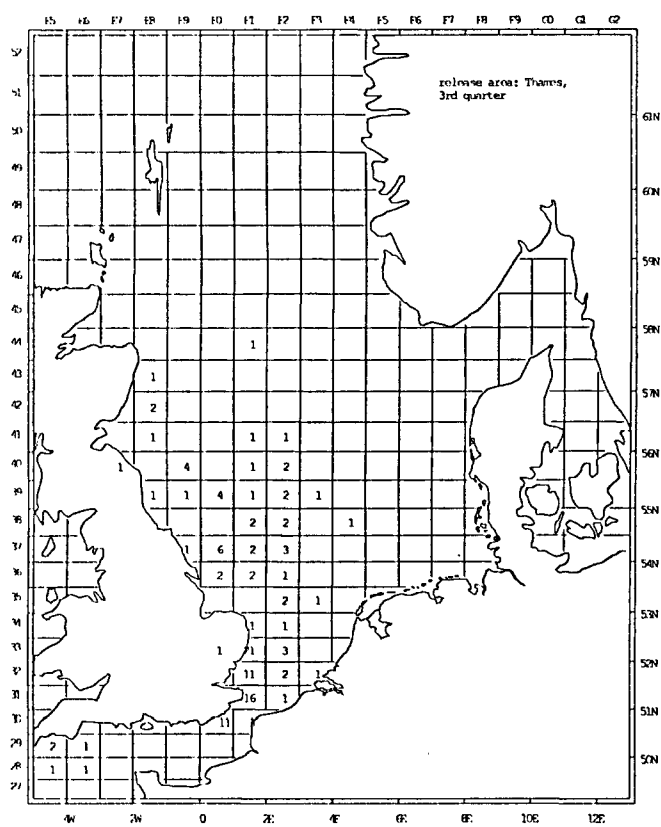
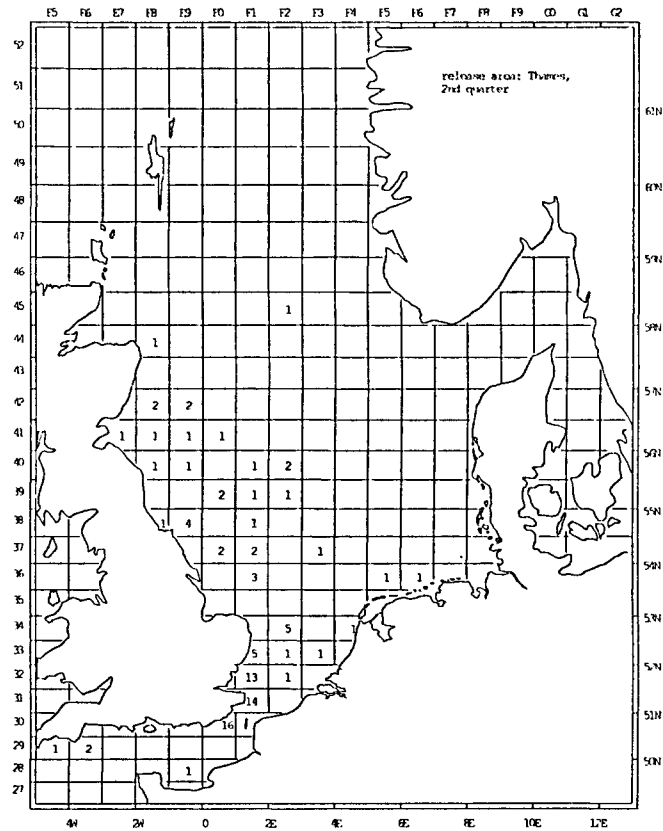
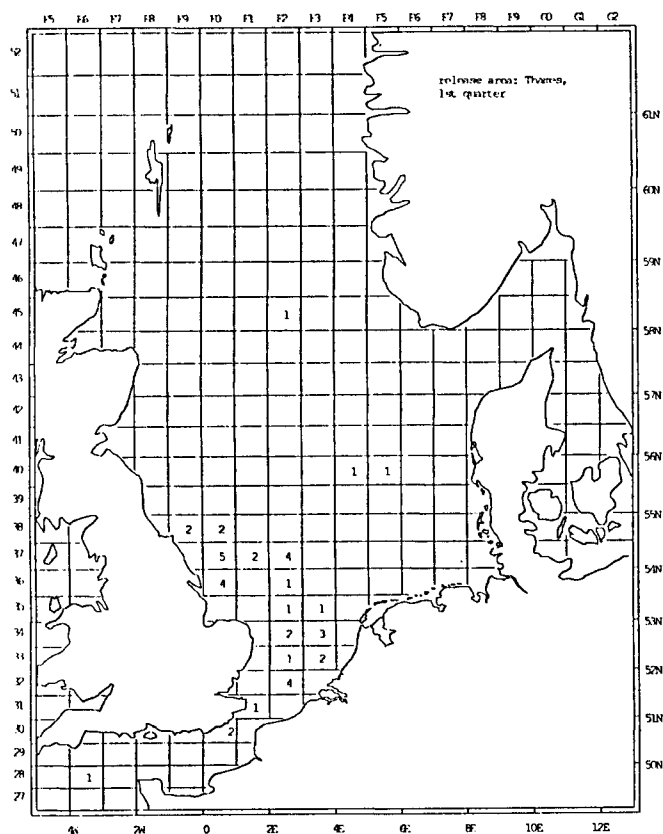


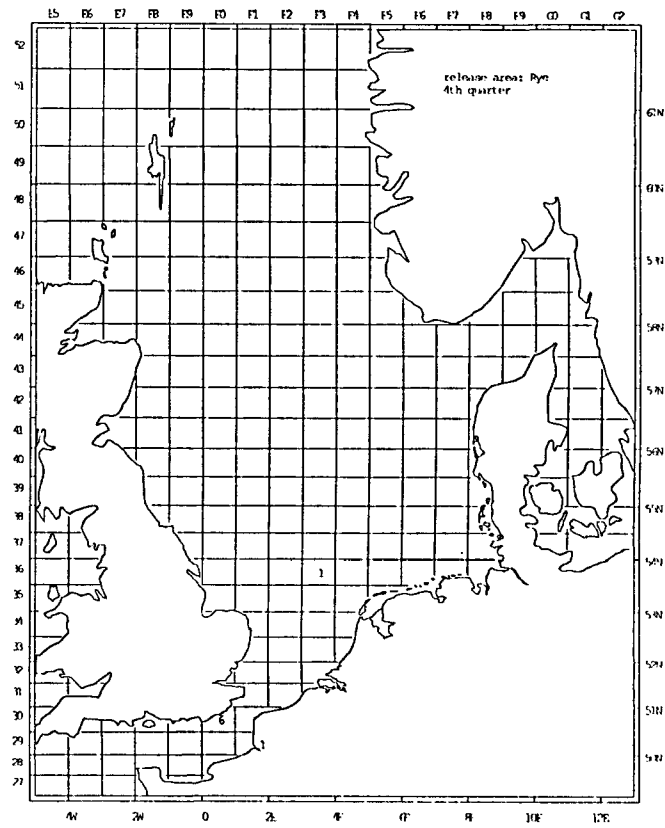
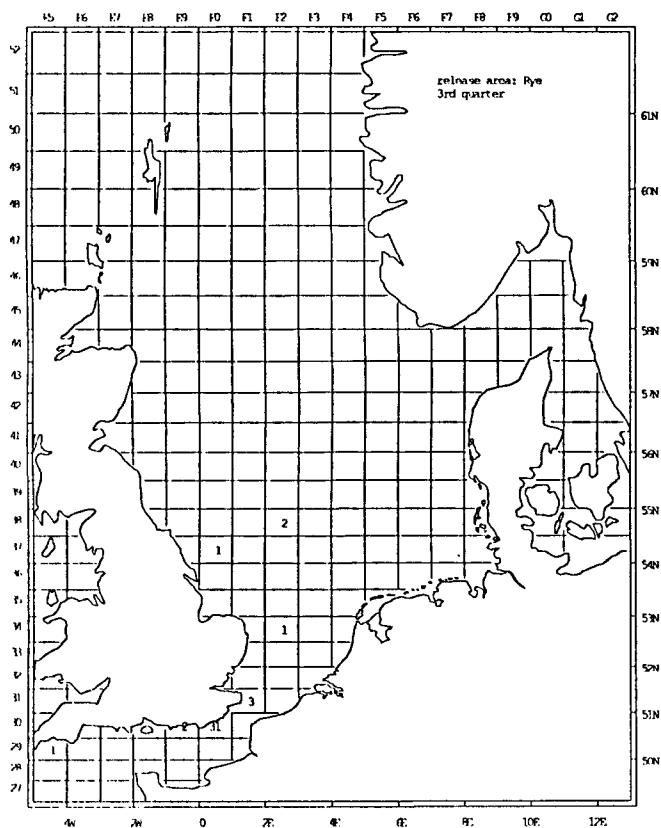
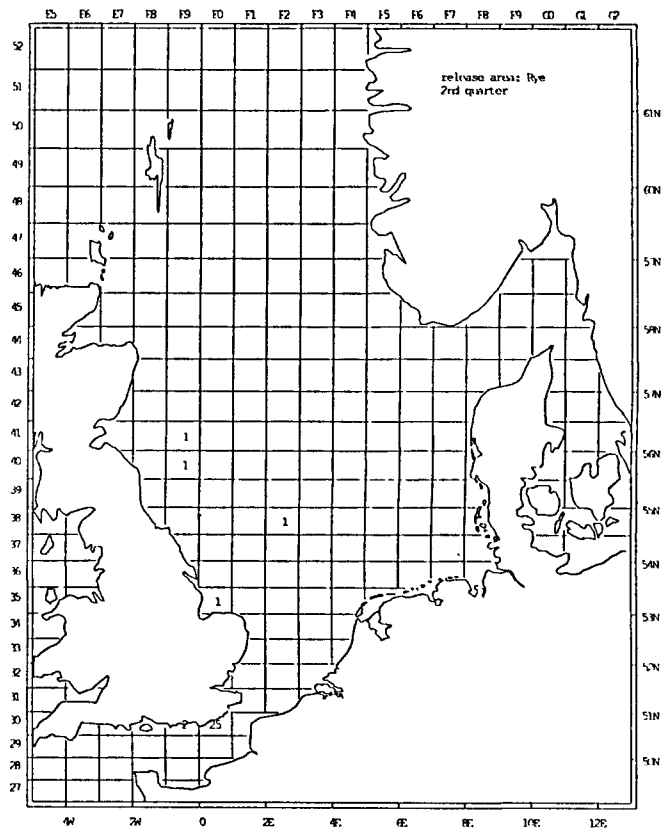
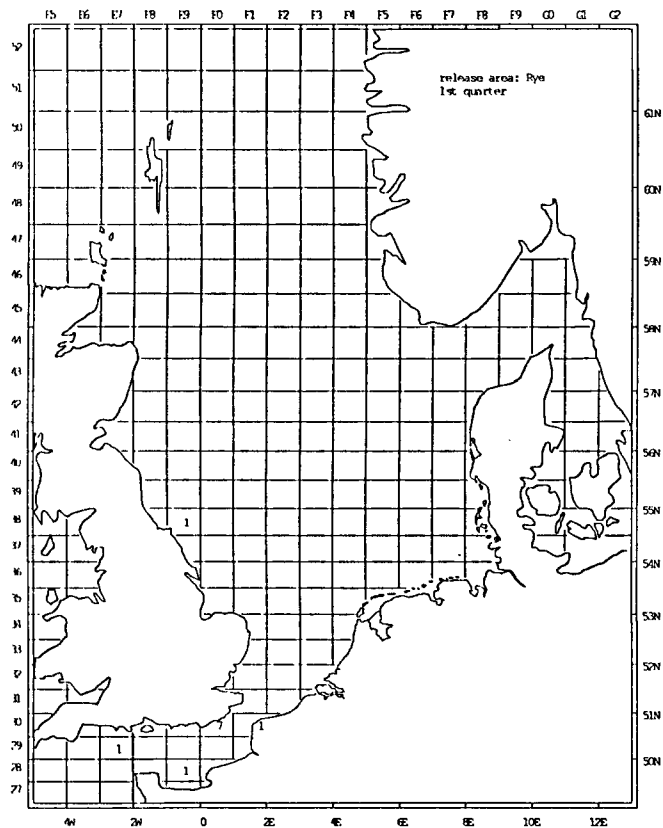


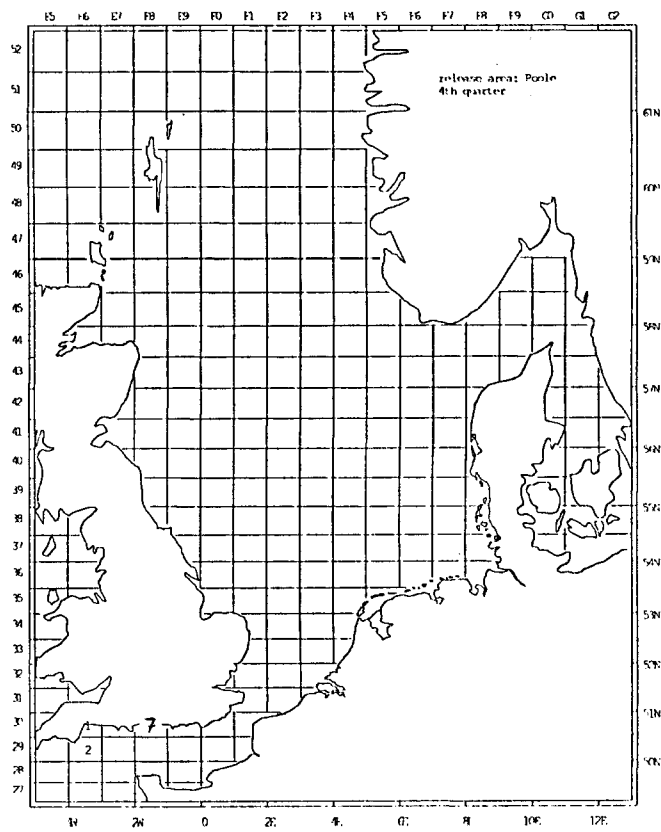
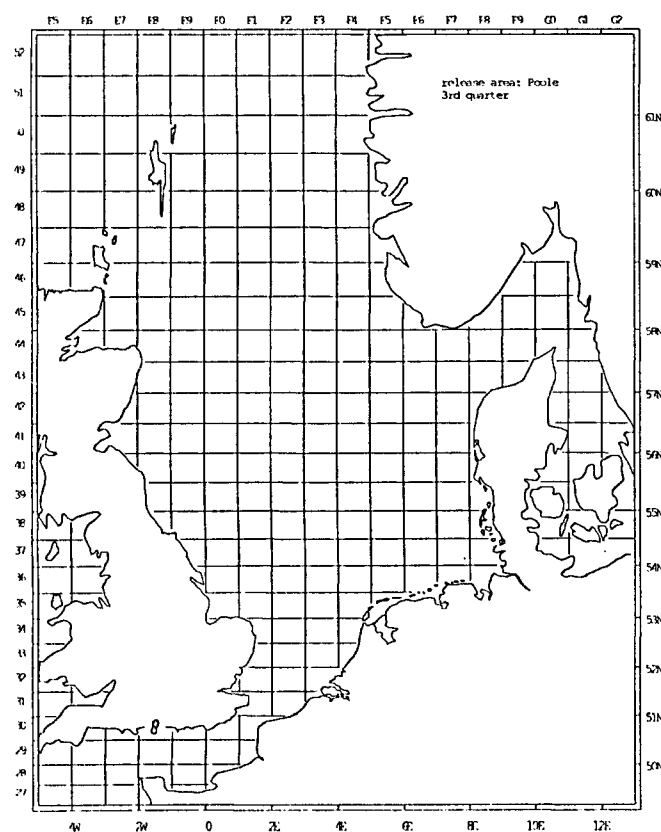
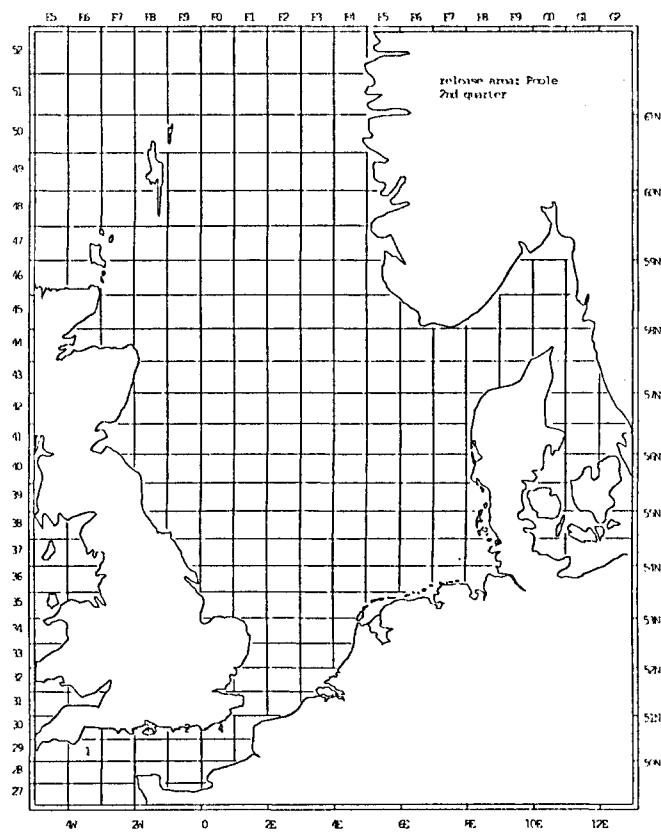
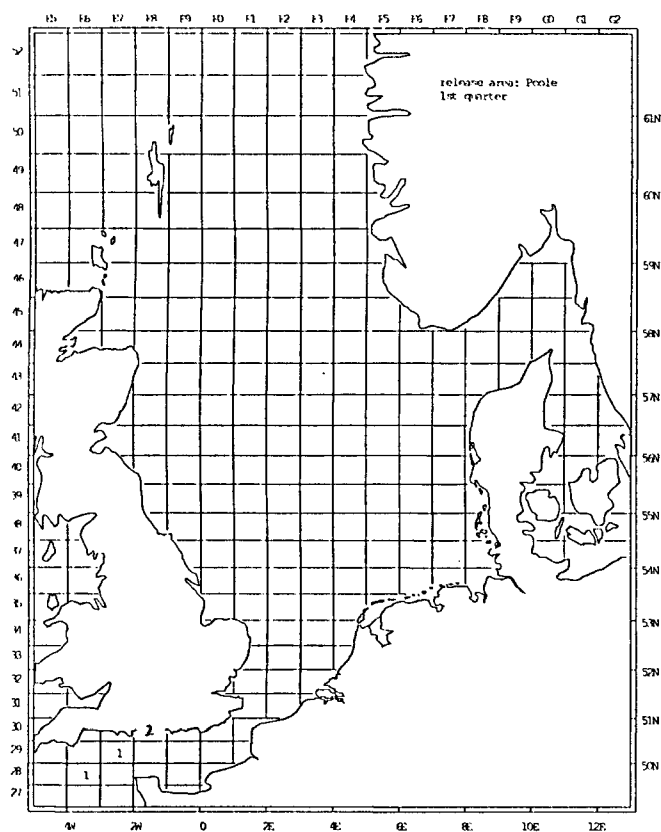


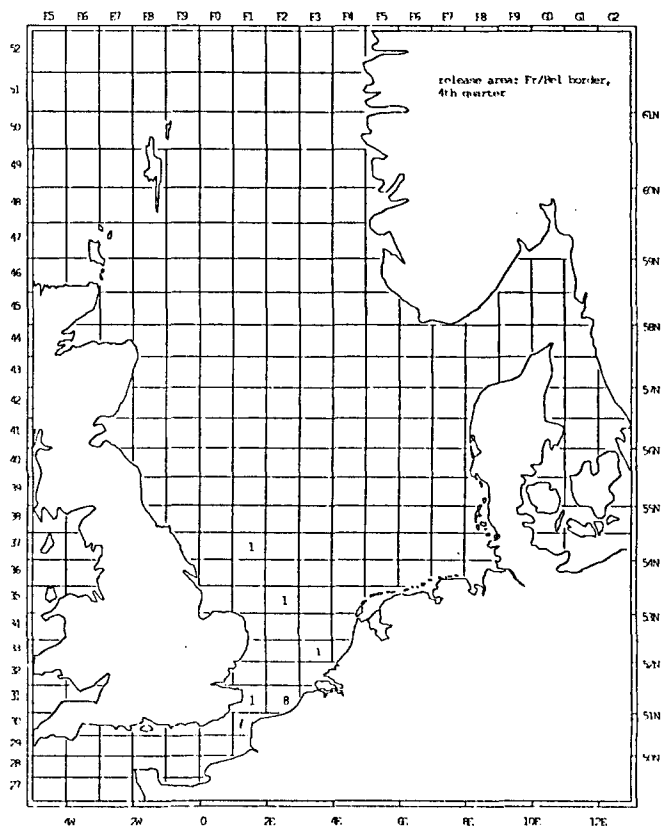
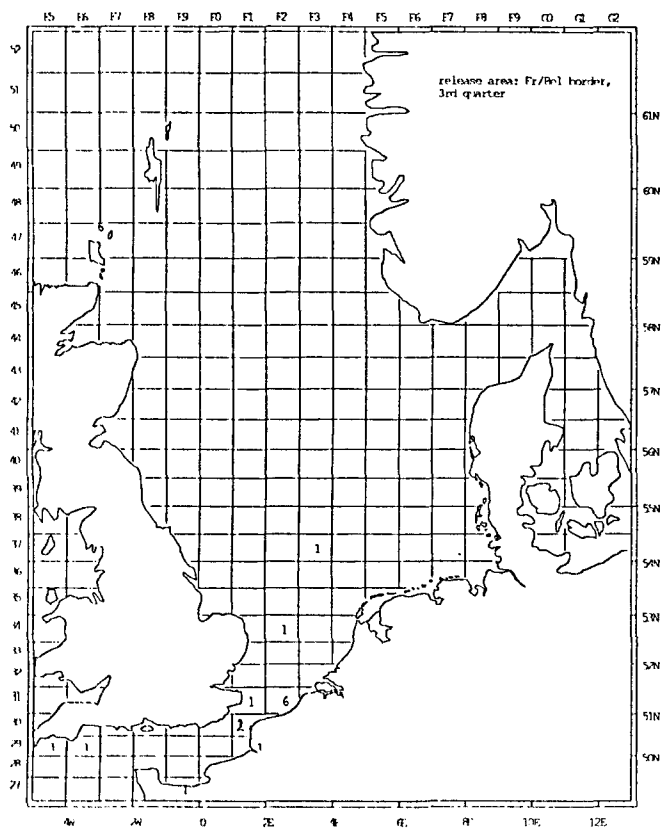
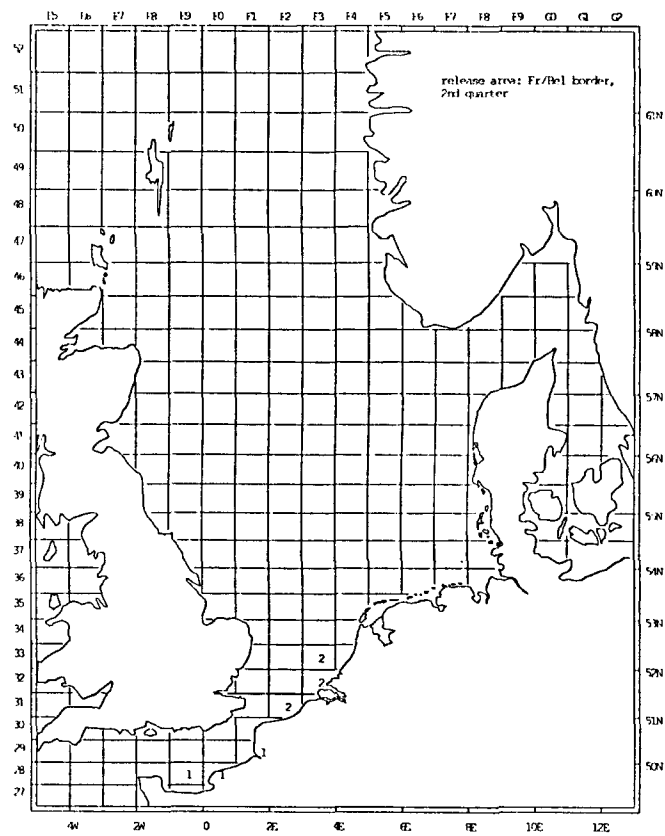
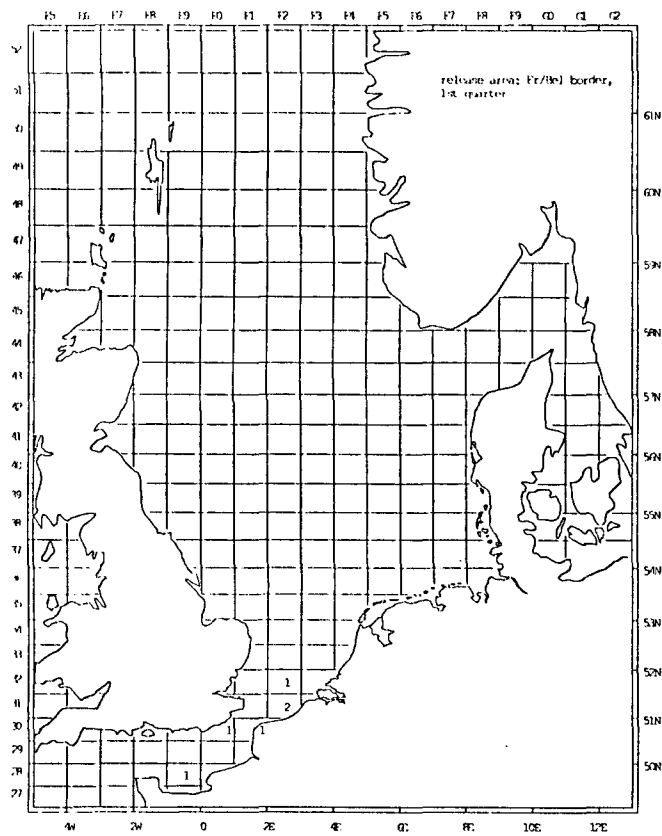


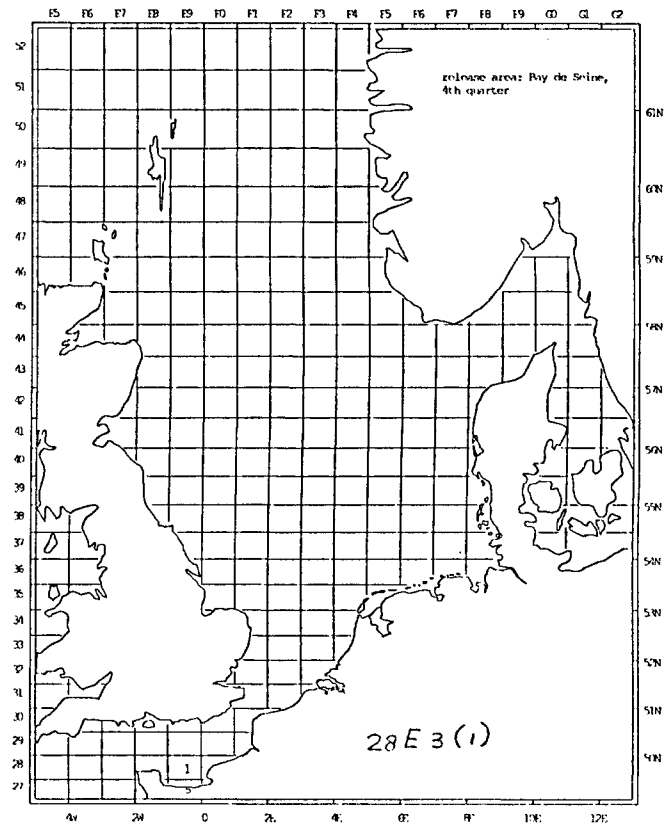
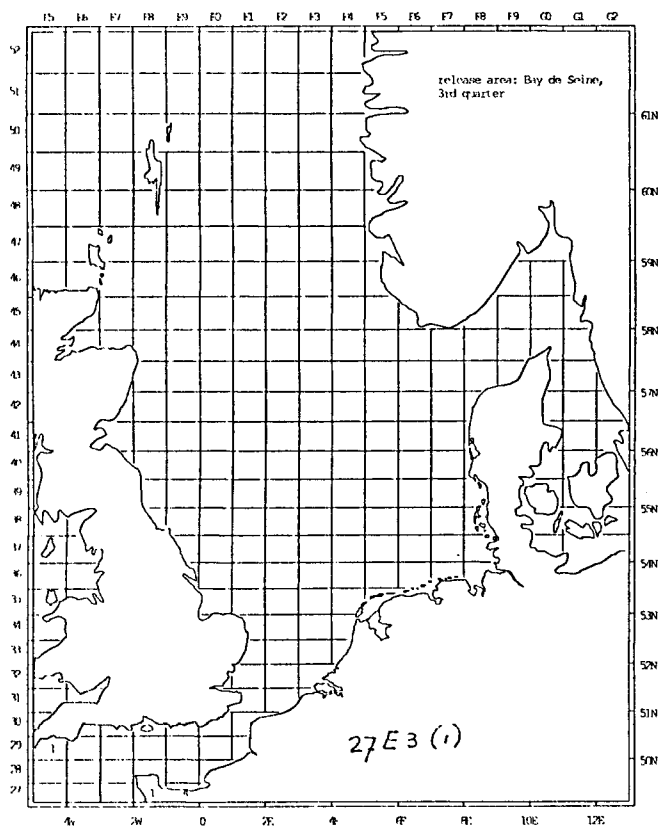
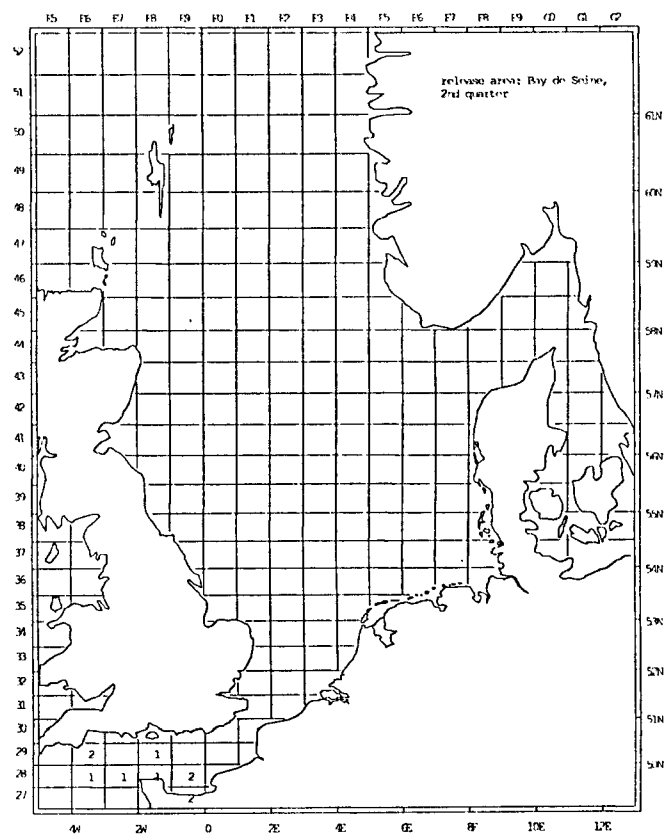
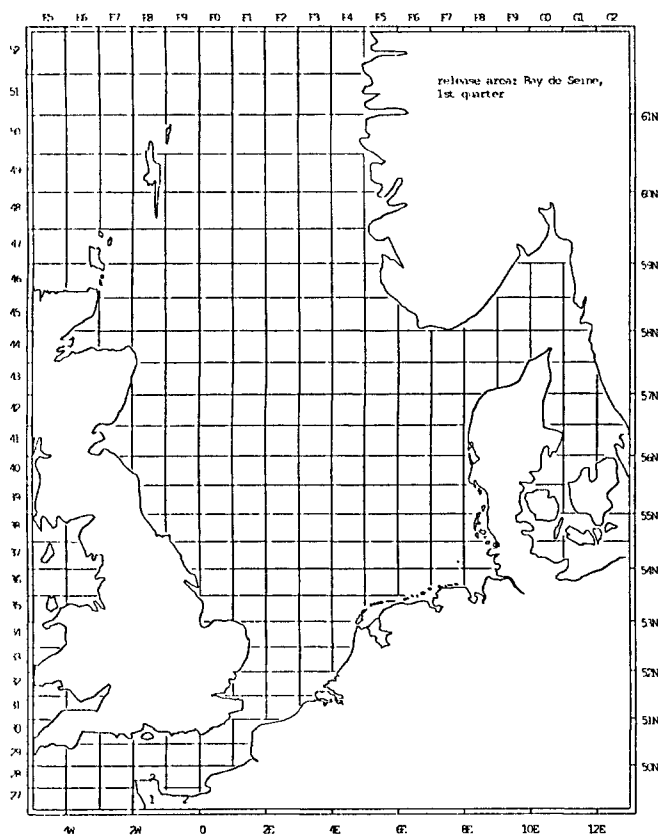










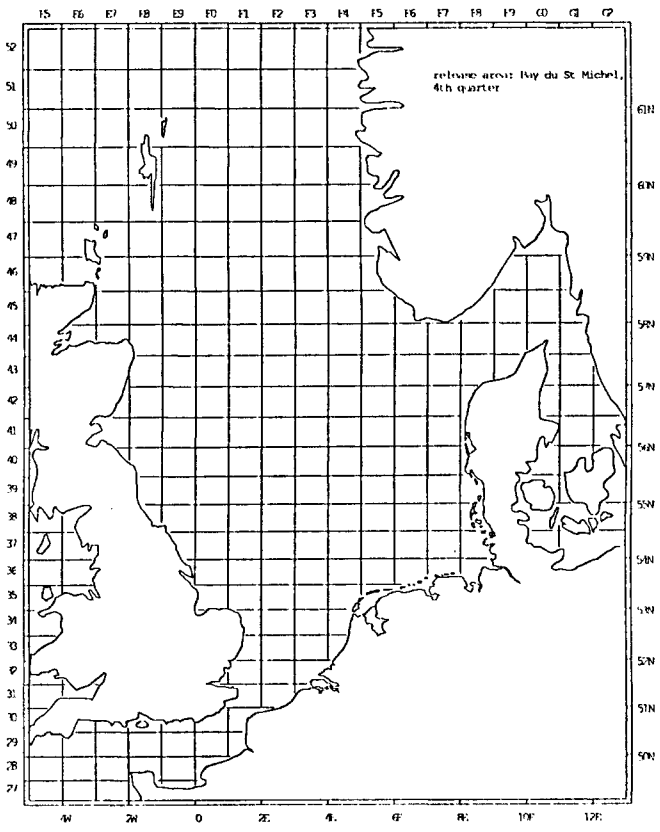
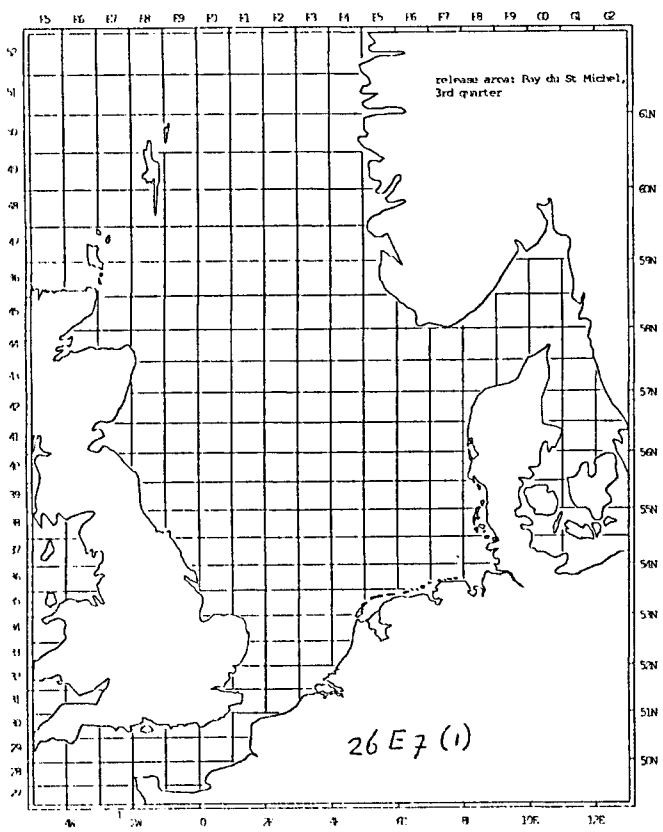
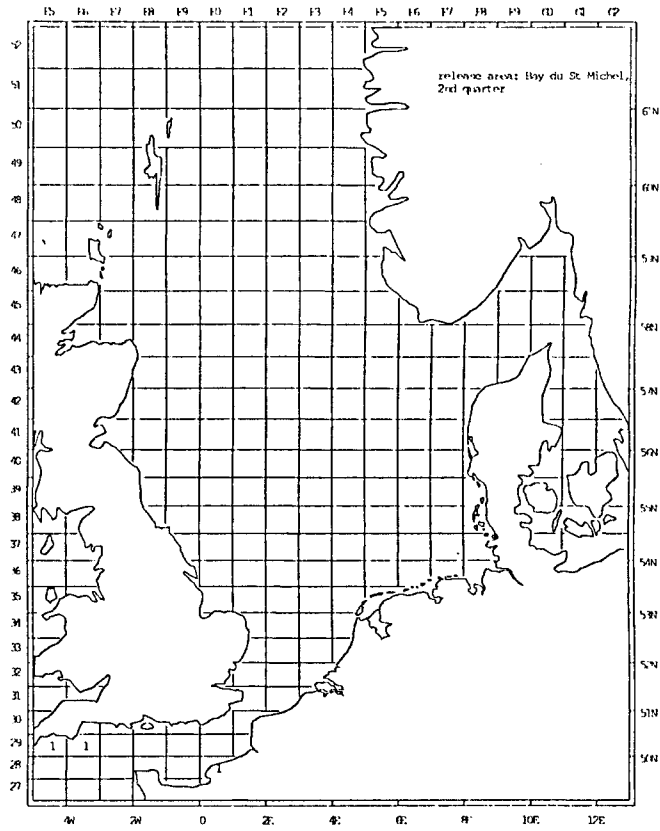
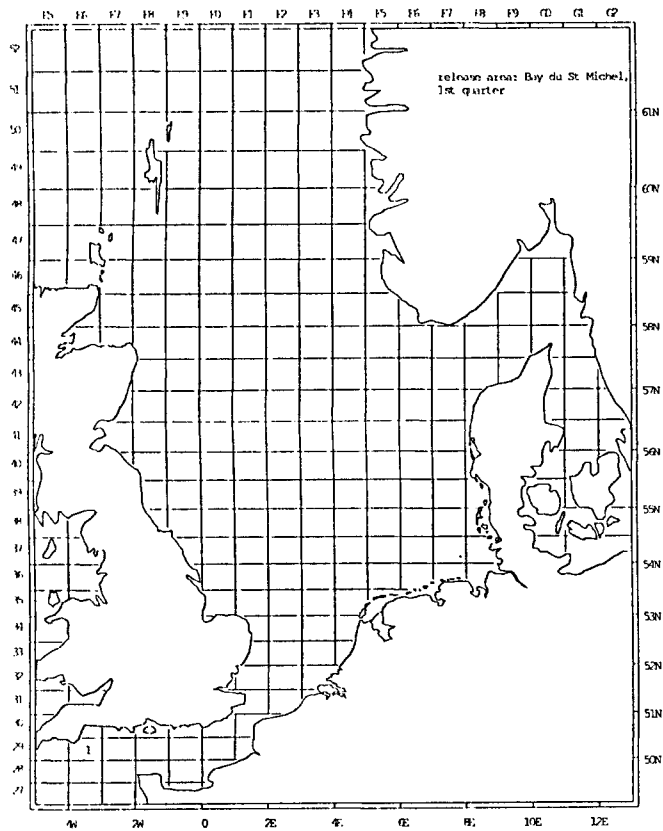


D8 D9 E0 E1 E2 E3 E4 E5 E6 E7 E8 E9 F0 F1 F2 F3 F4 F5 F6 F7 F8 F9 G0 G1 G2
45 #####
44 ##### release area: Bay de Somme
43 ##### 1st quarter
42 #####
41 #####
40 #####
39 #####
38 #####
37 #####
36 #####
35 #####
34 #####
33 #####
32 #####
31 1 #####
30 #####
29 #####
28 #####
27 #####
26 #####
25 #####
24 #####
23 #####

D8 D9 E0 E1 E2 E3 E4 E5 E6 E7 E8 E9 F0 F1 F2 F3 F4 F5 F6 F7 F8 F9 G0 G1 G2
45 #####
44 ##### release area: Bay de Somme
43 ##### 2nd quarter
42 #####
41 #####
40 #####
39 #####
38 #####
37 #####
36 #####
35 #####
34 #####
33 #####
32 #####
31 #####
30 #####
29 #####
28 #####
27 #####
26 #####
25 #####
24 #####
23 #####

D8 D9 E0 E1 E2 E3 E4 E5 E6 E7 E8 E9 F0 F1 F2 F3 F4 F5 F6 F7 F8 F9 G0 G1 G2
45 #####
44 ##### release area: Bay de Somme
43 ##### 3rd quarter
42 #####
41 #####
40 #####
39 #####
38 #####
37 #####
36 #####
35 #####
34 #####
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31 #####
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27 #####
26 #####
25 #####
24 #####
23 #####

D8 D9 E0 E1 E2 E3 E4 E5 E6 E7 E8 E9 F0 F1 F2 F3 F4 F5 F6 F7 F8 F9 G0 G1 G2
45 #####
44 ##### release area: Bay de Somme
43 ##### 4th quarter
42 #####
41 #####
40 #####
39 #####
38 #####
37 #####
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23 #####



Appendix IV. Relative fishing effort in Dutch beam trawl hours by ICES rectangle

	Q1	Q2	Q3	Q4		Q1	Q2	Q3	Q4
REC31F0	19	767	204	0	REC41E7	95	102	67	64
REC31F1	809	3795	4163	2075	REC41E8	42	91	85	47
REC31F2	385	835	944	102	REC41E9	13	43	47	21
REC31F3	4313	5743	3900	3414	REC41F0	17	39	62	31
REC32F0	0	85	0	14	REC41F1	153	141	149	252
REC32F1	166	660	713	233	REC41F2	6	145	54	217
REC32F2	4602	50	1369	960	REC41F3	154	110	2	484
REC32F3	4920	5245	3172	3859	REC41F4	90	66	68	94
REC33F1	109	1325	3693	1435	REC41F5	3731	1872	2034	2324
REC33F2	5325	1746	473	834	REC41F6	578	1245	2083	386
REC33F3	12988	19052	15945	13141	REC41F7	70	687	5267	8479
REC33F4	356	3673	2558	672	REC42E7	109	128	93	89
REC34F1	58	9	15	0	REC42E8	42	202	138	112
REC34F2	2839	1053	1431	1108	REC42E9	18	237	78	27
REC34F3	15887	21864	12751	8605	REC42F0	68	238	257	426
REC34F4	1886	10958	10463	3045	REC42F1	14	65	82	36
REC35F0	335	253	183	252	REC42F2	4	107	72	11
REC35F1	846	762	1018	471	REC42F3	1765	5433	2664	1912
REC35F2	2350	1111	3874	3223	REC42F4	913	376	528	585
REC35F3	4986	10305	10666	6817	REC42F5	378	103	208	124
REC35F4	3519	15738	11575	4974	REC42F6	2155	2305	5678	3220
REC35F5	333	1058	563	284	REC42F7	63	245	538	422
REC36E9	2	0	25	6	REC43E7	10	22	24	9
REC36F0	1625	405	746	1063	REC43E8	61	414	213	118
REC36F1	9276	4477	2728	4993	REC43E9	86	575	260	53
REC36F2	7626	6394	5801	5437	REC43F0	166	148	498	375
REC36F3	10301	12497	15048	10126	REC43F1	22	59	120	58
REC36F4	2895	7997	4366	4425	REC43F2	6	76	91	18
REC36F5	4982	16993	15291	6682	REC43F3	1	62	33	4
REC36F6	1283	4789	6642	2271	REC43F4	45	1541	2567	882
REC36F7	17	2928	721	149	REC43F5	0	88	124	11
REC37E9	4233	7420	8325	6380	REC43F6	287	2158	3639	990
REC37F0	7623	7675	5023	5753	REC43F7	492	920	1550	797
REC37F1	3809	7572	4572	7943	REC44E6	112	24	24	92
REC37F2	12694	1926	2720	9102	REC44E7	635	198	142	478
REC37F3	17107	2006	4535	7712	REC44E8	342	349	395	414
REC37F4	15557	4863	3742	9964	REC44E9	116	196	115	106
REC37F5	3897	2905	5139	4423	REC44F0	68	116	120	81
REC37F6	3425	6684	14483	7337	REC44F1	20	59	172	65
REC37F7	691	9165	13148	4253	REC44F2	5	2147	1446	325
REC38E9	3450	7008	5127	3457	REC44F3	13	2514	1538	639
REC38F0	1189	1754	4559	1063	REC44F4	77	10052	7390	2025
REC38F1	1332	2558	1914	1665	REC44F5	4	22	8	8
REC38F2	553	933	631	700	REC44F6	1	5	1	4
REC38F3	3289	136	459	1469	REC45E6	48	52	58	45
REC38F4	21711	795	1908	9663	REC45E7	115	151	144	169
REC38F5	5777	1434	2408	6296	REC45E8	168	164	90	126
REC38F6	10482	3939	7309	5067	REC45E9	134	142	58	80
REC38F7	686	6710	4312	3052	REC45F0	87	72	56	62
REC39E8	282	1181	656	463	REC45F1	16	30	81	48
REC39E9	559	1427	2182	909	REC45F2	27	1560	657	116
REC39F0	429	745	1447	555	REC45F3	15	104	64	36
REC39F1	408	4455	5079	3468	REC45F4	5	11	17	8
REC39F2	431	3227	2141	662	REC45F5	1	0	0	2
REC39F3	482	420	831	675	REC45F6	0	0	0	0
REC39F4	3549	315	489	770					
REC39F5	5586	645	762	1943					
REC39F6	6060	4984	4189	4461					
REC39F7	424	13114	7689	1839					
REC40E7	127	94	46	97					
REC40E8	452	977	128	167					
REC40E9	57	246	90	94					
REC40F0	48	37	34	16					
REC40F1	20	112	212	31					
REC40F2	788	6330	6119	1477					
REC40F3	844	1198	1092	1355					
REC40F4	5232	3996	2933	1868					
REC40F5	3076	550	1285	1962					
REC40F6	858	905	1544	1440					
REC40F7	926	3841	4676	1862					