The Macrobenthic Fauna Monitoring in the Dutch Sector of the North Sea, MWTL 2010

and a comparison with previous data

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1 Summary

Rijkswaterstaat Waterdienst organises a series of national monitoring programmes within the framework of MWTL (Monitoring Waterstaatkundige Toestand des Lands Milieumeetnet rijkswateren). One of these programs is the annual monitoring of macrobenthos in the North Sea, Wadden Sea and Delta Estuary. The monitoring programme of macrobenthos in the Dutch part of the North Sea was formerly referred to as BIOMON (biological monitoring). In this report, this project is henceforward referred to as MWTL. A consortium of the companies Grontmij (team Ecology) and Ecosub was involved in the execution of the monitoring in 2010.

This report presents the results of the macrobenthos survey on the Dutch continental shelf (DCS), carried out in 2010. To achieve an optimal comparability with previous surveys, great care has been taken to adhere to the systematics. The purpose of the programme is to obtain insight into the year-to-year variations of the macrobenthic assemblages and to detect trend-like changes. These changes possibly indicate anthropogenic influences on the marine environment (e.g. eutrophication, pollution, beam trawl fishery) or effects of climate changes such as rise in sea water temperature or the occurrence of anoxia near the sea bed. Like previous years, in spring 2010, 100 stations were sampled with a Reineck boxcorer (0,078 m^2 between 1 March and 16 April). In combination with data from previous years, an analysis was made of the trends and fluctuations of some species and of basic community attributes over the period 1991-2010.

The community attributes studied were the diversity, abundance and biomass of the total macrobenthos found. Temporal variations and trends were investigated separately for each of the four sub-areas on the DCS (Coastal and Offshore areas, the Dogger Bank and Oyster Grounds).

Totally 225 taxa were found in the boxcore samples of the MWTL North Sea monitoring programme of 2010.

In the monitoring of 2009 a steep increase was found for the Dogger Bank for both density and number of species, due to an steep increase of Phoronid worms in a few stations. In 2010, this number has decreased, but numbers are still quite high. The biomass for the area is comparable to 2009 and is low, compared to other areas. In 2009, 50% of the total density was determined by only three species. In 2010 a large part of the total density is determined by polychaete species, with *Magelona filiformis* being the most abundant species. The species *Bathyporeia elegans* decreased in numbers, compared to the year 2009, while *Bathyporeia guilliamsoniana* was found in high numbers. Presence of *Kurtiella bidentata* has decreased over the years, due to a decrease in the host *Amphiura filiformis*. The polychaete *Aricidea minuta* also became a rare found species, while in 1995 the species was commonly found on the Dogger Bank.

On the Oyster Grounds a total of 158 species were found, with an average of 29 species per sample. There is a slight increase in species number compared to 2009. The abundance of individuals per square meter slightly decreases in 2010, but is still in line with previous found densities on the Oyster Grounds. Some typical species are found in the Oyster Grounds. The brittle star *Amphiura filiformis* in 2010 is present in relatively high numbers. Also the highest number for Phoronid worms is found on the Oyster Grounds. The decapod *Callianassa subterranea*, found on sandy sediments with a high silt content, has a slightly negative trend since the 2004 maximum.

The average number of species and average density per sample in the Offshore area is comparable to 2009. In total 107 species were found, which is much higher compared to 2009. In 2010 polycheate worms are dominant in the species density. The polychaetes *Magelona johnstoni*, *Spiophanes bombyx*, *Notomastus latericeus* and *Nephtys cirrosa* are present in high numbers (30-44%) in the Offshore area. Phoronid worms determine 11% of the density in the Offshore area.

In the Coastal area in 2010 there was a strong increase in density. The total number of species was comparable to previous years, but since a low number in 2007, species numbers seem to increase slightly. The coastal zone was dominated by polychaete worms (61% of the total density). *Magelona johnstoni* is the most abundant polychaete, but there are several dominant polychaete species present. In 2010, the average density for *Ensis directus* was very high, due to a very high density on several locations. The average number even exceeded the average density of 2002, when the highest densities so far was recorded The bivalve, *Spisula subtruncata*, therefore has almost disappeared since 2004.

2 Samenvatting

De Waterdienst van Rijkswaterstaat organiseert een reeks nationale monitoringprogramma's in het kader van MWTL (Monitoring Waterstaatkundige Toestand des Lands Milieumeetnet rijkswateren). Een van deze programma's is de jaarlijkse monitoring van macrobenthos in de Noordzee, Waddenzee en de Zeeuwse Delta. De monitoring van macrobenthos in de Noordzee werd in het verleden over het algemeen aangeduid als BIOMON (biologische monitoring). In dit rapport wordt dit project aangeduid als MWTL Noordzee. De MWTL Noordzee monitoring wordt georganiseerd door de Waterdienst van Rijkswaterstaat. Een consortium bestaande uit medewerkers van Grontmij (team Ecologie) en Ecosub voerde de bemonstering, determinaties, analyse en rapportage van deze monitoring in 2010 uit.

Dit rapport geeft de resultaten van de monitoring in 2010 van het Nederlands Continentaal Plat (NCP) weer. Om een vergelijking het verleden te kunnen maken, is ervoor gezorgd dat de systematiek van de voorgaande monitoringsjaren werd aangehouden. Het doel van het monitoringprogramma is om inzicht te krijgen in de jaar-op-jaar variaties van de samenstelling van het macrobenthos en trends. Deze duiden op mogelijke antropogene invloeden op het mariene milieu, zoals eutrofiëring, vervuiling of visserij. Maar ook veranderingen in het klimaat zoals toename van zware stormen, stijging van de zeewatertemperatuur en het optreden van zuurstofloosheid op de bodem als gevolg van stratificatie in de diepe delen van de Noordzee, kunnen met deze data onderzocht worden. In het kader van dit project wordt iedere lente een veldcampagne uitgevoerd. In 2009 zijn 100 MWTL stations met een Reineck Boxcorer (0,078 m^2) bemonsterd in de periode tussen 1 maart en 16 april. Dit rapport bevat ook een vergelijking met data uit voorgaande jaren met trends en fluctuaties in soorten en eigenschappen van de benthos gemeenschap over de periode 1991-2010.

De bestudeerde gemeenschapskenmerken zijn dichtheid en biomassa van de totale macrobenthos gemeenschap. Temporele variaties en trends werden afzonderlijk onderzocht voor ieder van de vier deelgebieden op het NCP: Kustgebied, Offshoregebied, Doggersbank en Oestergronden.

In totaal werden er in 2010 225 taxa gevonden in de boxcoremonsters van het MWTL Noordzee-programma.

Op de Doggersbank nam in 2009 zowel de totale dichtheid als het soortaantal toe ten opzichte van de voorgaande jaren. Dit werd voornamelijk veroorzaakt door de aanwezigheid van grote hoeveelheden hoefijzerwormen (*Phoronida*) op enkele locaties. Deze toename werd in 2010 niet doorgezet, maar de totale densiteit is nog steeds erg hoog. De biomassa is gelijk aan 2009 en deze is laag ten opzichte van de andere gebieden. De densiteit werd voornamelijk bepaald door zeer abundant aanwezige polychaeten. *Magelona filiformis* draagt hierbij het meeste bij. Vergeleken met 2009 nam de abundantie van *Bathyporeia elegans* af in 2010, terwijl *Bathyporeia guilliamsoniana* sterk toenam in aantallen. De laatste jaren is de aanwezigheid van *Kurtiella bidentata* afgenomen door de afname van de aanwezigheid van zijn gastheer *Amphiura filiformis*. De polychaet *Aricidea minuta* is ook niet meer algemeen aanwezig, terwijl deze soort in 1995 nog zeer algemeen werd gevonden op de Doggersbank.

In de Oestergronden werden in totaal 158 soorten gevonden, met een gemiddelde soortdichtheid van 29 soorten per monster. Vergeleken met 2009 betekent dit een lichte stijging.
De abundatie is in 2010 licht afgenomen ten opzichte van 2009. Enkele soorten, welke typerend zijn voor de Oestergronden, worden in hoge abundanties aangetroffen. De brokkelster *Amphi-*

ura filiformis is in 2010 aanwezig is relatief hoge aantallen. Ook voor de hoefijzerwormen (*Phoronida*), worden de hoogste aantallen op de Oestergronden gevonden. De decapode *Callianassa subterranea*, welke typerend voor een zandige bodem met een hoog siltgehalte is, wordt sinds 2004 in lagere aantallen gevonden.

In het Offshore gebied is het gemiddeld aantal soorten en dichtheid per monster vergelijkbaar met 2009. In totaal werden in het gehele gebied 107 soorten gevonden, wat een sterke stijging is ten opzichte van 2009. In 2010 zijn de Polychaeten in hoge dichtheden aanwezig. Zo zijn *Magelona johnstoni*, *Spiophanes bombyx*, *Notomastus latericeus* en *Nephtys cirrosa* in hoge abundanties aanwezig (30-44%). Hoefijzerwormen bepalen ook in het Offshoregebied een belangrijk deel van de densiteit (11%).

In de kustzone is er in 2010 een sterke toename in dichtheden geconstateerd.. Het totale soortenaantal is wel vergelijkbaar met voorgaande jaren, maar sinds 2007, toen er een zeer laag aantal soorten is gevonden in de kustzone, lijkt er een lichte stijging te zijn. De kustzone wordt gedomineerd door borstelwormen, die 61% van de totale dichtheid innemen. *Magelona johnstoni* is daarvan de meest abundante soort. In 2010 is de gemiddelde dichtheid voor de Amerikaanse zwaardschede eveneens zeer hoog. Dit komt vooral door zeer hoge aantallen op enkele locaties. Het gemiddeld aantal individuen overschrijdt zelfs het gemiddelde van 2002, toen er zeer veel individuen van Amerikaanse zwaardschede (*Ensis directus*) zijn waargenomen. Sinds 2004 is de Halfgeknotte strandschelp (*Spisula subtruncata*) echter vrijwel verdwenen in de kustzone.

3 Introduction

In 1989 the **BIO**logical **MON**itoring program of marine waters was initiated to study the temporal variation of the marine ecosystems on the Dutch continental shelf (DCS) including the Wadden Sea and the Delta area. This program started as an initiative of the National Institute for Coastal and Marine Management (former RIKZ) , which has now integrated in Rijkswaterstaat Waterdienst and Deltares (Yland, 1995). Recently this programme was renamed to **MWTL** (Monitoring Waterstaatkundige Toestand des Lands). This programme monitors benthic fauna, plankton, fish, sea grass, seabirds and marine mammals. For the period 2009-2012 the consortium of Grontmij and Ecosub is assigned to perform the monitoring of macrobenthos on the DCS.

In this report the data from the benthos survey of spring 2010 are presented. Data on all invertebrate species found in this survey are supplied. The result is compared with MWTL data from previous years (1991-2009), data obtained during the ICES North Sea Benthos Survey (ICES-NSBS, 1986) and the MILZON-BENTHOS programme (1988-1993). In 1990 a pilot study of the BIOMON project was carried out at 7 locations on the DCS. These results have also been included in the dataset.

The aim of the MWTL program is to gain insight in the spatial and temporal variation of the benthic fauna and to detect possible trends. During the first years (1991-1994), 25 stations located along five transects perpendicular to the Dutch coast were sampled. On every station five replicate boxcore samples were collected. This method was reviewed and starting from 1995 it was decided to take single samples on 100 stations scattered on the DCS. These locations were selected according to a stratified random sampling design in each of the 4 subareas of the DCS: Dogger Bank, Oyster Grounds, Offshore area and Coastal area (Fig. 1). The number of stations within each subarea is proportional to its surface area. Each station is sampled for benthic fauna and sediment. The 100 stations that are sampled nowadays include the 25 original BIOMON stations. The procedure for the selection of locations is described in more detail by Essink (1995) and Holtmann *et al*. (1996).

4 Materials and Methods

To ensure that observed changes are not due to methodological differences, the procedures for sampling and processing the fauna samples have been standardized (Essink, 1991) and have remained unaltered since the beginning of the monitoring project in 1991.

4.1 Sampling

In 2010, all 100 MWTL stations were sampled with a Reineck Boxcorer in the period 1 March - 16 April. In 98 stations the water depth exceeded 5 m. These stations were visited using the research vessel MS Rotterdam (North Sea Directorate, Rijkswaterstaat). Two stations in the coastal subarea with a water depth less than 10 m (VOORDTA3 and VOORDTA4) were sampled using the research vessel Delta. These final two locations were sampled on 16 April 2010. Figure A1 -1 shows the positions of the stations. For geographical locations of the stations with DONAR codes and depth, see Appendix 1, table A1-4-1.

4.2 Sample treatments

On each station, two samples with a Reineck boxcorer (0.078 m², minimal depth 15 cm) were taken. One of the samples was used for sediment analysis, from which two subsamples (Ø 3.4 cm, sampling depth 10 cm) were pooled and immediately stored at -20°C. The other boxcore sample was washed through a sieve (mesh size 1 mm - circular holes). The sieved fraction was preserved in a borax-buffered solution of 4-6 % formaldehyde in seawater and stored at room temperature (Naber and Reeze, 2010)

In the laboratory (Grontmij, Amsterdam) to facilitate sorting, the macrobenthic samples were stained with Bengal rose and washed in a set of nested thread sieves with 0.7 mm being the smallest mesh size. In the laboratories of Grontmij (Amsterdam) and *ecosub* (Doorn), the benthos found was identified to species level, except for anthozoans, phoronids, priapulids and nemerteans (because identification in these groups is difficult), and subsequently counted. Juvenile macrobenthic animals which, because of their size, could not be identified to species level, were recorded on higher taxonomic levels, usually the genus level. Lengths (± 0.5 mm) were recorded for most molluscs and echinoids.

4.3 Ashfree dry weight

The ash-free dry weight (AFDW) of the different taxa was determined in one of the following ways:

Molluscs and echinoids:

By means of length-AFDW relationships of the formula $W = a*L^b$

with W = ash-free dry weight (g), L = length (mm), a and b are conversion factors varying for different species.

Polychaetes, larger crustaceans, ophiuroids and remaining taxa:

Indirectly, by converting the (blotted) wet weight into AFDW by means of conversion factors provided by Rumohr *et al*. (1987) and Ricciardi & Bourget (1998). Wet weights were measured with a Mettler PJ300 balance to the nearest mg.

Small amphipods and cumaceans were assigned an average individual AFDW of 0.2-0.5 mg. The same value was used by Holtmann & Groenewold (1992; 1994) in their analysis of macrobenthos from the MILZON-BENTHOS project in the southern North Sea between 1991 and 1993. These estimated individual weights are based on previous determinations of the AFDW of these taxa (Duineveld; Holtmann, unpubl.).

4.4 Diversity analyses

For each sample, density (ind./m²) and biomass (g AFDW/m²) were calculated. In the literature a number of indices have been proposed to represent biological diversity (Hill, 1973; Peterson, 1977; Pearson & Rosenberg, 1978; Harper & Hawksworth, 1994; Diaz, Solan & Valente, 2004; Dauvin & Ruellet, 2007). In this report, three indices are used, each representing a different aspect of the faunal diversity. The species richness ($Hill_0$) stands for the number of species per boxcore sample and is the simplest index. The other two indices, the Shannon-Wiener index (H') (Shannon & Weaver, 1949) and the Simpson index (D) for dominance (Simpson, 1949), are based on the proportional abundances of the individual species in the samples. The Simpson index is determined by the abundance of the most common species and can therefore be regarded as a measure of dominance (Hill, 1973). A high value of the Simpson index means low diversity, whereas a high value of $Hill_0$ or Shannon-Wiener's index indicates high diversity.

In this report, visual trends are discussed on a number of occasions. Please note that the description of these trends is based on information from the figures, and not from statistical trend analyses.

4.5 Sediment analysis

On each station a separate sediment sample was taken. From each sediment sample, two subsamples were taken from an intact boxcore sample and subsequently pooled for laboratory analysis of the sediment composition (*e.g.* grain size, content of calcium carbonate). The grain size was analyzed by laser diffraction (Malvern Mastersizer) at the laboratory of Rijkswaterstaat Waterdienst in Lelystad. Several parameters were derived from the grain size data: the median grain size (µm) and the silt content. The silt fraction was defined as the total fraction of mineral particles < 63 µm in the sample. Sediment types were classified on the basis of the median grain size as shown in table 4-2.

Table 4-2 Characterization of the sediment type according to the median grain size (after Gullentops et al., 1977).

< 175 µm	Very fine sand
176 - 250 µm	Fine sand
251 - 300 µm	Medium-fine sand
301 - 350 µm	Medium-coarse sand
> 351 µm	Coarse sand

5 Results and discussion

5.1 General results

In Table 5-1 an overview is given of the average values of sediment, species diversity, density and biomass in the four area's. These numbers are discussed in the paragraphs below.

Table 5-1: Mean values of abiotic and biotic parameters in the four sub-areas

		Area			
	Total	**Dogger Bank**	**Oyster Grounds**	**Offshore area**	**Coastal area**
Number of stations	100	7	42	34	17
Median grain size (µm)	223	201	144	316	241
Silt content (fr. < 63 µm, %)	4.24	0.85	8.49	1.04	1.53
Diversity					
Total number of species	225	82	158	107	71
Average number of species	20.4	32.0	25.4	12.5	13.2
Shannon & Wiener diversity	2.19	2.93	2.54	1.93	1.58
Simpsons' dominance	0.22	0.09	0.17	0.24	0.34
No. of indviduals (ind./m^2)					
Crustaceans	231.3	580.6	180.1	231.5	212.3
Echinoderms	28.9	25.6	23.7	35.1	33.7
Bivalves	314.2	280.2	365.1	97.2	520.8
Gastropods	35.8	25.6	41.9	22.8	19.2
Polychaetes	745.9	853.5	536.9	762.6	1185.5
Micellaneous	181.3	109.3	214.6	142.6	85.8
Average density	1667.8	2040.3	1812.0	1267.3	1959.3
Biomass (g AFDW/m^2)					
Crustaceans	0.47	0.08	0.60	0.27	0.91
Echinoderms	1.02	0.51	0.87	1.90	0.02
Bivalves	0.68	0.31	0.48	0.26	2.64
Gastropods	0.93	0.06	0.77	2.50	0.01
Polychaetes	0.82	0.26	0.46	0.71	3.07
Micellaneous	0.65	1.27	0.51	0.52	2.30
Average biomass	0.71	0.34	0.52	0.61	2.39

5.2 Sediment composition

The median grain size and silt content of the sediment for each station are listed in Table A1 - 2 of appendix 1. Spatial and temporal patterns are illustrated in appendix 1; Figure A1 - 2 and Figure A1 - 3.

The median grain size in 2010 was similar to those in preceding years (Figure 5-1). A comparison of 2010 data with previous years (Table A1 - 3) shows that only a few stations show changes in median grain size (D50). In the Oyster Grounds, station OYS39 measured a high grain size in 2009, but reduced in 2010 even below the average of the Oyster ground median

grain size. This indicates an error in the dataset in 2009 for this station and not a shift in the environment of this station. In the report of 2009 (Verduin *et al*., 2009) this problem is already mentioned, the data in 2010 indicates that this shift is not possible. It is advised to remove this measurement from the dataset and not to use it in future analysis.

On average, the Oyster Grounds consist of very fine sand, the Dogger Bank and Coastal area consist of fine sand. The Offshore area has a high grain size (median coase sand)

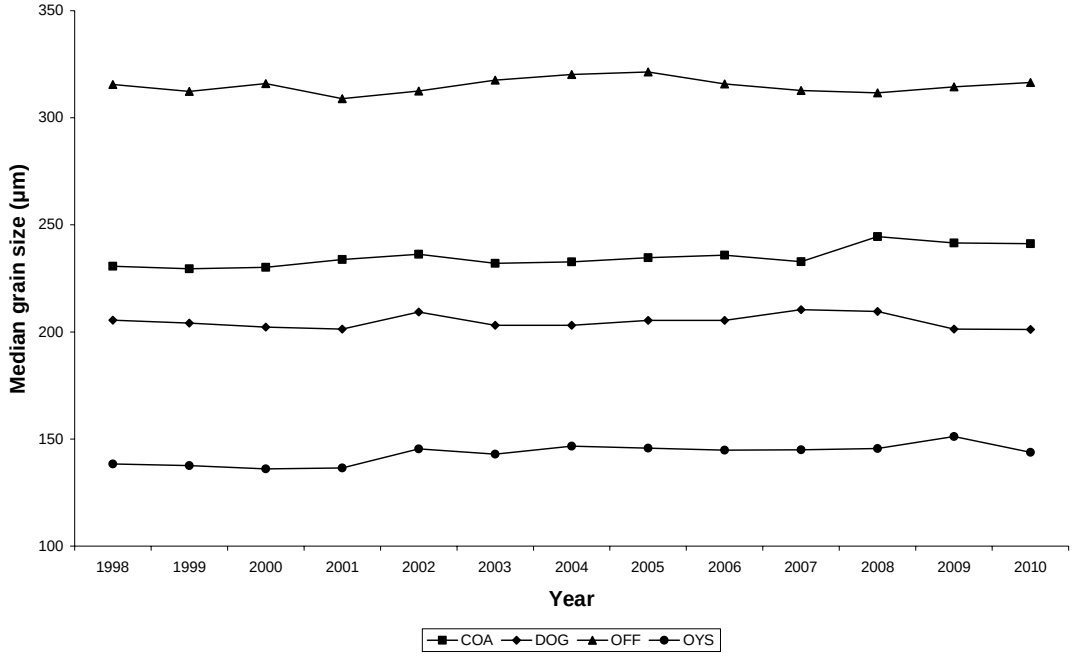

Figure 5-1: MWTL 1998-2010. Median grain size (µm) in the four sub-areas.

The distribution of silt in the sediment roughly showed a similar pattern as in preceding years. However, some changes in silt content can be distinguished. For the Oyster Grounds, a strong decrease was observed in the year 2002. Since 2002, the silt content on average has not changed (table 5-2).

Table 5-2: Mean silt content (%) at the Oyster Grounds, 1998-2010.

1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
11.3	10.9	11.2	12.4	8.7	8.1	8.1	8.0	7.9	7.7	8.7	7.9	8.5

Figure 5-2 and 5-3 show maps of the median grain size and silt fraction on the DCS. The highest silt concentrations were found in the Oyster Grounds (six stations with a silt content of over 15%), especially on the Frisian Front and central Oyster Grounds. In other sub-areas low concentrations of silt are found. When there is coarse sand present in the DCS, there is little or no silt present. The amount of silt increases, when the median grain size is smaller than 250 µm. The sediment of the Southern North Sea consists of a median course to course sand.

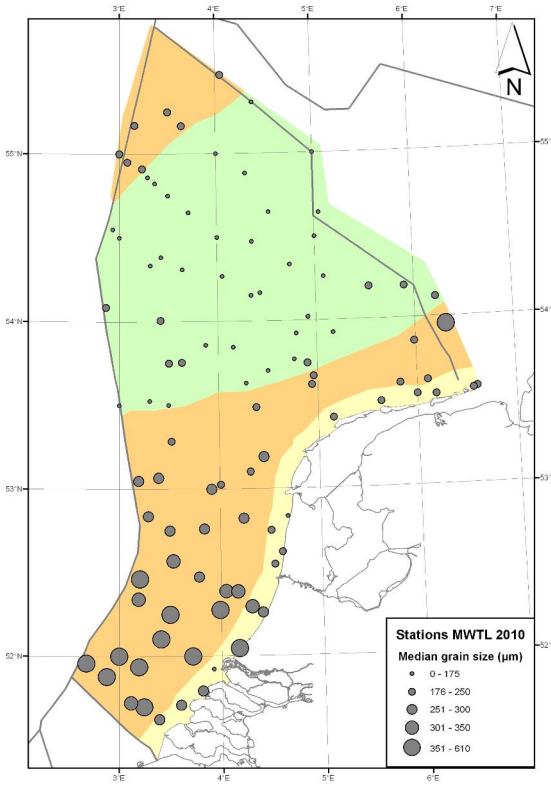

Figure 5-2 Median Grain size (µm)

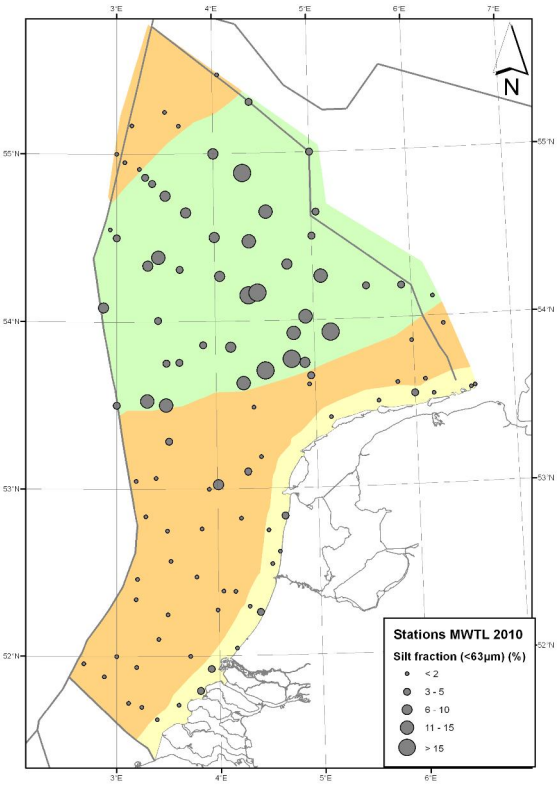

Figure 5-3 Silt fraction (< 63 µm) (%)

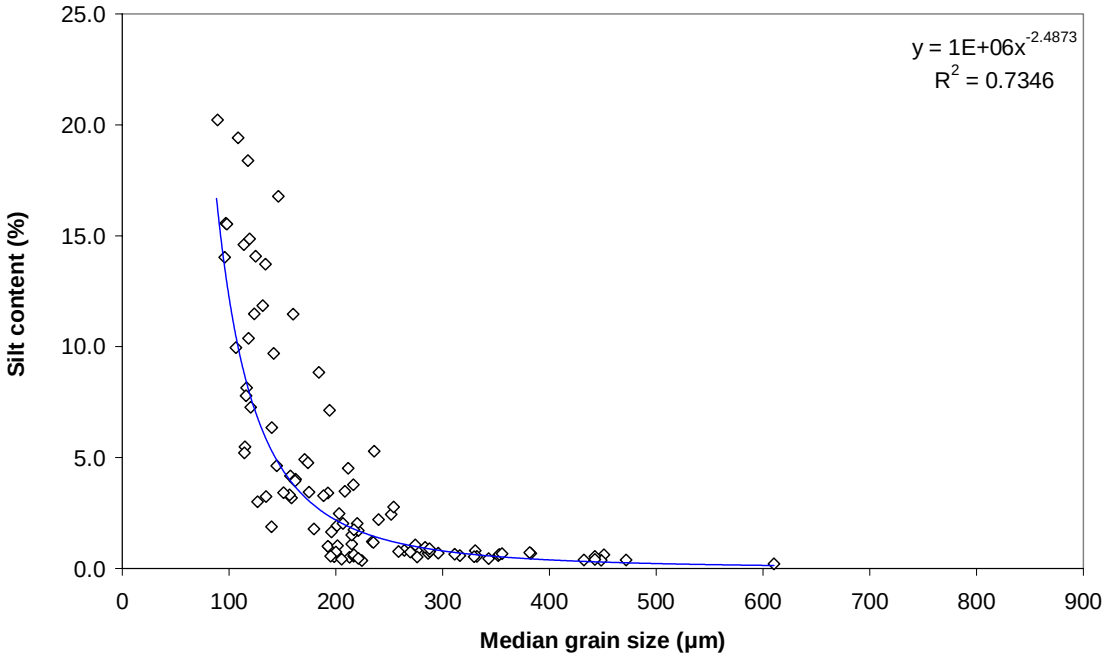

Figure 5-4 Median grain size vs. silt fraction in 2010

5.3 Distribution of the macrobenthic fauna in 2010

5.3.1 Diversity, density and biomass

In total 225 taxa were identified in the samples of 2010, including three taxa, only identified to genus level and five identified to family level or higher. The total number of taxa is well in range with previous years (181 – 237). Several new or previously not recognised species were found. These are commented on in chapter 5.4. The presence/absence of the species at the stations is given in appendix 3. The basic data on macrobenthic abundance and biomass are listed in appendix 4.

Figure 5-5, 5-5 and 5-6 show the average number of species, densities and biomass for the four sub-areas in 2009.

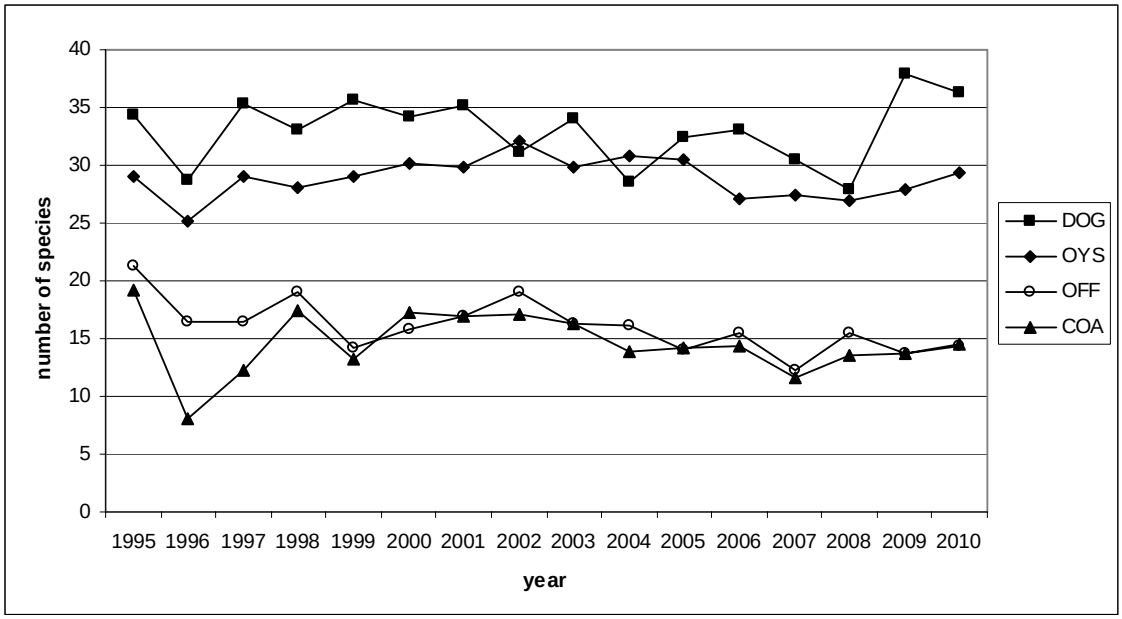

Figure 5-5 MWTL 1995-2010. Average number of macrobenthos species/sample in the sub-areas.

Hill-0 index

In 2010, the overall pattern of high species richness in the North part of the DCS and low species richness in the Southern part of the DCS continued. The mean number of species per sample (Hill-0) was highest on the Dogger Bank and the Oyster Grounds (*Figure A2 - 1* and *Figure A2 - 2*). For the Dogger Bank, the number of species found in 2010 was similar to previous years. On average, 32 species per station were found at the Dogger Bank, which is comparable to the average number of species found on the Dogger Bank in the total MWTL programme (33 species). For the Oyster Grounds, the mean number of species was 29. This is slightly higher compared to 2009 and a number comparable to the years, 2004-2006. The average values recorded for the Offshore area were comparable to 2009. Species numbers for the Coastal area were similar to previous years. Since 2000 there is a slight negative trend visible for the Coastal and Offshore area. Since there is only a slight increase in species numbers, this trend is continued in 2010 (appendix 2; figure A2-1 and A2-2).

Shannon-Wiener index

In 2010, like in previous years, the Shannon-Wiener index was highest at the Dogger Bank (2.93) (Figure A2 - 3 and Figure A2 - 4). All Dogger Bank stations have a relatively high index score compared to previous years. The Shannon-Wiener index for the Oyster Grounds shows a stable visual trend since 2001. In 2010 the average index score was slightly higher compared to previous years, the stable trend therefore continues. The Offshore area has a low average index score, but increased compared to 2009. There seems to be a slightly negative trend in this

area. For the Coastal area the index on average scores 1.58. This means there was a decrease compared to 2009. Also the distribution of the index over the Coastal stations is quite high (Standard deviation: 0.52). Compared to 2009, the diversity index increased at the Dogger Bank, Oyster Grounds and the Offshore area. There was a decrease at the Coastal area.

Simpson's dominance index

None of the four subregions was dominated by one taxon. Therefore Simpson's dominance index is relatively low in all regions. The index for most regions is comparable to the preceding years. But for the Offshore area, the Simpson's dominance increased slightly over the past seven years (Figure A2 - 6). On the Dogger Bank, the index decreased slightly compared to 2009. Also on location level, the distribution changed compared to 2009, when two stations scored relatively high. The distribution for the Oyster Grounds stations is similar compared to 2009. The highest numbers for Simpson's dominance are found in the Coastal area. Some stations are dominated by one taxon. The station COA04 is dominated by *Ensis directus* (app. 3700 ind/m^2) and the station COA17 is dominated by *Magelona johnstoni* (app. 4300 ind/m^2) (Appendix 4). Because of these dominances, also the average index score for the Coastal area increased.

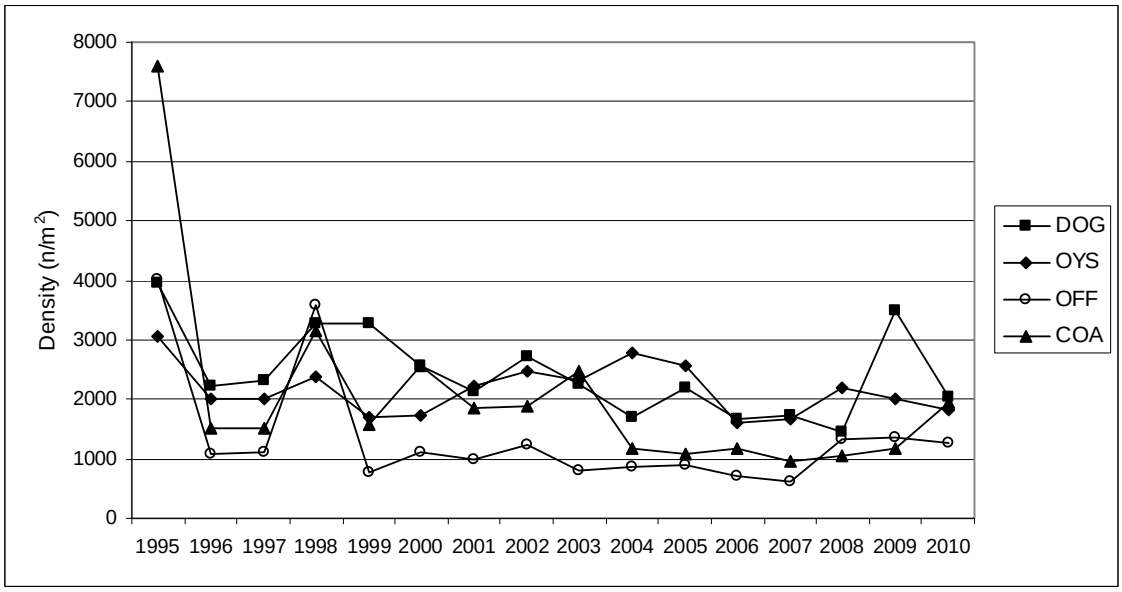

Figure 5-6 MWTL 1995-2010. Average macrobenthos densities/station in each of the sub-areas.

Total density

Figure 5-5 and Figure A2 - 8 display the development of the average macrobenthic density for each of the sub-areas and its stations. The total density at the Dogger Bank decreased compared to 2009. On average 2040 ind/m^2 are present at the stations. In comparison, in 2009, on average 3485 ind/m^2 were counted. The increase in 2009 was due to extremely high density numbers found in a few Dogger Bank stations, which were not found in 2010. However, the average density in 2010 is comparable to the average density found in the last decade. On the Oyster Grounds total density decreased from 2000 ind. /m^2 in 2009 to 1811 ind./m^2 in 2010. The density in 2010 is in line with the densities found from 2006. In the Offshore area no change was observed in 2010. The distribution of the densities over the stations is comparable to the years 2008 and 2009. For the Coastal area, there was an increase in the average density (from 1160 ind./m^2 in 2008 to 1959 ind./m^2 in 2009). Compared to previous recent years, this is a steep increase. On location level the numbers of individuals found in 2009 were higher compared to numbers found in the period 2004 – 2008.

Biomass

Figure 5-7 shows the development in total macrobenthic biomass. After low biomass values at the Dogger Bank in 2002, an increase in biomass was observed from 2003 and 2004. In 2010 there were no changes observed compared to 2009. The biomass of the Coastal area was as

low as in 2008 with biomass values comparable to the years before 1999 and 2000. See also Figure A2 - 9 and A2 – 10. At the Dogger Bank, in figure A2-10 fluctuations in average biomass seem rather strong. However, this is expected, because this area is represented by a small number of locations (7). The biomass in the Oyster Grounds was historically high in 2002. From this year on, a slight decrease in biomass was observed, which was not continued in 2010. In the Offshore area, the average biomass is stable since 1995. In the Coastal area, biomass peaked in 2003 to 2005. From 2008 to 2010 the biomass of the coastal zone reduces, to low numbers compared to all previous years. The biomass development in the Coastal area is strongly determined by the presence of the bivalve *Ensis directus*. However in recent years, this species also reduced dramatically in biomass.

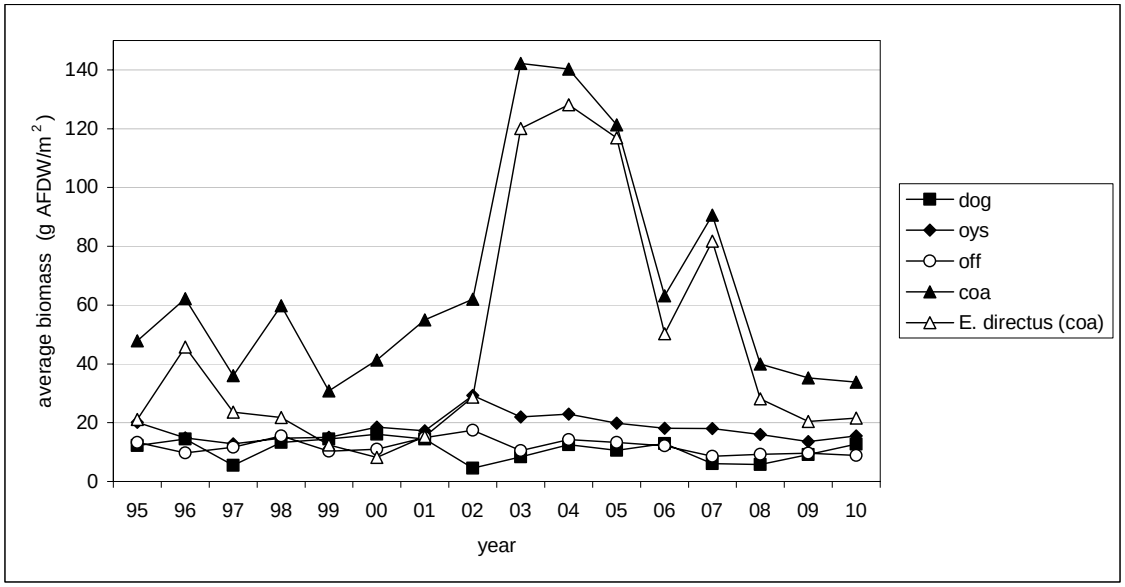

Figure 5-7 Average macrobenthos biomass per subarea from 1995 – 2010. For the Coastal area, total biomass (in legend: "COA") and the biomass of Ensis directus in the Coastal area ("E. directus (COA)") are shown.

5.3.2 Temporal variation in density and biomass of some selected species

Dogger Bank (Appendix 2; *Figure A2 - 27* and *Figure A2 - 28*)

On the Dogger Bank in 2010, a total of 82 taxa in 7 samples was found, and an average density of 2040 ind./m^2. The most numerous was the polychaete *Magelona filiformis*, the bivalve *Tellina fibula,* the amphipod *Bathyporeia guilliamsoniana* and phoronid worms. Compared to 2009, when a few taxa determined approximately half of the density found in the Dogger Bank samples, in 2010 the density is more divided over all species found in the samples. The density of the amphipod *Bathyporeia elegans* has decreased in 2010, while in 2009 this species was present in very high numbers. However, in 2010, *B. guilliamsoniana* is present in high densities. Costello and Bellan-Santini (2011) show that both species are historically found at the Dogger Bank.

Tellina fabula again increased compared to the previous year. The polychaetes *Goniada maculata* and *Nepthys cirrosa* are found in higher densities, compared to previous years. A few species have become less common on the Dogger Bank. Since 2004 the density of *Kurtiella bidentata* shows a negative trend and is found in only a few samples. It is likely that this is due to the presence of its host *Amphiura filiformis,* which has virtually disappeared from the Dogger Bank (see Figure A2 - 11) The amphipod, *Urothoe poseidonis* was found in similar densities as in 2008 and 2009.

The total number of polychaete species found at the Dogger Bank in 2010 was 31, which is comparable to 2009. The most numerous species are *Magelona filiformis*, *Goniada maculata*, *Owenia fusiformis*, *Sigalion mathildae* and *Nephtys cirrosa* (high density on DOG06). In 2009 *Chaetozone* had very high density which is not found again in 2010. The polychaete *Aricidea*

minuta has become a relatively rare species, while in 1995-1998 this species was common in the Dogger Bank samples.

Oyster Grounds (appendix 2; *Figure A2 - 29* and *Figure A2 - 30*)

On the Oystergrounds, a total of 158 taxa in 42 samples and an average density of 1812 ind./m^2 were found. Most abundant species were the brittle star *Amphiura filiformis*, phoronid worms (Phoronida*)*, the common basket shell *Corbula gibba*, the polychaete *Magelona filiformis* and the bivalve *Nucula nitidosa*.

In 2010 the brittle star *Amphiura filiformis* is present in relatively high numbers (average per station: 494 ind/m^2). *A. filiformis* is a typical species for the Oyster Grounds (Figure A2 - 11), which is also confirmed by WoRMS (Stöhr and Hansson, 2011). Phoronid worms (or horseshoe worms) are present on the whole DCS, but present in the highest number on the Oyster Grounds. The bivalve *Corbula gibba* is present in a relatively high number, however the high values found in 2008 (> 500 ind/m^2) are not found in 2010. Another common species was the bivalve *Nucula nitidosa*, which was found in a slightly lower density compared to 2009. The numbers of the decapod *Callianassa subterranea* in 2010 has a slightly negative trend since the 2004 maximum. *C. subterranea* is a typical species for the Oyster Grounds (Figure A2 - 17), found commonly on sandy sediments with a high silt content and shows the highest density around the Frisian Front (Türkay, 2011).

Offshore area (appendix 2; *figure A2 - 30* and *figure A2-31*)

In the Offshore area, a total of 107 taxa over 34 samples was found. The average density of the samples was 1267 ind./m^2. In comparison, in 2009 only 83 taxa were identified in this area. Therefore in 2010 an increase in diversity was found.

The most abundant and only dominant species was the polychaete *Magelona johnstoni*. In 2010, this species attributed 32% to the total density. This species each year dominates the density of the Offshore samples (30% – 44%). The polychaetes *Magelona filiformis*, *Spiophanes bombyx*, *Notomastus latericeus* and *Nephtys cirrosa* are present in high densities or commonly present in the Offshore area. In total polychaetes determined 58% of the total density in the Offshore area. Also Phoronid worms were present in high numbers and determine 11% of the total density. Other common species were the amphipods *Urothoe poseidonis*, *Bathyporeia elegans*, *Bathyporeia guilliamsoniana* and *U. brevicornis*. In 2008 *Bathyporeia elegans* was found in very high numbers on some stations. In 2010 the density and the distribution over the stations is lower compared to 2008 and 2009.

The genus *Magelona* has a high density in the shallow, fine sandy sediments of the DCS and a low density in the deeper mud-rich sediments of the DCS (Figure A2 - 19). Two species of *Magelona* are found in relatively high numbers on the DCS, each with it's own specific area preference (Figure A2 - 20). *Magelona johnstoni* is present in high numbers in the Offshore area and the Coastal area. From literature it is known that the species has a preference for fine sandy sediments, which are found in these areas (Fiege and Bellan, 2011). *Magelona filiformis* is found in muddy area's of the DCS (see Oyster Grounds and figure A2-19).

The genus *Nephtys* is found over the whole DCS but is especially abundant in the southern part (*Figure A2 - 21*). The species dominating the southern part is *Nephtys cirrosa*, a species preferring a clean course to fine sandy sediment (Rainer, 1991). In the more mud-rich sediments of the DCS, *N. hombergii* dominates. This species can be present on both mud-poor and mud-rich area's, but the general trend is that the species increases when mud content increases (Bellan, 2011).

Coastal area (appendix 2; Figure A2 - 33 and Figure A2 - 34)

In the Coastal area, a total of 71 taxa over 17 samples was found and an average density of 1959 ind./m^2. Most numerous was the polychaete worm *Magelona johnstoni*, attributing 25% of total density, which is comparable to 2009. *M. johnstoni* is present in the sandy sediments of the DCS (see Offshore area). The polychaetes *Capitella capitata*, *Phyllodoce mucosa*, *Spiophanes bombyx*, *Scoloplos armiger*, *Nephtys cirrosa*, *Lanice conchilega*, *Notomastus latericeus* and

Nephtys hombergii are present in high densities or presence in the Coastal area. In 2010, Polychaetes determined 61% of the total density.

The years 2008 and 2009 seemed to mark the end of the period since 2002 with high densities of the American razor clam *Ensis directus*. However, in 2010, the average density was very high again. It even exceeded the value of 2002, the highest average density recorded so far. At station COA04, the density was around 3700 ind/m^2. Another bivalve, *Spisula subtruncata,* has almost disappeared since 2004.

In 2010, the Coastal area has also high densities of the amphipods *Urothoe poseidonis* and *Bathyporeia elegans*. The oligochaete *Tubificoides diazi* was found in station COA14 in a relatively high density (> 600 ind/m^2). *Echinocardium cordatum* was found in 8 of the 17 stations.

5.4 Notes on scarce, rare and previously unrecorded species

In the 2010 samples, several species were found which had not been recorded in the MWTL project, previously. Also some scarce species were found. These species are commented on below.

5.4.1 Nemertea (Nemertean worms)

cf *Tubulanus polymorphus* – This may be the very regularly encountered nemertean species with an obvious pink band at one third body length. These animals closely match the description in Gibson (1994): “In alcohol or formalin […] the general colour changes to a dull creamy-white marked by a characteristic band of dark reddish-brown encircling the body in the foregut region […]. The width of this pigmented band is variable, but its anterior margin is invariably precisely marked […] “. However, the identification is yet to be confirmed.

5.4.2 Polychaeta (Bristle worms)

Abyssoninoe hibernica and *Lumbrineris* near *cingulata* (family Lumbrineridae) – These species were identified for the first time within the MWTL-project. They are, however, not new for the Dutch sector of the North Sea. Previously, Lumbrineridae were identified using Hartmann-Schröder (1997). Although this book lists *A. hibernica*, the identification key easily leads to misidentifications within this group of worms. In 2010, E. Oug (Niva Institute, Norway) prepared a more practical Key to this group for the NMBAQC-training course (Oug, 2010). This key uses mainly internal structures of the maxillary apparatus; external morphology, traditionally relied upon, can be used only as a secondary feature, not as the starting point of proper identification.

Until 2009, two species of Lumbrineridae were commonly reported in the MWTL programme: *Lumbrineris fragilis* and *L. latreilli*. Probably, most “*L. fragilis*” concerned *A. hibernica* and most “*L. latreilli*” concerned *L.* near *cingulata*. Since other species may occur this issue awaits further study.

Figure 5-8 Maxillae of *Lumbrineris* near *cingulata* from the Oyster Grounds (station OYS20).

Clymenura lankesteri (family Maldanidae) – This species is found at the Dogger Bank as well as station OYS04 of the Oyster Grounds. A review of the genus has recently been published (Read, 2011). It is likely, the Dogger Bank specimens of '*C. lankesteri*,' in fact belong to *Leiochone*. This genus is also characterized by a ventral shield at the 8th setiger. Unfortunately, only incomplete specimens have been collected. Complete animals are necessary for certain species identification. According to G. Read (pers. comm.), the animals from the Dogger Bank lack a cephalic rim and plate and are therefore *Leiochone* with *L. leiopygos* as a likely species for geographical reasons. Until more is known, we propose no name change so far.

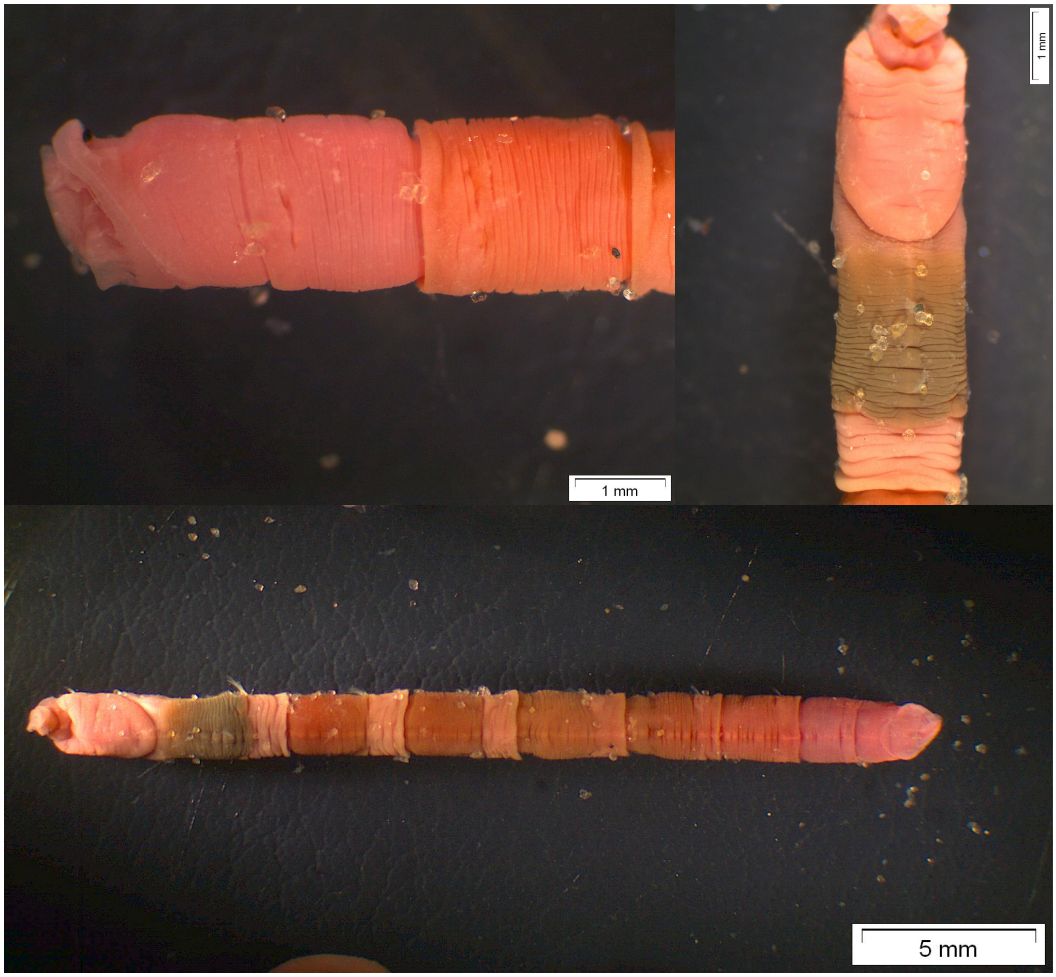

Figure 5-9 *Leiochone* sp. (possibly *L. leiopygos*), a maldanid species so far reported as *Clymenura lankesteri*. Origin: Dogger Bank (station DOG07). Top left: head in lateral view; top right: 7th and 8th segment in ventral view, showing the ventral shield at 8th segment; below: anterior section part of the animal.

Laonice bahusiensis (family Spionidae) – This species was recorded twice in 2010. Both records orginate from the Oyster Grounds (stations OYS14 and OYS37). These stations are located in the central part of the Oyster Grounds, at a depth of 47-49 m, with a silty seabed (mgs ~125 µm). The species has been recorded in 2006, 2008 and 2009 from this same region. Before 2006, however, only one MWTL record (recorded as *Laonice cirrata*) exists: 1991, interestingly again from station 37. *L. bahusiensis* is also known from the Cleaver Bank (van Moorsel, 2003). *L. bahusiensis* is identified by the presence of a median antenna and a long caruncle, reaching posteriorly until over 20 segments.

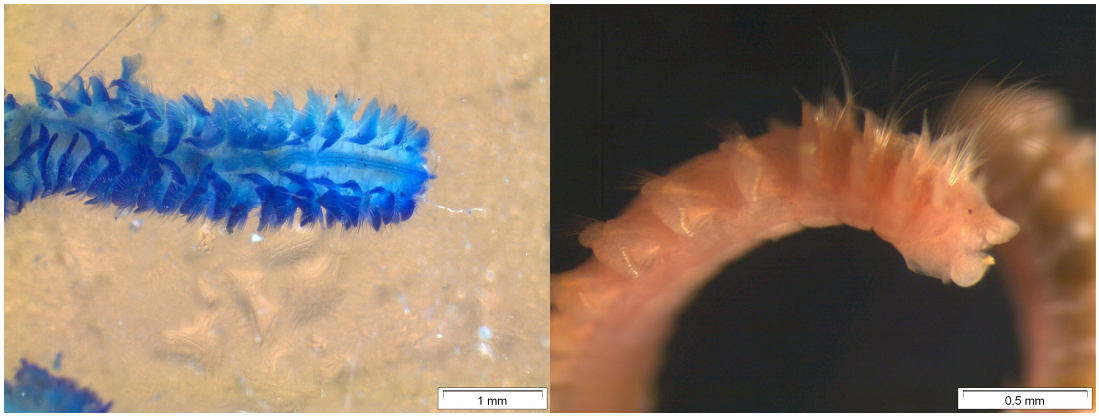

Figure 5-10 *Laonice bahusiensis*. Left: anterior section in lateral view (origin: OYS14). Right: dorsal view, showing long caruncle. Staining methyl green (origin: OYS37).

Malmgreniella-species (family Polynoidae) – Scale worms traditionally provide a challenge for the benthic specialist. They live associated with echinoderms or tube-building and burrowing polychaetes, such as *Arenicola marina*, *Lanice conchilega*, *Owenia fusiformis* and *Chaetopterus variopedatus*. These associations apparently are more or less species-specific: *M. arenicolae* can be found in the burrows of *Arenicola marina* and *Neoamphitrite figulus*; *M. andreapolis* is associated with sea cucumbers (Chambers & Muir, 1997).

We used Pettibone (1993) in combination with Barnich (2011) for their identification.

In 2010, five *Malmgreniella* species were identified: *M. castanea* (2010: first time), *M. darbouxi* (reported from 2009 onwards, but most likely identified as *M. marphysae* and *Harmothoe lunulata* in the past) living in association with *Lanice conchilega*, *M. ljungmani* (found in most years since the MWTL project was initiated in 1988, *M. marphysae* (found since 2006; most specimens probably concern *M. darbouxi*), and *M. mcintoshi. A* sixth species, *M. andreapolis* was also found in several samples (OYS06, OYS08, OYS19), together with its host *Leptosynapta.*

Malmgreniella species can be identified from other polynoid genera like *Harmothoe* by a combination of features: they lack cephalic peaks; lateral antennae are inserted terminoventrally; notochaetae stout with entire tip, blunt and/or pointed

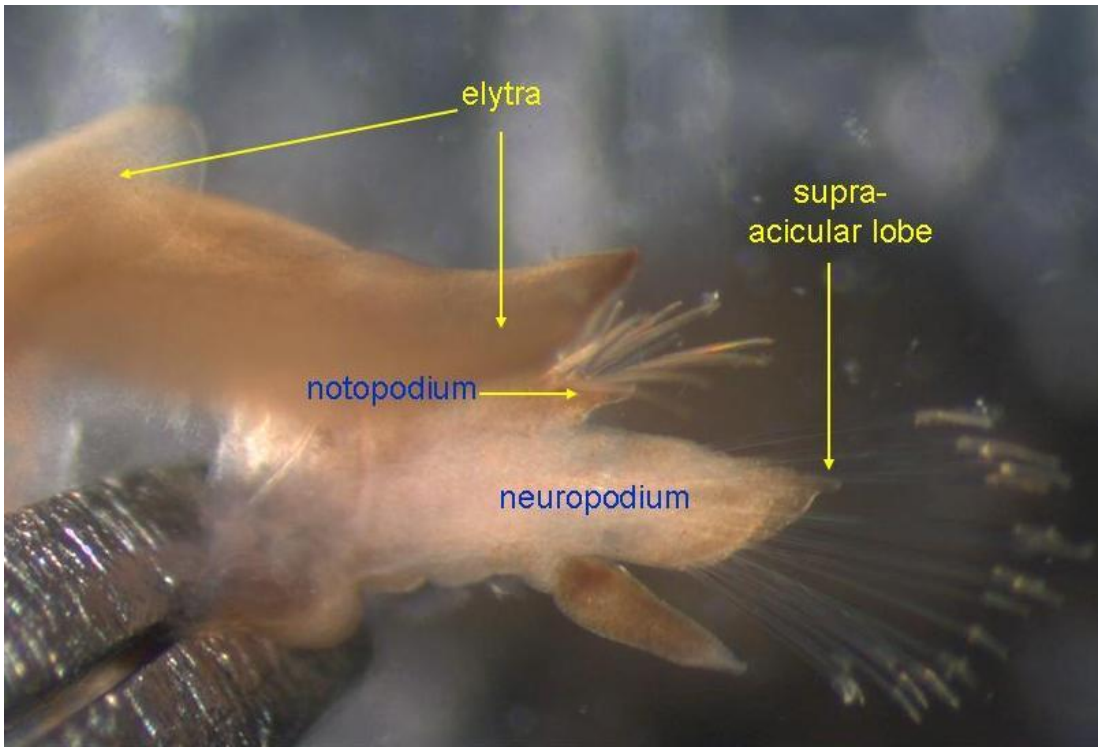

Figure 5-11 Anterior parapodium of the scaleworm *Malmgreniella* castanea (OYS10).

Malmgreniella arenicolae – This scale worm was found in sample DOG04 from the Dogger Bank. Its identification was confirmed by Dr. Barnich (Senckenberg Institut, Frankfurt). The species is not new for the Netherlands' territory (Pettibone, 1993), but it is new to the MWTL project.

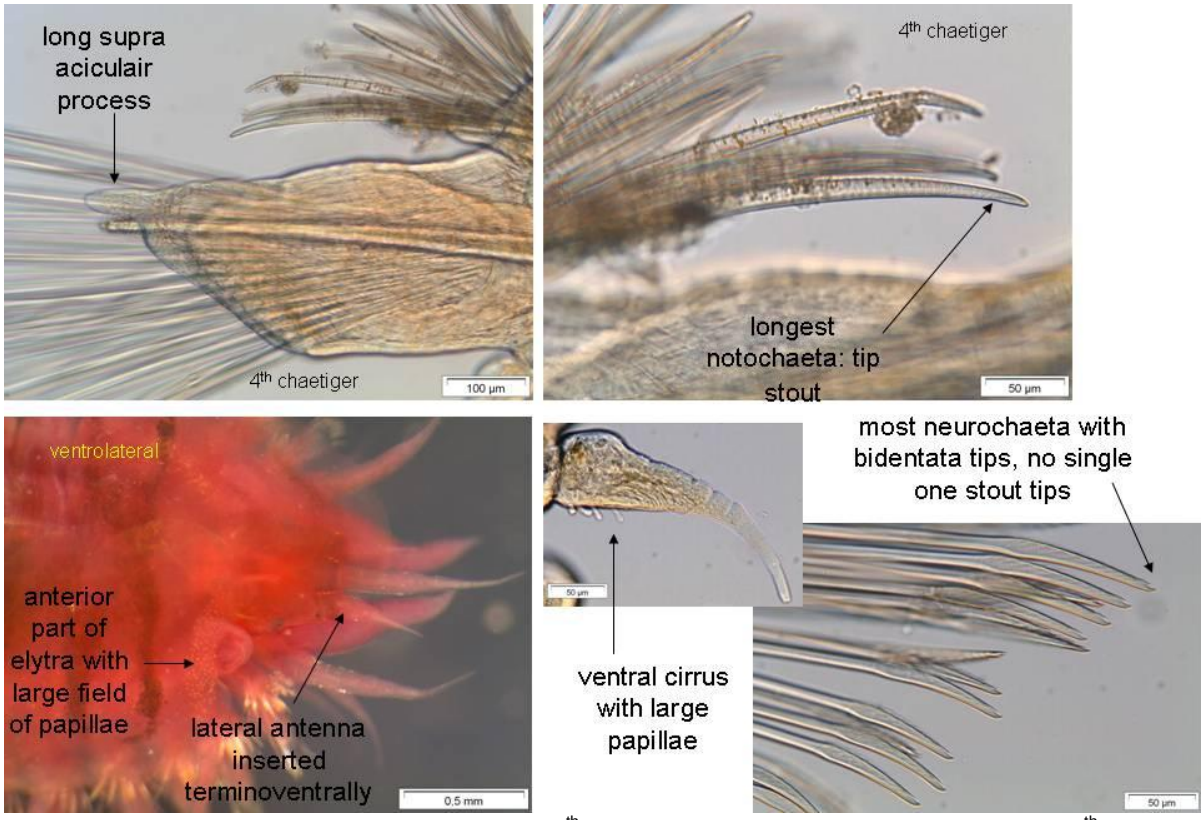

Figure 5-12 *Malmgreniella arenicolae* Clockwise: 4th chaetiger in frontal? view; notochaetae of the 4th chaetiger , neurochaetae and ventral cirrus and anterior section of the body in ventrolateral view. Origin: DOG04, March 2010.

Malmgreniella castanea (family Polynoidae) – This species was found at the Oyster Grounds, station OYS10. The species was identified using Barnich (2010). The species is new for the MWTL programme. It has been recorded at the DCS before, *viz*. at the Cleaver Bank (Van Moorsel, 2003).

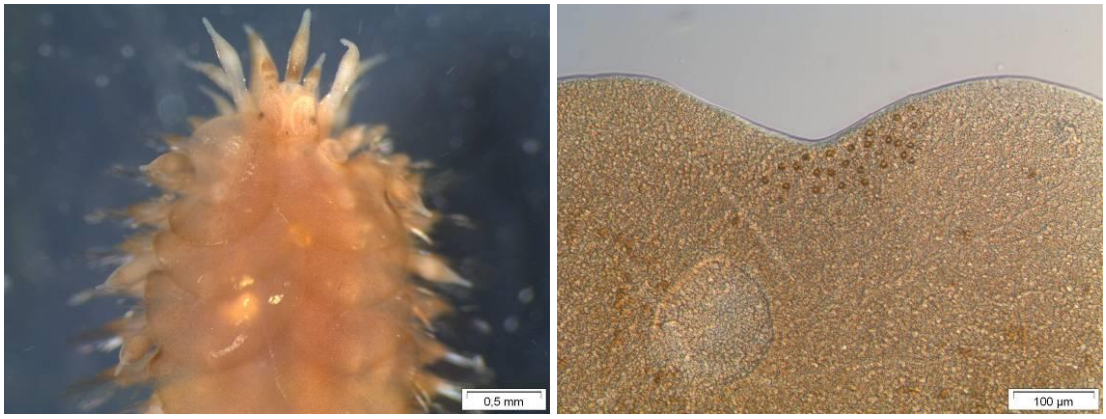

Figure 5-13 Anterior part of the scaleworm *Malmgreniella* castanea (OYS10). Anterior part of the elytron of the 1st chaetiger showing only a small field of papillae Origin: (oys 10).

Myrianida prolifera (syn. *Autolytus prolifer*) (family Syllidae) – This tiny species was recorded once in 2010, in the Offshore area (station OFF05). No previous MWTL records are known. The species is rather common along the Dutch coast; for instance, it has been reported from several locations along the coast of the Wadden Island of Ameland. It is also known in the Wadden Sea and the Delta area.

Pisione remota (family Pisionidae) – This species was found in the Offshore area (station OFF17). Between 1992 and 2000, the species was regularly found in the MWTL programme (locations: OFF29, OFF36, OFF26, OFF21). So the first record of the species in 10 years originates from a 'new' location. Four of these 5 locations, (OFF17, 21, 26 and 36) are in the south-western part of the Offshore area. Location OFF29 is located north off Schiermonnikoog. All locations have a seabed of coarse sand, median grain size 341 to 488 µm.

Prior to the MWTL project, the species was found at 8 stations in the Dutch sector of the North Sea (Holtmann *et al.* 1985). At the Cleaver Bank, it is one of the most common polychaetes (Van Moorsel 2003).

Polycirrus spec. (family Terebellidae) – This polychaete was found in the Offshore area (station OFF06). In the MWTL programme, *Polycirrus* has been recorded scarcely. Records exist from 1992 and 1994 (OFF36, recorded as *Polycirrus medusa*), 1996 (OFF32, *Polycirrus* sp.) and 2002 (OYS33, *Polycirrus medusa*).

Figure 5-14 *Polycirrus* sp. Colour: staining with methyl green. Origin: Off 06.

Polygordius appendiculatus (family Polygordiidae) – This species was found in the Offshore area (stations OFF20 and OFF29). This species is among the most atypical polychaetes. Whilst polychaetes belong to the Annelida – segmented worms, this species shows no externally visible segmentation. Parapodia and even bristles are absent. The animal can be identified by the presence of two thread-like structures, located at the animals' head. The worm is very thin – barely 0.1 mm in width. This species is well known in the Belgian part of the North Sea (Degraer *et al.*, 2007). This may be explained by a different methodology: fixation of samples before sieving results in a higher retrieval of small species.

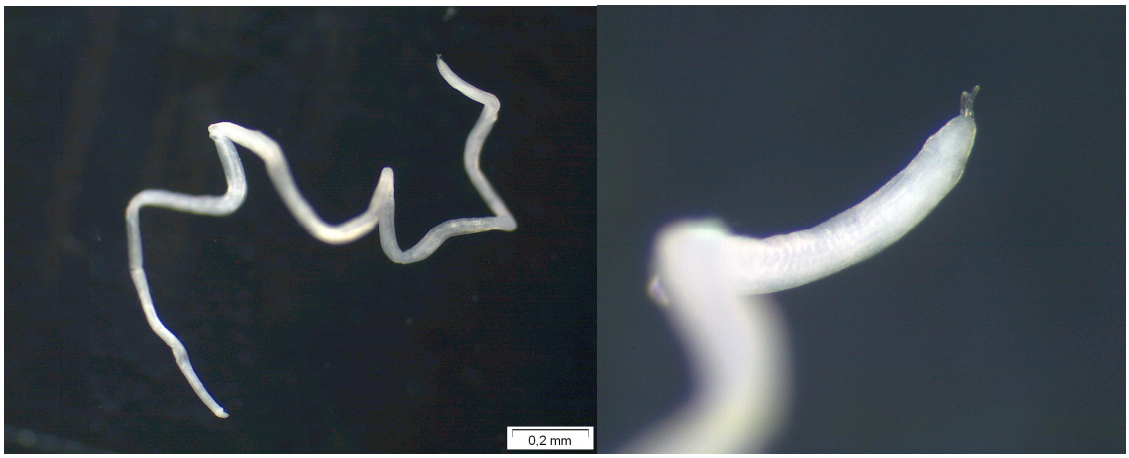

Figure 5-15 *Polygordius appendiculatus*. Left: entire animal. Right: head, showing two thread-like structures. Origin: OFF20.

Syllis gracilis (family Syllidae) – This tiny species was found twice in 2010, both times in the Offshore Area (stations OFF22 & OFF33). At station OFF33, 11 individuals were collected. The species has been recorded in the MWTL programme, but only in 2002: stations OFF21 and again OFF33. (1991: *Syllis* sp?). These three stations are all found in the southern section of the Offshore area. The seabed at these stations consists of medium-coarse to coarse sands. The species has been considered an exotic species by Wolff (2005), referring to Korringa (1951). Apart from these and the previous MWTL records, the species has also been found in 1994 on sublittoral hard substrates in the Delta area at Gorishoek (Van Moorsel *et al*., 1995). The species is reported to have a world-wide distribution (Hartmann-Schröder, 1997) but it might be a species complex (Maltagliati *et al*., 2000).

5.4.3 Oligochaeta (Oligochaete worms)

Oligochaeta are thin annelid worms, which are often neglected in marine benthic studies. As a "difficult" group, specimens are usually not identified to species level. Moreover, due to their small size they are only rarely retained by 1 mm sieves. Most marine oligochaetes can be considered meiofauna species and have hardly? been studied in the Dutch section of the North Sea. Several species, however, are larger, almost equal in size to polychaetes like *Levinsenia gracilis* and *Polygordius appendiculatus*. They are regularly found in macrobenthic samples. In 2007, two new species were found: *Limnodriloides scandinavicus* (at the Oyster Grounds) and *Tubificoides diazi* (in the Coastal area) (Tempelman *et al*., 2009). In 2010, yet another new species was found.

Grania vikingi (family Enchytraeidae) – In 2010 at OFF29, a specimen was identified. This species has been described by Rosa & Erséus (2003) from material collected in the Skagerak at the west coast of Sweden. It has a typical mosaic-like pattern of gland cells on the clitellum (photo 10), and the foot-shaped chaetae are becoming longer and more stout towards the posterior body region. Unlike *G. postclitellochaeta*, the species has anterior chaetae.

A short description of the material collected at OFF29 (17.iii.2010): length about 11 mm, width 125 µm in IV, 140 µm at clitellum and 125 µm in XXI; 72 segments. Ventral chaetae foot-shaped (proximally thickened) commencing from IV, one per bundle, in anterior segments 30-38 µm, in

posterior segments thicker and longer (40-52 µm). Dorsal chaetae from XXI, foot-shaped, one per bundle and 42-47 µm long. The material from ?? is a bit longer and has more segments than the type material.

The type material from the Skagerak is from subtidal sands, at a depth of 12-18m. Our material, ~40 km north of the isle of Schiermonnikoog, was collected at a depth of 31,4 m, with medium-coarse sand (average grain size 331 µm) (depth and grain size : 2009 data).

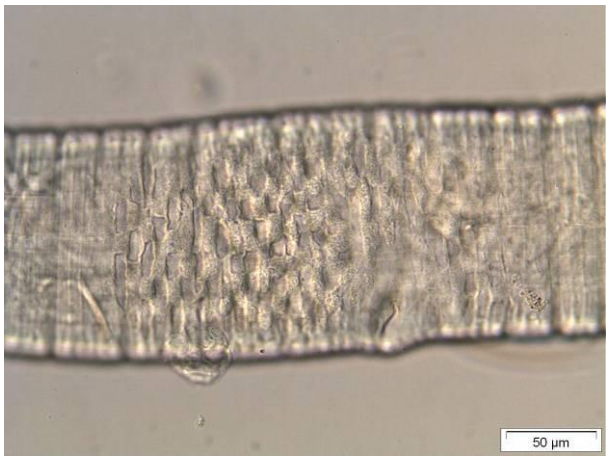

Figure 5-16 *Grania vikinga.* Mosaic pattern of glands on the clitelum Offshore area (OFF29).

5.4.4 Crustacea – Amphipoda

Bathyporeia pelagica (family Pontoporeiidae) – In 2010, this species was found twice, both records originate from the Coastal area (COA07 and COA18). In 2009, the species was also found at COA18. Both stations are located close to the Wadden islet of Rottumeroog. Clearly, the species seems to be a near-shore species. Prior to the 2009 and 2010 records, only records are known from 1991 – 1997. They originate from the Voordelta (COA13), again COA07, OFF02 and an exceptional record from the Oyster Grounds (OYS01). The species has also been found along the coast of the Wadden island of Ameland (Vanagt, 2011). In the MWTL programme, it is a rare species.

Gammarus crinicornis (family Gammaridae) – This species was recorded only once in 2010. It was found in the Coastal Zone at COA04. In 2006, at the same station, also a *Gammarus* was found. It had been reported as *Gammarus locusta* (Tempelman *et al*. 2009). The material was re-identified and it was apparent, that the 2006 specimen also concerned *G. crinicornis*. The species is a typical coastal-estuarine species and has incidentally also been reported from inshore brackish waters such as the North Sea canal (Kaag 2002).

Both species can be distinguished by the basis of the 7th pereiopod, *viz*. shorter in *G. crinicornis* compared to *G. locusta*. Also, *G. crinicornis* shows no humps at the urosome.

Figure 5-17 *Gammarus crinicornis*. Left specimen from COA04, 2006. In 2010, the species was again found at COA14.

Figure 5-18 Middle: basis 7th pereiopod same animal.

Figure 5-19 Right: basis 7th pereiopod of *G.* cf. *locusta* from De Petten, a brackish inshore lake at the Wadden Island of Texel, collected September 2011.

The species may be common. For instance, it has also been recorded from the Wadden Island of Ameland, within 2 km from the beach. Nevertheless, it was only very rarely encountered in the MWTL programme. Apart from the 2006 and 2010 records of COA04, there is just one more previous record: in 1991, the species was found at COA14. Therefore, the 2010 record constitutes only the third record of MWTL.

Medicorophium affine (family Corophiidae) – This amphipod was found once in 2010, at the Oyster Grounds (OYS07).

5.4.5 Crustacea – Cumacea

Cumaceans are tiny crustaceans. Their identification is not easy but fortunately, a recent new key has been published (Shalla, 2011).

Monopseudocuma gilsoni (syn. *Pseudocuma gilsoni*) (family Pseudocumatidae) – The species has been found along the northern Wadden coast at OFF02, OFF06 and COA08. The three 2010 records are remarkable, as this species was recorded only once in the MWTL programme. That record dates back to 1991 and originates from OFF29, roughly in the same section of the North Sea. The species is not restricted to this area, recently it was also found off the central part of the Dutch coast (Daan *et al.*, 2009, Wijsman & Verduin, 2011).

Figure 5-20 *Monopseudocuma gilsoni* from the Dutch coast near Hoek van Holland (Zandmotor project, sample 404702).

5.4.6 Crustacea – Isopoda

Pseudione hyndmanni (family Bopyridae) – This species, a parasite of hermit crabs, is new to the MWTL project. It was found in the Offshore area (OFF15). The presence was not surprising as a potential host (*Pagurus bernhardus*) was also present in the sample.

5.4.7 Crustacea – Tanaidacea (“tanaids”)

Of this little-known group of crustaceans, only a handful of species is known to occur in the Dutch section of the North Sea. One species was found at the Oyster Grounds. For the first time in almost 20 years, tanaids were found in the Offshore Area as well.

Tanaopsis graciloides (Paratanoidea incerta sedis) – In 2009, this species was found in the Oyster Grounds (station OYS20) for the first time. In 2010, it was again found at the Oyster Grounds (OYS30). Both stations are located in the most western part of the area, and OYS20 at a sandy area of the Cleaver Bank. This records prompted us to re-examine tanaid specimens found at the Cleaver Bank in 2002 and reported as Tanaidacea in Van Moorsel (2003). They were identified as *T. graciloides* as well (record confirmed by Dr Bamber of ARTOO, Southampton).

Tanaissus lilljeborgi (family Nototanidae) – This species was recorded in the Offshore Area (OFF06 & OFF36). The species is not new for the Dutch part of the North Sea, but has not yet been recorded in the MWTL programme. In 1991 and 1992, however, at stations OFF29, OFF33 and OFF34, unidentified Tanaidacea were recorded. The species has been recorded from the Dutch section of the North Sea before: in 2004, during a T0 study off the coast near IJmuiden at the construction site of the Princess Amalia wind farm (Jarvis 2004). The animal has been identified using Bird (2002).

Photo 1 *Tanaissus lilljeborgi* from the Offshore Area in 2010 (station OFF06). Scale bar: 0.2 mm.

5.4.8 Mollusca – Gastropoda (snails)

Nassarius reticulatus (syn. *Hinia reticulata*) (family Nassariidae) – In 2009, this species was found at COA15. In 2010 *N. reticulates* was again found at one station in the Coastal area (COA09). This station is located half way along the Dutch coast. It confirms the northward extension of this species, which was previously mainly known form the Delta area (Van Moorsel, 2007).

Oenopota turritula (family Conidae) – This species was found once in 2010, at the Oyster Grounds (OYS04). The species has been found in MWTL only a few times: 1996 (DOG01 & OYS04) and it showed up again only in 2006 (OYS04) and 2008 (OYS04 & OYS23).

5.4.9 Mollusca – Bivalvia (Bivalves)

Thracia pubescens (family Thraciidae) – This species was found at the Oyster Grounds (OYS15). The species so far has not yet been recorded in the MWTL project.

6 Acknowledgements

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Last but not least, we would like to thank all analysts for their input and knowledge in this survey.

Table 6-1: Analysts working on the MWTL monitoring program 2009

Name	*Organisation*	*Species groups / Activity*
Mario de Kluijver	Grontmij	Sampling and fieldwork
David Tempelman	Grontmij	All groups, photographs
Amy de Beauvesere - Storm	Grontmij	Molluscs
Godfried van Moorsel	Ecosub	All groups
Marco Faasse	Grontmij	Crustacea
Ton van Haaren	Grontmij	All groups, photographs

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Appendix

Appendix 1

Locations and Sediment

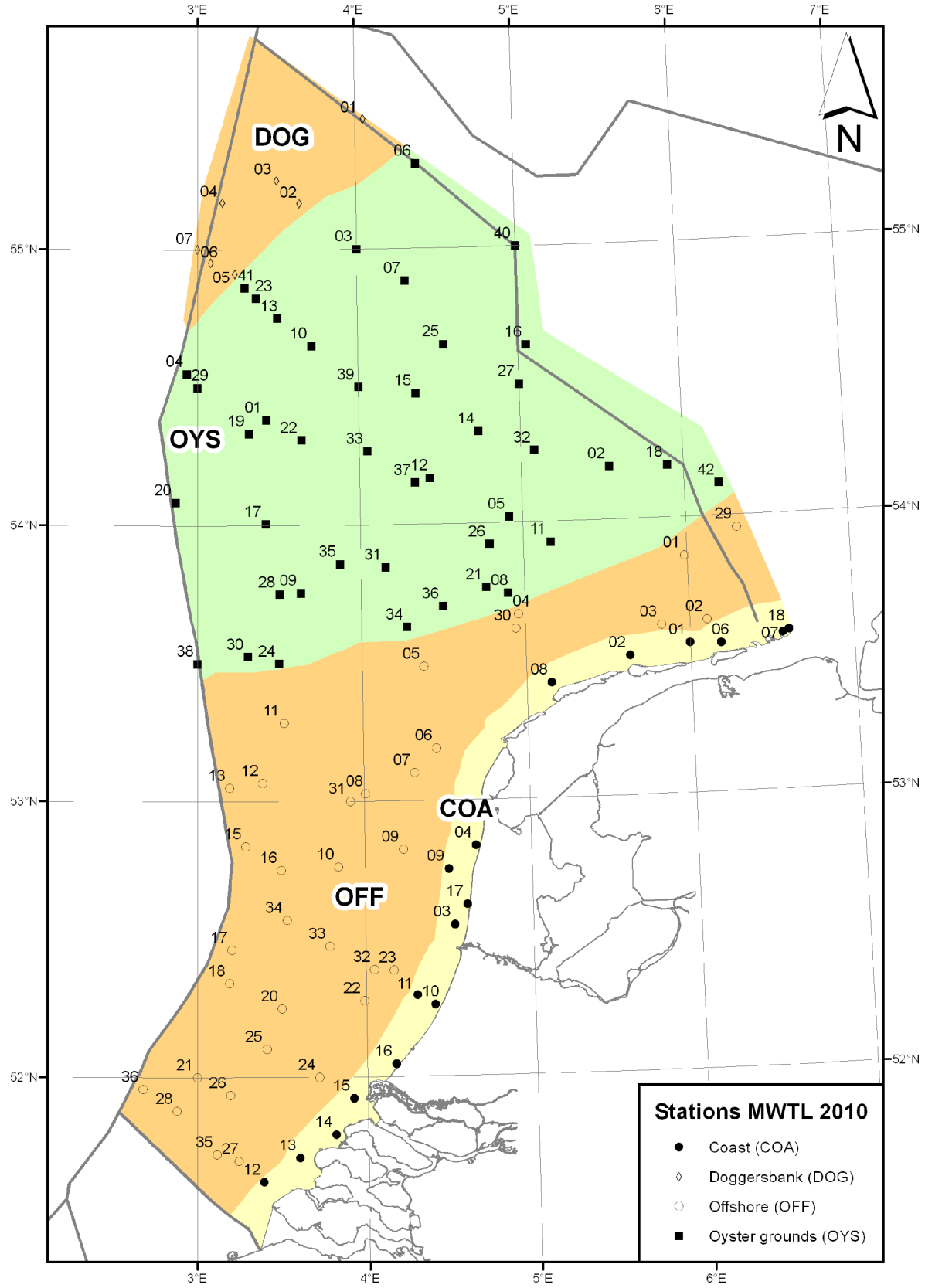


Figure A1 - 1 MWTL 2010. Locations of the sampling stations

In the tables below, two location codes are given: the AQS/NIOZ code is used in the past in all MWTL reports. The DONAR location code is used in the Rijkswaterstaat database DONAR.

In 2005, OFF14 and In OFF19 were discarded as sample locations. They were replaced by OYS16 and 17. Due to a projection error in 2006 COA05 was replaced by COA18. In Tempelman *et al.* (2009a, 2009b & 2009c) these problems are further discussed.

Table A1 - 1a MWTL 2010. Locations, sampling dates and depth

	Station (name)		Geographical position			
AREA	AQS/NIOZ code	DONAR code	Lat (N) ED50	Lon (E) ED50	Date	Depth (m)
DOG	DOG01	DOGGBK07	55°28'18"	4°03'00"	24-Mar-10	30.0
DOG	DOG02	DOGGBK02	55°10'00"	3°38'30"	23-Mar-10	37.0
DOG	DOG03	DOGGBK03	55°15'00"	3°30'00"	23-Mar-10	29.0
DOG	DOG04	TERSLG235	55°10'14"	3°09'26"	23-Mar-10	30.0
DOG	DOG05	DOGGBK04	54°54'42"	3°14'00"	23-Mar-10	35.0
DOG	DOG06	DOGGBK05	54°57'06"	3°05'00"	23-Mar-10	22.0
DOG	DOG07	DOGGBK08	55°00'00"	3°00'00"	23-Mar-10	25.0
OYS	OYS01	OESTGDN43	54°23'00"	3°25'30"	10-Mar-10	47.0
OYS	OYS02	FRIESFT16	54°11'30"	5°32'30"	16-Mar-10	40.0
OYS	OYS03	OESTGDN02	55°00'00"	4°00'00"	24-Mar-10	49.0
OYS	OYS04	OESTGDN03	54°33'00"	2°56'00"	10-Mar-10	34.0
OYS	OYS05	FRIESFT02	54°01'10"	4°55'00"	10-Mar-10	43.0
OYS	OYS06	OESTGDN04	55°18'24"	4°22'48"	24-Mar-10	47.0
OYS	OYS07	OESTGDN05	54°53'00"	4°18'00"	24-Mar-10	51.0
OYS	OYS08	FRIESFT03	53°44'40"	4°54'00"	16-Mar-10	36.0
OYS	OYS09	FRIESFT04	53°45'20"	3°37'50"	09-Mar-10	39.0
OYS	OYS10	OESTGDN06	54°39'00"	3°42'30"	23-Mar-10	45.0
OYS	OYS11	FRIESFT05	53°55'30"	5°10'00"	16-Mar-10	39.0
OYS	OYS12	OESTGDN07	54°10'00"	4°26'00"	10-Mar-10	50.0
OYS	OYS13	OESTGDN08	54°45'00"	3°30'00"	23-Mar-10	45.0
OYS	OYS14	OESTGDN09	54°20'00"	4°44'30"	23-Mar-10	47.0
OYS	OYS15	OESTGDN10	54°28'30"	4°21'20"	23-Mar-10	51.0
OYS	OYS16	OESTGDN11	54°38'30"	5°03'00"	25-Mar-10	46.0
OYS	OYS17	OESTGDN12	54°00'21"	3°25'08"	09-Mar-10	44.0
OYS	OYS18	FRIESFT06	54°11'20"	5°54'00"	16-Mar-10	38.0
OYS	OYS19	OESTGDN13	54°20'00"	3°19'00"	10-Mar-10	49.0
OYS	OYS20	OESTGDN14	54°05'00"	2°51'51"	09-Mar-10	51.0
OYS	OYS21	TERSLG50	53°46'04"	4°46'03"	10-Mar-10	38.0
OYS	OYS22	OESTGDN15	54°18'30"	3°38'30"	10-Mar-10	45.0
OYS	OYS23	OESTGDN16	54°49'24"	3°22'00"	23-Mar-10	42.0
OYS	OYS24	BREEVTN34	53°30'00"	3°29'46"	09-Mar-10	33.0
OYS	OYS25	OESTGDN17	54°39'00"	4°32'00"	24-Mar-10	50.0
OYS	OYS26	FRIESFT07	53°55'20"	4°47'30"	10-Mar-10	42.0
OYS	OYS27	OESTGDN18	54°30'00"	5°00'00"	25-Mar-10	43.0
OYS	OYS28	FRIESFT08	53°45'00"	3°30'00"	09-Mar-10	37.0
OYS	OYS29	OESTGDN19	54°30'00"	3°00'00"	10-Mar-10	26.0
OYS	OYS30	BREEVTN02	53°31'30"	3°18'21"	09-Mar-10	35.0
OYS	OYS31	FRIESFT09	53°50'42"	4°09'06"	11-Mar-10	43.0
OYS	OYS32	FRIESFT10	54°15'30"	5°05'00"	16-Mar-10	43.0
OYS	OYS33	OESTGDN20	54°16'00"	4°03'00"	10-Mar-10	49.0
OYS	OYS34	FRIESFT11	53°37'40"	4°16'37"	11-Mar-10	36.0
OYS	OYS35	FRIESFT12	53°51'31"	3°52'24"	09-Mar-10	40.0
OYS	OYS36	FRIESFT17	53°42'05"	4°30'00"	11-Mar-10	38.0
OYS	OYS37	TERSLG100	54°09'04"	4°20'27"	10-Mar-10	50.0
OYS	OYS38	BREEVTN26	53°30'00"	3°00'00"	09-Mar-10	33.0
OYS	OYS39	OESTGDN22	54°30'00"	4°00'00"	23-Mar-10	47.0
OYS	OYS40	OESTGDN21	55°00'00"	5°00'00"	24-Mar-10	41.0
OYS	OYS41	OESTGDN23	54°51'42"	3°17'36"	23-Mar-10	39.0
OYS	OYS42	ROTTMPT70	54°07'03"	6°12'51"	16-Mar-10	34.0

Table A1 - 1b MWTL 2010. Location, sampling dates and depth

AREA	Station (name) AQS/NIOZ code	Station (name) DONAR code	Geographical position Lat (N) ED50	Geographical position Lon (E) ED50	Date	Depth (m)
OFF	OFF01	FRIESFT13	53°51'30"	5°59'00"	17-Mar-10	31.0
OFF	OFF02	WADDKT07	53°37'29"	6°06'25"	17-Mar-10	21.0
OFF	OFF03	WADDKT02	53°36'40"	5°49'37"	17-Mar-10	25.0
OFF	OFF04	FRIESFT14	53°40'00"	4°57'30"	16-Mar-10	32.0
OFF	OFF05	FRIESFT15	53°29'00"	4°22'30"	08-Mar-10	28.0
OFF	OFF06	BREEVTN03	53°11'16"	4°26'32"	11-Mar-10	30.0
OFF	OFF07	BREEVTN04	53°05'59"	4°18'22"	08-Mar-10	25.0
OFF	OFF08	BREEVTN05	53°01'30"	4°00'30"	04-Mar-10	31.0
OFF	OFF09	BREEVTN06	52°49'20"	4°13'50"	08-Mar-10	26.0
OFF	OFF10	BREEVTN07	52°45'40"	3°50'30"	04-Mar-10	32.0
OFF	OFF11	BREEVTN08	53°17'00"	3°31'18"	04-Mar-10	27.0
OFF	OFF12	BREEVTN09	53°03'55"	3°23'30"	04-Mar-10	28.0
OFF	OFF13	BREEVTN10	53°02'58"	3°11'36"	04-Mar-10	31.0
OFF	OFF15	BREEVTN12	52°50'12"	3°17'18"	04-Mar-10	35.0
OFF	OFF16	BREEVTN13	52°45'00"	3°30'00"	03-Mar-10	27.0
OFF	OFF17	BREEVTN14	52°27'43"	3°12'12"	03-Mar-10	31.0
OFF	OFF18	BREEVTN15	52°20'25"	3°11'25"	03-Mar-10	30.0
OFF	OFF20	BREEVTN17	52°15'00"	3°30'00"	03-Mar-10	29.0
OFF	OFF21	BREEVTN18	52°00'00"	3°00'00"	03-Mar-10	27.0
OFF	OFF22	BREEVTN19	52°16'30"	3°59'15"	08-Mar-10	25.0
OFF	OFF23	BREEVTN20	52°23'08"	4°09'50"	15-Mar-10	23.0
OFF	OFF24	BREEVTN21	52°00'00"	3°42'58"	01-Mar-10	29.0
OFF	OFF25	BREEVTN22	52°06'12"	3°24'26"	03-Mar-10	33.0
OFF	OFF26	BREEVTN23	51°56'07"	3°11'34"	03-Mar-10	20.0
OFF	OFF27	BREEVTN24	51°41'40"	3°14'28"	02-Mar-10	27.0
OFF	OFF28	BREEVTN25	51°52'40"	2°52'48"	02-Mar-10	35.0
OFF	OFF29	ROTTMPT50	53°57'14"	6°18'36"	17-Mar-10	31.0
OFF	OFF30	TERSLG30	53°36'56"	4°56'17"	16-Mar-10	26.0
OFF	OFF31	BREEVTN27	52°59'53"	3°55'01"	04-Mar-10	28.0
OFF	OFF32	NOORDWK30	52°23'15"	4°02'53"	08-Mar-10	23.0
OFF	OFF33	NOORDWK50	52°28'30"	3°47'07"	05-Mar-10	31.0
OFF	OFF34	NOORDWK70	52°34'10"	3°31'53"	03-Mar-10	33.0
OFF	OFF35	WALCRN30	51°43'06"	3°06'49"	02-Mar-10	30.0
OFF	OFF36	WALCRN70	51°57'25"	2°40'45"	03-Mar-10	44.0
COA	COA01	WADDKT03	53°32'34"	5°59'53"	17-Mar-10	17.0
COA	COA02	WADDKT04	53°30'19"	5°37'48"	17-Mar-10	10.0
COA	COA03	HOLLSKT03	52°32'50"	4°31'50"	11-Mar-10	17.0
COA	COA04	HOLLSKT02	52°50'00"	4°40'00"	11-Mar-10	11.0
COA	COA06	WADDKT06	53°32'18"	6°11'10"	17-Mar-10	9.0
COA	COA07	ROTTMPT3	53°33'58"	6°33'51"	17-Mar-10	10.0
COA	COA08	TERSLG4	53°24'54"	5°09'02"	16-Mar-10	14.0
COA	COA09	HOLLSKT04	52°45'00"	4°30'00"	11-Mar-10	20.0
COA	COA10	NOORDWK2	52°15'36"	4°24'20"	15-Mar-10	12.0
COA	COA11	NOORDWK10	52°17'41"	4°18'01"	15-Mar-10	18.0
COA	COA12	VOORDTA2	51°37'04"	3°23'15"	01-Mar-10	13.0
COA	COA13	VOORDTA3	51°42'23"	3°36'02"	07-Apr-10	4.7
COA	COA14	VOORDTA4	51°47'26"	3°48'48"	07-Apr-10	3.7
COA	COA15	VOORDTA5	51°55'20"	3°55'09"	01-Mar-10	13.0
COA	COA16	TERHDE1	52°02'47"	4°10'12"	12-Mar-10	9.0
COA	COA17	EGMAZE1	52°37'15"	4°36'30"	11-Mar-10	7.0
COA	COA18	WADDKT08	53°34'36"	6°36'07"	17-Mar-10	6.0

Table A1 - 2a MWTL 2010. Sediment composition

Station (name)				
AREA	AQS/NIOZ code	DONAR code	Med.Gr Size (µm)	Silt (%) (Fr. <63 µm)
DOG	DOG01	DOGGBK07	217	0.6
DOG	DOG02	DOGGBK02	193	1.0
DOG	DOG03	DOGGBK03	201	1.0
DOG	DOG04	TERSLG235	205	0.4
DOG	DOG05	DOGGBK04	179	1.8
DOG	DOG06	DOGGBK05	217	0.6
DOG	DOG07	DOGGBK08	195	0.6
OYS	OYS01	OESTGDN43	118	10.4
OYS	OYS02	FRIESFT16	212	4.5
OYS	OYS03	OESTGDN02	116	8.1
OYS	OYS04	OESTGDN03	140	1.9
OYS	OYS05	FRIESFT02	131	11.9
OYS	OYS06	OESTGDN04	158	3.2
OYS	OYS07	OESTGDN05	89	20.2
OYS	OYS08	FRIESFT03	184	8.8
OYS	OYS09	FRIESFT04	189	3.3
OYS	OYS10	OESTGDN06	115	5.5
OYS	OYS11	FRIESFT05	146	16.8
OYS	OYS12	OESTGDN07	98	15.5
OYS	OYS13	OESTGDN08	114	5.2
OYS	OYS14	OESTGDN09	142	9.7
OYS	OYS15	OESTGDN10	96	14.0
OYS	OYS16	OESTGDN11	157	4.2
OYS	OYS17	OESTGDN12	193	3.4
OYS	OYS18	FRIESFT06	217	3.8
OYS	OYS19	OESTGDN13	120	7.3
OYS	OYS20	OESTGDN14	194	7.1
OYS	OYS21	TERSLG50	118	18.4
OYS	OYS22	OESTGDN15	162	4.0
OYS	OYS23	OESTGDN16	135	3.2
OYS	OYS24	BREEVTN34	125	14.1
OYS	OYS25	OESTGDN17	114	14.6
OYS	OYS26	FRIESFT07	134	13.7
OYS	OYS27	OESTGDN18	171	4.9
OYS	OYS28	FRIESFT08	203	2.5
OYS	OYS29	OESTGDN19	127	3.0
OYS	OYS30	BREEVTN02	124	11.5
OYS	OYS31	FRIESFT09	140	6.4
OYS	OYS32	FRIESFT10	160	11.5
OYS	OYS33	OESTGDN20	106	10.0
OYS	OYS34	FRIESFT11	119	14.9
OYS	OYS35	FRIESFT12	162	3.9
OYS	OYS36	FRIESFT17	108	19.4
OYS	OYS37	TERSLG100	97	15.6
OYS	OYS38	BREEVTN26	145	4.6
OYS	OYS39	OESTGDN22	116	7.8
OYS	OYS40	OESTGDN21	157	3.3
OYS	OYS41	OESTGDN23	151	3.4
OYS	OYS42	ROTTMPT70	235	1.2

Table A1 - 2b MWTL 2010. Sediment composition

Station (name)				
AREA	**AQS/NIOZ code**	**DONAR code**	**Med.Gr Size (µm)**	**Silt (%) (Fr.<63 µm)**
OFF	OFF01	FRIESFT13	217	1.7
OFF	OFF02	WADDKT07	215	1.1
OFF	OFF03	WADDKT02	196	1.7
OFF	OFF04	FRIESFT14	208	3.5
OFF	OFF05	FRIESFT15	221	1.7
OFF	OFF06	BREEVTN03	296	0.7
OFF	OFF07	BREEVTN04	220	2.0
OFF	OFF08	BREEVTN05	236	5.3
OFF	OFF09	BREEVTN06	286	0.7
OFF	OFF10	BREEVTN07	288	0.8
OFF	OFF11	BREEVTN08	207	2.0
OFF	OFF12	BREEVTN09	276	0.8
OFF	OFF13	BREEVTN10	274	1.1
OFF	OFF15	BREEVTN12	284	1.0
OFF	OFF16	BREEVTN13	270	0.7
OFF	OFF17	BREEVTN14	352	0.6
OFF	OFF18	BREEVTN15	329	0.5
OFF	OFF20	BREEVTN17	353	0.6
OFF	OFF21	BREEVTN18	449	0.4
OFF	OFF22	BREEVTN19	356	0.7
OFF	OFF23	BREEVTN20	311	0.6
OFF	OFF24	BREEVTN21	383	0.7
OFF	OFF25	BREEVTN22	442	0.5
OFF	OFF26	BREEVTN23	610	0.2
OFF	OFF27	BREEVTN24	472	0.4
OFF	OFF28	BREEVTN25	443	0.4
OFF	OFF29	ROTTMPT50	381	0.7
OFF	OFF30	TERSLG30	221	0.5
OFF	OFF31	BREEVTN27	259	0.8
OFF	OFF32	NOORDWK30	332	0.5
OFF	OFF33	NOORDWK50	264	0.8
OFF	OFF34	NOORDWK70	316	0.6
OFF	OFF35	WALCRN30	343	0.4
OFF	OFF36	WALCRN70	451	0.6
COA	COA01	WADDKT03	240	2.2
COA	COA02	WADDKT04	194	1.0
COA	COA03	HOLLSKT03	215	1.5
COA	COA04	HOLLSKT02	175	3.4
COA	COA06	WADDKT06	198	0.5
COA	COA07	ROTTMPT3	200	0.7
COA	COA08	TERSLG4	224	0.4
COA	COA09	HOLLSKT04	234	1.2
COA	COA10	NOORDWK2	252	2.4
COA	COA11	NOORDWK10	330	0.8
COA	COA12	VOORDTA2	288	0.9
COA	COA13	VOORDTA3	276	0.5
COA	COA14	VOORDTA4	254	2.8
COA	COA15	VOORDTA5	174	4.8
COA	COA16	TERHDE1	432	0.4
COA	COA17	EGMAZE1	201	1.9
COA	COA18	WADDKT08	213	0.5

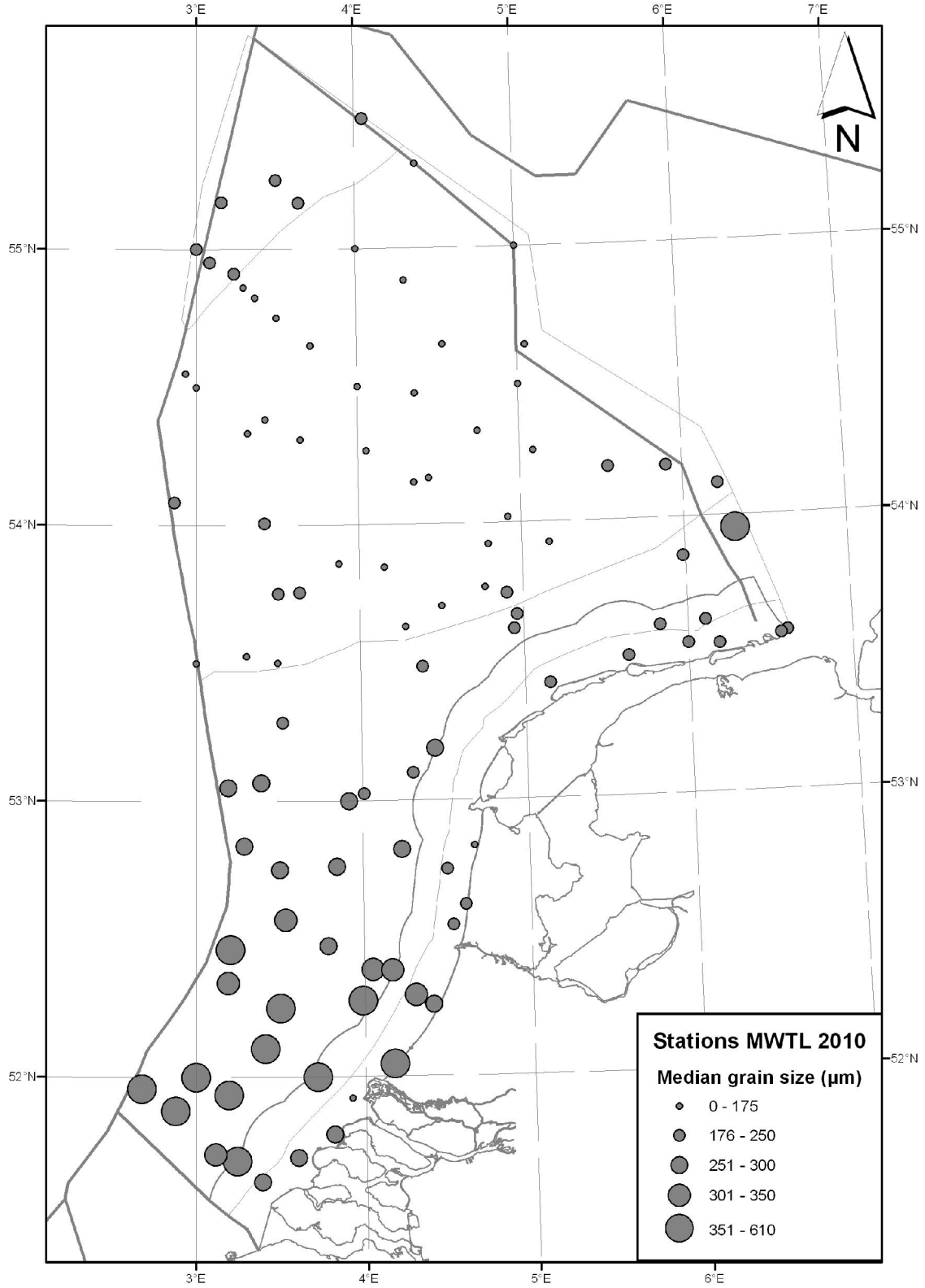


Figure A1 - 2 MWTL 2010. Median grain size (µm) of the sediment

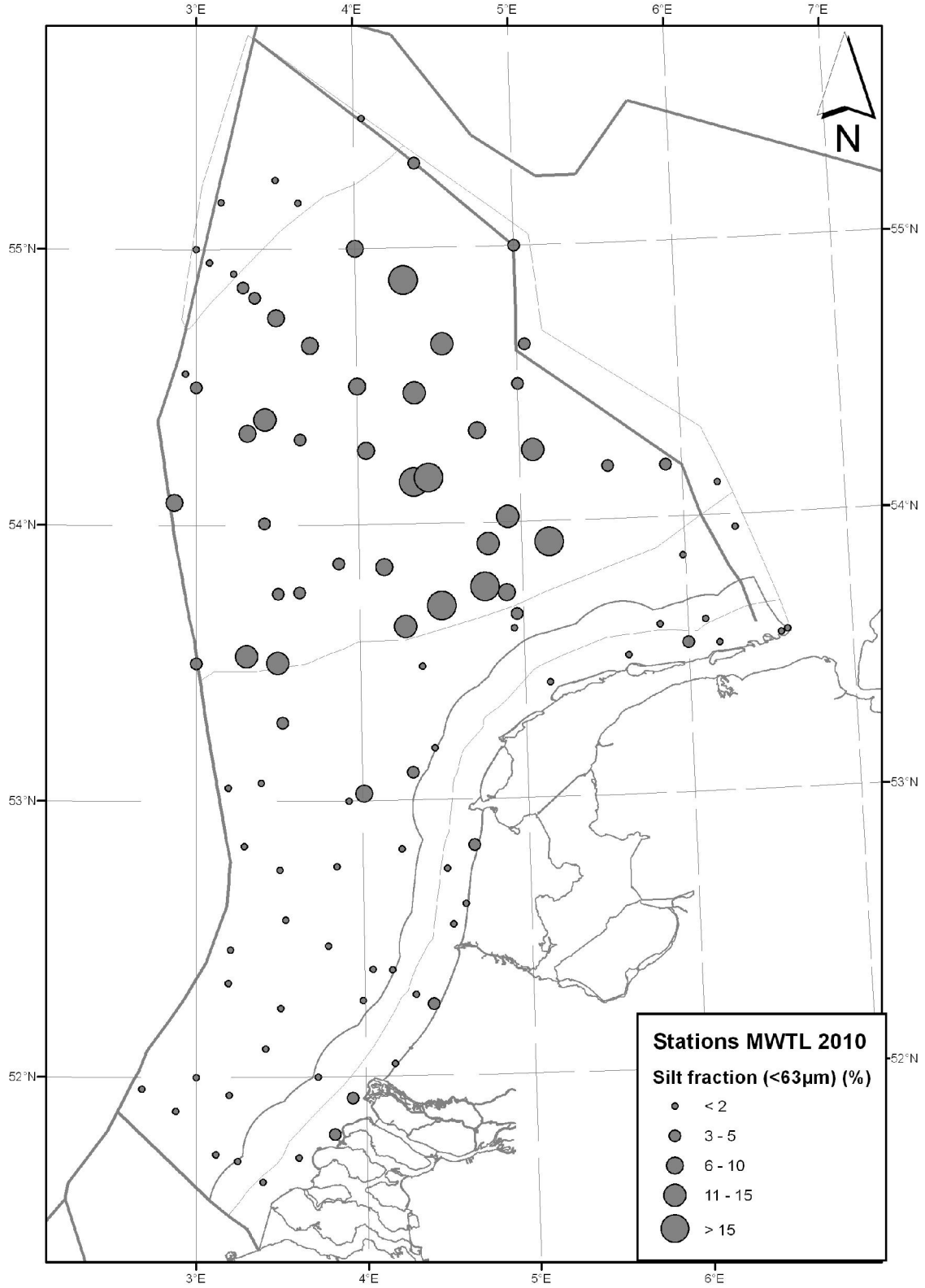


Figure A1 - 3 MWTL 2010. Silt content (fraction < 63 µm) of the sediment.

Table A1 - 3a MWTL 2006 – 2010. Sediment composition for Doggersbank and Oyster Grounds(Silt %, median grain size)

Station (name)		Sediment composition									
Location code	DONAR code	Med.Gr Size (µm)					Silt (%) (Fr.<63 µm)				
		2006	2007	2008	2009	2010	2006	2007	2008	2009	2010
DOG01	DOGGBK07	227	218	224	211	217	0.4	0.2	0.5	0.9	0.6
DOG02	DOGGBK02	193	198	194	195	193	1.7	0.7	0.9	1.4	1.0
DOG03	DOGGBK03	204	221	217	198	201	0.7	0.2	0.8	1.4	1.0
DOG04	TERSLG235	206	211	212	208	205	0.7	0.4	0.9	0.6	0.4
DOG05	DOGGBK04	186	186	189	183	179	2.5	1.6	1.6	1.8	1.8
DOG06	DOGGBK05	220	234	227	220	217	0.2	0.2	0.7	0.5	0.6
DOG07	DOGGBK08	202	205	204	194	195	0.6	0.8	0.7	0.8	0.6
OYS01	OESTGDN43	117	117	120	117	118	11.6	9.6	7.5	6.2	10.4
OYS02	FRIESFT16	199	212	214	209	212	4.7	2.9	9.7	3.5	4.5
OYS03	OESTGDN02	115	117	115	117	116	8.1	8.3	7.9	6.5	8.1
OYS04	OESTGDN03	140	140	141	140	140	1.7	1.7	2.4	1.9	1.9
OYS05	FRIESFT02	133	131	131	131	131	11.2	10.4	13.9	11.0	11.9
OYS06	OESTGDN04	152	154	156	158	158	3.2	4.6	4.8	3.1	3.2
OYS07	OESTGDN05	90	89	90	91	89	18.2	21.3	18.9	18.3	20.2
OYS08	FRIESFT03	197	191	197	204	184	10.2	13.0	17.2	8.4	8.8
OYS09	FRIESFT04	192	191	194	191	189	2.6	2.7	3.6	2.3	3.3
OYS10	OESTGDN06	115	115	114	116	115	6.8	5.7	7.4	5.7	5.5
OYS11	FRIESFT05	152	153	146	153	146	20.9	9.6	18.0	13.2	16.8
OYS12	OESTGDN07	95	95	95	95	98	16.1	15.2	19.0	17.6	15.5
OYS13	OESTGDN08	115	116	118	115	114	4.3	4.5	5.1	5.5	5.2
OYS14	OESTGDN09	137	143	139	139	142	14.5	10.4	9.5	10.2	9.7
OYS15	OESTGDN10	96	94	95	96	96	14.8	17.6	18.2	16.2	14.0
OYS16	OESTGDN11	161	159	156	159	157	5.0	6.5	8.1	4.2	4.2
OYS17	OESTGDN12	200	196	201	196	193	2.3	3.1	2.6	3.0	3.4
OYS18	FRIESFT06	217	216	220	216	217	3.1	3.5	3.0	3.9	3.8
OYS19	OESTGDN13	121	120	121	121	120	7.7	8.0	6.6	7.1	7.3
OYS20	OESTGDN14	200	199	199	195	194	8.1	13.5	12.9	12.3	7.1
OYS21	TERSLG50	117	124	117	98	118	18.4	15.9	19.5	17.5	18.4
OYS22	OESTGDN15	156	162	171	161	162	3.1	3.0	2.8	3.9	4.0
OYS23	OESTGDN16	135	137	136	136	135	3.1	3.2	3.2	3.1	3.2
OYS24	BREEVTN34	128	127	134	129	125	6.1	8.6	3.7	6.9	14.1
OYS25	OESTGDN17	120	114	120	117	114	13.8	14.2	13.5	11.5	14.6
OYS26	FRIESFT07	134	134	132	133	134	12.8	13.0	14.1	12.7	13.7
OYS27	OESTGDN18	184	182	180	175	171	4.2	4.0	4.0	4.7	4.9
OYS28	FRIESFT08	204	205	205	204	203	2.1	2.1	1.9	3.1	2.5
OYS29	OESTGDN19	127	127	127	127	127	2.3	2.7	2.6	2.5	3.0
OYS30	BREEVTN02	130	130	129	130	124	6.6	5.2	5.4	6.6	11.5
OYS31	FRIESFT09	141	141	142	140	140	5.9	5.3	3.2	6.5	6.4
OYS32	FRIESFT10	163	155	162	164	160	10.1	6.3	15.3	8.8	11.5
OYS33	OESTGDN20	107	107	107	106	106	10.5	9.3	10.3	10.7	10.0
OYS34	FRIESFT11	119	117	116	114	119	9.9	10.3	14.7	20.1	14.9
OYS35	FRIESFT12	163	162	164	162	162	2.4	3.3	2.9	2.5	3.9
OYS36	FRIESFT17	109	112	109	108	108	15.8	13.3	18.3	18.0	19.4
OYS37	TERSLG100	97	97	97	118	97	15.3	14.1	15.1	12.8	15.6
OYS38	BREEVTN26	145	145	145	144	145	3.7	3.5	3.5	4.2	4.6
OYS39	OESTGDN22	116	116	116	-	116	5.1	7.5	6.5	6.8	7.8
OYS40	OESTGDN21	157	158	158	157	157	2.9	3.6	3.5	3.5	3.3
OYS41	OESTGDN23	151	151	150	151	151	2.4	2.6	2.6	2.5	3.4
OYS42	ROTTMPT70	235	237	235	234	235	1.0	1.9	1.0	2.5	1.2

** OYS39 (OESTGDN22): In 2009, the D50 analysis had an incorrect measure (D50 = 387 µm).*

Table A1 - 3b: MWTL 2006 – 2010. Sediment composition for Offshore area and Coastal area (Silt %, median grain size)

Station (name)		Sediment composition									
Location code	DONAR code	Med.Gr Size (µm)					Silt (%) (Fr.<63 µm)				
		2006	2007	2008	2009	2010	2006	2007	2008	2009	2010
OFF01	FRIESFT13	217	219	217	217	217	1.2	1.1	1.7	1.6	1.7
OFF02	WADDKT07	223	217	216	215	215	0.8	0.8	1.3	1.2	1.1
OFF03	WADDKT02	194	195	195	195	196	0.9	1.9	1.5	1.8	1.7
OFF04	FRIESFT14	201	202	205	200	208	2.6	3.0	3.3	2.6	3.5
OFF05	FRIESFT15	217	218	221	224	221	1.6	1.2	1.0	1.5	1.7
OFF06	BREEVTN03	347	393	298	317	296	0.3	0.5	0.7	0.8	0.7
OFF07	BREEVTN04	232	236	224	238	220	1.0	1.1	1.5	1.4	2.0
OFF08	BREEVTN05	247	242	241	248	236	0.5	1.0	1.3	1.1	5.3
OFF09	BREEVTN06	261	262	270	260	286	0.3	0.8	0.6	0.6	0.7
OFF10	BREEVTN07	297	302	285	289	288	0.3	0.2	0.7	0.8	0.8
OFF11	BREEVTN08	204	207	207	208	207	2.7	2.6	2.4	2.8	2.0
OFF12	BREEVTN09	267	269	274	282	276	0.6	0.6	0.7	0.9	0.8
OFF13	BREEVTN10	266	267	284	291	274	1.9	0.6	0.9	0.9	1.1
OFF15	BREEVTN12	300	297	279	296	284	0.5	0.6	0.7	1.0	1.0
OFF16	BREEVTN13	286	265	276	264	270	0.3	0.8	0.6	0.9	0.7
OFF17	BREEVTN14	305	304	316	341	352	0.4	0.4	0.5	0.9	0.6
OFF18	BREEVTN15	331	339	343	321	329	0.2	0.3	0.4	0.6	0.5
OFF20	BREEVTN17	390	367	355	420	353	0.4	0.4	0.6	0.4	0.6
OFF21	BREEVTN18	463	383	478	421	449	0.2	0.2	0.3	0.7	0.4
OFF22	BREEVTN19	360	361	355	364	356	0.4	0.1	0.5	0.7	0.7
OFF23	BREEVTN20	327	334	318	338	311	0.5	0.6	0.5	0.8	0.6
OFF24	BREEVTN21	489	447	480	545	383	0.0	0.3	0.4	0.4	0.7
OFF25	BREEVTN22	344	379	385	438	442	0.7	0.7	0.5	0.5	0.5
OFF26	BREEVTN23	450	425	488	511	610	0.2	0.3	0.3	0.4	0.2
OFF27	BREEVTN24	411	470	397	344	472	0.3	0.4	0.8	0.7	0.4
OFF28	BREEVTN25	462	418	444	415	443	0.2	0.5	0.5	0.5	0.4
OFF29	ROTTMPT50	374	380	356	331	381	0.4	0.5	0.5	0.5	0.7
OFF30	TERSLG30	224	219	221	222	221	1.4	1.0	0.7	1.0	0.5
OFF31	BREEVTN27	272	266	260	262	259	0.3	0.8	0.6	0.7	0.8
OFF32	NOORDWK30	335	340	329	349	332	0.4	0.4	0.6	0.4	0.5
OFF33	NOORDWK50	289	281	282	282	264	0.4	0.5	0.7	0.9	0.8
OFF34	NOORDWK70	292	281	304	283	316	0.4	1.2	0.4	0.9	0.6
OFF35	WALCRN30	409	375	378	356	343	0.1	0.4	0.3	0.6	0.4
OFF36	WALCRN70	452	474	414	405	451	0.2	0.6	0.4	0.6	0.6
COA01	WADDKT03	251	230	229	219	240	0.4	1.2	0.8	1.3	2.2
COA02	WADDKT04	195	192	193	189	194	0.3	0.6	1.7	0.6	1.0
COA03	HOLLSKT03	230	223	224	223	215	2.0	1.9	1.8	1.6	1.5
COA04	HOLLSKT02	218	195	210	172	175	1.6	2.1	1.0	2.9	3.4
COA06	WADDKT06	189	195	199	194	198	0.7	0.4	0.8	1.1	0.5
COA07	ROTTMPT3	192	210	219	192	200	0.3	0.4	0.4	0.8	0.7
COA08	TERSLG4	223	220	226	223	224	1.2	0.3	0.5	0.7	0.4
COA09	HOLLSKT04	234	235	238	230	234	0.7	0.9	1.3	1.3	1.2
COA10	NOORDWK2	250	258	270	259	252	2.0	2.0	0.9	1.2	2.4
COA11	NOORDWK10	339	330	335	329	330	0.4	0.9	0.9	0.9	0.8
COA12	VOORDTA2	280	283	286	288	288	0.7	0.4	0.7	0.9	0.9
COA13	VOORDTA3	259	272	293	298	276	0.0	0.1	0.2	0.7	0.5
COA14	VOORDTA4	267	281	282	276	254	0.0	0.6	3.1	2.0	2.8
COA15	VOORDTA5	203	223	215	213	174	0.7	0.5	0.7	1.4	4.8
COA16	TERHDE1	282	226	334	405	432	0.3	0.8	0.6	0.5	0.4
COA17	EGMAZE1	254	201	222	203	201	0.6	0.6	1.0	1.1	1.9
COA18*	WADDKT08	-	184	182	195	213	-	0.5	0.3	0.9	0.5

Appendix 2

Diversity and Biomass

Table A2 - 1: MWTL 2010. Mean values of abiotic and biotic parameters in the four sub-areas

		Area			
	Total	**Dogger Bank**	**Oyster Grounds**	**Offshore area**	**Coastal area**
Number of stations	100	7	42	34	17
Median grain size (µm)	223	201	144	316	241
Silt content (fr. < 63 µm, %)	4.24	0.85	8.49	1.04	1.53
Diversity					
Total number of species	225	82	158	107	71
Average number of species	20.4	32.0	25.4	12.5	13.2
Shannon & Wiener diversity	2.19	2.93	2.54	1.93	1.58
Simpsons' dominance	0.22	0.09	0.17	0.24	0.34
No. of indviduals (ind./m^2)					
Crustaceans	231.3	580.6	180.1	231.5	212.3
Echinoderms	28.9	25.6	23.7	35.1	33.7
Bivalves	314.2	280.2	365.1	97.2	520.8
Gastropods	35.8	25.6	41.9	22.8	19.2
Polychaetes	745.9	853.5	536.9	762.6	1185.5
Micellaneous	181.3	109.3	214.6	142.6	85.8
Average density	1667.8	2040.3	1812.0	1267.3	1959.3
Biomass (g AFDW/m^2)					
Crustaceans	0.47	0.08	0.60	0.27	0.91
Echinoderms	1.02	0.51	0.87	1.90	0.02
Bivalves	0.68	0.31	0.48	0.26	2.64
Gastropods	0.93	0.06	0.77	2.50	0.01
Polychaetes	0.82	0.26	0.46	0.71	3.07
Micellaneous	0.65	1.27	0.51	0.52	2.30
Average biomass	0.71	0.34	0.52	0.61	2.39

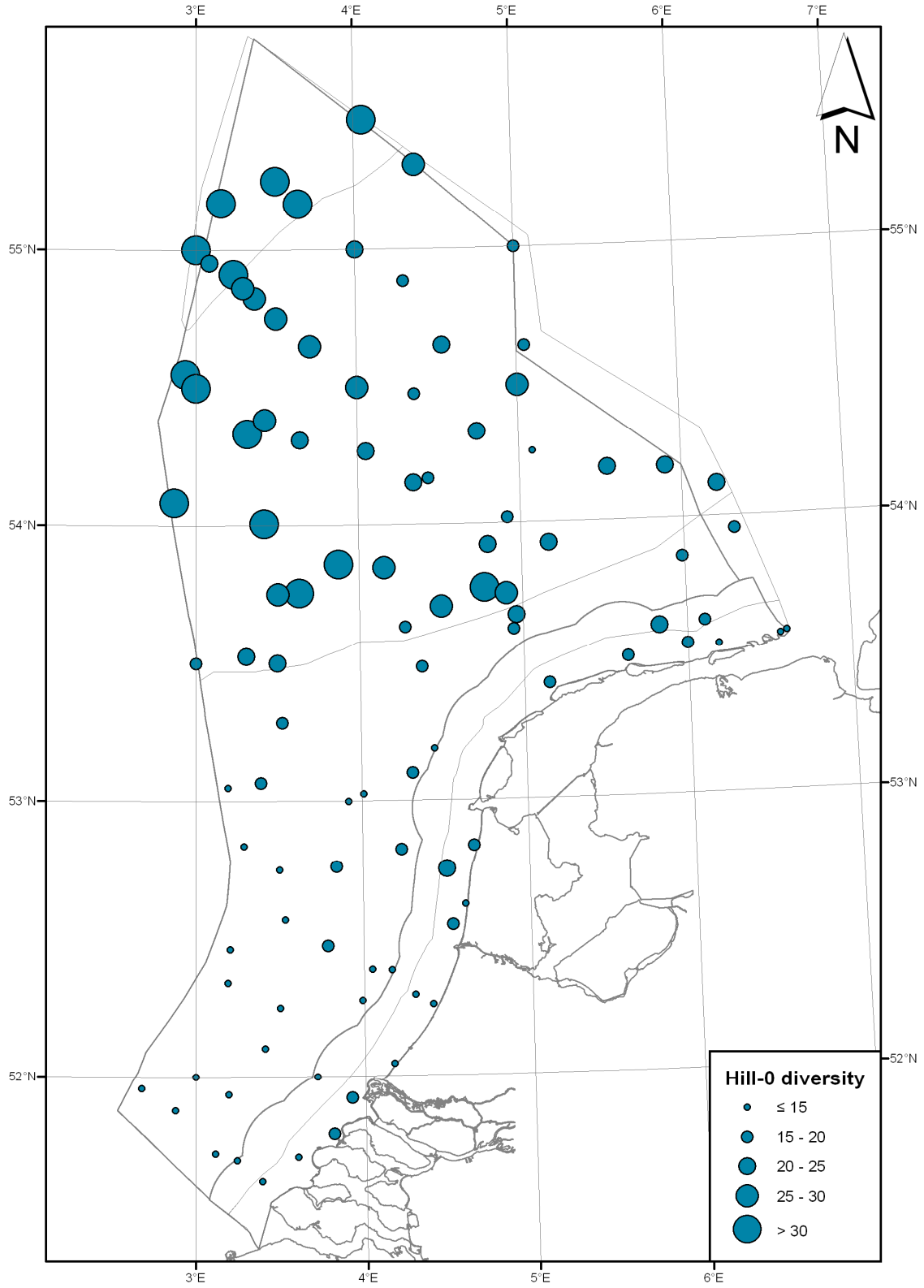


Figure A2 - 1 MWTL 2010. Diversity as expressed by species per sample (Hill-0).

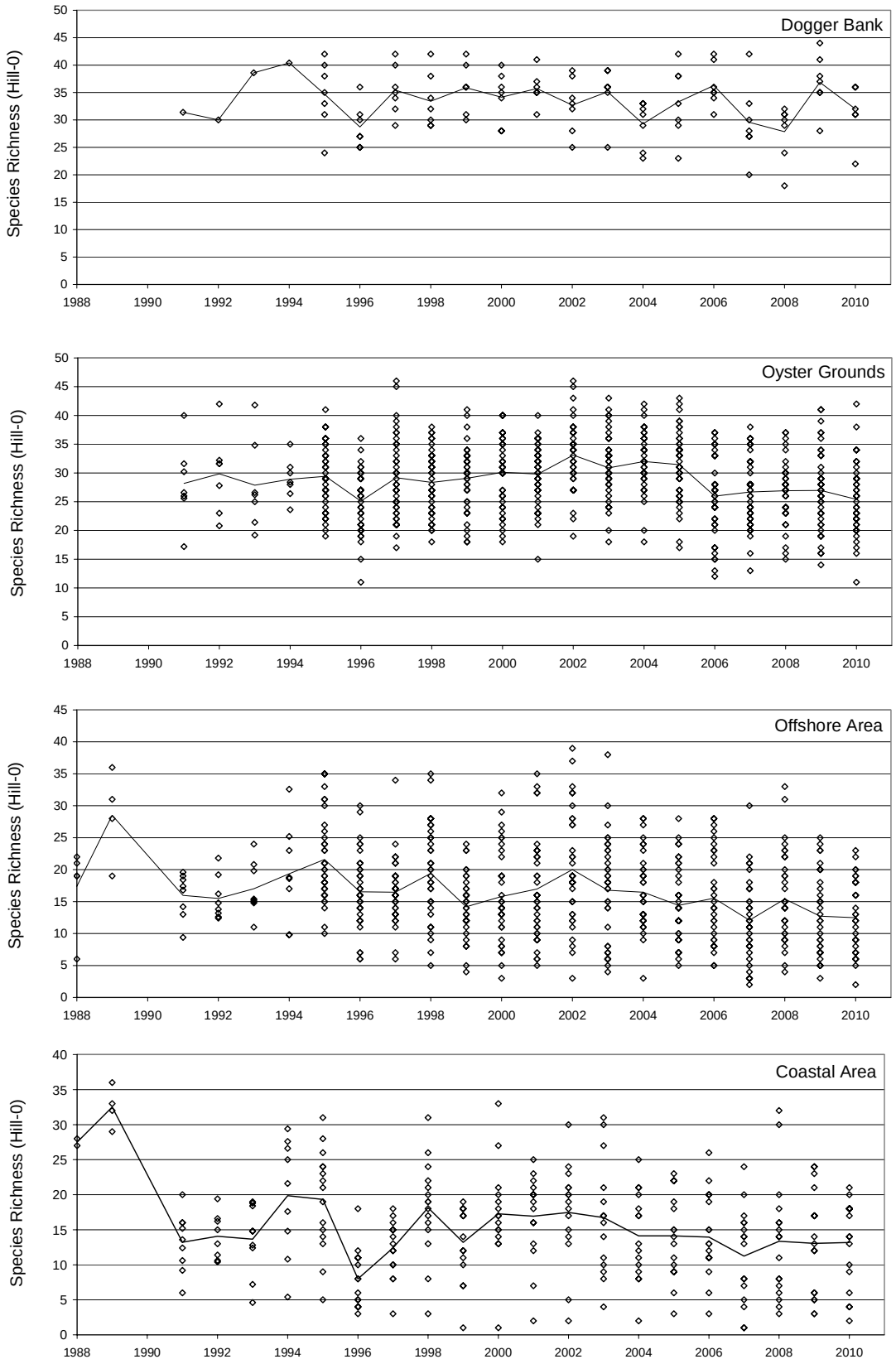


Figure A2 - 2 MWTL 1988 – 2010. Temporal patterns in species richness (Hill-0).

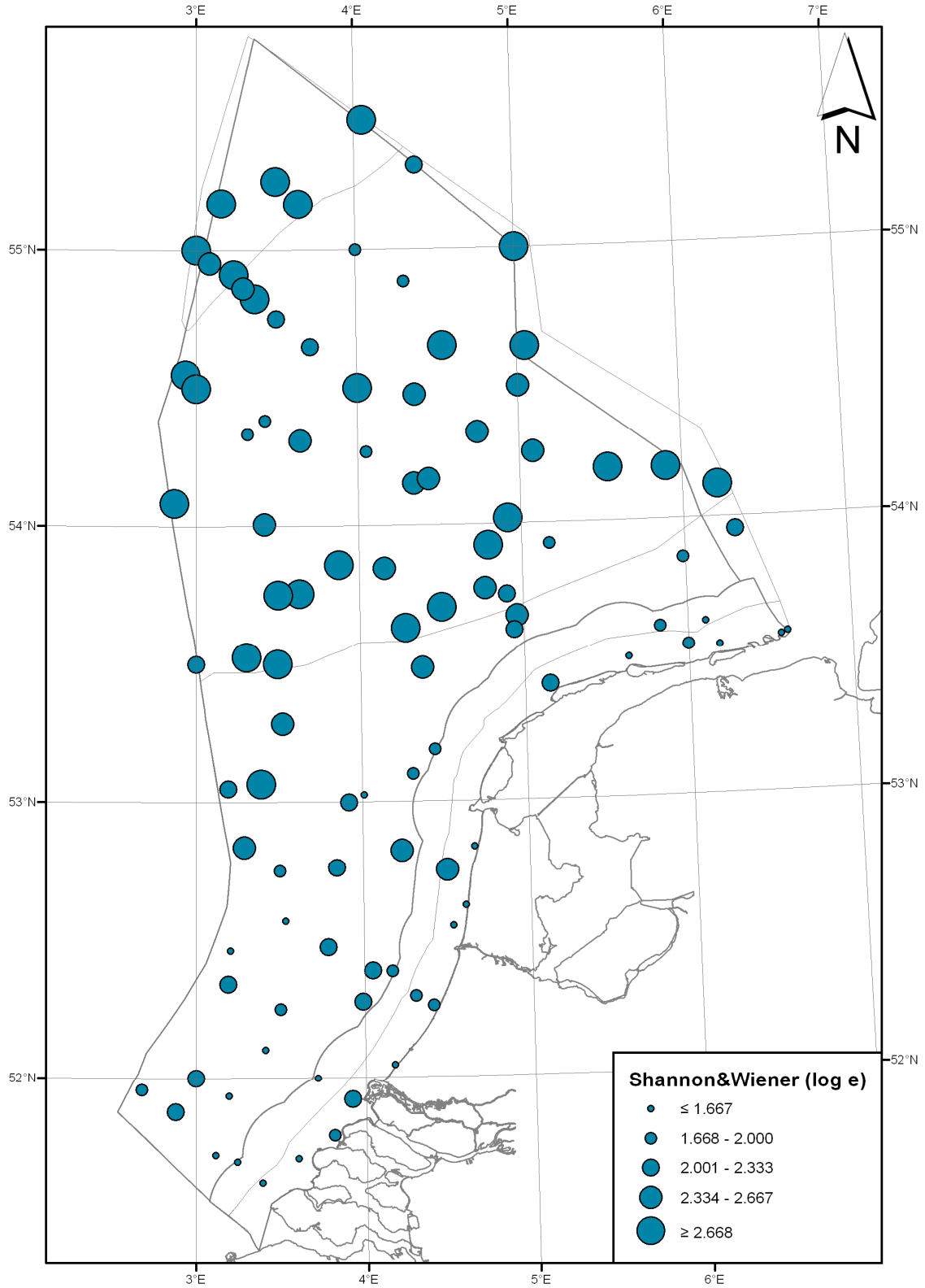


Figure A2 - 3 MWTL 2010. Diversity as expressed by the Shannon-Wiener index.

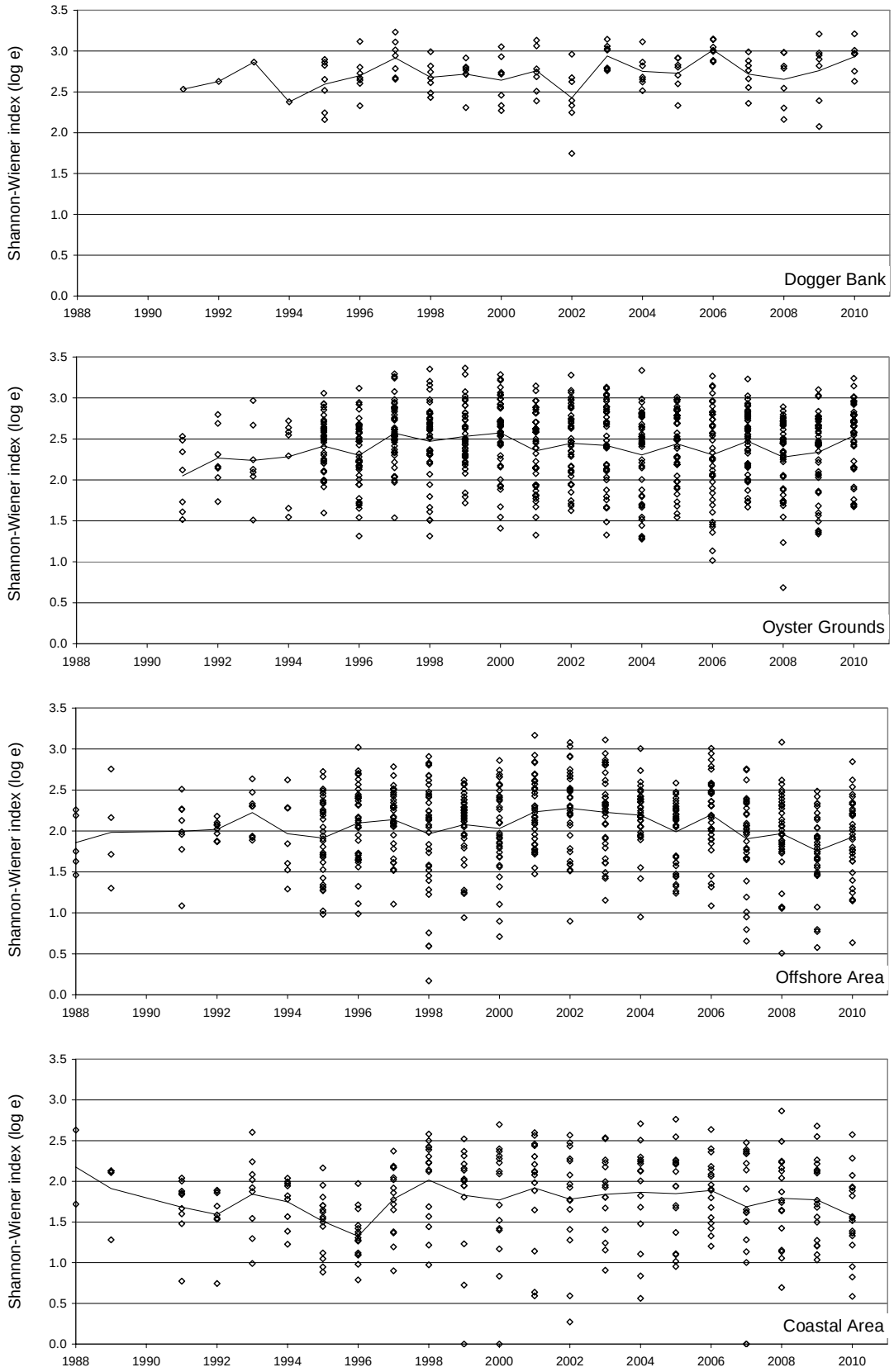


Figure A2 - 4 MWTL 1988 – 2010. Temporal patterns in diversity (Shannon-Wiener index).

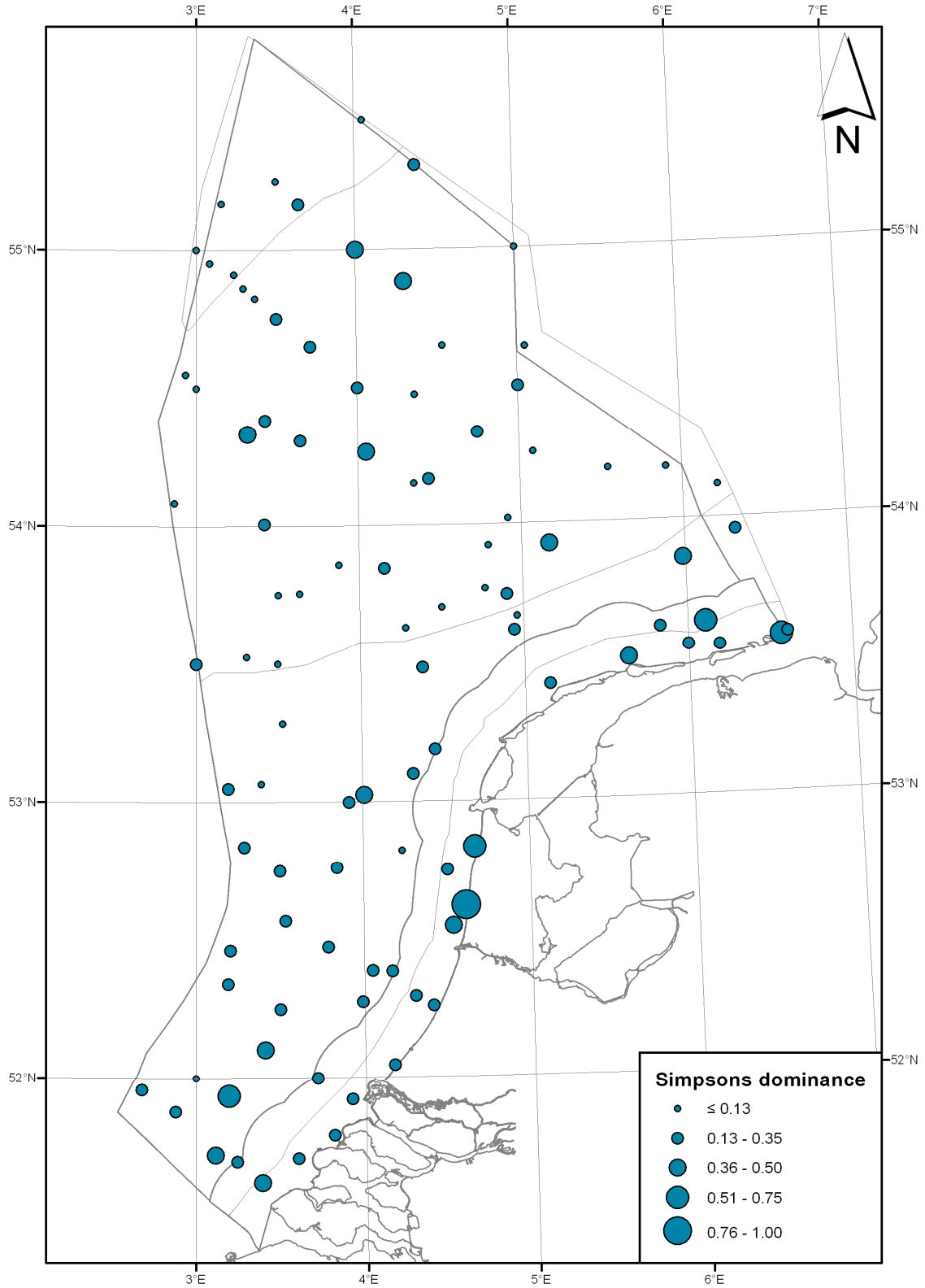


Figure A2 - 5 MWTL 2010. Diversity as expressed by Simpson's Dominance.

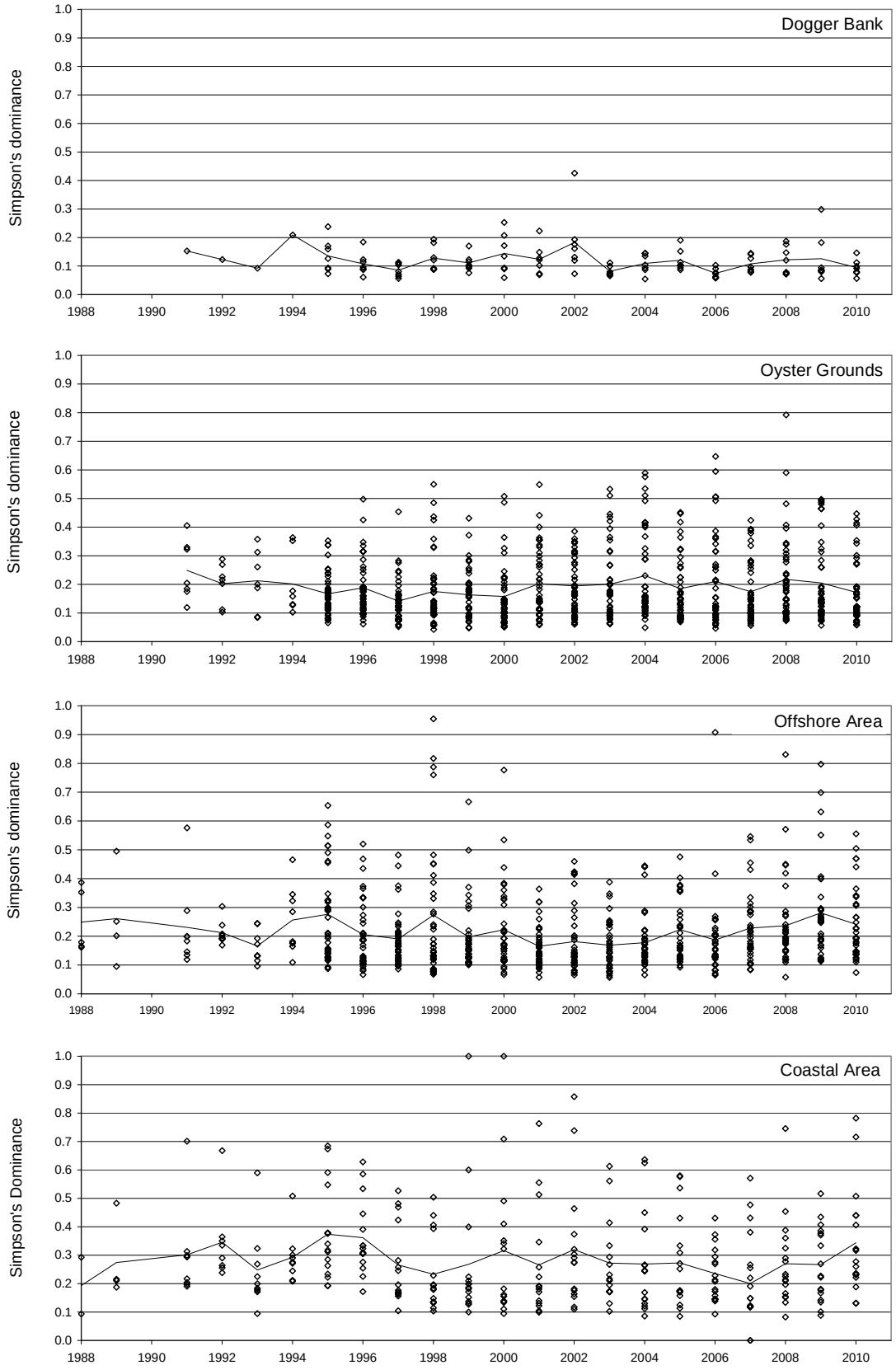


Figure A2 - 6 MWTL 1988 – 2010. Temporal patterns in diversity (Simpson's Dominance)

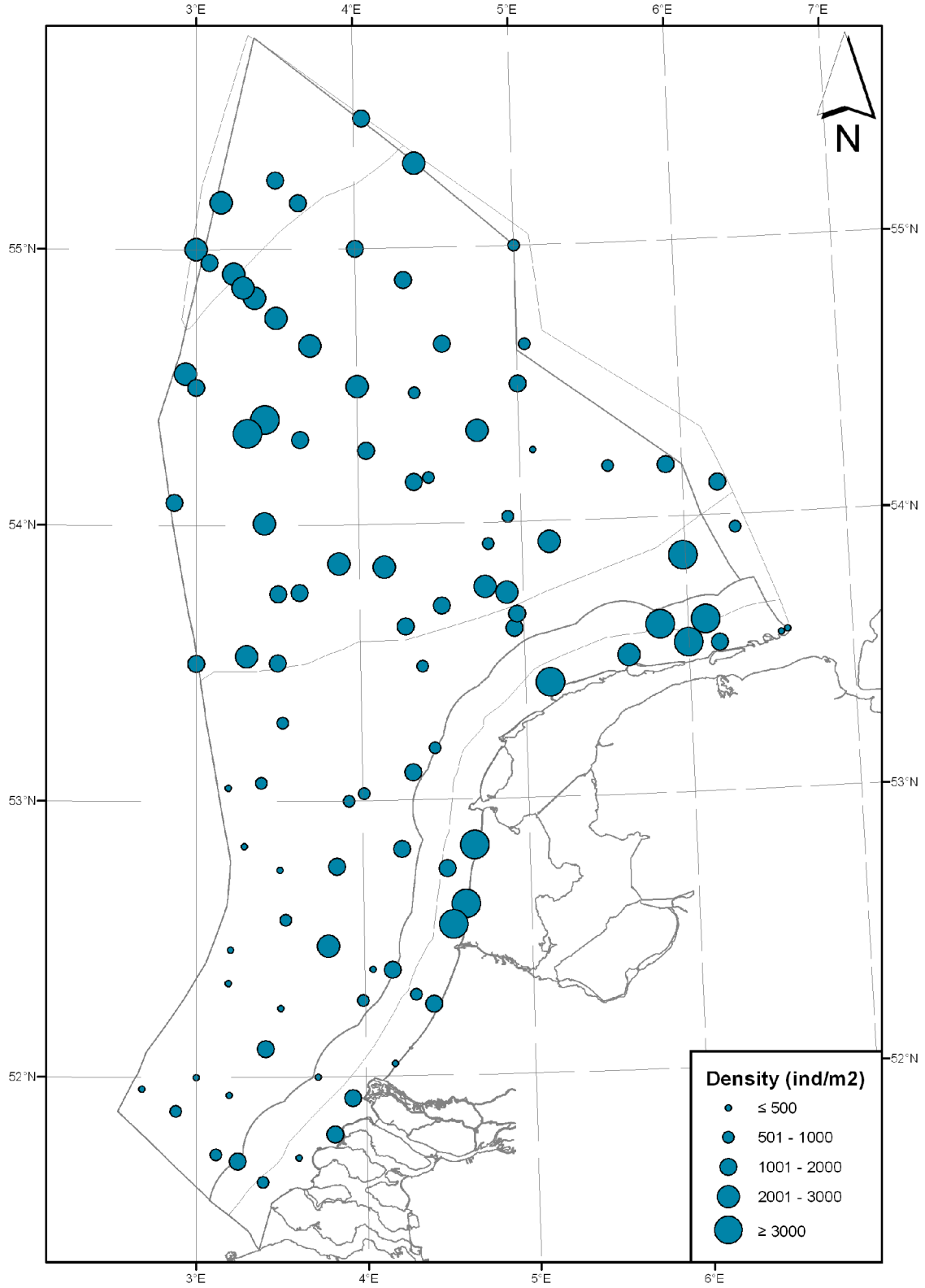


Figure A2 - 7 MWTL 2010 Total density of macrobenthic fauna.

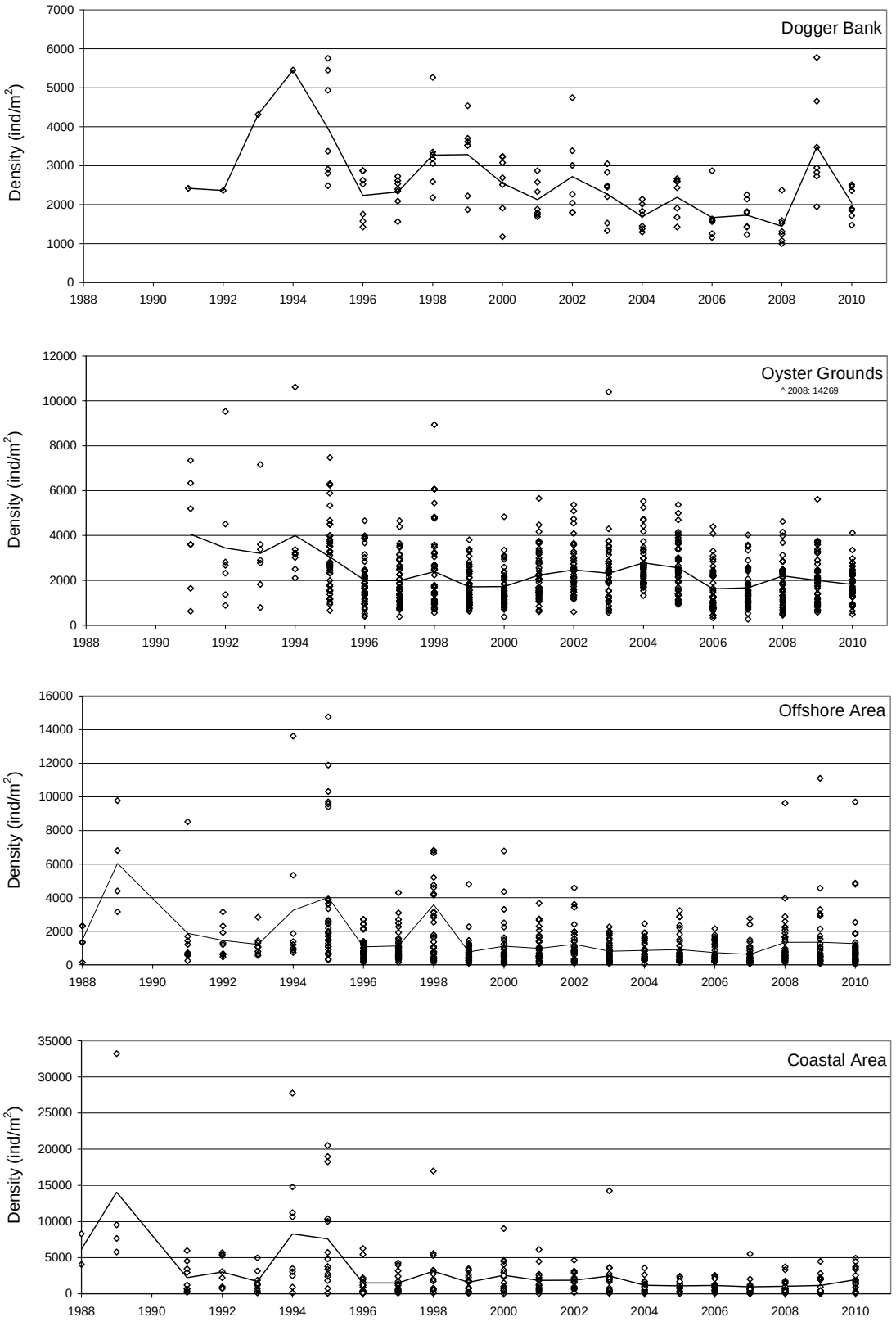


Figure A2 - 8 MWTL 1988 – 2010. Temporal patterns total macrobenthos density.

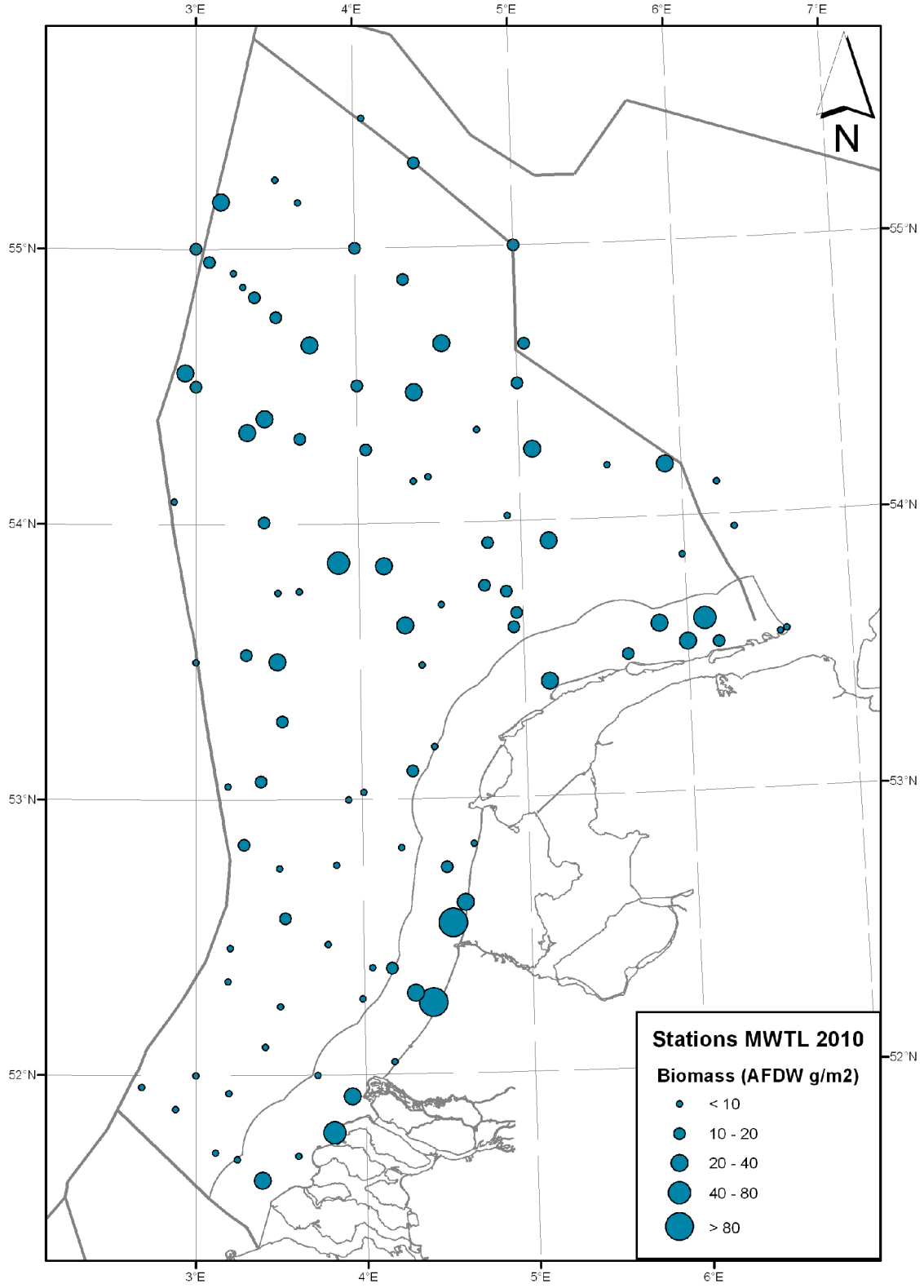


Figure A2 - 9 MWTL 2010. Biomass of benthic fauna

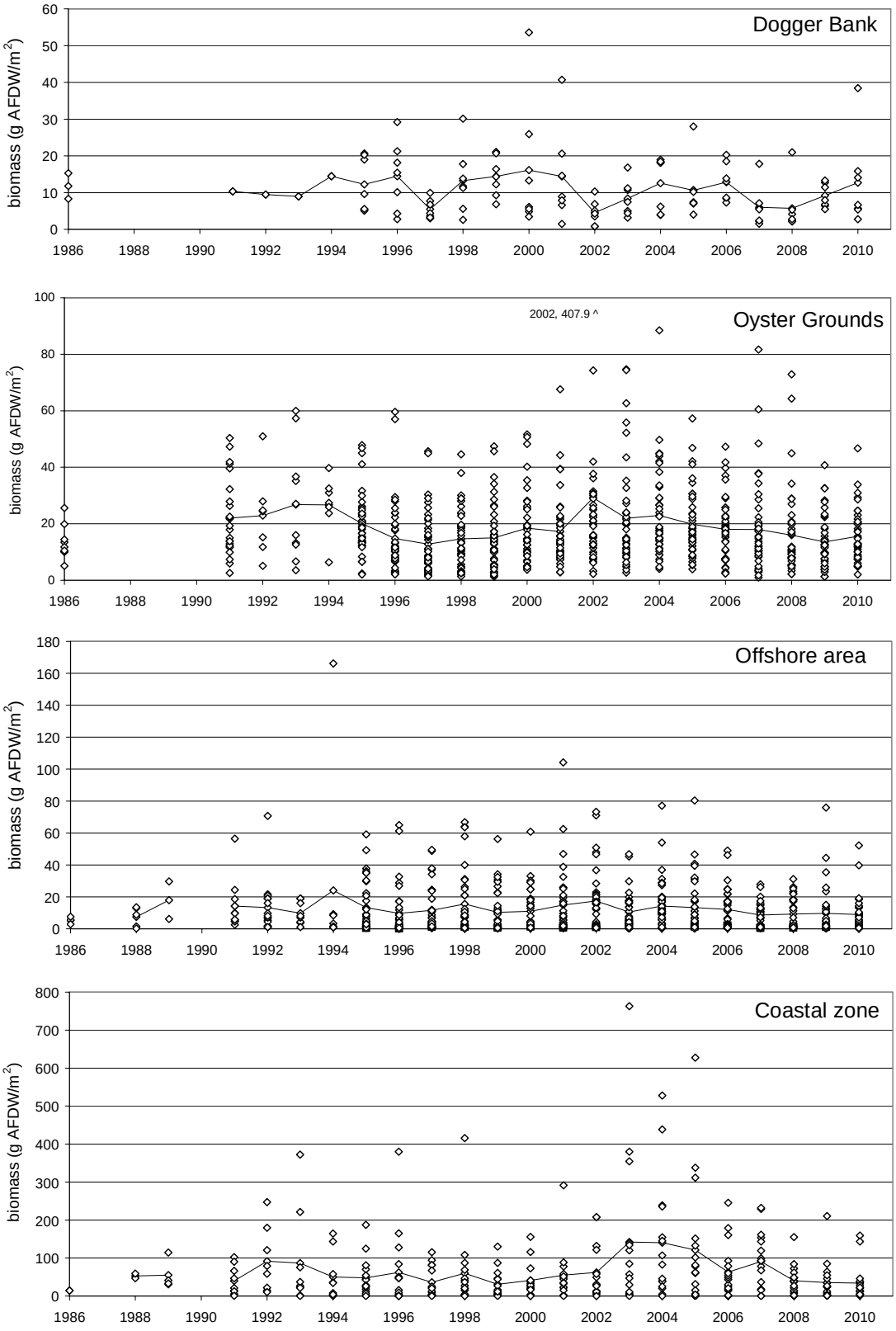


Figure A2 - 10 MWTL 1986 – 2010. Temporal patterns in biomass.

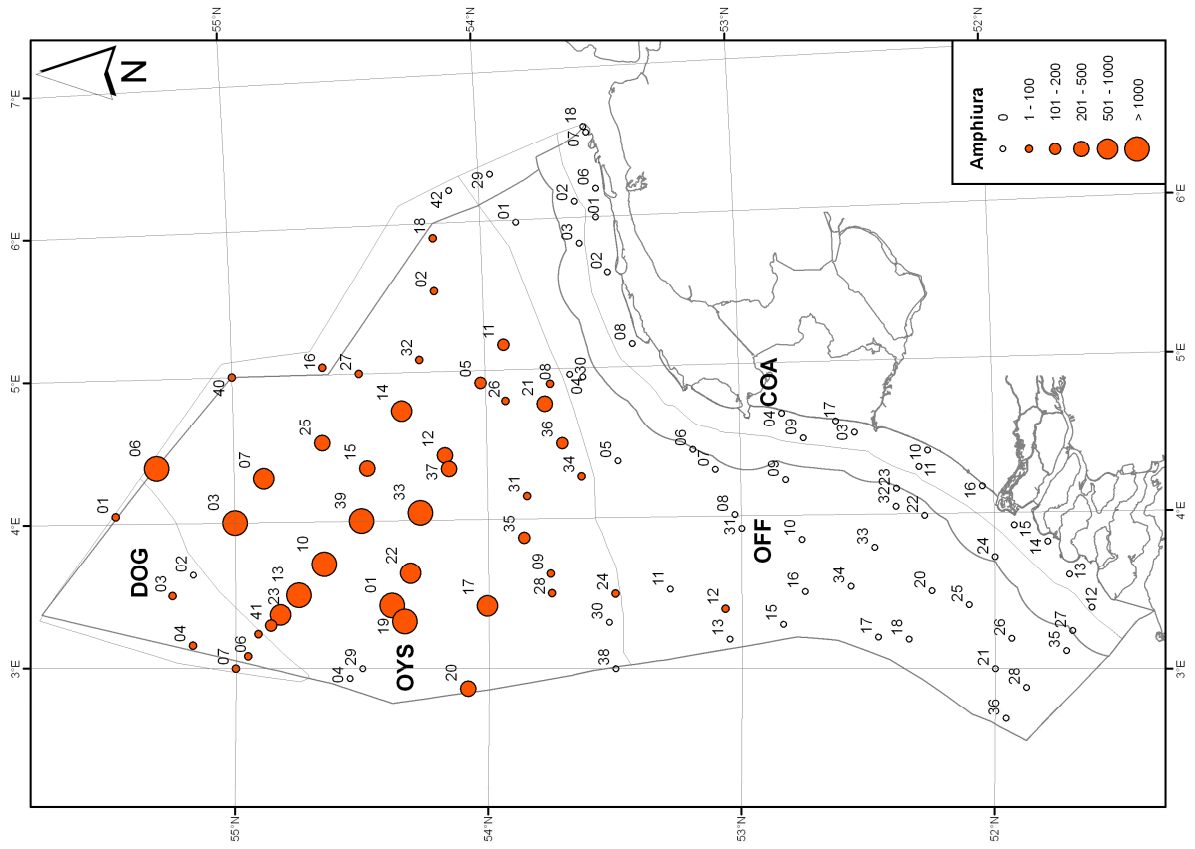


Figure A2 - 11 MWTL 2010. *Amphiura* density (n/m^2)

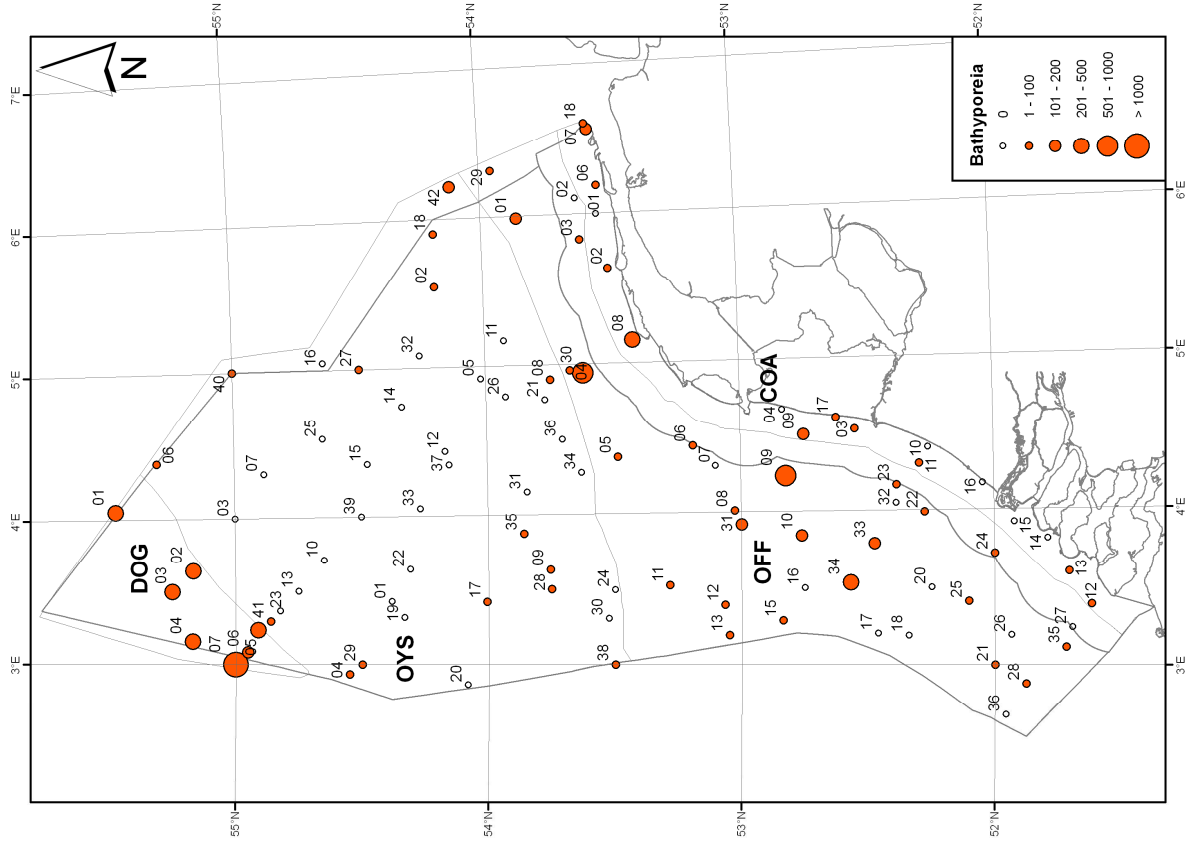


Figure A2 - 12 MWTL 2010. *Bathyporeia* density (n/m^2).

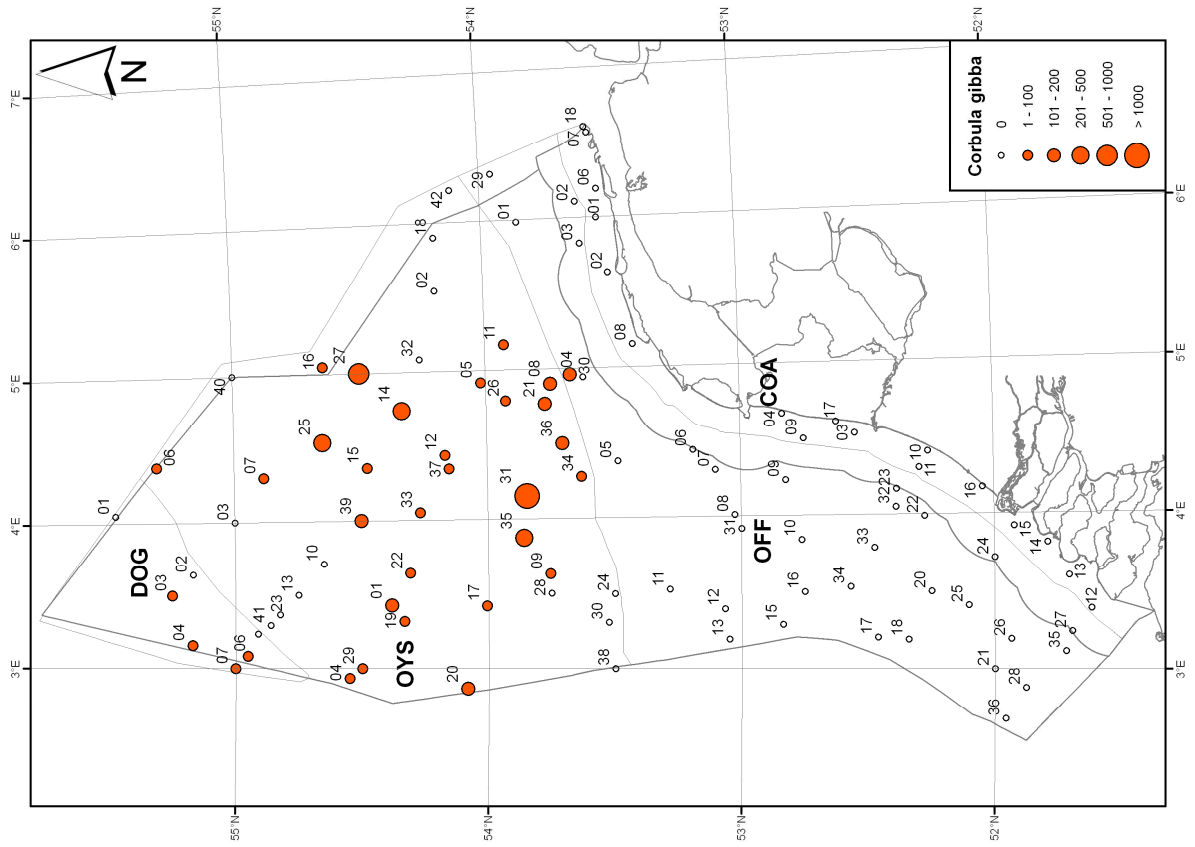
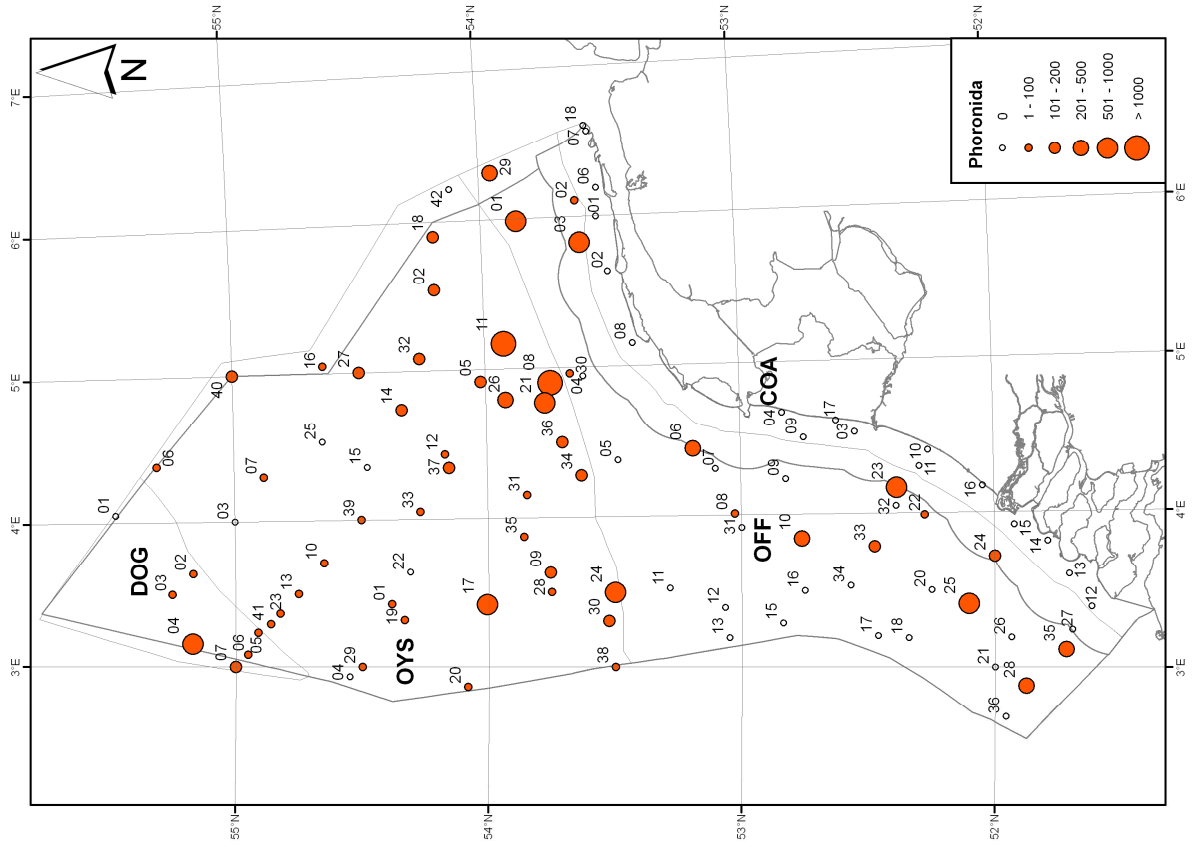


Figure A2 - 13 MWTL 2010. *Corbula gibba* density (n/m^2).



F igure A2 - 14 MWTL 2010. Phoronida density (n/m^2).

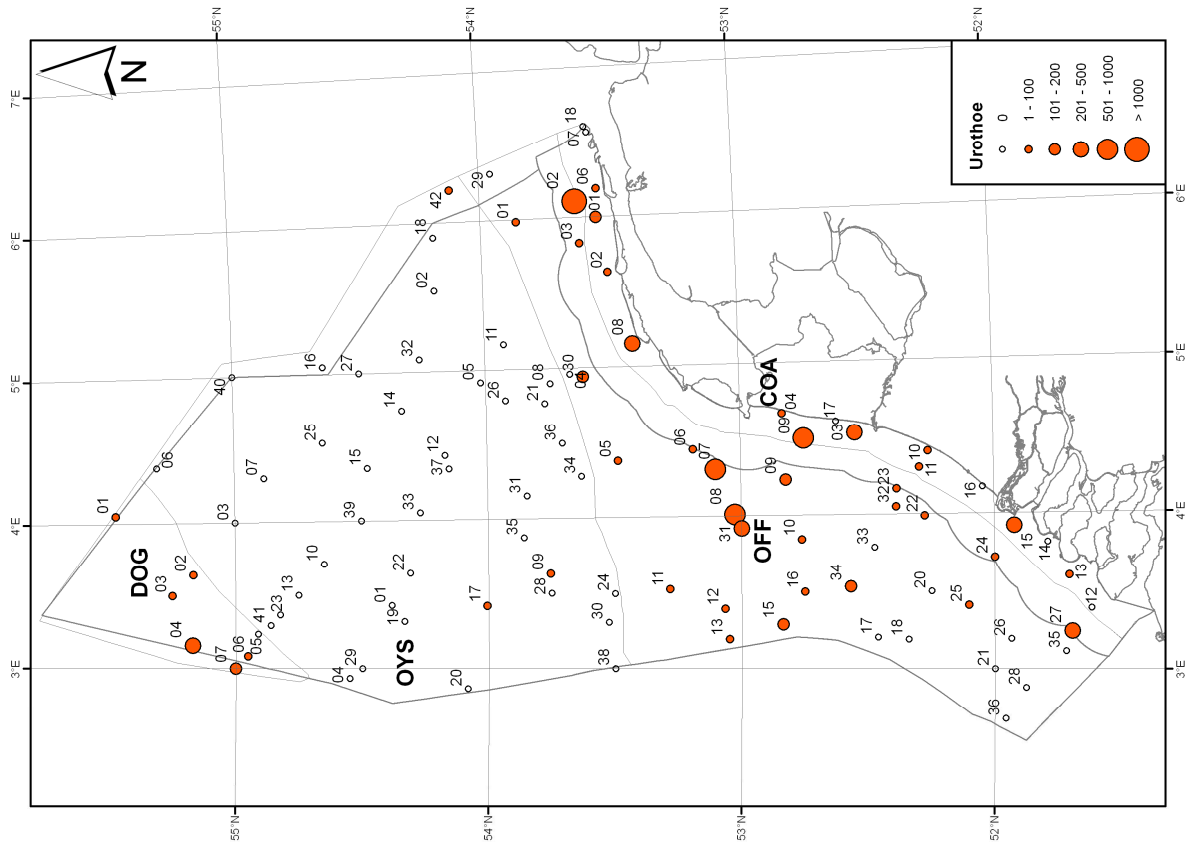


Figure A2 - 15 MWTL 2010. *Urothoe* density (n/m^2)

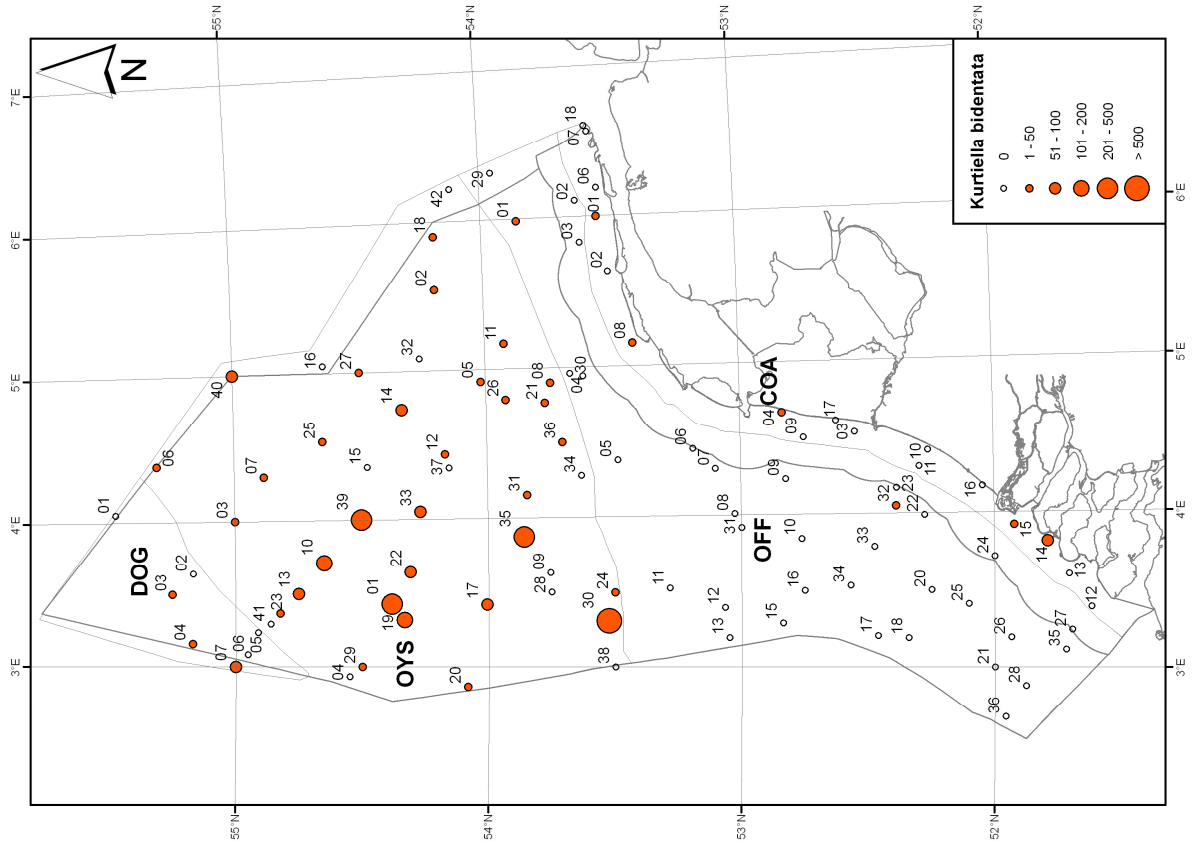


Figure A2 - 16 MWTL 2010. *Kurtiella bidentata* density (n/m^2)

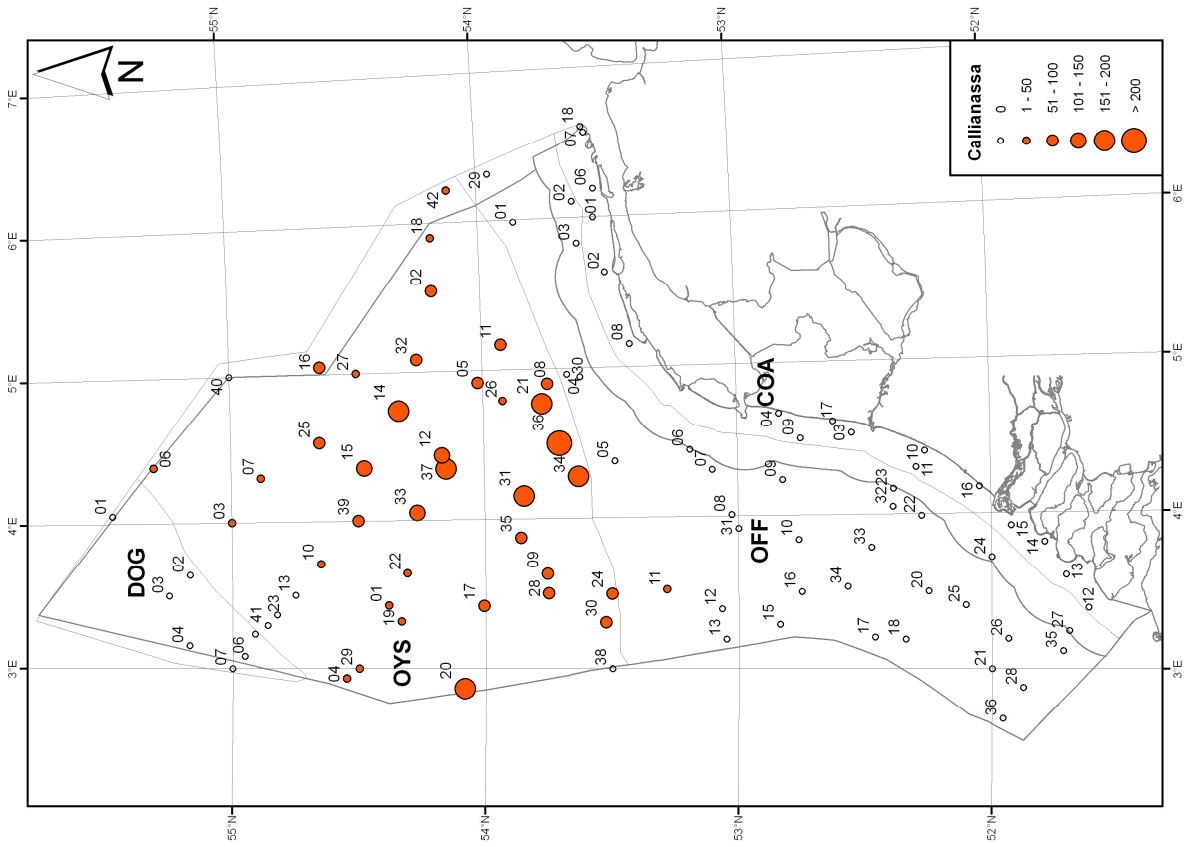


Figure A2 - 17 MWTL 2010. *Callianassa* density (n/m^2)

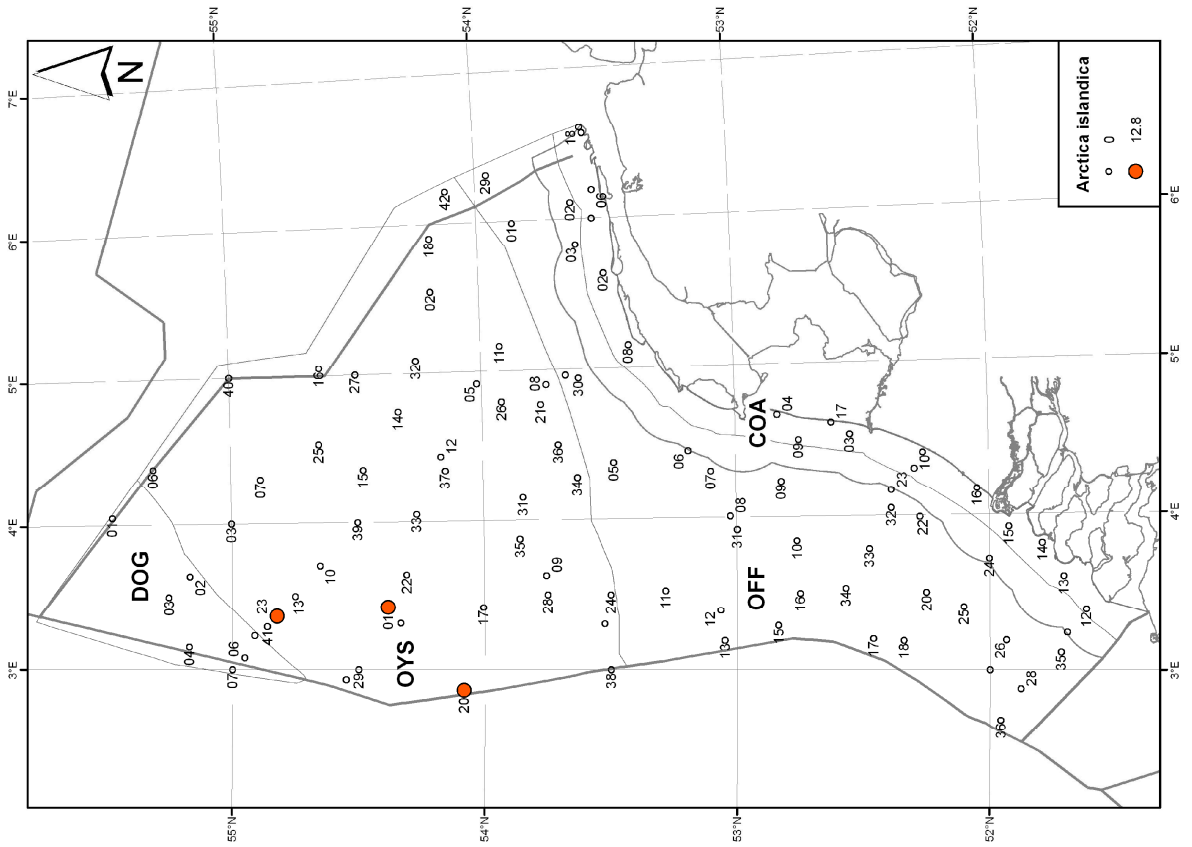


Figure A2 - 18 MWTL 2010. *Arctica islandica* density (n/m^2)

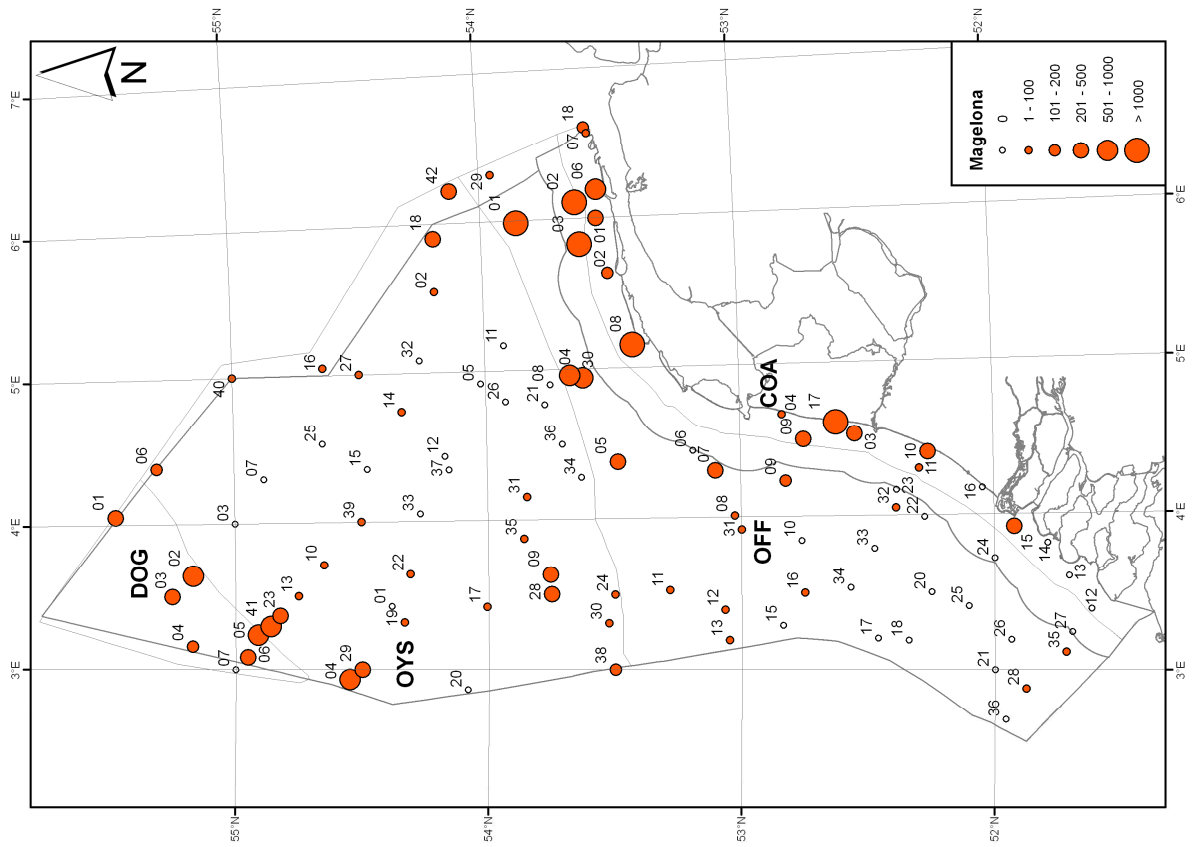


Figure A2 - 19 MWTL 2010. *Magelona* density (n/m^2)

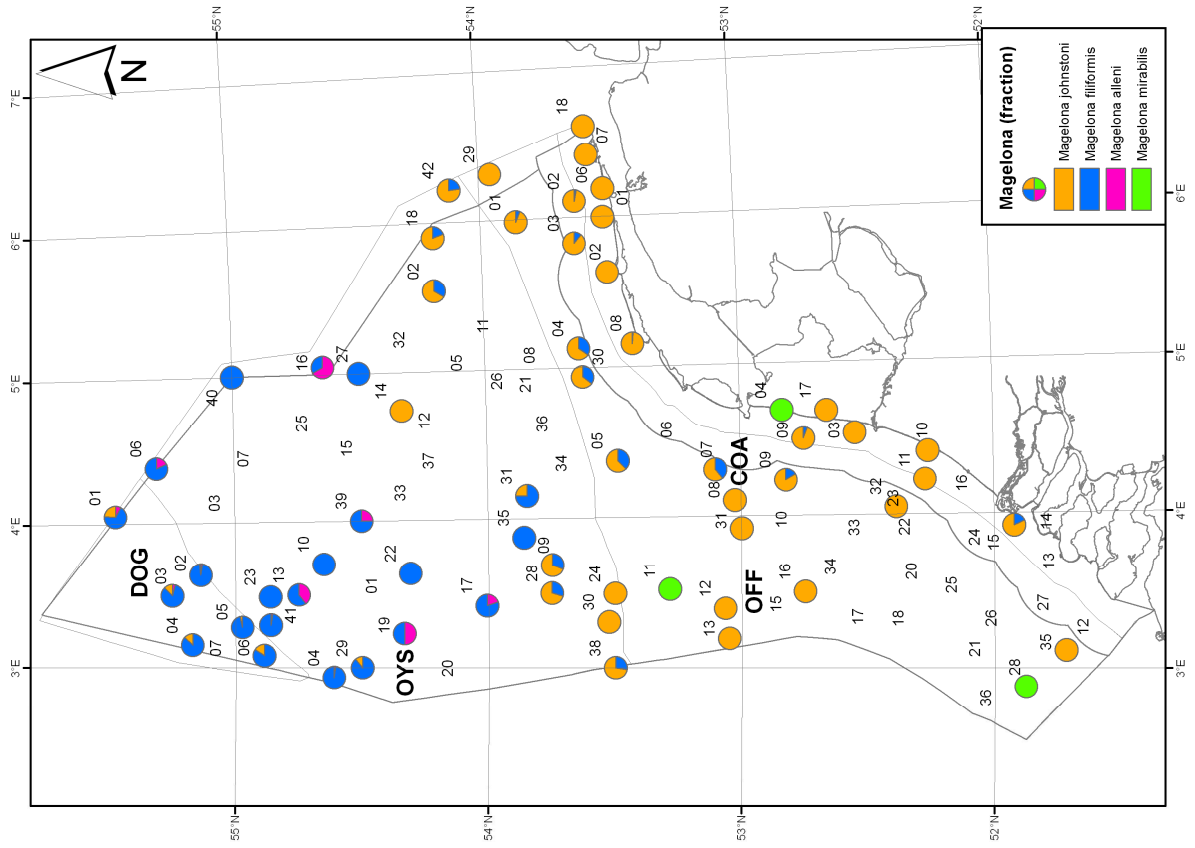


Figure A2 - 20 MWTL 2010. *Magelona* species (fraction).

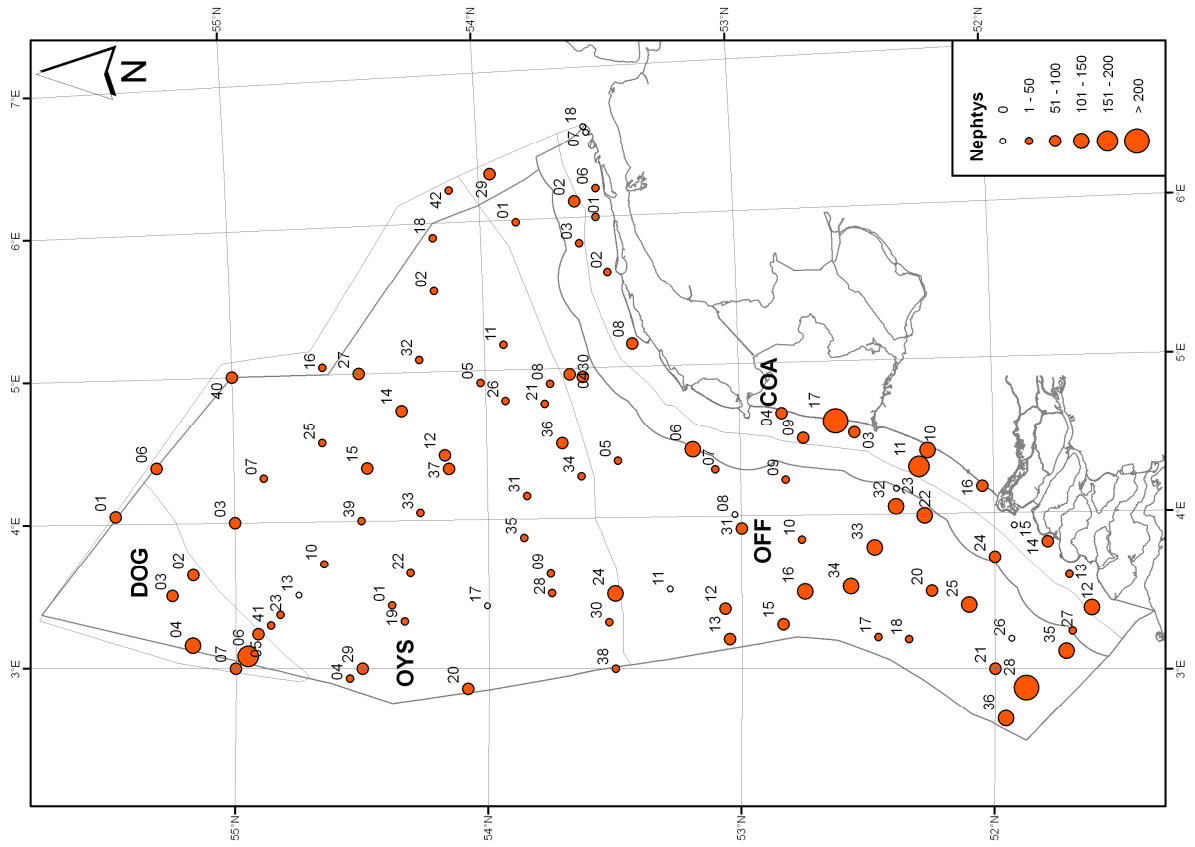


Figure A2 - 21 MWTL 2010. *Nephtys* density (n/m^2)

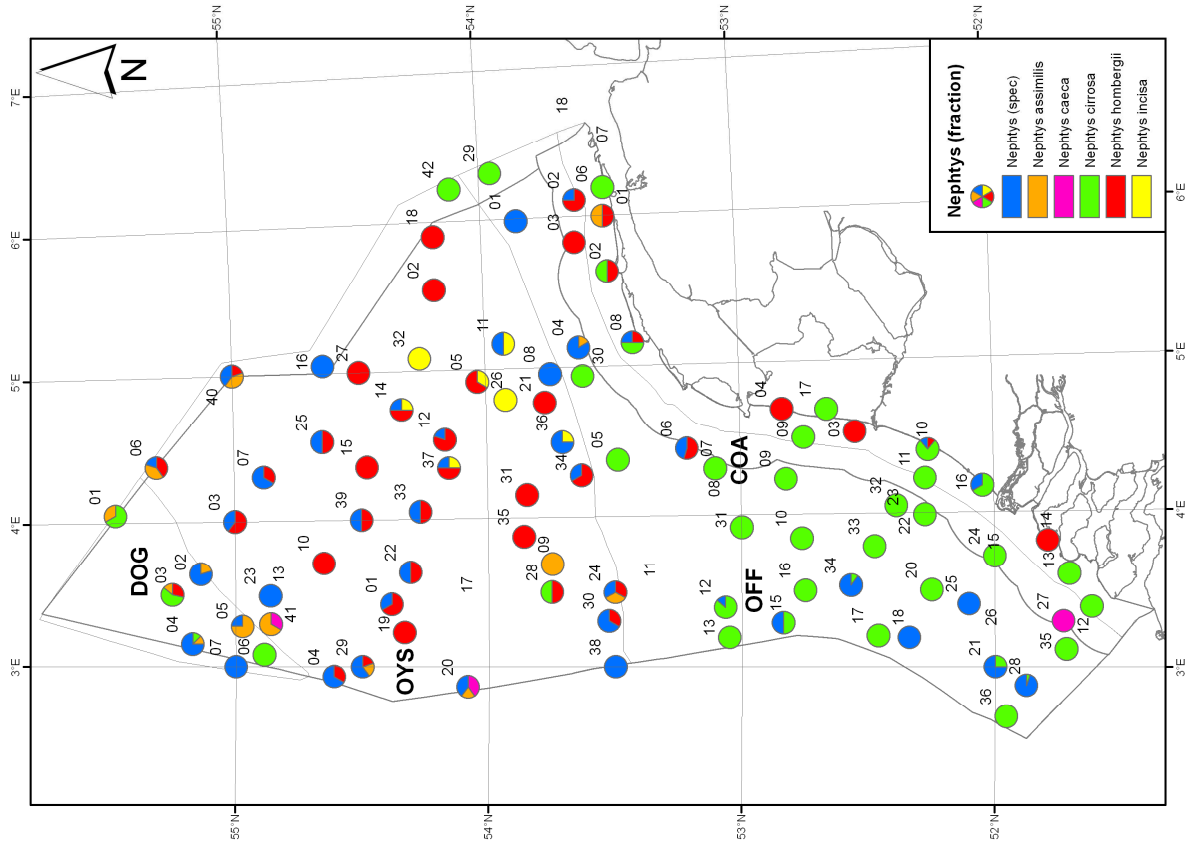


Figure A2 - 22 MWTL 2010. *Nephtys* species (fraction).

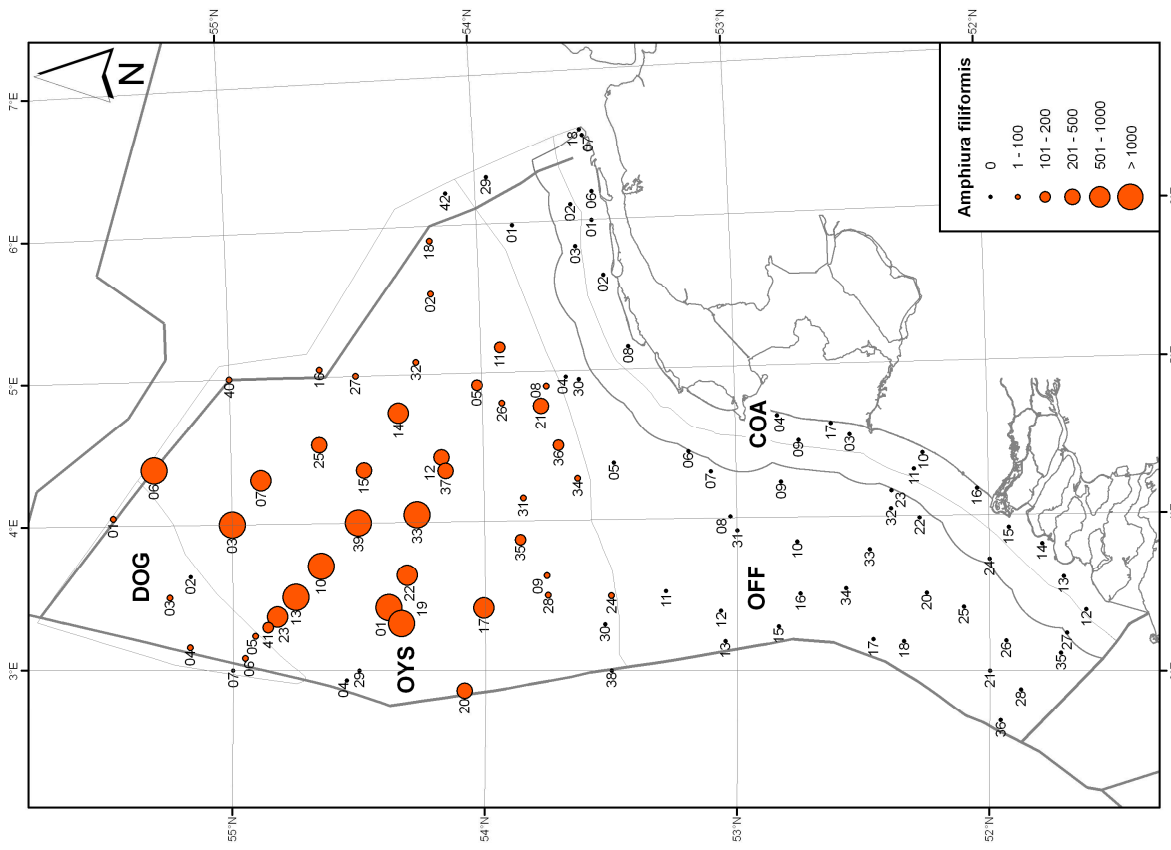


Figure A2 - 24 MWTL 2010. *Amphiura filiformis* density (n/m^2)

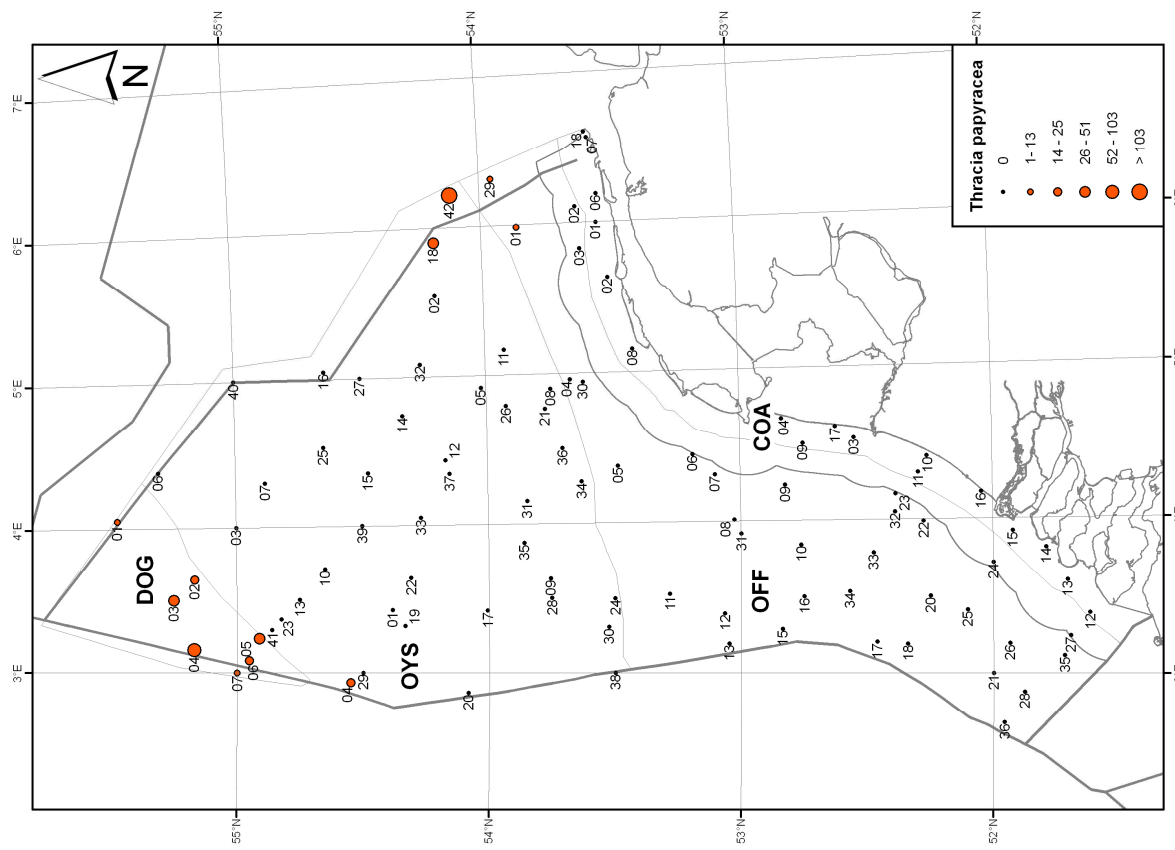


Figure A2 - 23 MWTL 2010. *Thracia papyracea* density (n/m^2)

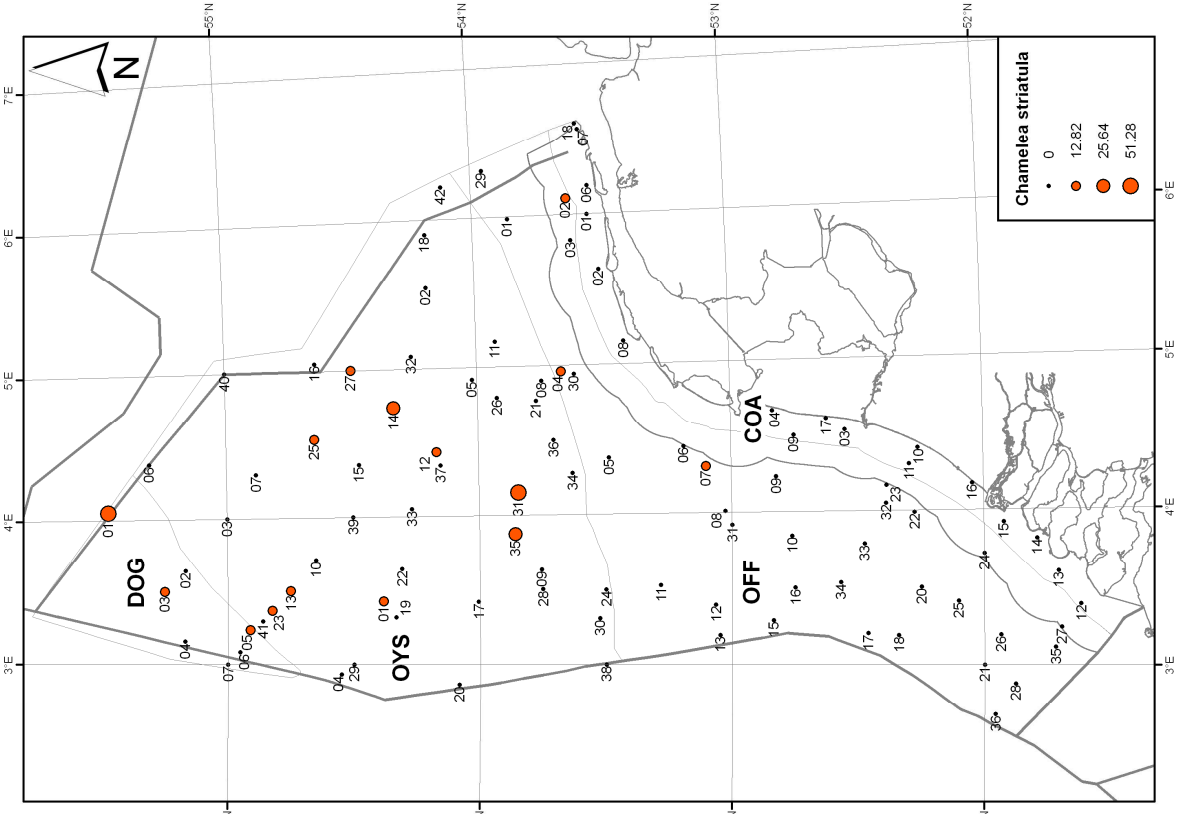


Figure A2 - 25 MWTL 2010. *Chamelea striatula* density (n/m^2)

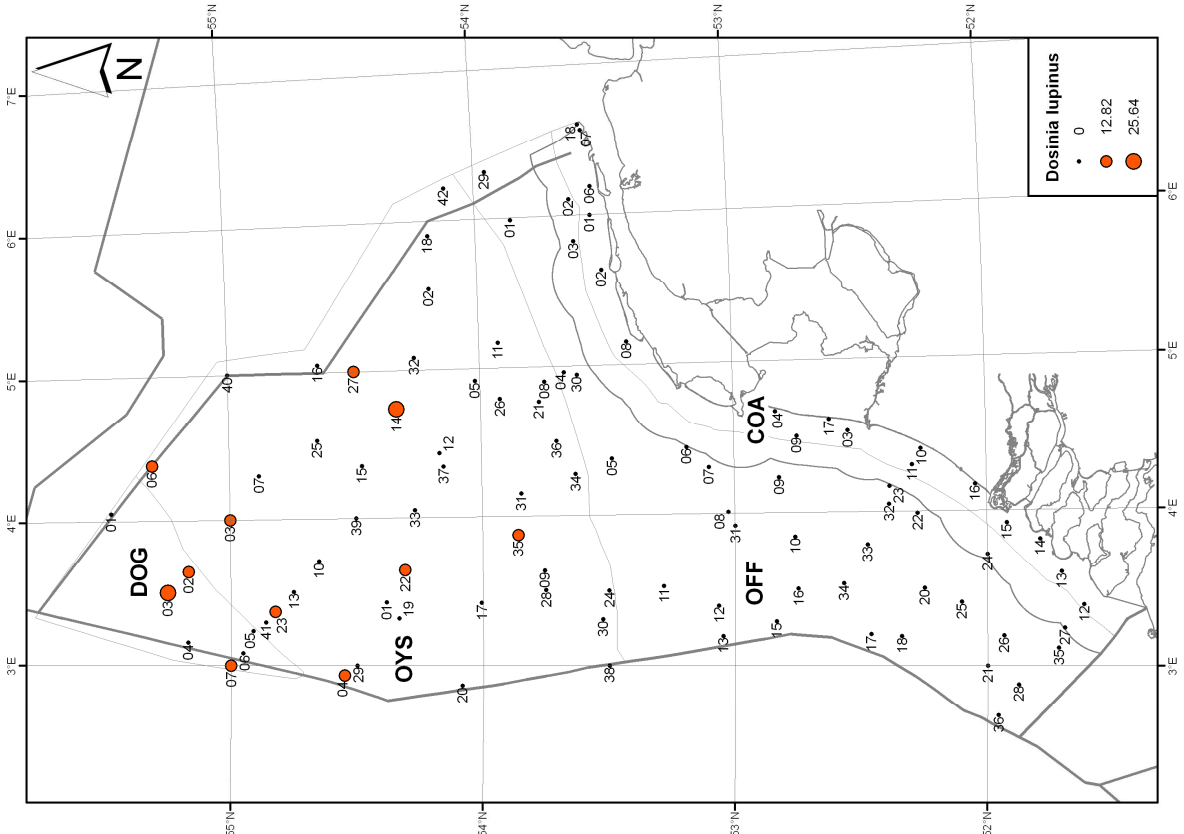


Figure A2 - 26 MWTL 2010. *Dosina lupinus* density (n/m^2)

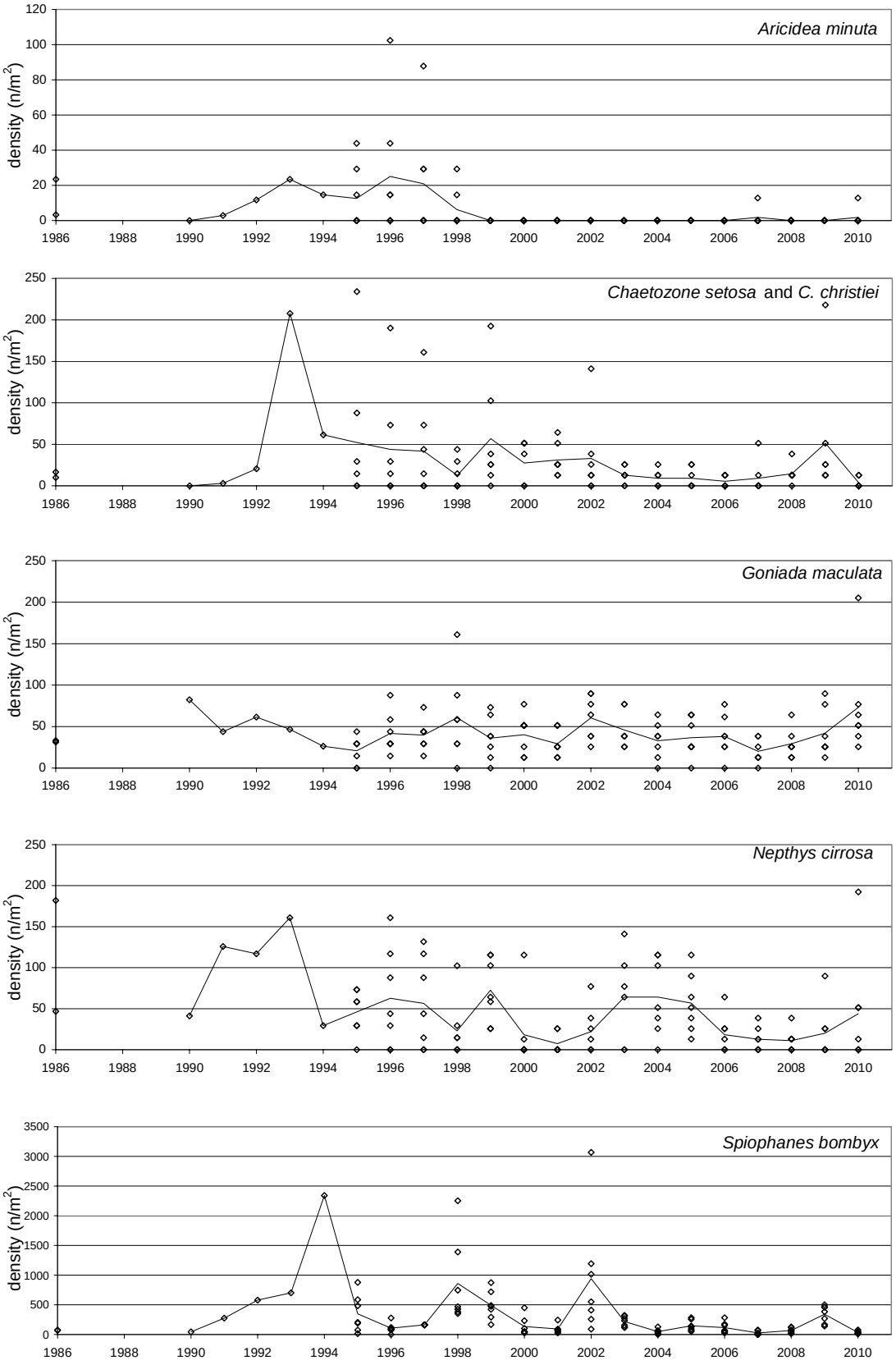


Figure A2 - 27 MWTL 1986 – 2010 Dogger Bank. Density of five species (1): the polychaetes *Aricidea minuta, Chaetozone, Goniada maculata, Nephtys cirrosa* and *Spiophanes bombyx* (line shows the average density of all Dogger Bank stations

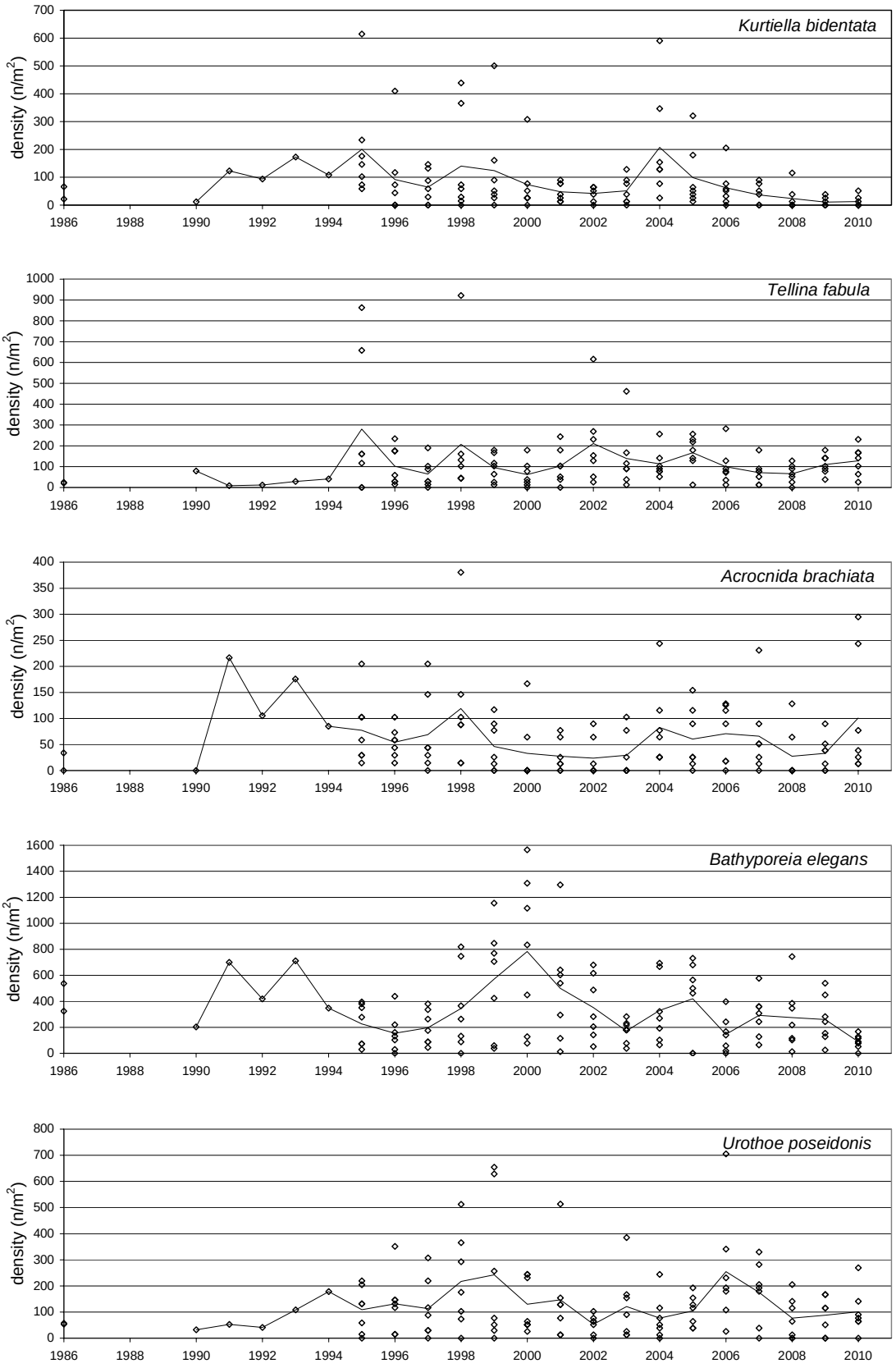


Figure A2 - 28 MWTL 1986 – 2010 Dogger Bank. Density of five species (2): The bivalves *Kurtiella bidentata* and *Tellina fabula,* the brittle star *Acrocnida brachiata* and the amphipods *Bathyporeia elegans* and *Urothoe poseidonis* (line shows the average density of all Dogger Bank stations).

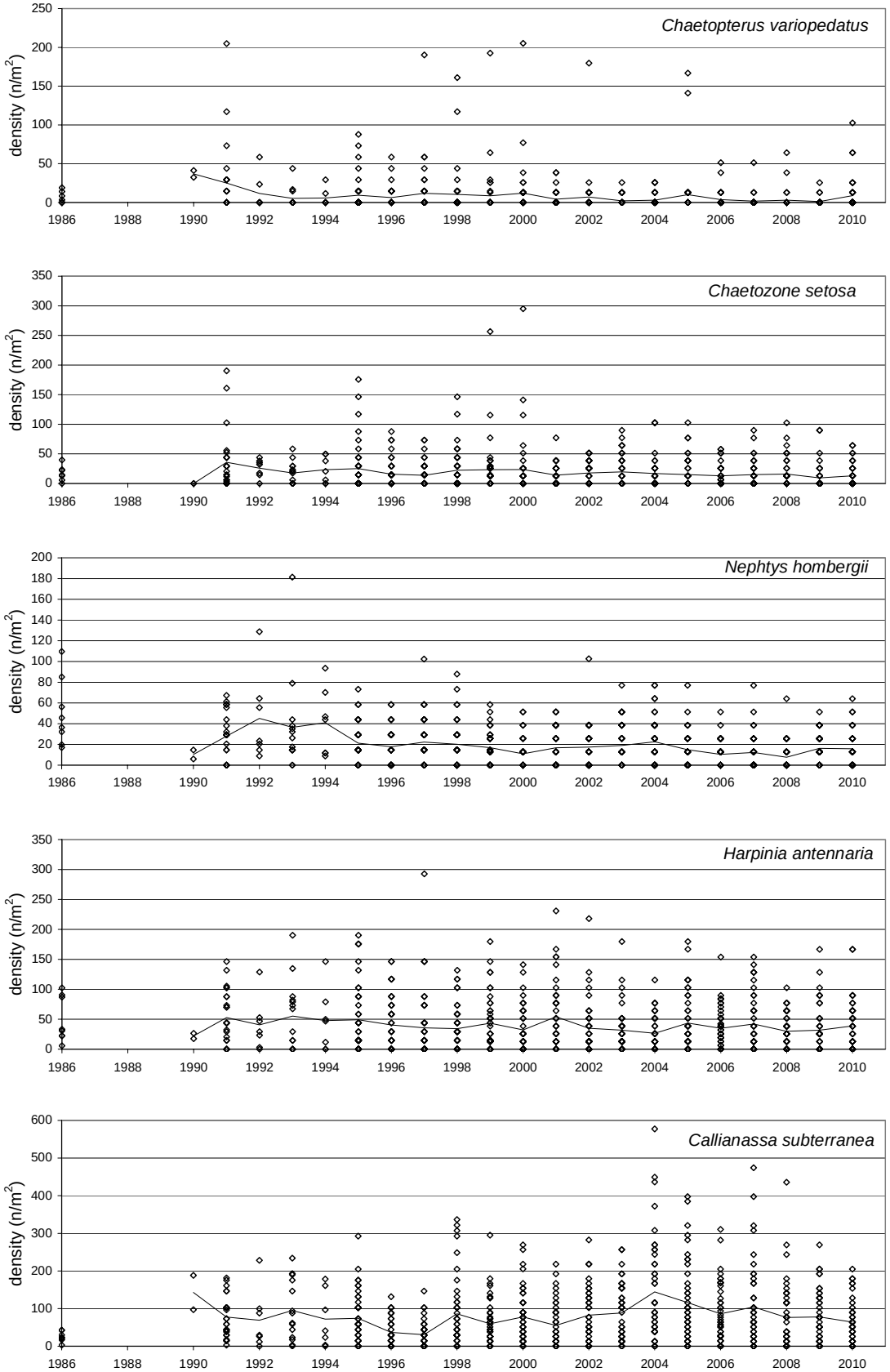


Figure A2 - 29 MWTL 1986 – 2010 Oyster Grounds. Density of five species (1): the polychaetes *Chaetopteryx variopedatus, Chaetozone setosa* s.l. and *Nephtys hombergii* and the crustaceans *Harpinia antennaria* and *Calliannassa subterranea* (including juveniles) (line shows the average density of all Oyster Grounds stations).

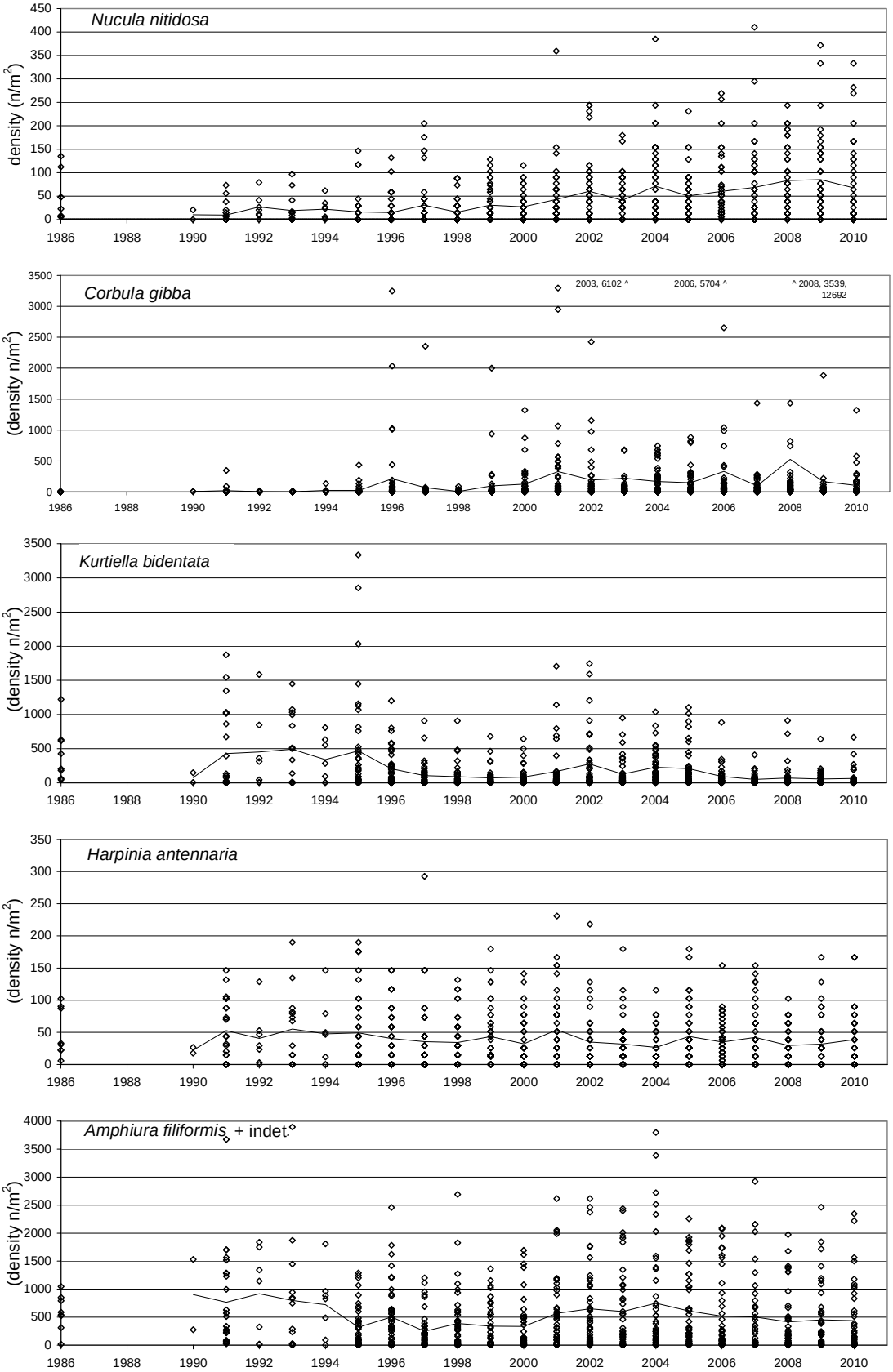


Figure A2 - 30 MWTL 1986 – 2010. Oyster Grounds: Density of five species (2): the bivalves *Nucula nitidosa*, *Corbula gibba* and *Kurtiella bidentata*, the amphipod *Harpinia antennaria* and the brittle star *Amphiura filiformis* (including juveniles) - line showing average density of all Oyster Grounds stations.

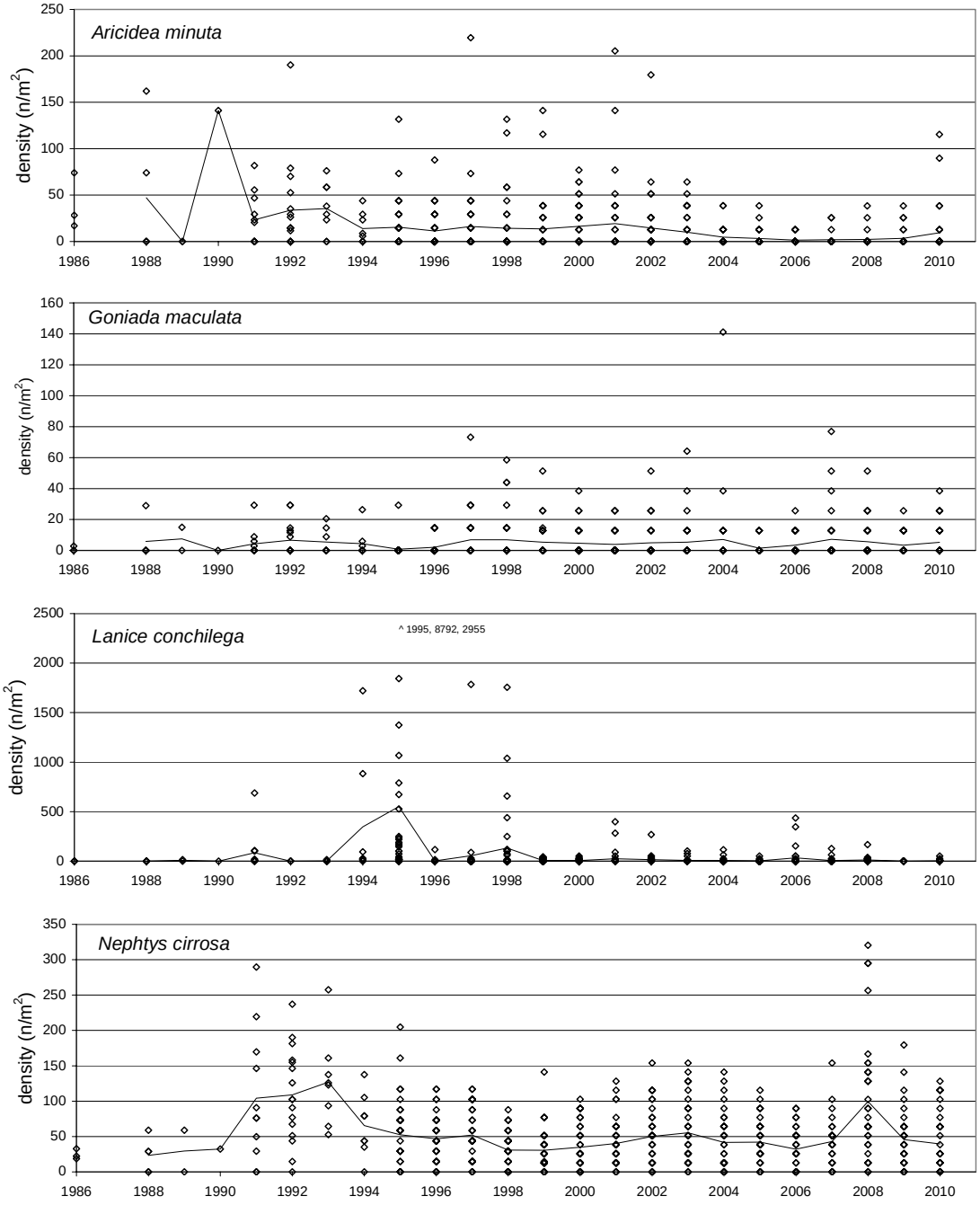


Figure A2 - 31 MWTL 1986 – 2010 Offshore area. Density of four species (1): the polychaetes *Aricidea minuta, Goniada maculata, Lanice conchilega* and *Nephtys cirrosa* - line showing average density of all sampling stations in the Offshore area.

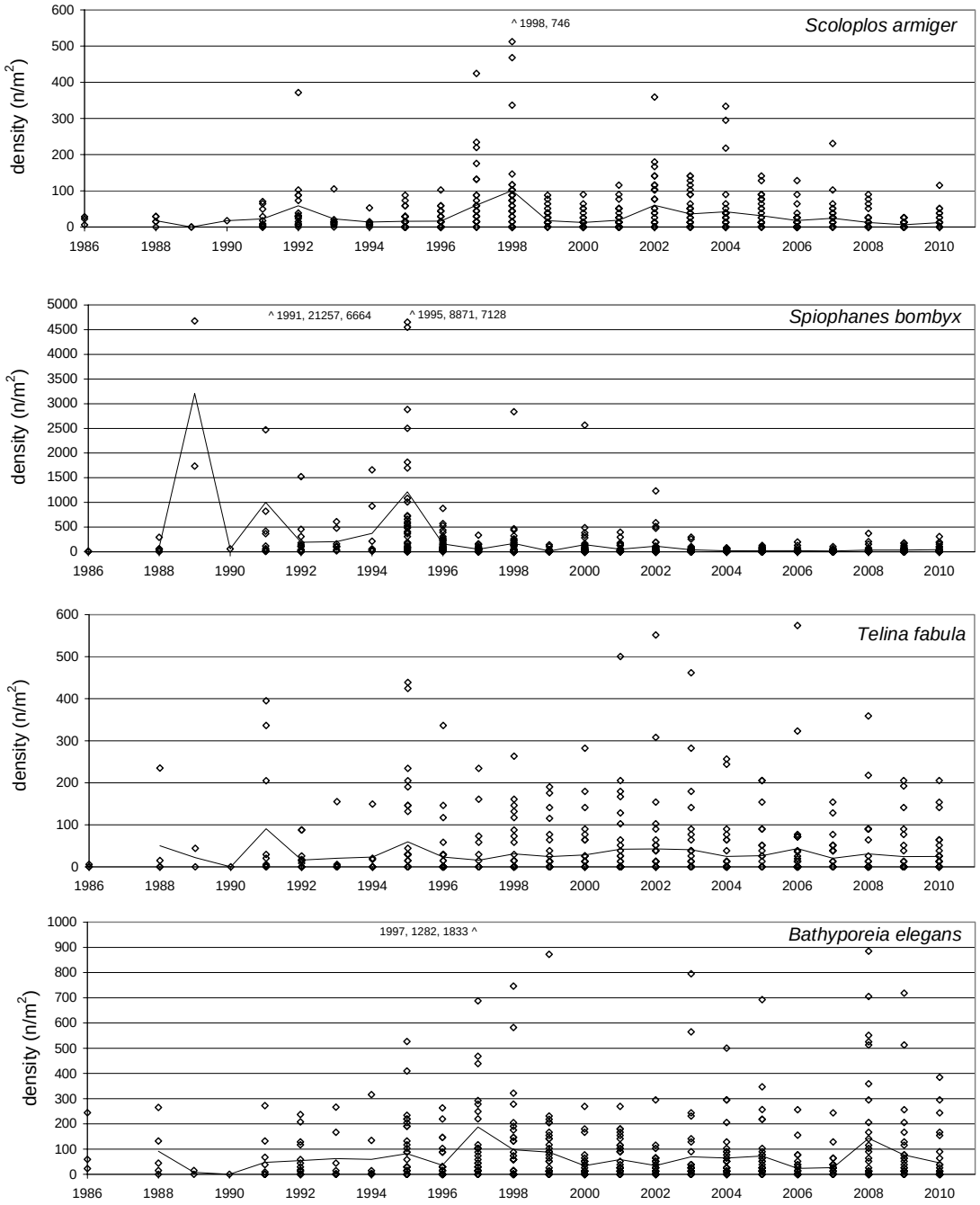


Figure A2 - 32 MWTL 1986 – 2010 Offshore area. Density of four species (2): the polychaetes *Scoloplos armiger* and *Spiophanes bombyx,* the bivalve *Tellina fabula* and the amphipod *Bathyporeia elegans* - line showing average density of all sampling stations in the Offshore area.

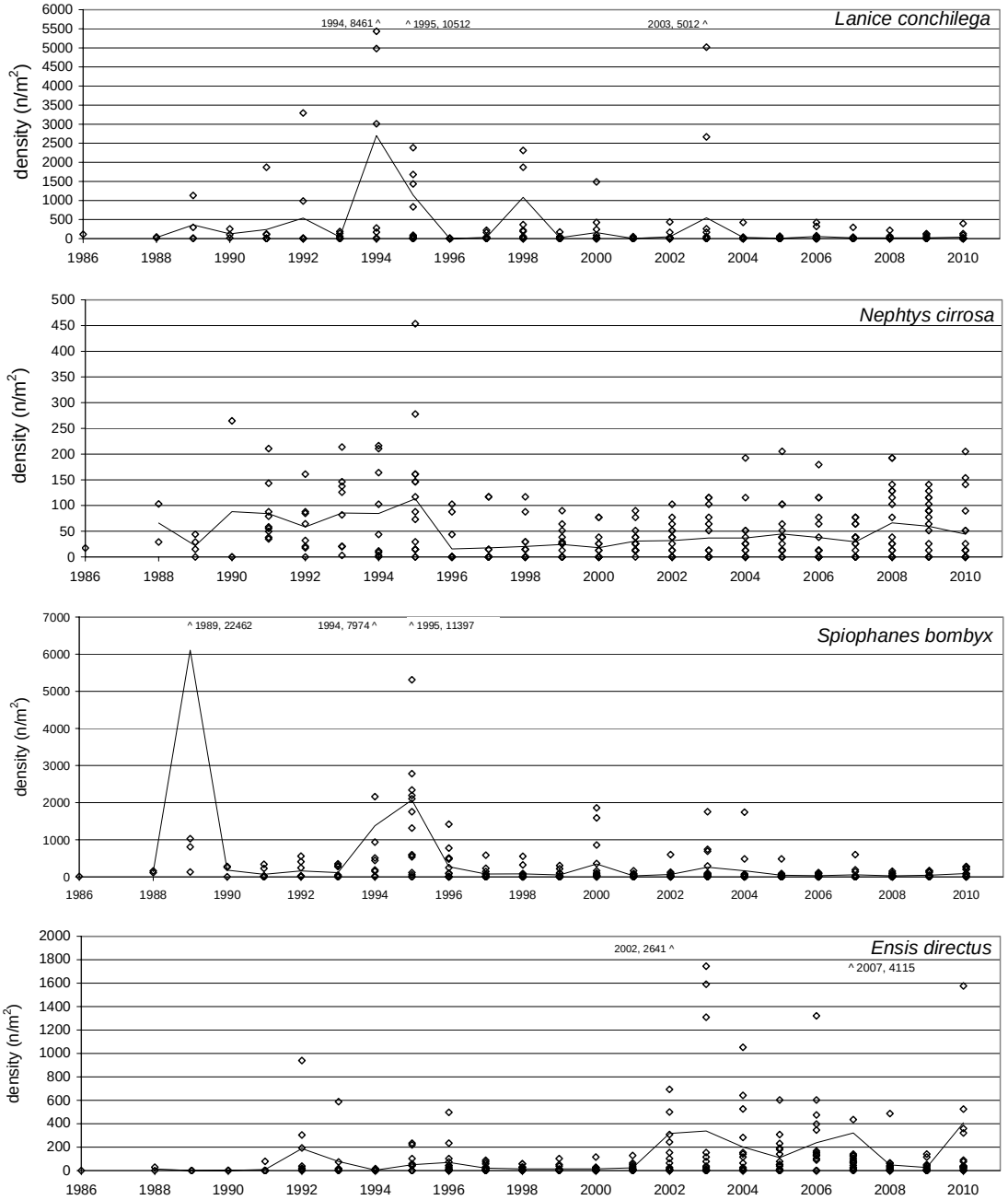


Figure A2 - 33 MWTL 1986 – 2010 Coastal area. Density of four species (1): the polychaetes *Lanice conchilega, Nephtys cirrosa* and *Spiophanes bombyx* and the razor clam *Ensis directus* (= *E. Americanus*) - line showing average density of all sampling stations in the Coastal area.

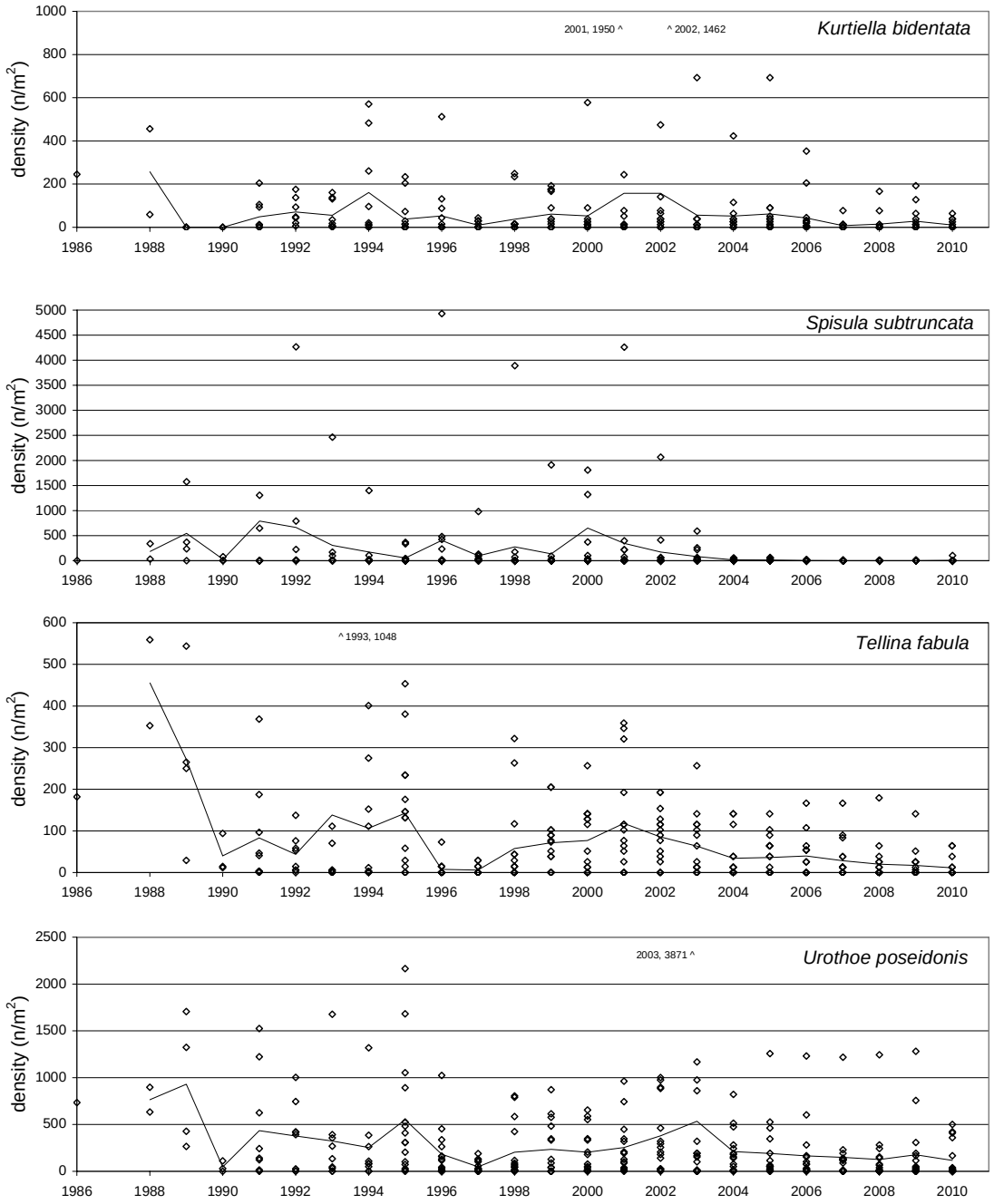


Figure A2 - 34 MWTL 1986 – 2009 Coastal area. Density of four species (2): the bivalves *Kurtiella bidentata, Spisula subtruncata* and *Tellina fabula* and the amphipod *Urothoe poseidonis* - line showing average density of all sampling stations in the Coastal area.

Appendix 3

Presence of species in 4 subareas

Table A3 - 1a: MWTL 2010. Dogger Bank and Oyster Grounds (part 1), taxa presence

Species	Dogger Bank							Oyster Grounds															Species code
	Dog 01	Dog 02	Dog 03	Dog 04	Dog 05	Dog 06	Dog 07	Oys 01	Oys 02	Oys 03	Oys 04	Oys 05	Oys 06	Oys 07	Oys 08	Oys 09	Oys 10	Oys 11	Oys 12	Oys 13	Oys 14	Oys 15	Oys 16	Oys 17	
Anthozoa																								
Edwardsia					x		x						x						x			x	x	EDWA
Edwardsia claparedii		x		x																				EDWACLAP
Platyhelminthes																								
Turbellaria					x							x						x		x				TURB
Nemertea																								
Nemertea	x	x	x		x				x		x	x	x	x	x	x	x	x		x		x	x	x	NEMR
Cerebratulus marginatus										x													x		CEREMARG
Tubulanus polymorphus					x			x	x		x	x				x	x			x				x	TUBNPOLY
Phoronida																								
Phoronida		x	x	x	x	x	x	x	x			x	x	x	x	x	x	x	x	x		x	x	PHOR
Oligochaeta																								
Limnodriloides scandinavicus															x									LIMLSCAN
Polychaeta																								
Abyssoninoe hibernica												x						x						ABYSHIBE
Aphrodita aculeata													x			x			x					APHOACUL
Aricidea minuta						x																		ARIIMINU
Atherospio guillei															x			x					x	ATHOGUIL
Capitella capitata	x																							CAITCAPI
Caulleriella killariensis							x																	CAUEKILL
Chaetopterus variopedatus								x			x		x	x			x			x				CHAEVARI
Chaetozone christiei	x			x				x			x									x		x		CHAZCHRI
Chaetozone setosa										x			x	x										CHAZSETO
Cirratulidae																			x					CIRR
Clymenura lankesteri				x			x				x													CLYMLANK
Diplocirrus glaucus					x			x			x		x	x	x	x	x			x				DIPOGLAU
Enipo kinbergi																	x							ENIPKINB
Eteone foliosa													x											ETEOFOLI
Eteone longa				x	x																			ETEOLONG
Eumida sanguinea		x							x															EUMISANG
Eunereis elitoralis												x												EUNEELIT
Eunereis longissima															x						x			EUNELONG
Eunoe nodosa																					x			EUNONODO
Galathowenia oculata															x	x								MYROOCUL
Gattyana cirrhosa											x			x			x							GATTCIRR
Glycera alba																		x						GLYCALBA
Glycera lapidum									x															GLYCLAPI
Glycera rouxi															x									GLYCROUX
Glycinde nordmanni	x	x	x	x	x	x					x		x			x		x	x	x			x		GLYINORD
Glyphohesione klatti								x									x		x	x	x	x		x	GLYPKLAT
Goniada maculata	x	x	x	x	x	x	x		x		x		x		x	x		x	x	x		x		x	GONAMACU
Harmothoe								x						x											HARM
Lanice conchilega			x								x		x			x				x					LANCCONC
Laonice bahusiensis																					x				LAONBAHU
Lumbrineris												x											x		LUMI
Lumbrineris latreilli									x						x			x							LUMILATR
Lysilla loveni																	x								LYSLLOVE
Magelona alleni	x	x	x								x		x							x			x	x	MAGEALLE
Magelona filiformis	x	x	x	x	x	x			x		x		x		x	x				x			x	x	MAGEFILI
Magelona johnstoni	x	x	x	x	x	x			x							x					x				MAGEJOHN
Maldanidae				x																					MALD
Malmgreniella													x		x		x								MALM
Malmgreniella castanea				x																					MALMCAST
Malmgreniella darbouxi										x	x		x			x									MALMDARB
Malmgreniella ljungmani																	x								MALMLJUN
Malmgreniella mcintoshi																	x								MALMMCIN
Mediomastus fragilis								x				x					x								MEDOFRAG
Minuspio multibranchiata																			x		x				MINUMULT
Nephtys		x		x	x		x	x		x	x		x	x	x			x	x		x		x		NEPY
Nephtys assimilis	x	x	x	x	x								x			x									NEPYASSI
Nephtys cirrosa	x		x	x		x																			NEPYCIRR
Nephtys hombergii			x					x	x	x	x	x	x	x			x		x		x	x			NEPYHOMB
Nephtys hystricis															x										NEPYHYST
Nephtys incisa												x						x			x				NEPYINCI

Table A3 - 1b: MWTL 2010. Dogger Bank and Oyster Grounds (part 1), taxa presence

	Dogger Bank							Oyster Grounds															
Species	Dog 01	Dog 02	Dog 03	Dog 04	Dog 05	Dog 06	Dog 07	Oys 01	Oys 02	Oys 03	Oys 04	Oys 05	Oys 06	Oys 07	Oys 08	Oys 09	Oys 10	Oys 11	Oys 12	Oys 13	Oys 14	Oys 15	Oys 16	Oys 17	Species code
Notomastus latericeus					x		x		x	x					x			x			x	x			NOTMLATE
Ophelia limacina	x		x	x												x									OPHELIMA
Ophelina acuminata										x												x			OPHLACUM
Ophiodromus flexuosus								x	x		x	x				x		x	x	x				x	OPHRFLEX
Owenia fusiformis		x	x	x		x	x	x			x	x			x			x				x		x	OWENFUSI
Pectinaria auricoma					x			x	x		x	x									x		x	x	PECTAURI
Pholoe baltica				x				x		x	x	x	x	x	x		x			x	x			x	PHOEBALT
Phyllodoce mucosa			x		x												x								PHYOMUCO
Phyllodoce rosea									x																PHYOROSE
Podarkeopsis helgolandica	x	x	x	x							x	x			x			x		x			x	x	PODKHELG
Poecilochaetus serpens	x				x			x	x			x				x		x							POEOSERP
Polygordius appendiculatus																								x	POYGAPPE
Prionospio														x								x			PRIO
Prionospio cirrifera																			x						PRIOCIRR
Scalibregma inflatum																				x					SCALINFL
Scolelepis bonnieri				x																					SCOIBONN
Scoloplos armiger	x	x	x		x		x	x		x	x		x			x	x			x				x	SCOSARMI
Sigalion mathildae	x	x	x	x	x	x	x				x					x								x	SIGLMATH
Spio decoratus		x			x	x																			SPIODECO
Spio symphyta				x		x	x				x														SPIOSYMP
Spiophanes bombyx	x	x	x	x	x	x	x		x		x		x			x	x			x	x			x	SPIPBOMB
Sthenelais limicola	x	x			x					x	x									x			x	x	STHELIMI
Terebellides stroemi																			x		x	x			TERSSTRO
Sipunculida																									
Sipuncula														x											SIPU
Thysanocardia procera															x			x							THYNPROC
Crustacea, Amphipoda																									
Acidostoma obesum		x	x																						ACIDOBES
Ampelisca brevicornis		x						x		x	x					x			x	x					AMPEBREV
Ampelisca tenuicornis										x						x			x	x					AMPETENU
Argissa hamatipes	x																								ARGIHAMA
Atylus falcatus			x																						ATYUFALC
Bathyporeia		x		x		x	x																		BATY
Bathyporeia elegans	x	x	x		x	x	x		x							x								x	BATYELEG
Bathyporeia guilliamsoniana	x	x	x	x	x	x	x																		BATYGUIL
Bathyporeia nana	x		x	x	x	x	x																		BATYNANA
Bathyporeia tenuipes	x	x	x	x	x		x				x		x		x										BATYTENU
Harpinia antennaria								x	x	x		x	x	x		x	x		x	x	x	x	x	x	HARPANTE
Hippomedon denticulatus		x															x								HIPMDENT
Lepidepecreum longicornis					x																				LEPMLONG
Leucothoe incisa							x				x					x									LEUTINCI
Leucothoe procera																								x	LEUTPROC
Medicorophium affine														x											MEDIAFFI
Orchomenella nana	x				x								x			x					x				ORCENANA
Pariambus typicus								x							x										PAIATYPI
Perioculodes longimanus	x		x	x	x		x				x		x	x											PEROLONG
Pontocrates arcticus				x			x																		PONOARCT
Siphonoecetes kroyeranus	x	x	x	x		x	x																		SIPOKROY
Urothoe						x																			UROT
Urothoe elegans																x								x	UROTELEG
Urothoe poseidonis	x	x	x	x		x	x																		UROTPOSE
Crustacea, Cumacea																									
Diastylis bradyi						x												x							DIATBRAD
Diastylis laevis														x											DIATLAEV
Eudorella emarginata																				x		x			EUDOEMAR
Eudorella truncatula								x					x	x		x					x				EUDOTRUN
Eudorellopsis deformis																x									EUDRDEFO
Iphinoe trispinosa							x								x	x									IPHITRIS
Crustacea, Decapoda																									
Callianassa																			x						CALN
Callianassa subterranea								x	x	x	x	x	x	x	x	x	x	x		x	x	x	x		CALNSUBT
Corystes cassivelaunus																				x					CORTCASS
Ebalia cranchii						x																			EBALCRAN
Processa nouveli holthuisi														x											PROENOHO
Upogebia																			x						UPOG
Upogebia deltaura															x			x						x	UPOGDELT
Upogebia stellata																		x				x			UPOGSTEL

Table A3 - 1c: MWTL 2010. Dogger Bank and Oyster Grounds (part 1), taxa presence

Species	Dogger Bank							Oyster Grounds															Species code
	Dog 01	Dog 02	Dog 03	Dog 04	Dog 05	Dog 06	Dog 07	Oys 01	Oys 02	Oys 03	Oys 04	Oys 05	Oys 06	Oys 07	Oys 08	Oys 09	Oys 10	Oys 11	Oys 12	Oys 13	Oys 14	Oys 15	Oys 16	Oys 17	
Crustacea, Mysida																								
Heteromysis microps																	x						x	HETMMICR
Mollusca, Bivalvia																								
Abra alba					x						x				x	x						x		ABRAALBA
Abra nitida								x									x						x	ABRANITI
Abra prismatica	x	x	x	x	x								x											ABRAPRIS
Arctica islandica								x																ARCTISLA
Bivalvia		x																						BIVA
Chamelea striatula	x		x		x			x										x	x	x				CHAMSTRI
Corbula gibba			x	x		x	x	x			x	x	x	x	x	x		x	x		x	x	x	x	CORUGIBB
Dosinia lupinus		x	x				x			x	x		x								x				DOSILUPI
Ensis	x																								ENSI
Ensis ensis	x		x	x		x	x				x														ENSIENSI
Gari fervensis							x				x														GARIFERV
Kurtiella bidentata			x	x			x	x	x	x		x	x	x	x		x	x	x	x	x			x	KURTBIDE
Lucinoma borealis							x																		LUCNBORE
Mactra stultorum											x														MACTSTUL
Nucula nitidosa					x			x	x		x	x				x	x	x		x	x	x	x	x	NUCLNITI
Phaxas pellucidus				x	x				x	x															PHAXPELL
Sphenia binghami										x															SPHNBING
Spisula subtruncata							x			x															SPISSUBT
Tellimya ferruginosa		x		x					x	x	x				x		x		x				x	x	TELYFERR
Tellina fabula	x	x	x	x	x	x	x				x					x									TELNFABU
Tellina tenuis				x			x																		TELNTENU
Thracia convexa										x															THRACONV
Thracia papyracea	x	x	x	x	x	x	x				x														THRAPAPY
Thracia pubescens																					x				THRAPUBE
Thyasira flexuosa		x			x			x			x		x							x			x		THYSFLEX
Mollusca, Gastropoda																								
Acteon tornatilis		x																							ACTETORN
Cylichna cylindracea					x			x		x	x	x		x		x	x			x				x	CYLCCYLI
Euspira pulchella		x		x				x			x				x									x	EUSRPULC
Hyala vitrea								x				x											x		HYAAVITR
Oenopota turricula											x														OENOTURR
Turritella communis																							x		TURRCOMM
Echinodermata																								
Astropecten irregularis																							x	x	ASTOIRRE
Brissopsis lyrifera										x						x									BRIPLYRI
Echinocardium cordatum				x	x		x	x	x		x		x		x		x		x	x				x	ECHNCORD
Echinocyamus pusillus		x	x		x																				ECHYPUSI
Leptosynapta inhaerens															x									x	LEPYINHA
Acrocnida brachiata	x	x	x	x	x	x	x									x								x	ACRNBRAC
Amphiura chiajei							x																		AMPICHIA
Amphiura filiformis	x		x	x	x	x		x	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	AMPIFILI
Amphiuridae		x		x		x	x									x									AMPD
Ophiura								x																	OPHU
Ophiura albida															x	x		x							OPHUALBI
Bryozoa																								
Triticella flava															x			x	x					x	TRTCFLAV
Cnidaria																								
Campanulariidae	x																								CAPA
Remaining																								
Entoprocta														x											ENPR
Totaal taxa	**34**	**37**	**38**	**42**	**41**	**26**	**36**	**33**	**26**	**23**	**44**	**24**	**32**	**24**	**32**	**36**	**30**	**27**	**22**	**34**	**25**	**22**	**24**	**42**	

Table A3 - 2a: MWTL 2010. Oyster Grounds (part 2), taxa presence

Species	Oyster Grounds																								Species code
	Oys 18	Oys 19	Oys 20	Oys 21	Oys 22	Oys 23	Oys 24	Oys 25	Oys 26	Oys 27	Oys 28	Oys 29	Oys 30	Oys 31	Oys 32	Oys 33	Oys 34	Oys 35	Oys 36	Oys 37	Oys 38	Oys 39	Oys 40	Oys 41	Oys 42	
Anthozoa																									
Cerianthus lloydi									x			x													CERULLOY
Edwardsia					x	x																x	x	x	EDWA
Edwardsia claparedii																								x	EDWACLAP
Platyhelminthes																									
Turbellaria			x	x		x			x			x		x		x									TURB
Nemertea																									
Nemertea	x	x	x		x	x	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	NEMR
Tubulanus polymorphus	x	x		x	x	x	x				x	x	x	x	x	x		x	x			x	x		x	TUBNPOLY
Phoronida																									
Phoronida	x	x	x	x		x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		PHOR
Oligochaeta																									
Oligochaeta															x										OLCH
Polychaeta																									
Abyssoninoe hibernica									x										x						ABYSHIBE
Ampharete finmarchica				x																					AMPAFINM
Atherospio guillei			x	x					x											x					ATHOGUIL
Chaetopterus variopedatus		x			x							x				x						x			CHAEVARI
Chaetozone																						x			CHAZ
Chaetozone christiei						x																x	x	x	CHAZCHRI
Chaetozone setosa			x		x			x				x				x				x					CHAZSETO
Cirratulidae																				x					CIRR
Diplocirrus glaucus		x		x		x					x	x				x						x		x	DIPOGLAU
Enipo kinbergi																						x			ENIPKINB
Eteone longa																								x	ETEOLONG
Eumida sanguinea																		x					x		EUMISANG
Eunereis elitoralis			x																						EUNEELIT
Eunereis longissima				x			x				x						x								EUNELONG
Galathowenia oculata			x	x															x			x			MYROOCUL
Glycera	x																								GLYC
Glycera alba								x									x								GLYCALBA
Glycera lapidum		x		x					x				x				x		x						GLYCLAPI
Glycera rouxi																				x					GLYCROUX
Glycinde nordmanni	x	x		x		x					x	x		x				x							GLYINORD
Glyphohesione klatti			x		x			x		x										x		x			GLYPKLAT
Goniada maculata	x	x		x	x	x	x		x		x	x	x	x	x		x	x	x	x	x		x	x	x	GONAMACU
Harmothoe																						x			HARM
Lanice conchilega	x						x					x						x					x	x		LANCCONC
Laonice bahusiensis																				x					LAONBAHU
Levinsenia gracilis								x												x		x			LEVIGRAC
Lumbrineris			x				x	x	x					x	x				x						LUMI
Lumbrineris latreilli				x			x						x				x								LUMILATR
Lysilla loveni				x					x				x						x			x			LYSLLOVE
Magelona alleni		x																				x		x	MAGEALLE
Magelona filiformis	x	x			x	x				x	x	x		x				x			x	x	x	x	MAGEFILI
Magelona johnstoni	x						x				x	x	x	x							x			x	MAGEJOHN
Malmgreniella		x																							MALM
Malmgreniella darbouxi																							x		MALMDARB
Malmgreniella ljungmani					x																				MALMLJUN
Malmgreniella marphysae																		x							MALMMARP
Mediomastus fragilis		x				x			x				x	x			x		x	x		x			MEDOFRAG
Minuspio multibranchiata					x			x								x				x		x			MINUMULT
Nephtys			x		x	x	x	x				x	x			x	x		x	x	x	x	x		NEPY
Nephtys assimilis			x				x					x											x	x	NEPYASSI
Nephtys caeca			x																					x	NEPYCAEC
Nephtys cirrosa											x														x NEPYCIRR
Nephtys hombergii	x	x		x	x		x	x		x	x	x	x	x		x	x	x		x		x	x		NEPYHOMB
Nephtys incisa									x						x				x	x					NEPYINCI
Notomastus latericeus			x	x			x						x	x		x	x	x			x				NOTMLATE
Ophelia limacina			x								x										x				x OPHELIMA
Ophiodromus flexuosus		x	x	x	x				x		x			x	x		x	x	x			x		x		OPHRFLEX
Owenia fusiformis			x	x																					OWENFUSI
Pectinaria auricoma								x	x	x				x										x	PECTAURI
Pholoe baltica		x				x		x				x		x		x		x				x		x	x PHOEBALT
Phyllodoce groenlandica																		x							PHYOGROE

Table A3 - 2b: MWTL 2010. Oyster Grounds (part 2), taxa presence

Species	Oyster Grounds																								Species code
	Oys 18	Oys 19	Oys 20	Oys 21	Oys 22	Oys 23	Oys 24	Oys 25	Oys 26	Oys 27	Oys 28	Oys 29	Oys 30	Oys 31	Oys 32	Oys 33	Oys 34	Oys 35	Oys 36	Oys 37	Oys 38	Oys 39	Oys 40	Oys 41	Oys 42	
Phyllodoce rosea													x												x	PHYOROSE
Podarkeopsis helgolandica	x			x			x		x				x			x	x	x	x		x		x		x	PODKHELG
Poecilochaetus serpens			x			x		x	x	x	x	x		x			x				x			x	x	POEOSERP
Polygordius appendiculatus							x																			POYGAPPE
Polyphysia crassa																								x		POLHCRAS
Prionospio		x		x					x	x							x		x							PRIO
Prionospio cirrifera			x																							PRIOCIRR
Scalibregma inflatum												x														SCALINFL
Scolelepis bonnieri																									x	SCOIBONN
Scoloplos armiger	x	x			x	x					x		x								x	x	x	x		SCOSARMI
Sigalion mathildae	x				x		x				x	x						x			x			x	x	SIGLMATH
Spio decoratus	x																									SPIODECO
Spio symphyta												x													x	SPIOSYMP
Spiophanes bombyx	x	x		x		x	x			x	x	x	x					x	x		x			x	x	SPIPBOMB
Spiophanes kroyeri			x		x							x							x							SPIPKROY
Sthenelais limicola					x	x	x	x		x	x					x			x				x	x		STHELIMI
Terebellides stroemi			x	x				x												x						TERSSTRO
Trichobranchus roseus			x																							TRIHROSE
Sipunculida																										
Thysanocardia procera				x																						THYNPROC
Crustacea, Amphipoda																										
Abludomelita obtusata							x																			ABLUOBTU
Ampelisca brevicornis					x																			x		AMPEBREV
Ampelisca tenuicornis			x		x	x		x		x		x				x		x	x	x		x		x		AMPETENU
Argissa hamatipes						x																				ARGIHAMA
Bathyporeia elegans	x										x							x						x	x	BATYELEG
Bathyporeia guilliamsoniana																									x	BATYGUIL
Bathyporeia tenuipes	x									x		x									x		x			BATYTENU
Harpinia antennaria		x	x		x	x	x	x		x	x	x	x	x		x		x	x	x	x	x				HARPANTE
Harpinia pectinata		x																								HARPPECT
Hippomedon denticulatus										x																HIPMDENT
Leucothoe lilljeborgi				x					x					x				x	x	x						LEUTLILL
Orchomenella nana							x					x		x												ORCENANA
Pontocrates arcticus																									x	PONOARCT
Urothoe poseidonis																									x	UROTPOSE
Crustacea, Cumacea																										
Diastylis bradyi		x			x	x			x	x									x				x			DIATBRAD
Diastylis laevis													x									x				DIATLAEV
Eudorella emarginata										x						x										EUDOEMAR
Eudorella truncatula			x							x			x				x	x				x				EUDOTRUN
Iphinoe trispinosa													x								x					IPHITRIS
Crustacea, Decapoda																										
Callianassa			x													x										CALN
Callianassa subterranea	x	x	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x		x			x	CALNSUBT
Corystes cassivelaunus								x										x			x					CORTCASS
Ebalia cranchii																					x					EBALCRAN
Goneplax rhomboides																x										GONLRHOM
Processa modica modica						x																				PROEMOMO
Upogebia deltaura			x	x											x				x							UPOGDELT
Upogebia stellata			x																							UPOGSTEL
Crustacea, Isopoda																										
Ione thoracica							x				x						x									IONETHOR
Natatolana borealis								x						x												NATTBORE
Pseudione borealis		x	x	x				x	x	x				x	x			x		x		x				PSEIBORE
Crustacea, Mysida																										
Heteromysis microps			x																							HETMMICR
Schistomysis			x																							SCHS
Crustacea, Remaining																										
Tanaopsis graciloides													x													TANOGRAC
Mollusca, Bivalvia																										
Abra alba						x	x					x	x	x			x		x	x		x		x		ABRAALBA
Abra nitida		x	x																							ABRANITI
Abra prismatica						x																		x		ABRAPRIS
Arctica islandica			x			x																				ARCTISLA
Bivalvia							x			x		x														BIVA
Chamelea striatula						x		x		x				x				x								CHAMSTRI

Table A3 - 2c: MWTL 2010. Oyster Grounds (part 2), taxa presence

Species	Oyster Grounds																								Species code
	Oys 18	Oys 19	Oys 20	Oys 21	Oys 22	Oys 23	Oys 24	Oys 25	Oys 26	Oys 27	Oys 28	Oys 29	Oys 30	Oys 31	Oys 32	Oys 33	Oys 34	Oys 35	Oys 36	Oys 37	Oys 38	Oys 39	Oys 40	Oys 41	Oys 42	
Corbula gibba		x	x	x	x			x	x	x		x		x		x	x	x	x	x		x				CORUGIBB
Dosinia lupinus					x	x				x								x								DOSILUPI
Ensis																									x	ENSI
Gari fervensis			x									x														GARIFERV
Kurtiella bidentata	x	x	x	x	x	x	x	x	x	x		x	x	x		x		x	x			x	x			KURTBIDE
Lepton squamosum			x																							LEPNSQUA
Lucinoma borealis																								x		LUCNBORE
Mactra stultorum							x				x															MACTSTUL
Mysia undata												x														MYSAUNDA
Nucula nitidosa	x	x	x	x	x	x	x			x	x	x	x	x		x	x	x	x	x	x	x	x	x		NUCLNITI
Phaxas pellucidus	x							x	x			x						x					x			PHAXPELL
Spisula subtruncata																					x					SPISSUBT
Tellimya ferruginosa	x	x				x	x			x	x	x		x	x	x		x			x					TELYFERR
Tellimya tenella			x																							TELYTENE
Tellina fabula	x											x									x			x	x	TELNFABU
Tellina tenuis						x																				TELNTENU
Thracia papyracea	x																								x	THRAPAPY
Thyasira flexuosa		x			x	x						x												x		THYSFLEX
Mollusca, Gastropoda																										
Cylichna cylindracea		x		x	x	x		x	x		x			x		x				x		x		x		CYLCCYLI
Euspira pulchella		x		x			x			x			x	x			x	x	x					x		EUSRPULC
Hyala vitrea		x		x										x								x				HYAAVITR
Turritella communis										x						x										TURRCOMM
Echinodermata																										
Brissopsis lyrifera																x										BRIPLYRI
Echinocardium cordatum	x	x	x			x	x	x		x	x	x		x	x		x	x			x	x	x			ECHNCORD
Leptosynapta inhaerens		x																								LEPYINHA
Amphiura																						x				AMPI
Amphiura filiformis	x	x	x	x	x	x	x	x	x	x	x			x	x	x	x	x	x	x		x	x	x		AMPIFILI
Ophiura			x																		x					OPHU
Ophiura albida				x					x								x	x	x							OPHUALBI
Bryozoa																										
Triticella flava				x											x				x							TRTCFLAV
Remaining																										
Chaetognatha								x												x						CHET
Totaal taxa	**26**	**35**	**40**	**35**	**28**	**35**	**31**	**27**	**27**	**29**	**28**	**39**	**25**	**33**	**15**	**26**	**24**	**36**	**31**	**26**	**24**	**35**	**22**	**33**	**25**	

Table A3 - 3a: Offshore area (part 1), taxa presence

Species	Offshore area																								Species code
	Off 01	Off 02	Off 03	Off 04	Off 05	Off 06	Off 07	Off 08	Off 09	Off 10	Off 11	Off 12	Off 13	Off 15	Off 16	Off 17	Off 18	Off 20	Off 21	Off 22	Off 23	Off 24	Off 25	Off 26	Off 27	
Anthozoa																										
Actiniaria								x																		ACNI
Edwardsia					x																					EDWA
Nemertea																										
Nemertea	x		x	x	x		x	x		x			x	x					x		x					NEMR
Tubulanus polymorphus	x		x	x	x		x		x	x	x										x				x	TUBNPOLY
Phoronida																										
Phoronida	x	x	x	x		x		x		x										x	x	x	x			PHOR
Oligochaeta																										
Tubificidae						x																				TUFI
Tubificoides diazi		x																								TUCODIAZ
Polychaeta																										
Aonides paucibranchiata						x																				AONIPAUC
Aricidea minuta												x		x			x	x		x						ARIIMINU
Capitella capitata										x																CAITCAPI
Chaetozone christiei	x	x	x							x	x	x		x		x										CHAZCHRI
Cirratulidae			x																							CIRR
Eteone foliosa													x													ETEOFOLI
Eteone longa	x	x	x	x																						ETEOLONG
Eumida sanguinea																					x					EUMISANG
Eunereis longissima											x															EUNELONG
Exogone hebes							x			x									x							EXOGHEBE
Exogone naidina																	x									EXOGNAID
Glycera														x					x							GLYC
Glycera lapidum																						x				GLYCLAPI
Glycera rouxi				x																						GLYCROUX
Goniada maculata			x	x	x					x	x	x	x	x												GONAMACU
Lanice			x																							LANC
Lanice conchilega			x	x																	x					LANCCONC
Magelona filiformis	x	x	x	x	x		x		x																	MAGEFILI
Magelona johnstoni	x	x	x	x	x		x	x	x			x	x		x											MAGEJOHN
Magelona mirabilis											x															MAGEMIRA
Malmgreniella darbouxi			x																		x					MALMDARB
Mediomastus fragilis		x	x																							MEDOFRAG
Myrianida prolifera					x																					MYRAPROL
Nephtys	x	x		x		x						x		x			x		x				x			NEPY
Nephtys assimilis				x																						NEPYASSI
Nephtys caeca																									x	NEPYCAEC
Nephtys cirrosa					x		x		x	x		x	x	x	x	x		x	x	x		x				NEPYCIRR
Nephtys hombergii		x	x			x																				NEPYHOMB
Notomastus latericeus			x	x			x	x			x	x								x						NOTMLATE
Ophelia limacina					x	x						x								x						OPHELIMA
Owenia fusiformis				x	x																					OWENFUSI
Paraonis fulgens															x	x	x	x								PARSFULG
Phyllodoce mucosa			x										x								x					PHYOMUCO
Phyllodoce rosea				x																						PHYOROSE
Phyllodocidae						x																				PHYC
Pisione remota																x										PISOREMO
Podarkeopsis helgolandica	x			x							x	x														PODKHELG
Polycirrus						x																				POLC
Polygordius appendiculatus																		x								POYGAPPE
Scolelepis bonnieri											x		x		x			x		x						SCOIBONN
Scolelepis squamata																	x									SCOISQUA
Scoloplos armiger	x	x	x		x				x	x		x				x	x				x					SCOSARMI
Sigalion mathildae	x	x	x	x	x		x	x																		SIGLMATH
Spio decoratus			x	x					x											x	x					SPIODECO
Spio goniocephala						x								x		x										SPIOGONI
Spio martinensis		x																								SPIOMART
Spio symphyta												x														SPIOSYMP
Spiophanes bombyx	x		x	x		x	x		x	x	x	x			x			x	x	x			x			SPIPBOMB
Sthenelais limicola					x																					STHELIMI
Streptodonta pterochaeta																			x							STREPTER
Syllis gracilis																				x						SYLSGRAC
Travisia forbesii																				x						TRAVFORB

Table A3 - 3b: Offshore area (part 1), taxa presence

Species	Offshore area																								Species code
	Off 01	Off 02	Off 03	Off 04	Off 05	Off 06	Off 07	Off 08	Off 09	Off 10	Off 11	Off 12	Off 13	Off 15	Off 16	Off 17	Off 18	Off 20	Off 21	Off 22	Off 23	Off 24	Off 25	Off 26	Off 27	
Crustacea, Amphipoda																									
Atylus falcatus		x																							ATYUFALC
Bathyporeia	x																								BATY
Bathyporeia elegans			x		x	x		x	x	x	x	x									x				BATYELEG
Bathyporeia guilliamsoniana	x							x	x	x			x	x					x	x	x	x	x		BATYGUIL
Bathyporeia tenuipes	x			x							x														BATYTENU
Leucothoe incisa	x				x					x														x	LEUTINCI
Megaluropus agilis	x								x											x					MEGUAGIL
Perioculodes longimanus			x																				x		PEROLONG
Pontocrates arcticus					x				x				x												PONOARCT
Siphonoecetes kroyeranus				x																					SIPOKROY
Synchelidium maculatum										x															SYNHMACU
Urothoe		x						x																	UROT
Urothoe brevicornis									x	x		x	x		x					x	x	x	x		x	UROTBREV
Urothoe poseidonis	x	x	x		x	x	x	x	x		x	x		x	x										x	UROTPOSE
Crustacea, Cumacea																									
Monopseudocuma gilsoni		x				x																			PSEOGILS
Pseudocuma simile						x	x		x															x		PSEOSIMI
Crustacea, Decapoda																									
Callianassa subterranea											x														CALNSUBT
Corystes cassivelaunus											x														CORTCASS
Crangon crangon	x																								CRONCRAN
Pagurus bernhardus														x											PAGUBERN
Pestarella tyrrhena										x														x	CALNTYRR
Processa modica										x								x							PROEMODI
Thia scutellata																								x	THIASCUT
Crustacea, Isopoda																									
Pseudione hyndmanni														x											PSEIHYND
Crustacea, Mysida																									
Gastrosaccus spinifer				x													x		x	x				x	GASSSPIN
Crustacea, Remaining																									
Balanus crenatus									x																BALACREN
Tanaissus lilljeborgi						x																			TANSLILL
Mollusca, Bivalvia																									
Abra alba			x																						ABRAALBA
Abra prismatica												x													ABRAPRIS
Chamelea striatula		x		x			x																		CHAMSTRI
Corbula gibba				x																					CORUGIBB
Donax vittatus	x											x			x										DONXVITT
Kurtiella bidentata	x																								KURTBIDE
Nucula nitidosa				x																					NUCLNITI
Spisula subtruncata		x																							SPISSUBT
Tellimya ferruginosa	x	x	x	x	x		x		x	x	x	x									x				TELYFERR
Tellina fabula	x	x	x	x			x	x	x		x	x	x	x							x				TELNFABU
Tellina pygmaea																			x					x	TELNPYGM
Thracia papyracea	x																								THRAPAPY
Mollusca, Gastropoda																									
Euspira pulchella					x		x			x	x	x		x		x	x								EUSRPULC
Echinodermata																									
Echinocardium cordatum		x	x	x	x		x		x	x	x	x		x	x						x		x		x	ECHNCORD
Echinocyamus pusillus												x													ECHYPUSI
Amphiura												x													AMPI
Ophiura albida							x										x					x	x		OPHUALBI
Bryozoa																									
Electra pilosa									x																ELECPILO
Cnidaria																									
Hydractinia echinata									x					x											HYDCECHI
Totaal taxa	**23**	**19**	**26**	**25**	**20**	**14**	**17**	**10**	**20**	**20**	**18**	**22**	**11**	**15**	**9**	**7**	**9**	**7**	**9**	**14**	**15**	**6**	**8**	**2**	**9**	

Table A3 - 4a: Offshore area (part 2) and Coastal area, taxa presence

Species	Offshore area									Coastal zone																Species code
	Off 28	Off 29	Off 30	Off 31	Off 32	Off 33	Off 34	Off 35	Off 36	Coa 01	Coa 02	Coa 03	Coa 04	Coa 06	Coa 07	Coa 08	Coa 09	Coa 10	Coa 11	Coa 12	Coa 13	Coa 14	Coa 15	Coa 16	Coa 17	Coa 18	
Anthozoa																											
Actiniaria											x																*ACNI*
Nemertea																											
Nemertea		x				x							x											x	x		*NEMR*
Tubulanus polymorphus		x	x														x	x				x	x				*TUBNPOLY*
Phoronida																											
Phoronida	x	x				x		x																			*PHOR*
Phoronidae																	x										*PHRO*
Oligochaeta																											
Grania vikinga		x																									*GRANVIKI*
Tubificoides diazi																						x					*TUCODIAZ*
Polychaeta																											
Aonides paucibranchiata	x								x																		*AONIPAUC*
Aricidea minuta					x		x																				*ARIIMINU*
Capitella capitata											x	x				x		x				x					*CAITCAPI*
Capitellida																	x										*CATE*
Chaetozone christiei				x			x			x		x					x										*CHAZCHRI*
Eteone foliosa						x																					*ETEOFOLI*
Eteone longa		x	x		x	x										x	x	x	x				x		x		*ETEOLONG*
Eumida sanguinea																			x								*EUMISANG*
Eunereis longissima												x										x	x				*EUNELONG*
Exogone hebes	x				x	x																					*EXOGHEBE*
Exogone naidina	x																										*EXOGNAID*
Goniada maculata			x																								*GONAMACU*
Lanice conchilega		x									x		x	x		x	x		x						x		*LANCCONC*
Lumbrineris latreilli																		x									*LUMILATR*
Magelona filiformis			x													x	x						x				*MAGEFILI*
Magelona johnstoni		x	x	x	x			x		x	x	x		x	x	x	x	x	x				x		x	x	*MAGEJOHN*
Magelona mirabilis	x												x														*MAGEMIRA*
Malmgreniella darbouxi													x			x	x		x								*MALMDARB*
Malmgreniella ljungmani																	x										*MALMLJUN*
Malmgreniella mcintoshi											x																*MALMMCIN*
Mediomastus fragilis												x	x														*MEDOFRAG*
Nephtys	x						x									x		x						x			*NEPY*
Nephtys assimilis										x																	*NEPYASSI*
Nephtys cirrosa	x	x	x	x	x	x	x	x	x		x			x		x	x	x	x	x	x			x	x		*NEPYCIRR*
Nephtys hombergii										x	x	x	x			x		x				x					*NEPYHOMB*
Notomastus latericeus						x				x		x					x	x		x		x	x				*NOTMLATE*
Ophelia limacina		x				x		x																		x	*OPHELIMA*
Owenia fusiformis										x			x							x		x	x				*OWENFUSI*
Phyllodoce groenlandica																							x				*PHYOGROE*
Phyllodoce mucosa										x			x	x				x		x			x	x	x		*PHYOMUCO*
Phyllodoce rosea					x																						*PHYOROSE*
Phyllodocinae													x														*PHYI*
Poecilochaetus serpens		x																									*POEOSERP*
Pygospio elegans																						x					*PYGOELEG*
Scolelepis bonnieri					x	x		x											x	x							*SCOIBONN*
Scoloplos armiger		x		x						x								x	x	x		x	x			x	*SCOSARMI*
Sigalion mathildae			x	x								x	x														*SIGLMATH*
Spio decoratus						x																					*SPIODECO*
Spio goniocephala								x				x															*SPIOGONI*
Spio martinensis											x		x	x		x											*SPIOMART*
Spio symphyta	x												x														*SPIOSYMP*
Spiophanes bombyx	x	x	x	x	x	x	x			x	x		x	x		x	x	x	x			x	x		x		*SPIPBOMB*
Streblospio shrubsolii																						x					*STSPSHRU*
Syllis gracilis						x																					*SYLSGRAC*
Crustacea, Amphipoda																											
Atylus falcatus									x			x															*ATYUFALC*
Atylus swammerdami	x	x									x		x				x										*ATYUSWAM*
Bathyporeia			x																								*BATY*
Bathyporeia elegans			x	x		x	x				x	x		x		x	x		x	x	x				x		*BATYELEG*
Bathyporeia guilliamsoniana	x	x	x	x		x		x								x	x										*BATYGUIL*
Bathyporeia pelagica															x											x	*BATYPELA*
Gammarus crinicornis													x														*GAMMCRIN*
Leucothoe incisa						x											x		x								*LEUTINCI*

Table A3 - 4b: Offshore area (part 2) and Coastal area, taxa presence

	Offshore area									Coastal zone																
Species	Off 28	Off 29	Off 30	Off 31	Off 32	Off 33	Off 34	Off 35	Off 36	Coa 01	Coa 02	Coa 03	Coa 04	Coa 06	Coa 07	Coa 08	Coa 09	Coa 10	Coa 11	Coa 12	Coa 13	Coa 14	Coa 15	Coa 16	Coa 17	Coa 18	Species code
Megaluropus agilis						x																				*MEGUAGIL*
Orchomenella nana																			x							*ORCENANA*
Pariambus typicus								x																		*PAIATYPI*
Perioculodes longimanus			x			x																				*PEROLONG*
Pontocrates altamarinus											x			x		x					x				x	*PONOALTA*
Pontocrates arcticus			x														x									*PONOARCT*
Pontocrates arenarius																										x	*PONOAREN*
Synchelidium maculatum						x					x																*SYNHMACU*
Unciola planipes	x																										*UNCOPLAN*
Urothoe																	x										*UROT*
Urothoe brevicornis				x	x		x														x						*UROTBREV*
Urothoe poseidonis			x	x			x			x	x	x	x	x		x	x	x	x				x				*UROTPOSE*
Crustacea, Cumacea																											
Diastylis bradyi										x																	*DIATBRAD*
Diastylis rugosa																	x										*DIATRUGO*
Monopseudocuma gilsoni																x											*PSEOGILS*
Pseudocuma simile	x								x																		*PSEOSIMI*
Crustacea, Decapoda																											
Corystes cassivelaunus			x																								*CORTCASS*
Crangon crangon					x																						*CRONCRAN*
Decapoda	x																										*DECA*
Processa modica						x																					*PROEMODI*
Thia scutellata		x				x																					*THIASCUT*
Crustacea, Mysida																											
Gastrosaccus	x																										*GASS*
Gastrosaccus spinifer					x				x													x					*GASSSPIN*
Mesopodopsis slabberi																							x				*MESOSLAB*
Schistomysis kervillei										x										x							*SCHSKERV*
Crustacea, Remaining																											
Tanaissus lilljeborgi									x																		*TANSLILL*
Mollusca, Bivalvia																											
Abra alba										x			x	x		x						x	x				*ABRAALBA*
Donax vittatus				x																							*DONXVITT*
Ensis																	x										*ENSI*
Ensis arcuatus																x											*ENSIARCU*
Ensis directus		x								x	x	x	x	x	x	x		x	x	x		x		x	x	x	*ENSIDIRE*
Goodallia triangularis		x																									*GOODTRIA*
Kurtiella bidentata					x					x			x			x						x	x				*KURTBIDE*
Lucinoma borealis						x																					*LUCNBORE*
Macoma balthica											x			x	x	x											*MACOBALT*
Petricola pholadiformis																						x					*PETRPHOL*
Spisula subtruncata											x																*SPISSUBT*
Tellimya ferruginosa		x	x	x	x					x	x	x		x			x						x				*TELYFERR*
Tellina fabula		x	x							x		x				x	x	x									*TELNFABU*
Tellina pygmaea	x								x																		*TELNPYGM*
Thracia papyracea		x																									*THRAPAPY*
Venerupis senegalensis																						x					*VENUSENE*
Mollusca, Gastropoda																											
Euspira pulchella	x																										*EUSRPULC*
Nassarius reticulatus												x					x										*NASARETI*
Echinodermata																											
Echinocardium cordatum			x		x	x	x			x	x	x		x			x					x	x		x		*ECHNCORD*
Echinocyamus pusillus									x																		*ECHYPUSI*
Ophiura albida									x			x															*OPHUALBI*
Ophiura ophiura																							x				*OPHUOPHI*
Bryozoa																											
Alcyonidium								x																			*ALCO*
Cnidaria																											
Clytia hemisphaerica				x																							*CLYIHEMI*
Hydractinia												x															*HYDC*
Totaal taxa	**16**	**20**	**17**	**13**	**14**	**22**	**9**	**9**	**9**	**18**	**19**	**19**	**20**	**14**	**4**	**23**	**27**	**16**	**14**	**9**	**4**	**18**	**18**	**6**	**11**	**6**	

Appendix 4

Density and biomass of species in 4 subareas

Dogger Bank (DOG),

Density and biomass of species

Density (n/m²)	DOG01		DOG02		DOG03		DOG04		DOG05		DOG06		DOG07	
Biomass (AFDW g/m²)	DOGGBK07		DOGGBK02		DOGGBK03		TERSLG235		DOGGBK04		DOGGBK05		DOGGBK08	
Soortcode	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²
Anthozoa														
EDWA									25.6	0.046			38.5	0.026
EDWACLAP			12.8	0.462			51.3	0.111						
Hydrozoa														
CAPA	12.8	0.401												
Platyhelminthes														
TURB									12.8	0.061				
Nemertea														
NEMR	12.8	0.036	12.8	0.064	25.6	0.031			76.9	0.024				
TUBNPOLY									12.8	0.010				
Phoronida														
PHOR			12.8	0.004	51.3	0.004	564.1	1.688	12.8	0.004	12.8	0.052	153.8	0.678
Polychaeta														
ARIIMINU											12.8	0.000		
CAITCAPI	12.8	0.013												
CAUEKILL													12.8	0.001
CHAZCHRI	12.8	0.003					12.8	0.036						
CLYMLANK							12.8	0.004					12.8	0.283
DIPOGLAU									38.5	0.384				
ETEOLONG							12.8	0.030	12.8	0.038				
EUMISANG			12.8	0.244										
GLYINORD	12.8	0.005	12.8	0.273	25.6	0.013	38.5	0.273	64.1	0.116	12.8	0.028		
GONAMACU	38.5	0.043	64.1	0.013	25.6	0.022	51.3	0.013	205.1	0.367	76.9	0.267	51.3	0.142
LANCCONC					12.8	0.108								
(blank)													12.8	0.000
MAGEALLE	38.5	0.364	12.8	0.387	12.8	0.048								
MAGEFILI	320.5	0.109	666.7	0.022	243.6	0.069	166.7	0.043	641.0	0.136	346.2	0.083		
MAGEJOHN	115.4	0.219	12.8	0.051	38.5	0.025	25.6	0.051	25.6	0.028	64.1	0.039		
MALD							12.8	0.013						
MALM							12.8	0.013						
NEPY			51.3	0.409			76.9	0.409	12.8	0.013			51.3	0.059
NEPYASSI	25.6	0.202	12.8	0.013	12.8	0.039	12.8	0.374	38.5	0.014				
NEPYCIRR	51.3	0.084			51.3	0.039	12.8	0.091			192.3	0.165		
NEPYHOMB					25.6	0.068								
NOTMLATE									12.8	0.290			12.8	0.032
OPHELIMA	12.8	0.008			25.6	0.012	12.8	0.056						
OWENFUSI			12.8	0.067	12.8	0.019	12.8	0.067			217.9	0.858	192.3	0.274
PECTAURI									12.8	0.022				
PHOEBALT							12.8	0.064						
PHYOMUCO					12.8	0.017			25.6	0.071				
PODKHELG	25.6	0.004	12.8	0.061	12.8	0.001	12.8	0.061						
POEOSERP	12.8	0.002							12.8	0.027				
SCOIBONN							12.8	0.610						
SCOSARMI	25.6	0.067	25.6	0.026	89.7	0.097			89.7	0.184			25.6	0.003
SIGLMATH	89.7	0.310	25.6	0.239	115.4	1.254	51.3	0.239	25.6	0.078	12.8	0.534	25.6	0.253
SPIODECO			38.5	2.051					12.8	0.002	12.8	0.000		
SPIOSYMP							12.8	0.013			12.8	0.006	38.5	0.007
SPIPBOMB	76.9	0.041	12.8	0.017	51.3	0.115	12.8	0.017	25.6	0.007	12.8	0.002	38.5	0.055

Density (n/m²)	DOG01		DOG02		DOG03		DOG04		DOG05		DOG06		DOG07	
Biomass (AFDW g/m²)	DOGGBK07		DOGGBK02		DOGGBK03		TERSLG235		DOGGBK04		DOGGBK05		DOGGBK08	
Soortcode	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²
STHELIMI	25.6	0.233	25.6	0.431					38.5	0.143				
Copepoda														
Copepoda													12.8	0.126
Crustacea, Amphipoda														
ACIDOBES			12.8	0.004	12.8	0.004								
AMPEBREV			12.8	0.004										
ARGIHAMA	12.8	0.004												
ATYUFALC					12.8	0.004								
BATY			102.6	0.002			115.4	0.002			12.8	0.002	435.9	0.002
BATYELEG	115.4	0.004	51.3	0.004	128.2	0.004			76.9	0.004	89.7	0.004	166.7	0.004
BATYGUIL	89.7	0.005	128.2	0.005	102.6	0.005	115.4	0.005	89.7	0.005	51.3	0.005	294.9	0.005
BATYNANA	128.2	0.002			141.0	0.002	12.8	0.002	12.8	0.002	12.8	0.002	141.0	0.002
BATYTENU	12.8	0.004	51.3	0.004	102.6	0.004	12.8	0.004	38.5	0.004			38.5	0.004
HIPMDENT			12.8	0.004										
LEPMLONG									12.8	0.004				
LEUTINCI													25.6	0.005
ORCENANA	12.8	0.004							12.8	0.004				
PEROLONG	12.8	0.004			25.6	0.004	12.8	0.004	12.8	0.004			12.8	0.004
PONOARCT							12.8	0.004					25.6	0.004
SIPOKROY	25.6	0.004	12.8	0.004	38.5	0.004	51.3	0.004			12.8	0.004	38.5	0.004
UROT											12.8	0.002		
UROTPOSE	64.1	0.004	76.9	0.004	89.7	0.004	269.2	0.004			64.1	0.004	141.0	0.004
Crustacea, Cumacea														
DIATBRAD											12.8	0.003		
IPHITRIS													12.8	0.003
Crustacea, Decapoda														
EBALCRAN											12.8	7.051		
Mollusca, Bivalvia														
ABRAALBA									12.8	0.067				
ABRAPRIS	12.8	0.030	25.6	0.093	12.8	0.003	12.8	0.013	51.3	0.087				
BIVA			12.8	0.000										
CHAMSTRI	38.5	0.003			12.8	0.036			12.8	0.002				
CORUGIBB					12.8	0.002	25.6	0.033			12.8	0.004	12.8	0.066
DOSILUPI			12.8	0.003	25.6	0.037							12.8	0.001
ENSI	12.8	0.040												
ENSIENSI	12.8	0.333			12.8	2.934	25.6	7.230			12.8	4.557	25.6	5.026
GARIFERV													12.8	0.003
KURTBIDE					12.8	0.002	25.6	0.004					51.3	0.011
LUCNBORE													12.8	0.581
NUCLNITI									51.3	0.122				
PHAXPELL							12.8	0.469	12.8	0.096				
SPISSUBT													25.6	0.006
TELYFERR			12.8	0.009			25.6	0.015						
TELNFABU	64.1	0.157	141.0	0.293	25.6	0.001	166.7	0.567	166.7	0.031	102.6	0.319	230.8	0.241
TELNTENU							25.6	0.024					12.8	0.003
THRAPAPY	12.8	0.001	25.6	0.008	38.5	0.004	102.6	0.028	51.3	0.004	25.6	0.004	12.8	0.001
THYSFLEX			12.8	0.002					76.9	0.025				
Mollusca, Gastropoda														

Density (n/m^2) Biomass (AFDW g/m^2) **Soortcode**	**DOG01** **DOGGBK07** n/m^2	g/m^2	**DOG02** **DOGGBK02** n/m^2	g/m^2	**DOG03** **DOGGBK03** n/m^2	g/m^2	**DOG04** **TERSLG235** n/m^2	g/m^2	**DOG05** **DOGGBK04** n/m^2	g/m^2	**DOG06** **DOGGBK05** n/m^2	g/m^2	**DOG07** **DOGGBK08** n/m^2	g/m^2
ACTETORN			12.8	0.009										
CYLCCYLI									38.5	0.254				
EUSRPULC			12.8	0.034			12.8	0.085						
Echinodermata														
ACRNBRAC	294.9	0.019	12.8	0.000	25.6	0.010	38.5	0.000	243.6	0.018	12.8	0.017	76.9	0.250
AMPICHIA													12.8	0.012
AMPIFILI	12.8	0.003			12.8	0.017	12.8	0.033	12.8	0.012	12.8	0.070		
AMPD			89.7	0.001			38.5	0.001			25.6	0.000	12.8	0.000
ECHNCORD							25.6	25.64	12.8	3.846			12.8	7.792
ECHYPUSI			25.6	0.345	25.6	0.345			25.6	0.000				
Totals	**1859**	**2.8**	**1897**	**5.7**	**1718**	**5.4**	**2359**	**38.4**	**2462**	**6.7**	**1474**	**14.1**	**2538**	**16.0**

Oystergrounds (OYS),

Density and biomass of species

Density (n/m²)	OYS01		OYS02		OYS03		OYS04		OYS05		OYS06		OYS07	
Biomass (AFDW g/m²)	OESTGDN43		FRIESFT16		OESTGDN02		OESTGDN03		FRIESFT02		OESTGDN04		OESTGDN05	
Soortcode	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²
Anthozoa														
CERULLOY														
EDWA											25.6	0.047		
EDWACLAP														
Platyhelminthes														
TURB									12.8	0.013				
TUBNPOLY	12.8	0.013	25.6	0.028			51.3	0.015	12.8	0.127				
Nemertea														
NEMR			51.3	0.622			38.5	0.016	12.8	0.004	76.9	0.028	64.1	0.064
Phoronida														
PHOR	25.6	0.038	192.3	0.182					166.7	0.106	38.5	0.004	12.8	0.004
Oligochaeta														
LIMLSCAN														
OLCH														
Polychaeta														
ABYSHIBE									25.6	0.009				
AMPAFINM														
APHOACUL											12.8	0.001		
ATHOGUIL														
CHAEVARI	102.6	16.62					64.1	7.070			12.8	0.011	12.8	0.013
CHAZ														
CHAZCHRI	38.5	0.006					12.8	0.007						
CHAZSETO					25.6	0.080					64.1	0.053	51.3	0.080
CIRR														
CLYMLANK							38.5	1.178						
DIPOGLAU	25.6	0.102					38.5	0.060			12.8	0.013	12.8	0.233
ENIPKINB														
ETEOFOLI											12.8	0.010		
ETEOLONG														
EUMISANG			12.8	0.022										
EUNEELIT									12.8	0.048				
EUNELONG														
EUNONODO														
MYROOCUL														
GATTCIRR							12.8	0.239					25.6	0.013
GLYC														
GLYCALBA														
GLYCLAPI			12.8	0.005										
GLYCROUX														
GLYINORD							12.8	0.067			12.8	0.005		
GLYPKLAT	12.8	0.003												
GONAMACU			38.5	0.028			38.5	0.110			25.6	0.009		
HARM	12.8	0.007											25.6	0.013
LANCCONC							166.7	3.146			12.8	1.460		
LAONBAHU														
LEVIGRAC														
LUMI									12.8	0.048				

Density (n/m²)	OYS01		OYS02		OYS03		OYS04		OYS05		OYS06		OYS07	
Biomass (AFDW g/m²)	OESTGDN43		FRIESFT16		OESTGDN02		OESTGDN03		FRIESFT02		OESTGDN04		OESTGDN05	
Soortcode	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²
LUMILATR			25.6	0.009										
LYSLLOVE														
MAGEALLE							12.8	0.001			25.6	0.008		
MAGEFILI			12.8	0.000			628.2	0.182			115.4	0.022		
MAGEJOHN			25.6	0.010										
MALM											12.8	0.044		
MALMDARB					12.8	0.013	38.5	0.049			12.8	0.003		
MALMLJUN														
MALMMARP														
MALMMCIN														
MEDOFRAG	38.5	0.010							12.8	0.013				
MINUMULT														
NEPY	12.8	0.013			25.6	0.409	25.6	0.020			12.8	0.013	25.6	0.409
NEPYASSI											25.6	0.380		
NEPYCAEC														
NEPYCIRR														
NEPYHOMB	25.6	0.208	12.8	0.253	38.5	0.079	12.8	0.015	25.6	0.169	25.6	2.724	12.8	0.079
NEPYINCI									12.8	0.974				
NOTMLATE			12.8	0.038	25.6	0.387								
OPHELIMA														
OPHLACUM					12.8	0.013								
OPHRFLEX	38.5	0.275	12.8	0.090			12.8	0.013	25.6	0.091				
OWENFUSI	12.8	0.013					12.8	0.002	12.8	0.013				
PECTAURI	38.5	0.010	12.8	0.064			12.8	0.038	12.8	0.005				
PHOEBALT	153.8	0.076			51.3	0.064	12.8	0.002	25.6	0.008	192.3	0.044	25.6	0.064
PHYOGROE														
PHYOMUCO														
PHYOROSE			25.6	0.004										
PODKHELG							12.8	0.010	38.5	0.057				
POEOSERP	12.8	0.043	12.8	0.008					25.6	0.010				
POCH														
POYGAPPE														
POLHCRAS														
PRIO													12.8	0.013
PRIOCIRR														
SCALINFL														
SCOIBONN														
SCOSARMI	64.1	0.035			12.8	0.026	51.3	0.075			217.9	0.177		
SIGLMATH							141.0	2.082						
SPIODECO														
SPIOSYMP							25.6	0.008						
SPIPBOMB			51.3	0.013			89.7	0.098			25.6	0.057		
SPIPKROY														
STHELIMI					25.6	0.431	12.8	0.011						
TERSSTRO														
TRIHROSE														
Sipuncula														
SIPU													12.8	0.046

Density (n/m²)	OYS01		OYS02		OYS03		OYS04		OYS05		OYS06		OYS07	
Biomass (AFDW g/m²)	OESTGDN43		FRIESFT16		OESTGDN02		OESTGDN03		FRIESFT02		OESTGDN04		OESTGDN05	
Soortcode	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²
Crustacea, Amphipoda														
ABLUOBTU														
AMPEBREV	12.8	0.004			12.8	0.004	12.8	0.004						
AMPETENU					38.5	0.004								
ARGIHAMA														
BATYELEG			12.8	0.004										
BATYGUIL														
BATYTENU							12.8	0.004			12.8	0.004		
HARPANTE	51.3	0.008	89.7	0.004	51.3	0.004			12.8	0.004	12.8	0.004	76.9	0.004
HARPPECT														
HIPMDENT														
LEUTINCI							25.6	0.005						
LEUTLILL														
LEUTPROC														
MEDIAFFI													12.8	0.003
ORCENANA											12.8	0.004		
PAIATYPI	12.8	0.004												
PEROLONG							12.8	0.004			12.8	0.004	38.5	0.004
PONOARCT														
UROTELEG														
UROTPOSE														
Crustacea, Decapoda														
CALN														
CALNSUBT	38.5	0.003	76.9	3.728	12.8	0.003	12.8	0.010	89.7	0.003	12.8	3.416	25.6	0.003
CORTCASS														
EBALCRAN														
GONLRHOM														
PROEMOMO														
PROENOHO													12.8	0.214
UPOG														
UPOGDELT														
UPOGSTEL														
Crustacea, Isopoda														
IONETHOR			12.8	0.013										
NATTBORE														
PSEIBORE													12.8	9.635
Crustacea, Mysida														
HETMMICR														
SCHS														
Crustacea, Remaining														
DIATBRAD														
DIATLAEV													12.8	0.011
EUDOEMAR														
EUDOTRUN	12.8	0.003									12.8	0.003	12.8	0.003
EUDRDEFO														
IPHITRIS														
TANOGRAC														

Density (n/m^2)	OYS01		OYS02		OYS03		OYS04		OYS05		OYS06		OYS07	
Biomass (AFDW g/m^2)	OESTGDN43		FRIESFT16		OESTGDN02		OESTGDN03		FRIESFT02		OESTGDN04		OESTGDN05	
Soortcode	n/m^2	g/m^2	n/m^2	g/m^2	n/m^2	g/m^2	n/m^2	g/m^2	n/m^2	g/m^2	n/m^2	g/m^2	n/m^2	g/m^2
Mollusca, Bivalvia														
ABRAALBA							25.6	0.001						
ABRANITI	12.8	0.003												
ABRAPRIS											12.8	0.006		
ARCTISLA	12.8	0.003												
BIVA														
CHAMSTRI	12.8	0.159												
CORUGIBB	153.8	0.088					12.8	0.009	25.6	0.009	12.8	0.010	12.8	0.010
DOSILUPI					12.8	0.047	12.8	0.060			12.8	0.110		
ENSI														
ENSIENSI							12.8	5.464						
GARIFERV							12.8	0.001						
KURTBIDE	423.1	0.035	12.8	0.003	12.8	0.001			12.8	0.000	38.5	0.008	25.6	0.004
LEPNSQUA														
LUCNBORE														
MACTSTUL							12.8	0.003						
MYSAUNDA														
NUCLNITI	166.7	0.047	38.5	0.016			128.2	0.334	12.8	0.002				
PHAXPELL			12.8	0.214	12.8	0.001								
SPHNBING					115.4	0.066								
SPISSUBT					12.8	0.006								
TELYFERR			12.8	0.002	12.8	0.011	25.6	0.033						
TELYTENE														
TELNFABU							51.3	0.004						
TELNTENU														
THRACONV					12.8	5.159								
THRAPAPY							25.6	0.049						
THRAPUBE														
THYSFLEX	12.8	0.008					256.4	0.192			25.6	0.032		
Mollusca, Gastropoda														
CYLCCYLI	115.4	0.099			25.6	0.004	12.8	0.013	38.5	0.020			38.5	0.013
EUSRPULC	12.8	0.171					12.8	0.029						
HYAAVITR	51.3	0.014							76.9	0.019				
OENOTURR							25.6	0.055						
TURRCOMM														
Echinodermata														
ACRNBRAC														
AMPI														
AMPIFILI	2346	4.924	12.8	0.006	1051	0.033			141.0	0.308	1179	5.687	833.3	0.033
AMPD														
BRIPLYRI					25.6	5.884								
ECHNCORD	25.6	0.052	12.8	3.846			12.8	3.846			12.8	3.846		
OPHU	12.8	0.006												
OPHUALBI														
Bryozoa														
TRTCFLAV														
Remaining														
ASTOIRRE														

Density (n/m^2) Biomass (AFDW g/m^2) **Soortcode**	**OYS01** **OESTGDN43** n/m^2 g/m^2	**OYS02** **FRIESFT16** n/m^2 g/m^2	**OYS03** **OESTGDN02** n/m^2 g/m^2	**OYS04** **OESTGDN03** n/m^2 g/m^2	**OYS05** **FRIESFT02** n/m^2 g/m^2	**OYS06** **OESTGDN04** n/m^2 g/m^2	**OYS07** **OESTGDN05** n/m^2 g/m^2
CEREMARG			12.8 0.064				
CHET							
ENPR							12.8 0.001
LEPYINHA							
	4115 23.1	**833 9.2**	**1654 12.8**	**2295 24.6**	**859 2.1**	**2346 18.2**	**1423 11.0**

Density (n/m²)	OYS08		OYS09		OYS10		OYS11		OYS12		OYS13		OYS14	
Biomass (AFDW g/m²)	FRIESFT03		FRIESFT04		OESTGDN06		FRIESFT05		OESTGDN07		OESTGDN08		OESTGDN09	
Soortcode	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²
Anthozoa														
CERULLOY														
EDWA											89.7	0.180		
EDWACLAP														
Platyhelminthes														
TURB							12.8	0.061			12.8	0.061		
TUBNPOLY			51.3	0.062	12.8	0.001					25.6	0.011		
Nemertea														
NEMR	25.6	0.120	64.1	0.115	38.5	0.030	12.8	0.004			89.7	0.749		
Phoronida														
PHOR	####	0.004	115.4	0.004	12.8	0.014	####	1.021	38.5	0.021	12.8	0.004	115.4	0.044
Oligochaeta														
LIMLSCAN	25.6	0.001												
OLCH														
Polychaeta														
ABYSHIBE									25.6	0.006				
AMPAFINM														
APHOACUL			12.8	0.001							12.8	0.001		
ATHOGUIL	12.8	0.005					64.1	0.015						
CHAEVARI					12.8	7.999					25.6	4.603		
CHAZ														
CHAZCHRI											25.6	0.019		
CHAZSETO														
CIRR									12.8	0.002				
CLYMLANK														
DIPOGLAU	12.8	0.003	25.6	0.011	12.8	0.032					51.3	0.194		
ENIPKINB					12.8	0.368								
ETEOFOLI														
ETEOLONG														
EUMISANG														
EUNEELIT														
EUNELONG	25.6	0.635												
EUNONODO														
MYROOCUL	25.6	0.013	12.8	0.013										
GATTCIRR					12.8	0.231								
GLYC														
GLYCALBA							12.8	0.126						
GLYCLAPI														
GLYCROUX	12.8	1.130												
GLYINORD			25.6	0.055			12.8	0.273	12.8	0.004	25.6	0.005		
GLYPKLAT					12.8	0.006			12.8	0.013	12.8	0.003	38.5	0.015
GONAMACU	38.5	0.006	38.5	0.010			25.6	0.005	12.8	0.001	38.5	0.008		
HARM														
LANCCONC			12.8	2.203							12.8	0.458		
LAONBAHU													12.8	0.005
LEVIGRAC														
LUMI														

Density (n/m²)	OYS08		OYS09		OYS10		OYS11		OYS12		OYS13		OYS14	
Biomass (AFDW g/m²)	FRIESFT03		FRIESFT04		OESTGDN06		FRIESFT05		OESTGDN07		OESTGDN08		OESTGDN09	
Soortcode	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²
LUMILATR	51.3	0.119					102.6	0.328						
LYSLLOVE					12.8	0.735								
MAGEALLE											25.6	0.138		
MAGEFILI			128.2	0.057	38.5	0.004					38.5	0.012		
MAGEJOHN			282.1	0.370									12.8	0.014
MALM	12.8	0.205			12.8	0.019								
MALMDARB			12.8	0.054										
MALMLJUN					12.8	0.082								
MALMMARP														
MALMMCIN					12.8	0.031								
MEDOFRAG					25.6	0.003								
MINUMULT									12.8	0.002			64.1	0.016
NEPY	12.8	0.016					12.8	0.002	12.8	0.011			12.8	0.010
NEPYASSI			12.8	0.198										
NEPYCAEC														
NEPYCIRR														
NEPYHOMB					38.5	0.931			51.3	0.761	25.6	0.121	25.6	0.472
NEPYINCI							12.8	0.637					12.8	0.065
NOTMLATE	230.8	0.978					128.2	1.019					25.6	1.121
OPHELIMA			12.8	0.002										
OPHLACUM														
OPHRFLEX			12.8	0.073			12.8	0.067	12.8	0.097	12.8	0.140		
OWENFUSI	25.6	0.011					12.8	0.003						
PECTAURI													89.7	0.016
PHOEBALT	12.8	0.004			166.7	0.026					230.8	0.048	25.6	0.011
PHYOGROE														
PHYOMUCO					12.8	0.063								
PHYOROSE														
PODKHELG	64.1	0.009					12.8	0.061			12.8	0.020		
POEOSERP			51.3	0.043			12.8	0.082						
POCH			12.8	0.062										
POYGAPPE														
POLHCRAS														
PRIO														
PRIOCIRR									12.8	0.013				
SCALINFL											12.8	0.089		
SCOIBONN														
SCOSARMI			25.6	0.006	179.5	0.098					179.5	0.131		
SIGLMATH			76.9	0.823										
SPIODECO														
SPIOSYMP														
SPIPBOMB			51.3	0.171	12.8	0.006					12.8	0.002	12.8	0.000
SPIPKROY														
STHELIMI											51.3	0.037		
TERSSTRO									25.6	0.035			51.3	0.118
TRIHROSE														
Sipuncula														
SIPU														

Density (n/m²)	OYS08		OYS09		OYS10		OYS11		OYS12		OYS13		OYS14	
Biomass (AFDW g/m²)	FRIESFT03		FRIESFT04		OESTGDN06		FRIESFT05		OESTGDN07		OESTGDN08		OESTGDN09	
Soortcode	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²
THYNPROC	25.6	0.105					25.6	0.069						
Crustacea, Amphipoda														
ABLUOBTU														
AMPEBREV					12.8	0.004					12.8	0.004	12.8	0.004
AMPETENU					12.8	0.004					12.8	0.004	12.8	0.004
ARGIHAMA														
BATYELEG			38.5	0.004										
BATYGUIL														
BATYTENU	12.8	0.004												
HARPANTE			12.8	0.004	76.9	0.004			12.8	0.004	51.3	0.004	64.1	0.004
HARPPECT														
HIPMDENT					12.8	0.004								
LEUTINCI			12.8	0.005										
LEUTLILL														
LEUTPROC														
MEDIAFFI														
ORCENANA			12.8	0.004									12.8	0.004
PAIATYPI	12.8	0.004												
PEROLONG														
PONOARCT														
UROTELEG			25.6	0.004										
UROTPOSE														
Crustacea, Decapoda														
CALN									25.6	0.024				
CALNSUBT	89.7	0.003	64.1	0.477	12.8	0.003	51.3	0.579	89.7	0.003			166.7	0.003
CORTCASS											25.6	0.340		
EBALCRAN														
GONLRHOM														
PROEMOMO														
PROENOHO														
UPOG									12.8	0.043				
UPOGDELT	12.8	7.316					12.8	####						
UPOGSTEL							12.8	1.902						
Crustacea, Isopoda														
IONETHOR														
NATTBORE														
PSEIBORE									38.5	0.011				
Crustacea, Mysida														
HETMMICR							12.8	0.013						
SCHS														
Crustacea, Remaining														
DIATBRAD							25.6	0.003						
DIATLAEV														
EUDOEMAR											12.8	0.003		
EUDOTRUN			12.8	0.003									12.8	0.003
EUDRDEFO			12.8	0.003										
IPHITRIS	25.6	0.003	12.8	0.003										
TANOGRAC														

Density (n/m²)	OYS08		OYS09		OYS10		OYS11		OYS12		OYS13		OYS14	
Biomass (AFDW g/m²)	FRIESFT03		FRIESFT04		OESTGDN06		FRIESFT05		OESTGDN07		OESTGDN08		OESTGDN09	
Soortcode	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²
Mollusca, Bivalvia														
ABRAALBA	76.9	0.009	12.8	0.002										
ABRANITI							12.8	0.001						
ABRAPRIS														
ARCTISLA														
BIVA														
CHAMSTRI									12.8	0.001	12.8	1.537	25.6	0.001
CORUGIBB	166.7	0.323	38.5	0.021			25.6	0.010	25.6	0.007			474.4	0.064
DOSILUPI													25.6	0.002
ENSI														
ENSIENSI														
GARIFERV														
KURTBIDE	12.8	0.000			192.3	0.031	12.8	0.000	25.6	0.002	51.3	0.007	64.1	0.010
LEPNSQUA														
LUCNBORE														
MACTSTUL														
MYSAUNDA														
NUCLNITI			64.1	0.036	166.7	0.137	12.8	0.014			38.5	0.021	25.6	0.011
PHAXPELL														
SPHNBING														
SPISSUBT														
TELYFERR	12.8	0.021			38.5	0.053			25.6	0.014				
TELYTENE														
TELNFABU			12.8	0.006										
TELNTENU														
THRACONV														
THRAPAPY														
THRAPUBE														
THYSFLEX											64.1	0.017		
Mollusca, Gastropoda														
CYLCCYLI			12.8	0.024	64.1	0.035					64.1	0.141		
EUSRPULC	12.8	0.126												
HYAAVITR													0.0	0.002
OENOTURR														
TURRCOMM														
Echinodermata														
ACRNBRAC			12.8	0.002										
AMPI														
AMPIFILI	38.5	0.033	25.6	0.021	1500	5.089	102.6	0.338	359.0	2.354	1564	4.272	615.4	2.784
AMPD			38.5	0.002										
BRIPLYRI					25.6	6.659								
ECHNCORD	12.8	3.846			25.6	6.659			12.8	2.637	51.3	3.846		
OPHU														
OPHUALBI	115.4	1.038	25.6	0.003			51.3	0.978						
Bryozoa														
TRTCFLAV	12.8	0.000					12.8	0.000	12.8	0.000				
Remaining														
ASTOIRRE														

Density (n/m^2) Biomass (AFDW g/m^2) **Soortcode**	**OYS08** **FRIESFT03** n/m^2 g/m^2	**OYS09** **FRIESFT04** n/m^2 g/m^2	**OYS10** **OESTGDN06** n/m^2 g/m^2	**OYS11** **FRIESFT05** n/m^2 g/m^2	**OYS12** **OESTGDN07** n/m^2 g/m^2	**OYS13** **OESTGDN08** n/m^2 g/m^2	**OYS14** **OESTGDN09** n/m^2 g/m^2
CEREMARG							
CHET							
ENPR							
LEPYINHA	12.8 1.314						
	2487 17.4	**1487 5.0**	**2795 29.4**	**2321 21.7**	**897 6.1**	**3000 17.2**	**2013 4.8**

Density (n/m²)	OYS15		OYS16		OYS17		OYS18		OYS19		OYS20		OYS21	
Biomass (AFDW g/m²)	OESTGDN10		OESTGDN11		OESTGDN12		FRIESFT06		OESTGDN13		OESTGDN14		TERSLG50	
Soortcode	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²
Anthozoa														
CERULLOY														
EDWA			25.6	0.039	12.8	0.061								
EDWACLAP														
Platyhelminthes														
TURB											12.8	0.061	12.8	0.061
TUBNPOLY					12.8	0.004	25.6	0.031	25.6	0.064			12.8	0.005
Nemertea														
NEMR	12.8	3.926	38.5	0.064	64.1	0.026	89.7	0.064	38.5	0.047	12.8	0.005		
Phoronida														
PHOR			25.6	0.004	615.4	0.004	128.2	0.004	12.8	0.016	38.5	0.062	564.1	0.004
Oligochaeta														
LIMLSCAN														
OLCH														
Polychaeta														
ABYSHIBE														
AMPAFINM													12.8	0.013
APHOACUL														
ATHOGUIL					153.8	0.076					128.2	0.077	12.8	0.004
CHAEVARI									25.6	5.588				
CHAZ														
CHAZCHRI	25.6	0.011			38.5	0.008								
CHAZSETO											12.8	0.008		
CIRR														
CLYMLANK														
DIPOGLAU									51.3	0.170			12.8	0.018
ENIPKINB														
ETEOFOLI														
ETEOLONG														
EUMISANG														
EUNEELIT											12.8	0.073		
EUNELONG	12.8	0.619											12.8	1.066
EUNONODO	12.8	0.009												
MYROOCUL											25.6	0.007	89.7	0.004
GATTCIRR														
GLYC							12.8	0.017						
GLYCALBA														
GLYCLAPI									12.8	0.002			12.8	0.009
GLYCROUX														
GLYINORD			12.8	0.273			12.8	0.273	12.8	0.035			12.8	0.004
GLYPKLAT	25.6	0.006			12.8	0.003					12.8	0.002		
GONAMACU	12.8	0.012			25.6	0.004	51.3	0.013	25.6	0.009			76.9	0.032
HARM														
LANCCONC							12.8	0.488						
LAONBAHU														
LEVIGRAC														
LUMI			38.5	0.013							64.1	0.069		

Density (n/m²)	OYS15		OYS16		OYS17		OYS18		OYS19		OYS20		OYS21	
Biomass (AFDW g/m²)	OESTGDN10		OESTGDN11		OESTGDN12		FRIESFT06		OESTGDN13		OESTGDN14		TERSLG50	
Soortcode	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²
LUMILATR													128.2	0.368
LYSLLOVE													12.8	0.572
MAGEALLE			25.6	0.387	12.8	0.111			12.8	0.008				
MAGEFILI			12.8	0.022	51.3	0.015	64.1	0.022	12.8	0.003				
MAGEJOHN							269.2	0.051						
MALM									12.8	0.013				
MALMDARB														
MALMLJUN														
MALMMARP														
MALMMCIN														
MEDOFRAG									12.8	0.013				
MINUMULT														
NEPY			12.8	0.409							25.6	0.025		
NEPYASSI											12.8	0.433		
NEPYCAEC											25.6	0.516		
NEPYCIRR														
NEPYHOMB	64.1	0.161					25.6	0.079	12.8	0.037			12.8	0.138
NEPYINCI														
NOTMLATE	12.8	0.647									12.8	0.674	179.5	0.865
OPHELIMA											12.8	0.013		
OPHLACUM	12.8	0.027												
OPHRFLEX					64.1	0.364			12.8	0.340	25.6	0.044	25.6	0.130
OWENFUSI	25.6	0.001			12.8	0.013					12.8	0.013	38.5	0.046
PECTAURI			25.6	0.099	12.8	0.338								
PHOEBALT					38.5	0.010			76.9	0.021				
PHYOGROE														
PHYOMUCO														
PHYOROSE														
PODKHELG			12.8	0.061	12.8	0.003	25.6	0.061					25.6	0.048
POEOSERP											25.6	0.011		
POCH														
POYGAPPE					12.8	0.003								
POLHCRAS														
PRIO	89.7	0.023							12.8	0.002			12.8	0.001
PRIOCIRR											25.6	0.013		
SCALINFL														
SCOIBONN														
SCOSARMI					12.8	0.005	25.6	0.026	51.3	0.023				
SIGLMATH					38.5	0.619	25.6	0.239						
SPIODECO							12.8	2.051						
SPIOSYMP														
SPIPBOMB					25.6	0.010	89.7	0.017	12.8	0.014			25.6	0.006
SPIPKROY											25.6	0.005		
STHELIMI			25.6	0.431	12.8	0.123			25.6	0.432				
TERSSTRO	25.6	0.037									89.7	0.056	12.8	1.544
TRIHROSE											12.8	0.086		
Sipuncula														
SIPU														

Density (n/m²)	OYS15		OYS16		OYS17		OYS18		OYS19		OYS20		OYS21	
Biomass (AFDW g/m²)	OESTGDN10		OESTGDN11		OESTGDN12		FRIESFT06		OESTGDN13		OESTGDN14		TERSLG50	
Soortcode	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²
THYNPROC													12.8	0.133
Crustacea, Amphipoda														
ABLUOBTU														
AMPEBREV														
AMPETENU											128.2	0.004		
ARGIHAMA														
BATYELEG					25.6	0.004	38.5	0.004						
BATYGUIL														
BATYTENU							38.5	0.004						
HARPANTE	64.1	0.004	89.7	0.004	38.5	0.004			12.8	0.004	89.7	0.004		
HARPPECT									12.8	0.004				
HIPMDENT														
LEUTINCI														
LEUTLILL													12.8	0.005
LEUTPROC					12.8	0.005								
MEDIAFFI														
ORCENANA														
PAIATYPI														
PEROLONG														
PONOARCT														
UROTELEG					64.1	0.005								
UROTPOSE														
Crustacea, Decapoda														
CALN											25.6	0.024		
CALNSUBT	115.4	1.543	51.3	0.003	51.3	1.388	12.8	0.025	38.5	0.142	128.2	0.003	153.8	3.652
CORTCASS														
EBALCRAN														
GONLRHOM														
PROEMOMO														
PROENOHO														
UPOG														
UPOGDELT					12.8	0.064					12.8	0.043	12.8	2.775
UPOGSTEL	12.8	2.948									12.8	0.952		
Crustacea, Isopoda														
IONETHOR														
NATTBORE	51.3	1.158			12.8	0.520								
PSEIBORE	89.7	0.027	12.8	9.635	76.9	0.027			25.6	9.635	38.5	0.033	25.6	0.024
Crustacea, Mysida														
HETMMICR					12.8	0.021					12.8	0.021		
SCHS											12.8	0.013		
Crustacea, Remaining														
DIATBRAD									12.8	0.003				
DIATLAEV														
EUDOEMAR	51.3	0.003												
EUDOTRUN											12.8	0.003		
EUDRDEFO														
IPHITRIS														
TANOGRAC														

Density (n/m²)	OYS15		OYS16		OYS17		OYS18		OYS19		OYS20		OYS21	
Biomass (AFDW g/m²)	OESTGDN10		OESTGDN11		OESTGDN12		FRIESFT06		OESTGDN13		OESTGDN14		TERSLG50	
Soortcode	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²
Mollusca, Bivalvia														
ABRAALBA			12.8	0.021										
ABRANITI					12.8	0.002			12.8	0.001	38.5	0.050		
ABRAPRIS														
ARCTISLA											12.8	0.001		
BIVA														
CHAMSTRI														
CORUGIBB	12.8	0.008	12.8	0.041	12.8	0.032			25.6	0.012	128.2	0.026	179.5	0.170
DOSILUPI														
ENSI														
ENSIENSI														
GARIFERV											12.8	0.002		
KURTBIDE					51.3	0.007	25.6	0.005	192.3	0.012	12.8	0.001	38.5	0.015
LEPNSQUA											38.5	0.255		
LUCNBORE														
MACTSTUL														
MYSAUNDA														
NUCLNITI	12.8	0.042	38.5	0.006	12.8	0.002	12.8	0.112	38.5	0.014	12.8	0.004	12.8	0.007
PHAXPELL							12.8	0.001						
SPHNBING														
SPISSUBT														
TELYFERR			25.6	0.051	64.1	0.046	128.2	0.101	51.3	0.025				
TELYTENE											12.8	0.001		
TELNFABU							25.6	0.031						
TELNTENU														
THRACONV														
THRAPAPY							38.5	0.018						
THRAPUBE	12.8	21.87												
THYSFLEX			25.6	0.003					25.6	0.001				
Mollusca, Gastropoda														
CYLCCYLI					12.8	0.015			141.0	0.050			12.8	0.053
EUSRPULC					12.8	0.310			12.8	0.004			25.6	0.203
HYAAVITR			38.5	0.004					12.8	0.002			12.8	0.004
OENOTURR														
TURRCOMM			12.8	0.047										
Echinodermata														
ACRNBRAC					12.8	0.008								
AMPI														
AMPIFILI	205.1	0.789	12.8	0.033	923.1	3.592	12.8	0.033	2218	5.445	230.8	0.465	384.6	0.033
AMPD														
BRIPLYRI														
ECHNCORD					25.6	2.174	25.6	16.84	51.3	8.883	12.8	3.246		
OPHU											12.8	0.007		
OPHUALBI													12.8	0.002
Bryozoa														
TRTCFLAV					64.1	0.000							12.8	0.006
Remaining														
ASTOIRRE			12.8	0.001	12.8	0.008								

Density (n/m^2) Biomass (AFDW g/m^2) **Soortcode**	**OYS15** **OESTGDN10** n/m^2	g/m^2	**OYS16** **OESTGDN11** n/m^2	g/m^2	**OYS17** **OESTGDN12** n/m^2	g/m^2	**OYS18** **FRIESFT06** n/m^2	g/m^2	**OYS19** **OESTGDN13** n/m^2	g/m^2	**OYS20** **OESTGDN14** n/m^2	g/m^2	**OYS21** **TERSLG50** n/m^2	g/m^2
CEREMARG			25.6	0.064										
CHET														
ENPR														
LEPYINHA					12.8	0.029			25.6	0.337				
	962	**33.9**	**628**	**11.7**	**2782**	**10.1**	**1244**	**20.6**	**3372**	**31.4**	**1628**	**7.4**	**2218**	**12.0**

Density (n/m²)	OYS22		OYS23		OYS24		OYS25		OYS26		OYS27		OYS28	
Biomass (AFDW g/m²)	OESTGDN15		OESTGDN16		BREEVTN34		OESTGDN17		FRIESFT07		OESTGDN18		FRIESFT08	
Soortcode	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²
Anthozoa														
CERULLOY									12.8	0.013				
EDWA	12.8	0.028	25.6	0.022										
EDWACLAP														
Platyhelminthes														
TURB			12.8	0.005					12.8	0.061				
TUBNPOLY	12.8	0.002	12.8	0.031	12.8	0.008							141.0	0.128
Nemertea														
NEMR	51.3	0.122	25.6	0.007	12.8	0.206	38.5	0.064	25.6	0.013			76.9	0.071
Phoronida														
PHOR			12.8	0.040	576.9	0.017			256.4	0.004	128.2	0.008	12.8	0.004
Oligochaeta														
LIMLSCAN														
OLCH														
Polychaeta														
ABYSHIBE									25.6	0.112				
AMPAFINM														
APHOACUL														
ATHOGUIL									25.6	0.007				
CHAEVARI	25.6	9.932												
CHAZ														
CHAZCHRI			12.8	0.004										
CHAZSETO	25.6	0.017					64.1	0.080						
CIRR														
CLYMLANK														
DIPOGLAU			64.1	0.069									12.8	0.025
ENIPKINB														
ETEOFOLI														
ETEOLONG														
EUMISANG														
EUNEELIT														
EUNELONG					12.8	0.520							12.8	0.002
EUNONODO														
MYROOCUL														
GATTCIRR														
GLYC														
GLYCALBA							12.8	0.185						
GLYCLAPI									12.8	0.024				
GLYCROUX														
GLYINORD			12.8	0.010									76.9	0.117
GLYPKLAT	12.8	0.007					51.3	0.062			12.8	0.062		
GONAMACU	25.6	0.252	102.6	0.016	51.3	0.041			12.8	0.002			64.1	0.213
HARM														
LANCCONC					25.6	0.935								
LAONBAHU														
LEVIGRAC							38.5	0.001						
LUMI					12.8	0.013	25.6	0.013	38.5	0.168				

Density (n/m²)	OYS22		OYS23		OYS24		OYS25		OYS26		OYS27		OYS28	
Biomass (AFDW g/m²)	OESTGDN15		OESTGDN16		BREEVTN34		OESTGDN17		FRIESFT07		OESTGDN18		FRIESFT08	
Soortcode	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²
LUMILATR					38.5	0.152								
LYSLLOVE									12.8	0.349				
MAGEALLE														
MAGEFILI	89.7	0.034	230.8	0.059							76.9	0.022	141.0	0.037
MAGEJOHN					38.5	0.039							333.3	0.396
MALM														
MALMDARB														
MALMLJUN	25.6	0.233												
MALMMARP														
MALMMCIN														
MEDOFRAG			12.8	0.001					25.6	0.011				
MINUMULT	12.8	0.013					38.5	0.015						
NEPY	12.8	0.003	12.8	0.003	38.5	0.017	12.8	0.409						
NEPYASSI					38.5	1.021								
NEPYCAEC														
NEPYCIRR													12.8	0.004
NEPYHOMB	12.8	0.169			38.5	3.646	12.8	0.079			51.3	0.079	12.8	1.493
NEPYINCI									12.8	0.538				
NOTMLATE					64.1	0.012								
OPHELIMA													12.8	0.035
OPHLACUM														
OPHRFLEX	25.6	0.125							25.6	0.021			12.8	0.003
OWENFUSI														
PECTAURI							12.8	0.099	12.8	0.008	12.8	0.099		
PHOEBALT			64.1	0.079			51.3	0.128						
PHYOGROE														
PHYOMUCO														
PHYOROSE														
PODKHELG					38.5	0.051			12.8	0.005				
POEOSERP			38.5	0.078			12.8	0.082	25.6	0.005	12.8	0.082	102.6	0.062
POCH													12.8	0.062
POYGAPPE					12.8	0.003								
POLHCRAS														
PRIO									12.8	0.005	12.8	0.013		
PRIOCIRR														
SCALINFL														
SCOIBONN														
SCOSARMI	51.3	0.034	141.0	0.116									25.6	0.020
SIGLMATH	12.8	0.066			12.8	0.317							76.9	0.060
SPIODECO														
SPIOSYMP														
SPIPBOMB			12.8	0.064	102.6	0.205					64.1	0.017	25.6	0.033
SPIPKROY	12.8	0.003												
STHELIMI	12.8	0.045	38.5	0.038	12.8	0.033	12.8	0.431			25.6	0.431	12.8	0.204
TERSSTRO							25.6	0.126						
TRIHROSE														
Sipuncula														
SIPU														

Density (n/m²)	OYS22		OYS23		OYS24		OYS25		OYS26		OYS27		OYS28	
Biomass (AFDW g/m²)	OESTGDN15		OESTGDN16		BREEVTN34		OESTGDN17		FRIESFT07		OESTGDN18		FRIESFT08	
Soortcode	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²
THYNPROC														
Crustacea, Amphipoda														
ABLUOBTU					12.8	0.004								
AMPEBREV	12.8	0.004												
AMPETENU	25.6	0.004	12.8	0.004			38.5	0.004			12.8	0.004		
ARGIHAMA			12.8	0.004										
BATYELEG													25.6	0.004
BATYGUIL														
BATYTENU											12.8	0.004		
HARPANTE	64.1	0.004	51.3	0.005	25.6	0.004	166.7	0.008			166.7	0.004	38.5	0.004
HARPPECT														
HIPMDENT											12.8	0.004		
LEUTINCI														
LEUTLILL									12.8	0.005				
LEUTPROC														
MEDIAFFI														
ORCENANA					25.6	0.004								
PAIATYPI														
PEROLONG														
PONOARCT														
UROTELEG														
UROTPOSE														
Crustacea, Decapoda														
CALN														
CALNSUBT	38.5	0.003			64.1	8.533	76.9	0.006	38.5	0.730	25.6	0.003	64.1	0.713
CORTCASS							12.8	0.003						
EBALCRAN														
GONLRHOM														
PROEMOMO			25.6	0.214										
PROENOHO														
UPOG														
UPOGDELT														
UPOGSTEL														
Crustacea, Isopoda														
IONETHOR					25.6	0.090							12.8	0.013
NATTBORE							25.6	0.385						
PSEIBORE							51.3	####	25.6	9.635	12.8	9.635		
Crustacea, Mysida														
HETMMICR														
SCHS														
Crustacea, Remaining														
DIATBRAD	12.8	0.003	12.8	0.003					12.8	0.003	12.8	0.003		
DIATLAEV														
EUDOEMAR											12.8	0.003		
EUDOTRUN											12.8	0.003		
EUDRDEFO														
IPHITRIS														
TANOGRAC														

Density (n/m²)	OYS22		OYS23		OYS24		OYS25		OYS26		OYS27		OYS28	
Biomass (AFDW g/m²)	OESTGDN15		OESTGDN16		BREEVTN34		OESTGDN17		FRIESFT07		OESTGDN18		FRIESFT08	
Soortcode	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²
Mollusca, Bivalvia														
ABRAALBA			38.5	0.103	256.4	0.014								
ABRANITI														
ABRAPRIS			25.6	0.052										
ARCTISLA			12.8	0.003										
BIVA					12.8	0.001					12.8	0.001		
CHAMSTRI			12.8	0.023			12.8	0.342			12.8	0.003		
CORUGIBB	38.5	0.185					294.9	0.061	51.3	0.210	576.9	0.102		
DOSILUPI	12.8	1.442	12.8	0.078							12.8	0.003		
ENSI														
ENSIENSI														
GARIFERV														
KURTBIDE	76.9	0.007	12.8	0.001	12.8	0.004	25.6	0.004	25.6	0.003	12.8	0.001		
LEPNSQUA														
LUCNBORE														
MACTSTUL					12.8	0.041							12.8	0.732
MYSAUNDA														
NUCLNITI	89.7	0.069	166.7	0.560	128.2	0.078					115.4	0.151	51.3	0.036
PHAXPELL							12.8	0.019	12.8	0.513				
SPHNBING														
SPISSUBT														
TELYFERR			12.8	0.023	115.4	0.062					64.1	0.022	51.3	0.031
TELYTENE														
TELNFABU														
TELNTENU			12.8	0.003										
THRACONV														
THRAPAPY														
THRAPUBE														
THYSFLEX	64.1	0.034	589.7	0.325										
Mollusca, Gastropoda														
CYLCCYLI	12.8	0.030	38.5	0.075			12.8	0.002	25.6	0.011			12.8	0.030
EUSRPULC					12.8	0.018					12.8	0.047		
HYAAVITR														
OENOTURR														
TURRCOMM											12.8	0.032		
Echinodermata														
ACRNBRAC														
AMPI														
AMPIFILI	564.1	2.141	512.8	0.269	38.5	0.197	256.4	0.065	64.1	0.213	25.6	0.033	12.8	0.151
AMPD														
BRIPLYRI														
ECHNCORD			25.6	9.806	12.8	3.846	12.8	6.659			25.6	3.846	12.8	3.846
OPHU														
OPHUALBI									12.8	0.313				
Bryozoa														
TRTCFLAV														
Remaining														
ASTOIRRE														

Density (n/m^2) Biomass (AFDW g/m^2) **Soortcode**	**OYS22** **OESTGDN15** n/m^2 g/m^2	**OYS23** **OESTGDN16** n/m^2 g/m^2	**OYS24** **BREEVTN34** n/m^2 g/m^2	**OYS25** **OESTGDN17** n/m^2 g/m^2	**OYS26** **FRIESFT07** n/m^2 g/m^2	**OYS27** **OESTGDN18** n/m^2 g/m^2	**OYS28** **FRIESFT08** n/m^2 g/m^2
CEREMARG							
CHET				12.8 0.001			
ENPR							
LEPYINHA							
	1449 15.0	**2423 12.2**	**1897 20.1**	**1423 28.6**	**846 13.0**	**1564 14.7**	**1474 8.5**

Density (n/m²)	OYS29		OYS30		OYS31		OYS32		OYS33		OYS34		OYS35	
Biomass (AFDW g/m²)	OESTGDN19		BREEVTN02		FRIESFT09		FRIESFT10		OESTGDN20		FRIESFT11		FRIESFT12	
Soortcode	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²
Anthozoa														
CERULLOY	12.8	0.004												
EDWA														
EDWACLAP														
Platyhelminthes														
TURB	25.6	0.016			12.8	0.013			12.8	0.023				
TUBNPOLY	12.8	0.005	12.8	0.013	12.8	0.002	51.3	0.017	25.6	0.002			25.6	0.018
Nemertea														
NEMR	25.6	1.463	51.3	0.900	12.8	0.019	25.6	0.064	12.8	0.002	38.5	0.940	12.8	0.013
Phoronida														
PHOR	12.8	0.088	115.4	0.017	76.9	0.068	115.4	0.088	12.8	0.003	192.3	0.004	64.1	0.046
Oligochaeta														
LIMLSCAN														
OLCH							12.8	0.000						
Polychaeta														
ABYSHIBE														
AMPAFINM														
APHOACUL														
ATHOGUIL														
CHAEVARI	12.8	7.134							12.8	0.801				
CHAZ														
CHAZCHRI														
CHAZSETO	12.8	0.008							12.8	0.015				
CIRR														
CLYMLANK														
DIPOGLAU	102.6	0.242							12.8	0.006				
ENIPKINB														
ETEOFOLI														
ETEOLONG														
EUMISANG													25.6	0.019
EUNEELIT														
EUNELONG											25.6	0.000		
EUNONODO														
MYROOCUL														
GATTCIRR														
GLYC														
GLYCALBA											12.8	0.136		
GLYCLAPI			12.8	0.009							12.8	0.093		
GLYCROUX														
GLYINORD	12.8	0.022			12.8	0.013							12.8	0.013
GLYPKLAT														
GONAMACU	51.3	0.052	25.6	0.059	12.8	0.001	25.6	0.006			38.5	0.152	12.8	0.019
HARM														
LANCCONC	12.8	0.246											615.4	16.69
LAONBAHU														
LEVIGRAC														
LUMI					25.6	0.005	12.8	0.070						

Density (n/m²)	OYS29		OYS30		OYS31		OYS32		OYS33		OYS34		OYS35	
Biomass (AFDW g/m²)	OESTGDN19		BREEVTN02		FRIESFT09		FRIESFT10		OESTGDN20		FRIESFT11		FRIESFT12	
Soortcode	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²
LUMILATR			12.8	0.165							256.4	0.000		
LYSLLOVE			153.8	4.554										
MAGEALLE														
MAGEFILI	410.3	0.131			38.5	0.005							76.9	0.006
MAGEJOHN	51.3	0.019	12.8	0.013	12.8	0.012								
MALM														
MALMDARB														
MALMLJUN														
MALMMARP													12.8	0.033
MALMMCIN														
MEDOFRAG			128.2	0.013	25.6	0.002					166.7	0.346		
MINUMULT									89.7	0.014				
NEPY	38.5	0.030	25.6	0.003					12.8	0.004	12.8	3.646		
NEPYASSI	12.8	0.318												
NEPYCAEC														
NEPYCIRR														
NEPYHOMB	12.8	1.044	12.8	0.342	25.6	0.248			12.8	0.035	25.6	####	12.8	0.105
NEPYINCI							25.6	0.234						
NOTMLATE			25.6	0.052	12.8	0.154			12.8	0.313	12.8	0.003	12.8	0.476
OPHELIMA														
OPHLACUM														
OPHRFLEX					51.3	0.148	12.8	0.027			25.6	0.018	12.8	0.067
OWENFUSI														
PECTAURI					12.8	0.013								
PHOEBALT	38.5	0.007			12.8	0.013			12.8	0.003			12.8	0.013
PHYOGROE													12.8	0.681
PHYOMUCO														
PHYOROSE			12.8	0.013										
PODKHELG			12.8	0.026					12.8	0.013	102.6	0.016	25.6	0.003
POEOSERP	25.6	0.008			25.6	0.022					12.8	0.002		
POCH														
POYGAPPE														
POLHCRAS														
PRIO											12.8	0.000		
PRIOCIRR														
SCALINFL	12.8	0.111												
SCOIBONN														
SCOSARMI			25.6	0.011										
SIGLMATH	12.8	0.424											25.6	1.183
SPIODECO														
SPIOSYMP	12.8	0.003												
SPIPBOMB	38.5	0.016	243.6	0.070									12.8	0.002
SPIPKROY	12.8	0.012												
STHELIMI									12.8	0.189				
TERSSTRO														
TRIHROSE														
Sipuncula														
SIPU														

Density (n/m²) Biomass (AFDW g/m²) **Soortcode**	**OYS29** **OESTGDN19** n/m² g/m²	**OYS30** **BREEVTN02** n/m² g/m²	**OYS31** **FRIESFT09** n/m² g/m²	**OYS32** **FRIESFT10** n/m² g/m²	**OYS33** **OESTGDN20** n/m² g/m²	**OYS34** **FRIESFT11** n/m² g/m²	**OYS35** **FRIESFT12** n/m² g/m²
THYNPROC							
Crustacea, Amphipoda							
ABLUOBTU							
AMPEBREV							
AMPETENU	12.8 0.004				12.8 0.004		12.8 0.004
ARGIHAMA							
BATYELEG							12.8 0.004
BATYGUIL							
BATYTENU	12.8 0.004						
HARPANTE	25.6 0.004	12.8 0.004	64.1 0.004		25.6 0.004		38.5 0.004
HARPPECT							
HIPMDENT							
LEUTINCI							
LEUTLILL			12.8 0.005				12.8 0.005
LEUTPROC							
MEDIAFFI							
ORCENANA	12.8 0.004		12.8 0.004				
PAIATYPI							
PEROLONG							
PONOARCT							
UROTELEG							
UROTPOSE							
Crustacea, Decapoda							
CALN					25.6 0.024		
CALNSUBT	12.8 0.003	64.1 3.547	179.5 0.003	51.3 1.405	102.6 0.003	166.7 0.071	51.3 0.003
CORTCASS							25.6 0.003
EBALCRAN							
GONLRHOM					12.8 4.269		
PROEMOMO							
PROENOHO							
UPOG							
UPOGDELT				12.8 ####			
UPOGSTEL							
Crustacea, Isopoda							
IONETHOR						38.5 0.426	
NATTBORE			12.8 0.385				
PSEIBORE			64.1 9.635	25.6 0.018			25.6 9.635
Crustacea, Mysida							
HETMMICR							
SCHS							
Crustacea, Remaining							
DIATBRAD							
DIATLAEV		12.8 0.013					
EUDOEMAR					12.8 0.003		
EUDOTRUN		38.5 0.013				12.8 0.003	12.8 0.003
EUDRDEFO							
IPHITRIS		12.8 0.003					
TANOGRAC		38.5 0.013					

Density (n/m²)	OYS29		OYS30		OYS31		OYS32		OYS33		OYS34		OYS35	
Biomass (AFDW g/m²)	OESTGDN19		BREEVTN02		FRIESFT09		FRIESFT10		OESTGDN20		FRIESFT11		FRIESFT12	
Soortcode	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²
Mollusca, Bivalvia														
ABRAALBA	38.5	0.121	25.6	0.001	12.8	0.178					115.4	0.004		
ABRANITI														
ABRAPRIS														
ARCTISLA														
BIVA	25.6	0.005												
CHAMSTRI					51.3	3.436							25.6	0.003
CORUGIBB	12.8	0.002			1321	0.360			51.3	0.021	89.7	0.197	269.2	0.110
DOSILUPI													12.8	0.001
ENSI														
ENSIENSI														
GARIFERV	12.8	0.002												
KURTBIDE	12.8	0.004	666.7	0.134	12.8	0.001			51.3	0.006			217.9	0.030
LEPNSQUA														
LUCNBORE														
MACTSTUL														
MYSAUNDA	12.8	0.070												
NUCLNITI	141.0	0.462	269.2	1.207	282.1	0.114			12.8	0.002	76.9	0.062	205.1	0.128
PHAXPELL	25.6	0.478											12.8	0.288
SPHNBING														
SPISSUBT														
TELYFERR	76.9	0.050			38.5	0.056	25.6	0.025	25.6	0.042			102.6	0.068
TELYTENE														
TELNFABU	25.6	0.118												
TELNTENU														
THRACONV														
THRAPAPY														
THRAPUBE														
THYSFLEX	487.2	0.584												
Mollusca, Gastropoda														
CYLCCYLI					12.8	0.002			12.8	0.017				
EUSRPULC			12.8	0.004	12.8	0.085					12.8	0.064	12.8	0.002
HYAAVITR					25.6	0.008								
OENOTURR														
TURRCOMM									12.8	0.055				
Echinodermata														
ACRNBRAC														
AMPI														
AMPIFILI					89.7	0.408	51.3	0.138	1090	4.285	25.6	0.081	128.2	0.650
AMPD														
BRIPLYRI									12.8	0.001				
ECHNCORD	12.8	6.659			38.5	9.221	25.6	3.846			12.8	3.846	25.6	16.4
OPHU														
OPHUALBI											12.8	0.008	12.8	0.005
Bryozoa														
TRTCFLAV							12.8	0.000						
Remaining														
ASTOIRRE														

Density (n/m^2) Biomass (AFDW g/m^2) **Soortcode**	**OYS29** **OESTGDN19** n/m^2 g/m^2	**OYS30** **BREEVTN02** n/m^2 g/m^2	**OYS31** **FRIESFT09** n/m^2 g/m^2	**OYS32** **FRIESFT10** n/m^2 g/m^2	**OYS33** **OESTGDN20** n/m^2 g/m^2	**OYS34** **FRIESFT11** n/m^2 g/m^2	**OYS35** **FRIESFT12** n/m^2 g/m^2
CEREMARG							
CHET							
ENPR							
LEPYINHA							
	1936 20.0	**2038 11.2**	**2628 24.6**	**487 20.0**	**1731 10.2**	**1513 20.7**	**2205 46.7**

Density (n/m2)	OYS36		OYS37		OYS38		OYS39		OYS40		OYS41		OYS42	
Biomass (AFDW g/m2)	FRIESFT17		TERSLG100		BREEVTN26		OESTGDN22		OESTGDN21		OESTGDN23		ROTTMPT70	
Soortcode	n/m^2	g/m^2	n/m^2	g/m^2	n/m^2	g/m^2	n/m^2	g/m^2	n/m^2	g/m^2	n/m^2	g/m^2	n/m^2	g/m^2
Anthozoa														
CERULLOY														
EDWA							25.6	0.025	25.6	0.011	38.5	0.010	12.8	3.437
EDWACLAP											12.8	0.064		
Platyhelminthes														
TURB														
TUBNPOLY	12.8	0.014					12.8	0.140	12.8	0.012			12.8	0.054
Nemertea														
NEMR	38.5	0.940	25.6	0.020	12.8	0.003	38.5	0.808	12.8	0.241	64.1	0.013	102.6	0.086
Phoronida														
PHOR	153.8	0.004	179.5	0.004	12.8	0.004	51.3	0.084	128.2	0.004	25.6	0.122		
Oligochaeta														
LIMLSCAN														
OLCH														
Polychaeta														
ABYSHIBE	12.8	0.136												
AMPAFINM														
APHOACUL														
ATHOGUIL			38.5	0.039										
CHAEVARI							64.1	4.832						
CHAZ							12.8	0.005						
CHAZCHRI							38.5	0.027	38.5	0.006	12.8	0.109		
CHAZSETO			12.8	0.080										
CIRR			25.6	0.013										
CLYMLANK														
DIPOGLAU							12.8	0.005			141.0	0.119		
ENIPKINB							12.8	0.026						
ETEOFOLI														
ETEOLONG													38.5	0.005
EUMISANG									12.8	0.013				
EUNEELIT														
EUNELONG														
EUNONODO														
MYROOCUL	38.5	0.346					12.8	0.012						
GATTCIRR														
GLYC														
GLYCALBA														
GLYCLAPI	51.3	0.093												
GLYCROUX			25.6	0.017										
GLYINORD														
GLYPKLAT			12.8	0.062			12.8	0.005						
GONAMACU	76.9	0.000	12.8	0.013	64.1	0.026			25.6	0.005	179.5	0.103	38.5	0.119
HARM							12.8	0.005						
LANCCONC									25.6	3.178	12.8	0.013		
LAONBAHU			12.8	0.031										
LEVIGRAC			12.8	0.001			12.8	0.001						
LUMI	141.0	4.554												

Density (n/m2) Biomass (AFDW g/m2) **Soortcode**	**OYS36** **FRIESFT17** n/m² g/m²	**OYS37** **TERSLG100** n/m² g/m²	**OYS38** **BREEVTN26** n/m² g/m²	**OYS39** **OESTGDN22** n/m² g/m²	**OYS40** **OESTGDN21** n/m² g/m²	**OYS41** **OESTGDN23** n/m² g/m²	**OYS42** **ROTTMPT70** n/m² g/m²
LUMILATR							
LYSLLOVE	12.8 0.000			25.6 0.352			
MAGEALLE				12.8 0.038		12.8 0.013	
MAGEFILI			38.5 0.011	38.5 0.005	38.5 0.014	500.0 0.130	64.1 0.024
MAGEJOHN			102.6 0.032				217.9 0.409
MALM							
MALMDARB					12.8 0.030		
MALMLJUN							
MALMMARP							
MALMMCIN							
MEDOFRAG	166.7 0.000	12.8 0.013		12.8 0.013			
MINUMULT		179.5 0.015		51.3 0.006			
NEPY	38.5 0.179	12.8 0.409	25.6 0.012	12.8 0.040	25.6 0.006		
NEPYASSI					25.6 1.531	25.6 0.096	
NEPYCAEC						12.8 0.177	
NEPYCIRR							12.8 0.004
NEPYHOMB		25.6 0.079		12.8 0.042	12.8 0.271		
NEPYINCI	12.8 0.003	12.8 0.013					
NOTMLATE			25.6 2.355				
OPHELIMA			12.8 0.001				12.8 0.001
OPHLACUM							
OPHRFLEX	51.3 0.018			25.6 0.200		12.8 0.013	
OWENFUSI							
PECTAURI						25.6 0.211	
PHOEBALT				141.0 0.026		12.8 0.013	12.8 0.001
PHYOGROE							
PHYOMUCO							
PHYOROSE							12.8 0.004
PODKHELG	25.6 0.002		12.8 0.008		12.8 0.015		38.5 0.016
POEOSERP			12.8 0.016			25.6 0.037	12.8 0.013
POCH							
POYGAPPE							
POLHCRAS						12.8 0.150	
PRIO	12.8 0.078						
PRIOCIRR							
SCALINFL							
SCOIBONN							38.5 0.157
SCOSARMI			12.8 0.030	102.6 0.070	205.1 0.136	269.2 0.245	
SIGLMATH			12.8 0.503			12.8 0.008	12.8 0.074
SPIODECO							
SPIOSYMP							12.8 0.006
SPIPBOMB	12.8 0.005		12.8 0.003			12.8 0.037	153.8 0.284
SPIPKROY	12.8 0.121						
STHELIMI	12.8 0.000				51.3 0.109	12.8 0.042	
TERSSTRO		25.6 0.126					
TRIHROSE							
Sipuncula							
SIPU							

Density (n/m2) Biomass (AFDW g/m2) **Soortcode**	**OYS36** **FRIESFT17** n/m² g/m²	**OYS37** **TERSLG100** n/m² g/m²	**OYS38** **BREEVTN26** n/m² g/m²	**OYS39** **OESTGDN22** n/m² g/m²	**OYS40** **OESTGDN21** n/m² g/m²	**OYS41** **OESTGDN23** n/m² g/m²	**OYS42** **ROTTMPT70** n/m² g/m²
THYNPROC							
Crustacea, Amphipoda							
ABLUOBTU							
AMPEBREV						12.8 0.004	
AMPETENU	12.8 0.004	12.8 0.004		12.8 0.004		12.8 0.004	
ARGIHAMA							
BATYELEG						12.8 0.004	141.0 0.004
BATYGUIL							38.5 0.005
BATYTENU			25.6 0.004		25.6 0.004		
HARPANTE	12.8 0.004	51.3 0.004	12.8 0.004	64.1 0.005			
HARPPECT							
HIPMDENT							
LEUTINCI							
LEUTLILL	12.8 0.005	12.8 0.005					
LEUTPROC							
MEDIAFFI							
ORCENANA							
PAIATYPI							
PEROLONG							
PONOARCT							25.6 0.004
UROTELEG							
UROTPOSE							51.3 0.004
Crustacea, Decapoda							
CALN							
CALNSUBT	205.1 0.062	179.5 6.446		64.1 0.003			12.8 0.267
CORTCASS			12.8 0.453				
EBALCRAN			12.8 0.033				
GONLRHOM							
PROEMOMO							
PROENOHO							
UPOG							
UPOGDELT	25.6 0.426						
UPOGSTEL							
Crustacea, Isopoda							
IONETHOR							
NATTBORE							
PSEIBORE		25.6 0.037		12.8 0.005			
Crustacea, Mysida							
HETMMICR							
SCHS							
Crustacea, Remaining							
DIATBRAD	12.8 0.003				12.8 0.003		
DIATLAEV				12.8 0.002			
EUDOEMAR							
EUDOTRUN				12.8 0.003			
EUDRDEFO							
IPHITRIS			12.8 0.003				
TANOGRAC							

Density (n/m2) Biomass (AFDW g/m2) **Soortcode**	**OYS36** **FRIESFT17** n/m² g/m²	**OYS37** **TERSLG100** n/m² g/m²	**OYS38** **BREEVTN26** n/m² g/m²	**OYS39** **OESTGDN22** n/m² g/m²	**OYS40** **OESTGDN21** n/m² g/m²	**OYS41** **OESTGDN23** n/m² g/m²	**OYS42** **ROTTMPT70** n/m² g/m²
Mollusca, Bivalvia							
ABRAALBA	12.8 0.099	25.6 0.006		12.8 0.000		64.1 0.922	
ABRANITI							
ABRAPRIS						25.6 0.397	
ARCTISLA							
BIVA							
CHAMSTRI							
CORUGIBB	166.7 0.206	25.6 0.007		179.5 0.535			
DOSILUPI							
ENSI							12.8 0.230
ENSIENSI							
GARIFERV							
KURTBIDE	25.6 0.006			269.2 0.036	51.3 0.007		
LEPNSQUA							
LUCNBORE						25.6 0.979	
MACTSTUL							
MYSAUNDA							
NUCLNITI	12.8 0.021	12.8 0.004	333.3 0.583	102.6 0.071	38.5 0.159	12.8 0.142	
PHAXPELL					12.8 0.040		
SPHNBING							
SPISSUBT			12.8 0.003				
TELYFERR			423.1 0.166				
TELYTENE							
TELNFABU			12.8 0.004			12.8 0.702	12.8 0.000
TELNTENU							
THRACONV							
THRAPAPY							153.8 0.075
THRAPUBE							
THYSFLEX						448.7 0.220	
Mollusca, Gastropoda							
CYLCCYLI		12.8 0.009		76.9 0.056		12.8 0.004	
EUSRPULC	12.8 0.034					12.8 0.015	
HYAAVITR				12.8 0.004			
OENOTURR							
TURRCOMM							
Echinodermata							
ACRNBRAC							
AMPI				12.8 0.013			
AMPIFILI	153.8 0.081	320.5 0.033		1013 4.315	38.5 0.396	153.8 0.009	
AMPD							
BRIPLYRI							
ECHNCORD			51.3 3.846	25.6 0.307	12.8 3.846		
OPHU			12.8 0.001				
OPHUALBI	38.5 0.182						
Bryozoa							
TRTCFLAV	12.8 0.000						
Remaining							
ASTOIRRE							

Density (n/m2) Biomass (AFDW g/m2) **Soortcode**	**OYS36** **FRIESFT17** n/m^2 g/m^2	**OYS37** **TERSLG100** n/m^2 g/m^2	**OYS38** **BREEVTN26** n/m^2 g/m^2	**OYS39** **OESTGDN22** n/m^2 g/m^2	**OYS40** **OESTGDN21** n/m^2 g/m^2	**OYS41** **OESTGDN23** n/m^2 g/m^2	**OYS42** **ROTTMPT70** n/m^2 g/m^2
CEREMARG							
CHET		12.8 0.001					
ENPR							
LEPYINHA							
	1603 7.6	**1321 7.5**	**1282 8.1**	**2641 12.1**	**859 10.0**	**2244 5.1**	**1256 5.3**

Offshore area (OFF),

Density and biomass of species

Density (n/m2) Biomass (AFDW g/m2) **Soortcode**	**OFF01** **FRIESFT13** n/m² g/m²	**OFF02** **WADDNKT07** n/m² g/m²	**OFF03** **WADDNKT02** n/m² g/m²	**OFF04** **FRIESFT14** n/m² g/m²	**OFF05** **FRIESFT15** n/m² g/m²	**OFF06** **BREEVTN03** n/m² g/m²	**OFF07** **BREEVTN04** n/m² g/m²
Anthozoa							
ACNI							
EDWA					12.8 1.951		
Nemertea							
NEMR	230.8 0.200		12.8 0.001	64.1 0.179	25.6 0.012		12.8 0.687
TUBNPOLY	141.0 0.102		12.8 0.013	102.6 0.215	12.8 0.027		12.8 0.066
Phoronida							
PHOR	576.9 0.468	51.3 0.022	948.7 0.685	76.9 0.194		320.5 0.069	
Oligochaeta							
GRANVIKI							
TUCODIAZ		12.8 0.013					
TUFI						12.8 0.013	
Polychaeta							
AONIPAUC						12.8 0.013	
ARIIMINU							
CAITCAPI							
CHAZCHRI	38.5 0.012	76.9 0.022	25.6 0.006				
CIRR			12.8 0.000				
ETEOFOLI							
ETEOLONG	179.5 0.042	12.8 0.003	25.6 0.019	38.5 0.081			
EUMISANG							
EUNELONG							
EXOGHEBE							12.8 0.002
EXOGNAID							
GLYC							
GLYCLAPI							
GLYCROUX				12.8 0.013			
GONAMACU			12.8 0.001	12.8 0.008	25.6 0.130		
LANC			12.8 0.001				
LANCCONC			12.8 0.978	12.8 0.100			
MAGEFILI	179.5 0.053	230.8 0.078	320.5 0.147	256.4 0.122	153.8 0.045		115.4 0.149
MAGEJOHN	2846 4.452	6679 11.5	2577 5.389	487.2 0.790	256.4 0.365		179.5 0.633
MAGEMIRA							
MALMDARB			12.8 0.010				
MEDOFRAG		12.8 0.000	38.5 0.007				
MYRAPROL					25.6 0.001		
NEPY	38.5 0.045	12.8 0.003		64.1 0.032		64.1 0.162	
NEPYASSI				12.8 2.472			
NEPYCAEC							
NEPYCIRR					12.8 0.003		12.8 0.063
NEPYHOMB		38.5 3.166	25.6 0.121			76.9 0.817	
NOTMLATE			12.8 2.444	76.9 5.860			25.6 4.135
OPHELIMA					12.8 0.001	12.8 0.013	
OWENFUSI				38.5 0.011	38.5 0.005		
PARSFULG							
PHYOMUCO			12.8 0.019				
PHYOROSE				12.8 0.005			

Density (n/m2) Biomass (AFDW g/m2) **Soortcode**	**OFF01** **FRIESFT13** n/m² g/m²	**OFF02** **WADDNKT07** n/m² g/m²	**OFF03** **WADDNKT02** n/m² g/m²	**OFF04** **FRIESFT14** n/m² g/m²	**OFF05** **FRIESFT15** n/m² g/m²	**OFF06** **BREEVTN03** n/m² g/m²	**OFF07** **BREEVTN04** n/m² g/m²
PHYC						12.8 0.013	
PISOREMO							
PODKHELG	38.5 0.012			51.3 0.042			
POEOSERP							
POCH							
POLC						51.3 0.013	
POYGAPPE							
SCOIBONN							
SCOISQUA							
SCOSARMI	25.6 0.046	115.4 0.134	38.5 0.073		12.8 0.007		
SIGLMATH	76.9 1.157	12.8 0.227	25.6 1.413	12.8 0.001	76.9 0.704		12.8 0.159
SPIODECO			25.6 0.001	12.8 0.002			
SPIOGONI						12.8 0.002	
SPIOMART		25.6 0.009					
SPIOSYMP							
SPIPBOMB	89.7 0.349		192.3 0.240	192.3 0.074		12.8 0.003	153.8 0.085
STHELIMI					25.6 0.121		
STREPTER							
SYLSGRAC							
TRAVFORB							
Crustacea, Amphipoda							
ATYUFALC		12.8 0.004					
ATYUSWAM							
BATY	89.7 0.002						
BATYELEG			25.6 0.004		12.8 0.004	38.5 0.004	
BATYGUIL	25.6 0.005						
BATYTENU	12.8 0.004			51.3 0.004			
LEUTINCI	38.5 0.005				12.8 0.005		
MEGUAGIL	12.8 0.004						
PAIATYPI							
PEROLONG			12.8 0.004				
PONOARCT					12.8 0.004		
SIPOKROY				12.8 0.004			
SYNHMACU							
UNCOPLAN							
UROT		25.6 0.002					
UROTBREV							
UROTPOSE	38.5 0.004	#### 0.004	51.3 0.004		89.7 0.004	12.8 0.004	551.3 0.004
Crustacea, Decapoda							
CALNSUBT							
CORTCASS							
CRONCRAN	12.8 0.006						
DECA							
PAGUBERN							
CALNTYRR							
PROEMODI							
THIASCUT							
Crustacea, Isopoda							

Density (n/m2) Biomass (AFDW g/m2) **Soortcode**	**OFF01** **FRIESFT13** n/m² g/m²	**OFF02** **WADDNKT07** n/m² g/m²	**OFF03** **WADDNKT02** n/m² g/m²	**OFF04** **FRIESFT14** n/m² g/m²	**OFF05** **FRIESFT15** n/m² g/m²	**OFF06** **BREEVTN03** n/m² g/m²	**OFF07** **BREEVTN04** n/m² g/m²
PSEIHYND							
Crustacea, Mysida							
GASS							
GASSSPIN				12.8 0.013			
Crustacea, Remaining							
PSEOGILS		12.8 0.001				12.8 0.013	
PSEOSIMI						25.6 0.013	12.8 0.001
TANSLILL						12.8 0.013	
BALACREN							
Mollusca, Bivalvia							
ABRAALBA			12.8 0.112				
ABRAPRIS							
CHAMSTRI		12.8 0.342		12.8 0.006			12.8 0.342
CORUGIBB				115.4 0.268			
DONXVITT	12.8 0.030						
ENSIDIRE							
GOODTRIA							
KURTBIDE	12.8 1.817						
LUCNBORE							
NUCLNITI				25.6 0.199			
SPISSUBT		12.8 0.656					
TELYFERR	64.1 0.079	589.7 0.347	89.7 0.073	12.8 0.004	12.8 0.011		12.8 0.011
TELNFABU	64.1 0.070	141.0 2.750	205.1 0.753	25.6 0.064			153.8 3.024
TELNPYGM							
THRAPAPY	12.8 0.002						
Mollusca, Gastropoda							
EUSRPULC					12.8 0.018		12.8 0.047
Echinodermata							
AMPI							
ECHNCORD		38.5 32.90	38.5 27.25	25.6 2.662	64.1 3.846		12.8 3.846
ECHYPUSI							
OPHUALBI							12.8 0.060
Hydrozoa							
ALCO							
ELECPILO							
CLYIHEMI							
HYDCECHI							
Totals	**4859 9.0**	**9705 52.2**	**4795 39.8**	**1833 13.4**	**910 7.3**	**692 1.2**	**1321 13.3**

Density (n/m2)	OFF08		OFF09		OFF10		OFF11		OFF12		OFF13		OFF15	
Biomass (AFDW g/m2)	BREEVTN05		BREEVTN06		BREEVTN07		BREEVTN08		BREEVTN09		BREEVTN10		BREEVTN12	
Soortcode	n/m^2	g/m^2	n/m^2	g/m^2	n/m^2	g/m^2	n/m^2	g/m^2	n/m^2	g/m^2	n/m^2	g/m^2	n/m^2	g/m^2
Anthozoa														
ACNI	12.8	0.665												
EDWA														
Nemertea														
NEMR	12.8	0.070			12.8	0.228					12.8	0.013	12.8	0.006
TUBNPOLY			12.8	0.010	51.3	1.028	51.3	0.041						
Phoronida														
PHOR	12.8	0.014			397.4	0.004								
Oligochaeta														
GRANVIKI														
TUCODIAZ														
TUFI														
Polychaeta														
AONIPAUC														
ARIIMINU									12.8	0.004			89.7	0.011
CAITCAPI					12.8	0.013								
CHAZCHRI					51.3	0.036	51.3	0.015	76.9	0.032			25.6	0.006
CIRR														
ETEOFOLI											12.8	0.010		
ETEOLONG														
EUMISANG														
EUNELONG							25.6	0.471						
EXOGHEBE					12.8	0.002								
EXOGNAID														
GLYC													12.8	0.006
GLYCLAPI														
GLYCROUX														
GONAMACU					12.8	0.003	25.6	0.059	38.5	0.220	25.6	0.214	12.8	0.093
LANC														
LANCCONC														
MAGEFILI			25.6	0.005										
MAGEJOHN	51.3	0.104	128.2	0.478					12.8	0.080	12.8	0.003		
MAGEMIRA							89.7	0.057						
MALMDARB														
MEDOFRAG														
MYRAPROL														
NEPY									12.8	0.013			25.6	0.062
NEPYASSI														
NEPYCAEC														
NEPYCIRR			25.6	0.146	38.5	0.334			76.9	0.293	64.1	0.367	25.6	0.214
NEPYHOMB														
NOTMLATE	64.1	4.259					217.9	3.364	64.1	0.734				
OPHELIMA									12.8	0.013				
OWENFUSI														
PARSFULG														
PHYOMUCO											12.8	0.018		
PHYOROSE														

Density (n/m2) Biomass (AFDW g/m2) **Soortcode**	**OFF08** **BREEVTN05** n/m² g/m²	**OFF09** **BREEVTN06** n/m² g/m²	**OFF10** **BREEVTN07** n/m² g/m²	**OFF11** **BREEVTN08** n/m² g/m²	**OFF12** **BREEVTN09** n/m² g/m²	**OFF13** **BREEVTN10** n/m² g/m²	**OFF15** **BREEVTN12** n/m² g/m²
PHYC							
PISOREMO							
PODKHELG				89.7 0.018	25.6 0.009		
POEOSERP							
POCH							
POLC							
POYGAPPE							
SCOIBONN				25.6 0.044		12.8 0.100	
SCOISQUA							
SCOSARMI		38.5 0.220	51.3 0.306		12.8 0.008		
SIGLMATH	12.8 0.927						
SPIODECO		12.8 0.003					
SPIOGONI							12.8 0.001
SPIOMART							
SPIOSYMP					12.8 0.002		
SPIPBOMB		38.5 0.032	51.3 0.633	25.6 0.001	25.6 0.012		
STHELIMI							
STREPTER							
SYLSGRAC							
TRAVFORB							
Crustacea, Amphipoda							
ATYUFALC							
ATYUSWAM							
BATY							
BATYELEG	12.8 0.004	243.6 0.004	153.8 0.004	64.1 0.004	12.8 0.004		
BATYGUIL	12.8 0.005	269.2 0.005	12.8 0.005			25.6 0.005	12.8 0.005
BATYTENU				12.8 0.004			
LEUTINCI			25.6 0.005				
MEGUAGIL		25.6 0.004					
PAIATYPI							
PEROLONG							
PONOARCT		12.8 0.004				12.8 0.004	
SIPOKROY							
SYNHMACU			12.8 0.004				
UNCOPLAN							
UROT	12.8 0.002						
UROTBREV		64.1 0.005	12.8 0.005		12.8 0.005	12.8 0.005	
UROTPOSE	551.3 0.004	102.6 0.004		12.8 0.004	12.8 0.004		128.2 0.004
Crustacea, Decapoda							
CALNSUBT				25.6 0.003			
CORTCASS				25.6 0.003			
CRONCRAN							
DECA							
PAGUBERN							12.8 5.256
CALNTYRR			12.8 0.002				
PROEMODI			12.8 0.231				
THIASCUT							
Crustacea, Isopoda							

Density (n/m2) Biomass (AFDW g/m2) **Soortcode**	**OFF08** **BREEVTN05** n/m² g/m²	**OFF09** **BREEVTN06** n/m² g/m²	**OFF10** **BREEVTN07** n/m² g/m²	**OFF11** **BREEVTN08** n/m² g/m²	**OFF12** **BREEVTN09** n/m² g/m²	**OFF13** **BREEVTN10** n/m² g/m²	**OFF15** **BREEVTN12** n/m² g/m²
PSEIHYND							12.8 0.008
Crustacea, Mysida							
GASS							
GASSSPIN							
Crustacea, Remaining							
PSEOGILS							
PSEOSIMI		25.6 0.001					
TANSLILL							
BALACREN		51.3 0.001					
Mollusca, Bivalvia							
ABRAALBA							
ABRAPRIS					12.8 0.707		
CHAMSTRI							
CORUGIBB							
DONXVITT					12.8 0.011		
ENSIDIRE							
GOODTRIA							
KURTBIDE							
LUCNBORE							
NUCLNITI							
SPISSUBT							
TELYFERR		12.8 0.017	12.8 0.012	12.8 0.028	76.9 0.049		
TELNFABU	64.1 1.108	12.8 0.030		51.3 0.556	25.6 0.004	25.6 0.145	12.8 0.008
TELNPYGM							
THRAPAPY							
Mollusca, Gastropoda							
EUSRPULC			38.5 0.138	38.5 0.464	12.8 0.003		12.8 0.023
Echinodermata							
AMPI					12.8 0.001		
ECHNCORD		51.3 3.846	25.6 6.102	12.8 8.405	51.3 16.25		25.6 8.664
ECHYPUSI					12.8 0.000		
OPHUALBI							
Hydrozoa							
ALCO							
ELECPILO		12.8 0.000					
CLYIHEMI							
HYDCECHI		12.8 0.000					12.8 0.000
Totals	**821 7.2**	**1179 4.8**	**1013 9.1**	**859 13.5**	**641 18.5**	**231 0.9**	**449 14.4**

Density (n/m²)	OFF16		OFF17		OFF18		OFF20		OFF21		OFF22		OFF23	
Biomass (AFDW g/m²)	BREEVTN13		BREEVTN14		BREEVTN15		BREEVTN17		BREEVTN18		BREEVTN19		BREEVTN20	
Soortcode	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²
Anthozoa														
ACNI														
EDWA														
Nemertea														
NEMR									25.6	0.101			25.6	0.221
TUBNPOLY													51.3	0.046
Phoronida														
PHOR											38.5	0.004	628.2	0.822
Oligochaeta														
GRANVIKI														
TUCODIAZ														
TUFI														
Polychaeta														
AONIPAUC														
ARIIMINU					12.8	0.013	38.5	0.011			115.4	0.022		
CAITCAPI														
CHAZCHRI			12.8	0.014										
CIRR														
ETEOFOLI														
ETEOLONG														
EUMISANG													25.6	0.007
EUNELONG														
EXOGHEBE									51.3	0.013				
EXOGNAID					12.8	0.013								
GLYC									12.8	0.020				
GLYCLAPI														
GLYCROUX														
GONAMACU														
LANC														
LANCCONC													51.3	5.526
MAGEFILI														
MAGEJOHN	25.6	0.197												
MAGEMIRA														
MALMDARB													38.5	0.070
MEDOFRAG														
MYRAPROL														
NEPY					25.6	0.030			38.5	0.230				
NEPYASSI														
NEPYCAEC														
NEPYCIRR	115.4	0.269	25.6	0.041			64.1	0.222	12.8	0.237	128.2	0.638	25.6	0.001
NEPYHOMB														
NOTMLATE											12.8	0.133		
OPHELIMA											25.6	0.017		
OWENFUSI														
PARSFULG	12.8	0.013	76.9	0.018	25.6	0.009	25.6	0.014						
PHYOMUCO													25.6	0.041
PHYOROSE														

Density (n/m^2)	OFF16		OFF17		OFF18		OFF20		OFF21		OFF22		OFF23	
Biomass (AFDW g/m^2)	BREEVTN13		BREEVTN14		BREEVTN15		BREEVTN17		BREEVTN18		BREEVTN19		BREEVTN20	
Soortcode	n/m^2	g/m^2	n/m^2	g/m^2	n/m^2	g/m^2	n/m^2	g/m^2	n/m^2	g/m^2	n/m^2	g/m^2	n/m^2	g/m^2
PHYC														
PISOREMO			12.8	0.013										
PODKHELG														
POEOSERP														
POCH														
POLC														
POYGAPPE							12.8	0.013						
SCOIBONN	89.7	0.913					38.5	0.357			38.5	0.240		
SCOISQUA					12.8	0.096								
SCOSARMI			12.8	0.085	12.8	0.047							25.6	0.011
SIGLMATH														
SPIODECO											12.8	0.008	12.8	0.002
SPIOGONI			12.8	0.005										
SPIOMART														
SPIOSYMP														
SPIPBOMB	12.8	0.012					12.8	0.037	12.8	0.012	12.8	0.006		
STHELIMI														
STREPTER									51.3	0.005				
SYLSGRAC											12.8	0.013		
TRAVFORB											76.9	0.007		
Crustacea, Amphipoda														
ATYUFALC														
ATYUSWAM														
BATY														
BATYELEG													38.5	0.004
BATYGUIL									25.6	0.005	12.8	0.005	51.3	0.005
BATYTENU														
LEUTINCI														
MEGUAGIL											12.8	0.004		
PAIATYPI														
PEROLONG														
PONOARCT														
SIPOKROY														
SYNHMACU														
UNCOPLAN														
UROT														
UROTBREV	51.3	0.005									12.8	0.005	76.9	0.005
UROTPOSE	12.8	0.004												
Crustacea, Decapoda														
CALNSUBT														
CORTCASS														
CRONCRAN														
DECA														
PAGUBERN														
CALNTYRR														
PROEMODI							12.8	0.108						
THIASCUT														
Crustacea, Isopoda														

Density (n/m²)	OFF16		OFF17		OFF18		OFF20		OFF21		OFF22		OFF23	
Biomass (AFDW g/m²)	BREEVTN13		BREEVTN14		BREEVTN15		BREEVTN17		BREEVTN18		BREEVTN19		BREEVTN20	
Soortcode	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²
PSEIHYND														
Crustacea, Mysida														
GASS														
GASSSPIN					51.3	0.013			38.5	0.013	12.8	0.013		
Crustacea, Remaining														
PSEOGILS														
PSEOSIMI														
TANSLILL														
BALACREN														
Mollusca, Bivalvia														
ABRAALBA														
ABRAPRIS														
CHAMSTRI														
CORUGIBB														
DONXVITT	12.8	0.053												
ENSIDIRE														
GOODTRIA														
KURTBIDE														
LUCNBORE														
NUCLNITI														
SPISSUBT														
TELYFERR													12.8	0.006
TELNFABU													12.8	0.004
TELNPYGM									25.6	0.023				
THRAPAPY														
Mollusca, Gastropoda														
EUSRPULC			12.8	0.004	51.3	0.075								
Echinodermata														
AMPI														
ECHNCORD	12.8	3.846											25.6	9.296
ECHYPUSI														
OPHUALBI					38.5	0.106								
Hydrozoa														
ALCO														
ELECPILO														
CLYIHEMI														
HYDCECHI														
Totals	**346**	**5.3**	**167**	**0.2**	**244**	**0.4**	**205**	**0.8**	**295**	**0.7**	**526**	**1.1**	**1128**	**16.1**

Density (n/m²)	OFF24		OFF25		OFF26		OFF27		OFF28		OFF29		OFF30	
Biomass (AFDW g/m²)	BREEVTN21		BREEVTN22		BREEVTN23		BREEVTN24		BREEVTN25		ROTTMPT50		TERSLG30	
Soortcode	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²
Anthozoa														
ACNI														
EDWA														
Nemertea														
NEMR											12.8	0.038		
TUBNPOLY							538.5	0.324			76.9	0.170	25.6	0.013
Phoronida														
PHOR	141.0	0.004	679.5	0.857					269.2	0.217	269.2	0.051		
Oligochaeta														
GRANVIKI											12.8	0.013		
TUCODIAZ														
TUFI														
Polychaeta														
AONIPAUC									25.6	0.013				
ARIIMINU														
CAITCAPI														
CHAZCHRI														
CIRR														
ETEOFOLI														
ETEOLONG											12.8	0.000	12.8	0.013
EUMISANG														
EUNELONG														
EXOGHEBE									25.6	0.013				
EXOGNAID									12.8	0.013				
GLYC														
GLYCLAPI	51.3	0.136												
GLYCROUX														
GONAMACU													12.8	0.013
LANC														
LANCCONC											25.6	0.564		
MAGEFILI													269.2	0.013
MAGEJOHN											12.8	0.007	500.0	0.013
MAGEMIRA									12.8	0.127				
MALMDARB														
MEDOFRAG														
MYRAPROL														
NEPY			141.0	0.470					217.9	0.346				
NEPYASSI														
NEPYCAEC							12.8	0.033						
NEPYCIRR	64.1	1.315							12.8	0.528	64.1	0.017	51.3	0.013
NEPYHOMB														
NOTMLATE														
OPHELIMA											89.7	0.413		
OWENFUSI														
PARSFULG														
PHYOMUCO														
PHYOROSE														

Density (n/m²)	OFF24		OFF25		OFF26		OFF27		OFF28		OFF29		OFF30	
Biomass (AFDW g/m²)	BREEVTN21		BREEVTN22		BREEVTN23		BREEVTN24		BREEVTN25		ROTTMPT50		TERSLG30	
Soortcode	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²
PHYC														
PISOREMO														
PODKHELG														
POEOSERP											12.8	0.082		
POCH														
POLC														
POYGAPPE														
SCOIBONN														
SCOISQUA														
SCOSARMI											51.3	0.043		
SIGLMATH													64.1	0.013
SPIODECO														
SPIOGONI														
SPIOMART														
SPIOSYMP									12.8	0.046				
SPIPBOMB			25.6	0.099					25.6	0.009	12.8	0.002	102.6	0.013
STHELIMI														
STREPTER														
SYLSGRAC														
TRAVFORB														
Crustacea, Amphipoda														
ATYUFALC														
ATYUSWAM									25.6	0.004	12.8	0.004		
BATY													102.6	0.002
BATYELEG													384.6	0.004
BATYGUIL	12.8	0.005	12.8	0.005					25.6	0.005	12.8	0.005	51.3	0.005
BATYTENU														
LEUTINCI							12.8	0.005						
MEGUAGIL														
PAIATYPI														
PEROLONG			12.8	0.004									12.8	0.004
PONOARCT													12.8	0.004
SIPOKROY														
SYNHMACU														
UNCOPLAN									12.8	0.004				
UROT														
UROTBREV	12.8	0.005	25.6	0.005			243.6	0.005						
UROTPOSE							141.0	0.004					128.2	0.004
Crustacea, Decapoda														
CALNSUBT														
CORTCASS													12.8	####
CRONCRAN														
DECA									12.8	1.474				
PAGUBERN														
CALNTYRR							25.6	1.904						
PROEMODI														
THIASCUT							25.6	1.762			12.8	0.705		
Crustacea, Isopoda														

Density (n/m²)	OFF24		OFF25		OFF26		OFF27		OFF28		OFF29		OFF30	
Biomass (AFDW g/m²)	BREEVTN21		BREEVTN22		BREEVTN23		BREEVTN24		BREEVTN25		ROTTMPT50		TERSLG30	
Soortcode	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²
PSEIHYND														
Crustacea, Mysida														
GASS									12.8	0.013				
GASSSPIN							12.8	0.013						
Crustacea, Remaining														
PSEOGILS														
PSEOSIMI					12.8	0.001			12.8	0.001				
TANSLILL														
BALACREN														
Mollusca, Bivalvia														
ABRAALBA														
ABRAPRIS														
CHAMSTRI														
CORUGIBB														
DONXVITT														
ENSIDIRE											12.8	0.019		
GOODTRIA											12.8	0.000		
KURTBIDE														
LUCNBORE														
NUCLNITI														
SPISSUBT														
TELYFERR											12.8	0.019	64.1	0.033
TELNFABU											12.8	0.001	38.5	0.052
TELNPYGM					25.6	0.058			12.8	0.039				
THRAPAPY											12.8	0.006		
Mollusca, Gastropoda														
EUSRPULC									12.8	0.002				
Echinodermata														
AMPI														
ECHNCORD			25.6	5.275			102.6	5.744					38.5	2.968
ECHYPUSI														
OPHUALBI	12.8	0.435	102.6	1.237										
Hydrozoa														
ALCO														
ELECPILO														
CLYIHEMI														
HYDCECHI														
Totals	**295**	**1.9**	**1026**	**8.0**	**38**	**0.1**	**1115**	**9.8**	**744**	**2.9**	**756**	**2.2**	**1885**	**19.1**

Density (n/m²) Biomass (AFDW g/m²) **Soortcode**	**OFF31** **BREEVTN27** n/m² g/m²	**OFF32** **NOORDWK30** n/m² g/m²	**OFF33** **NOORDWK50** n/m² g/m²	**OFF34** **NOORDWK70** n/m² g/m²	**OFF35** **WALCRN30** n/m² g/m²	**OFF36** **WALCRN70** n/m² g/m²
Anthozoa						
ACNI						
EDWA						
Nemertea						
NEMR			12.8 0.056			
TUBNPOLY						
Phoronida						
PHOR			115.4 0.004		371.8 0.004	
Oligochaeta						
GRANVIKI						
TUCODIAZ						
TUFI						
Polychaeta						
AONIPAUC						12.8 0.003
ARIIMINU		38.5 0.008		12.8 0.013		
CAITCAPI						
CHAZCHRI	25.6 0.017			12.8 0.009		
CIRR						
ETEOFOLI			12.8 0.059			
ETEOLONG		25.6 0.016	12.8 0.009			
EUMISANG						
EUNELONG						
EXOGHEBE		12.8 0.013	410.3 0.024			
EXOGNAID						
GLYC						
GLYCLAPI						
GLYCROUX						
GONAMACU						
LANC						
LANCCONC						
MAGEFILI						
MAGEJOHN	12.8 0.074	12.8 0.009			12.8 0.096	
MAGEMIRA						
MALMDARB						
MEDOFRAG						
MYRAPROL						
NEPY				115.4 0.164		
NEPYASSI						
NEPYCAEC						
NEPYCIRR	89.7 0.190	115.4 0.413	115.4 1.214	12.8 0.074	115.4 0.696	102.6 0.341
NEPYHOMB						
NOTMLATE			897.4 0.128			
OPHELIMA			51.3 0.019		12.8 0.070	
OWENFUSI						
PARSFULG						
PHYOMUCO						
PHYOROSE		12.8 0.019				

Density (n/m²)	OFF31		OFF32		OFF33		OFF34		OFF35		OFF36	
Biomass (AFDW g/m²)	BREEVTN27		NOORDWK30		NOORDWK50		NOORDWK70		WALCRN30		WALCRN70	
Soortcode	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²
PHYC												
PISOREMO												
PODKHELG												
POEOSERP												
POCH							0.0	0.062				
POLC												
POYGAPPE												
SCOIBONN			12.8	0.001	38.5	0.610			12.8	0.133		
SCOISQUA												
SCOSARMI	12.8	0.140										
SIGLMATH	12.8	1.000										
SPIODECO					51.3	0.006						
SPIOGONI									12.8	0.004		
SPIOMART												
SPIOSYMP												
SPIPBOMB	51.3	0.021	25.6	0.021	307.7	0.331	102.6	0.441				
STHELIMI												
STREPTER												
SYLSGRAC					141.0	0.036						
TRAVFORB												
Crustacea, Amphipoda												
ATYUFALC											12.8	0.004
ATYUSWAM												
BATY												
BATYELEG	89.7	0.004			166.7	0.004	294.9	0.004				
BATYGUIL	12.8	0.005			25.6	0.005			25.6	0.005		
BATYTENU												
LEUTINCI					25.6	0.005						
MEGUAGIL					12.8	0.004						
PAIATYPI									12.8	0.004		
PEROLONG					12.8	0.004						
PONOARCT												
SIPOKROY												
SYNHMACU					12.8	0.004						
UNCOPLAN												
UROT												
UROTBREV	192.3	0.005	25.6	0.005			25.6	0.005				
UROTPOSE	25.6	0.004					76.9	0.004				
Crustacea, Decapoda												
CALNSUBT												
CORTCASS												
CRONCRAN			12.8	1.251								
DECA												
PAGUBERN												
CALNTYRR												
PROEMODI					25.6	0.231						
THIASCUT					12.8	0.059						

Density (n/m²)	OFF31		OFF32		OFF33		OFF34		OFF35		OFF36	
Biomass (AFDW g/m²)	BREEVTN27		NOORDWK30		NOORDWK50		NOORDWK70		WALCRN30		WALCRN70	
Soortcode	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²
Crustacea, Isopoda												
PSEIHYND												
Crustacea, Mysida												
GASS												
GASSSPIN			12.8	0.013							38.5	0.013
Crustacea, Remaining												
PSEOGILS												
PSEOSIMI											64.1	0.001
TANSLILL											12.8	0.001
BALACREN												
Mollusca, Bivalvia												
ABRAALBA												
ABRAPRIS												
CHAMSTRI												
CORUGIBB												
DONXVITT	25.6	2.934										
ENSIDIRE												
GOODTRIA												
KURTBIDE			25.6	0.000								
LUCNBORE					12.8	0.490						
NUCLNITI												
SPISSUBT												
TELYFERR	12.8	0.028	12.8	0.016								
TELNFABU												
TELNPYGM											25.6	0.022
THRAPAPY												
Mollusca, Gastropoda												
EUSRPULC												
Echinodermata												
AMPI												
ECHNCORD			25.6	3.846	51.3	3.846	12.8	9.730				
ECHYPUSI											12.8	0.173
OPHUALBI											25.6	0.002
Hydrozoa												
ALCO									12.8	0.000		
ELECPILO												
CLYIHEMI	12.8	0.000										
HYDCECHI												
Totals	**577**	**4.4**	**372**	**5.6**	**2526**	**7.1**	**667**	**10.5**	**590**	**1.0**	**308**	**0.6**

Coastal area (COA),

Density and biomass of species

Density (n/m²)	COA01		COA02		COA03		COA04		COA06		COA07		COA08	
Biomass (AFDW g/m²)	WADDNKT03		WADDNKT04		HOLLSKT03		HOLLSKT02		WADDNKT06		ROTTMPT3		TERSLG4	
Soortcode	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²
Anthozoa														
ACNI			25.6	0.003										
Nemertea														
NEMR							12.8	0.025						
TUBNPOLY														
Phoronida														
PHRO														
Oligochaeta														
TUCODIAZ														
Polychaeta														
CAITCAPI			25.6	0.004	2333	0.502							628.2	0.092
CATE														
CHAZCHRI	38.5	0.013			13	0.007								
ETEOLONG													25.6	0.028
EUMISANG														
EUNELONG					26	0.364								
LANCCONC			12.8	0.255			128.2	1.317	12.8	0.236			25.6	1.282
LUMILATR														
MAGEFILI													12.8	0.002
MAGEJOHN	435.9	0.432	141.0	0.146	308	0.242			717.9	1.107	25.6	0.048	1167	1.861
MAGEMIRA							25.6	0.009						
MALMDARB							64.1	0.035					12.8	0.013
MALMLJUN														
MALMMCIN			12.8	0.109										
MEDOFRAG					13	0.013	12.8	0.004						
NEPY													12.8	0.002
NEPYASSI	12.8	0.067												
NEPYCIRR			12.8	0.349					12.8	0.123			25.6	0.111
NEPYHOMB	12.8	0.047	12.8	4.254	90	1.784	51.3	0.895					12.8	0.305
NOTMLATE	12.8	0.305			13	0.338								
OPHELIMA														
OWENFUSI	12.8	0.119					25.6	0.022						
PHYOGROE														
PHYOMUCO	1705	4.178					89.7	0.158	25.6	0.116				
PHYI							12.8	0.007						
PYGOELEG														
SCOIBONN														
SCOSARMI	666.7	1.005												
SIGLMATH					13	0.238	12.8	0.003						
SPIOGONI					26	0.006								
SPIOMART			38.5	0.035			12.8	0.013	25.6	0.010			333.3	0.172
SPIOSYMP							12.8	0.013						
SPIPBOMB	205.1	0.319	269.2	0.587			89.7	0.052	205.1	0.141			89.7	0.090
STSPSHRU														
Crustacea, Amphipoda														
ATYUFALC					13	0.004								
ATYUSWAM			12.8	0.004			12.8	0.004						
BATYELEG			38.5	0.004	13	0.004			25.6	0.004			359.0	0.004

Density (n/m²)	COA01		COA02		COA03		COA04		COA06		COA07		COA08	
Biomass (AFDW g/m²)	WADDNKT03		WADDNKT04		HOLLSKT03		HOLLSKT02		WADDNKT06		ROTTMPT3		TERSLG4	
Soortcode	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²
BATYGUIL													76.9	0.005
BATYPELA											141.0	0.004		
GAMMCRIN							12.8	0.004						
LEUTINCI														
ORCENANA														
PONOALTA			38.5	0.004					25.6	0.004			51.3	0.004
PONOARCT														
PONOAREN														
SYNHMACU			12.8	0.004										
UROT														
UROTBREV														
UROTPOSE	166.7	0.004	25.6	0.004	423	0.004	12.8	0.004	12.8	0.004			410.3	0.004
Crustacea, Mysida														
GASSSPIN														
MESOSLAB														
SCHSKERV	12.8	0.013												
Crustacea, Remaining														
DIATBRAD	12.8	0.003												
DIATRUGO														
PSEOGILS													12.8	0.001
Mollusca, Bivalvia														
ABRAALBA	25.6	0.099					76.9	0.408	12.8	0.112			12.8	0.130
ENSI														
ENSIARCU													38.5	22.72
ENSIDIRE	25.6	25.72	1577	0.685	77	101.8	3769	1.642	320.5	6.101	25.6	4.862	38.5	11.61
KURTBIDE	38.5	0.010					25.6	0.008					12.8	0.003
MACOBALT			141.0	1.950					25.6	0.021	12.8	0.006	12.8	0.006
PETRPHOL														
SPISSUBT			102.6	4.204										
TELYFERR	166.7	0.080	25.6	0.020	141	0.094			12.8	0.004				
TELNFABU	64.1	0.249			13	0.678							38.5	0.451
VENUSENE														
Mollusca, Gastropoda														
NASARETI					26	46.34								
Echinodermata														
ECHNCORD	141.0	3.846	12.8	0.509	51	3.846			12.8	3.846				
OPHUALBI					13	2.699								
OPHUOPHI														
Hydrozoa														
HYDC					13	0.000								
Totals	**3756**	**36.5**	**2538**	**13.1**	**3615**	**159.0**	**4462**	**4.6**	**1449**	**11.8**	**205**	**4.9**	**3410**	**38.9**

Density (n/m²)	COA09		COA10		COA11		COA12		COA13		COA14		COA15	
Biomass (AFDW g/m²)	HOLLSKT04		NOORDWK2		NOORDWK10		VOORDTA2		VOORDTA3		VOORDTA4		VOORDTA5	
Soortcode	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²	n/m²	g/m²
Anthozoa														
ACNI														
Nemertea														
NEMR														
TUBNPOLY	51.3	0.078	38.5	0.031							12.8	0.031	12.8	0.182
Phoronida														
PHRO	128.2	0.164												
Oligochaeta														
TUCODIAZ											602.6	0.013		
Polychaeta														
CAITCAPI			115.4	0.021							500.0	0.006		
CATE	38.5	0.003												
CHAZCHRI	38.5	0.015												
ETEOLONG	12.8	0.002	25.6	0.006	76.9	0.022							25.6	0.008
EUMISANG					25.6	0.028								
EUNELONG											12.8	0.002	12.8	0.014
LANCCONC	89.7	7.130			397.4	18.75								
LUMILATR			12.8	0.002										
MAGEFILI	12.8	0.008											51.3	0.013
MAGEJOHN	205.1	0.191	487.2	0.292	12.8	0.002							230.8	0.236
MAGEMIRA														
MALMDARB	25.6	0.078			102.6	0.179								
MALMLJUN	12.8	0.005												
MALMMCIN														
MEDOFRAG														
NEPY			12.8	0.013										
NEPYASSI														
NEPYCIRR	51.3	0.327	89.7	0.518	153.8	1.181	141.0	1.049	12.8	0.388				
NEPYHOMB			12.8	0.027							51.3	0.079		
NOTMLATE	12.8	0.815	12.8	0.047			12.8	0.008			38.5	0.387	307.7	10.62
OPHELIMA														
OWENFUSI							12.8	0.009			38.5	0.067	12.8	0.067
PHYOGROE													38.5	1.831
PHYOMUCO			38.5	0.099			12.8	0.084					346.2	0.966
PHYI														
PYGOELEG											12.8	0.001		
SCOIBONN					25.6	0.105	12.8	0.301						
SCOSARMI			38.5	0.027	12.8	0.007	89.7	0.037			25.6	0.026	64.1	0.045
SIGLMATH														
SPIOGONI														
SPIOMART														
SPIOSYMP														
SPIPBOMB	12.8	0.014	38.5	0.022	12.8	0.006					256.4	0.017	282.1	0.078
STSPSHRU											25.6	0.002		
Crustacea, Amphipoda														
ATYUFALC														
ATYUSWAM	12.8	0.004												
BATYELEG	89.7	0.004			12.8	0.004	12.8	0.004	25.6	0.004				

Density (n/m²) Biomass (AFDW g/m²) **Soortcode**	**COA09** **HOLLSKT04** n/m² g/m²	**COA10** **NOORDWK2** n/m² g/m²	**COA11** **NOORDWK10** n/m² g/m²	**COA12** **VOORDTA2** n/m² g/m²	**COA13** **VOORDTA3** n/m² g/m²	**COA14** **VOORDTA4** n/m² g/m²	**COA15** **VOORDTA5** n/m² g/m²
BATYGUIL	51.3 0.005						
BATYPELA							
GAMMCRIN							
LEUTINCI	38.5 0.005		38.5 0.005				
ORCENANA			12.8 0.004				
PONOALTA					12.8 0.004		
PONOARCT	25.6 0.004						
PONOAREN							
SYNHMACU							
UROT	12.8 0.002						
UROTBREV					25.6 0.005		
UROTPOSE	500.0 0.004	12.8 0.004	38.5 0.004				359.0 0.004
Crustacea, Mysida							
GASSSPIN						12.8 0.013	
MESOSLAB							12.8 0.013
SCHSKERV				12.8 0.013			
Crustacea, Remaining							
DIATBRAD							
DIATRUGO	12.8 0.011						
PSEOGILS							
Mollusca, Bivalvia							
ABRAALBA						12.8 0.055	25.6 0.097
ENSI	12.8 0.288						
ENSIARCU							
ENSIDIRE		359.0 142.0	12.8 0.040	525.6 27.25		38.5 0.146	
KURTBIDE						64.1 0.068	38.5 0.010
MACOBALT							
PETRPHOL						12.8 1.388	
SPISSUBT							
TELYFERR	102.6 0.046						25.6 0.042
TELNFABU	64.1 1.406	12.8 0.385					
VENUSENE						38.5 42.21	
Mollusca, Gastropoda							
NASARETI	12.8 0.451						
Echinodermata							
ECHNCORD	12.8 2.637					12.8 1.466	12.8 8.053
OPHUALBI							
OPHUOPHI							89.7 0.192
Hydrozoa							
HYDC							
Totals	**1641 13.7**	**1308 143.5**	**936 20.3**	**833 28.8**	**77 0.4**	**1769 46.0**	**1949 22.5**

Density (n/m²) Biomass (AFDW g/m²) **Soortcode**	**COA16** **TERHDE1** n/m²	g/m²	**COA17** **EGMAZE1** n/m²	g/m²	**COA18** **WADDKT08** n/m²	g/m²
Anthozoa						
ACNI						
Nemertea						
NEMR	12.8	0.589	51.3	0.000		
TUBNPOLY						
Phoronida						
PHRO						
Oligochaeta						
TUCODIAZ						
Polychaeta						
CAITCAPI						
CATE						
CHAZCHRI						
ETEOLONG			25.6	0.935		
EUMISANG						
EUNELONG						
LANCCONC			12.8	0.236		
LUMILATR						
MAGEFILI						
MAGEJOHN			4346	1.315	128.2	0.200
MAGEMIRA						
MALMDARB						
MALMLJUN						
MALMMCIN						
MEDOFRAG						
NEPY	25.6	0.014				
NEPYASSI						
NEPYCIRR	51.3	0.471	205.1	0.966		
NEPYHOMB						
NOTMLATE						
OPHELIMA					12.8	0.005
OWENFUSI						
PHYOGROE						
PHYOMUCO	25.6	0.753	64.1	0.078		
PHYI						
PYGOELEG						
SCOIBONN						
SCOSARMI					12.8	0.012
SIGLMATH						
SPIOGONI						
SPIOMART						
SPIOSYMP						
SPIPBOMB			76.9	0.081		
STSPSHRU						
Crustacea, Amphipoda						
ATYUFALC						
ATYUSWAM						
BATYELEG			12.8	0.004		

Density (n/m^2) Biomass (AFDW g/m^2) **Soortcode**	**COA16** **TERHDE1** n/m^2	g/m^2	**COA17** **EGMAZE1** n/m^2	g/m^2	**COA18** **WADDKT08** n/m^2	g/m^2
BATYGUIL						
BATYPELA					89.7	0.004
GAMMCRIN						
LEUTINCI						
ORCENANA						
PONOALTA			25.6	0.004		
PONOARCT						
PONOAREN					12.8	0.004
SYNHMACU						
UROT						
UROTBREV						
UROTPOSE						
Crustacea, Mysida						
GASSSPIN						
MESOSLAB						
SCHSKERV						
Crustacea, Remaining						
DIATBRAD						
DIATRUGO						
PSEOGILS						
Mollusca, Bivalvia						
ABRAALBA						
ENSI						
ENSIARCU						
ENSIDIRE	38.5	2.997	89.7	14.85	25.6	3.779
KURTBIDE						
MACOBALT						
PETRPHOL						
SPISSUBT						
TELYFERR						
TELNFABU						
VENUSENE						
Mollusca, Gastropoda						
NASARETI						
Echinodermata						
ECHNCORD			12.8	3.846		
OPHUALBI						
OPHUOPHI						
Hydrozoa						
HYDC						
Totals	**154**	**4.8**	**4923**	**22.3**	**282**	**4.0**