

C.I.P.S.  
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TECHNICAL REPORT

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MATHEMATICAL MODEL OF THE  
POLLUTION OF THE NORTH SEA.  
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This paper not to be cited without prior reference to the author.

KWALITATIEVE EN KWANTITATIEVE ANALYSE VAN DE BENTHISCHE EN EPIBENTHISCHE  
BIJVANGST-FAUNA VAN DE EXPERIMENTELE GARNAALVISSERIJ.

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Resultaten van de maandelijkse staalname NOVEMBER 1974.

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**Vlaams Instituut voor de Zee**  
*Flanders Marine Institute*

1. Beknopte technische fiche.

Staalname : maandelijkse staalname november 1974.

Data staalname : 05/11/1974  
06/11/1974  
07/11/1974

Aantal bemonsterde stations : 14.

Visserij : dagvisserij.

Vaarttuig : RV 'HINDERS'.

Vistuig : plankennet.

Maaswijdte net : 18 mm.

Duur sleep : 15 minuten

Tabel 1.

Hydrologische en meteorologische waarnemingen (november 1974).

| <u>Station</u> | <u>Datum</u> | <u>Uur</u> | <u>Dpt</u> | <u>StR</u> | <u>Temp</u> | <u>Sal</u> | <u>pH</u> | <u>B</u> | <u>WR</u> | <u>WK</u> | <u>N</u> |
|----------------|--------------|------------|------------|------------|-------------|------------|-----------|----------|-----------|-----------|----------|
| 17 W           | 05/11/74     | 10.15      | 8          | SW         | 9,5         | 33,24      | 7,83      | 8        | NE        | 2         | -        |
| 19 W           | 05/11/74     | 11.00      | 8          | SW         | 8,0         | 33,46      | 7,83      | 7        | NE        | 2         | -        |
| 23 W           | 05/11/74     | 11.45      | 8          | SW         | 8,0         | 32,76      | 7,84      | 8        | NE        | 2         | -        |
| 24 W           | 05/11/74     | 13.00      | 6          | SW         | 8,5         | 33,60      | 7,72      | 8        | NE        | 2         | -        |
| 25 W           | 05/11/74     | 13.45      | 8          | Stil       | 8,5         | 33,56      | 7,84      | 8        | NE        | 2         | -        |
| 2 VR           | 07/11/74     | 14.00      | 6          | SW         | 8,5         | 33,55      | 7,80      | 4        | SE        | 4         | -        |
| 30 VR          | 07/11/74     | 11.15      | 9          | SW         | 8,5         | 32,76      | 7,93      | 8        | SE        | 4         | -        |
| 35 VR          | 07/11/74     | 13.15      | 9          | SW         | 8,5         | 32,94      | 7,93      | 7        | SE        | 4         | -        |
| 37 VR          | 07/11/74     | 12.30      | 11         | SW         | 8,5         | 33,56      | 7,92      | 7        | SE        | 4         | -        |
| 38 VR          | 07/11/74     | 11.45      | 11         | SW         | 8,5         | 32,98      | 7,58      | 8        | SE        | 4         | -        |
| 44 TB          | 06/11/74     | 13.15      | 20         | WSW        | 8,5         | 33,21      | 7,89      | 4        | SW        | 4         | -        |
| 45 TB          | 06/11/74     | 12.30      | 18         | WSW        | 9,0         | 32,73      | 7,94      | 4        | SW        | 4         | -        |
| 46 TB          | 06/11/74     | 11.45      | 18         | WNW        | 9,0         | 33,32      | 7,76      | 5        | SW        | 3         | -        |
| 47 TB          | 06/11/74     | 14.00      | 21         | WSW        | 8,5         | 32,44      | 7,77      | 4        | SW        | 4         | -        |

Dpt : diepte in meters.

StR : stroomrichting getijstroom.

Temp : temperatuur oppervlakte-  
water in °C.Sal : saliniteit oppervlakte-  
water in ‰.

B : bewolkingsgraad in achtsten.

WR : windrichting

WK : windkracht in Beaufort-  
eenheden.

N : neerslag.

De Uur-aanduidingen werden in de loop van elke sleep opgetekend. Ze geven dus noch het begin noch het einde van de sleep aan.

Tabel 2.

Staalname- en omrekeningsfactoren voor de G- en B-stalen.

| Station | V | G-staal         |         |         |        | B-staal         |         |         |       |
|---------|---|-----------------|---------|---------|--------|-----------------|---------|---------|-------|
|         |   | SF <sub>G</sub> | (1)     | (2)     | (3)    | SF <sub>B</sub> | (1)     | (2)     | (3)   |
| 17 W    | P | 40,00           | 208,000 | 160,000 | 2,016  | 8,00            | 41,600  | 32,000  | 0,403 |
| 19 W    | P | 20,00           | 104,000 | 80,000  | 1,041  | 10,50           | 54,600  | 42,000  | 0,546 |
| 23 W    | P | 20,00           | 104,000 | 80,000  | 1,152  | 14,00           | 72,800  | 56,000  | 0,806 |
| 24 W    | P | 10,00           | 52,000  | 40,000  | 0,620  | 13,00           | 67,600  | 52,000  | 0,806 |
| 25 W    | P | 8,00            | 41,600  | 32,000  | 0,679  | 7,00            | 36,400  | 28,000  | 0,594 |
| 2 VR    | P | 4,00            | 20,800  | 16,000  | 0,307  | 4,50            | 23,400  | 18,000  | 0,307 |
| 30 VR   | P | 19,00           | 98,800  | 76,000  | 1,613  | 6,50            | 33,800  | 26,000  | 0,552 |
| 35 VR   | P | 4,00            | 20,800  | 16,000  | 0,293  | 4,00            | 20,800  | 16,000  | 0,293 |
| 37 VR   | P | 260,00          | 1352,00 | 1040,00 | 19,969 | 28,00           | 145,600 | 112,000 | 2,151 |
| 38 VR   | P | 10,00           | 52,000  | 40,000  | 0,672  | 11,33           | 58,933  | 45,333  | 0,762 |
| 44 TB   | P | 20,00           | 104,000 | 80,000  | 1,290  | 13,00           | 67,600  | 52,000  | 0,839 |
| 45 TB   | P | 10,00           | 52,000  | 40,000  | 0,461  | 16,50           | 85,800  | 66,000  | 0,760 |
| 46 TB   | P | 11,00           | 57,200  | 44,000  | 0,634  | 11,00           | 57,200  | 44,000  | 0,634 |
| 47 TB   | P | 24,00           | 124,800 | 96,000  | 1,335  | 8,00            | 41,600  | 32,000  | 0,445 |

V : visserij

P = plankenvisserij

SF<sub>G</sub>: verhouding volume G-fraktie/  
volume G-staal

SF<sub>B</sub>: verhouding volume B-fraktie/  
volume B-staal

(1) : omrekeningsfactor naar  
aantal of gewicht per  
uur bokkenvisserij.

(2) : omrekeningsfactor naar  
aantal of gewicht per  
uur plankenvisserij.

(3) : omrekeningsfactor naar  
aantal<sub>2</sub> of gewicht per  
1000 m<sup>2</sup>.

Tabel 3.

Waargenomen benthische en epibenthische bijvangst-species.

| Nummer  | Species   |
|---------|---|
| 003     | Phylum COELENTERATA (met uitzondering van de Scyphozoa) |
| 004     | Classis HYDROZOA  |
| 005     | Tubularia species                                       |
| 006     | Laomedea species  |
| 007     | Abietinaria abietina (L.)                               |
| 008     | Hydrallmania falcata (L.)                               |
| 009     | Sertularia species                                      |
| 010     | Classis ANTHOZOA  |
| 011     | Actinia equina L.                                       |
| 013     | Metridium senile (L.)                                   |
| 095     | Niet gedefinieerde species                              |
| 014     | Phylum ANNELIDA   |
| 015     | Classis POLYCHAETA                                      |
| 016     | Aphrodite aculeata (L.)                                 |
| 021     | Lanice conchilega (Pallas)                              |
| 022     | Pectinaria koreni (Malmgren)                            |
| 025     | Niet gedefinieerde species                              |
| 028     | Phylum MOLLUSCA   |
| 029     | Classis GASTROPODA                                      |
| 032     | Crepidula fornicata (L.)                                |
| 033     | Buccinum undatum L.                                     |
| 034     | Classis LAMELLIBRANCHIA                                 |
| 035     | Mytilus edulis L.                                       |
| 038     | Macra corallina cinerea Montagu                         |
| 037     | Spisula subtruncata (Da Costa)                          |
| 097     | Spisula solida (L.)                                     |
| 040     | Abra alba (W. Wood)                                     |
| 042     | Angulus tenuis (Da Costa)                               |
| 050     | Phylum BRYOZOA  |
| 051     | Classis ECTOPROCTA                                      |
| 052+053 | Alcyonidium species                                     |
| 054     | Flustra foliacea (L.)                                   |
| 098     | Niet gedefinieerde species                              |
| 055     | Phylum ARTHROPODA                                       |
| 056     | Classis CRUSTACEA                                       |
| 057     | Sub-classis MALACOSTRACA                                |
| 058     | Ordo CUMACEA  |
| 059     | Diastylis species                                       |
| 060     | Ordo ISOPODA  |
| 061     | Idotea linearis (L.)                                    |
| 062     | Ordo AMPHIPODA  |
| 063     | Niet gedefinieerde species                              |

Tabel 3 (vervolg).

Waargenomen benthische en epibenthische bijvangst-species.

| Nummer | Species                             |
|--------|-------------------------------------|
| 064    | Ordo DECAPODA                       |
| 065    | Pandalus montagui Leach             |
| 066    | Pandalina brevirostris (Rathke)     |
| ---    | Crangon crangon (L.)                |
| 107    | Crangon allmanni Kinahan            |
| 068    | Pontophilus trispinosus (Hailstone) |
| 069    | Pagurus bernhardus (L.)             |
| 070    | Portunus holsatus (Fabricius)       |
| 115    | Macropipus puber (L.)               |
| 119    | Macropipus arcuatus                 |
| 071    | Carcinus maenas (L.)                |
| 073    | Macropodia rostrata (L.)            |
| 103    | Porcellana longicornis (L.)         |
| 074    | Phylum ECHINODERMATA                |
| 075    | Classis ASTEROIDEA                  |
| 076    | Asterias rubens (L.)                |
| 077    | Classis OPHIUROIDEA                 |
| 079    | Ophiura species                     |
| 080    | Classis ECHINOIDEA                  |
| 081    | Psammechinus miliaris (Gmelin)      |
| 082    | Echinocardium cordatum (Pennant)    |
| 501    | Phylum CHORDATA                     |
| 502    | Sub-phylum VERTEBRATA               |
| 505    | Classis TELEOSTOMI                  |
| 508    | Syngnathus species                  |
| 509    | Callionymus lyra L.                 |
| 510    | Pomatoschistus minutus (Pallas)     |
| 511    | Agonus cataphractus (L.)            |
| 512    | Aphia minuta (Risso)                |
| 515    | Liparis liparis L.                  |

Tabel 4.

Aantallen en gewichten van de verschillende species in de G- en B-stalen.

| G-staal |         | B-staal |         | 17  | Stations            | 19 | G-staal |         | B-staal |         |
|---------|---------|---------|---------|-----|---------------------|----|---------|---------|---------|---------|
| Aantal  | Gewicht | Aantal  | Gewicht |     |                     |    | Aantal  | Gewicht | Aantal  | Gewicht |
|         |         |         |         | 001 | PORIFERA            |    |         |         |         |         |
|         |         | x       | 42      | 003 | COELENTERATA        |    |         |         | x       | 125     |
|         |         | x       | 36      | 004 | Hydrozoa            |    |         |         | x       | 125     |
|         |         | 1       | 5,5     | 010 | Anthozoa            |    |         |         |         |         |
|         |         | 1       | 5,5     | 011 | Actinia equina      |    |         |         |         |         |
|         |         |         |         | 012 | Tealia felina       |    |         |         |         |         |
|         |         |         |         | 013 | Metridium senile    |    |         |         |         |         |
|         |         |         |         | 095 | Overige Anthozoa    |    |         |         |         |         |
| 4       | 8,5     | 12      | 35      | 014 | ANNELIDA            |    | 3       | 3,5     |         |         |
|         |         |         |         | 016 | Aphrodite aculeata  |    |         |         |         |         |
| 3       | 8,5     | 12      | 35      | 021 | Lanice conchilega   |    | 3       | 3,5     |         |         |
|         |         |         |         | 022 | Pectinaria koreni   |    |         |         |         |         |
| 1       | md 0,5  |         |         | 025 | Overige Annelida    |    |         |         |         |         |
|         |         |         |         | 026 | ECHIURIDA           |    |         |         |         |         |
| 1       | md 0,5  | 2       | 3,0     | 028 | MOLLUSCA            |    |         |         | 6       | 6,5     |
|         |         | 2       | 3,0     | 029 | Gastropoda          |    |         |         | 6       | 6,5     |
| 1       | md 0,5  |         |         | 034 | Lamellibranchia     |    |         |         |         |         |
|         |         |         |         | 046 | Cephalopoda         |    |         |         |         |         |
|         |         |         |         | 047 | Sepia officinalis   |    |         |         |         |         |
|         |         |         |         | --- | Overige Cephalopoda |    |         |         |         |         |
|         |         | x       | 6,0     | 050 | BRYOZOA             |    | x       | 0,5     | x       | 65      |
| 735     | 407     | 143     | 1117    | 055 | ARTHROPODA          |    | 655     | 478     | 248     | 1486    |
|         |         |         |         | 058 | Cumacea             |    |         |         |         |         |
| 1       | md 0,5  | 1       | md 0,5  | 060 | Isopoda             |    |         |         |         |         |
|         |         | 2       | md 0,5  | 062 | Amphipoda           |    | 16      | 0,5     | 45      | 1,5     |
| 734     | 407     | 140     | 1117    | 064 | Decapoda            |    | 639     | 477     | 203     | 1484    |
| 715     | 385     |         |         | --- | Crangon crangon     |    | 559     | 320     |         |         |
| 8       | 15      | 10      | 125     | 069 | Pagurus bernhardus  |    | 1       | 6,0     | 1       | 8,0     |
| 9       | 6,0     | 128     | 985     | 070 | Macropipus holsat.  |    | 78      | 150     | 199     | 1415    |
| 2       | 0,5     | 2       | 7,0     | --- | Overige Decapoda    |    |         |         | 3       | 61      |
| 12      | 10,5    | 145     | 318     | 074 | ECHINODERMATA       |    | 21      | 26      | 110     | 255     |
|         |         | 3       | 105     | 076 | Asterias rubens     |    | 1       | md 0,5  | 3       | 80      |
| 12      | 10,5    | 141     | 205     | 079 | Ophiura texturata   |    | 20      | 26      | 107     | 175     |
|         |         | 1       | 8,5     | 081 | Psammechinus mil.   |    |         |         |         |         |
|         |         |         |         | 082 | Echinocardium cor.  |    |         |         |         |         |
|         |         |         |         | --- | Overige Echinoder.  |    |         |         |         |         |
|         |         |         |         | --- | TUNICATA            |    |         |         |         |         |
| 56      | 78      | 10      | 80      | 505 | TELEOSTOMI          |    | 75      | 92      | 5       | 15      |
|         |         |         |         | 506 | Onos mustelus       |    |         |         |         |         |
|         |         |         |         | 509 | Callionymus lyra    |    |         |         |         |         |
| 55      | 77      | 5       | 6,5     | 510 | Pomatoschistus min. |    | 73      | 89      | 2       | 1,0     |
|         |         | 3       | 23      | 511 | Agonus cataphract.  |    | 1       | 3,0     | 1       | 4,5     |
|         |         | 2       | 50      | 515 | Liparis liparis     |    |         |         | 1       | 9,5     |
| 1       | 0,5     |         |         | --- | Overige Teleostomi  |    | 1       | md 0,5  | 1       | md 0,5  |

Tabel 4.

Aantallen en gewichten van de verschillende species in de G- en B-stalen.

| G-staal |         | B-staal |         | 23      | Stations            | 24     | G-staal |        | B-staal |  |
|---------|---------|---------|---------|---------|---------------------|--------|---------|--------|---------|--|
| Aantal  | Gewicht | Aantal  | Gewicht | Species |                     | Aantal | Gewicht | Aantal | Gewicht |  |
| /       | /       | /       | /       | 001     | PORIFERA            | /      | /       | /      | /       |  |
| /       | /       | x       | 1,0     | 003     | COELENTERATA        | /      | /       | /      | /       |  |
| /       | /       | x       | 1,0     | 004     | Hydrozoa            | /      | /       | /      | /       |  |
| /       | /       |         |         | 010     | Anthozoa            | /      | /       | /      | /       |  |
| /       | /       |         |         | 011     | Actinia equina      | /      | /       | /      | /       |  |
| /       | /       |         |         | 012     | Tealia felina       | /      | /       | /      | /       |  |
| /       | /       |         |         | 013     | Metridium senile    | /      | /       | /      | /       |  |
| /       | /       |         |         | 095     | Overige Anthozoa    | /      | /       | /      | /       |  |
| /       | /       | /       | /       | 014     | ANNELIDA            | /      | /       | /      | /       |  |
| /       | /       | /       | /       | 016     | Aphrodite aculeata  | /      | /       | /      | /       |  |
| /       | /       | /       | /       | 021     | Lanice conchilega   | /      | /       | /      | /       |  |
| /       | /       | /       | /       | 022     | Pectinaria koreni   | /      | /       | /      | /       |  |
| /       | /       | /       | /       | 025     | Overige Annelida    | /      | /       | /      | /       |  |
| /       | /       | /       | /       | 026     | ECHIURIDA           | /      | /       | /      | /       |  |
| /       | /       | /       | /       | 028     | MOLLUSCA            | /      | /       | /      | /       |  |
| /       | /       | /       | /       | 029     | Gastropoda          | /      | /       | /      | /       |  |
| /       | /       | /       | /       | 034     | Lamellibranchia     | /      | /       | /      | /       |  |
| /       | /       | /       | /       | 046     | Cephalopoda         | /      | /       | /      | /       |  |
| /       | /       | /       | /       | 047     | Sepia officinalis   | /      | /       | /      | /       |  |
| /       | /       | /       | /       | ---     | Overige Cephalopoda | /      | /       | /      | /       |  |
| /       | /       | /       | /       | 050     | BRYOZOA             | /      | /       | /      | /       |  |
| 651     | 598     | 208     | 1685    | 055     | ARTHROPODA          | 552    | 634     | 215    | 1927    |  |
| 1       | md 0,5  |         |         | 058     | Cumacea             |        |         |        |         |  |
| 3       | md 0,5  |         |         | 060     | Isopoda             |        |         |        |         |  |
| 547     | 598     | 208     | 1685    | 062     | Amphipoda           |        |         |        |         |  |
| 563     | 420     |         |         | 064     | Decapoda            | 552    | 634     | 215    | 1927    |  |
| 2       | 7,5     |         |         | ---     | Crangon crangon     | 531    | 525     |        |         |  |
| 78      | 170     | 208     | 1685    | 069     | Pagurus bernhardus  | 1      | 14      | 1      | 22      |  |
| 4       | 0,5     |         |         | 070     | Macropipus holsat.  | 20     | 95      | 214    | 1905    |  |
| 27      | 28      | 53      | 178     | ---     | Overige Decapoda    |        |         |        |         |  |
| 27      | 28      | 2       | 110     | 074     | ECHINODERMATA       | 1      | 1,0     | 10     | 162     |  |
|         |         | 51      | 68      | 076     | Asterias rubens     |        |         | 4      | 150     |  |
|         |         |         |         | 079     | Ophiura texturata   | 1      | 1,0     | 6      | 12      |  |
|         |         |         |         | 081     | Psammechinus mil.   |        |         |        |         |  |
|         |         |         |         | 082     | Echinocardium cor.  |        |         |        |         |  |
|         |         |         |         | ---     | Overige Echinoder.  |        |         |        |         |  |
|         |         |         |         | ---     | TUNICATA            |        |         |        |         |  |
| 25      | 41      | 3       | 45      | 505     | TELEOSTOMI          | 22     | 38      | 5      | 78      |  |
|         |         |         |         | 506     | Onos mustelus       |        |         |        |         |  |
|         |         |         |         | 509     | Callionymus lyra    | 1      | 2,5     | 3      | 72      |  |
| 25      | 41      |         |         | 510     | Pomatoschistus min. | 17     | 28      | 1      | 3,5     |  |
| 2       | 9,0     | 3       | 45      | 511     | Agonus cataphract.  | 2      | 7,5     | 1      | 2,5     |  |
|         |         |         |         | 515     | Liparis liparis     |        |         |        |         |  |
|         |         |         |         | ---     | Overige Teleostomi  | 2      | 0,5     |        |         |  |

Tabel 4.

Aantallen en gewichten van de verschillende species in de G- en B-stalen.

| G-staal |         | B-staal |         | 25 | Stations                | 2   | G-staal |         | B-staal |         |
|---------|---------|---------|---------|----|-------------------------|-----|---------|---------|---------|---------|
| Aantal  | Gewicht | Aantal  | Gewicht |    | Species                 |     | Aantal  | Gewicht | Aantal  | Gewicht |
| /       | /       | /       | /       |    | 001 PORIFERA            |     | /       | /       | /       | /       |
| /       | /       | /       | /       |    | 003 COELENTERATA        | x   | 7,5     | x       | 19      |         |
| /       | /       | /       | /       |    | 004 Hydrozoa            | x   | 7,5     | x       | 19      |         |
| /       | /       | /       | /       |    | 010 Anthozoa            |     |         |         |         |         |
| /       | /       | /       | /       |    | 011 Actinia equina      |     |         |         |         |         |
| /       | /       | /       | /       |    | 012 Tealia felina       |     |         |         |         |         |
| /       | /       | /       | /       |    | 013 Metridium senile    |     |         |         |         |         |
| /       | /       | /       | /       |    | 095 Overige Anthozoa    |     |         |         |         |         |
| /       | /       | /       | /       |    | 014 ANNELIDA            |     |         |         |         |         |
| /       | /       | /       | /       |    | 016 Aphrodite aculeata  |     |         |         |         |         |
| /       | /       | /       | /       |    | 021 Lanice conchilega   |     |         |         |         |         |
| /       | /       | /       | /       |    | 022 Pectinaria koreni   |     |         |         |         |         |
| /       | /       | /       | /       |    | 025 Overige Annelida    |     |         |         |         |         |
| /       | /       | /       | /       |    | 026 ECHIURIDA           |     |         |         |         |         |
| /       | /       | /       | /       |    | 028 MOLLUSCA            |     |         |         |         |         |
| /       | /       | /       | /       |    | 029 Gastropoda          |     |         |         |         |         |
| /       | /       | /       | /       |    | 034 Lamellibranchia     |     |         |         |         |         |
| /       | /       | /       | /       |    | 046 Cephalopoda         |     |         |         |         |         |
| /       | /       | /       | /       |    | 047 Sepia officinalis   |     |         |         |         |         |
| /       | /       | /       | /       |    | --- Overige Cephalopoda |     |         |         |         |         |
| /       | /       | /       | /       |    | 050 BRYOZOA             | x   | 1,5     | x       | 1,0     |         |
| 521     | 515     | 299     | 2280    |    | 055 ARTHROPODA          | 578 | 472     | 197     | 1805    |         |
| /       | /       | /       | /       |    | 058 Cumacea             |     |         |         |         |         |
| /       | /       | /       | /       |    | 060 Isopoda             | 1   | md 0,5  |         |         |         |
| /       | /       | /       | /       |    | 062 Amphipoda           | 5   | md 0,5  |         |         |         |
| 521     | 515     | 299     | 2280    |    | 064 Decapoda            | 572 | 472     | 197     | 1805    |         |
| 458     | 330     |         |         |    | --- Crangon crangon     | 541 | 410     |         |         |         |
| /       | /       | /       | /       |    | 069 Pagurus bernhardus  | 2   | 1,5     | 2       | 15      |         |
| 61      | 185     | 299     | 2280    |    | 070 Macropipus holsat.  | 14  | 56      | 195     | 1790    |         |
| 2       | 0,5     |         |         |    | --- Overige Decapoda    | 15  | 5,0     |         |         |         |
| 3       | 1,5     | 8       | 130     |    | 074 ECHINODERMATA       | 23  | 24      | 10      | 68      |         |
| /       | /       | /       | /       |    | 076 Asterias rubens     | 1   | 5,5     | 5       | 60      |         |
| 3       | 1,5     | 5       | 125     |    | 079 Ophiura texturata   | 22  | 19      | 5       | 7,5     |         |
| /       | /       | /       | /       |    | 081 Psammechinus mil.   |     |         |         |         |         |
| /       | /       | /       | /       |    | 082 Echinocardium cor.  |     |         |         |         |         |
| /       | /       | /       | /       |    | --- Overige Echinoder.  |     |         |         |         |         |
| /       | /       | /       | /       |    | --- TUNICATA            |     |         |         |         |         |
| 19      | 95      | 11      | 278     |    | 505 TELEOSTOMI          | 63  | 28      | 1       | md .5   |         |
| /       | /       | /       | /       |    | 506 Onos mustelus       |     |         |         |         |         |
| 11      | 68      | 9       | 265     |    | 509 Callionymus lyra    |     |         |         |         |         |
| 5       | 11      |         |         |    | 510 Pomatoschistus min. | 60  | 27      | 1       | md .5   |         |
| 3       | 16      | 2       | 13      |    | 511 Agonus cataphract.  |     |         |         |         |         |
| /       | /       | /       | /       |    | 515 Liparis liparis     |     |         |         |         |         |
| /       | /       | /       | /       |    | --- Overige Teleostomi  | 3   | 0,5     |         |         |         |



Tabel 4.

Aantallen en gewichten van de verschillende species in de G- en B-stalen.

| G-staal |         | B-staal |         | 30 | Stations                | 35  | G-staal |         | B-staal |         |
|---------|---------|---------|---------|----|-------------------------|-----|---------|---------|---------|---------|
| Aantal  | Gewicht | Aantal  | Gewicht |    | Species                 |     | Aantal  | Gewicht | Aantal  | Gewicht |
|         |         |         |         |    | 001 PORIFERA            |     |         |         |         |         |
|         |         | x       | 1,0     |    | 003 COELENTERATA        |     |         |         | x       | 9,0     |
|         |         | x       | 1,0     |    | 004 Hydrozoa            |     |         |         | x       | 9,0     |
|         |         |         |         |    | 010 Anthozoa            |     |         |         |         |         |
|         |         |         |         |    | 011 Actinia equina      |     |         |         |         |         |
|         |         |         |         |    | 012 Tealia felina       |     |         |         |         |         |
|         |         |         |         |    | 013 Metridium senile    |     |         |         |         |         |
|         |         |         |         |    | 095 Overige Anthozoa    |     |         |         |         |         |
|         |         | 1       | 44      |    | 014 ANNELIDA            | 25  | 9,0     |         | 1       | 40      |
|         |         | 1       | 44      |    | 016 Aphrodite aculeata  |     |         |         | 1       | 40      |
|         |         |         |         |    | 021 Lanice conchilega   |     |         |         |         |         |
|         |         |         |         |    | 022 Pectinaria koreni   | 25  | 9,0     |         |         |         |
|         |         |         |         |    | 025 Overige Annelida    |     |         |         |         |         |
|         |         |         |         |    | 026 ECHIURIDA           |     |         |         |         |         |
| 1       | 0,5     | 1       | 9,0     |    | 028 MOLLUSCA            | 45  | 22      |         |         |         |
|         |         |         |         |    | 029 Gastropoda          |     |         |         |         |         |
| 1       | 0,5     | 1       | 9,0     |    | 034 Lamellibranchia     | 45  | 22      |         |         |         |
|         |         |         |         |    | 046 Cephalopoda         |     |         |         |         |         |
|         |         |         |         |    | 047 Sepia officinalis   |     |         |         |         |         |
|         |         |         |         |    | --- Overige Cephalopoda |     |         |         |         |         |
|         |         |         |         |    | 050 BRYOZOA             |     |         |         |         |         |
| 20      | 105     | 107     | 1031    |    | 055 ARTHROPODA          | 577 | 488     |         | 160     | 1820    |
| 3       | md 0,5  |         |         |    | 058 Cumacea             | 2   | md 0,5  |         |         |         |
|         |         |         |         |    | 060 Isopoda             |     |         |         |         |         |
|         |         |         |         |    | 062 Amphipoda           |     |         |         |         |         |
| 17      | 105     | 107     | 1031    |    | 064 Decapoda            | 575 | 488     |         | 160     | 1820    |
| 06      | 88      |         |         |    | --- Crangon crangon     | 513 | 385     |         |         |         |
|         |         | 1       | 51      |    | 069 Pagurus bernhardus  | 19  | 51      |         | 19      | 460     |
| 4       | 13      | 106     | 980     |    | 070 Macropipus holsat.  | 20  | 39      |         | 141     | 1360    |
| 7       | 4,5     |         |         |    | --- Overige Decapoda    | 23  | 13      |         |         |         |
| 17      | 330     | 328     | 1040    |    | 074 ECHINODERMATA       | 93  | 54      |         | 28      | 214     |
|         |         | 23      | 800     |    | 076 Asterias rubens     | 4   | 1,5     |         | 10      | 200     |
| 15      | 330     | 305     | 240     |    | 079 Ophiura texturata   | 87  | 51      |         | 18      | 14      |
|         |         |         |         |    | 081 Psammechinus mil.   |     |         |         |         |         |
| 2       | 0,5     |         |         |    | 082 Echinocardium cor.  | 2   | 2,0     |         |         |         |
|         |         |         |         |    | --- Overige Echinoder.  |     |         |         |         |         |
|         |         |         |         |    | --- TUNICATA            |     |         |         |         |         |
| 1       | 14      | 2       | 18      |    | 505 TELEOSTOMI          | 36  | 41      |         | 2       | 14      |
|         |         |         |         |    | 506 Onos mustelus       |     |         |         |         |         |
|         |         |         |         |    | 509 Callionymus lyra    |     |         |         |         |         |
| 9       | 8,0     |         |         |    | 510 Pomatoschistus min. | 32  | 25      |         |         |         |
| 1       | 6,0     | 1       | 3,5     |    | 511 Agonus cataphract.  | 4   | 16      |         | 2       | 14      |
|         |         | 1       | 15      |    | 515 Liparis liparis     |     |         |         |         |         |
|         |         |         |         |    | --- Overige Teleostomi  |     |         |         |         |         |

Tabel 4.

Aantallen en gewichten van de verschillende species in de G- en B-stalen.

| G-staal |         | B-staal |         | 37 | Stations                | 38 | G-staal |         | B-staal |         |
|---------|---------|---------|---------|----|-------------------------|----|---------|---------|---------|---------|
| antal   | Gewicht | Aantal  | Gewicht |    | Species                 |    | Aantal  | Gewicht | Aantal  | Gewicht |
|         |         |         |         |    | 001 PORIFERA            |    |         |         |         |         |
|         |         |         |         |    | 003 COELENTERATA        |    |         |         | x       | 6,0     |
|         |         |         |         |    | 004 Hydrozoa            |    |         |         | x       | 6,0     |
|         |         |         |         |    | 010 Anthozoa            |    |         |         |         |         |
|         |         |         |         |    | 011 Actinia equina      |    |         |         |         |         |
|         |         |         |         |    | 012 Tealia felina       |    |         |         |         |         |
|         |         |         |         |    | 013 Metridium senile    |    |         |         |         |         |
|         |         |         |         |    | 095 Overige Anthozoa    |    |         |         |         |         |
| 19      | 7,5     | 1       | 24      |    | 014 ANNELIDA            |    | 2       | 2,5     | 3       | 3,0     |
|         |         | 1       | 24      |    | 016 Aphrodite aculeata  |    |         |         |         |         |
| 19      | 7,5     |         |         |    | 021 Lanice conchilega   |    | 2       | 2,5     | 3       | 3,0     |
|         |         |         |         |    | 022 Pectinaria koreni   |    |         |         |         |         |
|         |         |         |         |    | 025 Overige Annelida    |    |         |         |         |         |
|         |         |         |         |    | 026 ECHIURIDA           |    |         |         |         |         |
| 42      | 23      | 1       | 19      |    | 028 MOLLUSCA            |    |         |         | 1       | md ,5   |
|         |         |         |         |    | 029 Gastropoda          |    |         |         |         |         |
| 42      | 23      | 1       | 19      |    | 034 Lamellibranchia     |    |         |         | 1       | md ,5   |
|         |         |         |         |    | 046 Cephalopoda         |    |         |         |         |         |
|         |         |         |         |    | 047 Sepia officinalis   |    |         |         |         |         |
|         |         |         |         |    | --- Overige Cephalopoda |    |         |         |         |         |
|         |         |         |         |    | 050 BRYOZOA             |    |         |         | x       | 6,0     |
| 19      | 12      | 33      | 275     |    | 055 ARTHROPODA          |    | 628     | 568     | 339     | 2460    |
| 2       | md 0,5  |         |         |    | 058 Cumacea             |    |         |         |         |         |
|         |         |         |         |    | 060 Isopoda             |    |         |         | 1       | md ,5   |
|         |         |         |         |    | 062 Amphipoda           |    |         |         |         |         |
| 17      | 12      | 33      | 275     |    | 064 Decapoda            |    | 628     | 568     | 338     | 2460    |
| 14      | 10      |         |         |    | --- Crangon crangon     |    | 515     | 335     |         |         |
|         |         |         |         |    | 069 Pagurus bernhardus  |    | 3       | 12      | 2       | 10      |
| 1       | 1,5     | 33      | 275     |    | 070 Macropipus holsat.  |    | 93      | 210     | 336     | 2450    |
| 2       | 1,0     |         |         |    | --- Overige Decapoda    |    | 17      | 10,5    |         |         |
| 037     | 658     | 10      | 48      |    | 074 ECHINODERMATA       |    | 104     | 98      | 93      | 393     |
|         |         | 2       | 45      |    | 076 Asterias rubens     |    | 3       | 12      | 15      | 300     |
| 940     | 590     | 8       | 2,5     |    | 079 Ophiura texturata   |    | 101     | 86      | 78      | 93      |
|         |         |         |         |    | 081 Psammechinus mil.   |    |         |         |         |         |
| 97      | 68      |         |         |    | 082 Echinocardium cor.  |    |         |         |         |         |
|         |         |         |         |    | --- Overige Echinoder.  |    |         |         |         |         |
|         |         |         |         |    | --- TUNICATA            |    |         |         |         |         |
| 2       | 0,5     |         |         |    | 505 TELEOSTOMI          |    | 83      | 61      | 1       | 0,5     |
|         |         |         |         |    | 506 Onos mustelus       |    |         |         |         |         |
|         |         |         |         |    | 509 Callionymus lyra    |    |         |         |         |         |
| 2       | 0,5     |         |         |    | 510 Pomatoschistus min. |    | 82      | 58      | 1       | 0,5     |
|         |         |         |         |    | 511 Agonus cataphract.. |    | 1       | 3,0     |         |         |
|         |         |         |         |    | 515 Liparis liparis     |    |         |         |         |         |
|         |         |         |         |    | --- Overige Teleostomi  |    |         |         |         |         |

Tabel 4.

Aantallen en gewichten van de verschillende species in de G- en B-stalen.

| G-staal |         | B-staal |         | 44 | Stations                | 45  | G-staal |         | B-staal |         |
|---------|---------|---------|---------|----|-------------------------|-----|---------|---------|---------|---------|
| Aantal  | Gewicht | Aantal  | Gewicht |    | Species                 |     | Aantal  | Gewicht | Aantal  | Gewicht |
|         |         |         |         |    | 001 PORIFERA            |     |         |         |         |         |
| x       | 4,5     | x       | 1,0     |    | 003 COELENTERATA        |     |         |         |         |         |
| 1       | 4,5     | x       | 1,0     |    | 004 Hydrozoa            |     |         |         |         |         |
|         |         |         |         |    | 010 Anthozoa            |     |         |         |         |         |
|         |         |         |         |    | 011 Actinia equina      |     |         |         |         |         |
|         |         |         |         |    | 012 Tealia felina       |     |         |         |         |         |
| 1       | 4,5     |         |         |    | 013 Metridium senile    |     |         |         |         |         |
| 4       | 5,0     |         |         |    | 095 Overige Anthozoa    |     |         |         |         |         |
|         |         |         |         |    | 014 ANNELIDA            | 3   | 1,5     |         |         |         |
| 3       | 4,5     |         |         |    | 016 Aphrodite aculeata  |     |         |         |         |         |
| 1       | 0,5     |         |         |    | 021 Lanice conchilega   | 2   | 1,5     |         |         |         |
|         |         |         |         |    | 022 Pectinaria koreni   |     |         |         |         |         |
|         |         |         |         |    | 025 Overige Annelida    | 1   | md ,5   |         |         |         |
|         |         |         |         |    | 026 ECHIURIDA           |     |         |         |         |         |
| 2       | 1,0     |         |         |    | 028 MOLLUSCA            |     |         |         |         |         |
|         |         |         |         |    | 029 Gastropoda          |     |         |         |         |         |
| 2       | 1,0     |         |         |    | 034 Lamellibranchia     |     |         |         |         |         |
|         |         |         |         |    | 046 Cephalopoda         |     |         |         |         |         |
|         |         |         |         |    | 047 Sepia officinalis   |     |         |         |         |         |
|         |         |         |         |    | --- Overige Cephalopoda |     |         |         |         |         |
|         |         |         |         |    | 050 BRYOZOA             |     |         |         |         |         |
| 416     | 310     | 311     | 2182    |    | 055 ARTHROPODA          | 661 | 480     | 181     | 1475    |         |
|         |         |         |         |    | 058 Cumacea             | 1   | md ,5   |         |         |         |
|         |         |         |         |    | 060 Isopoda             |     |         |         |         |         |
|         |         |         |         |    | 062 Amphipoda           |     |         |         |         |         |
| 416     | 310     | 311     | 2182    |    | 064 Decapoda            | 660 | 480     | 181     | 1475    |         |
| 355     | 175     |         |         |    | --- Crangon crangon     | 595 | 370     |         |         |         |
|         |         | 3       | 62      |    | 069 Pagurus bernhardus  | 3   | 3,0     | 5       | 110     |         |
| 51      | 130     | 308     | 2120    |    | 070 Macropipus holsat.  | 34  | 92      | 176     | 1365    |         |
| 10      | 4,5     |         |         |    | --- Overige Decapoda    | 28  | 15      |         |         |         |
| 35      | 265     | 272     | 755     |    | 074 ECHINODERMATA       | 268 | 205     | 128     | 284     |         |
|         |         | 17      | 530     |    | 076 Asterias rubens     |     |         | 5       | 99      |         |
| 355     | 265     | 255     | 225     |    | 079 Ophiura texturata   | 268 | 205     | 123     | 185     |         |
|         |         |         |         |    | 081 Psammechinus mil.   |     |         |         |         |         |
|         |         |         |         |    | 082 Echinocardium cor.  |     |         |         |         |         |
|         |         |         |         |    | --- Overige Echinoder.  |     |         |         |         |         |
|         |         |         |         |    | --- TUNICATA            |     |         |         |         |         |
| 23      | 17      | 4       | 24      |    | 505 TELEOSTOMI          | 32  | 40      | 6       | 16      |         |
|         |         |         |         |    | 506 Onos mustelus       |     |         |         |         |         |
| 23      | 17      | 1       | 1,0     |    | 509 Callionymus lyra    | 1   | 4,5     |         |         |         |
|         |         | 3       | 23      |    | 510 Pomatoschistus min. | 31  | 36      | 3       | 1,5     |         |
|         |         |         |         |    | 511 Agonus cataphract.  |     |         | 3       | 15      |         |
|         |         |         |         |    | 515 Liparis liparis     |     |         |         |         |         |
|         |         |         |         |    | --- Overige Teleostomi  |     |         |         |         |         |

Tabel 4.

Aantallen en gewichten van de verschillende species in de G- en B-stalen.

| G-staal |         | B-staal |         | 46      | Stations            | 47  | G-staal |         | B-staal |         |
|---------|---------|---------|---------|---------|---------------------|-----|---------|---------|---------|---------|
| Aantal  | Gewicht | Aantal  | Gewicht | Species |                     |     | Aantal  | Gewicht | Aantal  | Gewicht |
| /       | /       | /       | /       | 001     | PORIFERA            | /   | /       | /       | /       | /       |
| 1       | 1,5     | /       | /       | 003     | COELENTERATA        | 22  | 26      | x       | 353     |         |
| 1       | 1,5     | /       | /       | 004     | Hydrozoa            |     |         | x       | 290     |         |
| 1       | 1,5     | /       | /       | 010     | Anthozoa            | 22  | 26      | 9       | 63      |         |
|         |         |         |         | 011     | Actinia equina      | 22  | 26      | 7       | 55      |         |
|         |         |         |         | 012     | Tealia felina       |     |         | 2       | 8,0     |         |
|         |         |         |         | 013     | Metridium senile    |     |         |         |         |         |
|         |         |         |         | 095     | Overige Anthozoa    |     |         |         |         |         |
| 4       | 5,0     | 1       | 2,0     | 014     | ANNELIDA            | 740 | 195     | 340     | 170     |         |
| 3       | 3,5     | 1       | 2,0     | 016     | Aphrodite aculeata  |     |         |         |         |         |
| 1       | 1,5     |         |         | 021     | Lanice conchilega   |     |         |         |         |         |
|         |         |         |         | 022     | Pectinaria koreni   | 740 | 195     | 340     | 170     |         |
|         |         |         |         | 025     | Overige Annelida    |     |         |         |         |         |
| /       | /       | /       | /       | 026     | ECHIURIDA           | /   | /       | /       | /       | /       |
|         |         | 2       | 160     | 028     | MOLLUSCA            | 650 | 250     | 106     | 37      |         |
|         |         | 2       | 160     | 029     | Gastropoda          |     |         |         |         |         |
|         |         |         |         | 034     | Lamellibranchia     | 650 | 250     | 106     | 37      |         |
|         |         |         |         | 046     | Cephalopoda         |     |         |         |         |         |
|         |         |         |         | 047     | Sepia officinalis   |     |         |         |         |         |
|         |         |         |         | ---     | Overige Cephalopoda |     |         |         |         |         |
| /       | /       | /       | /       | 050     | BRYOZOA             | /   | /       | /       | /       | /       |
| 566     | 498     | 145     | 1385    | 055     | ARTHROPODA          | 33  | 43      | 47      | 495     |         |
|         |         |         |         | 058     | Cumacea             |     |         |         |         |         |
|         |         |         |         | 060     | Isopoda             |     |         |         |         |         |
|         |         |         |         | 062     | Amphipoda           |     |         |         |         |         |
| 566     | 498     | 145     | 1385    | 064     | Decapoda            | 33  | 43      | 47      | 495     |         |
| 105     | 405     |         |         | ---     | Crangon crangon     | 23  | 20      |         |         |         |
| 3       | 2,5     | 5       | 150     | 069     | Pagurus bernhardus  |     |         | 1       | 95      |         |
| 25      | 69      | 140     | 1235    | 070     | Macropipus holsat.  | 6   | 20      | 46      | 400     |         |
| 33      | 21      |         |         | ---     | Overige Decapoda    | 4   | 3,0     |         |         |         |
| 22      | 176     | 73      | 407     | 074     | ECHINODERMATA       | 691 | 340     | 742     | 680     |         |
| 2       | 1,0     | 15      | 305     | 076     | Asterias rubens     |     |         | 12      | 285     |         |
| 20      | 175     | 58      | 102     | 079     | Ophiura texturata   | 690 | 340     | 730     | 395     |         |
|         |         |         |         | 081     | Psammechinus mil.   |     |         |         |         |         |
|         |         |         |         | 082     | Echinocardium cor.  | 1   | 0,5     |         |         |         |
|         |         |         |         | ---     | Overige Echinoder.  |     |         |         |         |         |
| /       | /       | /       | /       | ---     | TUNICATA            | /   | /       | /       | /       | /       |
| 14      | 14      | 6       | 52      | 505     | TELEOSTOMI          | 3   | 20      | 7       | 49      |         |
|         |         |         |         | 506     | Onos mustelus       |     |         |         |         |         |
|         |         |         |         | 509     | Callionymus lyra    |     |         |         |         |         |
| 12      | 10      |         |         | 510     | Pomatoschistus min. | 1   | md 0,5  |         |         |         |
| 2       | 4,5     | 6       | 52      | 511     | Agonus cataphract.  | 1   | 4,0     | 6       | 35      |         |
|         |         |         |         | 515     | Liparis liparis     | 1   | 16      | 1       | 14      |         |
|         |         |         |         | ---     | Overige Teleostomi  |     |         |         |         |         |