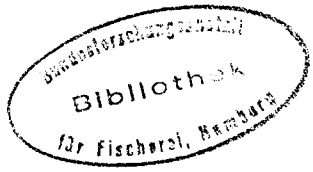
International Council for the
Exploration of the Sea

C.M. 1993/E:1
Report of Activities



MARINE ENVIRONMENTAL QUALITY COMMITTEE

by

Stig Carlberg

1992

Introduction

During the last several years the member of the Committee have questioned whether the annual reporting serves a real need. The main arguments against making national contributions to the report were that the readership and the aim of the report seem to be unclear and non-defined and also that, partly because of this, the contributions from any given country would provide a fragmented or sketchy picture.

Since I was elected the new Chairman of the Committee I have made an attempt to comply with the task to reporting as described in the letter of 20 January 1993 from the General Secretary. In doing so I found that I was able to solicit two contributions including my own. The other members of the Committee did not respond to my circular letter on the reporting, except one member who again pointed to the arguments described above.

This compiled report is submitted to the 1993 Statutory Meeting with the aim to provoking a discussion not only in the Marine Environment Quality Committee, but also among Delegates and members of the Consultative Committee on the need and the objectives with the annual report of activities.

IRELAND

(Dr. M. P. O Sullivan)

1. Dumping Grounds

Characterisation and monitoring surveys are organised to assess the impact on the benthos of the dumping of dredge spoil. Three such surveys carried out in 1992 included preliminary characterisation of benthic conditions in Waterford Harbour, characterisation of a new dumpsite off the east coast at Malahide and a pre-dumping survey of the dredge spoil dumpsite in Galway Bay.

2. Regional Assessments

The Irish Sea Science Coordination Group was established in 1991, with a mandate to advise on the potential for better integration of research and monitoring programmes with respect to improving knowledge of Irish Sea marine environmental issues and on the priorities for further work. One of the Group's tasks will be to consider how, and when, the next Quality Status Report on the Irish Sea should be prepared.

3. Contaminant monitoring

Monitoring of heavy metals and chlorinated hydrocarbons in shellfish from shellfish-growing areas was continued. An intensive monitoring programme was carried out for mercury in fish landed at major ports to ensure the quality of marine foodstuffs for human consumption. Monitoring of radionuclides in marine environmental matrices was continued with particular emphasis on the east coast and the Irish Sea.
Winter nitrate and phosphate levels were measured in the Irish Sea for the second consecutive year and also in Mulroy Bay on the northwest coast.

4. Algal Bloom monitoring.

Monitoring of phytoplankton samples from areas of aquaculture activity and shellfish-growing areas was continued. A number of harmful algal species were recorded, notably *Dinophysis acuta, D. acuminata, D. rotunda, Gyrodinium c.f. aureolum and Heterosigma akashiwo*. Blooms of *G. aureolum* were recorded in Clifden Bay and in Donegal Bay without any deleterious effects but a bloom in Drumcliffe Bay caused some mortalities to cultured clams (*Tapes semidecussatus*). *Heterosigma akashiwo* was recorded in low numbers from a number of sites including Belacragher Bay, Clifden Bay and Bantry Bay. *Dinophysis spp.* were recorded from a large number of sites for Co. Waterford westwards to Bantry Bay and along the west coast as far north as Co. Donegal.

Marine biotoxin testing (using bioassay techniques) was carried out throughout the year for DSP, with toxicity being detected in the southwest, Killary Harbour and Lough Foyle. Some PSP assays were also carried out but no PSP toxicity was detected. In parallel with the bioassays, shellfish were analysed for DSP toxins, okadaic acid and DTX-2.

A study commenced in 1992 with the aim of mapping the distribution of toxic algal cysts around the Irish coast, with specific emphasis on aquaculture sites.

SWEDEN

(S. Carlberg)

1. Algal Blooms Monitoring

Every year since the toxic bloom of *Chrysochromulina polylepis* in the Kattegat and Skagerrak Sweden has (in cooperation with Denmark and Norway) organised regular monitoring of major algal blooms and other situations like oxygen deficiency in bottom waters. Several governmental authorities and university institutions take part in the monitoring which is coordinated by the County Administrative Board of the County of Gothenburg and Bohuslån. Similar activities were started in 1992 for the Baltic proper by the County of Stockholm and for the Gulf of Bothnia by the County of Umeå. The offices compile transmit information to the mass media and to the general public on (toxic) algal blooms, unusual animal kills, anoxic conditions and other more or less acute problems in their respective areas, primarily in the Swedish zone.

The spring bloom in the Kattegat was quite normal and reached its maximum in the first half of March. Kisel algae were mainly dominant. In May and June several species of the *Chrysochromulina* family occurred in great quantities in the Kattegat (it was the *Chrysochromulina polylepis* which caused death of fish, etc. in May 1988). Danish fish farmers in the southern Kattegat reported fish kills, but in the northern Kattegat no effects were observed in fish or other animals, in contrast to the situation in 1988, although the *Chrysochromulina* at times appeared in great numbers.

In July 1992 heavy blooms of the blue-green algae (*Nodularia spumigena* and *Aphanizomenon flosaquae*) were discovered in the Baltic in the open sea areas west and north-west of Gotland. The blooms were dispersed by wind action before reaching the coast. The high surface temperatures were reduced at the same time and the conditions for blooms became less favourable. In August blooms of *Nodularia* were detected in the Bleckinge archipelago, in the norther Hanö Bight. Toxicity was confirmed but no problems were reported.

2. Other Monitoring Activities

Several Swedish representatives take active part in the ongoing revision of the Joint Monitoring Programme of OSPARCOM and the Baltic Monitoring Programme of HELCOM.

The Swedish National Monitoring Programme (PMK) for air, soil fresh water and marine waters has been critically reviewed by national experts, as well as by an international expert panel. The programme will be revised based on the findings and recommendations. The revisions finally decided upon may be presented in the next year's report to MEQC.

3. Assessments

Sweden takes an active role in the preparations to start the Third Periodic Assessment of the Baltic Sea Environment, organised by HELCOM.

4. Major Research Activities

The joint Swedish-Finnish research programme "The Gulf of Bothnia Year" which was carried out with field studies in 1991 has continued with the scientific work-up and evaluation of the data during 1992. The results will be presented at a symposium in Umeå in March 1994.

Appendix

REPORTS ON EXTRACTION OF MARINE SEDIMENTS AND EXCAVATIONS FROM:

Canada

Ireland

Latvia

Sweden

ICES - MARINE ENVIRONMENTAL QUALITY COMMITTEE

REPORT ON EXTRACTION OF MARINE SEDIMENTS AND EXCAVATIONS

YEAR 1992 REPORTING PERIOD 01 January - 31 December

COUNTRY CANADA REGION OR SUB-AREA (a) 3L

REPORTER NAME G. SEIBERT INSTITUTION MARINE CHEMISTRY DIVISION
PHYSICAL & CHEMICAL SCIENCES BRANCH

Address BEDFORD INSTITUTE OF OCEANOGRAPHY
BOX 1006, DARTMOUTH, N.S.
CANADA B2Y 4A2

TYPE OF MATERIAL (b)	Conversion Factor	Removed for use on land (eg construction materials, roads etc.)	Artificial land or island construction	Beach Replenishment, Coast Protection	Dredge spoils which are disposed of at sea.	Other	
	Tonnes/m^3	million m^3	million m^3	million m^3	m^3	Specify use (c)	m^3
Silt Mud Clay							
Sand							
Gravely Sand							
Sandy Gravel							
Gravel							
Larger material (specify)							
Calcareous materials (specify)							
Other * Deposits (specify)					17890		

*Total unspecified dredged material.

P.T.O.

ICES - MARINE ENVIRONMENTAL QUALITY COMMITTEE

REPORT ON EXTRACTION OF MARINE SEDIMENTS AND EXCAVATIONS

YEAR ..... 1992 ..... REPORTING PERIOD ..... 01 January - 31 December .....

COUNTRY ..... CANADA ..... REGION OR SUB-AREA (a) ..... 4T .....

REPORTER NAME ..... G. SEIBERT ..... INSTITUTION ..... MARINE CHEMISTRY DIVISION PHYSICAL & CHEMICAL SCIENCES BRAN .....

Address ..... BEDFORD INSTITUTE OF OCEANOGRAPHY BOX 1006, DARTMOUTH, N.S. CANADA B2Y 4A2 .....

TYPE OF MATERIAL (b)	Conversion Factor	Removed for use on land (eg construction materials, roads etc.)	Artificial land or island construction	Beach Replenishment, Coast Protection	Dredge spoils which are disposed of at sea.	Other	
	Tonnes/m^3	million m^3	million m^3	million m^3	m^3	Specify use (c)	m^3
Silt Mud Clay					97000		
Sand					97700		
Gravely Sand							
Sandy Gravel							
Gravel					25600		
Larger material (specify)							
Calcareous materials (specify)							
Other* Deposits (specify)					6260		

*Additional unspecified dredged material.

P.T.O.

ICES - MARINE ENVIRONMENTAL QUALITY COMMITTEE

REPORT ON EXTRACTION OF MARINE SEDIMENTS AND EXCAVATIONS

YEAR ..... 1992 ..... REPORTING PERIOD ..... 01 January - 31 December .....

COUNTRY ..... CANADA ..... REGION OR SUB-AREA (a) ..... 4X .....

REPORTER NAME ... G. SEIBERT ..... INSTITUTION ..... MARINE CHEMISTRY DIVISION PHYSICAL & CHEMICAL SCIENCES BRANCH .....

Address ..... BEDFORD INSTITUTE OF OCEANOGRAPHY BOX 1006, DARTMOUTH, N.S. CANADA B2Y 4A2 .....

TYPE OF MATERIAL (b)	Conversion Factor	Removed for use on land (eg construction materials, roads etc.)	Artificial land or island construction	Beach Replenishment, Coast Protection	Dredge spoils which are disposed of at sea.	Other	
	Tonnes/m^3	million m^3	million m^3	million m^3	m^3	Specify use (c)	m^3
Silt Mud Clay					90000		
Sand					4700		
Gravely Sand							
Sandy Gravel							
Gravel							
Larger material (specify)							
Calcareous materials (specify)							
Other Deposits (specify)							

P.T.O.

ICES - MARINE ENVIRONMENTAL QUALITY COMMITTEE

REPORT ON EXTRACTION OF MARINE SEDIMENTS AND EXCAVATIONS

YEAR 1992 REPORTING PERIOD 01 January - 31 December

COUNTRY CANADA REGION OR SUB-AREA (a) 4W

REPORTER NAME G. SEIBERT INSTITUTION MARINE CHEMISTRY DIVISION
PHYSICAL & CHEMICAL SCIENCES BRANCH
BEDFORD INSTITUTE OF OCEANOGRAPHY

Address BOX 1006, DARTMOUTH, N.S.
CANADA B2Y 4A2

TYPE OF MATERIAL (b)	Conversion Factor	Removed for use on land (eg construction materials, roads etc.)	Artificial land or island construction	Beach Replenishment, Coast Protection	Dredge spoils which are disposed of at sea.	Other	
	Tonnes/m^3	million m^3	million m^3	million m^3	m^3	Specify use (c)	m^3
Silt Mud Clay					2590		
Sand					3950		
Gravely Sand							
Sandy Gravel							
Gravel					200		
Larger material (specify)							
Calcareous materials (specify)							
Other Deposits (specify)							

P.T.O.

ICES - MARINE ENVIRONMENTAL QUALITY COMMITTEE

REPORT ON EXTRACTION OF MARINE SEDIMENTS AND EXCAVATIONS

YEAR 1992 REPORTING PERIOD 1.1.92 - 31.12.92

COUNTRY IRELAND REGION OR SUB-AREA (a) ... Total national coastal area.

REPORTER NAME M.O Sullivan INSTITUTION F.R.C.

Address Fisheries Research Centre, Abbotstown, Castleknock, Dublin 15.

TYPE OF MATERIAL (b)	Conversion Factor	Removed for use on land (eg construction materials, roads etc.)	Artificial land or island construction	Beach Replenishment, Coast Protection	Dredge spoils which are disposed of at sea.	Other	
	Tonnes/m^3	million m^3	million m^3	million m^3		Specify use (c)	m^3
Silt Mud Clay							
Sand							
Gravely Sand							
Sandy Gravel							
Gravel							
Larger material (specify)							
Calcareous materials (specify)							
Other Deposits (specify)							

There were no known extractions of marine sand, gravel etc or of lithoamnion in 1992.

P.T.O.

FOOTNOTES

(a) If appropriate, divide national coastal area into suitable homogeneous sub areas where distinct differences in extraction practices occur (eg as between Baltic and North Sea and English Channel etc.). Please also provide a master sheet for the total national extraction.

(b) Guide size ranges:- Silt etc. <64μ, sand <2mm, gravelly sand >50% <2mm, sandy gravel >50% >2mm, gravel 2-64mm, larger material >64mm (specify).

(c) Eg fertilisers, glass, metals industry etc.

ADDITIONAL INFORMATION

1. Impact on fisheries and the marine environment; please provide a reference to or synopsis of any significant reports on problems encountered.

2. Please provide, if possible an indication of the source of the material, its geology and dynamics eg sandwaves, sandbanks (stable), sandflats, relict gravel banks, modern gravel banks, shoreline, Lithothamnion beds (live/dead), shelly deposits, nodules, placers etc.

3. Future Production; please provide information on any future activity of relevance.

ICES - MARINE ENVIRONMENTAL QUALITY COMMITTEE

REPORT ON EXTRACTION OF MARINE SEDIMENTS AND EXCAVATIONS

YEAR 1993 REPORTING PERIOD 1992

COUNTRY LATVIA REGION OR SUB-AREA (a) 28.0 Ventspils, Liepaja

REPORTER NAME M. VITINSH INSTITUTION LATVIAN FISHERIES RESEARCH INSTITUTE

Address Daugavgrivas str. 6 LV-1007 RIGA LATVIA

TYPE OF MATERIAL (b)	Conversion Factor	Removed for use on land (eg construction materials, roads etc.)	Artificial land or island construction	Beach Replenishment, Coast Protection	Dredge spoils which are disposed of at sea.	Other	
	Tonnes/m^3	million m^3	million m^3	million m^3	million m^3	Specify use (c)	m^3
Silt Mud Clay					0,302		
Sand					0,374		
Gravely Sand							
Sandy Gravel							
Gravel							
Larger material (specify)							
Calcareous materials (specify)							
Other Deposits (specify)							

P.T.O.

ICES - MARINE ENVIRONMENTAL QUALITY COMMITTEE

REPORT ON EXTRACTION OF MARINE SEDIMENTS AND EXCAVATIONS

YEAR 1993 REPORTING PERIOD 1992

COUNTRY LATVIA REGION OR SUB-AREA (a) 28.5 Riga

REPORTER NAME M. VITINSH INSTITUTION LATFRI

Address Daugavgrivas str. 6 LV-1007 RIGA LATVIA

TYPE OF MATERIAL (b)	Conversion Factor	Removed for use on land (eg construction materials, roads etc.)	Artificial land or island construction	Beach Replenishment, Coast Protection	Dredge spoils which are disposed of at sea.	Other	
	Tonnes/m^3	million m^3	million m^3	million m^3	million m^3	Specify use (c)	m^3
Silt Mud Clay					0,019		
Sand					0,024		
Gravely Sand							
Sandy Gravel							
Gravel							
Larger material (specify)							
Calcareous materials (specify)							
Other Deposits (specify)							

P.T.O.

ICES - MARINE ENVIRONMENTAL QUALITY COMMITTEE

REPORT ON EXTRACTION OF MARINE SEDIMENTS AND EXCAVATIONS

YEAR 1992 REPORTING PERIOD 1992-01-01 -- 1992-12-31

COUNTRY SWEDEN REGION OR SUB-AREA (a) VÄSTRA HAKEN (ÖRESUND)

REPORTER NAME GUNNAR SVANFELDT INSTITUTION GEOLOGICAL SURVEY OF SWEDEN

Address BOX 670 75128 UPPSALA

TYPE OF MATERIAL (b)	Conversion Factor	Removed for use on land (eg construction materials, roads etc.)	Artificial land or island construction	Beach Replenishment, Coast Protection	Dredge spoils which are disposed of at sea.	Other	
	Tonnes/m^3	million m^3	million m^3	million m^3		Specify use (c)	m^3
Silt Mud Clay							
Sand						glass insulation	37511
Gravely Sand							
Sandy Gravel							
Gravel							
Larger material (specify)							
Calcareous materials (specify)							
Other Deposits (specify)							

P.T.O.