

MARINE ENVIRONMENTAL QUALITY COMMITTEE

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B. I. Dybern

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BELGIUM

(W. Vyncke)



1. The effects of dumping industrial wastes off the Belgian coast on the fish and shrimp stocks and invertebrates were studied further.

A monitoring programme was carried out every three months at two dumping areas for industrial wastes derived from titanium dioxide production, one area for wastes from the production of thiocarbamates and an area for an industrial waste containing 1.5 % phenol.

A biological and physico-chemical survey was carried out.

2. The biological and physico-chemical monitoring of the Kwinte Bank, Buiten Ratel, Oostdyckbank where sand extractions are taking place was continued.
3. The monitoring programmes on heavy metals and organochlorines in fish and shellfish were continued. Samples of cod, flounder, brown shrimps and mussels from the Southern North Sea were analyzed. The study on the evolution of mercury in Solea solea in the North Sea and the Irish Sea was continued.
4. Petroleum hydrocarbons were analysed in sea water, sediments and biota samples taken off the Belgian coast.
5. The radioactivity of sediments and samples of fish and shellfish from Belgian coastal waters was measured.
6. Studies on fish pathology were continued in Belgian coastal waters, especially in dumping areas.
7. The regular monthly survey to assess the general state of the marine environment was carried out further. Samples were taken in a 28 station grid. Automatic profiling of general oceanography parameters were included in the routine.

Heavy metals (Zn, Cd, Pb, Cu, Hg) and PCB were also determined in dissolved and suspended matter.

Tritium, gamma radioactivity and K40 were added to the regular survey.

8. Other surveys or specific campaigns :

- 8.1. The survey of the benthic fauna (39 stations) was continued. There is a link with other activities (COST 47) and programmes (influence of sand and gravel extraction, see item 2).
- 8.2. Each week from March to June, ichthyoplankton was surveyed on a 6 station profile using an undulating high-speed sampler. Zooplankton biomass, chlorophyll and hydrographical parameters were simultaneously surveyed.
- 8.3. Two special cruises were organized to improve the knowledge of the distribution, speciation, and transformation rates of organic matter present in the marine environments (stocks of small organic substrates ; uptake by bacteria ; exoenzymatic processes ; phytoplankton production ; and excretion, grazing, etc.).

Furthermore, attention was paid 1° to a comparison between Atlantic ocean and North Sea water and the geographical structure of water bodies

2° to terrigenous inputs (4 specific campaigns).

- 8.4. The fluxes of heavy metals through the food web (phyto-zoo) and in the environment (water-sediment) were investigated during the above mentioned campaigns and during the regular survey campaigns
- 8.5. Air-Sea interface exchanges of metals were investigated during two of the above mentioned cruises.
- 8.6. Geomorphological surveys (bathymetry, sedimentology, seismic cartography) of two areas in front of the Belgian coast were performed, in relation to sand banks investigations.
- 8.7. The monitoring program for the pollutants discharged from channels and sewage outfalls was continued. Samples were taken simultaneously from the points of input and offshore. Four campaigns were devoted to this exercise.
- 8.8. Two campaigns were devoted to the study of the physical characteristics of silt from the Belgian shelf compared to the Dutch coastal area and the Western Scheldt. A sub-bottom sampler (ORE) and a Reinek box corer were used.
- 8.9. Two campaigns were devoted to the detection of trace elements in the plankton of the Belgian coastal zone.

9. Survey of Western Scheldt :

- 9.1. The monitoring programme on the Scheldt was continued. Four surveys were made at 36 stations to provide longitudinal profiles of physico-chemical parameters (salinity, temperature, dissolved oxygen, redox potential, pH, turbidity).
- 9.2. Regular surveys of heavy metals (Cd and Hg) and PCB have been done at five stations, in the framework of the Joint Monitoring programme of the Oslo and Paris Conventions. Some radio-activity measurements were also performed during these surveys.
- 9.3. Heavy metals transport processes and accumulation in the sediments have been studied (1 campaign and 9 sampling stations). Localisation of sedimentation and erosion sites was made using a "sub bottom" sample.