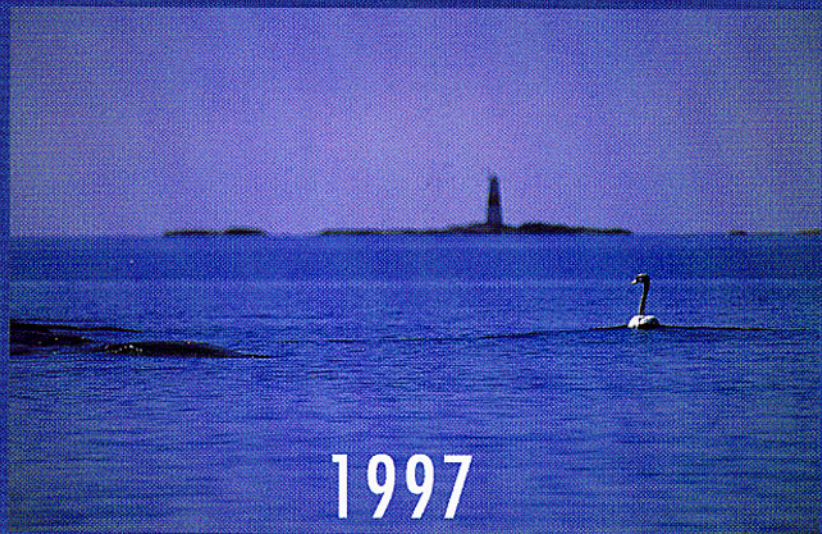




OVERVIEW ON ACTIVITIES



1997

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1997: A YEAR OF IMPORTANT PREPARATIONS

In 1997 HELCOM and its subsidiary bodies focused much of their work on preparations for the Ministerial Session of the 19th meeting of the Helsinki Commission (HELCOM 19). This session, held in March 1998, is expected to become an important milestone in co-operation on the protection of the Baltic ecosystem. Following the mandates given by the Baltic Sea States Summit at Visby in 1996 and the Council of the Baltic Sea States (CBSS), HELCOM 19 concerned crucial environmental priorities and their effective management to meet the challenges of the new political and economic circumstances in the Baltic. The ministerial deliberations addressed the overall scope and effectiveness of regional co-operation within HELCOM, based largely on two extensive assessments of progress in protecting the Baltic Sea:

- A project assessing progress towards the target to reduce harmful inputs into the Baltic Sea by 50% overall by 1995, that was set in the 1988 Ministerial Declaration;
- A project to update and strengthen the Baltic Sea Joint Comprehensive Environmental Action Programme (JCP), a vital and integral part of the HELCOM implementation framework.

The changing political, economic and environmental pressures in the Baltic region require adjustments in the conventional structures and procedures of HELCOM. Therefore the ministerial considerations reviewed HELCOM's activities and gave political guidance. They also addressed the potential role of the Helsinki Commission in the Agenda 21 for the Baltic Sea Region - a comprehensive vision of the extremely important goal of sustainable development, translated into practical actions to change regional economic policy.

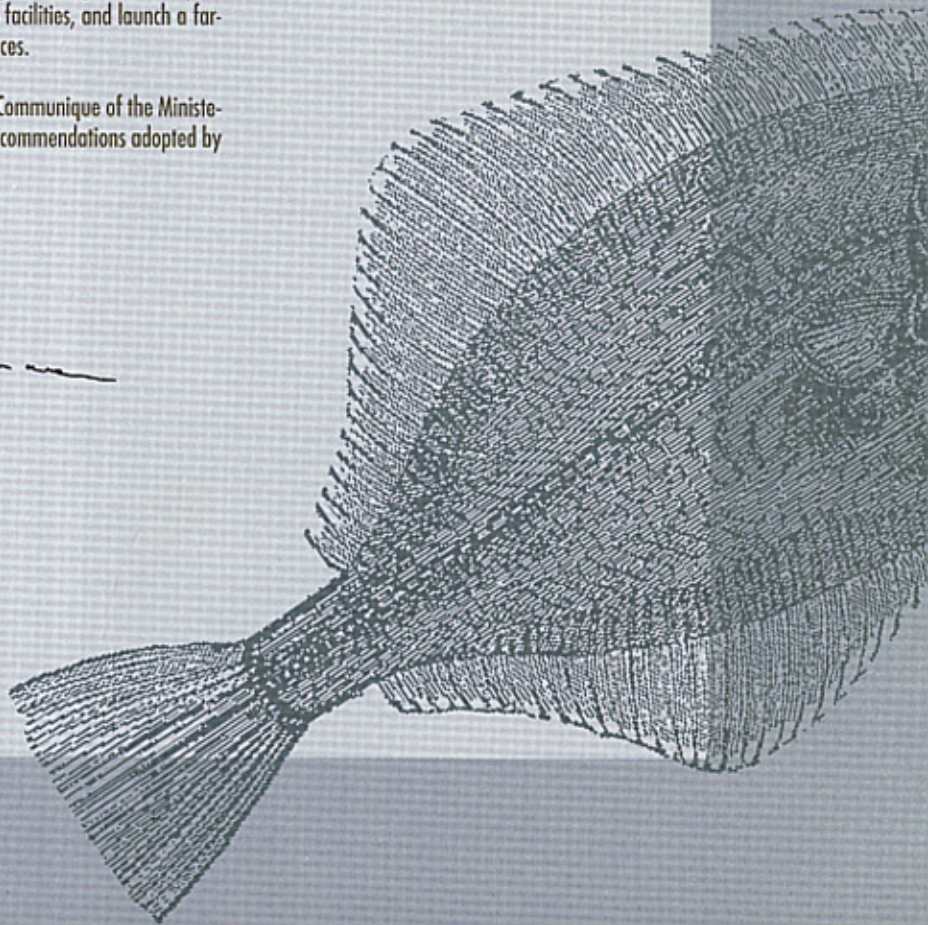
Ministerial commitments on high priority actions to facilitate preventive and curative measures included innovation in the execution of the JCP, and the adoption of new provisions of the Helsinki Convention. These will restrict agricultural pollution, require ship-generated wastes to be discharged at port reception facilities, and launch a far-reaching HELCOM strategy concerning hazardous substances.

Because they result from efforts made during 1997, the Communique of the Ministerial Session on 26 March 1998 and the list of HELCOM Recommendations adopted by HELCOM 19 are contained in this publication.

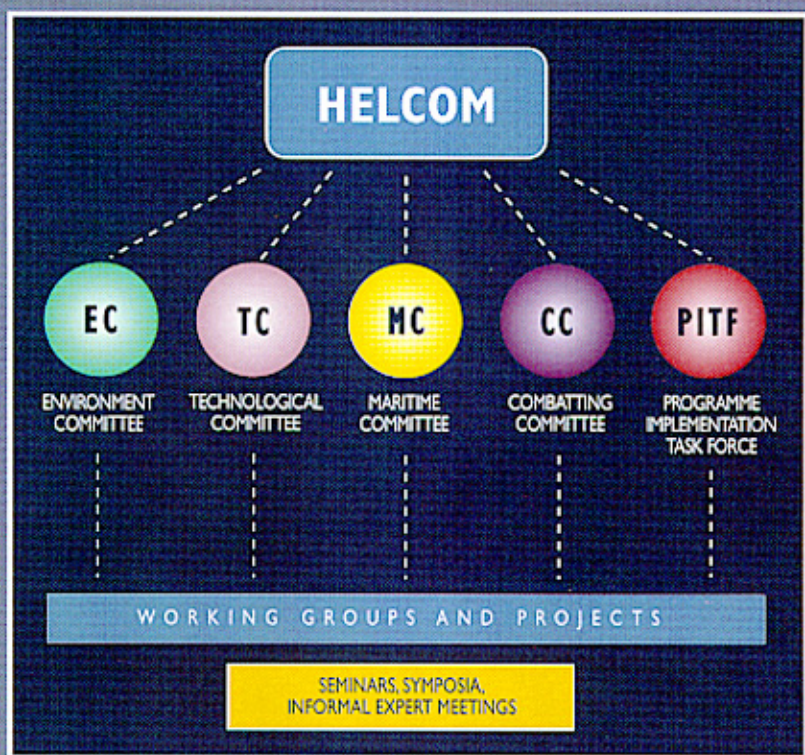


A handwritten signature in black ink, which appears to read 'Tapani Kohonen'.

Tapani Kohonen
Executive Secretary



ORGANIZATION



1974 Helsinki Convention

(Convention on the Protection of the Marine Environment of the Baltic Sea Area)

Contracting Parties

Denmark, Estonia, European Community, Finland, Germany, Latvia, Lithuania, Poland, Russia, Sweden

Observers of the Helsinki Commission

• Government of Belarus • Government of Ukraine • Intergovernmental Agreement on the Conservation of Small Cetaceans of the Baltic and North Seas (ASCOBANS) • Intergovernmental

Oceanographic Commission (IOC) • International Atomic Energy Agency (IAEA) • International Baltic Sea Fishery Commission (IBSFC) • International Council for the Exploration of the Sea (ICES) • International Maritime Organization (IMO) • Oslo and Paris Commissions (OSPAR) • United Nations Economic Commission for Europe (UN/ECE) • United Nations Environment Programme (UNEP) • World Health Organization, Regional Office for Europe (WHO/EURO) • World Meteorological Organization (WMO)

• Baltic and International Maritime Council (BIMCO) • Baltic Ports Organization (BPO) • BirdLife International • Coalition Clean Baltic (CCB) • European Chlor-Alkali Industry (EURO CHLOR) • European Dredging Association (EuDA) • European Fertilizer Manufacturers' Association (EFMA) • European Sea Ports Organization (ESPO) • European Union for Coastal Conservation (EUCC) • Greenpeace International (Stichting Greenpeace Council) • International Council for Local Environmental Initiatives (ICLEI) • Inter-

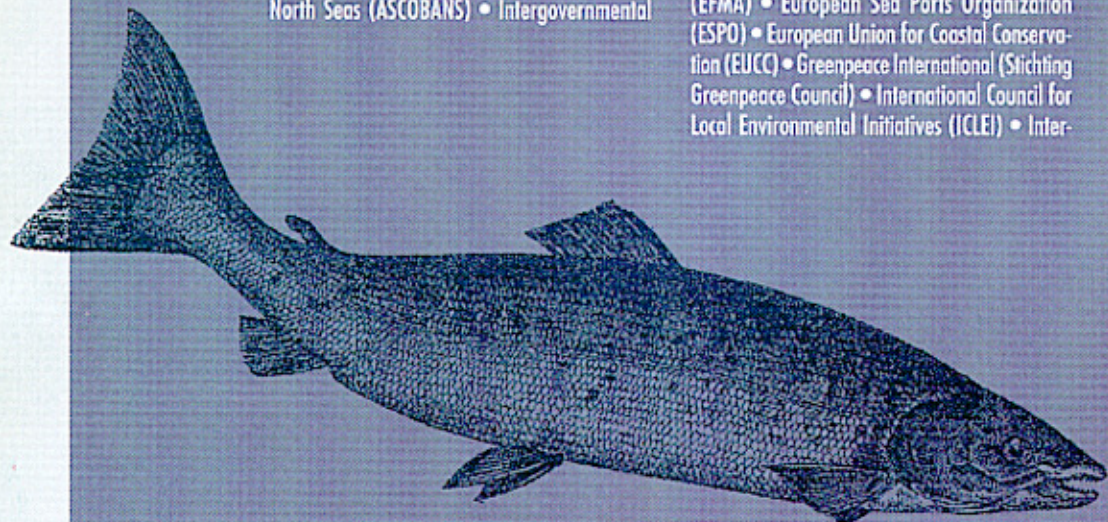
national Network of Environmental Management (INEM) • Oil Industry International Exploration & Production Forum (E&P Forum) • Standing Conference of Rectors, Presidents and Vice-Chancellors of the European Universities (CRE) • Union of the Baltic Cities (UBC) • World Wide Fund for Nature (WWF International)

Members of HELCOM PITF

• HELCOM Contracting Parties • Belarus • Czech Republic • Norway • Slovak Republic • Ukraine • European Bank for Reconstruction and Development • European Investment Bank • Nordic Investment Bank • Nordic Environment Finance Corporation • World Bank • International Baltic Sea Fishery Commission

1992 Helsinki Convention

The 1992 Helsinki Convention, signed by all the Baltic Sea States and the European Economic Community, was ratified by the European Community, Germany, Latvia and Sweden in 1994, by Estonia and Finland in 1995, by Denmark in 1996 and by Lithuania in 1997.



MONITORING Activities

The revision of the Baltic Monitoring Programme was finalised by the Environment Committee of HELCOM (HELCOM EC) by adopting the "Manual for Marine Monitoring in the COMBINE Programme of HELCOM" (Cooperative Monitoring in the Baltic Marine Environment). This was done with the understanding that the different parts of the Manual will be submitted for adoption by HELCOM EC as they are completed. The coastal monitoring programme in the COMBINE Manual has not yet been fully included and harmonised with the open sea monitoring programme. Similarly, some issues related to quality assurance, including technical annexes on some methods, are currently being elaborated and will be included in the Manual when available.

In the revised monitoring programme the reported frequency of pelagic biological observations in the southern and eastern Baltic is still too low to permit proper statistical analysis. Therefore the Contracting Parties were recommended to investigate the feasibility of increasing the biological sampling of stations in this region. In order to increase the number of plankton samples from the open sea and to improve the quality of plankton data from the pelagic biological stations, the Contracting Parties have also been recommended to divide activities in different sub-areas among themselves. Details will be defined by the Working Group on Monitoring and Assessment (EC MON). The test version of the Manual is now available on the

Internet through HELCOM's home page. Updating of the Manual will be coordinated by EC MON whenever the need arises.

Consideration of ways to improve the comparability and quality of the monitoring data included discussion of the possible requirement for accreditation. Participating laboratories are encouraged to obtain official accreditation (or certification) for the variables on which they report data in accordance with COMBINE. Furthermore, it is emphasised that the new phase of the Baltic Monitoring Programme (BMP) regards quality assurance as integral to all monitoring programmes, requiring a substantial input of manpower and finance.

Despite several attempts to harmonise pollution load monitoring and the sea monitoring in order to facilitate the preparation of periodic assessments, there are still difficulties in meeting the data requirements of the assessment experts. Therefore, it was decided that the issue should be thoroughly examined by HELCOM EC and TC experts at a joint seminar day, in conjunction with the third meeting of EC MON.

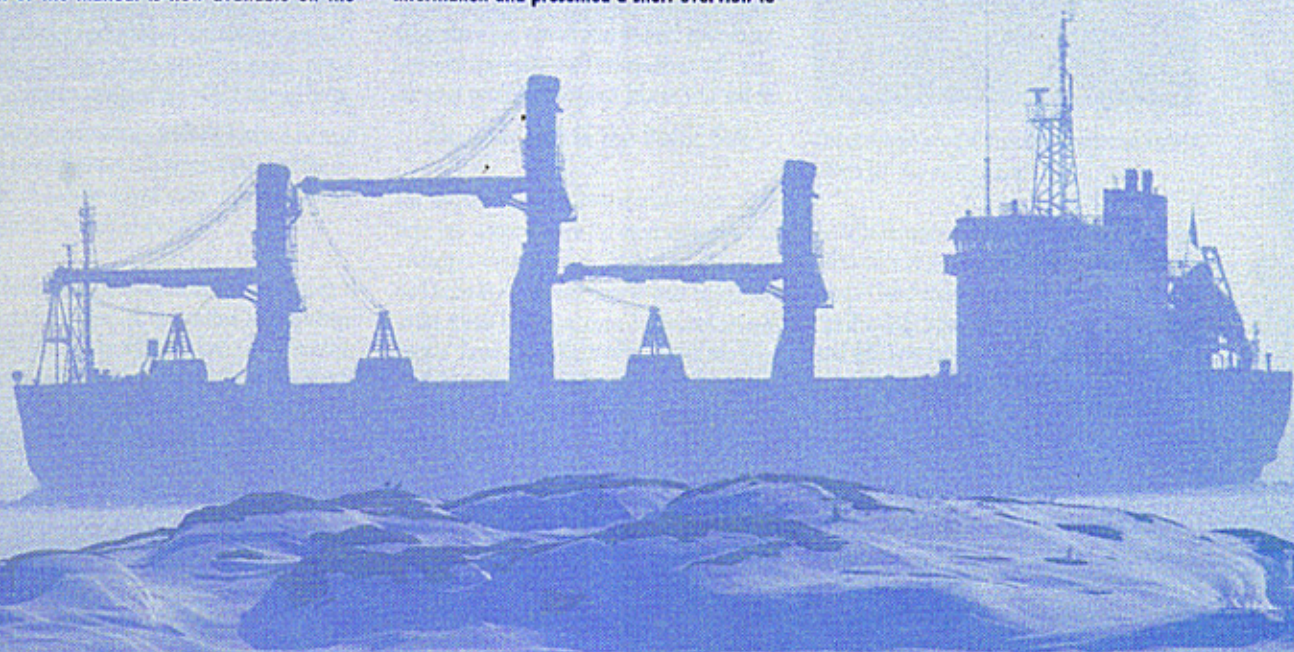
Recalling the large-scale flooding in Germany and Poland and the occurrence of massive algal blooms in the Baltic Sea during the summer 1997, the Environment Committee considered the preliminary results of the studies and related information and presented a short overview to

the public and press. A special scientific workshop on the effects of the 1997 flood of the Odra and Vistula rivers was arranged in January 1998 for more thorough discussions. The evaluation of the impact of the flood on the Baltic Sea is included in this publication.

Assessment of the state of the sea

According to the HELCOM decision to prepare assessments of the state of the Baltic Sea every fifth year, the planning of the Fourth Periodic Assessment has been initiated with a provisional decision to follow the same approach as for the Third Periodic Assessment. Unfortunately none of the Contracting Parties has so far agreed to take the leading responsibility for the work. The next meeting of EC MON will consider a draft content of the Fourth Periodic Assessment and a draft project proposal containing a work schedule and an estimate of the financial implications. Parallel to the preparation of the Fourth Periodic Assessment, the elaboration of a new, more flexible procedure for the preparation of the periodic assessments is planned.

Preparation of the report on the status of radioactivity in the Baltic Sea (1992-1998) will begin in autumn 1998; the report is expected to be available in 2000.



NATURE CONSERVATION AND Biodiversity



The Project "Red List of Coastal and Marine Biotopes in the Baltic Sea Region" has been proceeding according to plan. The last meeting, held in November 1997, agreed on the content of the Red Data Book, which will be printed in 1998 after final approval by the Working Group on Nature Conservation and Biodiversity (EC NATURE).

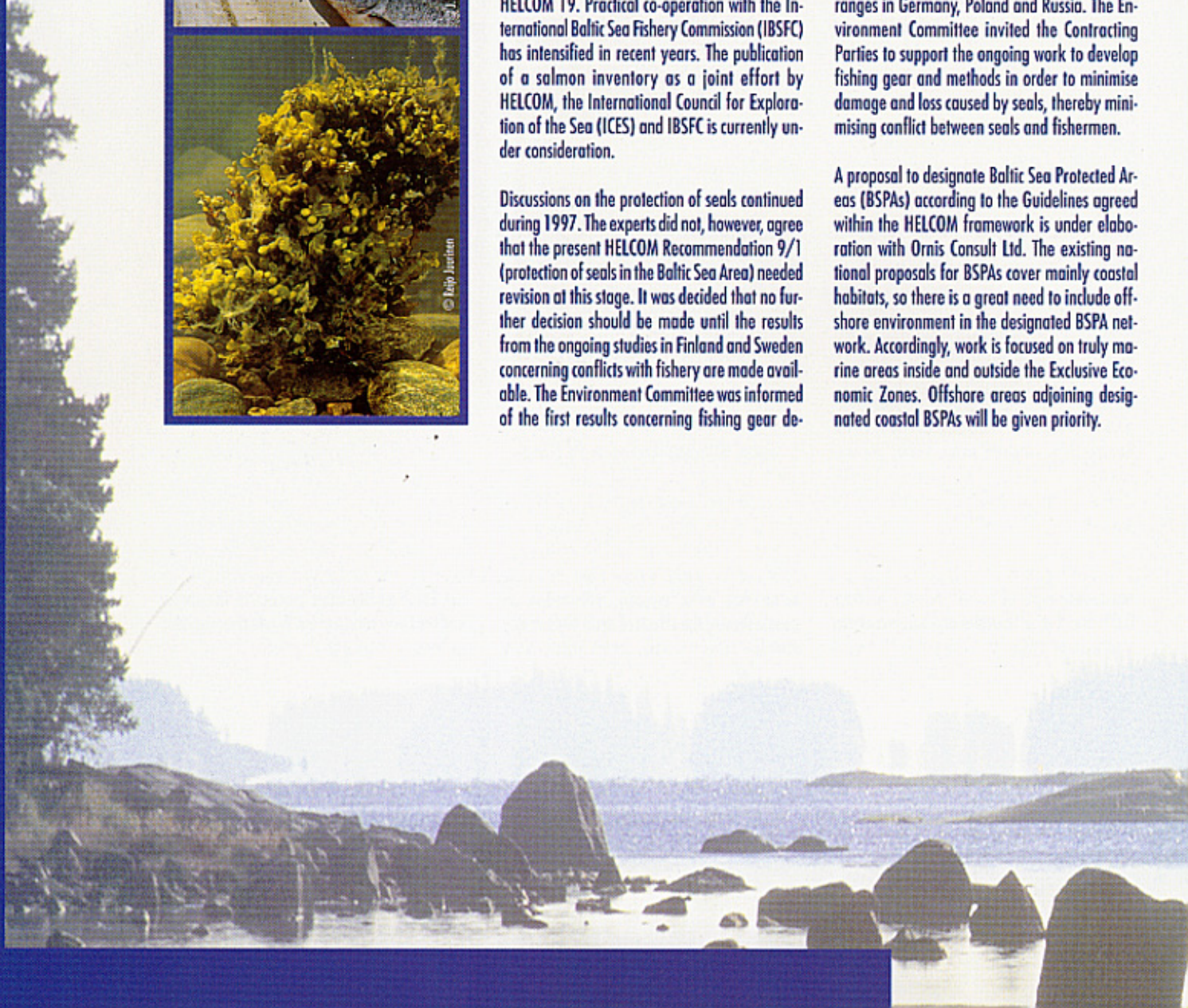
Consideration of the draft HELCOM Recommendation on the protection and improvement of the wild salmon (*Salmo salar* L.) populations in the Baltic Sea Area has continued, based on the proposed changes by some Contracting Parties. The Environment Committee submitted a revised draft Recommendation for possible adoption by HELCOM 19. Practical co-operation with the International Baltic Sea Fishery Commission (IBSFC) has intensified in recent years. The publication of a salmon inventory as a joint effort by HELCOM, the International Council for Exploration of the Sea (ICES) and IBSFC is currently under consideration.

Discussions on the protection of seals continued during 1997. The experts did not, however, agree that the present HELCOM Recommendation 9/1 (protection of seals in the Baltic Sea Area) needed revision at this stage. It was decided that no further decision should be made until the results from the ongoing studies in Finland and Sweden concerning conflicts with fishery are made available. The Environment Committee was informed of the first results concerning fishing gear de-

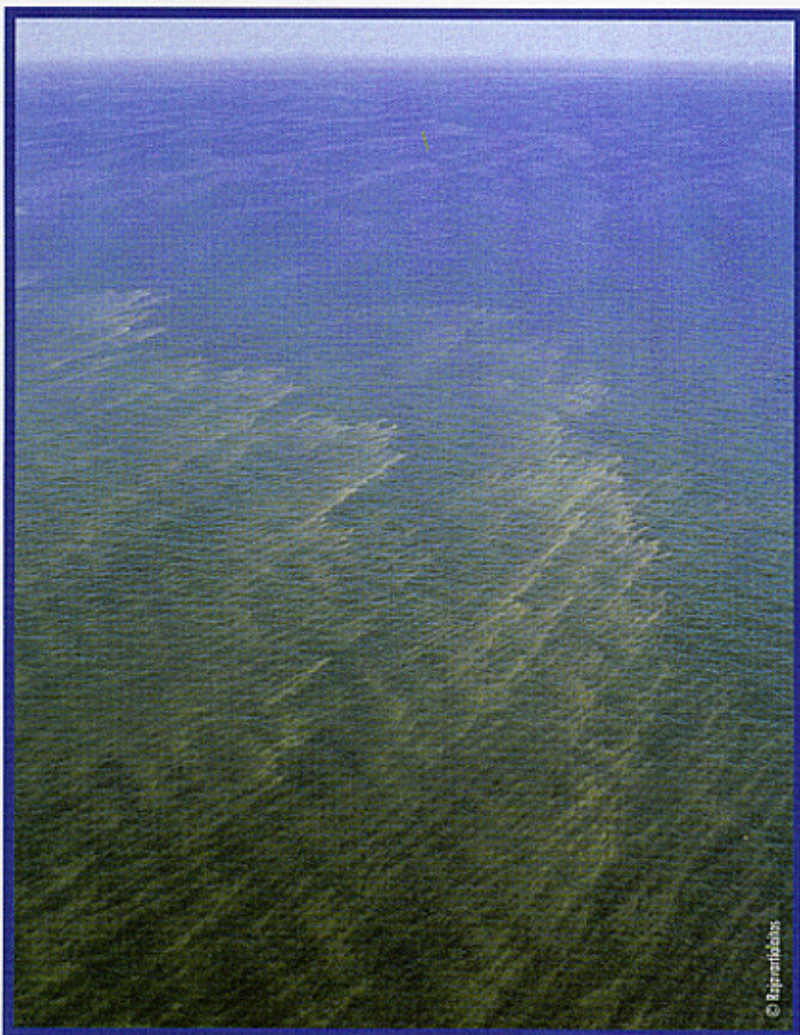
velopment and the restricted hunting in Sweden and Finland. The special scientific hunting campaign has now finished in Sweden and a further similar campaign requires fresh authorisation by the Swedish EPA. In Finland it is intended to continue the scientific hunting of grey seals in 1998.

The Committee appreciated the detailed advice by ICES on issues regarding the status of marine mammal populations in the Baltic Sea, by-catches of marine mammals in the Baltic fisheries, and the effects of fishing activities on the Baltic ecosystem. ICES also encouraged HELCOM to recommend the establishment of additional protected areas in the southern Baltic Sea, which will allow grey seals to recolonize their former ranges in Germany, Poland and Russia. The Environment Committee invited the Contracting Parties to support the ongoing work to develop fishing gear and methods in order to minimise damage and loss caused by seals, thereby minimising conflict between seals and fishermen.

A proposal to designate Baltic Sea Protected Areas (BSPAs) according to the Guidelines agreed within the HELCOM framework is under elaboration with Ornis Consult Ltd. The existing national proposals for BSPAs cover mainly coastal habitats, so there is a great need to include offshore environment in the designated BSPA network. Accordingly, work is focused on truly marine areas inside and outside the Exclusive Economic Zones. Offshore areas adjoining designated coastal BSPAs will be given priority.



BALTIC SEA IN 1997



An inflow of saline and oxygen-rich water in November 1996 failed to stop the stagnation in the central Baltic Sea in 1997. Oxygen conditions in the deep water deteriorated and hydrogen sulphide was observed in the bottom waters of the Bornholm and eastern Golland Basins. Low oxygen concentrations in bottom waters and the decline of benthic macrofauna communities continued in the Gulf of Finland.

Extremely high temperatures and low mixing in the surface layer of the central and southern Baltic Sea due to the calm and sunny weather conditions during July and August 1997 caused considerable oxygen depletion near the bottom in the shallow Danish Fjords and Belt Sea areas.

The phosphate concentrations in the surface water continued to decrease in the central Baltic region.

Algal Blooms in the Baltic Sea

The surface accumulations of blue-green algae seen last summer were the most extensive and prolonged ever recorded. The blooms were verified to be toxic (mainly hepatotoxin nodularin) in the whole Baltic Sea area. In Finland several people showed the effects of toxin and two dogs died after drinking water containing the algae. In Finland and Sweden, several animals showed symptoms of blue-green algal toxins. Large

amounts of blue-green algal biomass were washed ashore, particularly along the entire northern coastline of the Gulf of Finland and in the Archipelago Sea. While the development of algal blooms in many southern and eastern coastal areas was prevented by an unusually persistent upwelling of cold water, caused by steady easterly winds prevailing in July and August, these winds extended the bloom into the Sound and Belt Sea.

The exceptional extent and duration of the surface accumulations resulted from the coincidence of several natural factors. The exceptionally hot weather triggered the blooms early. The large extent of anoxic bottom areas released phosphorus (a limiting nutrient) from the sediment. The long calm periods from June to August allowed the algal filaments to concentrate into thick surface accumulations.

A dinoflagellate bloom with toxic effects on the bottom fauna and fish was observed in September - October in the northern Belt Sea and western Kattegat.

Evaluation of the impact of the 1997 flood event on the Baltic Sea

Developments in the Rivers

The meteorological conditions in Central Europe were unusual for mid-summer. A stationary low over Poland transported humid air from the Mediterranean Sea to the north. Passing the mountain chain in North Bohemia and South Poland the air lost much of its humidity in three successive rain events. The first rain saturated the soil so that the continuing precipitation ran off the surface and caused flood waves within the drainage area of the upper Odra and Vistula rivers (cf. the map on page 9).

Deficits in natural and artificial reservoirs and difficulties in managing the water also contributed to the development of the flood, leading to the flooding of the Odra river banks. The middle and the lower course of the Vistula river was able to handle the volume of water.



In the Vistula, water-level gaugings showed two successive flood waves. Maximum flow rates at the mouth of the Vistula (station Kiezmark) were 3700 m³/s; average flow rate during the flood period was about 2500 m³/s over more than one month. The rates did not exceed Mean High Flow for the period 1951 - 1990.

In the Odra, water-level gaugings showed two successive flood waves. Maximum flow rates estimated by different institutions showed diverging rates, from 2700 m³/s up to 3400 m³/s at the outflow of the river into the estuary (station Krajnik). Flow rates were significantly higher than any previously observed. Due to the difficulties in estimating flow rates, accurate values for total discharge are not yet available.

Nutrients were supplied to the river water by riverbank sediments, flooded industrial plants (fertilizer industry), municipal wastewater treatment plants, and submerged farms and farmlands.

Metals were mainly supplied by contaminated river and riverbank deposits, and by flooded industrial areas, especially in the Katowice-Olkusz and in the Lubin-Glogow regions.

Organic contaminants were supplied by contaminated river and riverbank deposits, flooded industrial chemical plants, municipal waste disposals, submerged agricultural areas, and flooded fuel stores.

Developments in the Szczecin Lagoon

The Szczecin Lagoon is the transition zone between the Odra River and the Baltic Sea. Most of the water (about 75%) is discharged to the Pomeranian Bay via the Swina Strait. Approximately 15% of the water reaches the Baltic Sea via the Peene Stream, and around 10% flows over the Dziwna.

Due to a change in water level in the Baltic Sea, an outflow from the Szczecin Lagoon into the Baltic started on 20 July 1997. The floodwater from the Odra started to fill the Zalew Wielki on 23 July 1997. The maximum inflow occurred on 7 August 1997. The water of Zalew Wielki was replaced by river water after about 5 days. The Kleines Haff was only slowly filled with the floodwater, which reached the western end of Kleines Haff around 13 August 1997.

In the most affected central and eastern area of the Lagoon an increase of all inorganic nutrients was observed in the course of the flood. Only a small proportion of nutrients was transformed into biomass.

There were no significant changes in the concentrations of heavy metals zinc, copper and nickel, but slightly increased concentrations of lead, cadmium and mercury were observed.

A large number of pesticides (26) were analysed from sea water from the Szczecin Lagoon. Two pesticides (atrazin and 2,4-dichlorophenoxy acetic acid) were observed in measurable concentrations.

Reduction of soft bottom macrofauna was observed at the entrance of the river into the Lagoon. The dominant species in the central and north-eastern parts of the Lagoon were not significantly affected by the flood.

Developments in the Open Sea

Gulf of Gdansk

Floodwater from the river Vistula reached the Gulf of Gdansk in late July/early August 1997. Southward flow from the open sea pushed floodwater towards the coast of the Gulf of Gdansk in westerly and easterly directions. In the Gulf of Gdansk nutrient concentrations were in the or-

der of maximal concentrations recorded in spring thaw waters during 1979-1996.

The inflow of nutrient-rich floodwater into the Gulf of Gdansk was followed by greatly increased primary production, which was also observed as an increase in oxygen saturation. At the same time large amounts of settling organic matter led to temporary oxygen deficiency in near-bottom water.

Increased nutrient concentrations were limited to the geographical boundary of the Gulf and did not spread into the open Baltic. In the Gulf of Gdansk most of the measured parameters returned to normal conditions in November 1997.

In the Gulf of Gdansk the impact of floodwaters on sanitary conditions was significant. With respect to parameters such as total bacteria number, MPN (Most Probable Number) of faecal coliform bacteria and MPN of faecal streptococci, the sanitary pollution of the Gulf of Gdansk was several times higher than in previous years. Potentially pathogenic bacteria were isolated from near-shore water of the Gulf of Gdansk. In autumn the situation returned to normal.

Pomeranian Bay

The main discharge into the Pomeranian Bay began with an early increase caused by the blocking effect of strong northerly winds. This continued, with brief interruptions, until the end of August. Variations in the discharge rate were due to changes in wind direction.

At first winds transported the river water along the Usedom coast, then along the Polish coast. In August main transport occurred through the western part of the Pomeranian Bay into the Arkona Sea.



Odra floodwaters reached the Swina Strait outlet on 30 July, indicated by very low salinity in the entire water column and by considerably increased concentrations of all nutrients.

The calculated amounts of nutrients (in tonnes) transported into the Pomeranian Bay over the period 1 June - 31 August 1997 are given in the table. For comparison also 1995 values are given.

	1995/tonnes	1997/tonnes
NO ₃	550	2600
PO ₄	347	890
total-N	7500	16 500
SiO ₄	3300	26 000

The maximal nitrogen and phosphate concentrations in the Pomeranian Bay were similar to maximal concentrations normally observed during spring run-off, whereas concentrations of silicate were exceptionally high. Nitrate concentrations decreased very rapidly beyond the outlet area due to biological uptake, whereas phosphate and silicate were simply diluted.

Nutrient load caused a higher primary production, leading to oxygen over-saturation in the surface water. In the near-bottom water degradation processes were intensified by enhanced loads of organic matter, leading partly to anoxia in the coastal strip of the Bay.

The effects of the flood remained restricted to the Pomeranian Bay and did not influence the open Baltic Sea. In late-October/early November 1997 the levels of nutrients in the Pomeranian Bay had returned to normal.

There was considerable growth of phytoplankton in the Gulf of Gdansk and the Pomeranian Bay. Instead of the blue-green algae typical in summer, the floodwater created a bloom with lots of diatoms, typical of spring bloom, and also a massive freshwater flora. It should be noted, however, that the enormous blue-green bloom that appeared in most parts of the Baltic Sea at the same time were unrelated to the flood event.

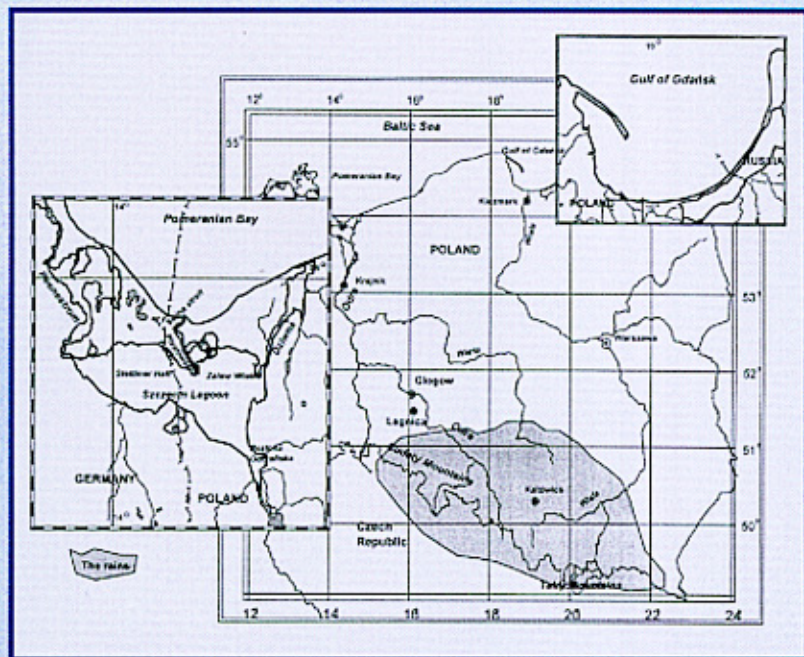
The concentrations of mercury, cadmium and copper at a station near the Swina mouth were similar to the mean concentrations measured in June 1995. In this coastal area only lead concentration was 2-3 times higher than the mean concentration.

The concentrations of organic contaminants (PAHs, DDTs and PCBs) at the Swina mouth decreased towards the open sea. However, there were no differences compared to 1996. No increased concentrations of HCHs were observed.

Preliminary conclusions are that no extraordinarily elevated organic contaminant levels were found in the Pomeranian Bay. No further negative effects of metals and organic contaminants on the marine environment are expected.

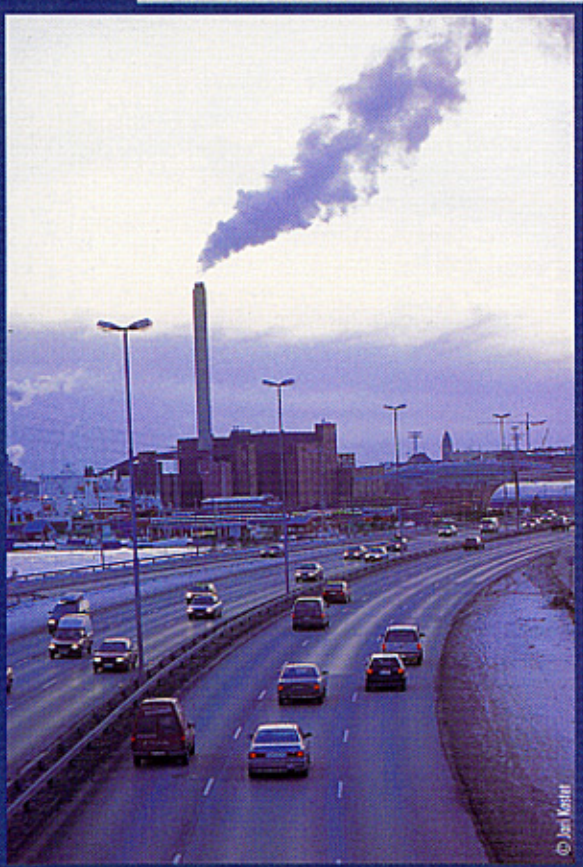
In the Pomeranian Bay, in the areas close to the Swina and Dziwna mouths, a high number of total bacteria, Most Probable Number (MPN) of faecal coliform bacteria, and potentially pathogenic bacteria were observed. In autumn the situation returned to normal.

Figure 1
Map of the drainage area of the Odra and Vistula rivers. Flooded area indicated by raster.



REDUCTION OF POLLUTION

From land-based sources



Continuing the work it began in the mid-1980s to reduce environmental pollution, the Technological Committee (HELCOM TC) decided in 1997 to forward two draft Recommendations for adoption by HELCOM 19. One restricts sulphur content in diesel fuel on offshore units in the Baltic Sea Area. The other reduces nutrient and other pollutants leaching from forestry land. However, because there is insufficient knowledge on the impact of the closure of waste water streams, and a lack of techniques to reduce sulphur and nitrogen oxide emissions in the pulp and paper industry, further work to restrict pollution from wood-based and wood-free paper production and the proposed reconsideration of limits on nitrogen emissions from recovery boilers (new plants) and sulphur emissions from sulphite pulp and kraft pulp processing are being postponed until 2000. The application of the best available technology (BAT) in the iron and steel industry and the revision of reduction targets of atmospheric pollution have been interrupted until the corresponding work under EC Directive 96/61 has been finalised.

Based on comments by the Contracting Parties and adjustments to relevant parts of the Annex VI of the EU Directive 91/414/EEC, the revision of draft criteria to identify pesticides for possible use in the Baltic Sea catchment area was finalised by HELCOM TC for consideration by HELCOM 19.

The "Summary overview on sampling and compliance checking", prepared under the auspices of HELCOM TC, indicated that the national contributions still do not give a full and adequate picture of monitoring in the countries and that the methods used vary greatly. Taking into account the further need to strengthen co-operation with the member countries of the EU and OSPAR, the Technological Committee decided to forward the summary overview to EU and OSPAR.

Hot spot criteria for point sources of pollution were developed in 1997. HELCOM TC unanimously endorsed the "Criteria for Inclusion of Sites on the Hot Spot List". Criteria-setting for agricultural hot spots and guidance on how to apply the criteria sector by sector will continue in 1998.

Assessment of the pollution load to the marine environment

In 1997 two important projects which support the decision-making process to protect the Baltic

Sea, "Airborne Pollution Load to the Baltic Sea 1991-1995" (PLC AIR/91-95) and "Third Baltic Sea Pollution Load Compilation" (PLC-3) were finalised and published in the Baltic Sea Environment Proceedings No. 69 and No. 70 respectively. However, HELCOM TC concluded that the PLC-3 report is not comparable with the previous reports (PLC-1 and PLC-2), and that comparison of the results does not adequately reflect the changes of the pollution load during the last five years. The results of the airborne and waterborne pollution load reports are included in the Final Report on Implementation of the 1988 Ministerial Declaration.

In 1997 the Guidelines for the Fourth Waterborne Pollution Load Compilation (PLC-4) were finalised. The main aim is to collect information on the load from all point and diffuse sources in the Baltic Sea drainage area. The HELCOM Recommendations concerning PLC-4 were presented for adoption by HELCOM 19.

Matters related to preparation of the 1998 Ministerial Meeting

1997 saw the completion of the important and extensive project concerning HELCOM Strategy with Regard to Hazardous Substances. This proposes the main principles for elaborating criteria for selection and priority setting of substances and the assessment methodology, taking into account the limited experience in risk assessment of hazardous substances, particularly in marine environments. For example, the effects on marine organisms of long-term exposure, low degradation rates, and large dilution remain conjectural.

Matters Related to Agriculture

Under the joint HELCOM PITE/TC "Project on Agriculture", the amendments to Annex III of the Helsinki Convention on regulations to prevent pollution from agriculture were finalised and proposed to HELCOM 19 for adoption.

Future Work

Attention should be concentrated on harmonising HELCOM Recommendations and EU Directives. An analysis of differences between HELCOM Recommendations, EU Directives and OSPAR Decisions and Recommendations and their reporting procedures should lead to a proposal for harmonisation within the next year.



FURTHER MEASURES

To eliminate illegal discharges and to decrease operational discharges from ships



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The Baltic Sea States carry out regular surveillance activities to monitor pollution at sea. The assessment of national oil spill reports over ten years indicates an annual rate of approximately 600-700 discharges. The map (page 22), which illustrates the number and size of oil spillages observed by national surveillance flights in 1996, shows marked concentrations along the Danish, German and Swedish coastlines. This reflects both the intensive ship traffic in these regions, and the regular surveillance flights using modern remote sensing devices.

To eliminate these spillages the Helsinki Commission developed a complex of measures known as the Baltic Strategy for Port Reception Facilities for Ship-generated Wastes and Associated Issues, approved in 1995. Follow-up work to create uniform requirements for the operation and availability of reception facilities in the region has now been completed. This also determines detailed principles for the ashore handling of ship-generated wastes, to be implemented by all Baltic Sea states.

The Baltic Sea States shall apply the "no-special-fee" charging system for the use of reception facilities, whereby the cost of reception, handling and disposal of ship-generated wastes, originating from the normal operation of a ship, is included in the harbour fee or otherwise charged to the ship irrespective of whether wastes are actually delivered. The system now applies to oily wastes from machinery spaces, and the inclusion of sewage and garbage is expected. All small vessels, such as pleasure craft, which are not covered by the existing sewage discharge regulations should, within certain conditions, be provided with a port reception facility to discharge sewage. All ships, with some exemptions, will be subject to a mandatory discharge of all wastes to a port reception facility before leaving a port.

The Baltic Sea States shall use common criteria for a minimum level of fines for violations of anti-pollution regulations. For example, an ille-

gal discharge of oil detected by aerial surveillance carries a minimum fine of 1,500 SDR (Special Drawing Right), which is equivalent to more than 2,000 USD.

The follow-up actions also cover matters related to notification by a ship of her wastes before entry to a port, guidelines concerning waste management plans for ports, and ashore handling of wastes.

The need to install appropriate equipment on board ships not covered by Annexes I (oil), IV (sewage) and V (garbage) of MARPOL 73/78 is also defined. Thus, ships of less than 400 tonnes gross tonnage should comply with the principles concerning holding tanks/oily water separating or filtering equipment. Furthermore, fishing vessels, working vessels and pleasure craft should be provided with toilet retention systems, standard connections for sewage, and garbage retention appliances.

This comprehensive set of measures - the first in the world for regional sea areas - is intended to eliminate illegal discharges by ships into the Baltic Sea.

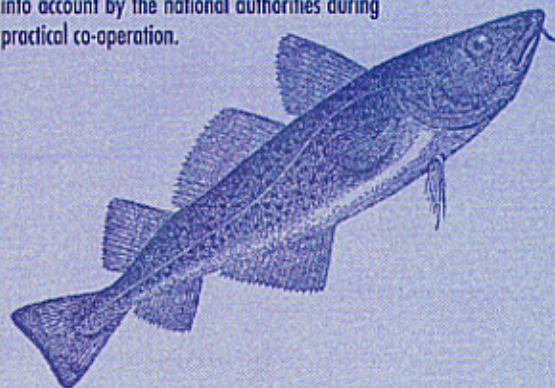
These measures are accompanied by an investment programme to improve the availability of ashore reception facilities in the countries in transition in the region. Denmark has completed feasibility studies for the ports of Estonia, Latvia, Lithuania and for St. Petersburg; Sweden has completed studies for the Polish ports. The feasibility study for the Russian port of Kaliningrad will be completed by Sweden in 1998. The implementation of the feasibility studies is divided into two: development of port waste management plans for the ports concerned, which are or will be carried out by Denmark and Sweden, and real investments. International financial institutions (the Nordic Investment Bank for the Danish studies, the World Bank for the Polish ports) have preliminarily agreed to provide loans for these investments. However, approximately

30% of each project should be financed by the recipient countries, which are also interested in obtaining grants from donor countries. The implementation of the investment programme is co-ordinated by a special group established jointly by the International Maritime Organization (IMO) and the Helsinki Commission.

In order to ensure compliance with the anti-pollution regulations, it is vital that the states concerned should co-operate in investigating violations. Such co-operation includes reporting on pollution incidents and detected spillages, and assisting in gathering evidence and information on the detained vessels. The principles of this co-operation are reflected in the revised HELCOM Recommendation "Co-operation in investigating violations or suspected violations of discharge and related regulations for ships, dumping and incineration regulations" and the HELCOM Recommendation concerning reporting on incidents involving harmful substances and emergency dumping.

HELCOM 19 also adopted a HELCOM Recommendation concerning requirements for ships bound for or leaving the ports of the Baltic Sea Area and carrying dangerous or polluting goods. This obliges ships to report on such goods to the port authorities.

The first meeting of the competent authorities for investigations of anti-pollution regulations was arranged by the Helsinki Commission in 1997. The meeting's conclusions will be taken into account by the national authorities during practical co-operation.



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PROGRESS WITHIN THE ACTION PROGRAMME

Introduction

Thanks to the support of HELCOM PITF members and observers, considerable progress has been made in the implementation of the Baltic Sea Joint Comprehensive Environmental Action Programme (JCP), which was approved at the Diplomatic Conference in Helsinki in March 1992. During the course of implementation the members and observers gained experience which could be used to update and strengthen the JCP as defined in the HELCOM PITF Terms of Reference and required by the Prime Ministers of the Baltic Sea States at the Summit in Visby (Sweden, May 1996). In 1996 HELCOM PITF established the Project "Updating and Strengthening of the JCP" and a draft final report was produced in December 1997.

In 1997 HELCOM PITF focused on the implementation, updating and strengthening of the JCP. More detailed information can be found in the HELCOM PITF's Annual Report 1997 and the Fifth Activity Inventory.

Project on Updating and Strengthening of the JCP

During the first meetings of 1997 the content of the Final Report was clarified and the responsibilities of the Project members and consultants were agreed. The Project Leader (Poland), the Lead Parties and all members and observers worked extremely hard to produce the draft final report on time. The representative of the World Bank, Mr. Stephen Lintner, made a valuable contribution in drafting the executive summary and editing the Final Report. The draft executive summary and the draft report were forwarded to HELCOM PITF 11/97 for consideration. Final adoption was deferred to a special HELCOM PITF meeting in February 1998 and these documents were presented at the Ministerial Session of HELCOM 19.

Point source and non-point source pollution (element 3)

The JCP is structured into six elements to guarantee stable environmental development with strong links to policy, law, and economy and to public awareness and environmental education. Investment activities concerning point source and non-point source pollution are the core activity (element 3) whilst the other elements are supportive.

Point Source Pollution

In 1997 three hot spots were deleted from the list: No. 29, Tallinn Pulp and Paper Mill, and No. 35, Vähma Meat Processing Plant, have been closed, whilst No. 16, Pulp Mill Sunila Oy in Finland, has put in place the required measures. Investment is continuing in 58 of the remaining 117 hot spots, and 78 are in receipt of technical assistance. More detailed information, including figures on investment cost, allocated and reserved resources, and sources of finance, is given in the Fifth Activity Inventory (cf. Figures 3 and 4 as examples, page 14).

HELCOM PITF 11/97 adopted in principle the general criteria for the inclusion of sites on the hot spot list. According to the Terms of Reference the HELCOM PITF JCP-UP further developed criteria for deletion and inclusion of point and non-point sources of pollution. This activity has not yet been finalised.

Non-point Source Pollution

HELCOM 18 decided, in principle, on close co-operation with the Baltic 21 process but the detail will depend on available resources. Sweden offered to share responsibility for the sector on

agriculture with HELCOM. The Lead Parties had to finalise the sector's work programme for 1997 and 1998 for elaborating the sector report including the action programme. Three workshops were scheduled to consider the goals, criteria and indicators for sustainable development; scenarios and policies implied; obstacles and gaps; and the sector's action programme. Close co-operation between the HELCOM PITF/TC "Project on Agriculture" and Baltic 21 has been safeguarded by one back-to-back meeting and by the permanent involvement of the Project Leader (Poland) and the Project Team members. The activities and results of the HELCOM PITF/TC Project on Agriculture are recognised as fundamental for the elaboration of the report on sustainable agriculture and the implementation of the proposed actions, in particular the Annex on Agriculture to the Helsinki Convention, the Codes on Good Agricultural Practice and the evaluation of targets and results of finalised and ongoing projects on agriculture in the Baltic catchment area.

HELCOM Recommendation 17/1 "Reduction of emissions from transport sector affecting the Baltic Sea" was elaborated and adopted in 1996 at HELCOM 17. This aims to reduce air pollution from mobile sources, through, for example, emission control technologies for vehicles, inspection programmes to improve engine tuning and maintenance of control systems. Following the HELCOM PITF 6/95 decision to arrange three follow-up workshops, the 1997 Pärnu/Estonia workshop dealt with environmental impact assessment as a part of traffic planning, and with measures to promote public transport. At HELCOM PITF 11/97 the Lead Party Germany proposed a "Project on Transport" to evaluate general investment policy directed at improving sustainable transport infrastructure in the countries.



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Other Programme Elements

Work within the other Programme elements is progressing well. Activities have been organised within the elements in the course of implementation of the JCP. Lead Party reports have been elaborated, and analyses carried out in order to identify gaps and obstacles in the programme and to propose solutions. The contributions of the HELCOM PITF members and observers, including Working Groups and projects, were passed on to JCP-UP to be reflected in the Final Report on Updating and Strengthening of the JCP.

The activities and progress of the remaining five Programme elements are, briefly, as follows:

Policies, laws and regulations (element 1)

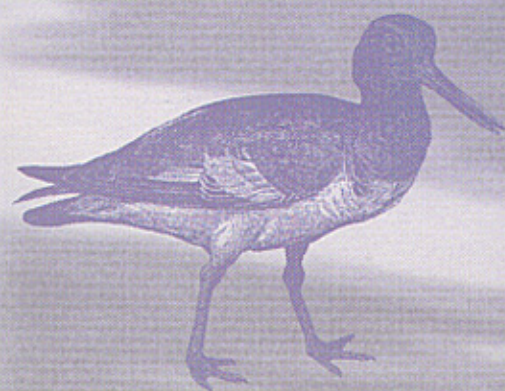
In most of the countries in transition a legal framework for environmental protection has been elaborated. The tendency is to harmonise with EU-legislation. Many of the Contracting Parties to the Helsinki Convention have also decided to follow an integrated approach, which includes consideration of the environment in other political fields. In some cases this is supported by the inclusion of environmental aspects in the constitution.

Institutional strengthening and human resources development (element 2)

Programme activities are designed to help define and strengthen the role of central and local government in the new and evolving legal framework. All countries have already made successful efforts to achieve a proactive approach, related to basic principles such as precaution and prevention. A number of contacts and networks have been established around the Baltic Sea, including twinning arrangements between cities and regional administrations, networks between organisations, and contacts between schools.

The Union of the Baltic Cities (UBC) has undertaken a wide range of programmes to support transfer of experience between countries in the region.

The ICLEI's ECO Cities Programme, and the Baltic Sustainable Cities Programme co-ordinated by the UBC, are other examples of multilateral activities for institutional strengthening and human resource development.



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The International Network for Environmental Management (INEM) is developing the institutional capacity of business organisations, and promotes sound environmental management in enterprises.

However, despite these achievements, there is still a lack of experts on environmental issues, even with regard to the development of environmental legislation.

Management Plans for Coastal Lagoons and Wetlands (element 4)

Activities in previous years have focused on five Integrated Coastal Zone Management Plans (ICZMP) on the Baltic Sea coast. The interim period for preparing the implementation of the ICZMPs began in 1997. This time has been used, inter alia, to improve the list of potential projects for implementation and to seek funding. All countries have indicated support, but much needs to be clarified before ideas can be turned into practical steps.

Applied research (element 5)

At the initial stage of the JCP, the HELCOM Environmental and Technological Committees were invited to lead this element. Many of the EC's and TC's important activities are classified under "Applied Research", for example, monitoring and assessing the state of the marine environment, and the assessing the pollution load entering the Baltic Sea from land-based sources and with atmospheric deposition. However, HELCOM PITF doubted the success of this Programme element and requested the project on updating and strengthening of the JCP to examine whether it should be kept.

HELCOM PITF 11/97 decided to keep the Programme element and to focus on research related to cost-effective measures and critical loads, mainly with respect to eutrophication, and on finding solutions to data reliability problems in order to facilitate the implementation of the JCP.

Public Awareness and Environmental Education (PA&EE) (element 6)

Nine projects are current within the Contracting Parties. In 1997 the main task was to integrate the project activities into the HELCOM information strategy and to identify ways to support the Baltic 21 process. The working group decided to increase support for the targets of the Committees and HELCOM PITF. The working group will contribute guidance to Baltic 21 on public participation and environmental education.

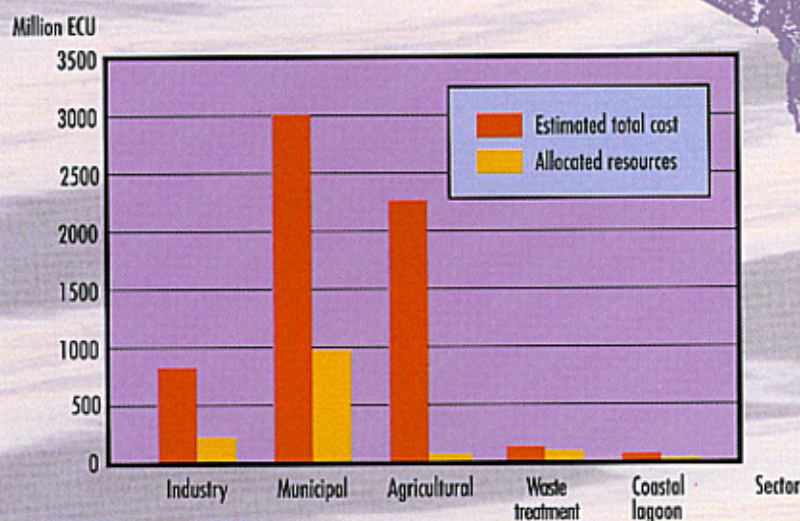


Figure 3
Estimated costs and allocated/reserved resources by sector by the year 1996

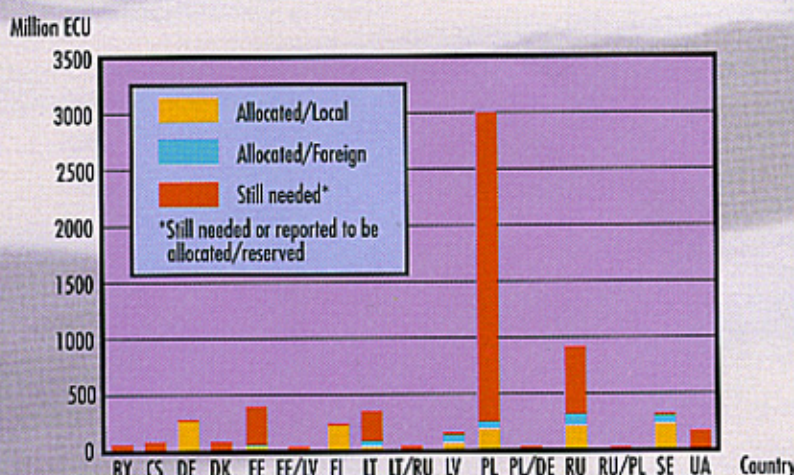


Figure 4
Estimated costs and allocated/reserved resources by country by the year 1996

Communique

of the Ministerial Session on 26 March 1998



The international co-operation for the protection of the marine environment of the Baltic Sea Area has been recognized since the '70s as a valuable example of co-operation between countries to protect the environment in the region.

This co-operation between the Baltic Sea States (i.e. Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland, Russia and Sweden - plus the European Community) has produced many environmental gains in the course of the last 25 years. Thus confirming the belief that the deterioration of the Baltic Sea can be arrested and the state of the marine environment improved.

At the Ministerial Meeting of the Helsinki Commission in 1988, the Ministers agreed that a reduction of 50% in pollution load going into the Baltic Sea should be aimed at. This demanding target concerning heavy metals, toxic or persistent organic compounds and nutrients has served as the starting point for planning and policy development within HELCOM. Now, ten years later, the Environment Ministers of the Baltic Sea States and the European Commissioner for the Environment met to consider to which extent this target has been reached.

The Ministers and the Commissioner noted that a number of important actions have been taken. They welcomed the successful implementation of the Baltic Sea Joint Comprehensive Environmental Action Programme (JCP), e.g., the removal of 15 point sources of serious pollution, "hot spots", as a result of decisive action and investments and

the fact that there are ongoing activities at 70% of the remaining priority "hot spots". Work is continuing to remove more of these "hot spots" from the remaining 117 on the JCP list.

Furthermore, the Ministers and the Commissioner welcomed the significant progress made in:

- the reduction of discharges of organochlorine compounds;
- the significant reduction in emissions of lead from motor vehicles;
- recovery in the populations of certain hitherto severely endangered species.

Nevertheless, the Ministers and the Commissioner recognized that many problems which so far have not been successfully addressed still exist thus mitigating the realization of the 50% target. In particular the Ministers and the Commissioner expressed concern at

- eutrophication resulting from high inputs of nutrients from agriculture, transport and municipalities;
- comparatively high concentrations of some heavy metals and persistent organic pollutants;
- illegal discharges from ships.

Moreover, the Ministers and the Commissioner are worried by some further problems, inter alia:

- lack of adequate national data on human inputs of nitrogen and phosphorus, heavy metals and persistent organic compounds;
- recent detection of new potentially dangerous contaminants;
- shortcomings in the procedures for monitoring and risk assessment of hazardous substances;
- the potentially adverse impact of the introduction of non-native species into the Baltic Sea.

Having discussed these matters and concluded that progress towards arresting pollution inputs and restoring the ecological balance of the Baltic Sea should be accelerated, the Ministers and the Commissioner decided:

- to reaffirm their commitment to achieve the strategic goals set up in the 1988 Ministerial Declaration and to define a series of more specific targets to be realized before the year 2005 and reviewed in 2003;
- to intensify the implementation of the Baltic Sea Joint Comprehensive Environmental Action Programme (JCP) and to this end, place increased emphasis on the reduction of non-point pollution sources in agriculture and transport sectors as well as the actions to remedy remaining industrial "hot spots";
- to speed up the development and implementation of integrated coastal zone

management plans, and to actively promote programmes for the integrated management of the major water systems in the Baltic Sea catchment area;

- to further investigate the scope of problems related to shipping such as the introduction of non-native species and the use of antifouling agents and to support ongoing activities in relevant international organizations, in particular within the IMO as well as propose action as needed;
- by adopting a new annex on pollution from agriculture ensure a number of actions which will lead to less discharges of, inter alia, nutrients from agriculture;
- by adopting amendments to the annex on shipping introduce effective methods to encourage ships to deposit their wastes and cargo residues directly to port reception facilities, including the "no special fee" system by the year 2000;
- to streamline and make more effective the systems for monitoring environmental performance and compliance within the Helsinki Convention - and to improve the production and dissemination of accurate pollution load data which is necessary for the detailed evaluation of the environmental health of the Baltic Sea;
- to implement the strategy on the cessation of discharges, emissions and losses of hazardous substances by the year 2020;

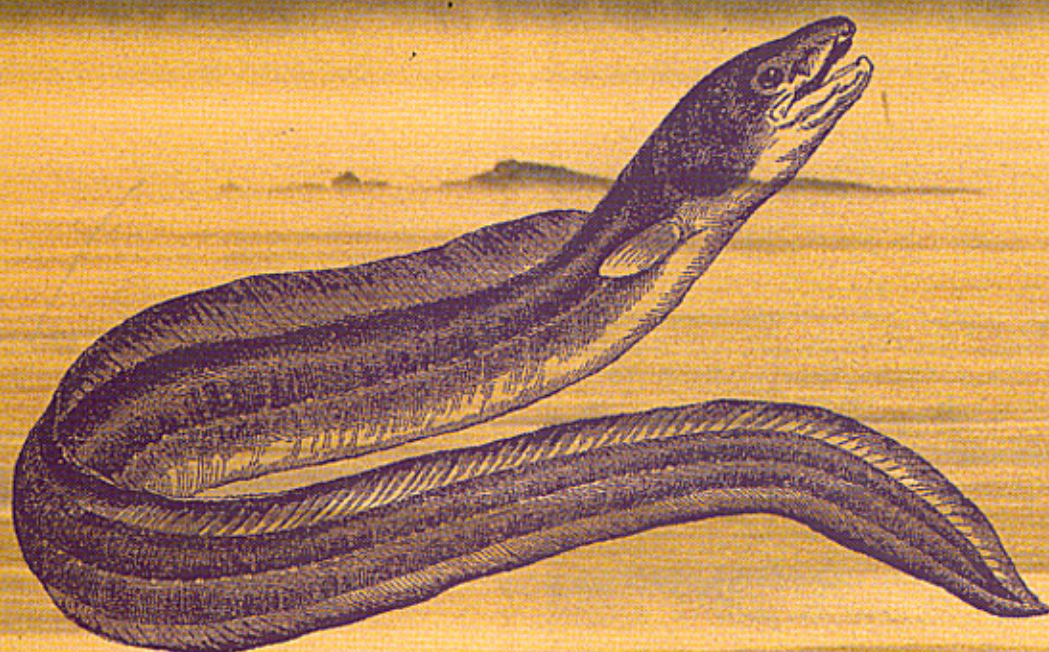
The Ministers and the Commissioner emphasized the importance of co-operation to decrease transboundary pollution not only within the context of the Convention on the Protection of the

Marine Environment of the Baltic Sea Area, but also in the context of a number of other important international conventions and treaties (including UN ECE Convention on the Protection and Use of Transboundary Water Courses and International Lakes, the UN ECE Convention on Long Range Transboundary Air Pollution and the Convention on Environmental Impact Assessment in a Transboundary Context). They advocated the development of sub-regional co-operation as exemplified, inter alia, by the International Commission for the Protection of the Oder/Odra River Against Pollution.

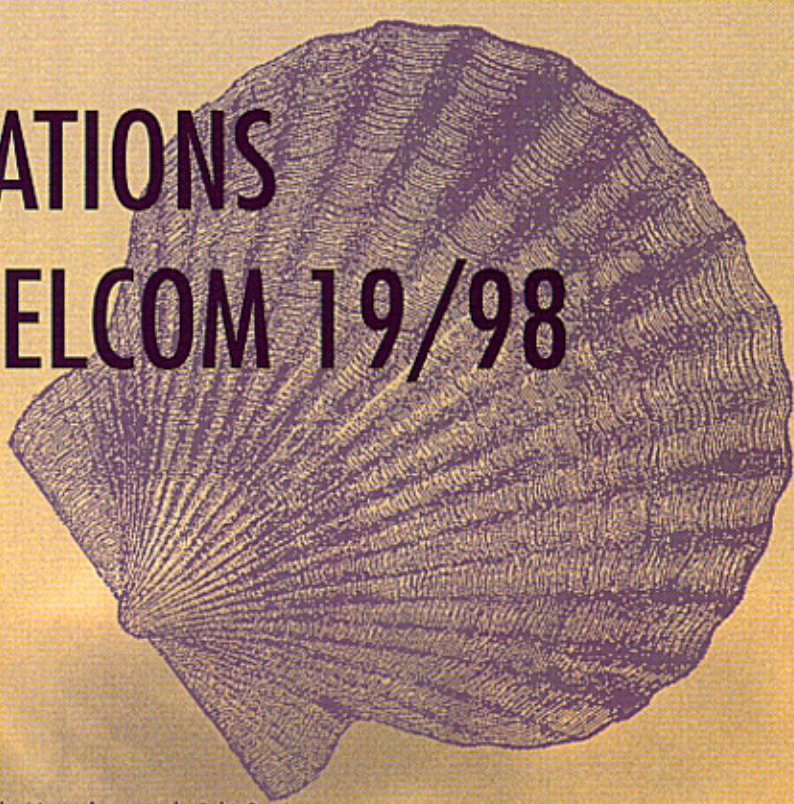
In the same vein they committed themselves to intensify joint co-operative research projects including, inter alia, the application of models for decision support, evaluation of effect-related critical loads and methods to follow up action taken. This will contribute to a more effective environmental management framework for the restoration of the Baltic Sea.

Finally, the Ministers and the Commissioner underlined the need to develop greater priority setting and targeting for tackling the more acute environmental issues around the Baltic Sea. They, therefore, decided that HELCOM structures, procedures and programmes will be reviewed during 1998 and the results and conclusions will be presented to the next meeting of the Commission. It is expected that this review will result in such changes in the role, organization and procedures of HELCOM which will better reflect the changing political and economic context and enable the Commission to react more rapidly and effectively to the environmental challenges.

The Ministers and the Commissioner are confident that the above decisions will result in a significant improvement in the state of the marine environment of the Baltic Sea Area.



RECOMMENDATIONS adopted by HELCOM 19/98

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- 19/1 Marine sediment extraction in the Baltic Sea Area
 - 19/2 Protection and improvement of the wild salmon (*Salmo salar L.*) populations in the Baltic Sea Area
 - 19/3 Manual for the Marine Monitoring in the COMBINE Programme of HELCOM
 - 19/4 Waterborne Pollution Load Compilation 2000
 - 19/5 HELCOM Objective with regard to hazardous substances
 - 19/6 Amendments to Annex III of the Helsinki Convention concerning regulations on prevention of pollution from agriculture
 - 19/7 Amendments to Annex IV of the Helsinki Convention
 - 19/8 Application of the "no-special-fee" system in the Baltic Sea Area
 - 19/9 Installation of garbage retention appliances and toilet retention systems and standard connections for sewage on board fishing vessels, working vessels and pleasure craft
 - 19/10 Application by the Baltic Sea States of Guidelines for holding tanks/oily water separating or filtering equipment for ships of less than 400 tons gross tonnage
 - 19/11 Notification of ship's wastes
 - 19/12 Waste management plans for ports
 - 19/13 Basic principles of ashore handling of ship-generated wastes
 - 19/14 Harmonized system of fines in case a ship violates anti-pollution regulations
 - 19/15 Minimum requirements for vessels bound for or leaving ports of the Baltic Sea States and carrying dangerous or polluting goods
 - 19/16 Co-operation in investigating violations or suspected violations of discharge and related regulations for ships, dumping, and incineration regulations
 - 19/17 Measures in order to combat pollution from offshore units
 - 19/18 Reporting on incidents involving harmful substances and emergency dumping

Full texts of these HELCOM Recommendations can be obtained by contacting the HELCOM Secretariat. They can also be found on Internet (<http://www.helcom.fi>).

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Helsinki Commission (HELCOM)

Mr. Niels-Peter Rühl
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Ms. Ulla-Britta Fallenius
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Mr. Peter Ehlers
Maritime Committee (HELCOM MC)

Mr. Olli Pahkala
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Mr. Göte Svenson
Programme Implementation Task Force (HELCOM PITF)

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Ms. Eeva-Liisa Poutanen
Environment Secretary

Mr. Vassili Rodionov
Technological Secretary
(until 31 July 1997)
Senior Adviser
(as from 1 August 1997)

Mr. Ain Lääne
Technological Secretary
(as from 1 August 1997)

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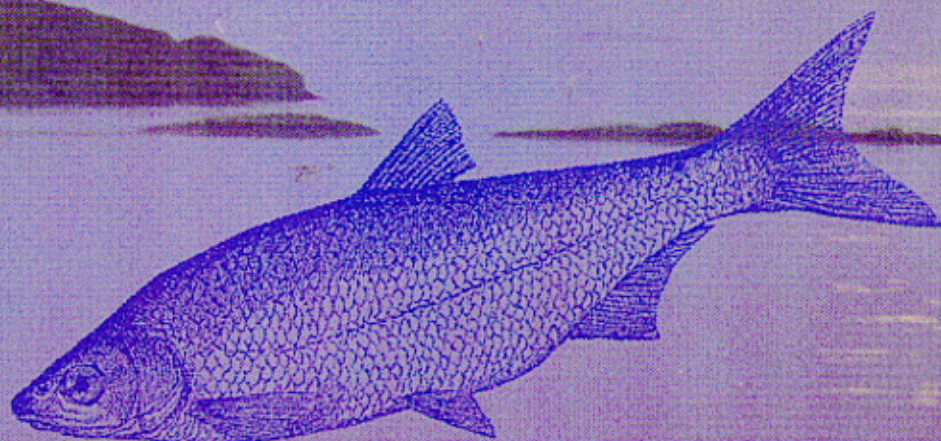
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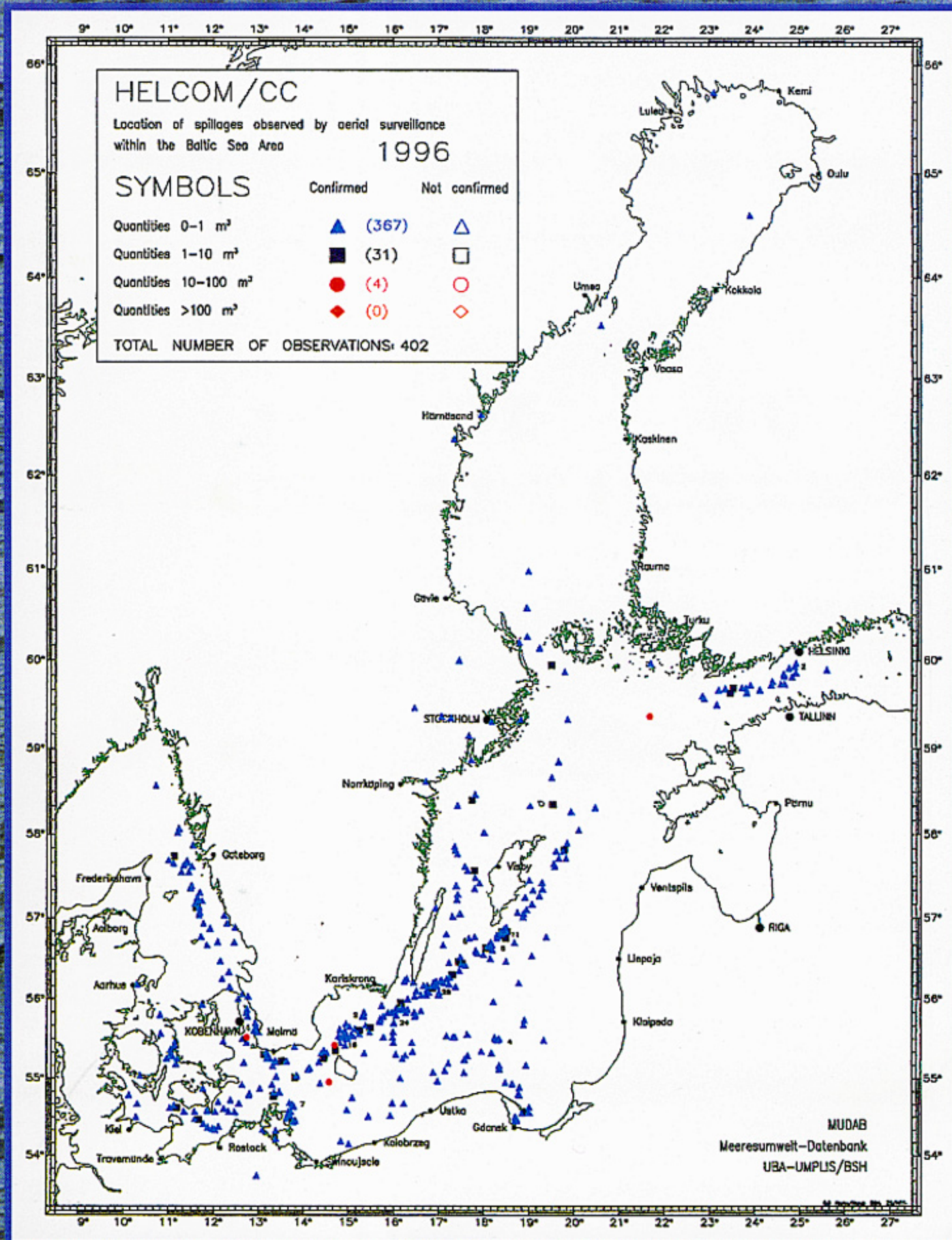


Figure 2
Number and quantities of oil spillages observed by national surveillance flights in 1996.





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