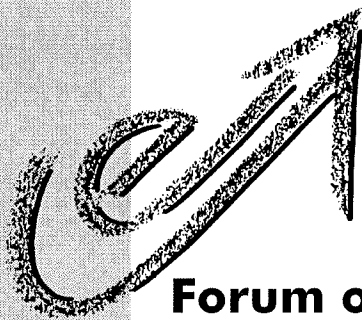


**German NGO Forum
on Environment & Development**

**Report to the 7th Meeting of the
Commission on Sustainable Development (CSD)**

Protection of the Marine Environment



**Forum on
Environment & Development**

Position paper
of the German NGO Forum on Environment & Development
on the protection of the marine environment

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This publication was sponsored by the German Federal Ministry for Economical Co-operation and Development (BMZ). It does not necessarily reflect the opinion of the Ministry.

Bonn, November 1998

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1 INTRODUCTION

The 1996 meeting of the CSD already addressed chapter 17 of Agenda 21, which is concerned with protection of the oceans and seas. Since then, a great amount of new information has been published and old information has been repeated and confirmed – however, little has happened to bring about fundamental changes in the situation.

Our purpose in presenting this position paper is not to put forward one more analysis of the situation. We rather wish to reaffirm our positions and to highlight some pivotal points in the debate on marine environmental protection, centring on the three principal themes of hazardous substance inputs, shipping and fisheries.

2 HAZARDOUS SUBSTANCE INPUTS

Marine environmental protection is an area in which it has become particularly clear that the definition of 'hazardous' for chemical substances needs to have a very broad scope. Persistent pollutants can reach the oceans over lengthier pathways without being decomposed en route, and need to be classified as hazardous for this reason alone. As many substances accumulate in sediments and biota and their degradability is even further reduced under marine conditions, their input can be viewed as irreversible. The oceans and seas are thus sinks for the chemicals emissions of society and are an indicator of the general state of the environment. Marine pollution highlights the necessity of a precautionary approach: Regulations must take effect before pollutant discharges can reach the seas. Solutions to the problem of chemical inputs are to be sought in the most varied policy domains. The marine environment can only be protected at the source of pollution, and the objectives of marine environmental

protection must become guiding principles for all relevant policy domains.

2.1 Focussing on individual pollutants versus diversity of hazardous substances, input pathways, regulatory domains

Despite new findings, the monitoring of and regulatory controls on hazardous substances continue to be limited to the small number of well-known substances with identifiable hazardous properties (e.g. PCBs, heavy metals, some pesticides). However, in the meantime – largely unnoticed – further more recent substances are taking the place of the 'old stars' of yesterday. The regularities underlying these inputs, i.e. the patterns of use of substances and input pathways, are receiving scant attention.

Research programmes are already detecting substances in the oceans and seas that have properties similar to the 'old stars'. Nonetheless, their regulation is not being debated with the same urgency, or even not at all. This is creating an impression that inputs of hazardous substances to the oceans and seas stem from a limited number of substances that will be under control in the not all too distant future.

The range of the problem is complex: Some 70,000–100,000 substances are manufactured in Europe, arise in the manufacture of other substances or are traded on the market. The number of chemical products made out of these substances, including household and industrial detergents and cleaning products, paints, adhesives, cosmetics, plastics etc., which are mixtures of various chemical substances, is far larger.

The environmental properties of most substances and products are unknown. Despite this, in most cases their uses are open to the environment: Chemical substances are released to the environment through the production, use and disposal of products from countless uses (diffuse sources) and from the direct emissions of industrial plants (point sources) – and can reach the oceans via the atmosphere and waters.

➤ Protection of the marine environment fundamentally calls for a chemicals policy that looks to the future, is oriented to the precautionary principle and actively promotes clean technologies and products.

➤ CSD-7 (1999) should endorse the overarching OSPAR/Helcom goal of eliminating hazardous substance inputs as a guiding objective of future chemicals and marine environmental protection policies and should confirm the OSPAR definition of hazardous substances.

➤ The POPs convention presently under negotiation must not remain limited to the small selection of hazardous POPs that is currently being debated, but must rather, in a dynamic process, regularly include in its programme of work further substances of supraregional or global concern (e.g. substances used in widespread products). Its approach must not remain restricted to a pure focus on individual pollutants – it must also examine substance groups and application clusters of hazardous substances. The substitution principle, i.e. the binding requirement to substitute hazardous substances by less hazardous substances, must be enshrined in the POPs convention. In analogy to the international CFC regime, it needs to be ensured that developing countries receive compensation for the additional costs incurred by switching to less hazardous substances. For developing countries in particular, the POPs convention process must be accompanied by the initiation of comprehensive chemicals management measures (e.g. pesticide management with improved hygiene measures and improved state controls)

Inputs from point sources, such as industrial effluents, are a problem that could largely be solved by technological means. However, in many cases the necessary investments are not made (or funds for these are not available). All too often, investments, if they are made at all, are directed to end-of-pipe measures instead of to clean technologies within an integrated pollution prevention approach that prevents pollutants from arising in the first place.

➤ The development and application of clean technologies needs to be promoted worldwide. Tackling the production process itself is the key to resource-conserving and environmentally sound development. This can render superfluous end-of-pipe technologies, which in many cases are not economically expedient, either. A financial instrument funded by the rich countries needs to be established to promote clean technologies in developing countries. Globally operating corporations must commit themselves to comply with the highest standards at all their sites.

Controlling inputs from diffuse sources (a diverse array of small and medium-sized enterprises, agriculture and households/housekeeping) is problematic because of the diversity of substances, products and patterns of use. Here technology deployment and behavioural changes can only make a limited contribution to solving the problem.

➤ Inputs from diffuse sources, particularly from products, can only be effectively restricted through a combination of substance bans, the substitution principle, the active promotion of environmentally sound products, strengthening consumer protection and mandatory disclosure of information (e.g. through registers of products). The burden of proof needs to be shifted to the manufacturers – substances that have not been assessed or that are hazardous must not be used.

Present chemicals policies are limited to controlling individual substances. The EU risk assessment procedure (under Council Regulation EEC 793/93) for existing substances, which is a precondition to regulation, has proven to be an extremely slow and ineffective process.

➤ Preconditions to a functioning chemicals policy include the disclosure of available data including product quantities and applications by industry, the keeping of product registers with the data and compositions of chemical products, and effective chemicals assessment procedures oriented to the precautionary principle. A binding deadline (year 2004) needs to be defined for completion of the risk assessment of existing substances.

2.2 Non-implementation of existing international agreements

In recent years, new findings of previously unknown, hazardous properties of substances (e.g. endocrine effects) have presented new aspects in the debates on substance inputs and the definition of hazardous substances. These have brought about an understanding that marine inputs of hazardous substances must in fact be completely eliminated. Various international agreements relating to the protection of the marine environment (4th North Sea Protection Conference, Oslo-Paris Convention (OSPAR), Helsinki Convention (Helcom), the Barcelona Convention in parts) have therefore made this understanding their long-term goal. In practice, however, the focus on individual substances continues to be pursued as the path towards this goal. The implementation of the ambitious objectives of the above conventions is impeded by the political practice in the policy domains concerned.

Protecting the marine environment against hazardous inputs concerns a diverse array of regulatory domains (chemicals policy, transport, agriculture, trade, etc.) over which the existing marine protection bodies have no direct power. It is however questionable whether the implementation of marine protection objectives would be improved if this power were given. Marine environmental protection policy is characterized by a high degree of inconsistency among political actors, who promise much in terms of marine environmental protection but do not throw in their weight for implementing these objectives at the appropriate political levels (national, international,

European Union) or do not have the clout to do so.

For its part, the EU is not acting in accordance with its commitments as a party to OSPAR and Helcom. EU actions in relevant policy spheres fail to do justice to important objectives of these conventions. For instance, the Water Framework Directive currently being debated in the EU is not oriented to the objectives of marine environmental protection undersigned by the European Commission in the OSPAR and Helcom processes as recently as summer 1998.

Instead of seeking new avenues, the existing marine environmental protection bodies proceed from the old structures of chemicals policy. The question further arises of to what extent e.g. OSPAR takes its own objectives seriously. The strategy adopted for implementing the OSPAR goal illustrates the conflict between the ambitious goal, which would require rigorous implementation, and the business-as-usual approach focussed on individual substances with single-substance risk assessment. This strategy concentrates on developing a prioritization procedure for selecting substances for priority measures and upon the necessity of developing marine risk assessment procedures for hazardous substances. Statements made concerning measures then to be taken are restricted to the conventional development of Best Available Techniques (BAT) and Best Environmental Practice (BEP). Overarching programmes such as promoting clean technologies and developing environmentally sound products are scarcely undertaken – both in the OSPAR process and in the states party to it.

- Relevant policy arenas need to be consistently coordinated with the objectives of marine environmental protection, and these objectives need to become the guiding objectives of all relevant policy arenas. The EU Water Framework Directive is currently a case in point.
- For the EU, this means developing a strategy for the implementation of the OSPAR goal. This is required by the principle that environmental concerns are to be integrated in other policy spheres, as is stipulated in the Amsterdam Treaty.
- For the implementation of the OSPAR goal, OSPAR itself needs to establish a form of clearinghouse or screening process of available options.

3 SHIPPING

Global trade in products and raw materials is growing. This is felt especially in the North Sea, which, with 420,000 ship movements per year, is one of the most heavily trafficked marine areas in the world. Tricky currents, frequent storms and poor visibility place high demands upon the ability and experience of crews and captains. Shipping densities are particularly high in the English Channel and on the Dutch and German North Sea coasts. These coasts are seeing the creation of ever larger ports for ever larger ships.

➤ The negative impacts of globalization, when viewed in their totality, are a source of grave concern to the German NGOs. Making shipping more environmentally sound is only one factor contributing towards structuring globalization in a more environmentally acceptable manner. At a general level, regional development and a reasonable regionalization process need to be strengthened as a counterbalance. We take the view that "Every commodity at every place in every season" is a principle that is incompatible with the guiding vision of sustainability.

From then on, it will no longer be permitted to discharge liquid waste from flushing the tanks of oil tankers to the North Sea. However, the discharge of oil-contaminated bilge water from the engine room will continue to be permitted up to a concentration of 15 ppm. The state of the art would already permit filtering the oil down to a concentration of 5 ppm. Moreover, tank flushing continues to be permitted in marine areas that have not been designated a Special Area.

b) High accident risks

Experts state the annual number of ship accidents in the North Sea to be about 150. From 1989 to 1991, these included 40 accidents involving oil tankers. The sinking of an oil tanker would have disastrous impacts upon the ecosystems of the entire northern hemisphere. For migratory birds from Greenland to Siberia, intact Wadden Sea mudflats are an indispensable feeding and resting place on their journey to the south. Moreover, for the people on the coast a major contamination of the mudflats would be an economic disaster. Due to their strong economic dependence upon tourism, a large percentage of jobs would be endangered in the structurally weak coastal regions.

3.1 Oil discharges

a) The seas are being contaminated by both legal and illegal discharges of ship-generated waste, above all oil. From 1 February 1999 onwards, the North Sea will presumably be designated a 'Special Area' by the International Maritime Organization (IMO).

3.2 Air pollution

Exhausts containing sulphur and nitrogen compounds from ship smokestacks pollute the air. Heavy oil is used as fuel for economic reasons. Ship engines are thus effectively hazardous waste incineration units without the

filters and catalytic converters that are long mandatory on land. All exhausts are released unfiltered to the air. By the year 2010, shipping is expected to be responsible for one third of sulphur emissions in Europe. While considerable financial efforts are being made on land to minimize the sulphur content in heating oils and fuels, a further increase in sulphur contents is being tolerated at sea. Worldwide, the pollution caused by ship exhausts is of the same order as that caused by all passenger cars on land together.

- In order to reduce oil discharges and air pollution, diesel oil should be made mandatory as fuel instead of heavy oil. Filters and catalytic converters such as are already used on some passenger ferries must become standard.
- Free port reception facilities need to be provided for the disposal of oily wastes. To finance oil disposal, either a fund should be established with the participation of shipping lines and the mineral oil industry or the costs should be contained in the harbour dues. It is high time that the plans for the establishment of such a 'no special fee' system within the European Union are finalized and implemented.
- The acceptance of emergency tug services must be made mandatory.
- Economic incentive systems such as the Green Award or the Swedish initiative (graduated harbour dues depending upon the degree of air pollution emanating from a ship) should be further developed and introduced at least Europe-wide. Annex 6 of the MARPOL Convention (IMO) is in urgent need of amendment in order to prevent ship-generated sulphur emissions from continuing to rise.

3.3 Ship paints

Algae, balanid and clam growths on ship hulls lead to greater frictional drag and thus to increased fuel consumption. Ship paints have the purpose of preventing these growths by continuously releasing a biocide, tributyl tin (TBT). However, TBT is not only effective on the hull of the ship but also throughout the entire marine environment. In large parts of the North Sea, it has led to imposex and the development of male genital organs in whelk females. The snails can no longer reproduce. The stocks of marine snails have fallen worldwide due to this hormonal effect of TBT, more than 100 species are seriously endangered. Other species are also endangered. Damage already sets in at a concentration of 1 ng TBT per litre water. In the bay of Arcachon in France, the collapse of oyster farming due to TBT has caused damage costing 150 million DM.

➤ Environmentally sound techniques and products need to be developed and deployed for the removal of growths from ship hulls. CSD 1999 must give a clear signal and urge the IMO to rapidly implement the agreement found in November 1998 in the 42nd session of IMO's Marine Environment Protection Committee (MEPC 42) to prohibit organotin-containing ship paints and develop standards for future environmentally sound antifouling methods.

➤ CSD 1999 must underscore the importance of national/regional options in developing environmentally sound shipping (e.g. in the areas of antifouling and oil disposal).

3.4 Non-compliance with standards

Compliance with and monitoring of safety requirements are inadequate. Many ships are antiquated, with decrepit and unserviceable technical equipment, so that they do not even correspond to the state of the art that applied when they commenced service. The global tanker fleet is typical of this: Most tankers, of which many are in a desolate state, were built in the 1960s and 1970s. More than half of all ships inspected in German ports have considerable deficiencies. Some have even had to be scrapped. The flight of shipping lines to flags of convenience exacerbates this problem.

At the same time, staff is being cut on the ships and the training of the remaining crew is being neglected. Day-to-day operations on board are increasingly being dominated by technology, but the owners are shirking the cost of properly training the people on board in handling this technology. Crews are frequently internationally composed, but education levels are so low that the various members of the crew neither have a command of English nor of any other common language. In the event of an emergency, this compromises their ability to take joint action. No uniform international working language has yet been introduced in high-sea shipping as it has for instance in international air traffic. The result is that communication problems arise between the traffic control centre and ships' officers in 10 percent of all cases on the German North Sea coast.

3.5 Inadequate standards for the carriage of hazardous substances

60–70% of the total loads of cargo and container ships consist of hazardous substances such as toxic chemicals and oil. Despite this, these ships are not subject to the same safety requirements as tankers. The loss of load or of containers at sea is not subject to mandatory notification. It is thus not exactly known how many containers are lost e.g. in the North Sea. It is estimated that 500–1000 containers are lost annually in the southern North Sea alone.

- The growing size of ships also increases the risk of damage. Ship sizes therefore need to be limited.
- Unlimited flag State liability needs to be introduced in order to enforce compliance with safety standards worldwide.
- It follows from the polluter pays principle that shipping lines must be held liable for all damage caused by their ships.
- Higher requirements need to be placed upon the construction and operation of ships, their machines, safety systems and crews. These requirements need to be stipulated in an internationally binding form. A uniform working language needs to be introduced on ships as in air transport. The Standard Marine Navigational Vocabulary (SMNV) and the Standard Marine Communication Phrases (SMCP) adopted in 1997 at the 68th session of the Maritime Safety Committee are only a first important step here. All essential propulsion and navigation units need to be present in duplicate on ships.

- Ships that do not comply with safety standards according to the state of the art must be denied the right to enter port. The port State inspections necessary for this need to be carried out more frequently and more strictly, and the results should be published.
- Shipments of hazardous goods, in particular nuclear shipments, need to be reduced as a matter of principle. This matches the demand to develop clean technologies that prevent contaminants from arising in the first place. According to the polluter pays principle, contaminants must be treated in the country of origin – this also increases the pressure to develop clean technologies. In exceptional cases, hazardous shipments can be carried on special routes alone and with specially trained and equipped crews.

4 FISHERIES

In recent years, the problems of the fisheries have increasingly been making the headlines. Reports on overfishing and collapse of certain stocks have become commonplace. At the same time, per capita consumption of fish in Germany rose from just under 12 kg in 1987 to almost 15 kg in 1996. Mass fish species such as Alaska pollack are to be had cheap. But also exotic marine products, some coming from large-scale aquaculture in tropical coastal areas, are available in rich supply and at comparatively low prices. With an annual financial volume of 11 billion US dollars, the trade with fish and other fishery products has become an important trade sector. While in Europe fish is a welcome supplement to the diet and is rather viewed as a luxury product, in East and South-East Asia alone more than one billion people depend upon fish as their main source of protein. 300 to 500 million people in developing countries depend economically, directly and indirectly, upon fishing.

4.1 Overfishing

Overfishing is the core problem of fisheries today: According to FAO figures, 35% of the 200 major fish stocks are in decline or overfished, 25% are fished to full capacity. No figures are available for the other stocks. This means that at least 60% of fisheries are in urgent need of regulation or restriction if a further decline in stocks is to be prevented. The decline in important stocks and the resulting scarcity of fish, including e.g. Alaska pollack, is making prices rise worldwide. This is leading to a danger that marine fish, which, par-

ticularly for millions of people in developing countries, has until now been a relatively affordable and accessible source of protein, may soon become an expensive luxury product.

In addition to the approx. 70–80 million tons of marine products brought to shore every year, a further 20–30 million tons of bycatch is made that is usually thrown dead or dying overboard again. This is a huge waste – not only of fish that fails to meet standard dimensions or that does not yield enough profit, but in particular also a real threat to species diversity. Sharks, seabirds, marine mammals and sea turtles die as fishery bycatch in such quantities that many of the populations are acutely endangered. For instance, in the North Sea alone, 7000 sea hogs are caught annually in the high-sea fixed net fishery of Denmark – far more than the population can bear.

More than one third of fish brought to shore is processed to fish meal to serve as feedstuff for pigs or salmon. This makes intensive livestock farming possible and supports the excessive levels of meat consumption in Europe. This form of 'value added' is a huge waste of resources and energy.

➤ The reduction of catches is the crucial demand. This is in accordance with the vision of sustainable use set out in Agenda 21. Bycatch needs to be reduced, in particular of sharks and other endangered marine mammals and birds. Examples of suitable measures are available in some areas, such as in Australia for the protection of albatrosses, but need to be further developed through improving fishing methods. A greater proportion of the fish catch, particularly of those species that are high-grade table fish such as herring or brisling in the North Sea, needs to be used directly for human consumption instead of for animal feed.

➤ Ratification of the UN Fish Stocks Agreement: This has albeit been ratified by the European Commission, but needs to be signed by all EU Member States to be valid. This is particularly important as signature by all EU states would yield the critical number of 30 ratifications and the Agreement could then enter into force.

➤ On the high seas, regional agreements are the only possibility by which to regulate fisheries according to principles of sustainability. The number and importance of regional fisheries agreements thus urgently need to be expanded.

➤ Worldwide there are practically no marine areas in which fishing is entirely or largely prohibited. In the interests of preserving species diversity and giving fish stocks an opportunity to recover, such fishery-free marine conservation areas need to be designated throughout the world.

➤ The upcoming revision of the EU Common Fisheries Policy (CFP) must integrate ecological criteria in a binding form in fisheries management. The implementation of the precautionary principle is one aspect in this.

4.2 Overcapacity of fishing fleets

The prevailing overcapacities of fishing fleets are the main cause of overfishing. Official figures (FAO) speak of 30% overcapacity. However, the WWF study "Too Much Fishing Fleet, Too Few Fish" (1998) proves that if the data are examined more closely, overcapacities actually run to 155%. A study carried out by Greenpeace in 1998 (Assessment of the World's Fishing Fleet 1991-1997) arrives at a similar result.

➤ Overcapacities must be immediately and significantly reduced. The problem has been internationally recognised (e.g. at the FAO Conference in October 1998), but many countries (including the EU) refuse to take concrete measures for reasons of competition and national interest.

4.3 Subsidies

These global overcapacities and the fish industry receive state subsidies running to an annual sum estimated at 11–21 billion US \$ (WWF study: "Too Much Fishing Fleet, Too Few Fish", 1998). The EU subsidizes its fisheries with almost 1.5 billion US \$ per year – this sum does not yet contain the financial support delivered at the purely national level. However, subsidies do not promote the equitable reduction of overcapacities, but rather their expansion. This is being recognized by ever more states.

➤ Subsidies contributing to the emergence and upholding of overcapacities need to be abolished and channelled to other forms of regional assistance, compensation and retraining of affected

fishermen, or used for the establishment of demonstrably sustainable fisheries.

4.4 Distant Water Fleets - Third Country Agreements, of the EU in particular

The EU in particular 'exports' its overcapacity and overfishing to other countries (e.g. to West Africa, where the factory ships lying off the coast fish away the basis of existence of the local coastal fishers) or to the high seas. This is highly subsidized in the EU (see two recent WWF studies: "Subsidies and Depletion of World Fisheries" 1997 and "Footprint of Distant Water Fleets" 1998).

➤ EU fisheries must cease to take fish in the exclusive economic zones (or directly on the fringe of exclusive economic zones) of other states.

4.5 Aquaculture

Aquaculture is the strongest growth sector in food production. In the period from 1990 to 1996, production doubled from 12.4 to 23 million tons. Annual aquaculture production is expected to reach 50 million tons by the year 2020 – this is half of the current total world fishery! While there are indeed various examples of sustainable aquaculture, so that aquaculture cannot be condemned in principle, current trends and practices are highly problematic for ecological and other reasons:

- For the establishment of aquaculture undertakings, large areas of valuable coastal ecosystems are endangered. In the tropics, this con-

cerns particularly the mangrove forests, which have high ecological value. While hard to quantify, aquaculture projects play an important role in the global loss of mangrove forests.

- In developing countries large areas of former rice fields and other areas previously used for food production are converted to aquaculture. Aquaculture, as a source of foreign exchange (for some investors), is thus beginning to compete with food production. As yet, because of high prices, aquaculture is only rarely used for domestic food production to supplement the diet of the local population.
- Through e.g. nutrient and wastewater discharges, aquaculture facilities can have considerable impacts upon drinking water quality in the surroundings and upon neighbouring ecosystems.
- Breeding carnivorous species (such as salmon) which require a certain composition of protein-rich feedstuffs does not reduce the pressure upon marine fisheries but in fact increases this pressure, as many species bred in aquaculture are high-grade luxury products whose production requires fish meal. It is thus not true that aquaculture helps marine fisheries to recover as is often claimed.

➤ In view of the explosive growth in the aquaculture sector it is essential that criteria (e.g. regional appropriateness, environmental impact assessment) for sustainable aquaculture are established at the international level, and that these are enforced by conventions, trade agreements and certification.