HELCOM RECOMMENDATION 18/3*)

Adopted 12 March 1997
having regard to Article 13, Paragraph b)
of the Helsinki Convention

MEASURES AIMED AT THE REDUCTION OF DISCHARGES FROM MARINE FISH FARMING**)

THE COMMISSION,

RECALLING Paragraph 1 of Article 6 of the 1974 Convention on the Protection of the Marine Environment of the Baltic Sea Area (Helsinki Convention), in which the Contracting Parties undertake to take all appropriate measures to control and minimize land-based pollution of the marine environment of the Baltic Sea Area,

RECALLING ALSO Paragraphs 3 and 4 of Annex III to the 1974 Helsinki Convention, in which the Contracting Parties agree to minimize the polluting load of industrial wastes in an appropriate way,

HAVING REGARD to the Ministerial Declaration of 1988, to the Baltic Sea Declaration of 1990 and to the Baltic Sea Environmental Declaration of 1992, calling, inter alia, for a substantial reduction of the load of pollutants most harmful to the ecosystem of the Baltic Sea,

RECOGNIZING the importance of discharges and losses, nutrients and organic material in particular, from marine fish farms as sources of pollution of the aquatic environment,

DESIRING to limit the pollution from the fish farms located in the Baltic Sea or on the coast, when discharging water directly to the Baltic Sea, by Best Available Technology (BAT) and Best Environmental Practice (BEP),

RECOMMENDS to the Governments of the Contracting Parties to the Helsinki Convention that the following measures of BAT and BEP should be used:

1. Plant operation, feeding methods and fish feed (predominantly dry), which cause minimum nutrient discharges and losses, should be used and developed;

2. The number of fish/water volume should be optimized in order to prevent fish diseases; dead fish should be collected as soon as possible;

3. Methods for sludge removal in fish farms should be developed and introduced so as to decrease the discharges and losses of nutrients, organic matter and chemicals;

*) This Recommendation supersedes HELCOM Recommendation 15/3

**) This Recommendation does not apply to natural fish cultured for re-stocking purposes

4. Fish farming should be subject to permits or prior regulations by the competent authority or appropriate body in accordance with the following principles:

a) limits to phosphorus, nitrogen and, when necessary, organic material discharges should be given in permits or prior regulations. Limits might also be expressed as maximum amounts of phosphorus and/or nitrogen in feed or maximum allowable feed consumption;

b) future environmental effects of the proposed installation should be evaluated as part of the authorization process for intensive fish farms;

c) permits and regulations should be reviewed at appropriate intervals;

5. Nutrient discharges from fish farms should not exceed the annual average of 8 g phosphorus (tot-P) and 70 g nitrogen (tot-N)***) per 1 kg fish (living weight) produced (the limit values are calculated on the basis that living fish contains 0.4% of phosphorus and 2.75% of nitrogen);

6. Regional planning should be employed as an instrument for directing fish farming activities to suitable areas and mitigating conflicts between fish farming and other uses of the water area. Fish farms should not be placed in areas reserved for nature protection, if that might conflict with the aims of protection.

   Management agreements should be achieved between neighbouring fish farms on the use of high quality stock and disease prevention measures.

   Sites of the fish farms should be selected and discharges from them restricted by means of objective environmental impact evaluation methods in accordance with the holding capacity of the water environment affected. Fallowing periods should be installed to allow recovery of benthic areas;

7. The discharges from and the ecological effects of fish farms should be adequately supervised by the competent authority or appropriate body e.g. by means of fish farm operation records, discharge calculations, monitoring and environmental impact models. The monitoring should focus on measuring reliably and cost-effectively the impacts of fish farming on the eutrophic status, oxygen depletion and the state of the sediments in the affected area;

8. The use of bioactive chemicals and drugs at fish farms should be officially approved and effectively controlled to minimize hazards to the environment. The prophylactic use of chemicals should be avoided. Washing or drying of net cages should be used instead of application of toxic antifouling compounds. The use of wrasse (*Ctenolabrus Rupestris*) instead of dichlorvos should be achieved where applicable. The use of chloroamphenicols should be avoided;

***) tot-N means sum of organic and inorganic nitrogen

9. The transfer of cultured fish ****) and introduction of new species should be undertaken according to the recommendations of EIFAC and ICES thus avoiding the possible negative effects in wild fish;

10. Waste or waste water resulting from the handling and processing of fish should be treated, disposed of and utilized so as not to cause pollution of the Baltic Sea or of surface or ground water;

11. The cooperation between the aquaculture industry and the authorities should be intensified including an elaboration of the following instruments:

a) keeping under review and further development of BAT and BEP;
b) exchange of information;
c) an overview of discharges of potentially hazardous chemicals from aquaculture;
d) control and regulation of the amounts of contaminants in fish flesh and shellfish, e.g. mussels;
e) making sure that information on fish stock, chemicals and feed used is available,

RECOMMENDS ALSO that this Recommendation should be implemented as from 1 January 1998,

RECOMMENDS FURTHER that the Contracting Parties should report to the Commission in 1999 and every three years thereafter,

DECIDES that this Recommendation should be reconsidered in 2002 especially concerning the limit values for nutrients in the light of new developments for sludge removal and other measures to minimize water pollution.

****) cultured fish = fish which are meant to remain captive until harvest

REPORTING FORMAT FOR HELCOM RECOMMENDATION 18/3 CONCERNING MEASURES AIMED AT THE REDUCTION OF DISCHARGES FROM MARINE FISH FARMING

Country _____ **Year** _____

Sea area[1)] : _____

1. Cultivated species and total annual production (growth of living weight) of each species, t/a

2. Number of fish farms, using

   - net cages or pens
   - floating basins or vessels
   - basins on shore discharging directly to the Baltic Sea

3. Annual mean value for kg fish (living weight) per m^3 water and kg feed per kg fish (living weight) for classified fish farms under Item 2

4. Number of fish farms which practice sludge removal, please describe further

5. Total feed consumption, t/a, classified as

   - dry feed (dry matter more than 80%)
   - semi moist feed (dry matter 35-80%)
   - moist (fresh) feed (dry matter less than 35%)

6. Total mean percentage of phosphorus and nitrogen in the feed

7. Total and specific nutrient discharges

Nutrients	**Load: t/a**	**Specific load g/kg fish (living weight) produced**
tot-P		
tot-N		

[1)] Bothnian Bay, Bothnian Sea, Archipelago and Åland Sea, Gulf of Finland, Northern Baltic Proper, Western Gotland Basin, Gulf of Riga, Eastern Gotland Basin, Gdansk Basin, Bornholm Basin, Arkona Basin, Belt Sea, The Sound, Kattegat

8. Measures taken to assess the impacts of fish farms on the water environment and to set limits to maximum allowable discharges from fish farms as part of the authorization process (e.g. environmental risk assessment for site selection, water quality models, objectives and investigations, permit conditions and limit values)

9. Measures taken to supervise the discharges and environmental effects of fish farms (e.g. monitoring programmes and obligations, fish farm operation records, control visits, use of models).

10. Name and amount of used individual chemicals out of the following groups: therapeutic chemicals, disinfectants, anaesthetics, piscicides, hormones, herbicides, algicides, antifoulants, non-nutritive feed additives.