HELCOM RECOMMENDATION 23/10 *)

Adopted 6 March 2002
having regard to Article 20, Paragraph 1 b)
of the Helsinki Convention

REDUCTION OF DISCHARGES AND EMISSIONS FROM PRODUCTION AND FORMULATION OF PESTICIDES

THE COMMISSION,

RECALLING Paragraph 1 of Article 6 of the Convention on the Protection of the Marine Environment of the Baltic Sea Area, 1992 (Helsinki Convention), in which the Contracting Parties undertake to prevent and eliminate pollution of the Baltic Sea Area from land -based sources by using , inter alia, Best Environmental Practice for all sources and Best Available Technology point sources,

HAVING REGARD also to Article 3 of the Helsinki Convention, in which the Contracting Parties shall individually or jointly take all appropriate legislative, administrative or other relevant measures to prevent and abate pollution in order to promote the ecological restoration of the Baltic Sea Area,

RECALLING Article 5 of the Convention on the Protection of the Marine Environment of the Baltic Sea Area, 1992 (Helsinki Convention), in which the Contracting Parties undertake to prevent and eliminate pollution of the marine environment of the Baltic Sea caused by harmful substances,

RECALLING ALSO Annex I, Part 1 of the Convention, according to which the Contracting Parties shall, in their preventive measures, give priority to the groups of substances listed in Annex I, Part 1 which are generally recognised as harmful substances,

RECALLING FURTHER the Ministerial Communiqué 1998, calling to implement the HELCOM Recommendation 19/5 on the HELCOM Objective with regard to Hazardous Substances, which is to prevent pollution of the Convention Area by continuously reducing discharges, emissions and losses of hazardous substances, with the ultimate aim of concentrations in the environment near background values for naturally occurring substances and close to zero for man-made synthetic substances, until 2020,

RECALLING FURTHER that the Ministerial Declaration 1988, of the ninth meeting of the Helsinki Commission calls for a considerable reduction of land-based pollution,

RECALLING FURTHER Recommendation 23/11 on chemical industry, which also applies to the production of and formulation of pesticides for the requirements which are not covered by this Recommendation,

*) Superseding HELCOM Recommendation 14/2

RECOGNIZING the importance of reducing discharges into water and emissions to the atmosphere from the production and formulation of pesticides as a source of substances with toxic, persistent and bioaccumulative properties of pesticides,

RECOMMENDS to the Governments of the Contracting Parties that they apply the precautionary principle, the principle of the Best Available Techniques and the substitution principle, by which is meant substitution of the use of hazardous substances by less hazardous substances or preferably non-hazardous substances where such alternatives are available,

RECOMMENDS to the Governments of the Contracting Parties to apply the following measures to the plants which produce or formulate more than 5.0 t/a of active substance(s)

1. General requirements

Liquid concentrates out of the production or formulation processes should be kept away from water, be recycled for the active substances and/or solvents or be incinerated.

2. Requirements for the reduction of waste water discharges

2.1 Waste waters which occur continuously or discontinuously, e.g. during synthesising, washing and rinsing processes, should be reused as far as possible and should be treated to meet the following requirements for discharge into waters:

	2 h or 24 h-sample
Adsorbable Organic Halogen (AOX)	1.0 mg/l
Copper[1)] (Cu)	0.5 mg/l
Chromium, total[1)] (Cr-tot)	0.5 mg/l
Chromium-VI[1)] (Cr-VI)	0.1 mg/l
Zinc [1)] (Zn)	2.0 mg/l
Arsenic[1)] (As)	0.3 mg/l

[1)] only if expected in waste water, e.g. from production of wood preservatives

2.2 Acute ecotoxicity

Toxicity to Fish	*TU(fish, 96 h)* 2
Toxicity to Daphnia	*TU(daphnia,48 h)* 8
Toxicity to Algae	*TU(algae, 72h)* 16
Toxicity to Bacteria	*TU(Vibrio fischeri, 0,5 h)* 8

Where for this Recommendation TU(testing organism, required acute toxicity testing time) = concentration of the substance to be tested / NOEC. For a waste water testing this equation can be written as follows: TU = 100 / no effects dilution rate (%) of waste water. The “no effect dilution rate” should be observed with standard toxicity tests. The CEN, ISO or OECD acute toxicity testing standards should be used.

E.g. for daphnia criteria TU 8 means that the sewage water should be of such quality that it has to be diluted at the highest by 1:7 in order achieve a level of no effect concentration in a standard acute toxicity test for daphnia (where the testing time is 48 h).
Acute toxicity testing should be carried out at least for two of the four above presented organisms. Results from those tests have to comply with the requirements above.

2.3 In case of joint treatment of waste water out of production and formulation of pesticides with other waste waters in a biological treatment plant (industrial or municipal) the pretreatment for waste water out of production and formulation of pesticides should be run in such a manner that the biological process is not disturbed.

The requirements in 2.1 for AOX and heavy metals appeal also for the outlet of the biological treatment plant taking into account the dilution by the other waste water streams.

3. Requirements for the reduction of emissions to the air

Dust emissions into the atmosphere out of facilities for the production and formulation of pesticides should not exceed mass concentrations of 5.0 mg/m^3 (ndg) if the mass flow is 25 g/h or more.

4. Analysing methods

Internationally accepted standardized sampling, analysing and quality assurance methods (e.g. CEN-standards, ISO-standards and OECD-Guidelines) should be used whenever available,

RECOMMENDS FURTHER that the Contracting Parties report to the Commission in 2006 and thereafter every three years.

REPORTING FORMAT FOR HELCOM RECOMMENDATION 23/10 CONCERNING REDUCTION OF DISCHARGES AND EMISSIONS FROM PRODUCTION AND FORMULATION OF PESTICIDES

Lead Country:
Country:
Year:

1. Number, name, location and producing/formulating capacity for every active substance of the plants which produce or formulate more than 5.0 t/a of active substance.

2. Summarized description of the sector including:

- description of waste water collection and treatment systems;
- measures taken to minimize the volume of waste water;
- recycling processes;
- actions taken to reduce discharges and emissions during the last 3 years.

3. Waste water discharge data

3.1 Waste water volume, and concentration of the parameters required in the Recommendation

		Concentration in mg/l					
Plant	waste water volume (m^3)	AOX	Cu	Cr-tot	Cr-VI	Zn	As

3.2. Results from toxicity tests

Plant	Testing frequency (indicate which tests are used)	Amount of exceedings of the toxicity criteria in year	Waste water ($1000m^3$*/d)*

4. Data for emissions of dust and other relevant substances into the atmosphere

Plant	Mass flow (g/h)	Mass concentration (mg/m^3) (ndg)

5. Summary of evaluation of compliance with the requirements of the Recommendation including:

- problems encountered in the implementation of the requirements and the foreseen development of the situation.

6. Specify means used when nationally putting into force the Recommendation

- via general reference in the national legislation
- via a specific adoption of an amendment to existing national legislation
- via administrative or other means, please specify.

Possible problems identified when putting into force nationally the Recommendation.