COMMISSION - HELSINKI COMMISSION - Annex 5
Seventh Meeting
Helsinki 11-14 February 1986

HELCOM RECOMMENDATION 7/1

Adopted 11 February 1986, having regard to Article 13, Paragraph b) of the Helsinki Convention

RECOMMENDATION CONCERNING MONITORING OF AIRBORNE POLLUTION LOAD

THE COMMISSION,

RECALLING Article 6 of the Convention on the Protection of the Marine Environment of the Baltic Sea Area, 1974 (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, and to endeavour to use best practicable means in order to minimize the airborne pollution of the Baltic Sea Area by noxious substances,

RECALLING ALSO Paragraph 3 of the Article 1-6 of the Helsinki Convention, in which the Contracting Parties undertake directly, or when appropriate, through competent regional or other international organizations and other basis of the information and data acquired pursuant to Paragraphs 1 and 2 of Article 16, to cooperate in developing intercomparable observation methods, in performing baselines studies and in establishing complementary or joint programmes for monitoring,

NOTING the increasing concern on harmful effects of pollutants in the environment and that an essential amount of various contaminants is transported via the atmosphere,

NOTING FURTHER the decision by the Commission that a joint monitoring programme on airborne pollution should be started,

DESIRING to limit the pollution of the Baltic Sea due to atmospheric transport of harmful substances,

BEING MINDFUL of the need of reliable data on the amounts of harmful substances carried by the air to the Baltic Sea,

RECOMMENDS to the Governments of the Contracting Parties to the Helsinki Convention that

a) each Baltic Sea State should have at least one monitoring station on the sea or on the coast, whenever possible, to be included into the tentative stage of the monitoring programme started in 1985;

b) the list attached to this Recommendation (Annex 1) should be used as the basis for the monitoring programme in all Baltic Sea States, bearing in mind that the list consists of minimum requirements, and that Chloride (Cl) in precipitation should be included in the monitoring programme as an alternative sea salt indicator;

c) when the intercalibrations are acceptable, in the precipitation samples components lead (Pb), copper (Cu) and zinc (Zn) should be analysed as a routine basis from at least one sea or coastal station of each country; and

d) whenever possible, also experimental monitoring of those substances which are now included in the present list attached to this Recommendation, should be started,

RECOMMENDS ALSO that the Baltic Sea States would report their data to the Commission by using the format attached to this Recommendation (Annex 2),

RECOMMENDS FURTHER that measures taken in accordance with this Recommendation and the analyses and methods used should be reported to the Commission by 1 May 1987 and thereafter every 3 years.

HELCOM RECOMCMATION 7/1 Annex 1

RECOMMENDED LIST OF PARAMETERS FOR THE MONITORING OF AIRBORNE POLLUTION LOAD

		Routine Minimum requirements	Experimental
N	$N0_3^{\circ}$ precipitation	+	+
	NH + 4 precipitation	+	+
	NO $_z$ gas		+
	HNO particles gas + N03		
	NH, + gas + NH particles		
Pb	precipitation		+
	particles		+
Cd	precipitation		
Cu, Zn	precipitation		+
	particles		+
S	$50_4^{2^{\circ}}$ precipitation	+	+
	SO Z gas	(+)	+
	5042 - particles	W	+
Na, Mg**) or C1	precipitation		+
	particles		+

monitored on routine or experimental basis not monitored on routine basis

not monitored on routine basis; strongly recommended after intercalibrations as a routine basis from at least one station of each country

brackets indicate conditional status of + or - alternative sea salt indicators

Country Contact Address

Station

Year

PRECIPITATION Bulk C wet only Q * * Daily Fj Weekly n Monthly Q * * *												A I R CONCENTRATION				
Month	Preci-pita-tion M	NO^--N	NH_4^+-	0_4-S	Na +	Mg +	Pb l.	Cd	Cu	Zn	Cl	0_2-S	$S0_4$-S	$N0_2$-	HNO3 + NO_3	NH_3 + + ~
		-	-3	dm -	-	-3	-	-	-	-	-	.ug m -	-	-3	3	3
Jan																
Feb																
Mar																
Apr																
May																
June																
July																
Aug																
Sept																
Oct																
Nov																
Dec																

Indicate which sampler is used.
Monitoring Indicate- which sampling period is used.

TENTATIVE INSTRUCTIONS FOR REPORTING MONITORED DATA TO THE BALTIC MARINE ENVIRONMENT PROTECTION COMMISSION

Monthly mean values should be reported in the following way:

Precipitation

The precipitation amount should preferably be based on the volume collected in the actual deposition sampler; if not, the base should be given.

Concentrations of precipitation

Sampling periods less than a month

The concentration of each species should be precipitation amount weighted aritmetric mean values, i.e. calculated
with the following formula

C_M
__ ~.Pici ~Pi
where C_M is the weighted monthly mean. Pi is the precipitation amount (mm) collected at each sampling period and Ci is the corresponding concentration. f- PiCi is thus the total collected amount per unit area and month and ,[5]_~Pi the total precipitation amount for the month in question.

Weekly sampling

If weekly sampling is used and if a week includes two adjacent months, the measured data should be allocated to the month which contains the largest number of days in the week in question.

Concentrations below the detection limit

When the concentrations are below the detection value zero should be used for the mean calculations. When the sampling or analysis has failed due to a too small sample this should be neglected. If sampling and analysis have failed due to other reasons this should be marked with an asterisk after the concentration values.
limit the

Units

The concentrations should be expressed in $_3$mg or$_j$ug of the element ig question (e.g. N or S) per dm precipitation
or per m air as indicated in the reporting format.