

## HELCOM RECOMMENDATION 13/9

Adopted 6 February 1992 having regard to  
Article 13, Paragraph b) of the Helsinki Convention

### REDUCTION OF NITROGEN, MAINLY NITRATE, LEACHING FROM AGRICULTURAL LAND

#### THE COMMISSION,

**RECALLING** Paragraph 1 of 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,

**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,

**RECALLING FURTHER** the Ministerial Declaration of 1988 and the Baltic Sea Declaration of 1990, calling, *inter alia*, for a substantive reduction of the inputs caused by diffuse sources,

**RECOGNIZING** the fact that a substantial part of the eutrophication problems observed in the Baltic Sea Area is caused by nutrient inputs from diffuse sources,

**DESIRING** to limit this pollution,

**RECOMMENDS** to the Governments of the Contracting Parties that:

- a) artificial fertilizers and animal manure should be applied according to crop need. This principle should be promoted, e.g., by the use of:
- economic incentives used by the authorities to reduce nutrient application and to promote the development of a sustainable agriculture;
  - fertilizer and crop-rotation planning and calculation of nitrogen balance, i.e., with a specification of crop need and applied amounts of nitrogen fertilizers;
  - prognosis tools for nitrogen application, such as assessment of soil mineral nitrogen contents, soil nitrogen mineralization potential, or the use of calculation methods,
- b) utilization efficiencies of animal manures should be enhanced by:
- application of animal manure shortly before or during the early growing season;
  - establishing of six to twelve months storage capacity for animal manure depending on farming system, climate and soil conditions;
  - develop governmental programmes for financial support for farmers' investments in storage capacity;
  - upper limits for application of animal manure, corresponding to 170 kg N (approximately 2 animal units) per hectare annually \*); these upper limits might be exceeded in the following cases:
    - (i) long growing seasons,

- (ii)crops with high nitrogen uptake,
- (iii)high net precipitation in the vulnerable zone,
- (iv)soils with exceptionally high denitrification capacity;
- promote studies on nutrient contents of animal manures and the related conversion factors to animal units,
  
- c)utilization efficiency of artificial fertilizers should be promoted by integrated plant production \*\*),
  
- d)green fields should cover 50% of the agricultural land, or the highest possible percentage with respect to climate and soil conditions,
  
- e)further distribution and increased utilization efficiency of animal manure may additionally be promoted by, e.g.:

  - slurry banks for surplus manure, possibly in connection with degassing of animal manure in large scale biogas plants;
  - use of large lorries, possibly in combination with small application units,

  
- f)programmes should be developed and action taken to implement the above mentioned measures and to report on the effect of these measures or any other measures taken to reduce nitrogen leaching from agricultural land,

**RECOMMENDS ALSO** that the actions stated in a) - f) should be implemented by the Contracting Parties within 5 years,

**RECOMMENDS FURTHER** that the action taken by the Contracting Parties, e.g. economic incentives, recommendations, regulations, agricultural advice, should be reported to the Commission in 1994 and thereafter every three years.

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Footnote:

\*) The 170 kg N per hectare stems from the Nitrate Directive of the European Community.

\*\*) In this aspect integrated plant production is a farming practice which optimizes the utilization efficiency of fertilizers through a precise determination of the optimal fertilization level and the use of appropriate crop rotations.