

Danish efforts to mitigate phosphorus losses from agriculture to surface waters

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In Denmark national regulation addressing nutrient losses to the aquatic environment was initiated in the 1980's. At that time, little was known about the agricultural contribution of P to surface waters. Regulation addressing agriculture, therefore, focused on nitrogen and the handling of manure. However, much of this regulation also had a significant impact on P.

The most recent Danish Action Plan for the aquatic environment addresses P surpluses in agriculture and the risk of P losses directly. The Action Plan requires a 50 % reduction in the P surplus, the establishment of 10 m buffer zones along streams and lakes and introduces a tax on feed phosphates.

As part of the Action Plan research is funded to investigate the reduction of the national P surplus and the development of effective mitigation options for rural landscapes. On one project a tool for identifying areas with a high risk of P losses as the basis for devising suitable mitigation options is presently being developed. This tool will also address the risk of nitrate leaching and describe environmental side effects and costs of the various mitigation options.

This paper presents: (1) an outline of the regulations implemented in Denmark and their impact on P surplus and P utilisation in Danish agriculture. (2) The mitigation options, which we presently work on as well as examples on how they are implemented in the abovementioned risk assessment tool.

Schou J.S., Kronvang, B., Birr-Pedersen, K., Jensen, P.L., Rubæk, G.H. Jørgensen, U. & Jacobsen, B. 2007. Virkemidler til realisering af målene i EUs Vandrammedirektiv. Udredning for udvalg nedsat af Finansministeriet og Miljøministeriet: Langsigtet indsats for bedre vandmiljø. Faglig rapport fra DMU, no. 625, 132 pp. (in Danish with English summary). http://www2.dmu.dk/Pub/FR625_Final.pdf