

Costs of regulating ammonia emissions from livestock farms near Natura 2000 areas

- Experiences from Germany, Netherlands and Denmark

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Abstract

Natura 2000 areas are designated according to the EU's habitat directive and bird protection directive in order to protect particular habitats and species. A variety of these habitats and species are particularly sensitive to deposition of nitrogen, where ammonia emissions from livestock farming constitute the primary source of pollution. The purpose of this paper is to compare the costs of reaching the ammonia emission targets for different livestock farms near Natura 2000 sites in the Netherlands, Schleswig Holstein, and Denmark. These countries have some of the highest NH₃ deposition in Europe and especially Germany will have to implement new measures to reach the NEC requirements for 2030. This will also benefit nature sites in Denmark as a large part of the ammonia deposition is transported over a long distance. The paper looks at regulatory aspects, the emission requirements and the cost of implementing the technologies. The selected case farms are a finisher farm, a dairy farm and a broiler farm and the distance to Natura 2000 site is 400 and 2000 meters. In all three countries a relatively low share of livestock farms are situated near Natura 2000 areas, but especially in Denmark many livestock farms are situated near other nature sites. The regulatory approach is very different in the three countries and key issues are additional deposition from projects, neighbouring livestock farms, the inclusion of background deposition and the critical load levels used. The Dutch PAS system is interesting as projected reductions in emissions are given as additional room for development today. For the general regulation and the implementation of BAT, the costs for farms with finishers in Schleswig Holstein are the highest as the Filter Decree require the use of air-scrubbers. The findings suggest that farms 400 meter from a Natura 2000 site in the Netherlands have lower and less costly restrictions than in the other countries, whereas the opposite is the case for farms 2000 meter from Natura 2000 sites. The requirements near Natura 2000 where strict requirements apply are so high, that in practice farms will expand at a different site instead as it is too costly or the required technology is not available.

Key words: Natura 2000, Ammonia, costs, livestock regulation