



## **Footprints on Ammonia Concentrations from Emission Regulations**

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Modelling level as well as daily and seasonal variations of ambient ammonia concentrations is challenging due to large temporal and spatial variations of the emission sources. We have therefore developed a dynamical ammonia emission model for application into large and local scale air pollution models. Here we use the model to explain how Danish legislation measures on ammonia emissions has introduced a decreasing trend and changed the seasonal variation in ambient ammonia concentrations during 1989-2003; from one with moderate spring and autumn peaks to one with a single but larger spring peak. The obtained results show that emission reductions are obtained through significant changes in the Danish agricultural production, which includes simultaneously reduction of emissions and increased production especially within the livestock sector.