## Advancing local engagement in nitrate regulation

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For the last 30 years nitrate regulation of agriculture in Denmark has been governed through general "top down" regulations and legislation which has reduced nitrogen emissions to coastal waters by approx. 50%. This has obviously been a success, but has happened without engagement of stakeholders and has often taken place with reluctance and significant costs for the individual farmer.

Implementation of the Water Framework Directive has led to further reduction needs, and it was decided that previous practices of general regulation were no longer sufficient since the measures in the general regulation became too expensive. The Government therefore, in 2015, decided to introduce more targeted regulation. This in terms of restoration of wetlands, constructed wetlands, targeted catch crops and a division of Denmark into areas with different nitrate retention zones (1500 ha) with the perspective to differentiate nitrate restrictions more cost effective.

A change from general regulation to more site-specific and targeted regulation requires a new water governance based on more local engagement. In 2017, the government introduced a new concept of 28 Catchment officers with the purpose of finding suitable sites for constructed wetland and wetlands through direct contact with farmers. However, this new initiative by the government is only one step forward going from "top down control" to more cooperative and engagement in governance.

In the TReNDS pilot area - the catchment for Norsminde Fjord - farmers face more than a 50% nitrate reduction target to the fjord by 2027. This has so far led to two tracks: 1) a willingness to make a positive difference by taking an active role in finding measures, but so far only with measures on a voluntary basis and with compensation 2) at the same time a critical attitude towards the significant reduction requirements. This demonstrates that an acceptance of the nitrate reduction targets, is crucial for willingness among farmers to engage further into the challenges with reducing nitrate.

The constructive attitude towards finding solutions, even though the reduction targets are a mayor challenge for the agro-economy, should probably be seen in the context of the collaboration in the pilot area between farmers, farmers union, advisers and researchers since 2007 including establishing a local water council in 2012.

In the TReNDS project, we use the "governance infrastructure" (water council, catchment officer, engaged farmers) to test and find solutions for water management strategies suitable for future demand for local engagement.