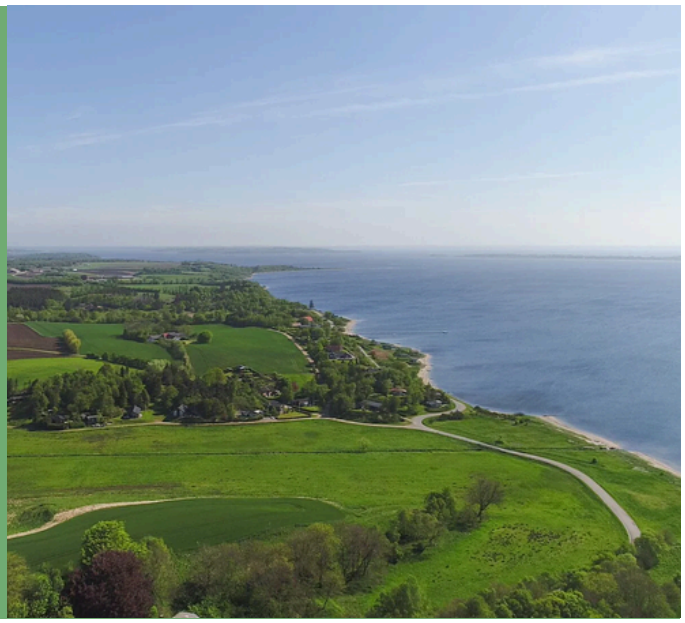
How can Nature-Based Solutions (NBS) support Danish farmers and the Limfjord region



Experiences from the Danish trans4num NBS site in the Limfjord catchment show that circular, nature-based approaches, such as perennial grass rotations, bio-based fertilisers, and nutrient-flow modelling, can help farmers meet strict nitrogen reduction targets while maintaining productivity.

Our field observations suggest several clear benefits:

- **Cleaner water and healthier soils:** Perennial crops such as grass and grass-clover significantly reduce nitrate leaching while improving soil structure and organic matter content.
- **Efficient nutrient recycling:** Bio-based fertilisers from green biorefineries recycle nutrients effectively, reducing dependence on mineral fertilisers and imported feed protein.
- **Smarter nutrient management:** Dynamic nutrient-flow models enable farmers to visualise nitrogen balances in real time, improving transparency and supporting adaptive management.
- **Collaborative policy innovation:** Participatory testing within Denmark's Regulatory Sandbox ensures that environmental goals are met through cooperation rather than restrictive measures.
- **New economic opportunities:** Farmers and cooperatives can benefit from growing biomass markets and emerging prospects in the green bioeconomy.
- **Stronger local cooperation:** Dialogue platforms connecting farmers, industries, and regulators build trust and accelerate the uptake of sustainable practices.
- **National alignment:** Together, these actions contribute to Denmark's Green Tripartite Agreement goals: cleaner water, lower emissions, and thriving rural economies.

Take-away message

Nature-based solutions enable Danish farmers to combine productivity with environmental responsibility. By linking green biorefining, flexible regulation, and farmer-driven innovation, the Limfjord region is showing how the transition to climate-resilient agriculture can work in practice.

Learn more about the project at https://trans4num.eu/en/

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