



Healthy sand : a farmers initiative on soil protection and ecosystem service management

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In a small region in the Netherlands a group of dairy farmers (cooperated in a foundation HOE Duurzaam) cooperates with the drinking water company and together aim for a more healthy soil. They farm a sandy soil, which is in most of the parcels low in organic matter. The local farmers perceive loss of soil fertility and blame loss of soil organic matter for that. All farmers expect that increasing the soil organic matter content will retain more nitrates in the soil, leading to a reduction in nitrate leaching and a higher nutrient availability for the crops, forage and grass and probably low urgency for grassland renewal. The drinking water company in the area also has high expectations that a higher SOM content does relate to higher quality of the (drinking) water and lower costs to clean and filter the water to meet drinking water quality requirements.

Most farmers in the area face suboptimal moisture conditions and thrive for increasing the soil organic matter content and improving the soil structure as key factors to relieve, soil moisture problems both in dry (drought) and wet (flooding) periods. A better water holding capacity of the soil provides benefits for the regional water board as this reduces leaching and run-off.

The case study, which is part of the Recare-project, at first glance deals with soil management and technology to improve soil quality. However, the casus in fact deals with social innovation. The real challenge to this group of neighbours, farmers within a small region, and to science is how to combine knowledge and experience on soil management for increasing the content of soil organic matter and how to recognize the ecosystem services that are provided by the adapted and more 'healthy' soils. And also how to formalize relations between costs and benefits of measures taken in the field and how these could be financially rewarded from an agreed and acceptable financial awarding scheme based on payments for securing soil carbon stocks and increasing carbon fluxes to soils.

In the presentation we want to discuss

- what choices in optimal farming practices and strategy for Dutch farmers help to increase soil organic matter content in the soil in the next 5-10 years?
- What role can the foundation play in organising the practices and the payment for extra activities, collecting results and present them to benefitting stakeholders?
- What valuation of ecosystem service and which payment scheme would satisfy the needs of both farmers as recipient and water board and regional government as beneficiaries and financing body for ecosystem service provided for.