OPTAIN

OPTimal strategies to retAIN and re-use water and nutrients in small agricultural catchments across different soil-climatic regions in Europe

NIBIO STUDY SITE: Hobøl (Norway)

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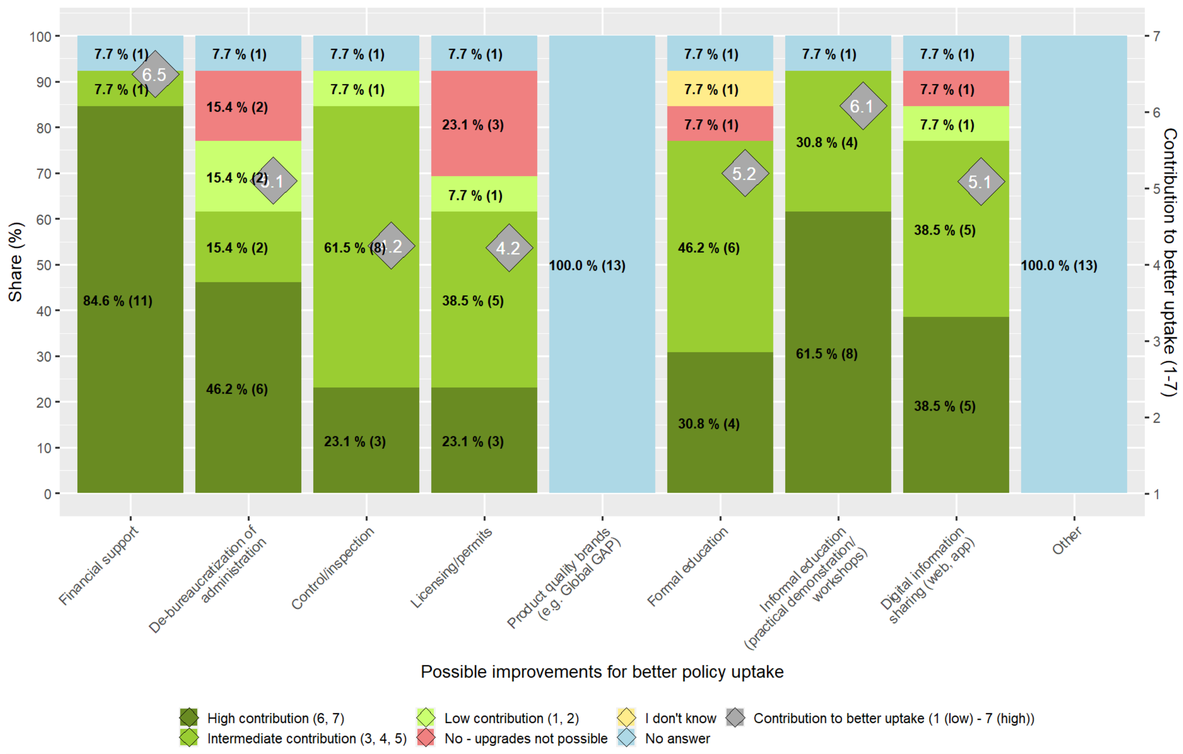
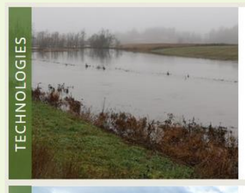
POLICY SURVEY – key findings

- 13 informants were interviewed, nine women and four men
- There is a need to coordinate related regulations, both related to agriculture and the environment
- The most important barriers for implementing NSWRM are both managerial and structural: administrative barriers, low benefit-cost ratio and voluntary measures
- Financial support, informal & formal education and de-bureaucratization have been seen as most important levers



WOCAT – status of documentation

Documentation for 6 measures published



Grass or stubble in areas prone to flooding ... [Norway]

Establishment of grass - or retaining stubble - on arable land that is prone to erosion and flooding to reduce the risk of soil and nutrient losses.

Compiler: Dominika Krzeminska 02/11/2022 3:28 p.m.

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Grassed waterways [Norway]

Grassed waterways are shallow channels (natural or constructed) with grass cover, used to drain surface runoff from cropland and prevent erosion.

Compiler: Dominika Krzeminska 02/07/2022 9:31 p.m.

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Small constructed wetland [Norway]

A small constructed wetland is a combination of ponds and vegetation filters, designed mainly to remove sediment and nutrients from streams. It is usually located in first and second order streams in agricultural landscapes.

Compiler: Dominika Krzeminska 06/22/2021 11:54 a.m.

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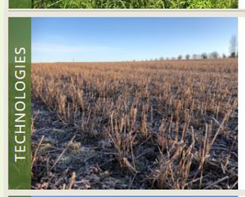

Reduced tillage: no tillage in autumn [Norway]

Reduced tillage, involving no plowing in the autumn, preserves stubble or plant cover during the autumn and winter to prevent soil erosion, and particle and nutrient loss from cropland to watercourses.

Compiler: Kamilla Skaalsveen 08/14/2014 1:47 p.m.

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Grass buffer zones alongside waterways in cropland [Norway]

Grass buffer zones are established along waterways in cropland to reduce the surface runoff rate, and the amounts of sediment, nutrients and pesticides in the runoff.

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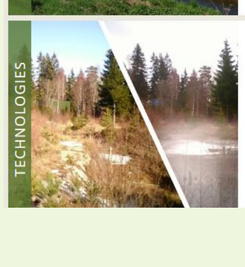

Small retention ponds in the forest [Norway]

Small retention ponds, located in the forest, are ponds or pools with sufficient storage capacity to store the surface runoff to prevent flooding during heavy rainfall events. Ponds contain limited or no water during dry weather, but are designed to retain water during rain events.

Compiler: Dominika Krzeminska 01/25/2022 2:10 p.m.

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INDICATORS – 2nd MARG workshop results

- For EPI: surface runoff, soil erosion and water quality (suspended sediment and nutrient concentration in the stream)
- For SPI: it differs, depending on the scale

Ranking of the environmental performance indicators (EPIs) and socio-economic performance indicators (SPIs) by the MARG group (9 people responding, each had 3 votes for each category and scale.

ALLOCATING MEASURES – workshop results

Procedure:
- Discussions with actors (2nd MARG)
- Potential location → from previous projects
- Consultation with local authorities/farmers

Grass/stubble on areas prone to flooding

- Based on inundation risk maps (NVE map repository kartkatolog.nve.no)

Grassed waterways

- National gully erosion risk map (NIBIO map repository kilden.nibio.no)

Small constructed wetland

- Existing methodology, based on local topography and land use in the contributing area

Reduced tillage

- National erosion risk map (NIBIO map repository kilden.nibio.no)

Buffer zones

- 2 and 6 m grassed buffer along channels in cropland; actors also asked to test different buffer widths

Retention ponds

- Existing methodology, based on presence of natural retention potential, local land use and the potentially flooded agricultural area.

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