Peatland rewetting in agriculture: Perspectives from Sweden

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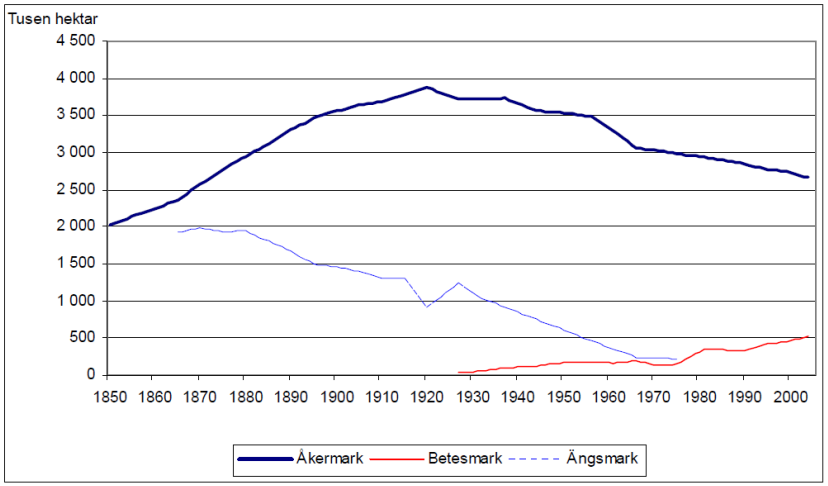
History

- In the 19th Century there was a need to increase food production
- Between 1850 and 1920 cropland area increased from 2 to 4 Mha (much of this was through drained peatlands)
- Since 1840. Government support to drain peatlands
- Since 1920 cropland area has decreased
- Since 1951 support for deforestation

Diagram 1.4 Areal åkermark, betesmark och ängsmark 1850-2004



Land use and emissions in 2020

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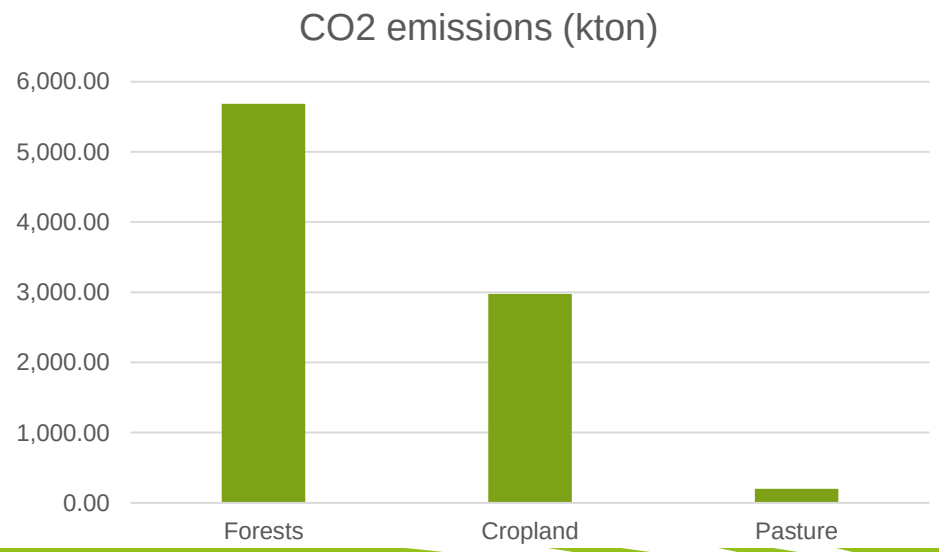
	Drained organic soil area (ha)
Land use	
Forests	939 000
Cropland	140 000
Pasture	19 000
Peat extraction	6 000



National targets

- Net-zero emissions by 2045
- 8 % (11 Mton CO2e) are allowed to come from complementary (negative) emissions.
- Wetlands are seen as a part of the solution but no specific target!

Wetland Support (general)

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LONA
- Water balance
- Groundwater supply
- GHG emission reductions
- Biodiversity
- Recreation

LOVA
- Eutrophication

LBP (RDP)
- Water qualtiy
- Biodiversity

ÅGP & Skyddade områden (protected areas)
- Species protection

Wetland Support (general)

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Tabell 9. Arealer våtmark som anlagts eller restaurerats hydrologiskt samt restaurerats genom röjning eller hävd under 2021.

Bidrag	Areal hydrologiskt restaurerad eller anlagd våtmark (ha)	Areal våtmark som restaurerats genom röjning eller hävd (ha)
Skyddade områden	729 [c]	1410 [c]
ÅGP	164 [c]	5 [c]
LONA	304 [b]	57 [d]
LOVA	572 [b]	0,3 [d]
LBP	305 [a]	-
Totalt	2074	1472,3

Uppgifter från: [a]Jordbruksverket, [b] Miljömålsuppföljningen, [c] SkötselDOS, [d] länens svar i frågeformuläret

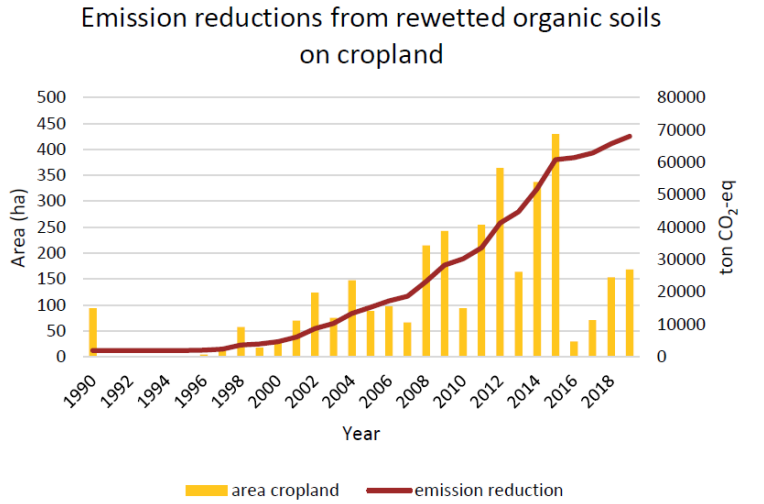

Figure 7 Rewetting of drained organic soils on cropland. Areas are given each year. The accumulated emission reduction from soils is calculated based on the wetland area and associated emission factors.[12] Each wetland counts toward reductions for 20 years after rewetting.

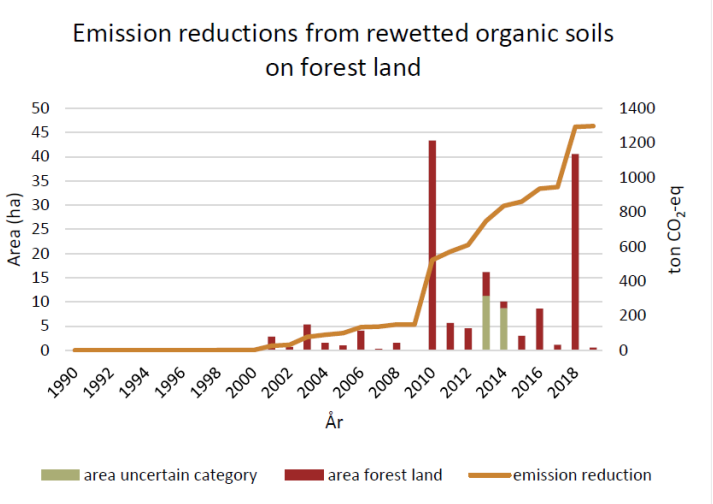

Figure 8 Rewetting of drained organic soils on forest land financed by the Swedish state. Areas are given each year. The accumulated emission reduction from soils (CO_2, CH_4 and N_2O) is calculated based on the wetland area and associated emission factors.[21] Each wetland counts toward reductions for 20 years after rewetting.

Re-wetting contracts

- Administered by the Swedish Forest Agency (since 2021)
- Only available for forest land (but agricultural land can be converted to forest land)
- Contract period is 50 years
- No restriction regarding the use of the trees
- Compensation for reduced land value

Prioritized areas

- Former agricultural land or is located south of river Dalälven
- An impact area that only concerns one property
- does not involve plugging ditches that are straightened natural streams or have water flow all year round.
- does not adversely affect e.g. roads or other infrastructure
- has a peat layer that is at least 3 decimeters deep on at least one hectare
- is less than 5 hectares
- has a reasonably flat ground surface
- does not have a high proportion of forest with already high nature values.