

DANISH CASE STUDY



AARHUS
UNIVERSITY
DEPARTMENT OF AGROECOLOGY

EU REGIONAL FORUM - PEATLAND REWETTING IN
AGRICULTURE
APRIL 2022

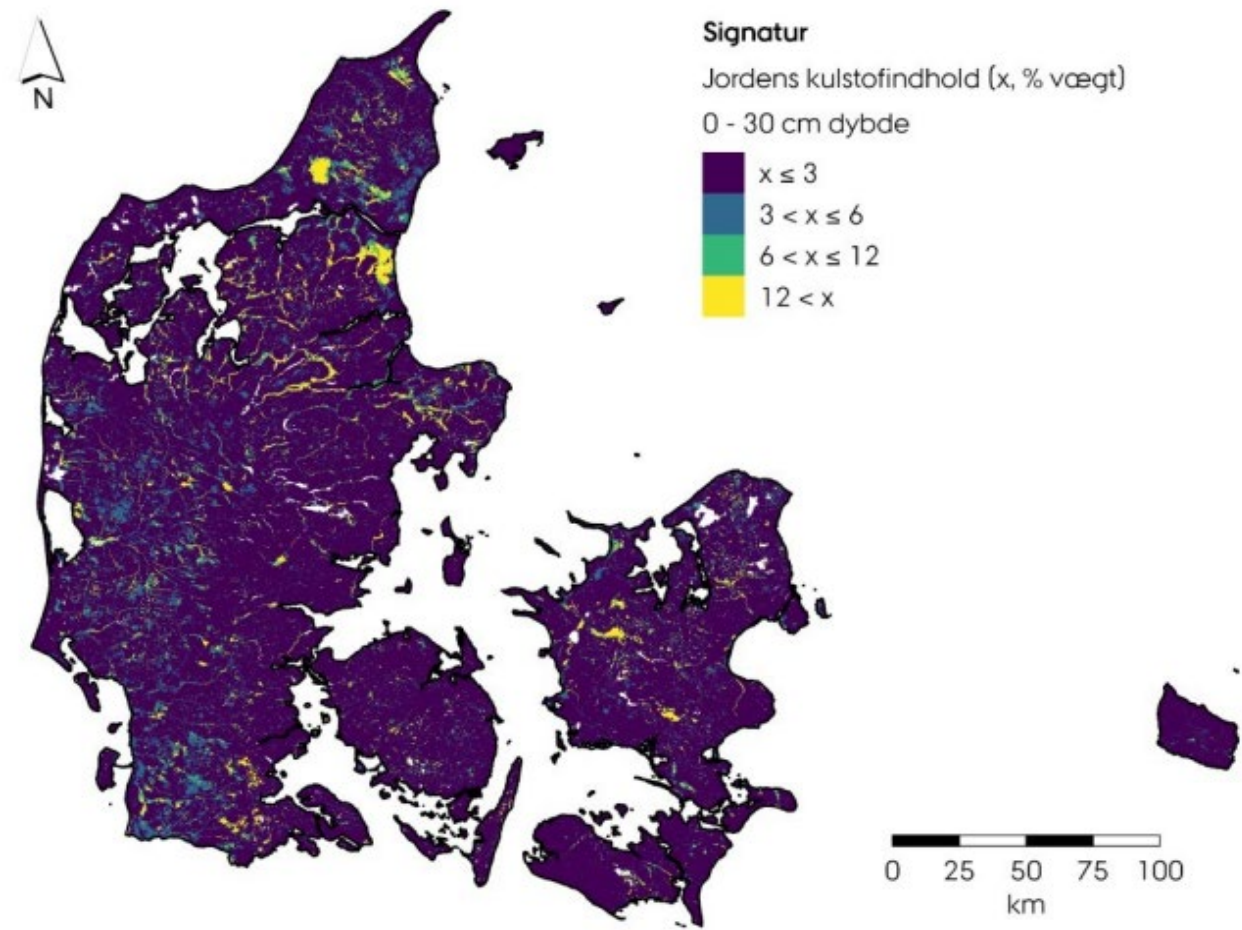
MARTIN HVARREGAARD THORSØE
RESEARCHER



OUTLINE

- Overview of organic soils in DK and rewetting potential
- History of wetland restoration
- Policies and instruments in support of restoration
- Lessons learnt

ORGANIC SOILS IN DK



(Greve et al. 2021)

Land-use	6-12 % C	>12 %	Total
Permanent grass	20.244	21.592	41.836
Arable farming	66.973	39.318	106.292
Other crops	10.525	12.354	22.880
Total	97.743	73.264	171.007



Rewetted site in Nørreå stream valley

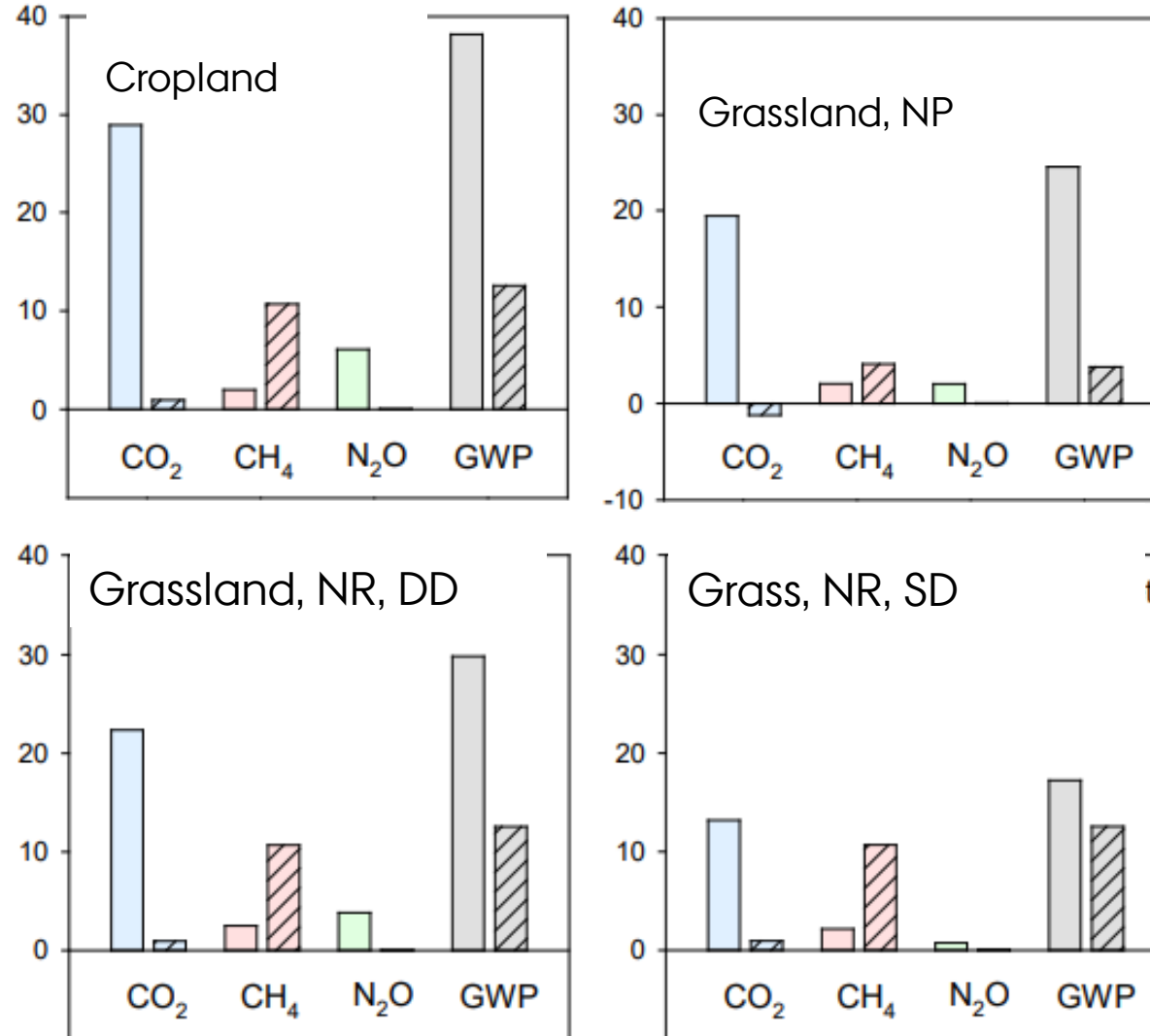


Drained site in Store Vildmose, bog



Intensive arable farming, Lammefjorden

GHG EMISSIONS IN TONS CO₂-EQ HA⁻¹ YR⁻¹ FROM TYPES OF ORGANIC SOILS BEFORE (SOLID) AND AFTER (HATCHED) REWETTING



NP: Nutrient Poor

NR: Nutrient Rich

DD: Deeply Drained

SD: Shallow Drained

HISTORY OF WETLAND RESTORATION IN DK

Wetland policy programmes	Efficiency demand	Financial incentives
AP-II (1998–2003)	350 kg N/ha/yr	Compensation, lump sum
AP-III (2004–2015)	265 kg N/ha/yr	Compensation, annual payment
AP-III (2004–2015) MVJ wetlands	100 kg N/ha/yr	Compensation, annual payment
Green growth agreement (2009–2015) and RBMP I (2009–2015)	113 kg N/ha/yr	Compensation, annual payment
RBMP II (2016–2021), and the Food and Agricultural package (2016–2021)	90 kg N/ha/yr	Compensation, annual payment
RBMP II (2018–2021) Constructed wetlands (CW)	N/A	N/A
Total	From 350 kg N/ha/yr to 90 kg N/ha/yr	From lump sum to annual payment

Significant changes over time

1. Changes in efficiency - Lower efficiency kg N per ha

2. Financial changes:

- Change in funding (from state to EU-partly funding)
- Change from lump sum to annual compensation
- Increased compensation and cost per ha

3. Change in governance structure:

- From counties to state and now only to more municipalities involvement
- Many landowners and complex schemes



NATIONAL POLICY PROCESS (ORGANIC SOILS)

2013: Nature and Agricultural Commission

- Consensus on the way forward for DK agriculture: Targeted regulation and land use change

2019: Climate act

- Ambition: 70% reduction of CO₂e emissions in 2030 across all sectors

2021: "Agreement on the green transition of Danish Agriculture"

- 55-65% CO₂e emission reduction in land use and forestry sector. Land use conversion on 100.000 ha, prioritization of CAP strategic funds

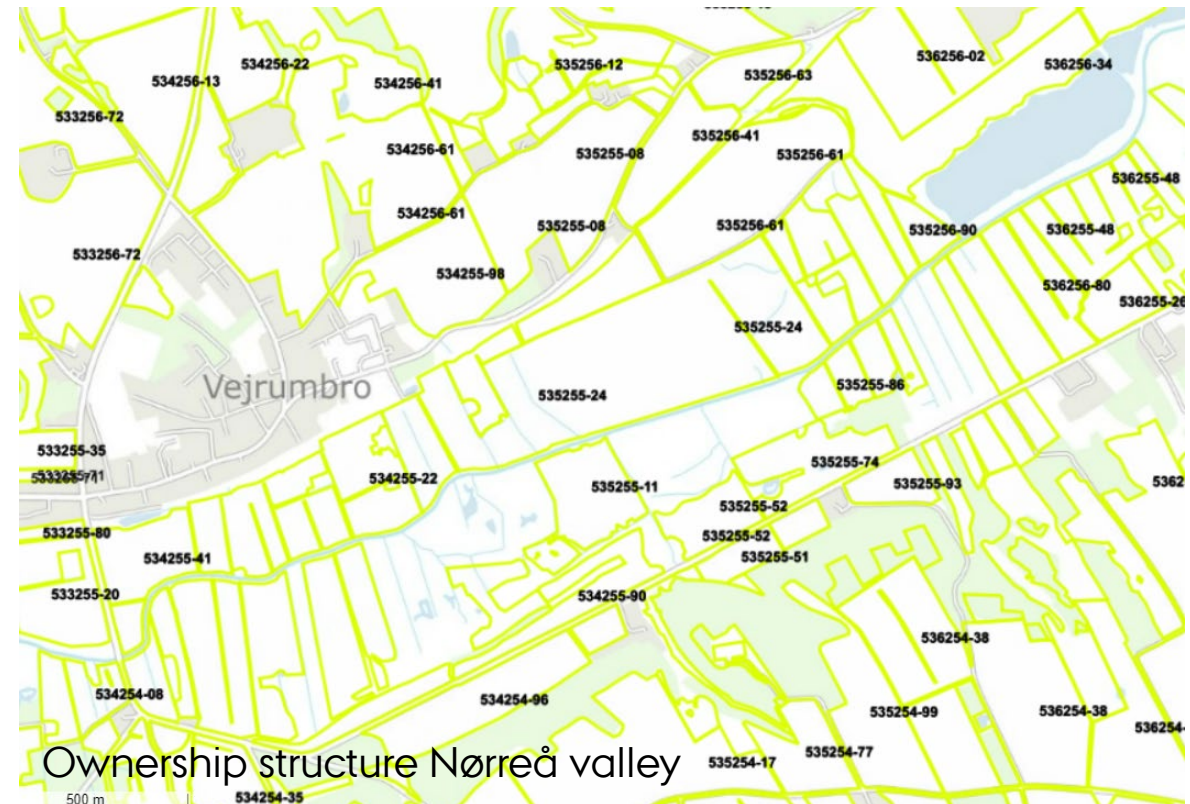


Aftale om klimalov
af 6. december 2019

Aftale om grøn omstilling af dansk landbrug
af 4. oktober 2021 mellem regeringen, Venstre, Dansk
Folkeparti, Socialistisk Folkeparti, Radikale Venstre,
Enhedslisten, Det Konservative Folkeparti, Nye Borgerlige,
Liberal Alliance og Kristendemokraterne.

CHALLENGES

- Complex ownership structure of organic soils (21.000 owners, mostly non-farmers)
- Diverse areas, highly productive and less productive
- In some areas negative sideeffects (particularly P leaching)
- Socio-cultural factors
- Few incentives for farmers to change land-use
- Need for land to fulfill conditionality requirements



OPPORTUNITIES



- Consolidating land around farms
- Creating more rational field structure
- Avoiding farming activities on lowlying and partly flooded areas
- Maintaining "licence to produce"

PUBLIC POLICY INSTRUMENTS

Direct instruments:

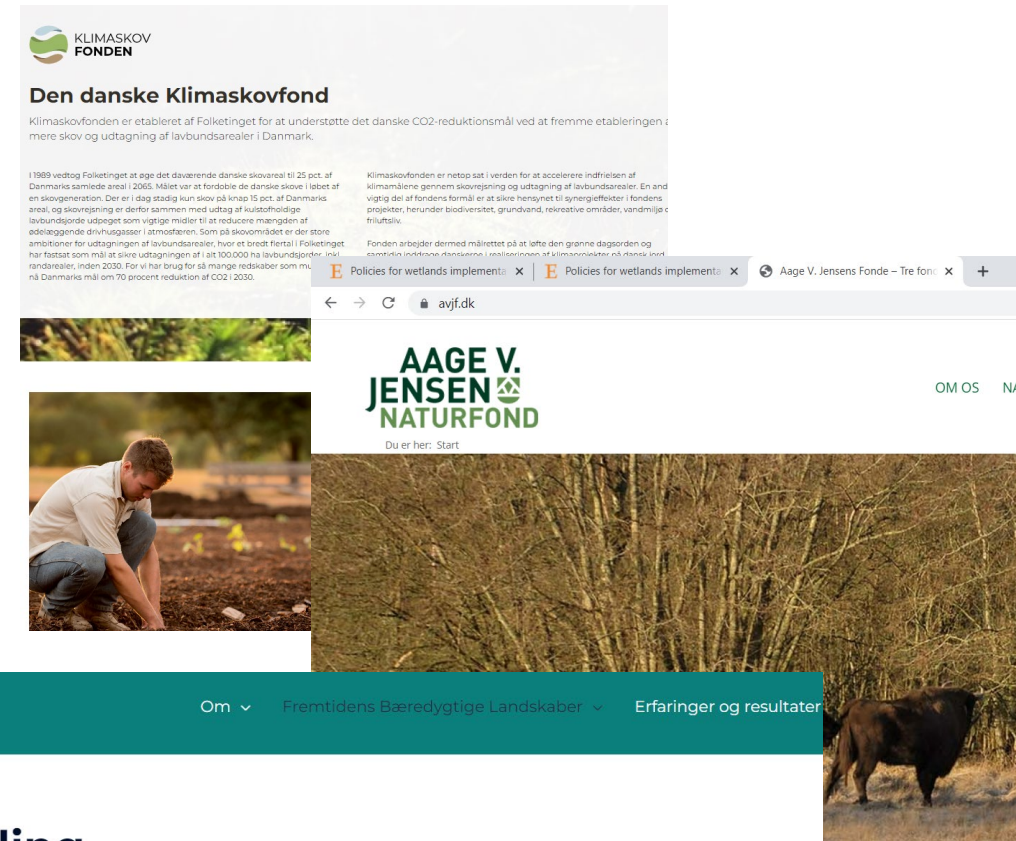
- SMR: GAEC 2, (>6% C reduced fertilizer norm; > 12% C tillage ban in some areas)
- CAP (Eco-Schemes): Extensification (>6% C, no fertilisation)
- CAP (Pillar II): Wetland creation and restoration, Aforestation; Lump sum compensation, land use conversion (>6% C)
- National funds: land use conversion (>6% C)

Indirect

- “Conversion officers”
- Land consolidation

PRIVATE INSTITUTIONAL ARRANGEMENTS

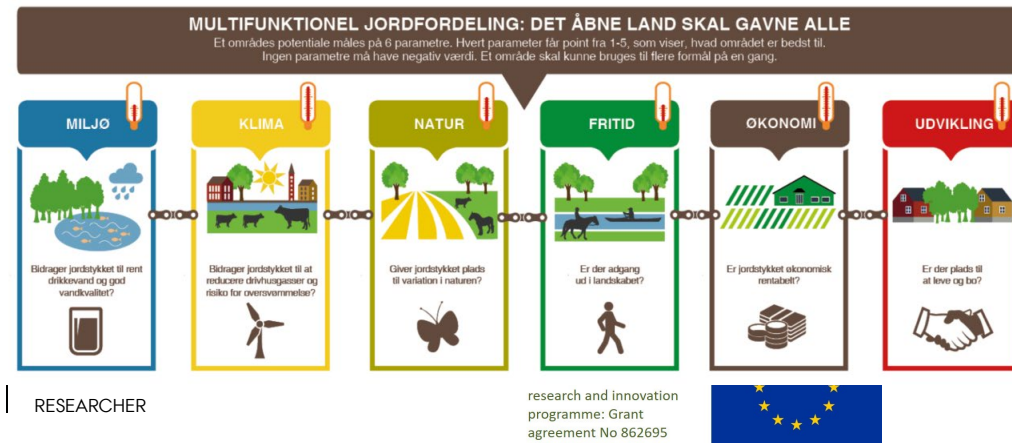
- Climate and forrest trust (Public/private partnership)
- Aage V. Jensen Nature fund (Private)
- Collective Impact (Private)



Collective Impact

Om Fremtidens Bæredygtige Landskaber Erfaringer og resultater

Jordfordeling



WHAT CAN BE LEARNT FROM THE DANISH CASE?

- Important to involve stakeholders
- Processes take time, important to plan for a longterm perspective
- Setting clear targets and adjust plans incrementally
- Targeted use of voluntary activity based schemes ensure efficiency
- Combination of multiple schemes, both directly incentivising land-use change and facilitating conversion



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