The Peat Dilemma

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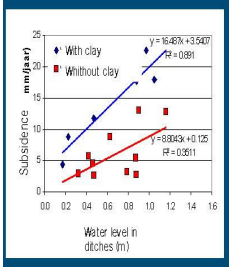
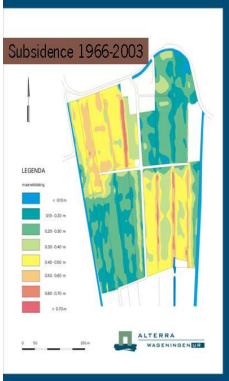
Worldwide 375 mln ha
Mostly nature
Marginal agriculture
Reclaiming leads to subsidence

Netherlands
0,3 mln ha
Mostly agriculture
Windmills, dikes, old farms,
Parceling patterns, open landscape
Old historic landscape
High nature values
1 to 12 m thick



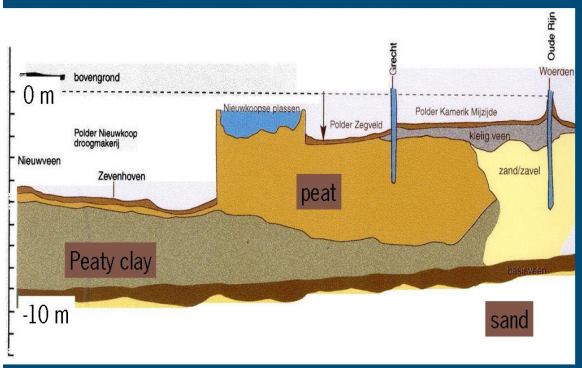


Subsidence proces

- Shrink
- Compaction
- Oxidation

Invisible proces
0,5 – 2 m per century
Huge impact in flat country

Dependent on water level
Every decade lower water level
Lower field level



Consequences

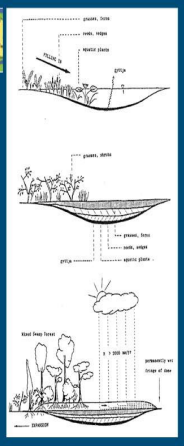
- CO2 output
- Weaker dikes
- Cracking houses
- Nutrients
- Salinization
- Land below sealevel - pumping
- Complex water management
- Nature dries out

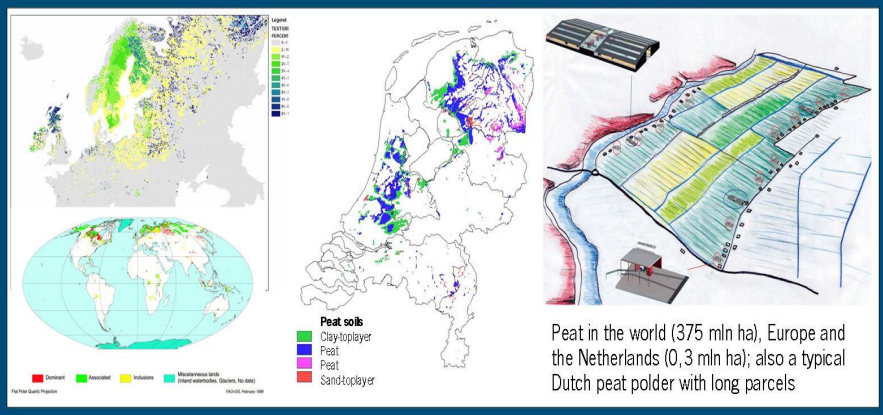
Greenhouse gas	Emission Kg/ha/year	Emission Tons CO2 eq / year
CO2	19030	4.24
N2O	7.4	0.51
total		4.75 = 45 mil Euro

History

Temperature rises
After ice age
Laguna environment
Accumulated organic material
Peat is formed
Roman time – cultivation
9th century large scale cultivation
Forest to arable land

Rational cultivation
Quick subsidence
Dike breaches
Arable -> grass
Profitable farming
Windmills
Modern agriculture



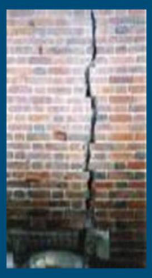


Peat in the world (375 mln ha), Europe and the Netherlands (0,3 mln ha); also a typical Dutch peat polder with long parcels

Policy change

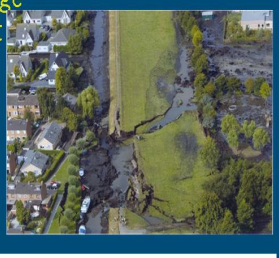
Costs and watermanagement
Agriculture no profitable
Climate change
Recreation & urbanisation

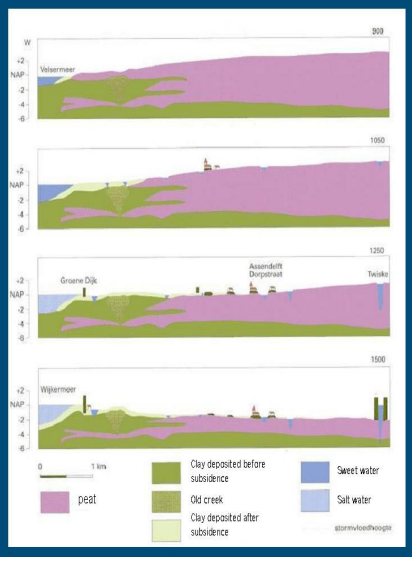
Solution:
higher water levels
or technology



Consequences

-Landscape change
-Cultural heritage
-Nature change
-Environment
-Costs
-Land use





New land use?

Everglades
Large scale dairies
Biofuels, fish, rice?
Slow food – historic landscape

Agriculture > recreation/nature

Spatial differentiation

-Different solutions
-Farming potential
-Nature potential
-Cultural heritage
-Thickness peat layer