GREENHOUSE GAS EMISSIONS AND AGRONOMIC FEASIBILITY FOR FORAGE PRODUCTION ON INVERTED PEAT SOIL

Hansen S., Rivedal S., Øpstad S., Heggset S., Deelstra J. and Dörsch P.

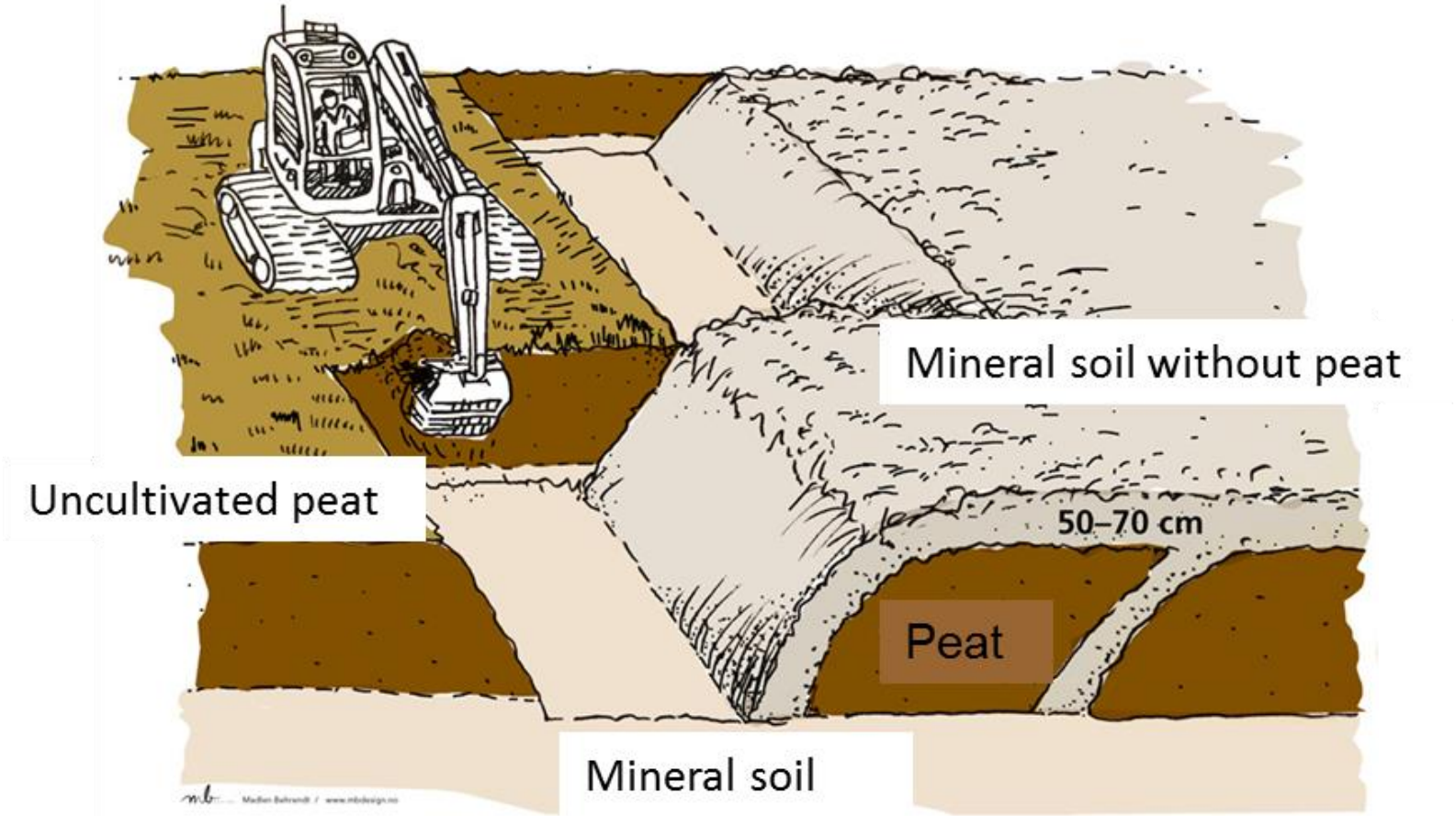
We thank the Norwegian Research Council, the counties, the regional agricultural authorities and the farming communities in western Norway for financial support

Background

Grasslands on former bogs, are posing agronomic and environmental challenges

In some regions, peat soils are situated on top of a self-draining mineral soil covered by a thin layer of impermeable mineral soil

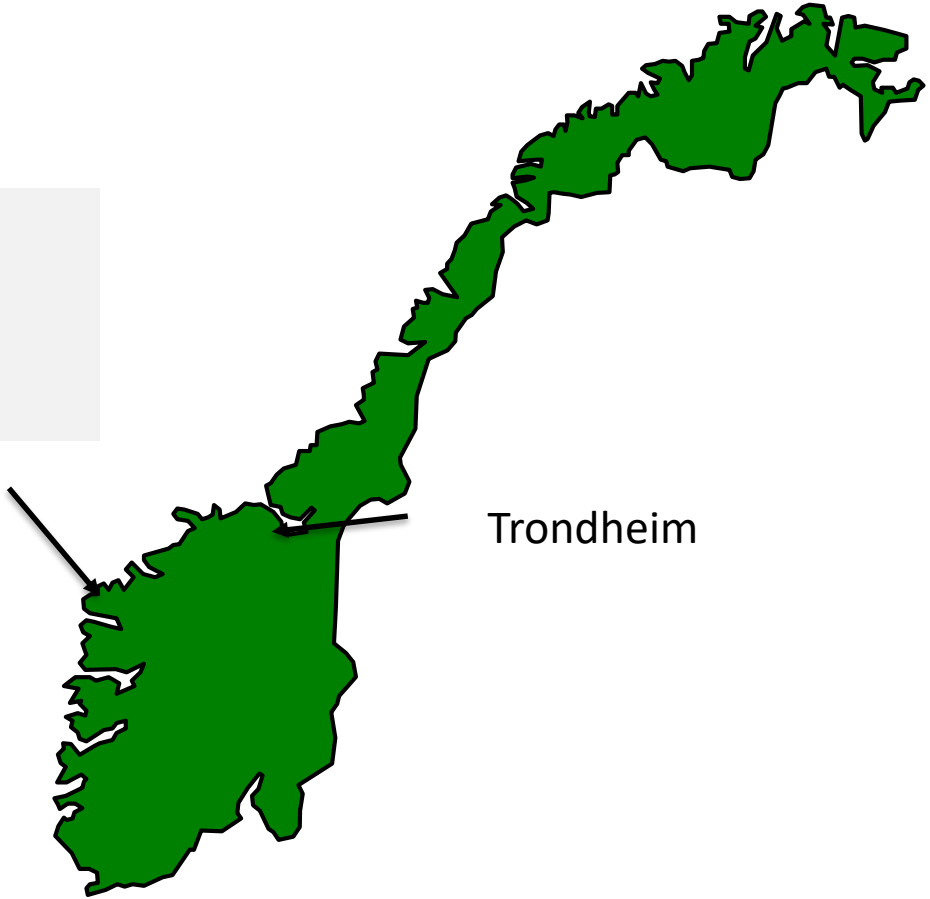
PRINCIPLE FOR PEAT INVERSION

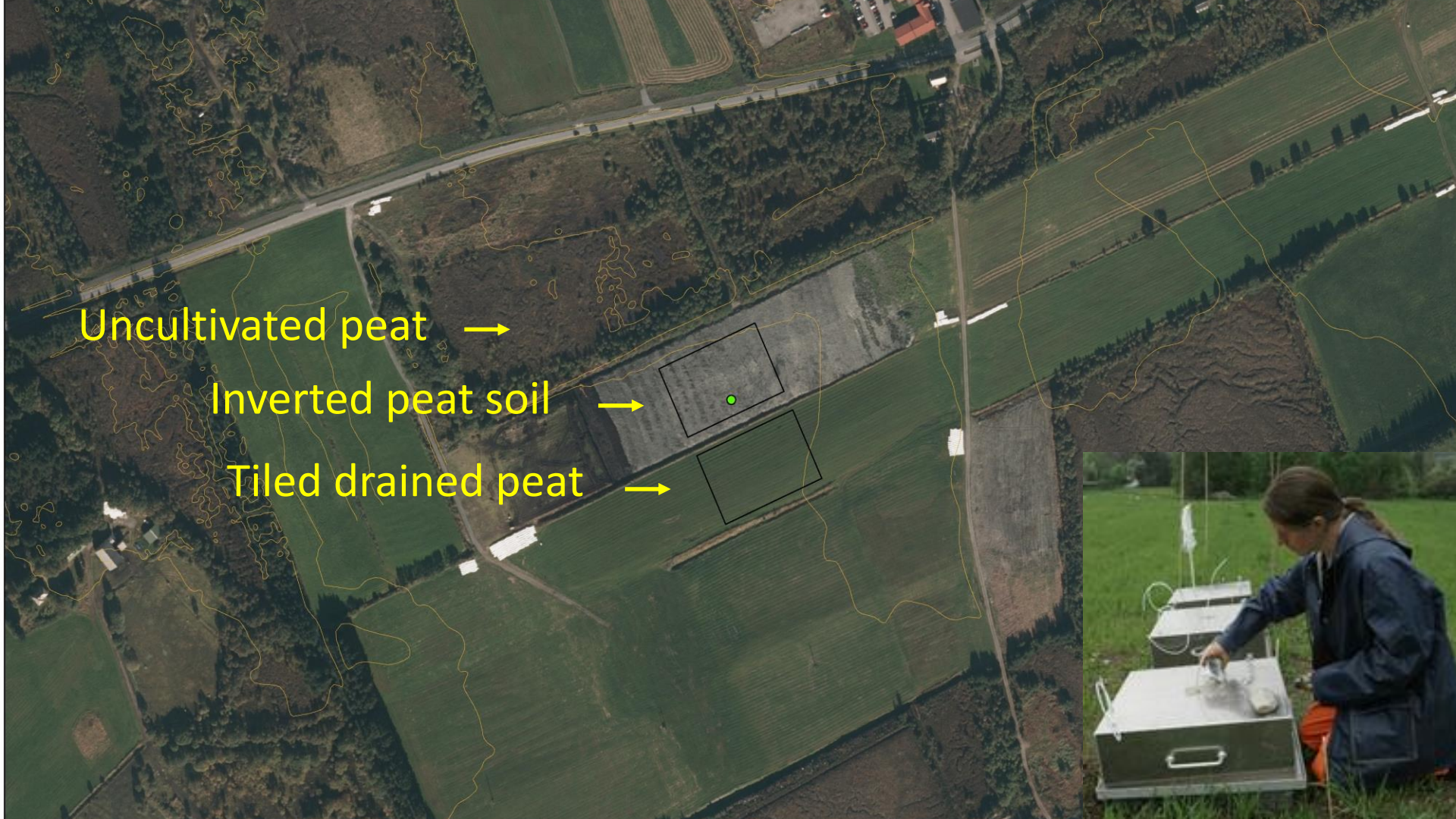


Location

Fræna

Norwegian West Coast




Uncultivated peat
Inverted peat soil
Tiled drained peat

SITES

SITES

EXPECTED GHG EMISSIONS FROM UNCULTIVATED PEAT

$N_2O = 0$

CH_4 ↑↓

CO_2 ↓ ?

EXPECTED GHG EMISSIONS FROM TILE DRAINED PEAT

N_2O ↑ ↑

CH_4 ↑ ↑

CO_2 ↑ ?

EXPECTED GHG EMISSIONS FROM INVERTED PEAT

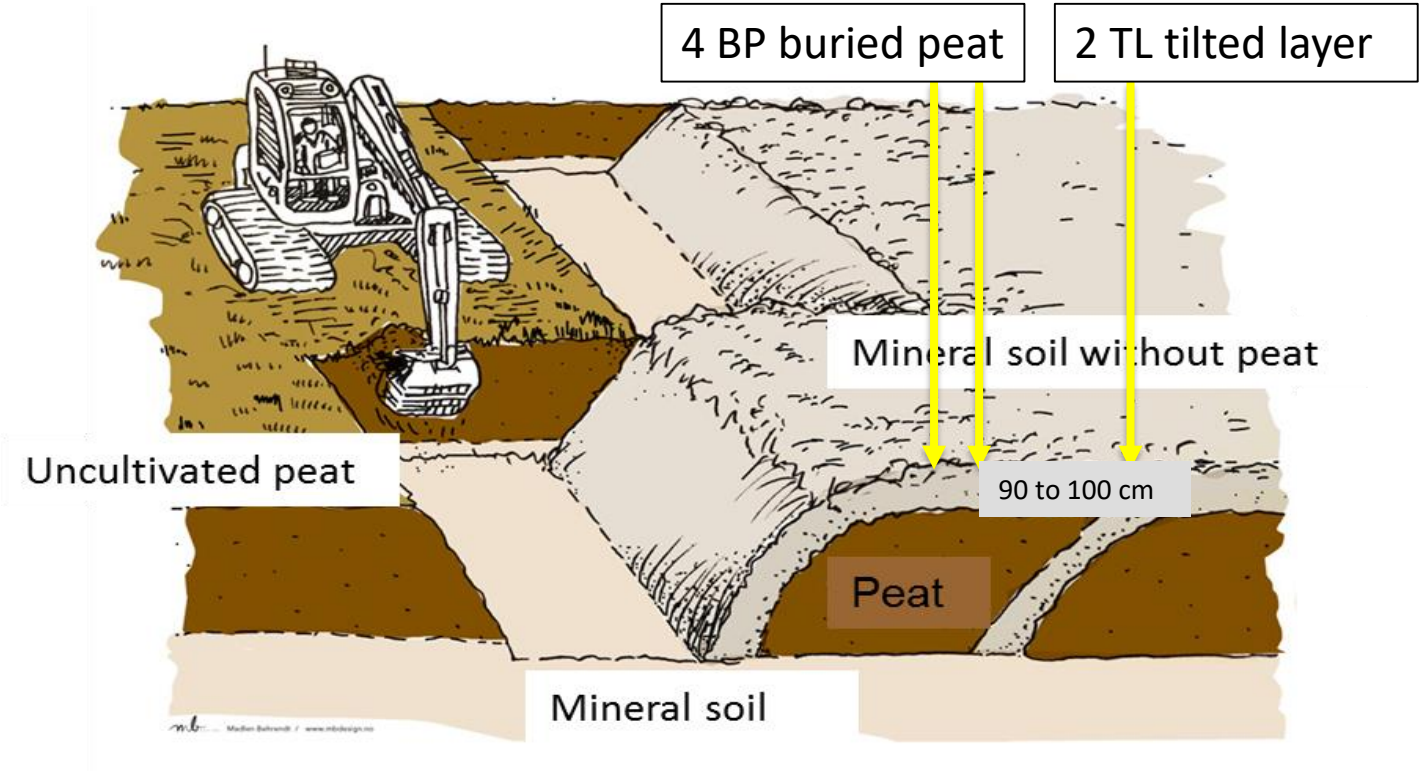
N_2O ↑↑

CH_4 ↑↑

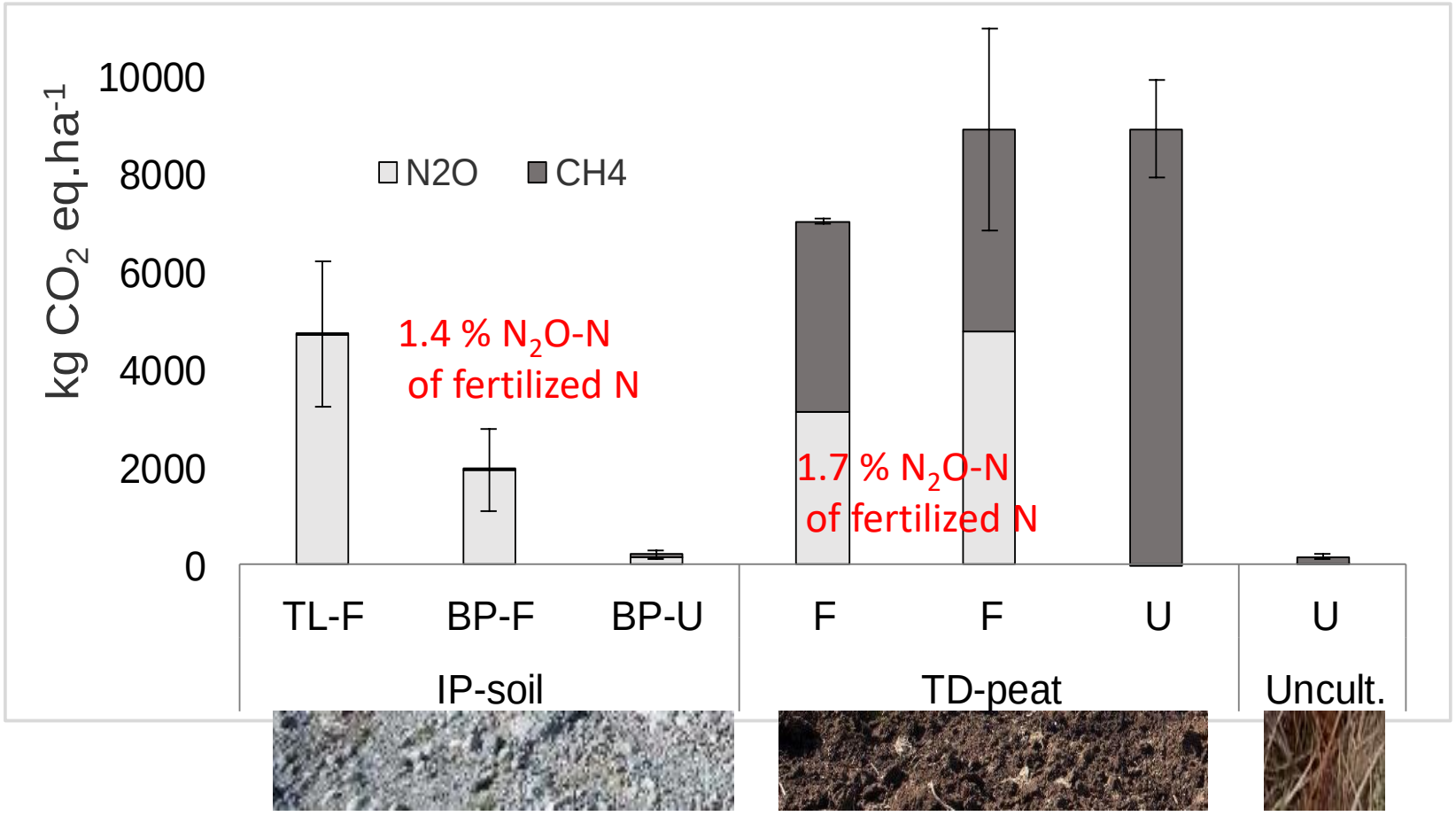
$CO_2 = 0$

?

PLACEMENT OF CHAMBERS INVERTED PEAT



EMISSION OF GHG FROM PEAT SOIL FRÆNA 27/4 – 14/10 2015




Thank you
for attention

Questions ?