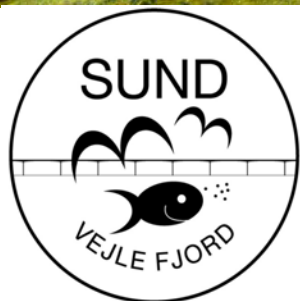


Succes med ålegræsrestaurering og gode råd

af Rune Steinfurth

SDU 

VEJLE
KOMMUNE

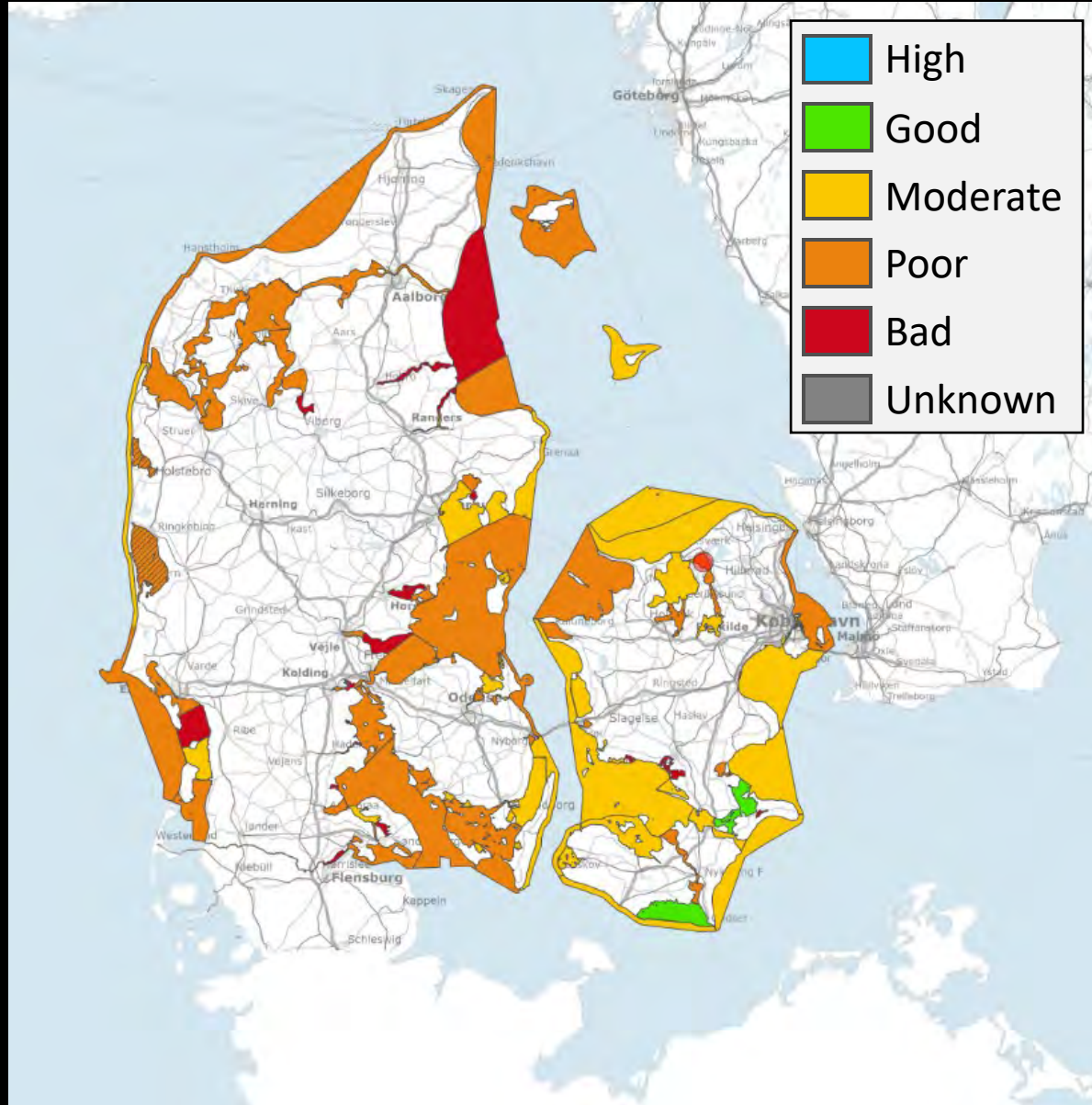


THE VELUX FOUNDATIONS
VILLUM FONDEN  VELUX FONDEN

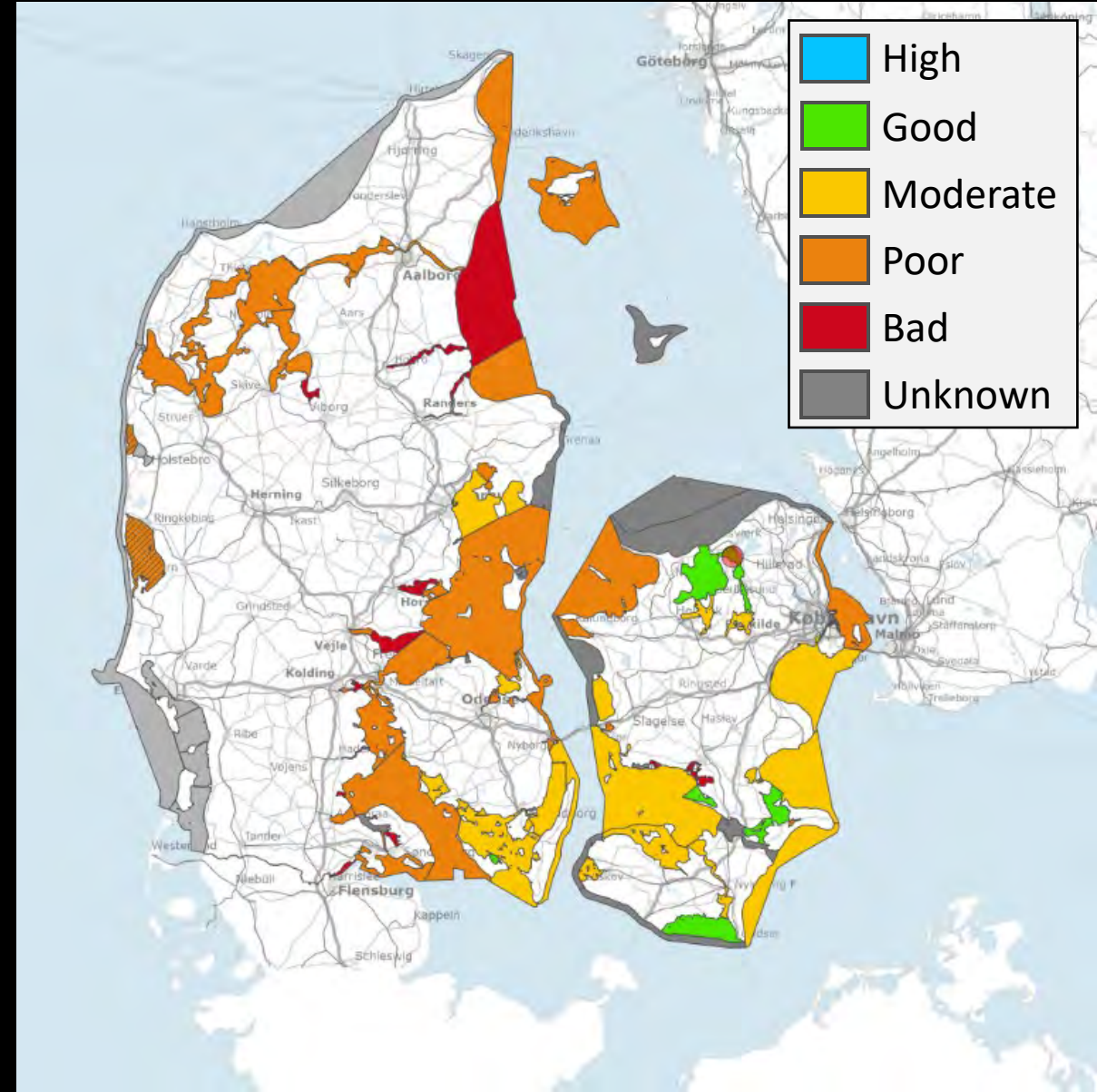


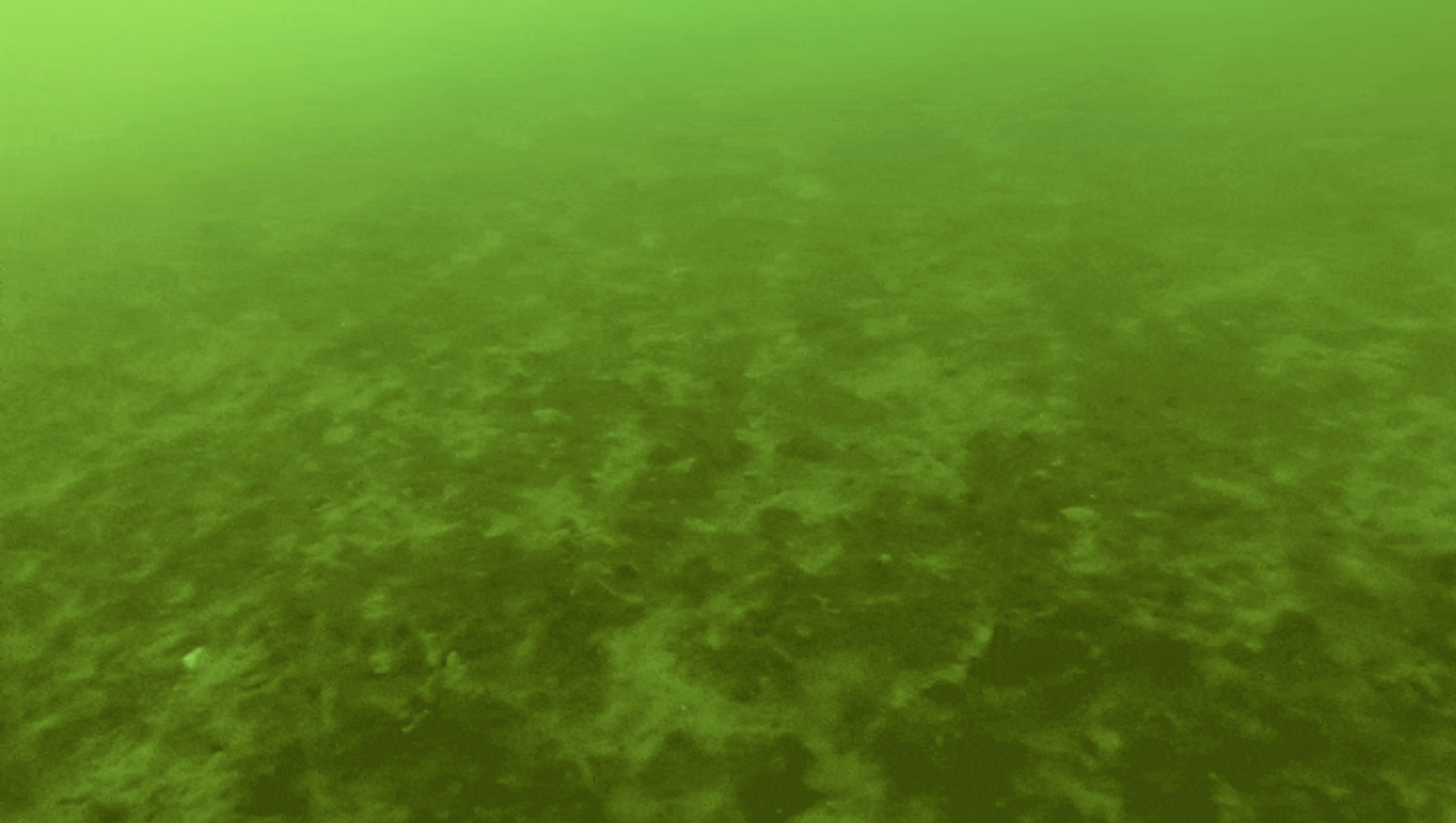
Natur-
Erhverv-
styrelsen

Økologisk tilstand

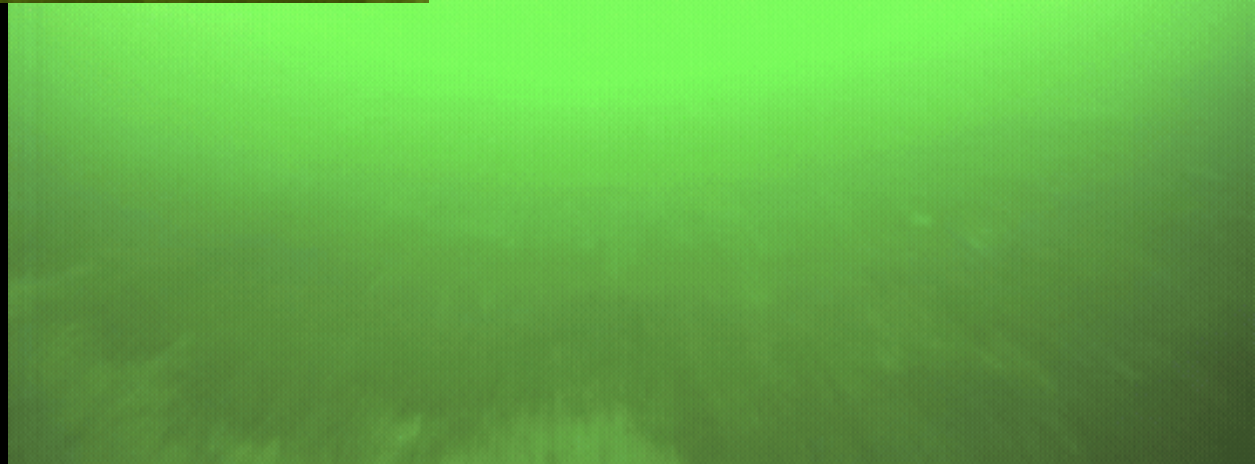


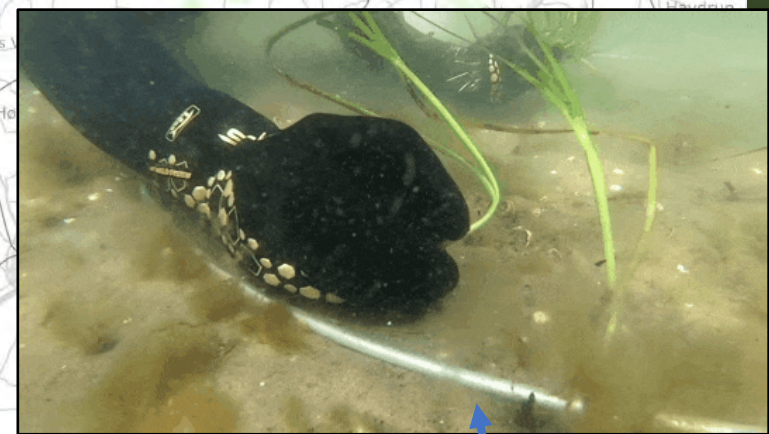
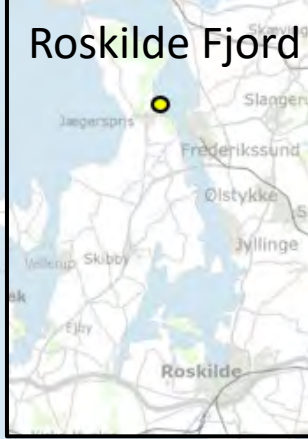
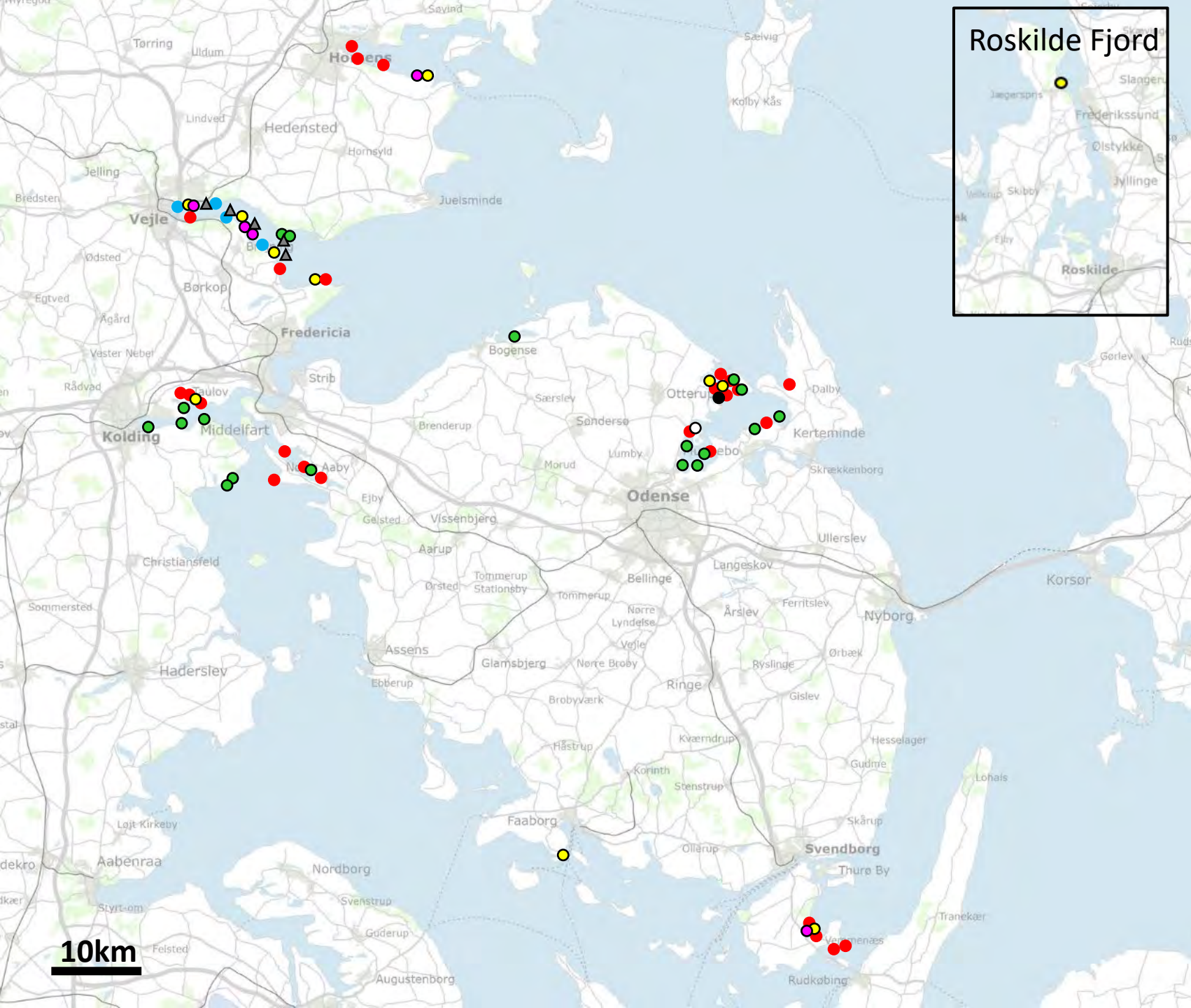
Ålegræssets tilstand



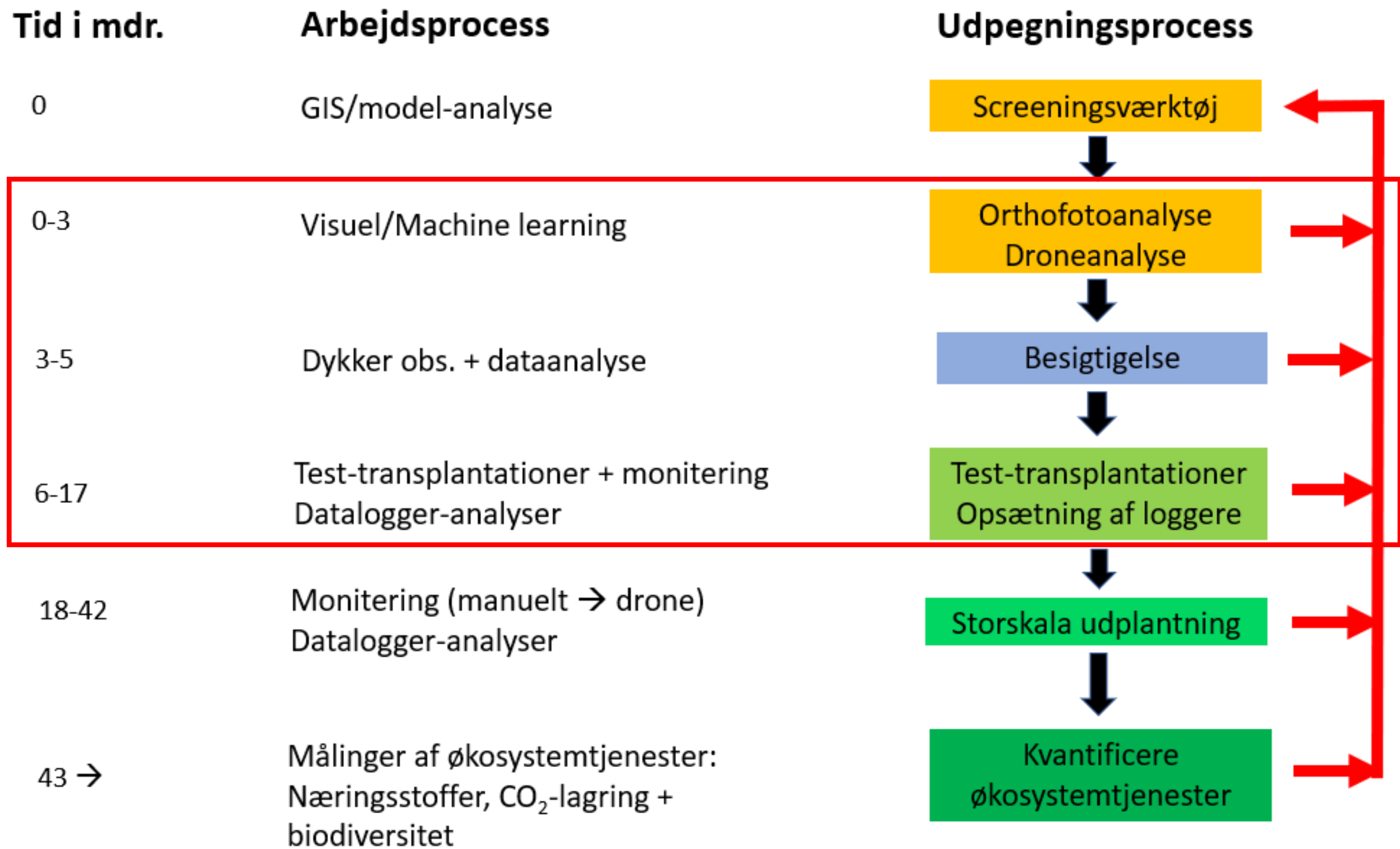


08-04-2020
14:48:31
N 55°40,888' POS
Ø 9°41,831'
177,2 COG
°M
2,1 SOG
kn
11,0 Dyt480
m





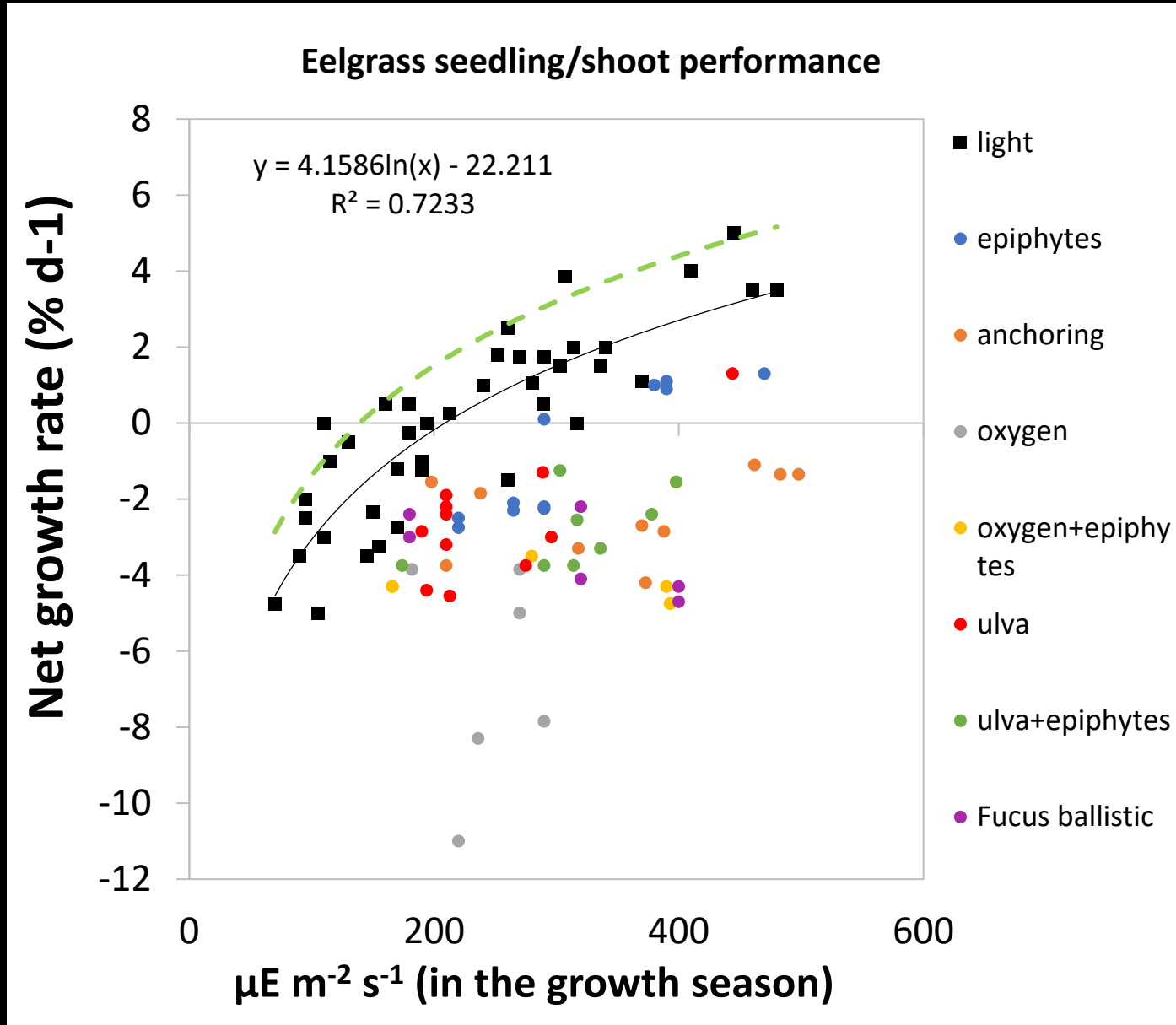
- Succes (test-transplant)
- Failure (test-transplant)
- New (test-transplant)
- Succes (large-scale transplant)
- Succes (large-scale musselbank)
- Succes (large-scale sandcap)
- Failure (transplant on large-scale sandcap)
- ▲ Stonereefs



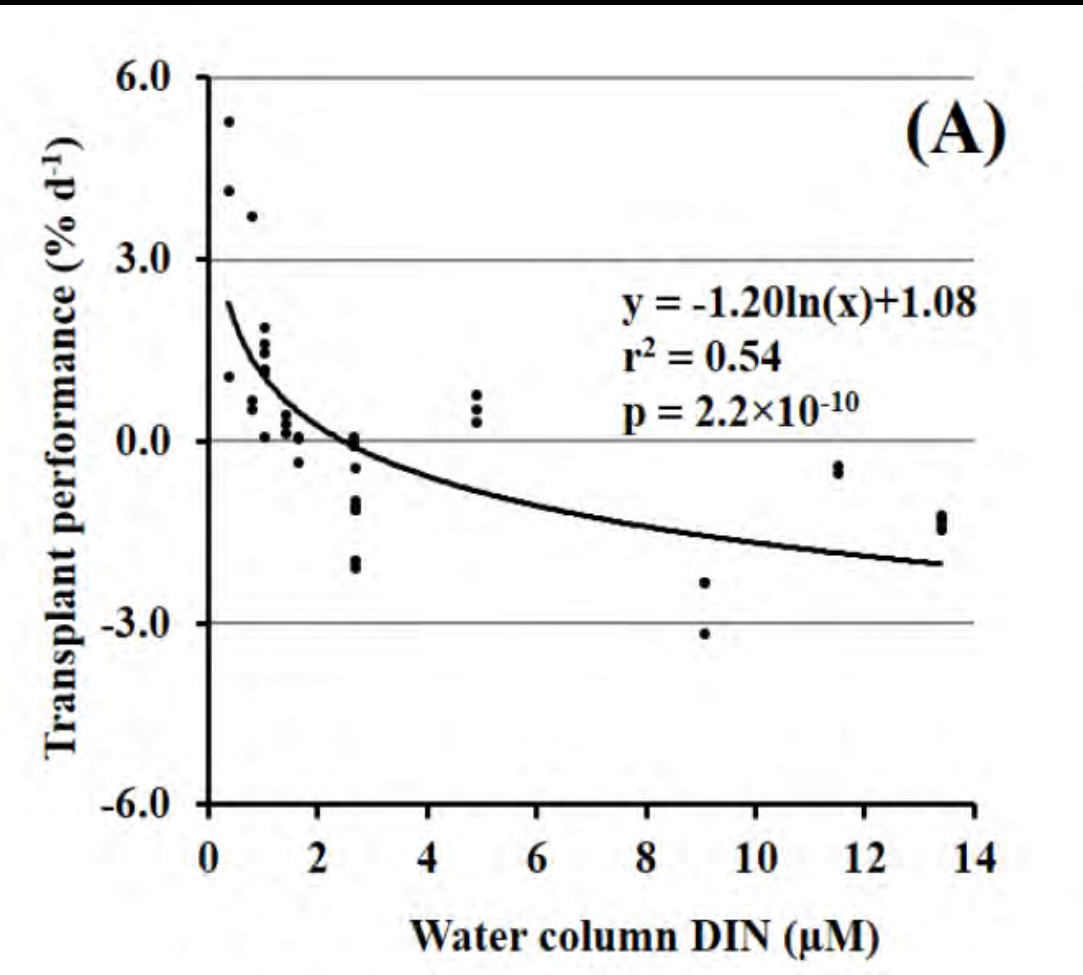
- Hvad skal der til for at retablere ålegræs?

Finde/definere tærskelværdier for presfaktorer
via gradientanalyser

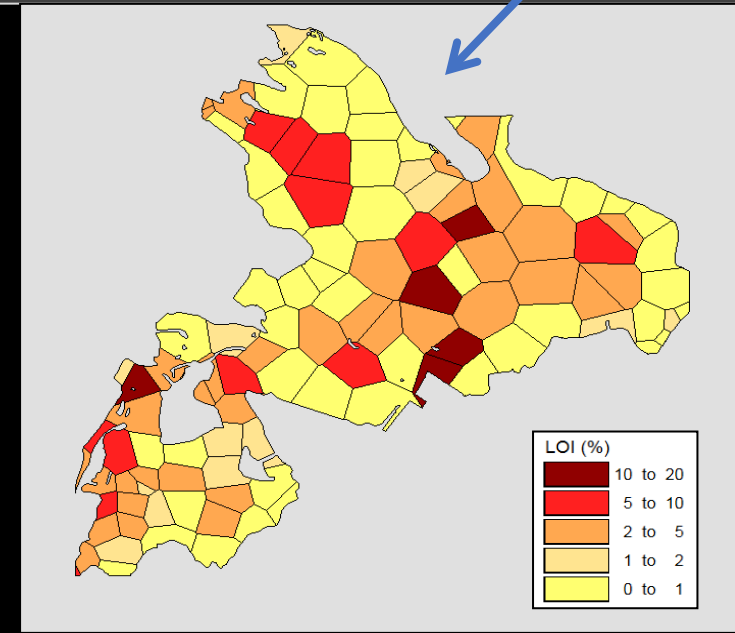
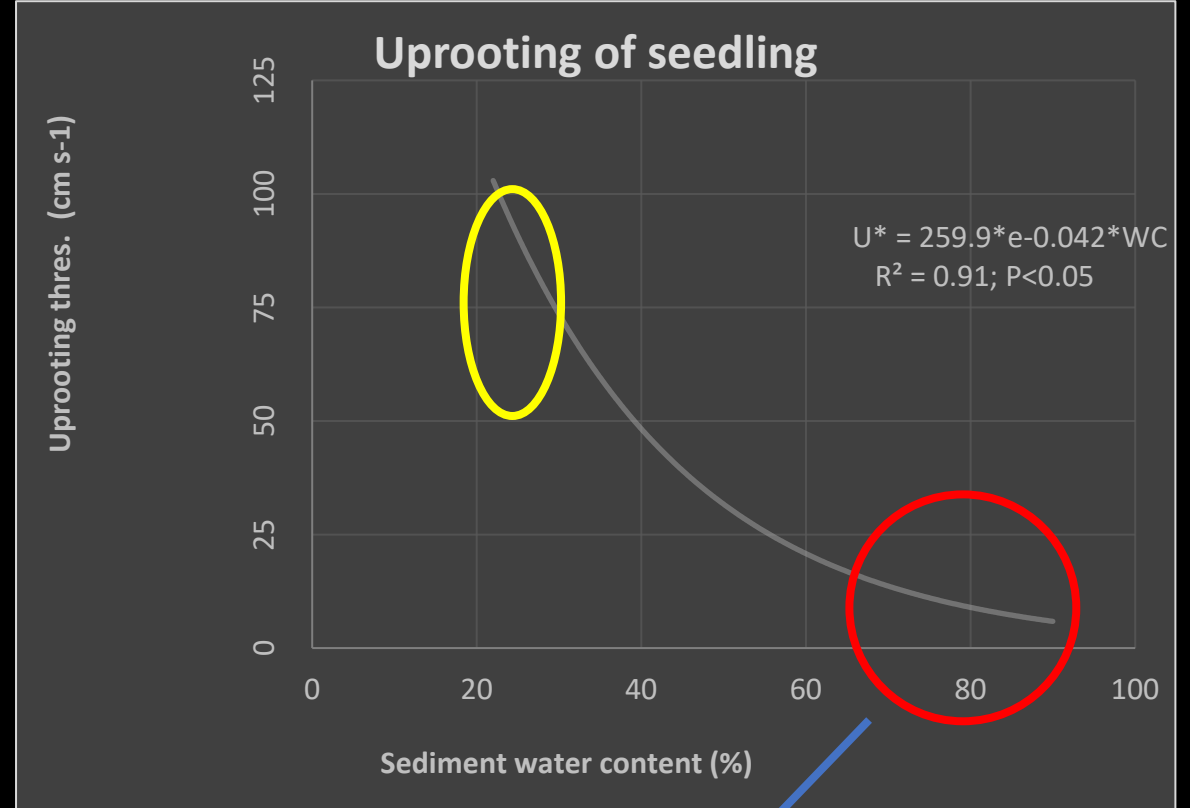
Tilstrækkeligt bentisk lys



Reduktion af næringsstoffer



Gode bundforhold!

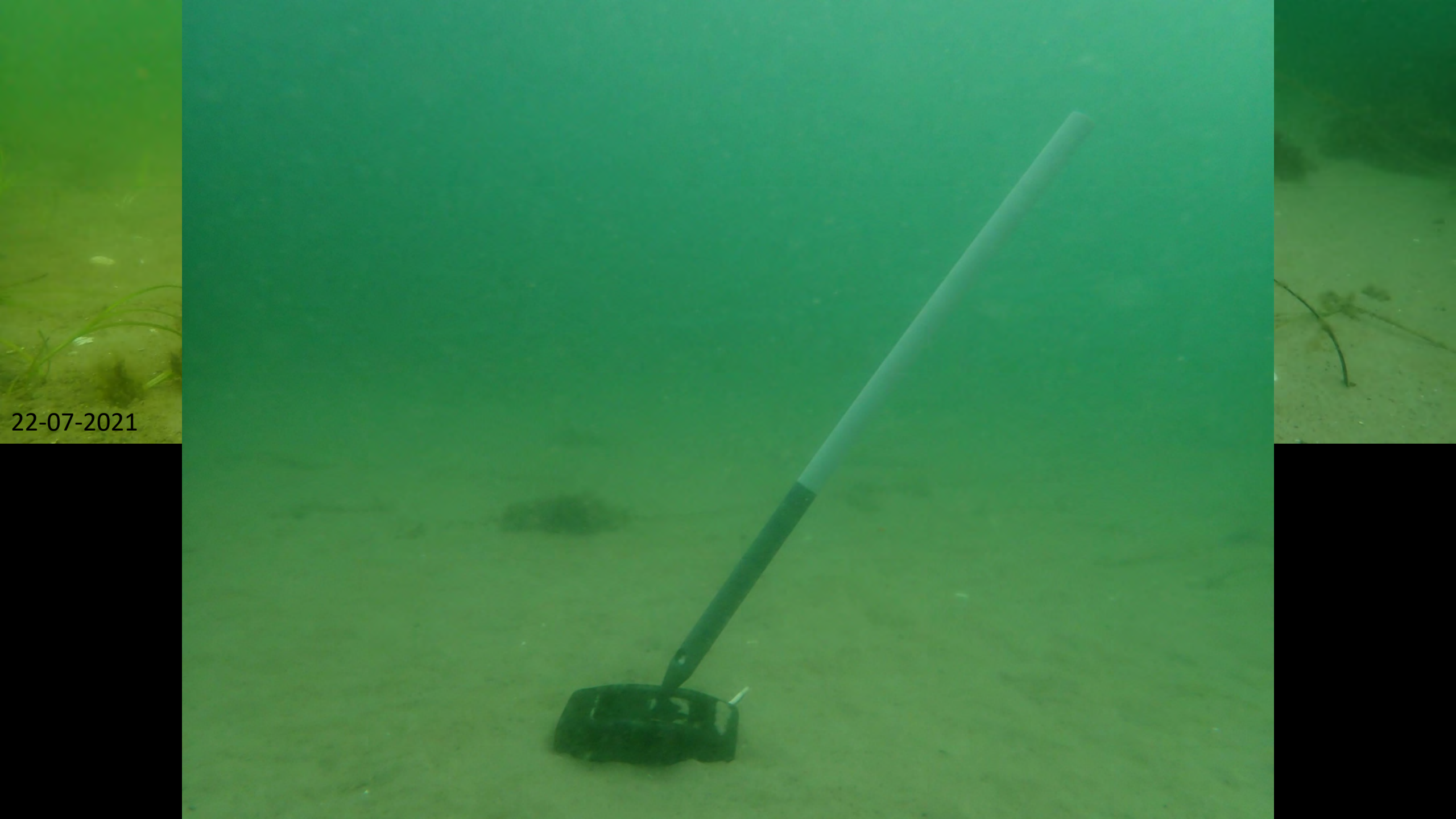


Få eller ingen sandorme





Troels Lange

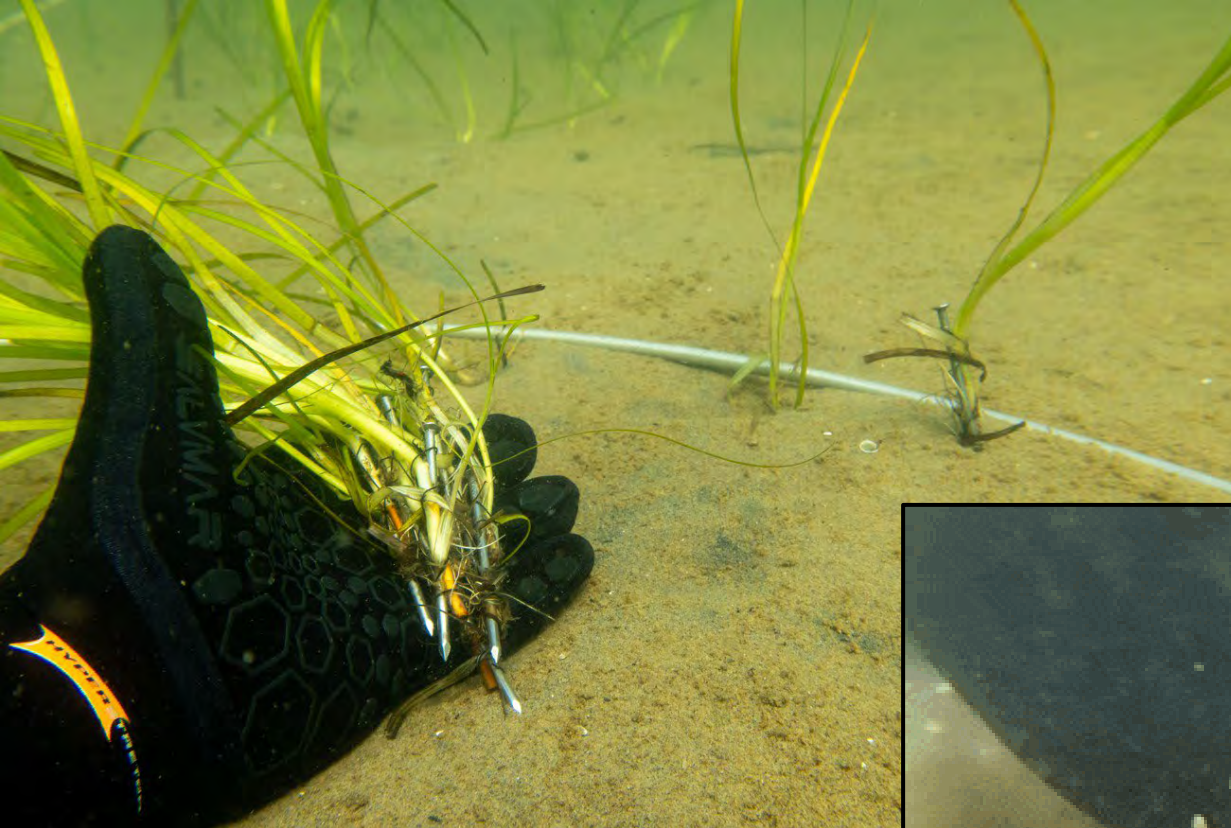


22-07-2021

Tabel 1. Viser de individuelle presfaktorer og deres tærskelværdier.

		Recovery				
Parameter (layer)	Unit	Very poor	Poor	Threshold	Good	Optimal
T_{wc}	$N\ m^{-2}$	>1	0.7-1.0	0.5-0.7	0.2-0.5	0.0-0.2
Sediment LOI	%	>10	5-10	2-5	1-2	0-1
DIN	$\mu g\ N\ l^{-1}$	> 150	75-150	40-75	25-40	0-25
DIP	$\mu g\ P\ l^{-1}$	>30	15-30	10-15	5-10	0-5
Resuspension	Frequency	> daily	daily	monthly	Biannual	< Biannular
Benthic light	$\mu E\ m^{-2}\ s^{-1}$	0-100	100-200	200-300	300-400	> 400
O ₂ limitation	Period	3 Week ⁻¹	2 Week ⁻¹	Weekly	Monthly	< Monthly
Opp. Macroalgae	$g\ C\ m^{-2}$	>26	13	10	6	< 2
Non-opp. Macroalgae	$g\ C\ m^{-2}$	>26	13	10	6	< 2
Lugworm	$g\ WW\ m^{-2}$	>50	40	25	10	<9
Eelgrass	$g\ C\ m^{-2}$	< 3	< 7	< 14	< 28	> 28

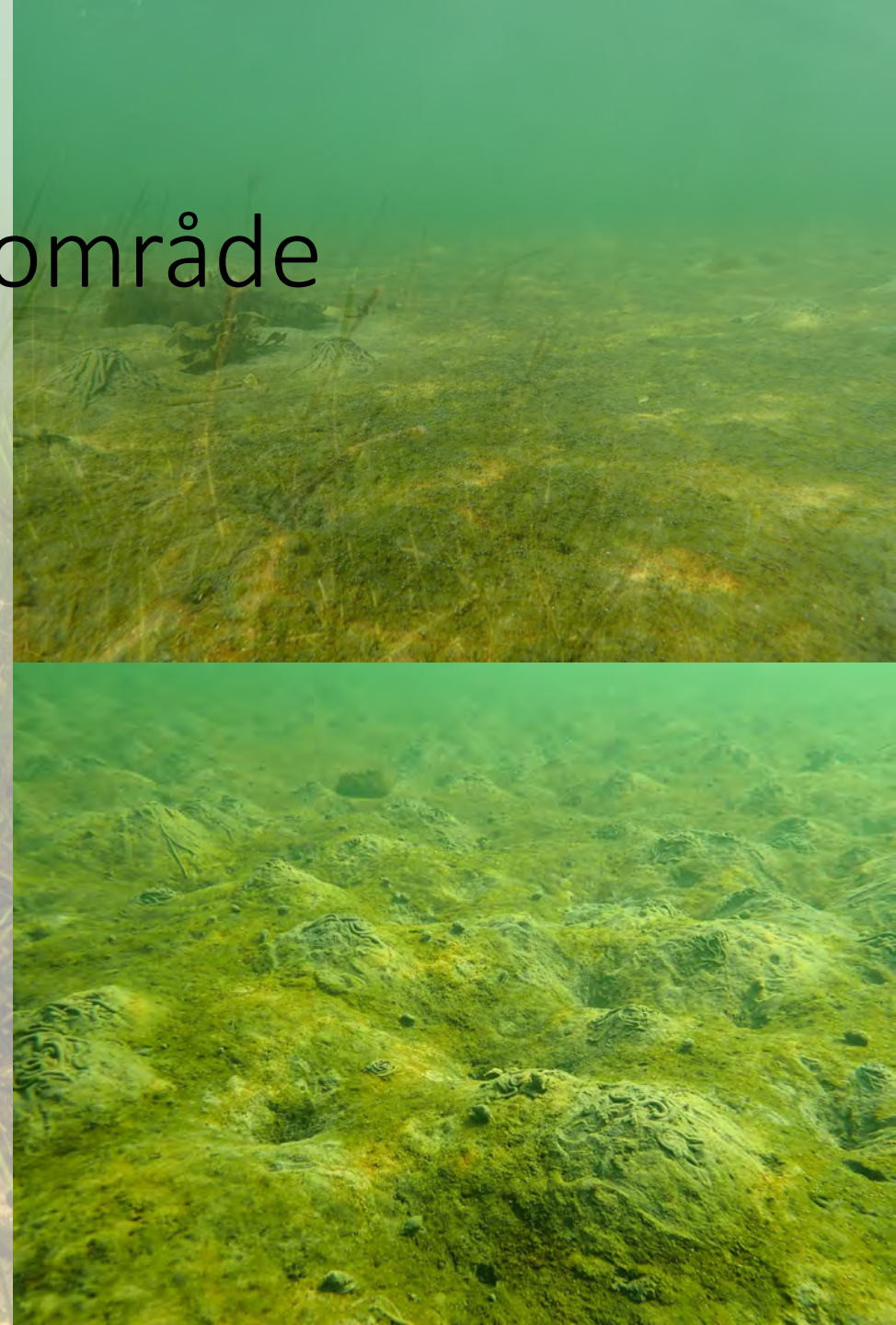
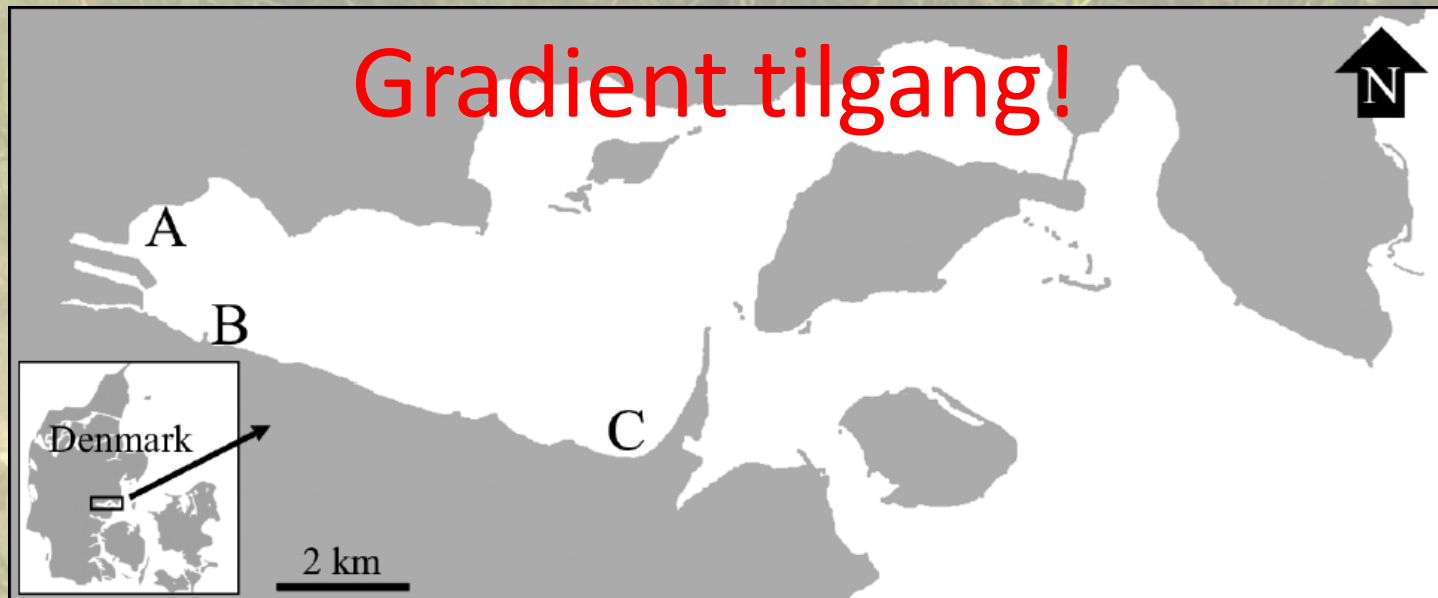




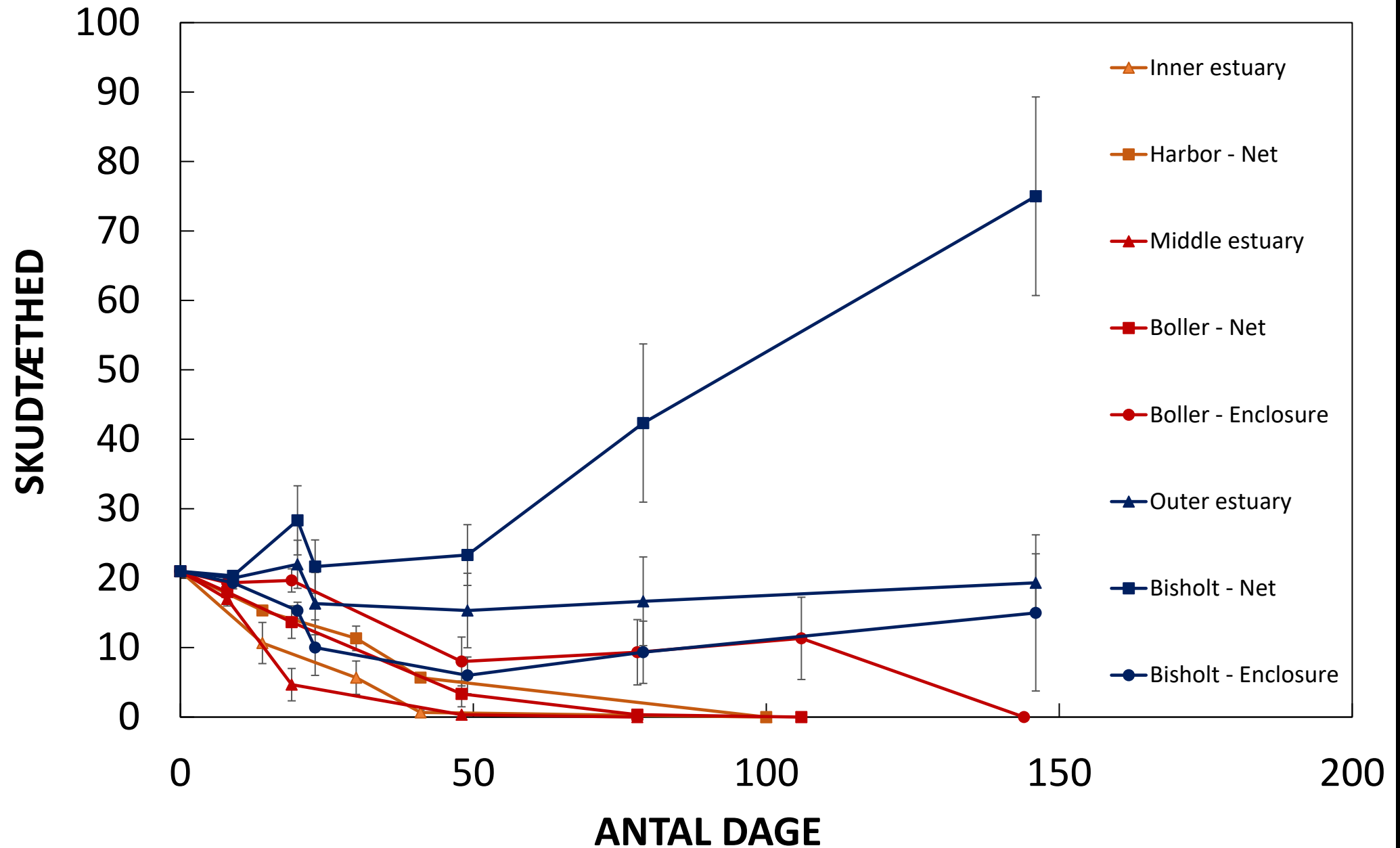
Horsens Fjord

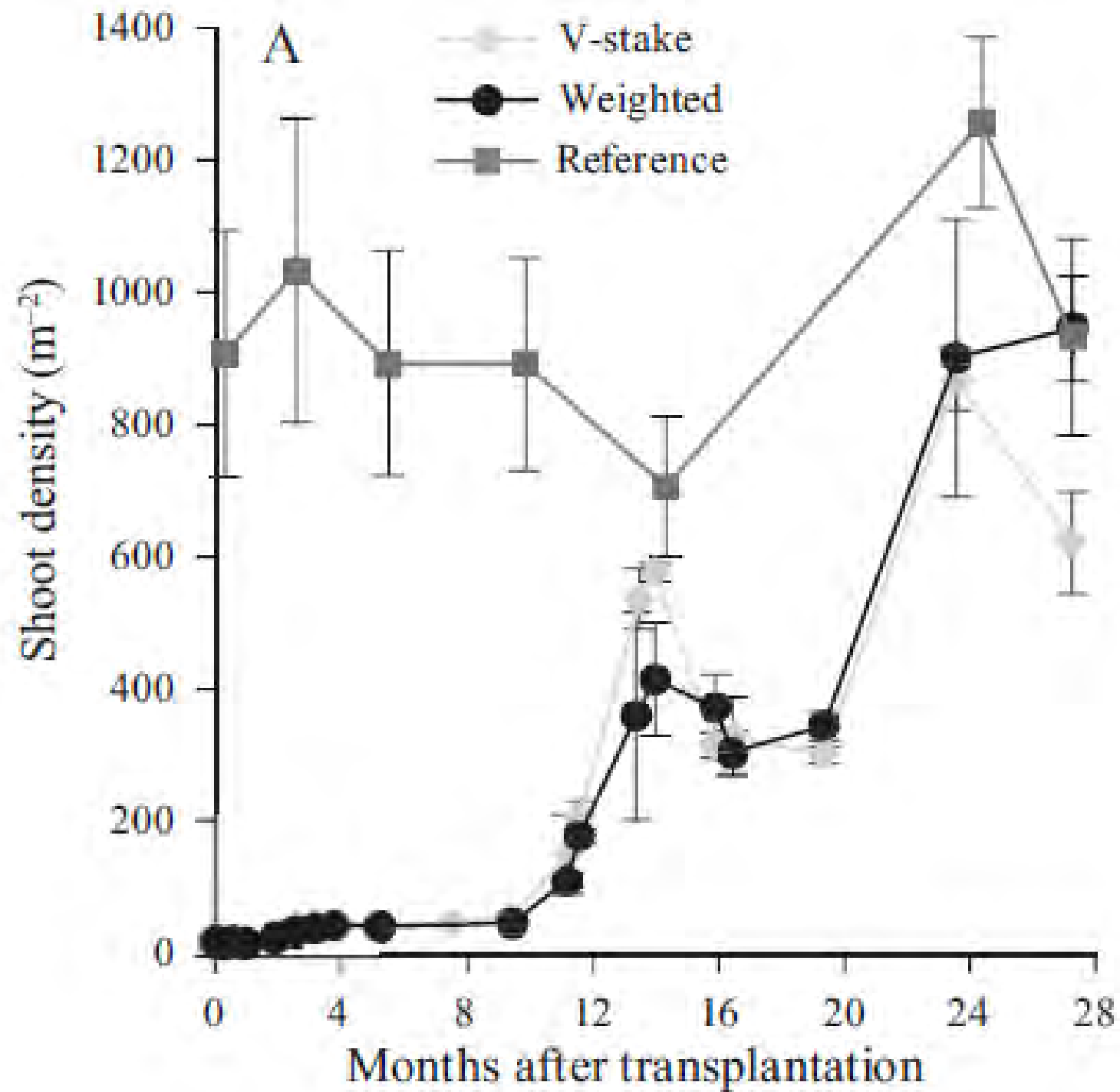
udvælgelses af transplantations område

- 1) Orthofotos
- 2) Felt inspektion
- 3) Test transplantationer



HORSENS FJORD



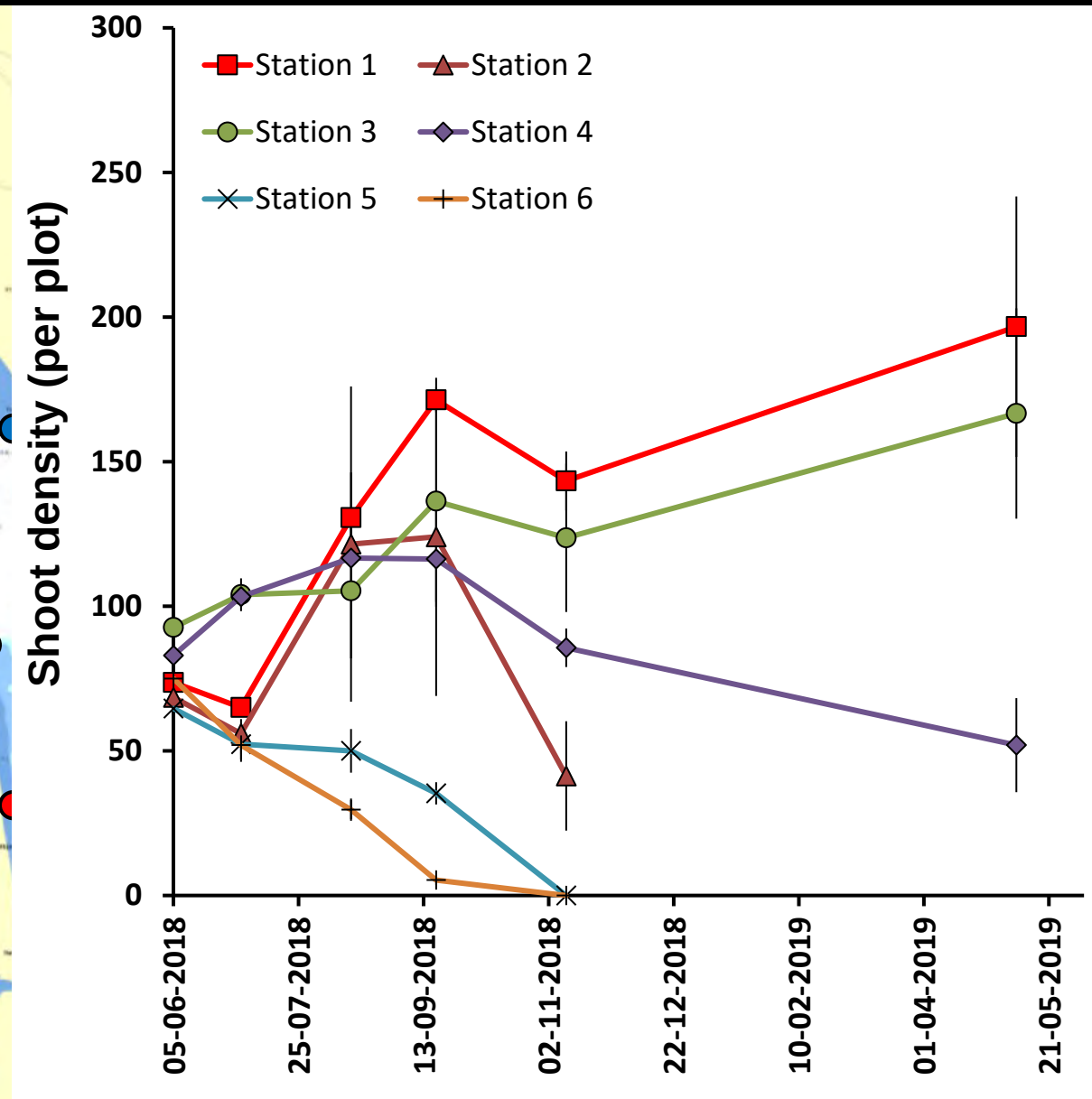
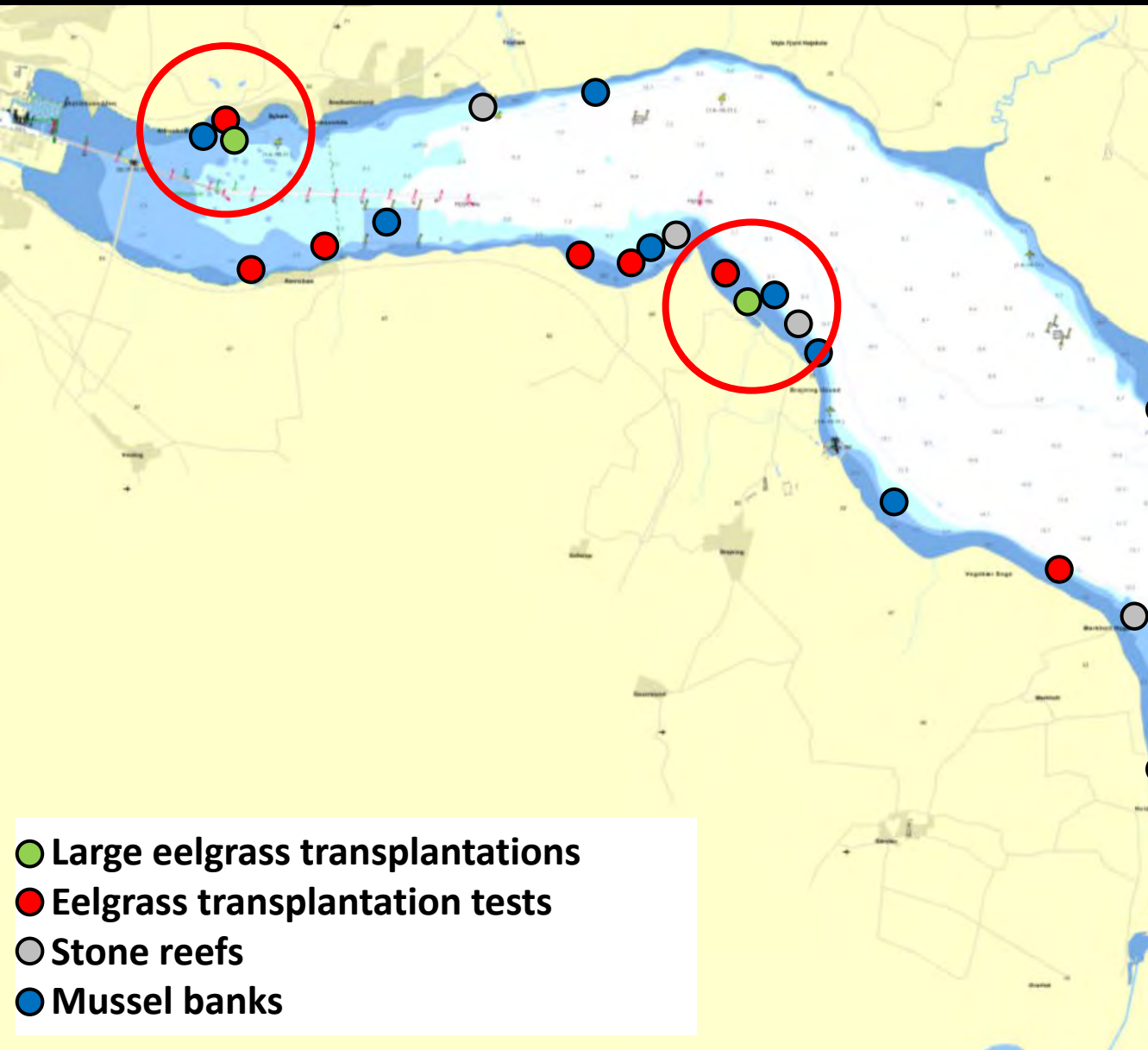


2021



Tabel 1. Den årlige ændring i C, N og P i det transplanterede område i Horsens Fjord fra 2017 til 2019. Data er korrigerede for barbund, således at puljeændringer repræsenterer den ekstra økosystemservice som transplantationerne understøtter de to første år. Budgettet er baseret på de nyeste resultater og kan derfor afvige lidt fra tidligere publicerede værdier.

Puljeændring	kg ha ⁻¹ år ⁻¹			
	C	CO ₂	N	P
Skudtilvækst	525	1925	21	4
Rod/rodstængel-vækst	925	3391	37	7
Afstødte blade	1750	6416	70	13
Akkumuleret i sediment	355	1301	66	30
Denitrifikation			50	
Bundfauna tilvækst	340	1246	39	4
Total immobilisering	3895	14282	283	58
- Permanent immobilisering	2145	7865	213	45
- Midlertidig immobilisering	1750	6417	70	13



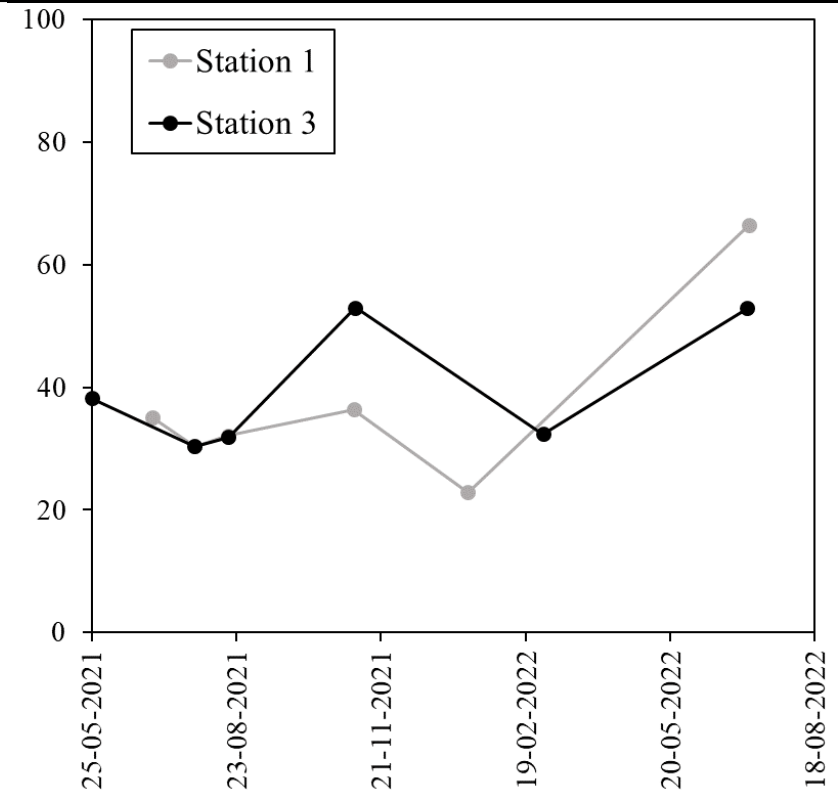
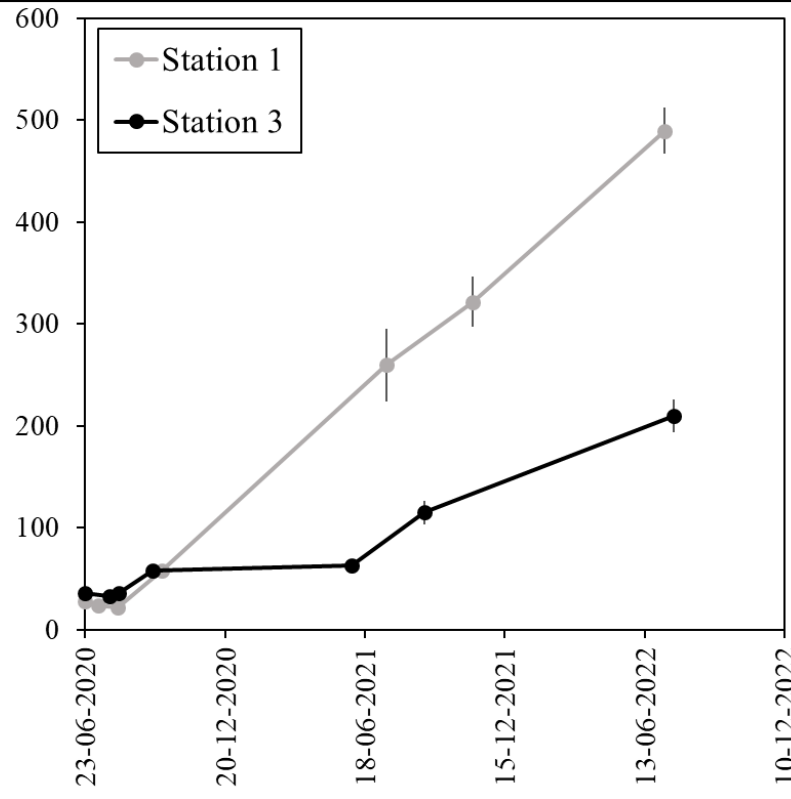
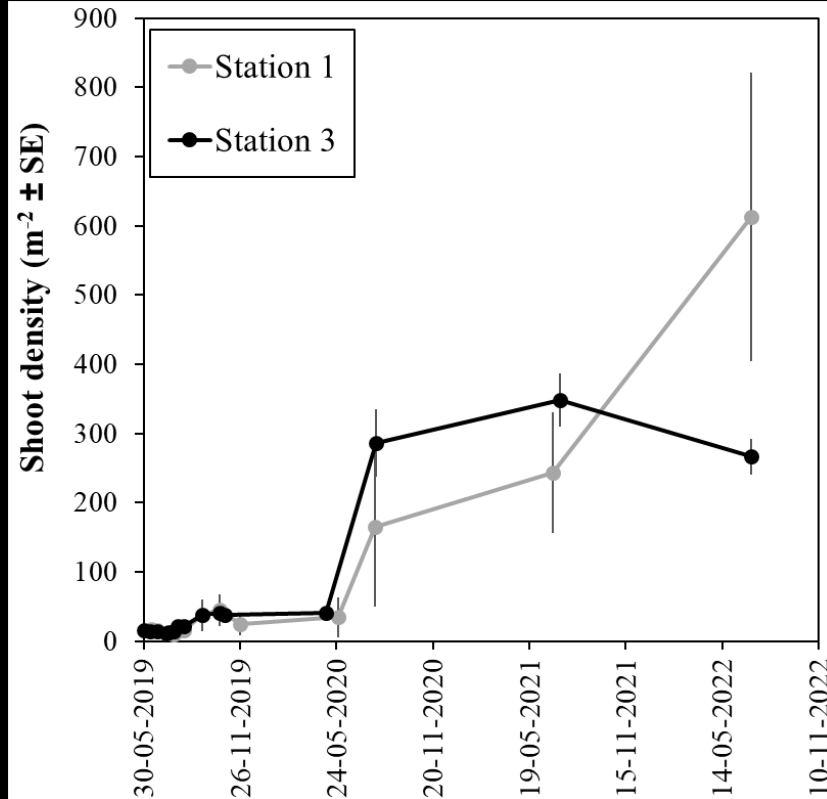
Vejle Fjord (100.000 transplanted shoots)

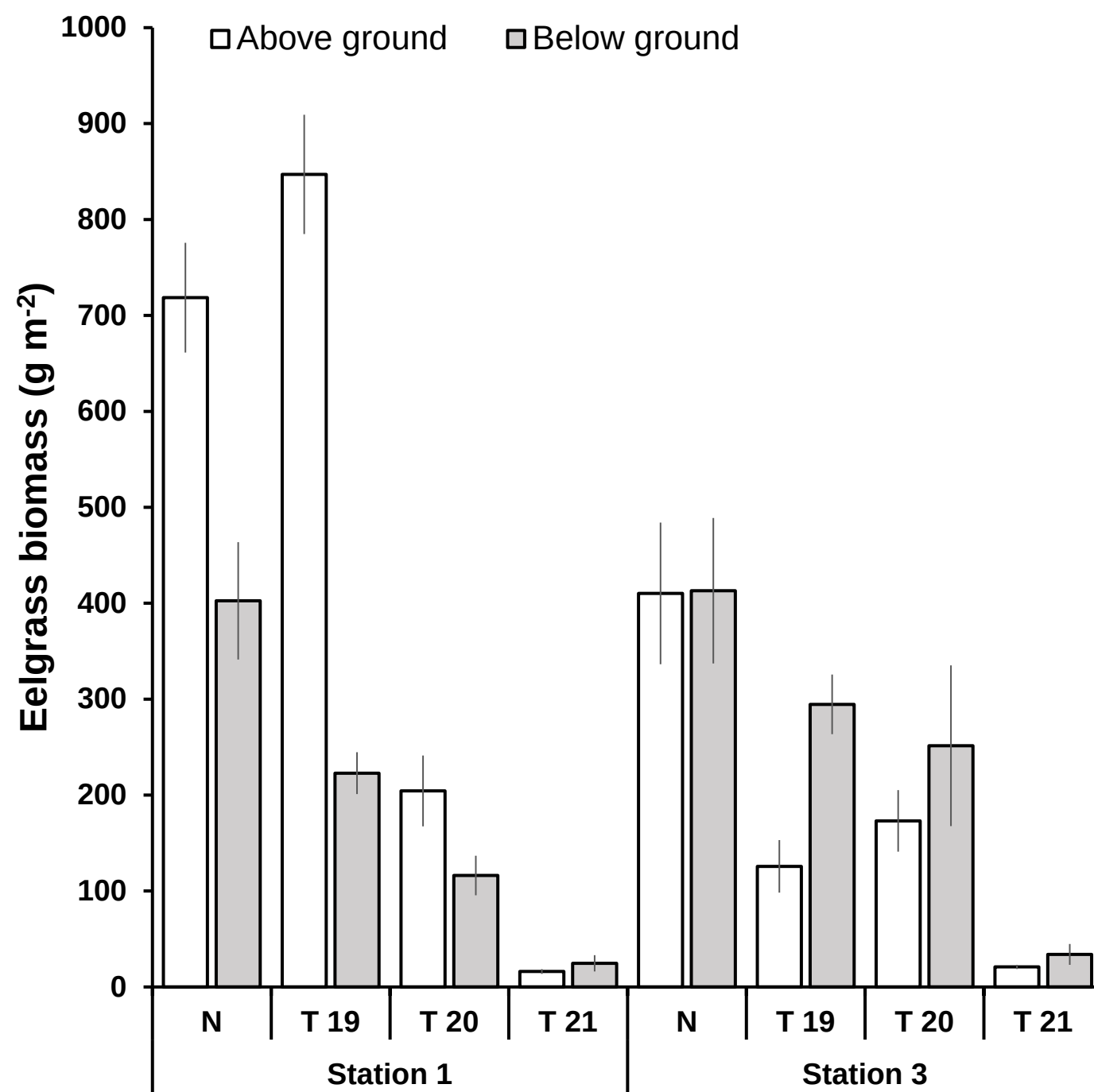
(16.000 shoots transplanted in 2022)

2019 (16.600 shoots)

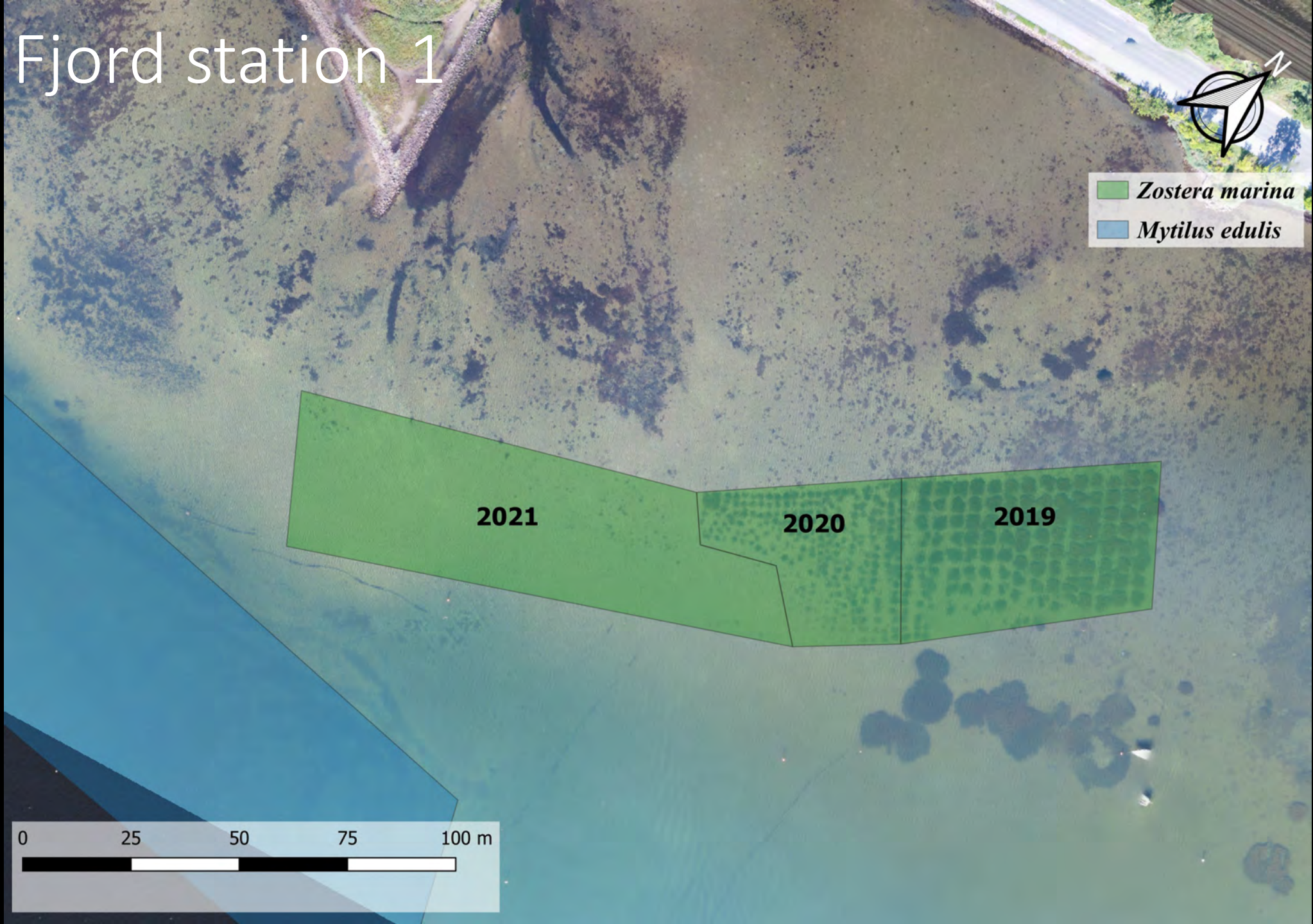
2020 (32.400 shoots)

2021 (35.000 shoots)

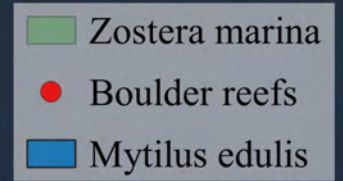




Vejle Fjord station 1



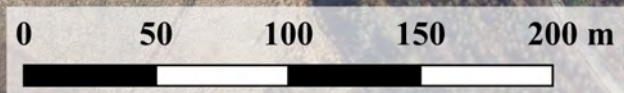
Vejle Fjord station 3



Zostera marina 3.55 ha

Boulder reefs 2.4 ha

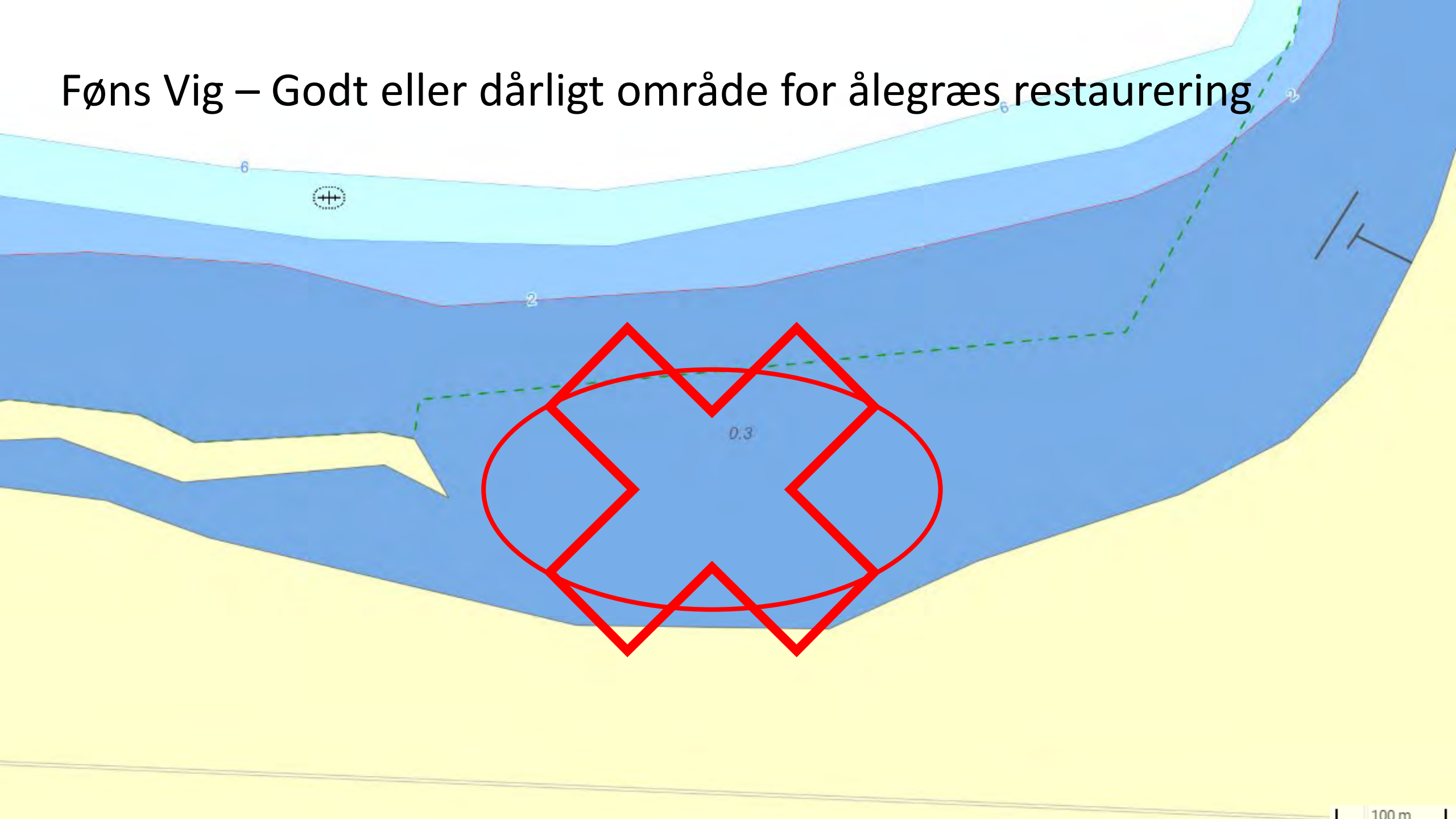
Mytilus edulis 8 ha



Føns Vig – Godt eller dårligt område for ålegræs restaurering



Føns Vig – Godt eller dårligt område for ålegræs restaurering

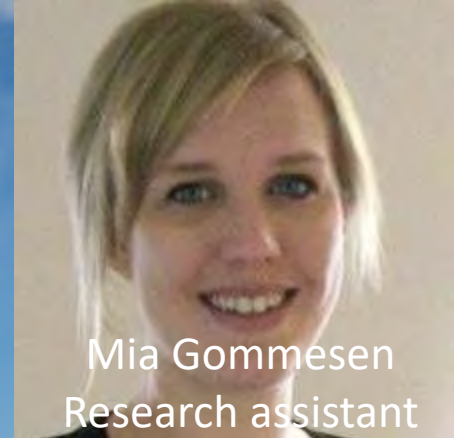




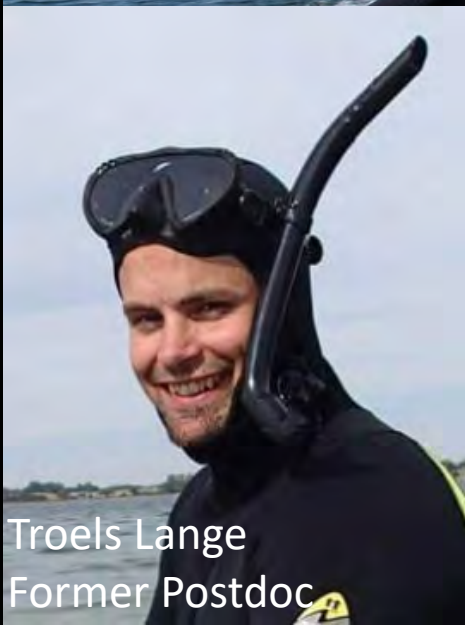
Mogens R. Flindt
Associate professor



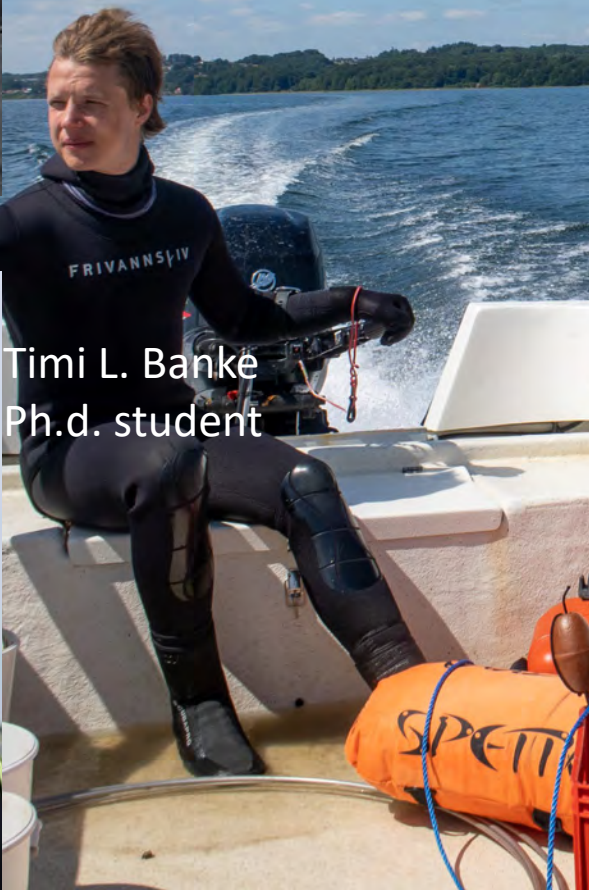
Rune Steinfurth
Ph.d. student



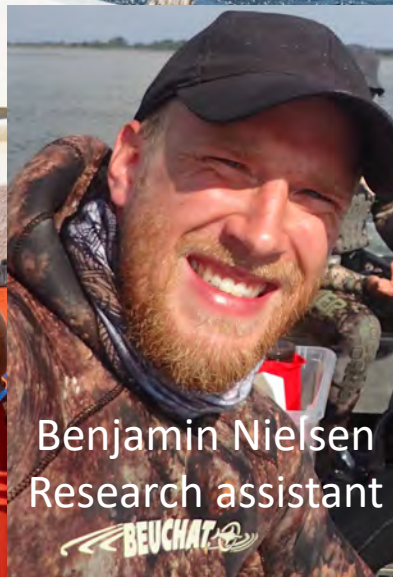
Mia Gommesen
Research assistant



Troels Lange
Former Postdoc



Timi L. Banke
Ph.d. student



Benjamin Nielsen
Research assistant



Paula Canal-Vergés
Assistant professor

Mikkel Keller Lees
Research assistant

Niels Svane
Postdoc