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EUROFLEETS+ FINAL CONFERENCE

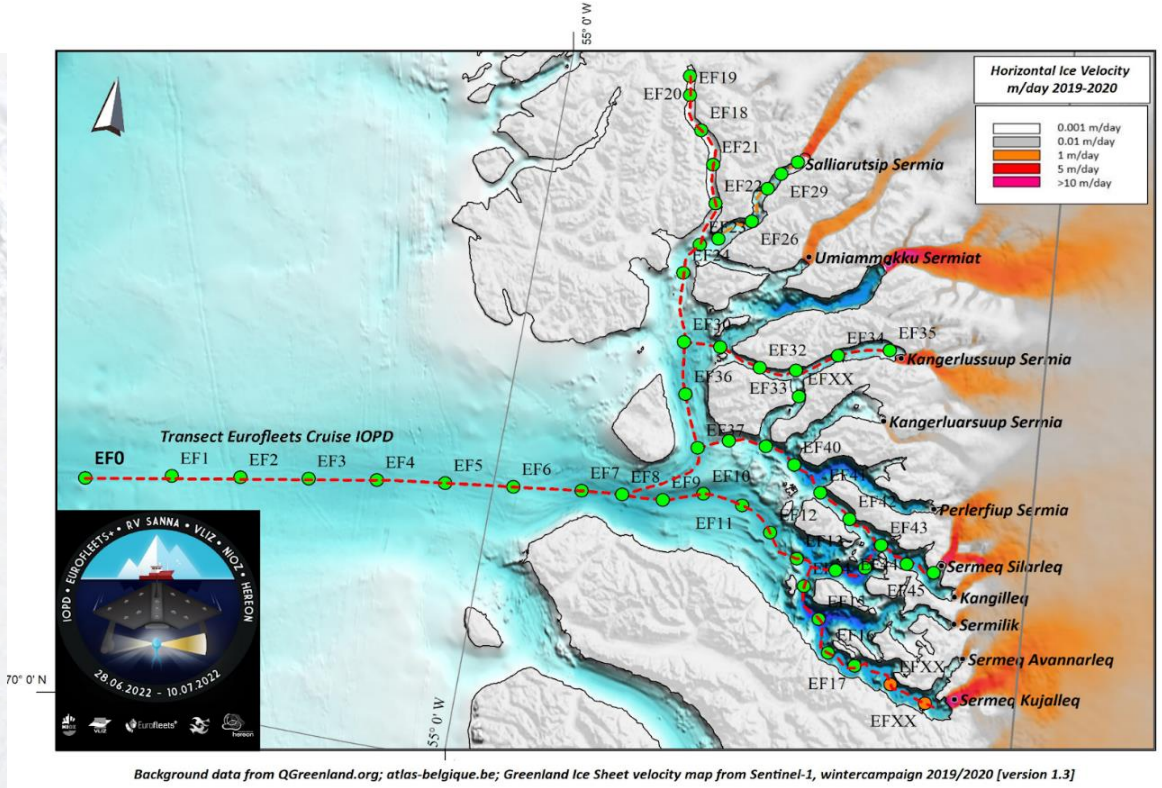
Innovative study on regional high resolution imaging of glacier induced plankton dynamics in West-Greenland fjords (IOPD)

Wieter Boone, Anouk Ollevier, Lorenz Meire, Klas Ove Möller, Dick van Oevelen, Kirstin Shultz, Daniel Blandfort, Roeland Develter, Koen Planken, Leandro Ponsoni

VLIZ hereon NIOZ

EUROFLEETS IOPD

Linking oceanographic drivers with nutrient and plankton dynamics along latitudinal and altitudinal gradients in Greenland



Background data from QGreenland.org; atlas-belgique.be; Greenland Ice Sheet velocity map from Sentinel-1, wintercampaign 2019/2020 [version 1.3]

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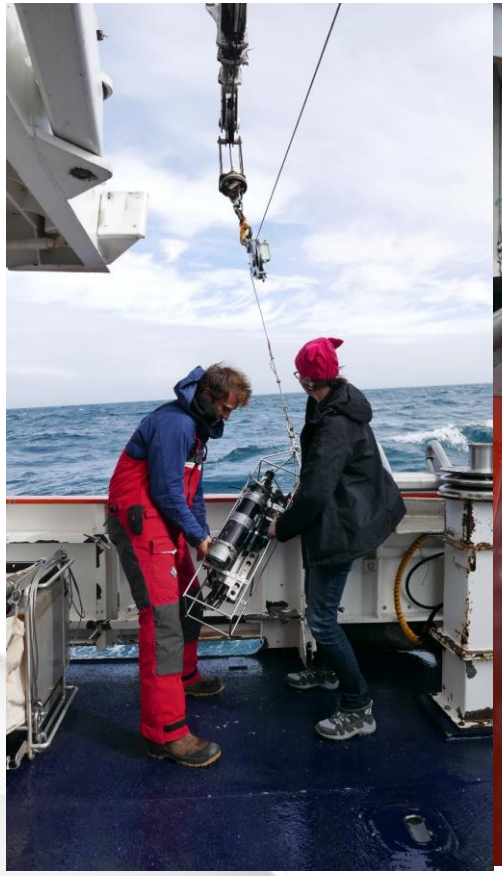
Physical Oceanography (CTD + Turbulence) + Nutrient dynamics + primary production



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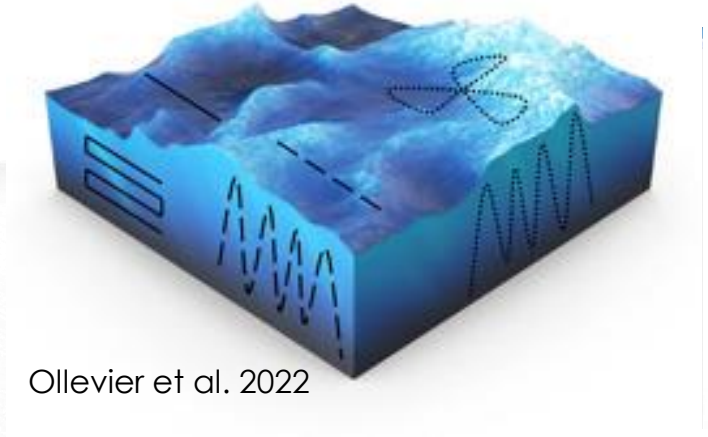
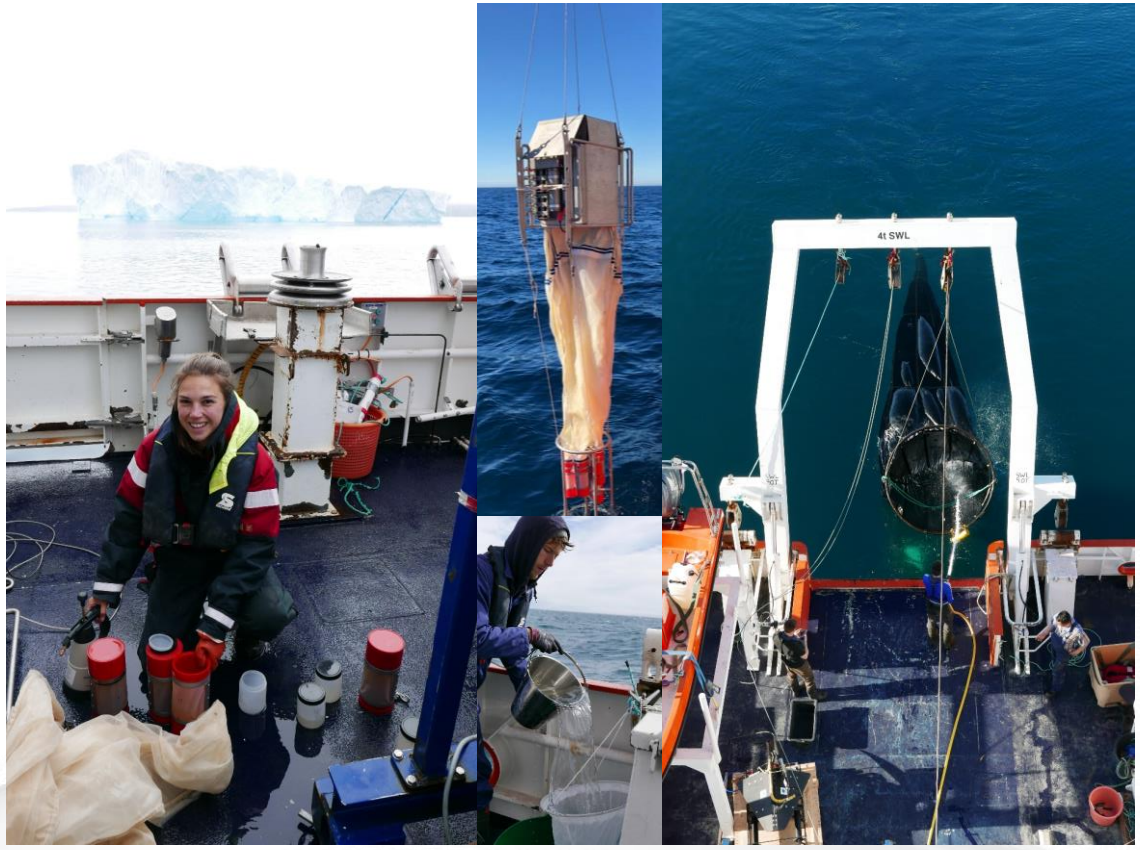
Plankton Dynamics



Ollevier et al. 2022

Video Plankton Recorder



Net Samples (Apstein, Multi and MIK)

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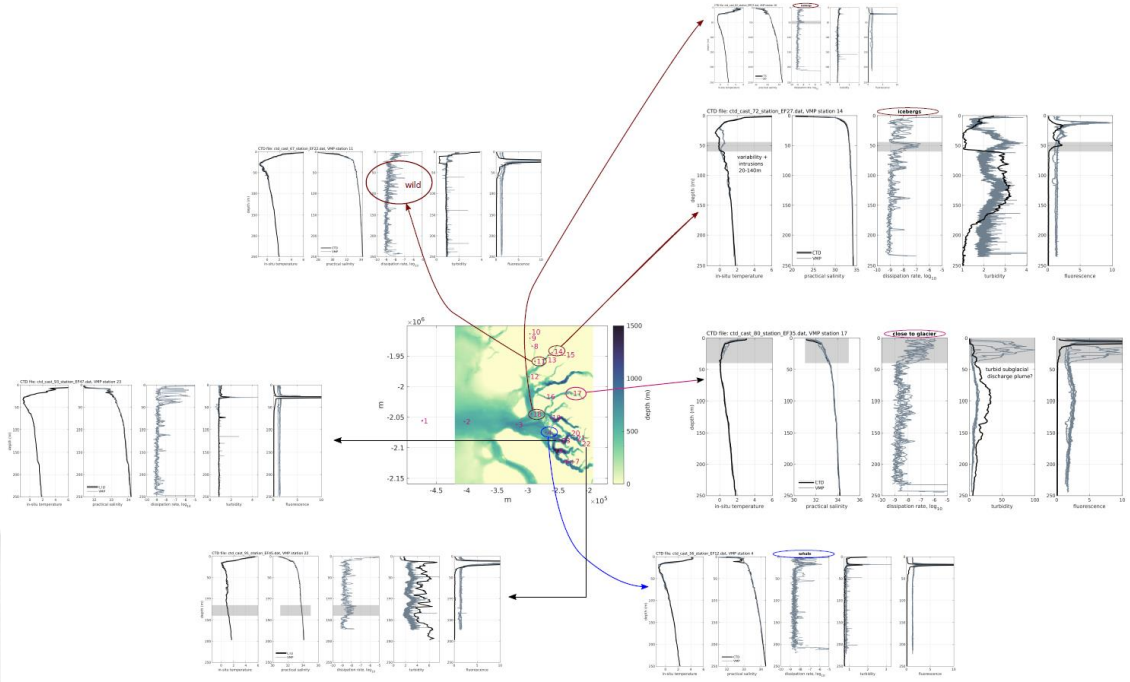
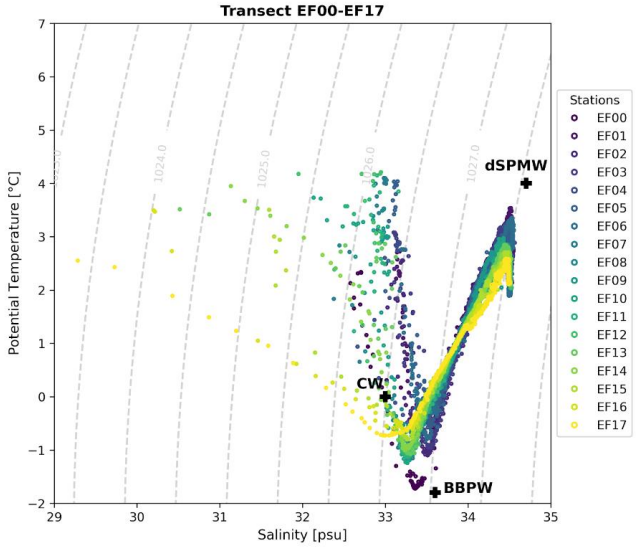
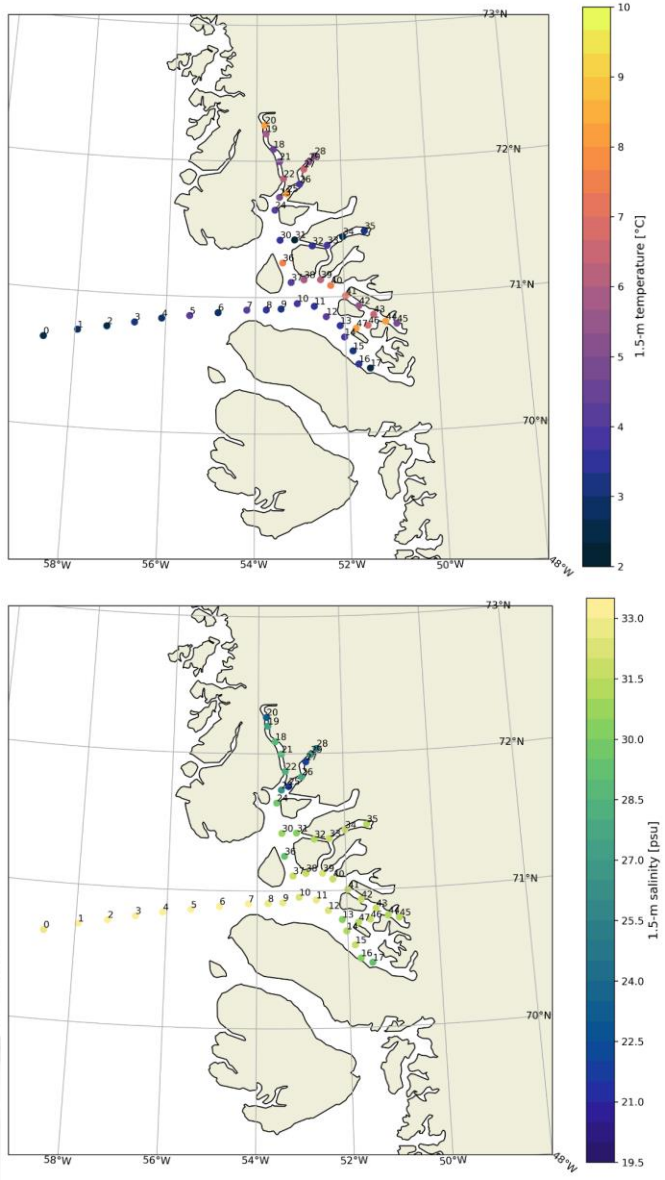
Oceanographic Drivers



Shultz, preliminary results, 2023





Ponsoni, preliminary results, 2023

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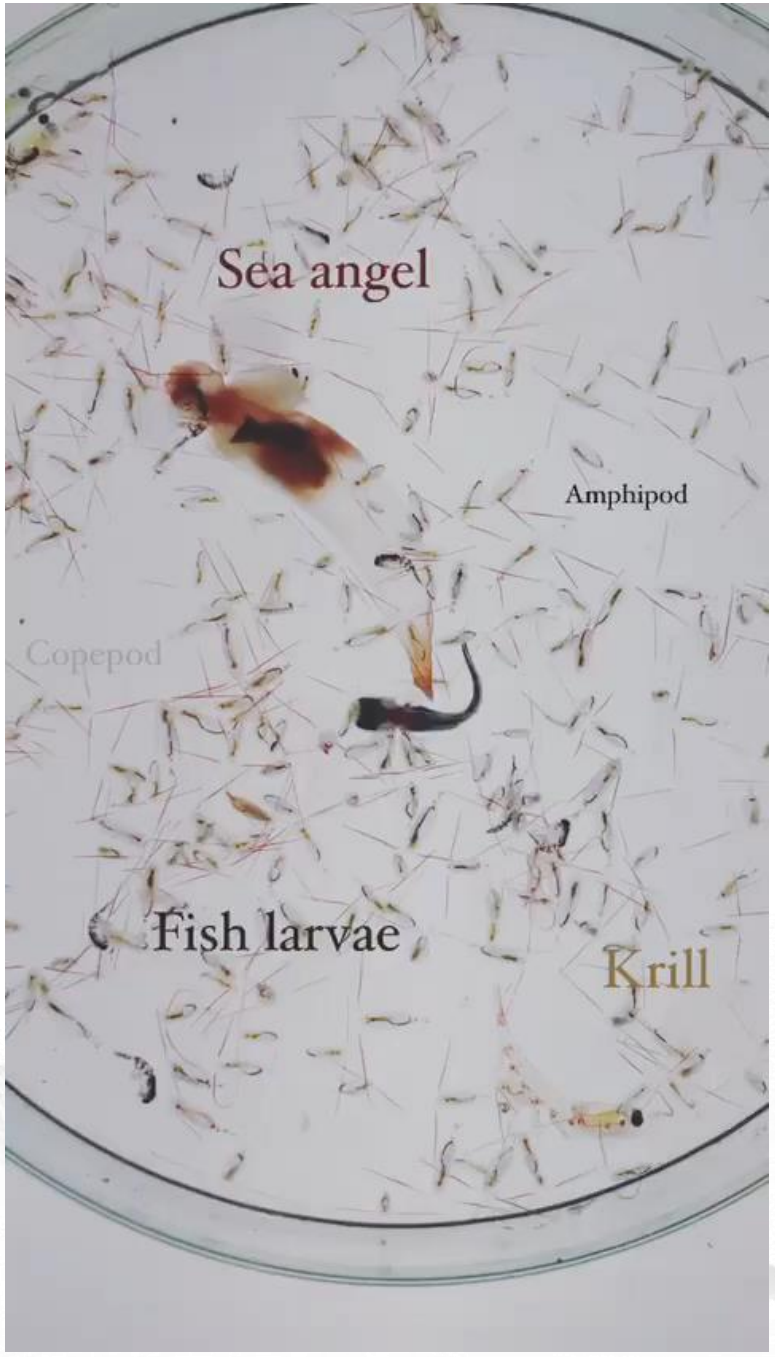
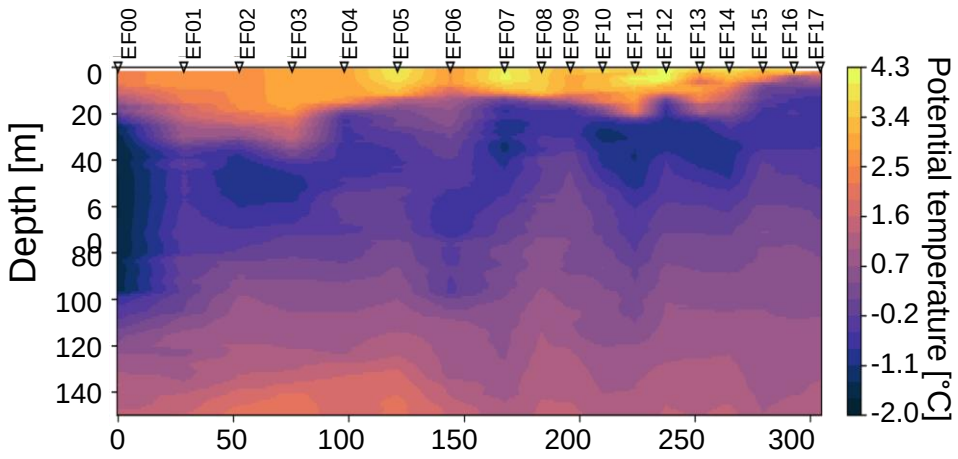
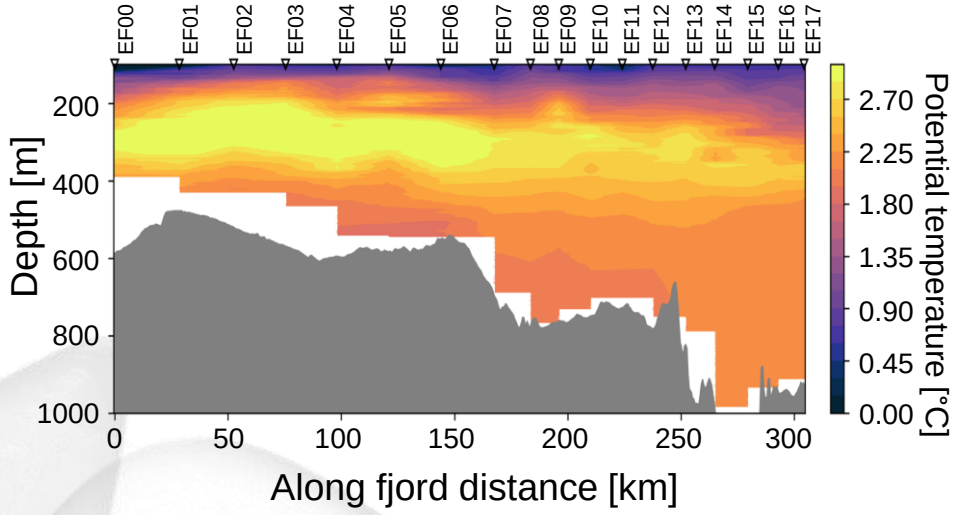
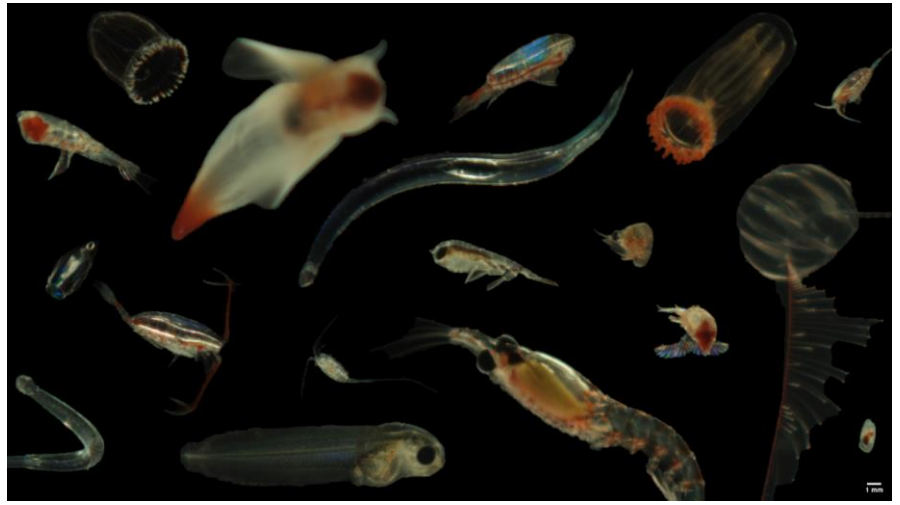
Plankton Dynamics

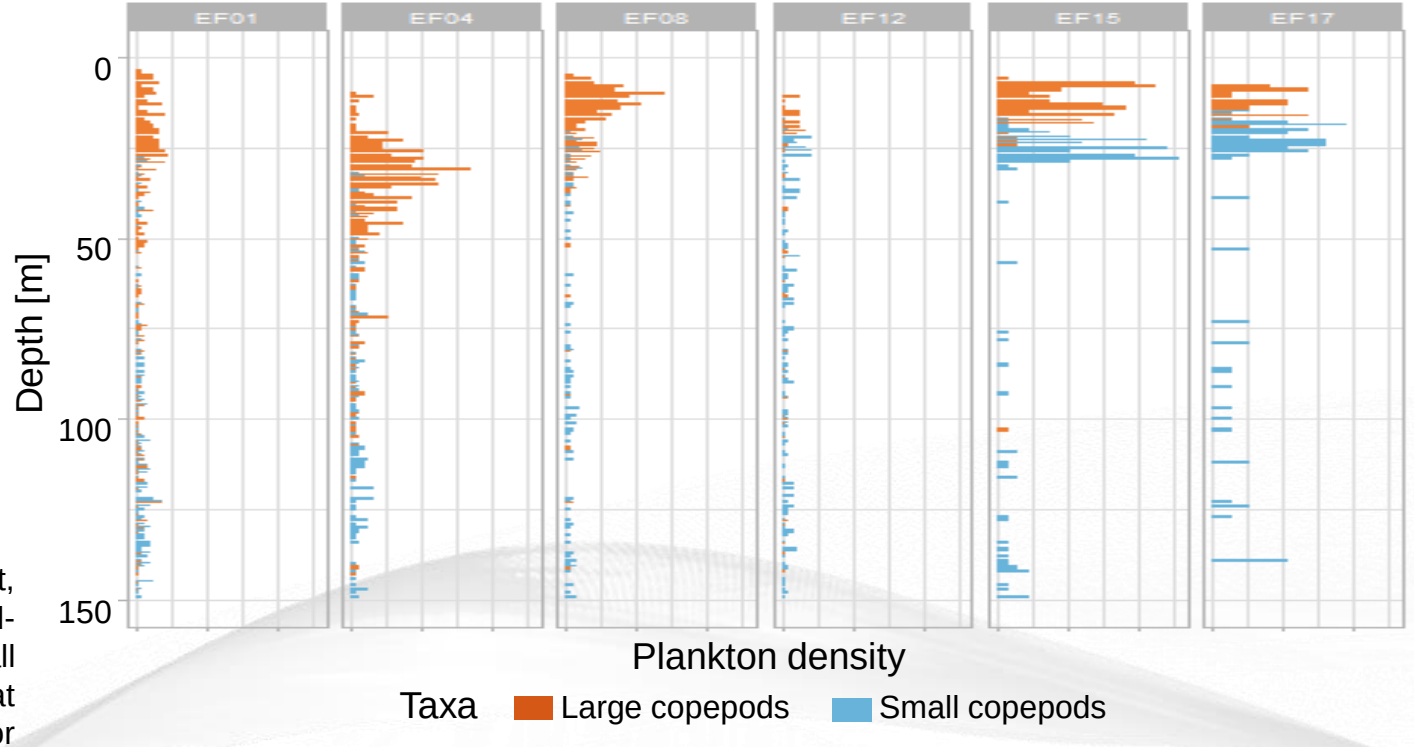


Ollevier, preliminary results, 2023









Ollevier, preliminary results, 2023

Preliminary results indicate differences in the physical environment, plankton community composition and plankton distribution along a fjord-shelf gradient. Large copepods dominate offshore areas whereas small copepods become more abundant in the inner fjord (with density peaks at 20-25m depth). Additionally, small copepods showed a preference for deeper waters. Further analysis will provide insight into the driving factors of plankton composition and distribution in fjord systems.

VISIT OF MEEQQAT ANGERLARSIMAFFIAT UUMMANNAQ - THE CHILDREN'S HOME TO RV SANNA!

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Initiated and lead by Early Career Scientists and Engineers

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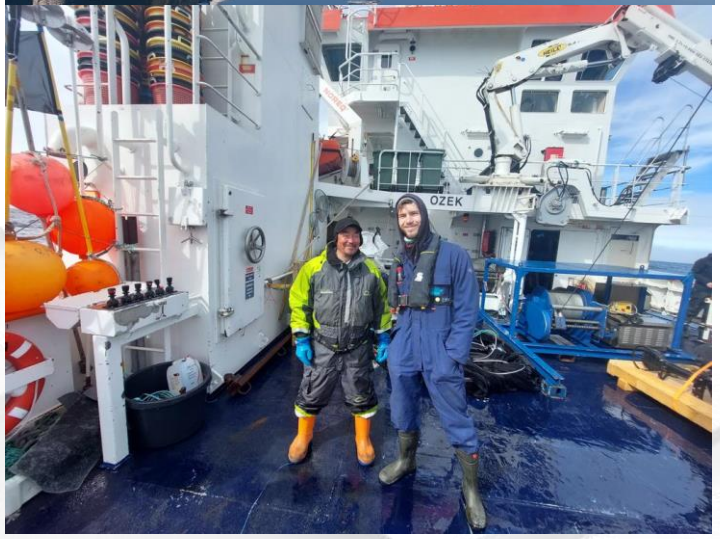
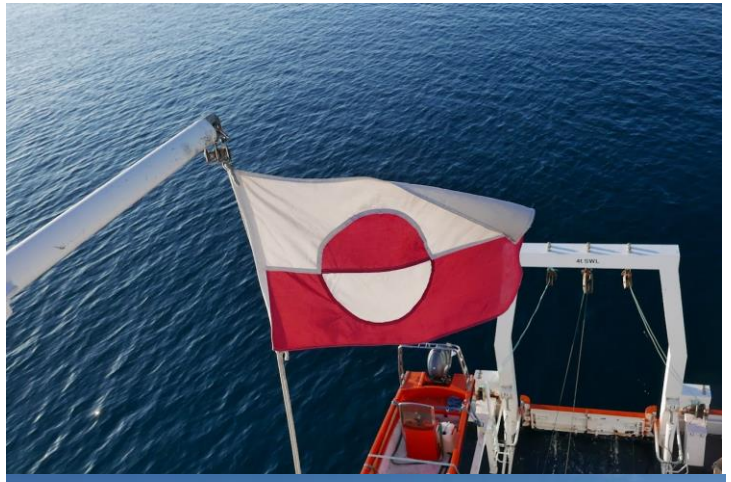
Made possible by Eurofleets and crew & operator of RV Sanna





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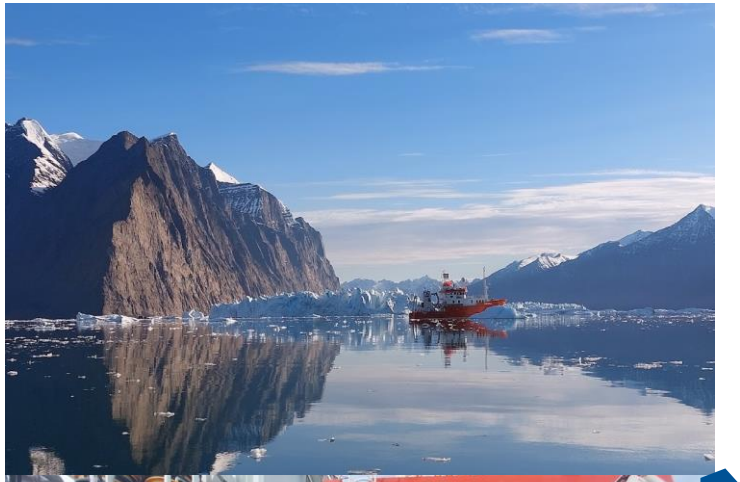

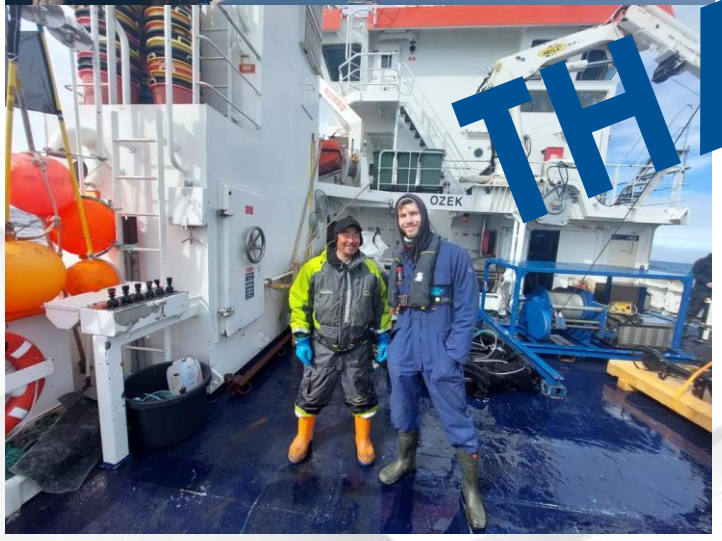

THANKS !

OUTPUT

Dataset:

- https://evior.eurofleets.eu/cds-report/15 ; https://csr.seadatanet.org/report/21026654

Paper:

Ollevier et al., in prep, *A comparison of sampling techniques for plankton community composition and density trends: insights from a WP2 net, MultiNet and Video Plankton Recorder*

Ollevier et al., in prep, *Oceanic drivers, nutrient dynamics and plankton communities in West-Greenland's fjord system*

Ponsoni et al., in prep, *Freshwater input and water mass interactions in the Uummannaq fjord system*

More in development

Conference:

- Ollevier, A.; Ponsoni, L.; Develter, R.; Mortelmans, J.; Lagaisse, R.; De Troch, M.; Hablützel, P.; Boone, W. (2023). Oceanic drivers, nutrient dynamics and plankton communities in West-Greenland's fjord system: A multidisciplinary study, in: Mees, J. et al. Book of abstracts – VLIZ Marine Science Day, 1 March 2023, Bruges. VLIZ Special Publication, 90: pp. 79
- Ponsoni, L.; Ollevier, A.; Develter, R.; Boone, W. (2023). Freshwater input and water mass interactions in the Uummannaq fjord system, in: EGU General Assembly 2023. Vienna, Austria & Online, 23–28 April 2023. pp. EGU23-11323.

Social media:

Timelapse https://youtu.be/WI1Vz4c0ncE?si=f9pii9XJ7dpUHq8J

Social media via institutes and https://twitter.com/boonewieter