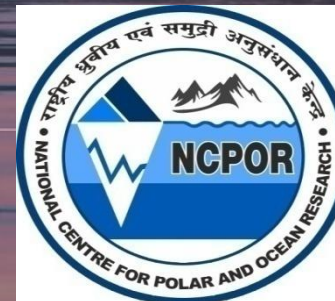


# SIOS Marine Infrastructure Workshop

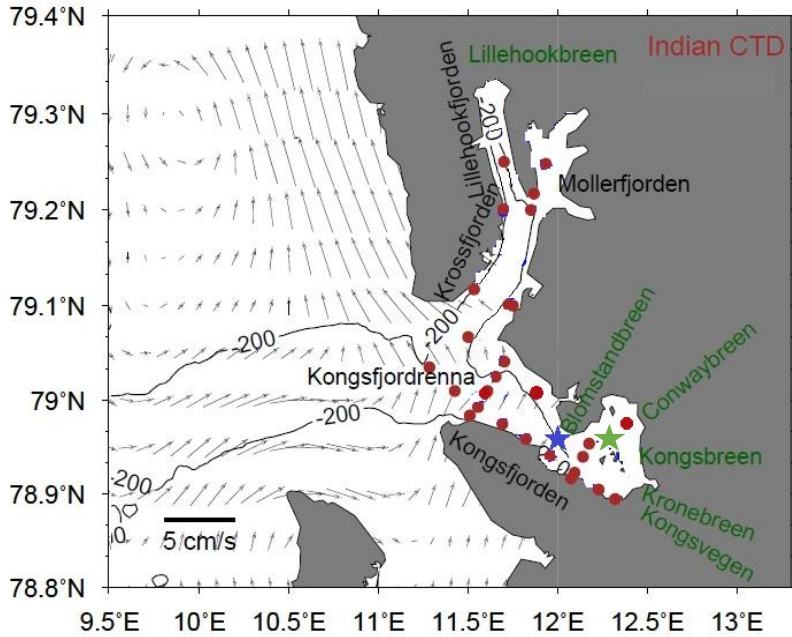
Indian Observation Infrastructures in Kongsfjorden- An Overview

6. oktober 2023

Divya David T, Goa, India

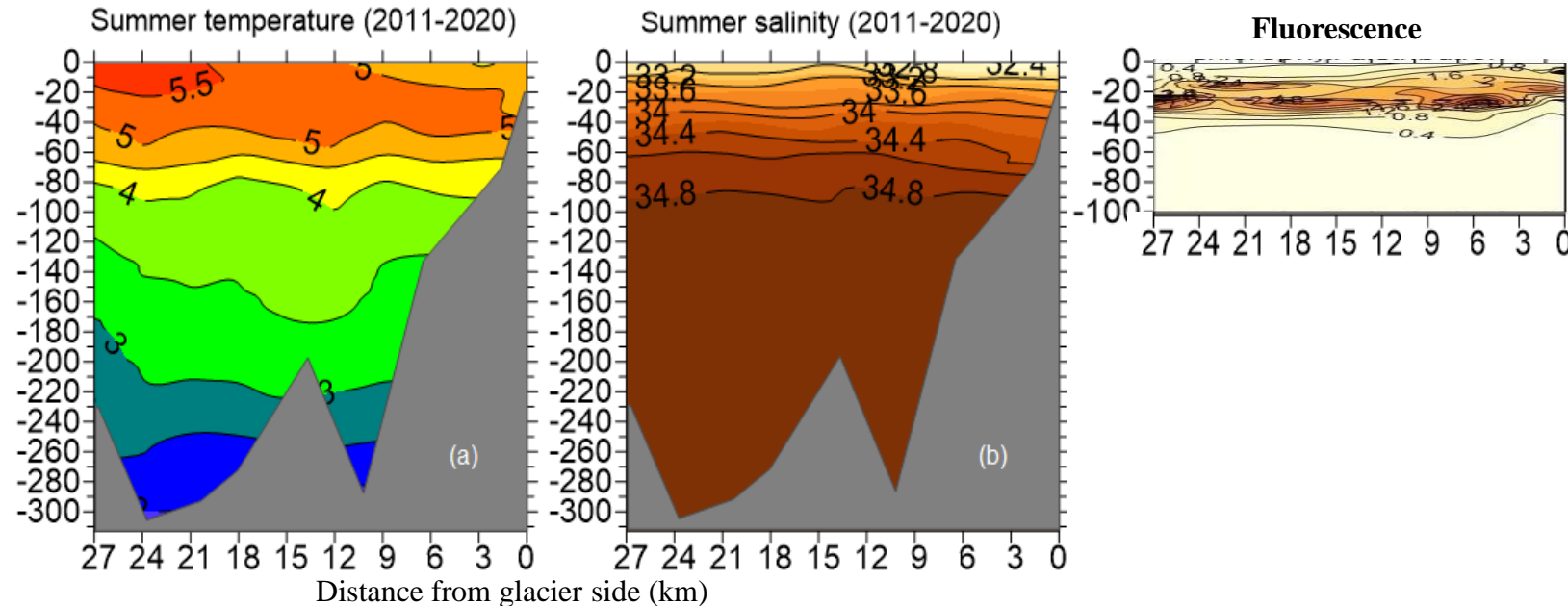


# Overview of marine infrastructure / time series



## ➤ Summer CTD survey (June-October, since 2011)

Temperature (T), Salinity (S), Dissolved Oxygen (DO), Photosynthetically Active radiation (PAR), fluorescence- Chlorophyll\_a (Chl\_a)



## ➤ Indian mooring 'IndARC'- middle zone (July 2014-30 August 2021)

T, S, Currents, and DO,  $\text{NO}_3$ , PAR, Chl\_a, Turbidity, Ambient noise system data (**Deployed in September 2023**)

$\text{CO}_2$  data by NPI and Institute for Marine Research 2016-17 and 2019-21 [Contact- Dr. Agneta Fransson]

**Details :** <https://sios-svalbard.org/node/965>

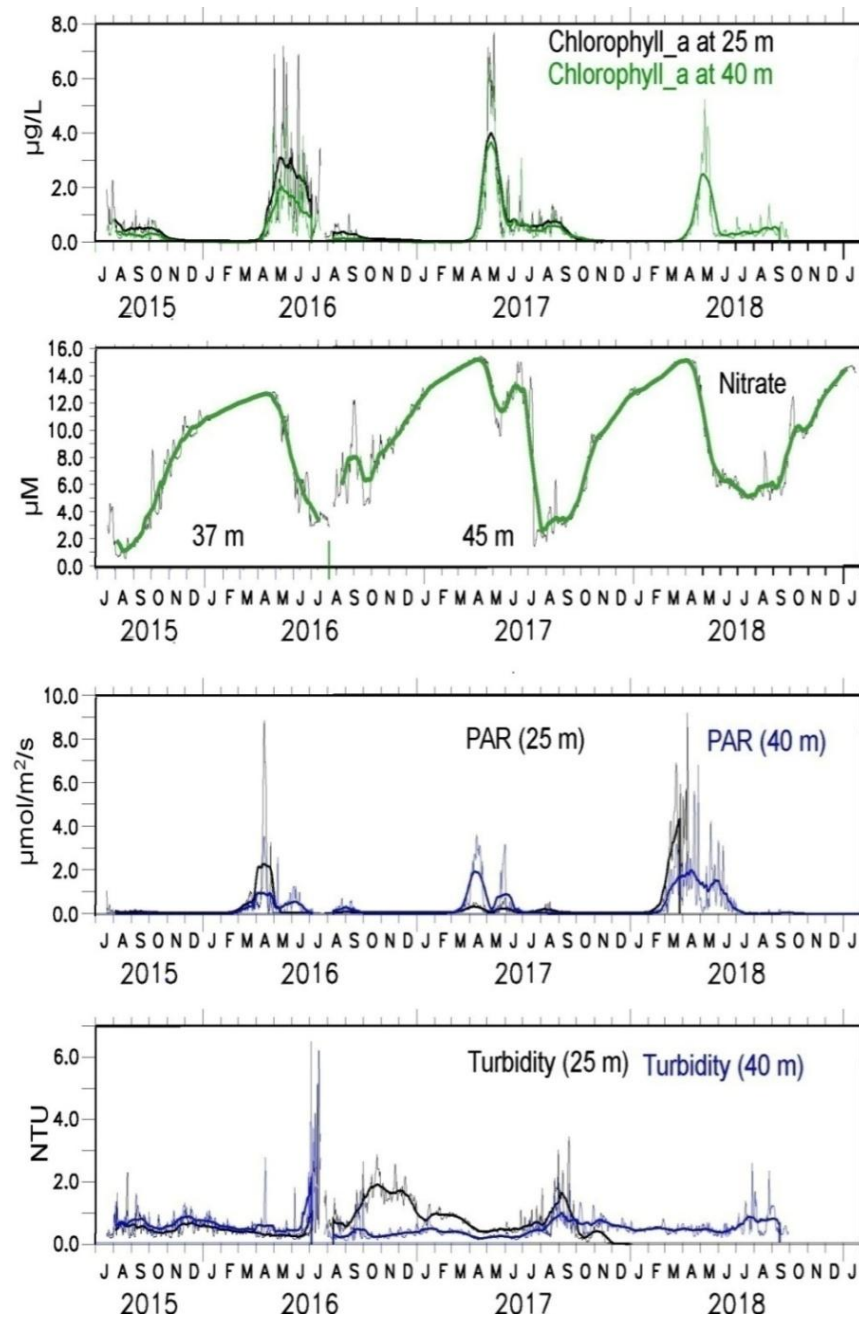
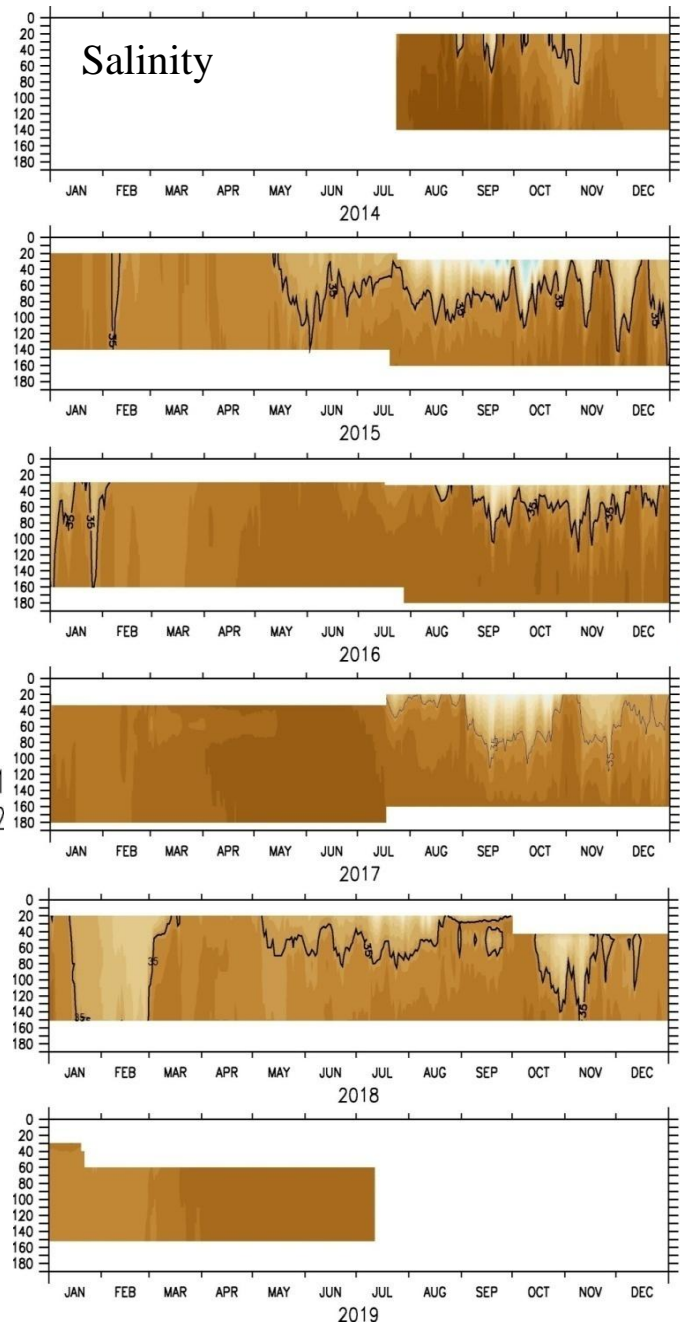
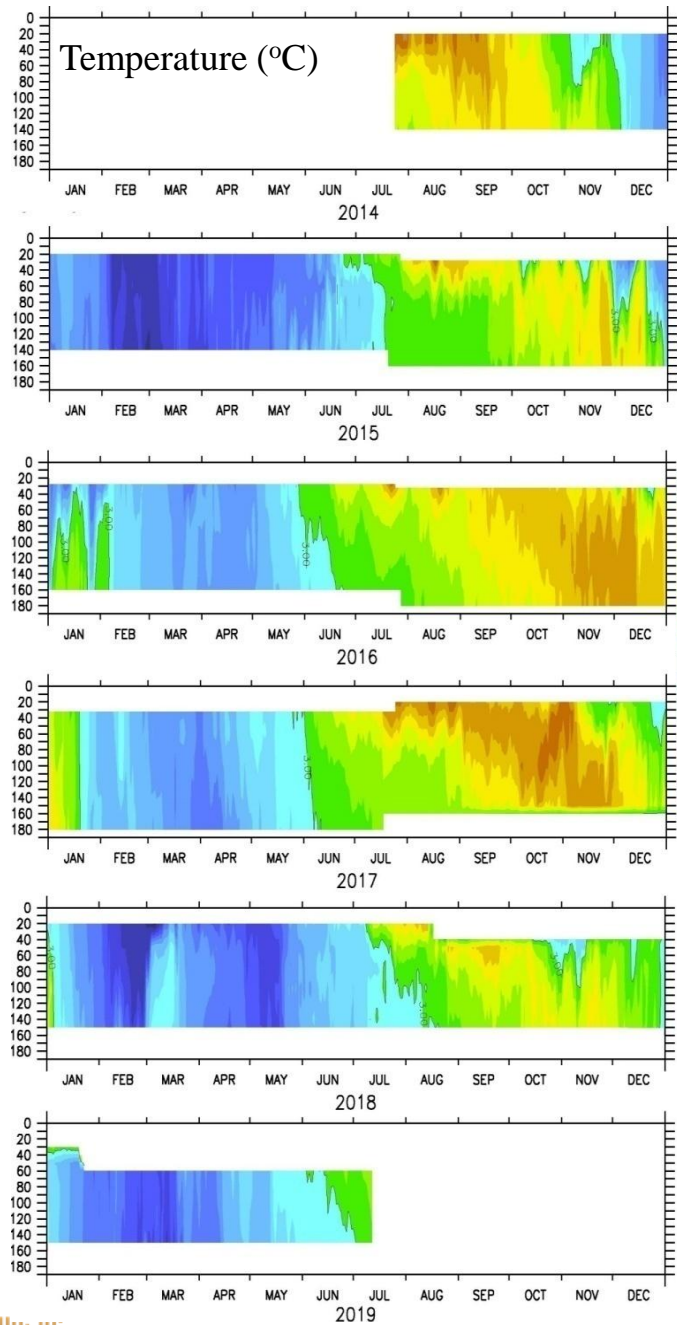
**Data at :** <http://data.ncaor.gov.in/newhtml>

The portal showcases the Indian Scientific endeavours in the Arctic region –endeavours which commenced just about three years back in 2007 when a five-member team of scientists from India visited the International Arctic Research facilities at Ny-Alesund. Organized, coordinated and executed by the Ministry of Earth Sciences under the aegis of its R&D Wing, the National Centre for Antarctic and Ocean Research (NCAOR), the team, during its month-long stay initiated

[sios-svalbard.org](https://sios-svalbard.org)







# Other summer observations, since 2011

- Nutrients
- Dissolved Oxygen
- Phytoplankton
- Zooplankton
- Microbial diversity
- Organic matter

## ➤ **Outlook, future perspectives**

- Continuing IndARC mooring deployment in Kongsfjorden in 2024, surface observations
- Planning an atmospheric mooring outside Kongsfjorden
- Submission of data in the Kongsfjorden CTD portal
- Expanding time series and mooring measurements in collaboration with the other regions in Svalbard and other parts of the Arctic (2023- Arctic Ocean cruises in June and August; Cambridge Bay- Canada)

## ➤ **Challenges:**

- Yearly team movement for mooring retrievals and deployments
- Ship availability

## ➤ **Wishes:**

A collaborative system for sustainable monitoring activities— mooring maintenance, sharing instruments, and data



# What you hope to get out of a Svalbard marine infrastructure network

- A platform to define or address science questions and knowledge gaps, with all the moorings inside Kongsfjorden, prior planning of similar data collection between groups to identify critical locations and avoid data duplication
- Possible formation of a collaborative system for the long-term scientific infrastructure maintenance by scientific groups themselves on an alternate-year basis after the formulation of how it can work.

Thank you