



May 2023

# International Nutrient Inter-Comparison: Newsletter #12

Keep up to date on the facts, plans and people involved with the International Nutrient Inter-Comparison voyage (INIV) scheduled for June 2023

Photo Credit Maddy Zahm

INIV is practically here! Reposting our voyage schedule here as well as with some updated symposium details to note as well.

**May 31<sup>st</sup>-June 2<sup>nd</sup>:** Voyage mobilization

**\*June 2<sup>nd</sup>:** Symposium Welcome + Keynote

**June 3<sup>rd</sup>-4<sup>th</sup>:** Onboard pre-voyage medical clearance

**June 5<sup>th</sup>-18<sup>th</sup>:** INIV + \*Symposium Sessions Onboard

**June 19<sup>th</sup>:** Voyage demobilization

**\*June 20<sup>th</sup>:** CSIRO Ocean and Coastal Nutrient Symposium

**\* Indicates Webcast Availability**

*Covid-19 protocols could affect the dates of pre-voyage medical and isolation rules. We will continue to communicate changes in this landscape as they develop.*

## Welcome

Welcome to the twelfth INIV newsletter where we discuss preparation for the upcoming Nutrient Symposium. Make sure to check your emails, lest you find yourself scrambling for last-minute updates. In this newsletter, we also address preparations for our voyage, report the inaugural voyage of the CSIRO HydroBox, and welcome the addition of our POGO Fellows to our party. Read on and get in touch with any finalizations leading up to June.

## Symposium Call for abstract and Registration

As INIV is investigating the causes of poor oceanographic nutrient data comparability, the CSIRO Ocean Nutrient

Symposium is designed to focus on discussing nutrient analytical techniques and methodologies, as well as technological improvements and data end uses.

Before, during and after RV Investigator's 14-day voyage, voyage partners and members of the marine research community are invited to join live webcasts from both onshore and aboard the ship. Presentations will cover unique aspects of nutrient analysis, data interpretation, and nutrient impacts on ocean research. Discussions will cover new and emerging analytical, data processing and technical capabilities, including but not limited to methods and implementation of nanomolar nutrient analysis, robust data pipelines, miniaturisation, and the development of experimental non-bias procedures to increase comparability of nutrient datasets.

Submit your abstract for an oral presentation (15-20 min talk + 10-15 min for question/discussion) on the 20<sup>th</sup> of June 2023. Abstracts are to be a maximum of 150 words, excluding the title and authors. They are due 14<sup>th</sup> May 2023 and can be submitted via email to Claire Mulhall ([claire.mulhall@csiro.au](mailto:claire.mulhall@csiro.au)).

Registration for the INIV events occurring parallel to the voyage are now open; if you haven't had a chance to yet, please register below:

[CSIRO's International Nutrient Inter-comparison Voyage Launch](#) – 2 June 2023

[CSIRO's International Nutrient Inter-comparison Voyage Broadcast](#) – 6, 8, 10, 12, 14 and 16 June 2023

[CSIRO Ocean Nutrient Symposium](#) – 20 June 2023

For any question about the symposium contact Julie Janssens ([Julie.janssens@csiro.au](mailto:Julie.janssens@csiro.au)).

## Voyage Preparation

In observation of safety precautions and fatigue management, we advise that participants travelling from various time zones prepare for the shift to Australian

Eastern Standard Time (AEST). During the voyage, approximately one CTD cast is planned every 24 hours with the aim of ensuring a consistent daily shift schedule. However, experienced sea goers will tell you that flexibility is the key to enduring whatever comes— something that is much more manageable when feeling well-rested. Our safety coordinator has recommended the ‘Timeshifter’ app, designed to assist in tackling Jet Lag. (<https://www.timeshifter.com/> - it isn’t a free app, but you do get one free trip).

We will be going quite far south in the middle of our winter, and everyone will need to ensure they pack appropriate clothing to keep warm sampling and while on the boat. It is recommended that people bring cold weather gear that includes waterproof and thermal gloves, balaclava, thermal hat, thermal neck gaiter, thermal pants, wool socks, thermal top, polar fleece jacket and pants, waterproof or rain jacket and pants, and an insulated down vest/jacket. **Steel-capped-toe boots or gumboots are required for sampling on the voyage. All shoes onboard must have a closed heel or heel strap** for safety as well. All voyage personnel are encouraged to bring additional items for comfort and for use during recreational times.

## HydroBox

CSIRO Hydrochemistry is proud to be initiating our offshore module known as the ‘HydroBox’ into life at sea during INIV.



Figures 1 (left) & 2 (right) show the easily recognizable pink door showing the front entrance and through the threshold of the HydroBox during construction.

The HydroBox is a 20-foot shipping container transformed into a portable marine chemistry laboratory fully equipped for the analysis of nutrients, oxygen, and salinity. The container can be used at sea or on land, without having to move sensitive equipment.

The laboratory module was designed for chemists by chemists and will have the flexibility to support a wide range of research activities. The laboratory module is intentionally constructed for common carrier transport to facilitate global usage and is certified for up to two occupants working 12-hour shifts. The HydroBox is designed to operate in air temperatures ranging from -20°C to +35°C. The laboratory is equipped with a top-of-the-line Seal Analytics AA500, a Guildline Portasal Salinometer, and an Automatic Titrator Instrument. The Hydrobox is also equipped with a MilliQ ultra-pure water system for reagent and standard preparation, and a refrigerator. Internal lab temperature is controlled by an HVAC system with a tolerance of +/- 2°C for ideal temperature control.

This is an exciting part of INIV for the CSIRO team and we look forward to showing everyone the final product.

## POGO Fellows

We are pleased to welcome two POGO Fellows who will be working with us on INIV. They will join us for the voyage, symposium, and a period of data wrap-up and writing following the voyage.



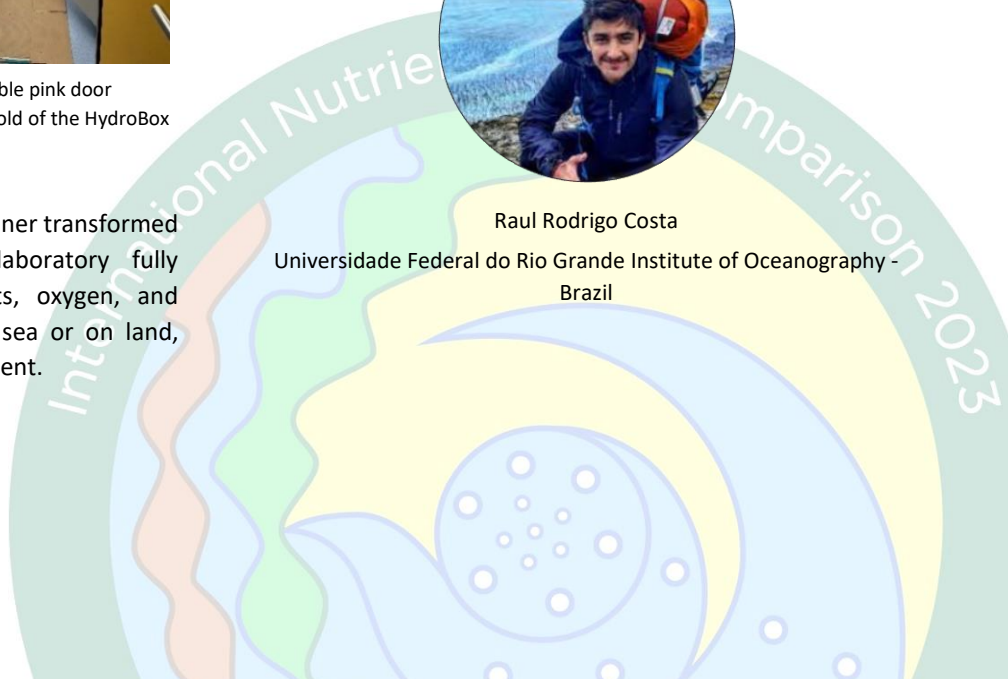
Paula Bermejo – Analytical Chemist

Centro para el Estudio de Sistemas Marinos - Argentina



Raul Rodrigo Costa

Universidade Federal do Rio Grande Institute of Oceanography - Brazil



## Participant Bios



**Anne Daniel and Emilie Rabiller**

**Role:** Researcher and Analytical Chemist

**Organisation:** IFREMER

**Days at sea:** We didn't count! Mainly voyages along the French coast.

**Favourite voyage:** Each voyage is interesting with its share of surprises, pleasures and misfortunes.

**What interests you most about INIV?**

Our laboratory has been involved in the organization of intercomparison exercises for 30 years. These exercises are based on the preparation of pasteurized samples that are distributed within the French oceanographic community to improve the reliability and comparability of nutrient measurements. This international collaboration on board a ship is a practical experience that will promote direct exchanges on the different analytical techniques and how to control the quality of the measurements. A great opportunity to learn from each other. And of course, to discover the ocean in South of Tasmania.



**Purena Son**

**Role:** Technologist

**Organisation:** KIOST

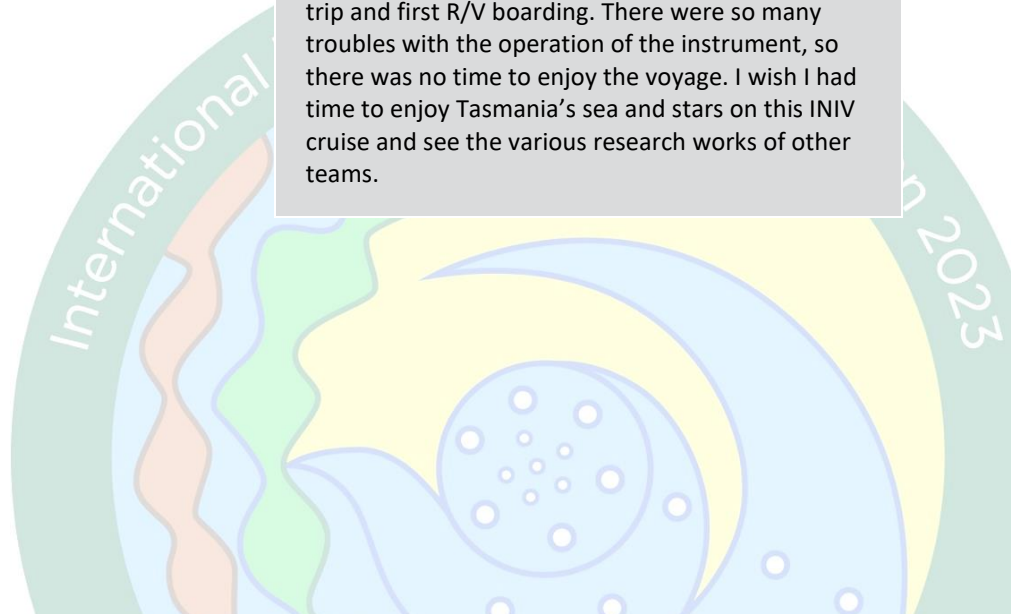
**Days at sea:** 168

**Favourite voyage:**

I went voyage once a year, and every voyages remains in my memory. Among them, the most memorable voyage is the longest one in 2021. The cruise schedule was delayed because of corona, so both Christmas and New Year were celebrated on the ship. We brought light bulbs and balloons to decorate, and wore red and green socks in pairs on Christmas. On New Year's Eve, we all stayed up all night watching the sun rise over the wide horizon. It was holiday to be celebrated not on land but in the distant sea, so the atmosphere and feeling of that time still remain in my memory.

**What interests you most about INIV?**

INIV held in 2017 was my first overseas business trip and first R/V boarding. There were so many troubles with the operation of the instrument, so there was no time to enjoy the voyage. I wish I had time to enjoy Tasmania's sea and stars on this INIV cruise and see the various research works of other teams.



## Voyage Website

We have a website! Check it out for additional information about our voyage including voyage location, planning, getting involved, previous newsletters, FAQ and more: <https://wp.csiro.au/iniv>

## Contact Us

Please feel free to reach out to the CSIRO Hydrochemistry team at any time during the planning process: [iniv2022@csiro.au](mailto:iniv2022@csiro.au)



Photo Credit Maddy Lahm

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CSIRO. Unlocking a better future for everyone.

### **For further information**

Hydrochemistry – National Collections and Marine Infrastructure (NCMI)

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<https://wp.csiro.au/iniv>