### **1st Rufford Small Grant**

Project: Plastic pollution influence over mangrove ecosystems from Southeast Brazil
ID: 39538-1
Name of leader: Luiz Eduardo de Oliveira Gomes
Project Update: July 2024 (Report 3)

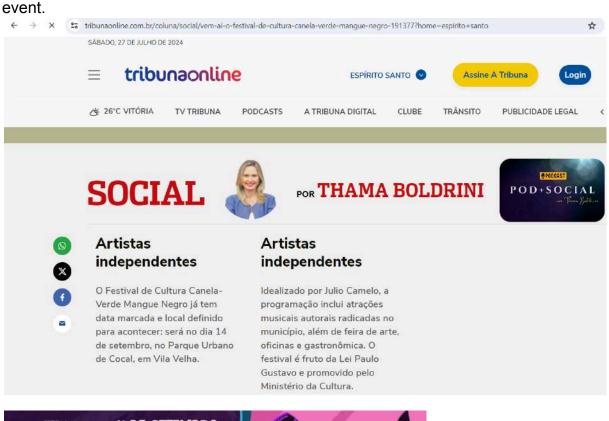
### **General information**

We finished the analyses of microplastic of the samples from mangroves at the facilities provided by Professors André Luiz Lopes de Faria and Eduardo Nery Duarte (Universidade Federal de Viçosa: Federal University of Viçosa). Now we are polishing these results to start the statistical analysis;

Our team keeps doing the lab analyses (Sá's lab) of the sediment cores sampled on the tidal flats, which is taking more time than expected because most of our Sediment-Microplastic Isolation (SMI) units are rusty (inside and outside);



We are supporting the Mangue Negro Festival (Black Mangrove Festival, 2024) that will occur in Vila Velha (Espírito Santo). This is an event that is related to a myriad of activities about mangroves, from culture to science and education. We will present our results to the society, government, and interested parties during the





It was hard to find areas highly dominated by plastic pollution along the states of Rio de Janeiro and Espírito Santo. We monitor solid waste pollution in a mangrove conservation unit in Espírito Santo to keep a similar goal. So, we are monitoring the solid waste pollution on mangrove soils at Piraquê Açú-Mirim, part of a long-term monitoring effort that I started in 2018.

#### Social media

In X social media (https://twitter.com/), we created the Healthy Seascape Initiative (@HealthySeascape) to post our activities and share other pieces of information about blue carbon ecosystems conservation, mostly mangroves and salt marshes. Up to now, we have 195 posts and 40 followers.



Besides this, we are using the Instagram account of the Graduate Program in Oceanography (@ppgoam) and related laboratories (e.g. @grupo\_lixomar) to enhance our public through highly visited pages.



### Materials and presentation of this project

Activities developed by our project from April to July 2024.

Professor Fabian Sá gave a talk on April 24, 2024, to the "Bom Dia ES" (the important morning news the state Espírito Santo: most in of about https://globoplay.globo.com/v/12544089/) plastic pollution marine on ecosystems and the risk that plastic causes to human health.



Also, on Apr 24 2024 Fabian Sá gave a talk to the TV Vitória (<u>https://www.folhavitoria.com.br/videos/tv-vitoria/jornal-da-tv-vitoria/avmE2B0MA6t</u>) about the impacts that the small plastic fragments can cause to freshwater to marine ecosystems, marine biota and human wellbeing.



On June 05 (World Environment Day, 2024), Luiz (pos-doctorate in Graduate Program of Environmental Oceanography from the Universidade Federal do Espírito Santo) and students of the Graduate program visited some kindergartens' (children's school) to talk about marine conservation, focusing on mangroves and their biodiversity. We also gave them stickers and puzzles about the sea.





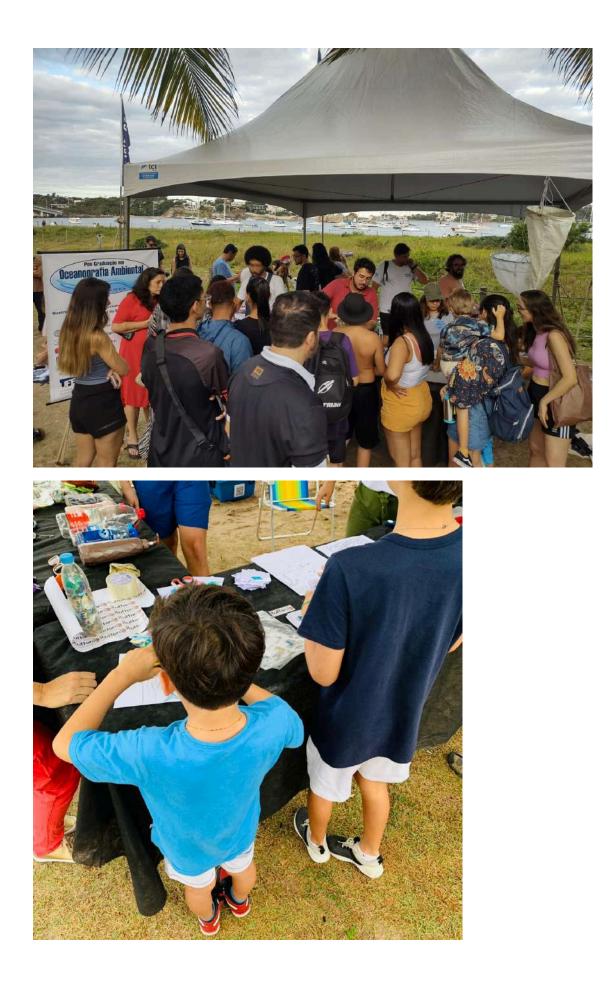






On July 13 and 14, 2024, Luiz, Ana, and Professor Fabian participated in the Whale 2024: Festival (Festival Baleia da https://www.amigosdajubarte.com/post/vem-ai-6-edicao-festival-da-baleia) with many students of the Undergraduate Program in Oceanography and the Graduate Program of Environmental Oceanography from the Universidade Federal do Espírito Santo. This Festival is one of the biggest environmental events in the state of Espírito Santo. Professor Fabian is a supervisor and Luiz is a Pos-doctorate under Fabian's supervision. During the festival, we promoted educational activities to many families. The activities were related to scientific research on plastic pollution on many species, ecosystems, and human well-being, drawing marine environments, animal puppets, local fauna and Rufford stickers, and puzzle games.









Luiz Gomes gave a talk on July 26, 2024, on Mangrove Week (Semana dos Manguezais) which was about the Overview of the restoration of mangroves and salt marshes in Brazil (Panorama da restauração de manguezais e marismas do Brasil; <u>https://semanadosmanguezais.org/transmissao2024</u>). Luiz talked about the influence of plastic pollution on mangroves in Southeast Brazil; as well as the urgent need for a Brazilian inventory of mangrove ecosystems (and other blue carbon ecosystems) carbon stocks and dynamics considering the different environmental features and conservation conditions (e.g. the influence of pollution and land use and cover change on these ecosystems, related services and human wellbeing). Up to now, this event has reached 289 views.

**GUEZAIS** 



SEMANA DOS

Sexta-feira / 9h às 12h

Link: semanadosmanguezais.org/transmissao2024

CORREALIZAÇ

OUTE

# 26 JULHO 2024 / Sexta-feira / 9h-12h SEMINÁRIO ONLINE

## **Região Sudeste**

### Influência de poluição plástica nos ecossistemas de manguezais do sudeste do Brasil

O projeto busca avaliar a influência da poluição plástica na estrutura e dinâmica de carbono de manguezais e as taxas de retenção destes poluentes em solo de manguezal. Luiz Gomes é pesquisador de projetos em conservação e restauração de ecossistemas de carbono azul principalmente na costa Sudeste do Brasil.

Luiz Gomes PPG em Oceanografia Ambiental/ ONG Guardiões do Mar UFES

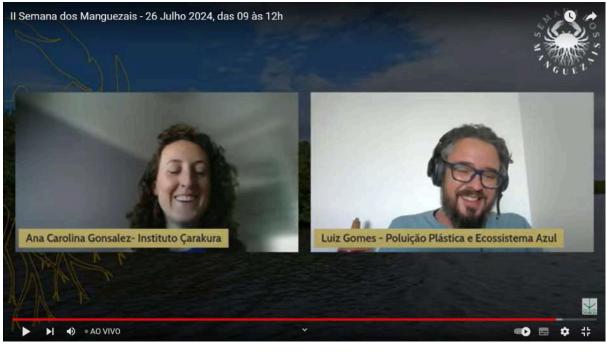
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### Next steps

In the next 3 months, we will:

Laboratory analyses to finish all the needed samples for the scientific goals of our project.

Keep the training of students interested in the theme;

The submission of a scientific article about plastic pollution in mangrove ecosystems (up to September 2024);

Support the Mangue Negro Festival with interested parties to show our results and discuss strategies for plastic pollution mitigation, while spreading the state-of-the-art of the area in Espírito Santo (e.g. education activities).