Dra. Marcela Aparecida Campos Neves Miranda
Ecologist and Sustainability Scientist

marcelaacnmiranda@gmail.com

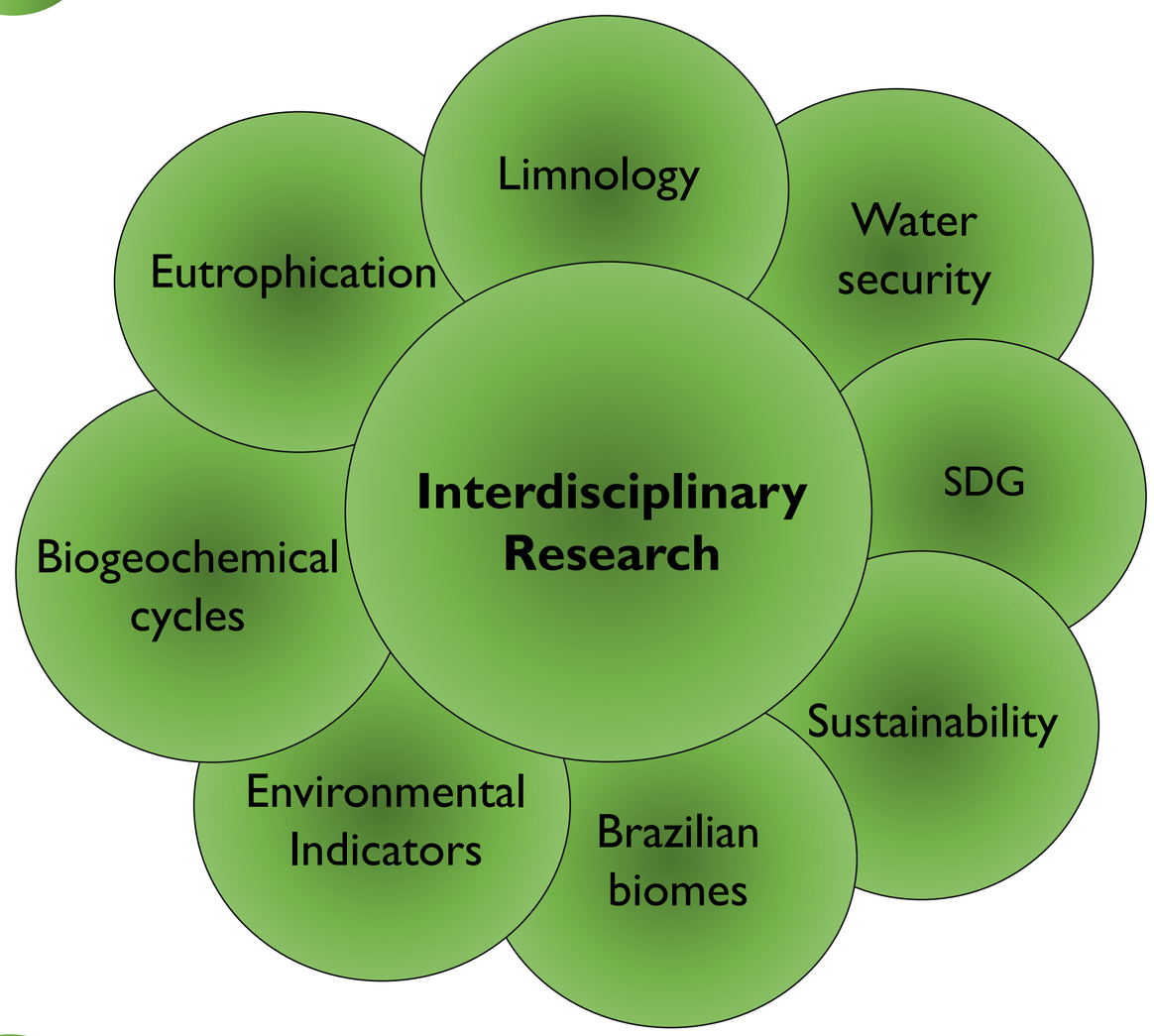
About me

I am a Brazilian scientist interested in the sustainability of freshwater ecosystems. I have expertise in eutrophication of aquatic environments, mitigation of cyanobacterial blooms and biogeochemical cycles.

Currently, I am a postdoctoral researcher in Earth System Science at the National Institute for Space Research (INPE, Brazil), and a Visiting Scholar in the Department of Ecology and Evolutionary Biology at Cornell University (USA, NY), working in an interdisciplinary group that seeks to find ways toward a sustainable future for society living in the different Brazilian biomes. My research goal seeks to address contemporary environmental issues such as global changes and the water-energy-food nexus.

My current work is centered around the following question: “What is the role of nutrient cycling in the water, energy, and food security in the São Francisco River basin?” In this context, we are proposing a Eutrophication Risk Index to be used as a water resource management tool for watersheds.

Research Interests



Sustainable Amazônia

Motivation:

- Identify efficient solutions that promote economic activities for local populations that use ecosystem services as an ally to preserve the Amazon.
- Establish an interdisciplinary research network to advance the field's understanding beyond what my research group could do on its own.

Questions:

- What are the socio-environmental consequences of anthropogenic impacts on the Amazonian aquatic environments?
- Which portfolio of animal sourced food are best able to meet human nutritional needs in the Amazon with the lowest environmental cost?

Work

2022 – Present. Visiting Scholar in the Department of Ecology and Evolutionary Biology at Cornell University, Ithaca – New York, United States.

2019 – Present. Postdoctoral Researcher in Earth System Science, National Institute for Space Research (INPE), São José dos Campos – São Paulo, Brazil.

Projects

- Balancing Environmental and Nutritional Tradeoffs of Expanding Amazonian Aquaculture. Cornell Atkinson Center for Sustainability.
- Transition to sustainability and agriculture-energy-water nexus: exploring an integrate approach with case studies in the Cerrado and Caatinga (NEXUS). FAPESP. http://nexus.ccst.inpe.br/
- Waterfall Project: sport, science and society coming together. https://www.cachoeirasparaibadosul.net/
- Mitigation measures for the control and management of cyanobacterial blooms in a shallow tropical system. UFJF/Cnpq 2013.

Personal values

I believe that quality science is done with a diverse group of scientists with different backgrounds. As a Latin American woman and part of an underrepresented group in science, I recognize many of my privileges and firmly advocate for a more diverse and inclusive scientific community. My actions are supported by my experience acquired in the various programs in which I have participated, in receiving or sharing knowledge, and also in my daily life as a scientist in Brazil. I recognize that it is unlikely I would be where I am without the diversity, equity and inclusion (DEI) initiatives promoted by the institutions, professors, and supervisors I have had in my career – and I am committed to making my own contributions to promoting DEI.