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# EXSTREAM BRAZIL: MITIGATING CLIMATE CHANGE AND AGRICULTURAL INTENSIFICATION EFFECTS IN TROPICAL STREAMS

*A Data Management Plan created using DMPonline*

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**Template:** DCC Template

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**Project abstract:**

In Brazil, freshwater ecosystems are facing multiple anthropogenic pressures, such as agricultural intensification, urbanization and intensifying climate change effects. To disentangle these effects, multiple-stressor research seeks to analyze the variety of stressors acting simultaneously to elucidate how stressor interactions affect individual organisms to whole ecosystems. The aim of this project is to conduct the first mesocosm experiments investigating the interactive effects of climate change and agricultural stressors on freshwater organisms in Brazil. The experiments will disentangle the individual and combined effects of agricultural intensification and climate change on benthic stream macroinvertebrates as a model community. Understanding how climate and agricultural stressors individually and interactively impact aquatic organisms will inform stressor mitigation prioritization and best-practice agricultural management to protect freshwater ecosystems.

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## Data Collection

We will create environmental datasets including:

- Limnological data
- Benthic macroinvertebrate community dataset

The format of the data will be basically .xlsx or .txt

We will follow the methods described in publications from Matthei C.D. and Piggott J.J.

The name of the files will be exstreambrazil\_expXXXvXXX - where expXXX will be the number of the experiment and vXXX the version of the sheet

The quality assurance will follow the Standard Methods for the Examination of Water and Wastewater for water quality data.

## Documentation and Metadata

The metadata will include information about:

- How the samples were collected
- Which method has been used
- How the quality of the data was verified
- The date when the samples were collected
- Who was involved in the sampling and experimental phase with their contacts

## Ethics and Legal Compliance

The data preservation and sharing will be conducted by storing those data in websites such as Dryad Digital Repository. All the participants are aware before participating in the experiment that these data will be shared.

We will publish the results in open access journals if funds are available.

## Storage and Backup

The data before publication will be stored in clouds such as iCloud or Google Drive.

After publication the data will be stored in websites such as Dryad Digital Repository or journals supplementary material.

The data will be shared through the participant researchers by allowing them to the clouds (iCloud or Google Drive)

## Selection and Preservation

All the data will be retained and published in websites such as Dryad Digital Repository.

Dryad Digital Repository or similar

## **Data Sharing**

The potential users will find our dataset specially through publications.

We will need exclusive access until the manuscript will be published

## **Responsibilities and Resources**

The responsible for implementing the DMP is Ricardo Taniwaki, PI of the project.

We will require existing staff from the Universidade Federal do ABC