

Review of: "Collective Córregos Da Tiririca- Restoration of Riparian Forest in a Stream Contributor of Itaipu Lagoon – Niterói- RJ"

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Potential competing interests: No potential competing interests to declare.

Abstract:

The abstract offers a clear overview of the pollution and eutrophication challenges faced by the Itaipu-Piratininga lake system due to urban expansion. However, it lacks specific details regarding the methods used in agroforestry restoration and biodiversity evaluation. Including more information about these techniques would enhance the depth of the study. Additionally, the abstract could be improved by clearly stating the objectives or hypotheses of the study, as well as providing more explanation about the adaptation of syntropic agriculture for use in an urban stream. These enhancements would make the abstract more informative and relevant to the field of environmental science and restoration ecology.

Introduction:

The introduction offers a thorough overview of the Itaipu-Piratininga lagoon system, highlighting its historical significance and the environmental challenges it faces due to urbanization and human activities, which effectively sets the context for the study. However, it would benefit from clearly stating the specific research questions or objectives of the study to provide a more focused direction with some more recent references. While it discusses the restoration of the riparian forest and the assessment of biodiversity, explicitly outlining the goals of these efforts would enhance the clarity of the study. Additionally, the introduction could be strengthened by providing more specific references to relevant literature to support claims and deepen the understanding of the context. It mentions ongoing initiatives and social movements related to conservation and revitalization, but more details on these efforts, their goals, and their impact on the ecosystem would enrich the discussion of conservation in the area. Improving these aspects would enhance the introduction's relevance and impact within the field of environmental science and restoration ecology.

Methodology:

The methodology section of the research paper provides a comprehensive description of the methods used, including the preparation of georeferenced maps, restoration of the riparian forest using syntropic agriculture, and assessment of flora and fauna. However, some important drawbacks should be addressed. Firstly, while the methods are described in detail, there is a lack of discussion on the rationale behind their selection and how they specifically address the research objectives. Additionally, more information could be provided on the criteria for selecting plant species and the standardization of sampling methods for assessing aquatic fauna. Furthermore, the section could benefit from a

discussion of any limitations or challenges encountered during the study, which would enhance the transparency and reliability of the research findings.

Results:

The results section offers a detailed narrative of the environmental conditions before and after the agroforestry intervention, as well as the involvement of the Collective in the project. However, there are several notable suggestions. Firstly, the section lacks quantitative data and statistical analysis, which are crucial for establishing the effectiveness of the intervention and drawing robust conclusions. The absence of specific metrics or indicators to assess the impact of the restoration efforts on water quality, biodiversity, and ecosystem health limits the depth of the findings. Additionally, while the qualitative observations and descriptions are valuable, they would be more impactful if supported by quantitative data. Furthermore, the section could benefit from a more structured presentation of results, with clear headings and subheadings to enhance readability and organization. Addressing these limitations would strengthen the scientific rigor and credibility of the study.

Discussion and Conclusion:

The discussion and conclusions section offers a comprehensive overview of the environmental, social, and cultural aspects related to the restoration efforts along the Colibris stream. However, the section could benefit from a more focused discussion on the specific outcomes and impacts of the agroforestry intervention, particularly in relation to water quality improvement, biodiversity enhancement, and ecosystem resilience. While the narrative provides valuable insights into the historical context and the social significance of the project, it lacks a critical analysis of the data presented in earlier sections. Additionally, the section would be strengthened by a clearer articulation of the implications of the findings for future research, policy, and practice. Providing specific recommendations based on the outcomes of the project would enhance the practical relevance of the study and its potential impact on urban stream restoration efforts. Separating the discussion and conclusion sections would allow for a more systematic presentation of the study's findings and their implications, improving the clarity and readability of the paper.