



IRACAMBI ATLANTIC RAINFOREST RESEARCH AND CONSERVATION CENTER
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Research and Internship Opportunities

AREA 1) Community Understanding

**Involves: Sociology/Education and/or Educational Psychology
/Environmental Science, Political Science/Development/Geography**

Environmental Education and Awareness

Research

- Evaluate Iracambi's on-going environmental education program in terms of its real impact on target population
- Assess how local communities view the "environment" and, based on this, what type of support they need in order to protect it.
- Assess how local communities view the question of mining in their area.
- Based on the above assessments, determine the most effective means of directing environmental education to practical needs of communities.

Community Empowerment

Research

- Using previous research on decision making processes within the community, develop effective ways of assisting communities in taking important decisions
- Research how decisions are taken over land use.
- Develop strategies for communities to respond to the impact of bauxite mining

See: https://en.iracambi.com/download/research/SustainableCommunities/Bauxite_mining_&_sust_Dec_Connor.pdf

REQUIRES: Good grasp of Portuguese, some experience of work in rural communities.

AREA 2) Conservation

Involves: Geography/Environmental Science/Geographic Information Systems (GIS)

Buffer Zone Management

Iracambi GIS

Research

- Fieldwork collecting land use data for better identification of priority conservation areas
- Labwork entering and verifying data, standardizing formats, and preparing maps
- Community mapping project: review and update information from Serra das Aranhas area; re-map Graminha area property boundaries to align with government land cadaster
- Monitoring mining activities

REQUIRES: Middle level GIS skills.

Conservation Planning & Training

Involves: Environmental Science/Ecology/Environmental Law/Education/Sociology

Research

- Creating technical assistance methodology for creating Environmental Protection Areas (EPAs) in the buffer zone of an important conservation area and assisting communities in setting up management committees.
- Developing training curriculum for EPA committees
- Creating curricula for planning concepts, environmental management, and environmental law

Environmental Monitoring

Involves: Environmental Engineering/Environmental Science/Hydrology/Forestry

- Continue existing program of monitoring the hydrology of the Graminha basin - water flows and quality
- Identification of sources of water pollution
- Continue existing program of monitoring forest growth in forest permanent sample plots

Flora and Fauna

Involves: Animal or Plant Biology, Environmental Science, Ecology

Research

- Complete identification of trees in the permanent sample plots
- Bird population studies, based on existing bird identification list
- Continue study of aquatic fauna
- Continue identification of amphibia
- Continue butterfly identification study
- Identify potential field for insect study

See: Birds: <http://fieldguides.fieldmuseum.org/guides/guide/538>
Butterflies: <http://fieldguides.fieldmuseum.org/guides/guide/416>
Amphibia: <http://fieldguides.fieldmuseum.org/guides/guide/641>

EQUIRES: Basic knowledge of wildlife biology. Basic knowledge of tropical ecology an advantage

Environmental Restoration

Involves: Forestry/Sociology/Sustainability

Organization

Research

- Assess communities' perception of land degradation – deforestation, diminishing soil fertility, diminishing water supplies - and appropriate actions to be taken by the communities themselves
- Identification of stakeholders
- Identification of issues
- Advise on Negotiation of solutions

See: <https://en.iracambi.com/download/research/SustainableCommunities/SciPubCoffeeWatsonAchinelli.pdf>

REQUIRES: Intermediate Portuguese; experience with multisectoral organizations

Strategic Plan

Involves: Ecology/Forestry/Conservation Biology

Forest Corridors

Research

- Determine composition of corridors in relation to their location and purpose
- Determine location and dimensions in relation to biological, agricultural, social and legal requirements
- Refine our preliminary identification of priority sites for forest corridors

See: <https://en.iracambi.com/download/research/NaturalResources/SciFeasibilityandEffectivenessofForestCorridorsJanuary20.pdf>

REQUIRES: middle level forest science or biology; some knowledge of soil science an advantage.

Involves: Ecology/Environmental Science

Reforestation

Research

- Evaluate pilot scheme “Forest for Water” in terms of impact and sustainability

- Continue trials on reforestation technology

AREA 3) Sustainable Income Generation

Involves: Botany/Chemistry

Iracambi Medicinal Plants

Research

- Continuing ongoing laboratory analyses, ethno-botanical studies and harvesting studies on traditionally used plants that are not officially recognized as medicinal

Agro-Forestry

Involves: Agronomy/Ecology

Research

- Adapt research already done in other locations to meet farmers' needs for income generation
- Deepen existing agro-forestry research to improve productivity of cattle raising through:
 - Appropriate composition of protein fodder banks for cattle
 - Use of tree legumes in pastures.
 - Exotic/native tree species mixes

See: https://www.academia.edu/31536468/Agroforestry_for_Soil_Regeneration_LHaynes.pdf

Other Opportunities

Involves: Environmental Science/Economics

Research

- Attracting researcher(s) to conduct research into innovative ideas
- Technical research, as opportunities are identified
- Market research into commercial potential of proposed products, especially "Juçai", candeia, banana, other fruits

Payment for Environmental Services (PES)

Involves: Environmental Science/Restoration Ecology/Economics

Research

- Investigating reforestation in mining reclamation as potential generator of PES
- Identify high priority areas for inclusion in PES schemes with regard to their capacity to increase the biological resources of the Park and assist a rapid recovery from mineral extraction.

REQUIRES: Environmental science, basic economics.

Eco-tourism

Research

- Determining viable eco-tourism activities for communities;
- Assisting communities in developing these

REQUIRES: Intermediate Portuguese; experience of tourist industry.