Vacancy for Protected Areas Geospatial Monitoring Officer

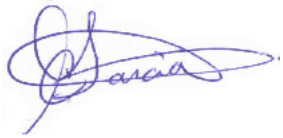
Ya'axché is seeking the services of a Protected Areas Geospatial Monitoring Officer to join the Protected Areas team at the start of February 2025. This application pack contains the Terms of Reference. Please read these documents carefully! Note that this is a full-time position based in Punta Gorda Town.

To apply, please send a copy of your CV (no more than two pages) and a one-page letter outlining your interest and suitability for the position. All documents should be in .pdf format and should be emailed and addressed to the Executive Director at the email below:

christina.garcia@yaaxche.org

Only serious inquiries will be accepted. The closing date for submission of your application is January 10, 2025. We look forward to hearing from you.

Yours sincerely



Christina Garcia
Executive Director
Ya'axché Conservation Trust

TERMS OF REFERENCE – Protected Areas Geospatial Monitoring Officer

Reporting to: Protected Areas Program Director

Introduction

Ya'axché staff are expected to work cooperatively with others, demonstrate flexibility in organizing work, have good communication skills and demonstrate thoughtfulness in decision making. Staff must be non-judgmental and receptive, live up to the values of integrity, respect and professionalism while reflecting genuine concern toward both the biosphere and the communities where Ya'axché is active.

The Protected Areas Geospatial Monitoring Officer is responsible for conducting annual Land Use & Land Cover (LULC) change analysis along with seasonal fire events monitoring and reporting. As the main GIS and remote sensing expert the officer is expected to collaborate across program areas for all mapping activities in the field and desk based. As part of Ya'axché's growing geospatial work, the officer will also be responsible for the management of the Spatial Monitoring and Reporting Tool (SMART) database used by Ya'axché's ranger teams and which is an essential tool for protected areas management. The position is also responsible for providing technical and practical training in the use of mapping technology such as GPS/GNSS devices, ArcGIS/QGIS software and drones based on need. The position is based out of the Punta Gorda office with varied time in the field including time spent at the 4 protected areas under Ya'axché's management as well as withing the farming landscape working within agroforestry farms when the need arises.

The Protected Areas Geospatial Monitoring Officer maintains strong relationships with the Protected Areas Program Director and Science Director.

Primary relationships

- Supervisor: Protected Areas Program Director
- Protected Areas Manager
- Science Director
- Community Outreach and Livelihoods Director
- Ya'axché Staff

Key areas of responsibility

- Land Use and Land Cover (LULC) change analysis and related remote sensing assessments including fire monitoring
- Management of the SMART database and supporting its development along with Ya'axché's ranger teams
- Management of Farm mapping data and its corresponding database
- Cross program field mapping

Accountabilities:

1. Conduct LULC change analysis in the Maya Golden Landscape (MGL) through remote sensing using satellite imagery for the annual LULC change report for the Toledo District and MGL
2. Conduct seasonal fire risk monitoring and conduct analysis of the fire season for the annual report from the Toledo District and MGL
3. Conduct ground-truthing and verification of remote sensing analysis and results where applicable
4. Exploratory analysis for forest connectivity in the MGL with a focus on structural and functional corridors in collaboration with the Protected Areas Program Director and Science Director
5. Conduct GPS and GIS training for Ya'axché's field staff based on need
6. Provide support for field mapping exercises in protected areas and farmlands
7. Management of farm geospatial data including uploads, edits and quality control within the existing cloud-based database with support from the developer.
8. Provide technical support to community outreach and livelihoods field staff on how to collect field data using QField and QGIS
9. Explore the use of drones in mapping and other GIS related applications at Ya'axché
10. Manage the Spatial Monitoring And Reporting Tool (SMART) database including the curation and troubleshooting of patrol data inputs by Ya'axché's ranger teams
11. Development of SMART report templates in collaboration with the Protected Areas Program Director
12. Creation of maps for multiple uses as the need arises
13. Represent Ya'axché at national events related to GIS and the use of SMART
14. Other tasks that may arise from time to time at Ya'axché

Outcomes to be achieved by the position:

Outcomes	Indicators
1. Land Use Land Cover Change Analysis Collection, collation and analysis of satellite imagery and other datasets which results in reliable remote sensing analysis that allows for objective and evidence-based recommendations for resource management in the MGL.	• Annual LULC report for the MGL with recommendations and implications for management action. • Annual fire monitoring and risk assessment for the MGL with recommendations and implications for management • Exploratory analysis for forest connectivity within the Toledo District

2. Spatial Monitoring and Reporting Tool Effective and Efficient SMART database management and implementation. SMART database, maps and geospatial components updated regularly on a fixed schedule.	• SMART database is updated regularly and maintained. Patrol data undergoes quality control inspections and field data collection by rangers runs efficiently and effectively
3. Geospatial data management and field mapping support Geospatial data curated and maintained regularly ensuring accuracy and integrity including farming landscape mapping data through the existing farm database. Trainings in GPS use for all field staff. Mapping activities across programs are guided by accurate location positions using adequate technology and equipment across all programs	• Ya'axché's geospatial data is maintained and kept relevant with up-to-date advancements in GIS technology and methodology • Fully operational farm database with up-to-date data that can evaluate program performance • Mapping exercises lead to the creation and updating of essential map products for Ya'axché's programs
4. Other Exploratory work on the use of drones in conservation and biodiversity monitoring	• Delivery of GPS and GIS trainings to essential field staff based on need. • Use of drones in forest and biodiversity monitoring • Exploring the use of drones for enforcement and compliance activities

Qualifications:

- Minimum Bachelor´s Degree in relevant subject area (GIS & Remote Sensing, Geography, Natural Resources Management and related fields)
- Experience conducting land use and land cover change analysis and reporting
- Experience using ArcGIS Pro, QGIS and remote sensing software and platforms, such as Google Earth Engine, or others
- Skilled with GPS use in the field
- Passion for field work especially in forested areas
- Strong interest in conservation and community development
- Ability to work independently and as part of a team
- Knowledge of SMART and its application is an asset but not essential
- Prior experience with database management is an asset
- Proven record in technical writing and data analysis
- Be a quick learner
- Must be Belizean or a permanent resident of Belize
- Must be willing to relocate to Punta Gorda, Toledo District

Desired:

- Masters/postgraduate degree in GIS and/or remote sensing
- At least 1 year experience in GIS & remote sensing, particularly analyzing satellite imagery
- Experience using submeter precision GNSS for the creation of highly accurate spatial data sets
- Experience piloting drones with experience conducting mapping surveys
- Ability to conduct field work in forest settings as deemed necessary
- Experience working for conservation NGOs or with applications in the forest sector
- Knowledge of conservation and community development issues in developing countries
- Knowledge of Google Earth Engine, Python, JavaScript, or other coding languages
- Experience with SMART database management and patrol data handling