



Vacancy for GIS and Remote Sensing Specialist

Ya'axché is seeking the services of a GIS and Remote Sensing Specialist. This application pack contains a Terms of Reference (three pages). Please read these documents carefully! Note that this is a full-time position.

To apply, please send a copy of your **CV (no more than two pages)** and a **one-page letter** outlining your interest in, 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 **August 31, 2022**. We look forward to hearing from you.

Yours sincerely

Christina Garcia
Executive Director
Ya'axché Conservation Trust

Position: GIS and Remote Sensing Specialist

Job Description : As of July 20, 2022

Location: Punta Gorda Town Toledo Belize

Length of stay: 1-year contract (possible extension; probation period 3 months)

Salary: Dependent on qualifications and experience

Work Schedule: Full time (Monday – Friday, 8:00am – 5:00pm) including weekends as required

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 GIS and Remote Sensing Specialist is responsible for the analysis of satellite data and preparation of annual Land Use & Land Cover (LULC) change report, monitoring and reporting of Maya Golden Landscape (MGL) fires through the Fire Information for Resource Management System (FIRMS), development of remote sensing assessments for forest connectivity in southern Belize and continued support for the implementation of the Spatial Monitoring And Reporting Tool (SMART) within the protected areas program. 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. The specialist will ensure efficient data management through the establishment of a GIS database and providing technical support to field teams for mapping exercises including ground-truthing. All mapping tasks include but are not limited to the creation of new maps and updating current maps.

The GIS and Remote Sensing Specialist 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
- Staff and Board members

Key areas of responsibility

- Land Use and Land Cover (LULC) change analysis and related remote sensing assessments
- GIS database development and management
- Field mapping with the use of GPS/GNSS, drones and other forms of mapping technology for all program areas

Accountabilities:

1. Identify and gather satellite data from adequate sources for land use change monitoring

2. Conduct LULC change analysis in the MGL through remote sensing and other means
3. Creation of annual internal report on LULC
4. Conduct a fire risk analysis and report for the MGL
5. Identify areas of concern with respect to land use changes to provide adequate support to farmers and field staff
6. Conduct ground-truthing and verification of remote sensing analysis and results where applicable
7. Exploratory analysis for forest connectivity in the MGL with a focus on structural and functional corridors
8. Provide technical support for upgrades and continued development of the spatial components of SMART used under the Protected Areas Program and Science Program
9. Develop and maintain Ya'axché's GIS database
10. Continuous updating and creation of raster and vector files related to all aspects of protected areas, research and monitoring and community work at Ya'axché
11. Implement GPS and basic GIS use training for Ya'axché's field staff as identified by needs assessments.
12. Provide support for field mapping exercises in protected areas and farmlands
13. Employ the use of drones in mapping and other GIS related applications at Ya'axché
14. Creation and updating of maps for multiple uses as the need arises
15. Represent Ya'axché at national GIS and remote sensing related events
16. Other tasks that may arise from time to time at Ya'axché

Outcomes to be achieved by the position:

Outcomes	Indicators
<p>1. Land Use Land Cover Change</p> <p>Timely collection, collation and analysis of satellite data and other datasets which results in reliable remote sensing analysis that allows for objective and evidence-based recommendations for resource management in the MGL.</p>	<ul style="list-style-type: none"> • Annual LULC report for the MGL with recommendations and implications for management action. • Annual fire risk assessment for the MGL with recommendations and implications for management action. • 1 exploratory analysis for forest connectivity within the MGL
<p>2. Spatial Monitoring and Reporting Tool</p> <p>Effective and Efficient SMART database management and implementation. SMART database, maps and geospatial components updated regularly on a fixed schedule.</p>	<ul style="list-style-type: none"> • SMART's spatial components both at the database and field collection level are up to date and taking advantage of new developments from the SMART Community.

3. GIS data management and field mapping support

A well-functioning GIS and remote sensing framework supporting Ya'axché's protected areas management, science and community outreach and livelihoods programs. GIS database is updated and maintained regularly on a fixed schedule. Trainings in GPS and GIS use for all field staff. All mapping exercises are guided by adequate technical support. All relevant maps are updated and published internally once a year

- Ya'axché's GIS database is maintained and kept relevant with up-to-date advancements in GIS technology and methodology
- 1 training in GPS use for relevant staff
- 1 training in basic GIS use for relevant staff
- Mapping exercises lead to the creation and updating of essential map products for Ya'axché's programs

4. Other

Continued employment of the use of drones in conservation and biodiversity monitoring

- Exploring the use of drones in forest cover monitoring
 - Exploring the use of drones in biodiversity monitoring
 - Exploring the use of drones for enforcement and compliance activities
 - Continued drone piloting training for field staff
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Qualifications:

- Minimum Bachelor's Degree in relevant subject area (Geography, GIS, Remote Sensing and related fields)
- 2-3 years' experience in remote sensing, particularly analyzing satellite imagery
- Proven record in technical writing and data analysis
- Experience using ArcGIS and/or QGIS and remote sensing software and platforms, such as Google Earth Engine, ERDAS, ENVI or others
- 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
- Must be willing to relocate to Punta Gorda Town if not from the Toledo District

Desired:

- Masters/postgraduate degree in GIS and/or remote sensing
- Experience using drones, GPS/GNSS for the creation of spatial data sets
- 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, JavaScript, or other coding language