Distant Imagery Solutions

Understanding Through Imagery

Terms of Reference

GIS Support Needs

www.distantimagery.com

Can be remote or locally for from UAE

Project dependent support on ad-hoc basis

Renumeration by deliverables and based on experience

KEY TASKS

Under the general supervision of the PM, the GIS officer will:

- provide GIS services to develop a database plant species types using drone images captured with multispectral and RGB cameras as well as handheld spectrometers (data captured by field teams).
- Develop methodologies for importing image and spectrometer data into GIS software to develop maps using layers to identify the health of the plants as well as to identify species type.
- Develop a methodology to assign metadata (location, name, data, time, weather conditions, spectral data) to individual images
- Develop a script to automate workflows

- Develop a methodology and script to “calibrate” aerial multispectral data against ground data to account for weather conditions (dust, humidity, etc) to allow for higher accuracy in health and species assessments
- compile a spatial database of project sites using different methods of Remote Sensing and GIS;
- develop guidelines for field data collection including the use of Geographic Positioning System (GPS), GIS including the use of Google maps;
- produce maps of project sites;
- prepare metadata and other documentation for each of the datasets that will be stored in the database;
- Identify and develop new methods of data compilation, data logging and analysis, using new database systems such as smart phone, online tools and websites.
- Provide advice on appropriate GIS, spatial analysis and database software, to ensure that the software used is of the appropriate standard.
- Provide GIS support to the project, including development of thematic maps, such as species distribution, change over time, health, and forest cover.
- Support the analysis of remote-sensing data (e.g drone images) in order to assess health and health change in the target landscape.
- Develop ground –truthing methodologies as needed for field staff, in order to verify the maps and spatial analysis produced and to determine levels of accuracy.
- Performs other related tasks as demanded by the project manager.

COMPETENCIES

- Strong background in using ERDAS, ENVI, ArcGIS, QGIS and CollectEarth;
- Experience with maintaining databases of spatial information, GIS/GPS shape
- files is essential;
- Experience with remote sensing, forest inventories or assessments;
- Extensive analytical and practical experience in land survey and Geographical Information Systems (GIS) tools and others;
- Experience using Collect Earth and Open Foris, R and Java tools is desirable;
- Understanding of and/or willing to learn statistical analysis;
- Excellent verbal/written communication skills;
- Good writing skills-for documentation, training, processes;
- Good analytical/problem solving skills;
- Good IT technical skills.

- MSc. Degree in GIS/Remote Sensing, geoinformatics or in related fields or bachelors with proven experience
- 3 to 5 years of experience in the field of GIS/RS with preference towards the application of Natural Resource Management.
- A background of plant health and species identification will be an added value;

Reporting and Performance Monitoring

- The GIS officer will report directly to the project manager and will prepare a complete work plan with a timeframe and outputs. Performance on the workplan will be assessed on a project basis