

ABSTRACT

The main goal of this project was to conduct a vegetation survey using the major aspects of a Rapid Ecological Assessment (REA); particularly its field surveying, remote sensing and environmental analyses. The adapted REA was used to classify and describe the terrestrial vegetation types of an area encompassing the Black River Upper Morass (part of a Ramsar protected area) and the Nassau Mountains. The primary field-sampling methodology used was the Line Intercept Method (a procedure not previously employed in Jamaican REA projects). From this the other objectives of the study were realised. These were, firstly, the characterisation and assessment of the flora and environment of the area in order to build upon past vegetation data collected. Secondly, the interpretation of past and present imagery data to determine and illustrate the extent to which the vegetation composition of the area has changed from 1981-1999. Finally, the conducting of a Threat Assessment, an important aspect of an REA which aided in determining the stresses and stressors impacting within and upon the environment.

In order to achieve and investigate these objectives an approach was developed based on the REA field and production procedures. This involved image processing and classification, field surveys, in-house or laboratory methods and further analyses involving comparisons of recent aerial photographs with historical imagery.

Success was achieved in assessing and characterising the flora of the study area. Three main terrestrial vegetation types were defined exhibiting various stages of disturbance. These were, the Evergreen Seasonal Forest, Partly Deciduous Thorn Thicket and Tall-herb Savannah. In light of previous inadequacies in terrestrial (non-palustrine) vegetation description, the data collected, the maps produced and the evaluation of threats within this study may be considered sufficiently extensive to form important baseline data for future studies in the area and elsewhere.

Key Words: REA; GIS; Satellite Imagery; Line Intercept Method; Black River Upper Morass; Nassau Mountains; Vegetation Assessment.