

Topographical Sheet Updation Project

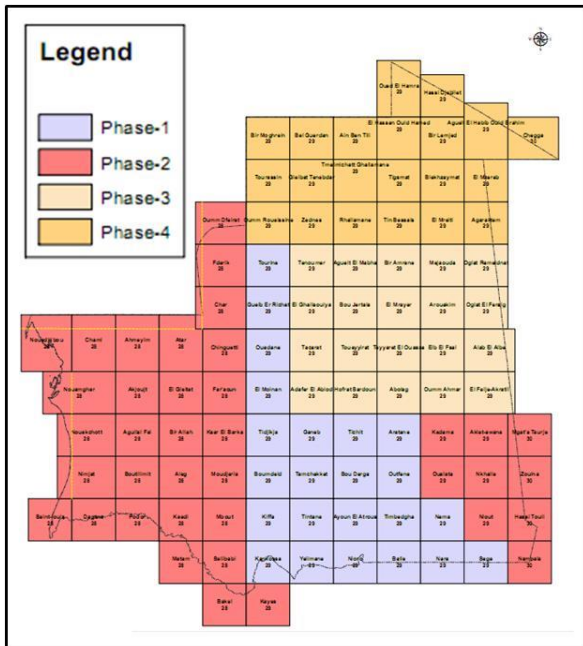


Figure1. Study Area

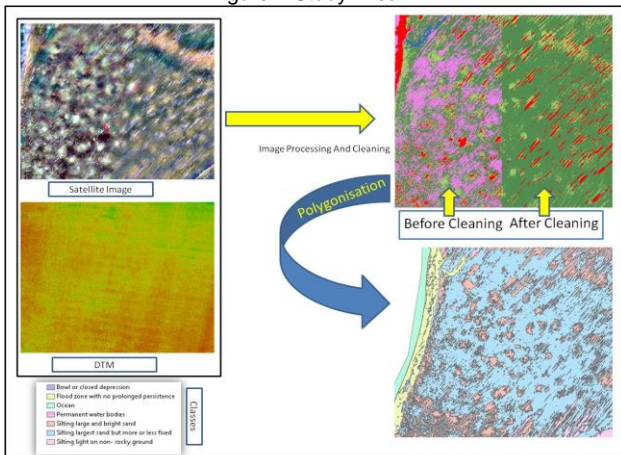


Figure2. Cleaning and Map creation Process.

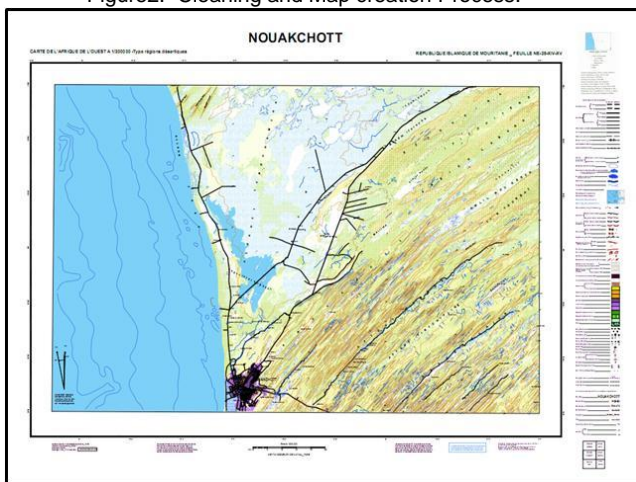


Figure3. Updated Topographical Sheet

Business Need:

A topographic map is a detailed and accurate graphic representation of cultural and natural features on the ground. These topographic maps are a national resource in modern nations in planning infrastructure and resource exploitation.

However, the existing topographical sheets for Mauritania were 30 to 40 years old and did not represent the existing actual scenario. Demands and requirement of developmental activities for a country is very much time specific, meeting the requirement of present as well as future so the topographical map should reflect the Topography in that context and hence it must be updated.

The Business need was to update the existing topographical sheets with taking the reference of recent satellite images and Digital Terrain Model .

Inputs Used:

- Latest Ortho rectified Satellite Image with 5 m resolution
- Existing Topographical Map Sheets
- Digital Terrain Model
- Map Index Files

Business Solution:

Building and Habitation were identified and captured manually from the Ortho-rectified Satellite images through heads-up digitization. Transportation network was captured as line feature and categorized into different categories.

Hybrid classification was performed to get most of the land features. Thorough data cleaning and appropriate data filtering process was applied to extract and represent the land-use\land-cover of the area. Features were topologically cleaned.

Hydrographic features were captured from the satellite image. Contours extracted from DTM were modified to align with the hydrographic features. Edge matching was done among the adjacent sheets for all the feature classes and contours.

Map Layout was created as per the layout plan agreed with the client. Finally all the features were arranged according to the GIS Data model provided by the client.

Project Shipment:

The following shipments were made-

- i) Map Layout (.mxd format)
- ii) Geo-database
- iii) Updated Topographical Sheet (PDF)