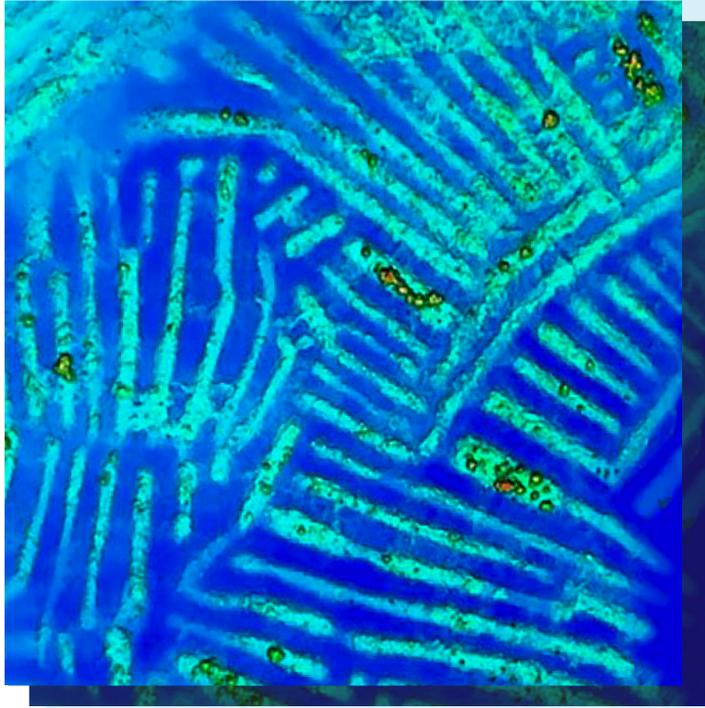


In Colombian folklore, La Mojana is a shapeshifting water spirit, embodying the essence of rivers

February 2019



Lidar scan of La Mojana region visualized by height above ground, highlighting agricultural engineering

Project Introduction

GEO1 acquired data of La Mojana, a remote floodplain in Colombia, which revealed settlement patterns of an ancient civilization. Furthermore, the area's lack of roads and tendency to flood was an additional logistical hurdle to overcome. Researchers coordinating the study sought to demonstrate the effectiveness of lidar in archaeological sites that lacked dense forest cover or major structural remnants.

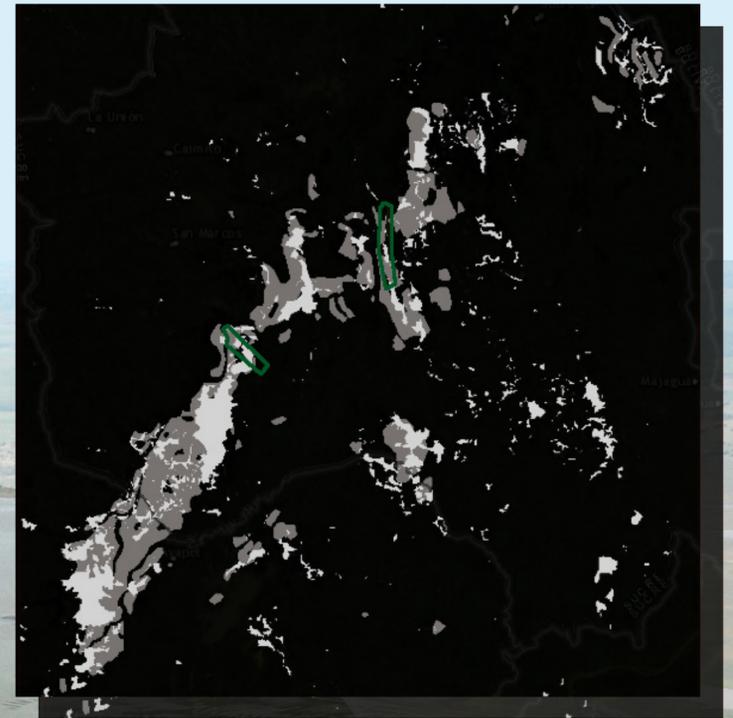
The data GEO1 provided was used to build upon historical surveys of the area to identify key areas in La Mojana that had been excavated and settled upon by ancient cultures. The data also served as foundational evidence in demonstrating the complexity of ancient populations and their relationship with the land, as well as the power and versatility of lidar in archaeological studies.

Innovation

The isolated location of La Mojana necessitated careful planning to complete an efficient flight, ensuring sufficient time for acquisition without compromising data quality.

To prevent gaps in the lidar data when scanning the wetland, the flight crew worked with researchers to identify survey sites where bare earth was visible and flooding was minimal, which would then be used as the AOIs throughout the study.

To further maximize data quality, GEO1 employed a custom dual sensor configuration. Multiple sensors oriented at varying angles allowed for denser lidar data capture and created a greater likelihood that subtle changes in the landscape could be captured, even through dense grasses.



Dark gray indicates the suspected raised field coverage; light gray represents area post remote sensing analysis; green outlines AOIs



Digital Elevation Model of the AOIs displayed in Red Relief to better illustrate the raised fields

Mounted custom dual sensor



Foundations of ancient dwellings were also recognized in lidar

8° 33' 23.21"

