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# Light Detection and Ranging (LiDAR) – A Boon for Climate Change Adaptation

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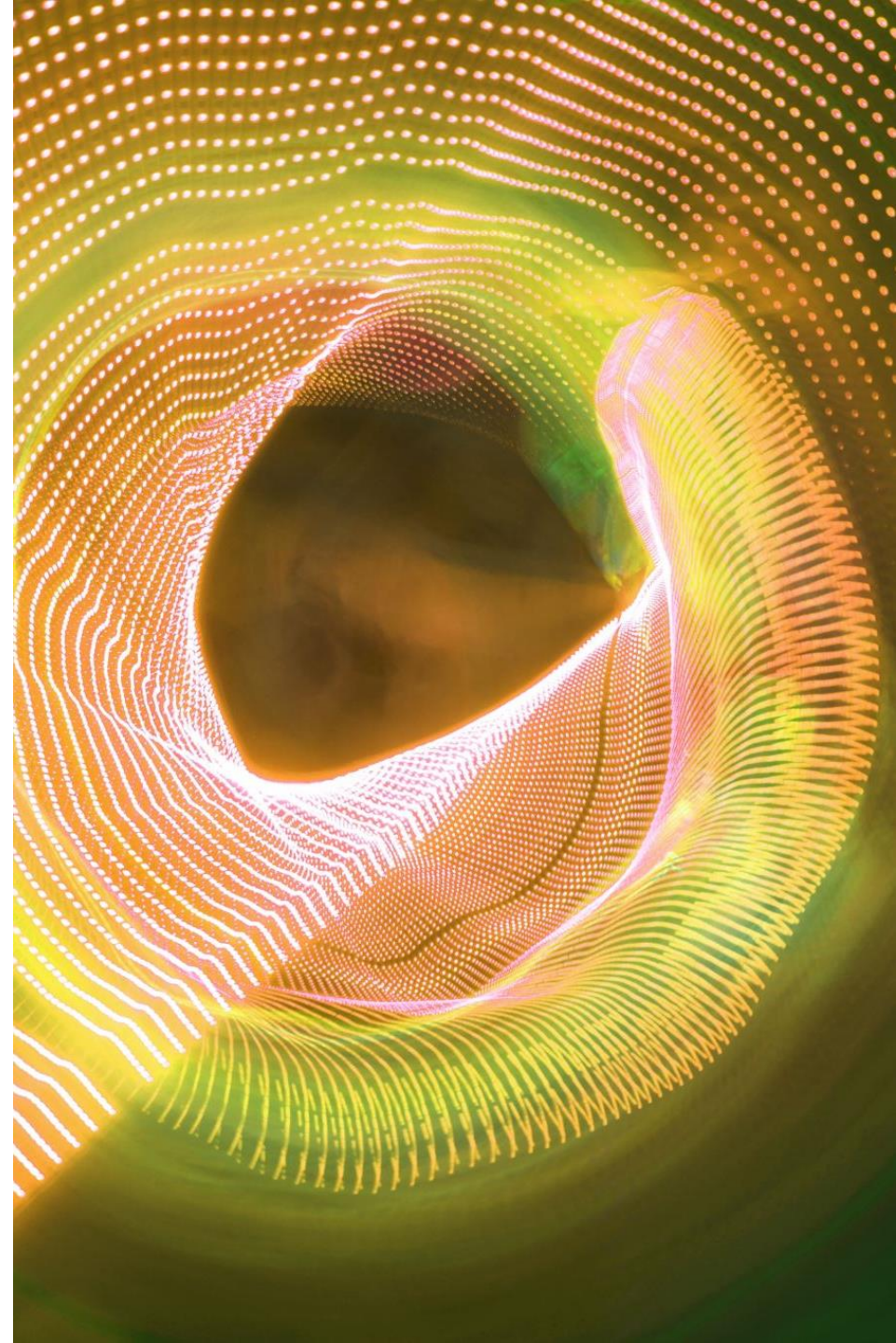
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# How LiDAR Came About



- A grant from the USAID in 2019
- Discussions and decisions to purchase a LiDAR scanner
- Sought to work a relationship with Maya Island Air
- Did one job and then there was a pause because of COVID 19 and other realities
- Went with Leading Edge Geomatics – that fell through
- Now partnering with Quantum Spatial Canada, a Subsidiary of NV5 Global



## What we Did

- The Centre obtained a grant from the Caribbean Development Bank (CDB) to survey all 19 Borrowing Member Countries (BMCs)
- Only 10 signed the Project Participating Agreement (PPA)
- The PPA sets out the conditions, which is largely to facilitate internal assistance
- We took about 6-7 months to agree on a formula to partner with QSI
- QSI have since sub-contracted KASI Aviation Services to complete the data capture



## What has happened to date

- Ten (10) countries are participating
- We surveyed Barbados, Tobago, Suriname, Guyana, Antigua and Barbuda, St. Kitts, Saint Lucia, Turks and Caicos, and Belize
- St. Vincent and the Grenadines remains to be completed
- We are receiving good support from the Governments
- Thereafter, we will process the data and deliver the products

# LiDAR and Climate Change

- What is Climate Change and Why does it matter
  - Seek to mitigate the effects of climate change
    - Reduce emissions
  - Let us adapt through putting in place that which matters most
    - Grey solutions
    - Nature base solutions
    - A combination of the two
  - Let us seek to avoid losses and damages
    - These are outside of adaptation – somethings we cannot adapt to
  - Build a better future

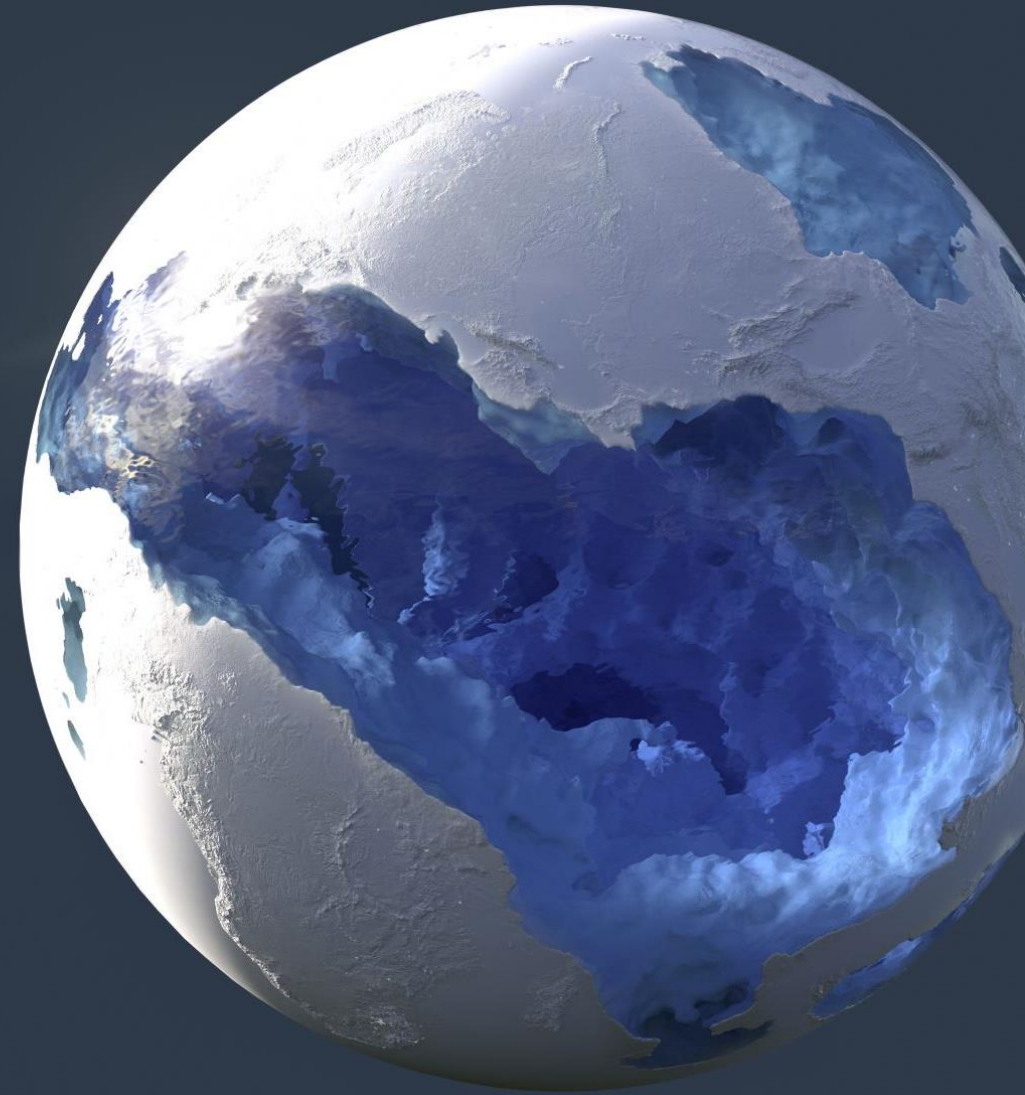


# New Developments

- The Centre entered into an Agreement with Global Affairs Canada in April 2023 and with the USAID in May 2023
- They received grant funds to survey 7 countries under Global Affairs Canada and 9 under USAID
- Some countries will overlap
- Commenced on the 11 February 2024 with data acquisition
- Thus far we have completed 7 countries and we are presently in Barbados
- Most of the countries are seeking to collect the GCPs post survey

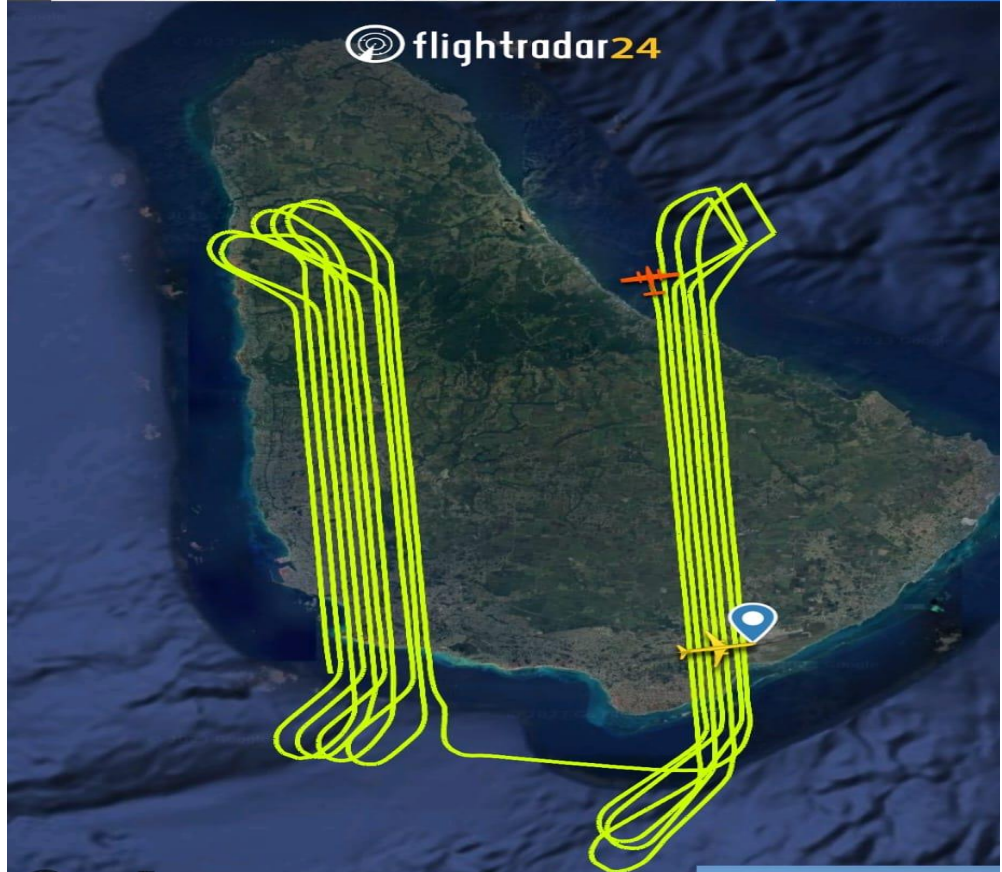
# Benefits of LiDAR

- Near shore bathymetry
- Digital Elevation Models
- Bare earth models
- Conduct contour and elevation mapping
- Use data for adaptation planning and building projects
- Help to determine land use planning
- Help us to understand what not to do



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## CARICOM Next Steps: Building the National Capacities for using LiDAR Products

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- Ensure that we are not satisfied with getting the products
- Use the products for planning purposes
- Expand the uses of LiDAR application
- Continue to build the human resources for using this technology

# Thank You!

## *Let's Connect!*

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