Coastal Habitat mapping using UAVs; a tool for enhanced Protected Area Management in the Buccoo Reef Marine Park, Tobago

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Effective management of Marine Protected Areas requires the usage of technology to assist with the monitoring and evaluation of ever-changing conditions, in the marine environment. UAVs or drones have been identified as potential tools to aid in coastal habitat mapping. When compared to underwater field surveys, UAVs had an 89.7% accuracy rate. Given that consumer-level drones can be utilised UAVs should be considered as a cost-effective and efficient method of marine habitat monitoring in Trinidad and Tobago, as well as the wider Caribbean Region.

UAVs have the potential to transform monitoring operations from labour and time-intensive programs, into a singular flight operated by a small team. UAV usage is not without its drawbacks, as factors such as heavy wind speeds and poor water quality can lead to inaccurate results and drones capable of longer flight times, usually come with hefty price tags. Furthermore, GIS comprises a major part of UAV image analysis, thus research teams need to be equipped with the relevant software and persons highly skilled in its usage.

Whats Next:

Drone and UAV usage is still considered a novel technology in Trinidad and Tobago, as well as throughout the Caribbean, despite rapid advancements within the last few years. Training and usage of drones and relevant software need to be scaled up significantly in order for the Caribbean to reap the benefits of a game-changing technology.