# MAPPING MARINE HABITATS FRÔM OUTER SPACE TO UNDERSEA

## **DOVE SATELLITES**

Constellation of satellites capturing images across ~60 million mi<sup>2</sup> of the Earth's surface per day

#### **GLOBAL AIRBORNE OBSERVATORY**

Aircraft with a high-tech spectrometer GEO Global Airborne Observatory capturing images across an area the size of ~135,000 football fields per day

### **AERIAL DRONES**

Vehicles that fly over the ocean capturing images across an area the size of ~700 football fields per day

## SUB-SURFACE IMAGERY

**Divers and underwater drones** capturing images across an area the size of <1 football field per day

- Creates maps of coral reefs and other habitats across the Caribbean at a pixel size of 150 ft<sup>2</sup> **Guides optimal marine protected area design** and management planning
- Creates 3D habitat models at a pixel size of .1 10 ft<sup>2</sup> and reveals % live coral and algal cover Identifies sites that can improve survival rates a a a of outplanted corals
- Creates 3D habitat models at a **pixel size of 1 in<sup>2</sup>** and reveals individual coral species type **Evaluates the impact of protection and restoration** - An efforts on coral cover and reef complexity
  - Creates 3D habitat models at a pixel size of .01 in<sup>2</sup> and reveals coral health and growth rates **Determines if individual coral colonies are thriving** and creating habitat for marine life



#### Using revolutionary remote sensing technologies to advance large-scale coral reef and coastal conservation

#### WHAT DO THE MAPS ALLOW US TO DO?

#### WHO USES THESE **HABITAT MAPS?**

• Conservation scientists and practitioners • Marine protected area and fishery managers

• Hotel and tourism associations

International governments

Educational institutions



 Promote effective marine spatial planning and management of protected areas

• Quantify the economic and protection value of marine habitats to support policymaking

 Determine sites for nature-based, climate resilience solutions for coastal communities

 Identify areas for urgent coral restoration, including sites that improve survival rates

• Catalyze conservation action and education by making vital habitat data readily available

