

Coral Mapping: Conservation from a bird's eye view

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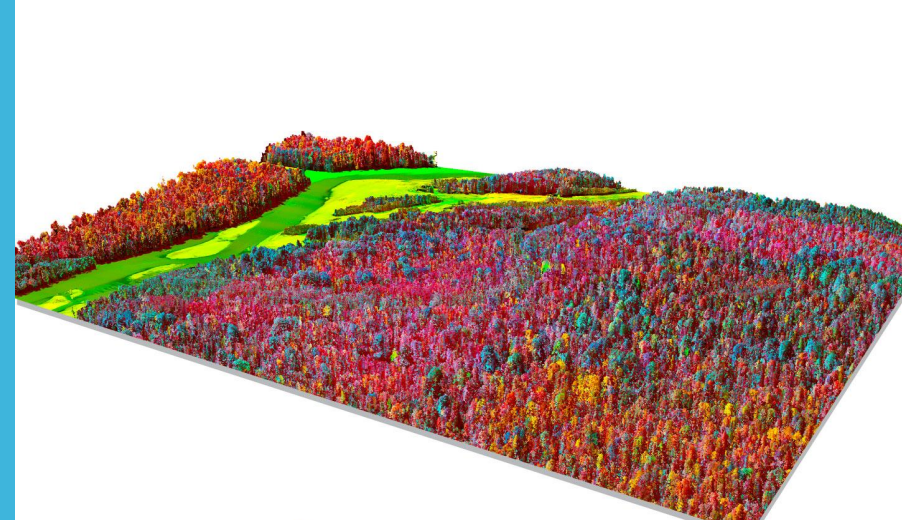
Photo retrieved from New Scientist

Main Ideas

Arizona State University mapping coral cover over Hawaii in the Global Airborne Observatory plane (top right).

Used initially to map forests (bottom right) they collect high resolution data of corals to compile their **location, type and health**.

Live coral locations provided by mapping will aid in the creation of **specific strategies** to protect and restore corals.



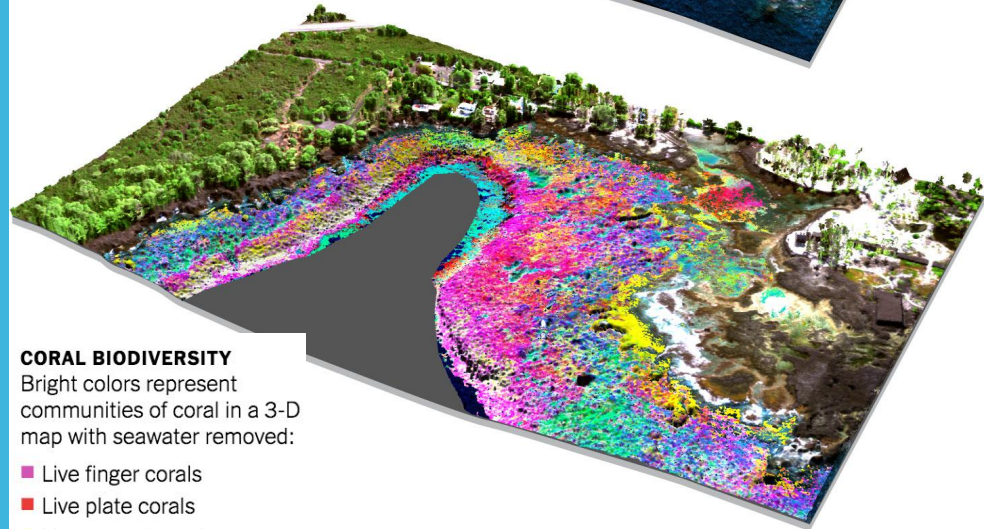
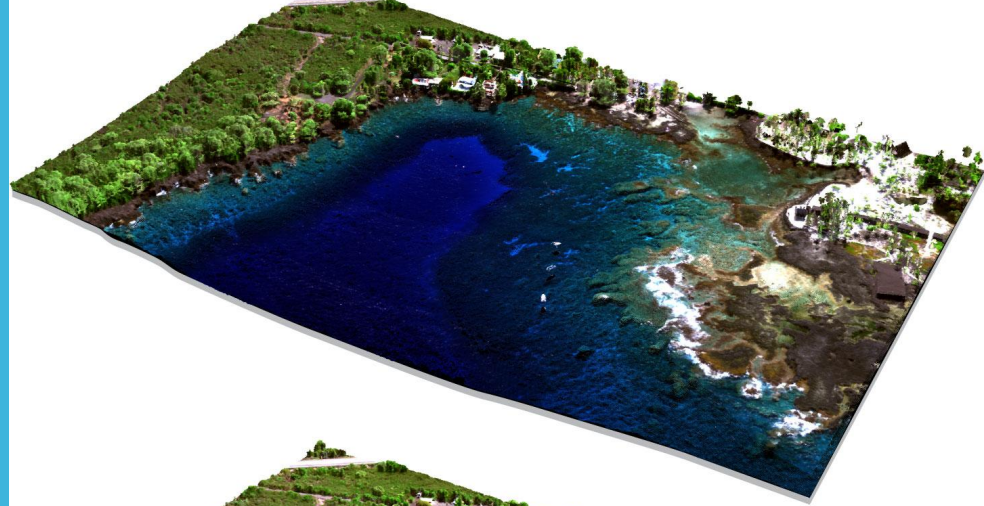


Ecological Impacts

This approach gives a new view of reefs showing **where live and dead corals are**, as well as the structural type of coral present.

Hawaiian corals experienced **marine heatwaves & coral bleaching** events → mapping shows where to establish **protection**

Indicates regions of coral survival (yay!) called **refugia**, where corals may be more resilient. → **prime location for coral conservation.**



Social Impacts

This mapping information is used by **partner organizations & policy makers** for protection, restoration activities (top right) and public engagement.

Increased protection of reefs will allow for greater sustainability of local fisheries through recovery of fish nurseries.



Photo retrieved from New York Times



**7-3-18 GOVERNOR IGE
SIGNS SUNSCREEN BILL
INTO LAW!**

Photo retrieved from Ban Toxic Sunscreens

Economic Impacts

Coastal developments (**resorts, housing**) in Hawaii lead to pollution and reef removal.

Mapping costs < **\$4 USD** per hectare for shallow reefs.

Reefs carry an economic, natural, & cultural value of about \$1 billion USD per year. → large-scale coral mapping is **economically beneficial** to conduct!

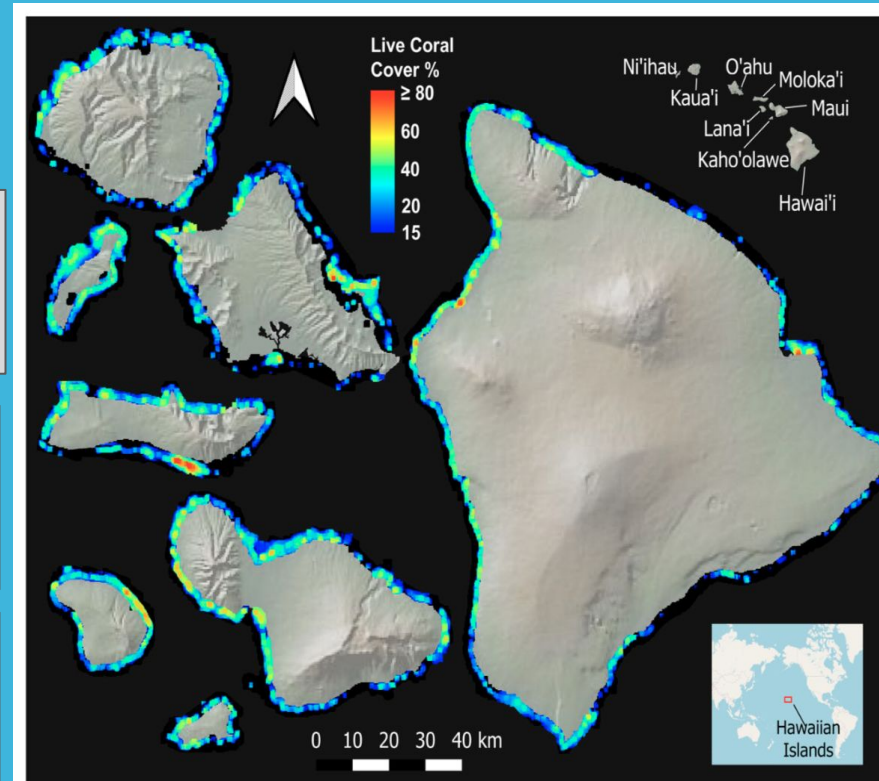


Fig. 1. Percent live coral cover at 2-m spatial resolution to 16-m depth for the eight Main Hawaiian Islands.

An aerial photograph of a tropical coastline, likely Hawaii, showing a mix of green hills, sandy beaches, and vibrant turquoise coral reefs. A large propeller airplane is flying in the upper left quadrant, its propeller blurred from motion. The sky is a clear, deep blue with some light clouds. The overall scene is bright and scenic.

If you want to learn more about how cool corals are...

- Chasing Coral on Netflix (highly recommend)
- Hawai'i Reef & Ocean Coalition
- Coral Reef Alliance
- “Cnidariology” Ologies Podcast

References

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