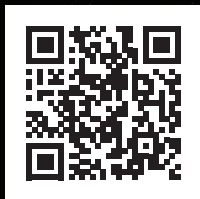


MANAGING RESOURCES WITH ICESAT-2

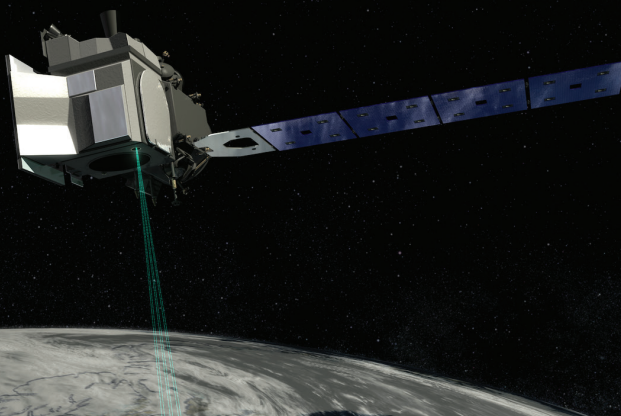
The Ice, Cloud, and land Elevation Satellite-2 (ICESat-2) measures the height of ice, vegetation, land, and water on Earth's surface.

The Advanced Topographic Laser Altimeter System (ATLAS) operates a green laser split into six beams that collect precise height measurements.

Resource managers use ICESat-2 and other space-based observations to help develop clean energy sources, monitor freshwater sources, and more.



ICESat-2



AERODYNAMICS FOR WIND ENERGY

The surface texture of a site affects its wind flow and therefore the efficiency of its turbines. Kenneth Grogan from the DHI Group utilizes ICESat-2 data to pinpoint optimal turbine locations based on topography.



HYDROELECTRIC POWER

Reservoirs are essential for supplying freshwater and producing hydroelectric power, and many of them are fed by melting snow and ice. Andri Gunnarsson at the National Power Company in Iceland uses ICESat-2 data to estimate snowpack size and forecast the amount of meltwater for hydroelectric power applications.

SOCIETAL BENEFITS AND IMPACT OF ICESAT-2: WATER BODIES



Landsat 8 image May 3, 2023, Malawi

Monitoring lakes, rivers, and other water bodies is crucial for comprehending the freshwater resources. ICESat-2's inland surface water product is used to monitor water levels of inland rivers and lakes. Charon Birkett of NASA's Goddard Space Flight Center in Greenbelt, Maryland uses ICESat-2 data to track water levels in high latitude lakes and rivers.

At the company Water in Sight, Guy Schumann and Louise Croneborg-Jones use ICESat-2 satellite data, along with ground observations from local volunteers, to monitor and track river levels and rainfall in Malawi.

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