

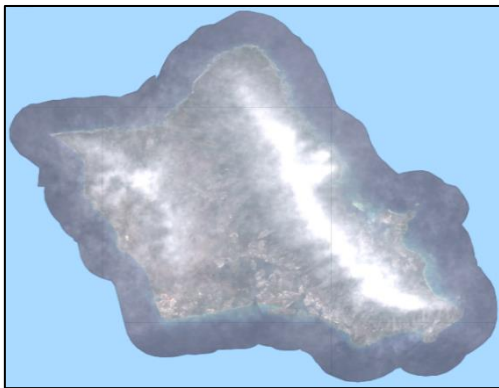


HAWAIIVIEW 2019 - 2020



HAWAIIVIEW 2019 - 2020 ACTIVITIES

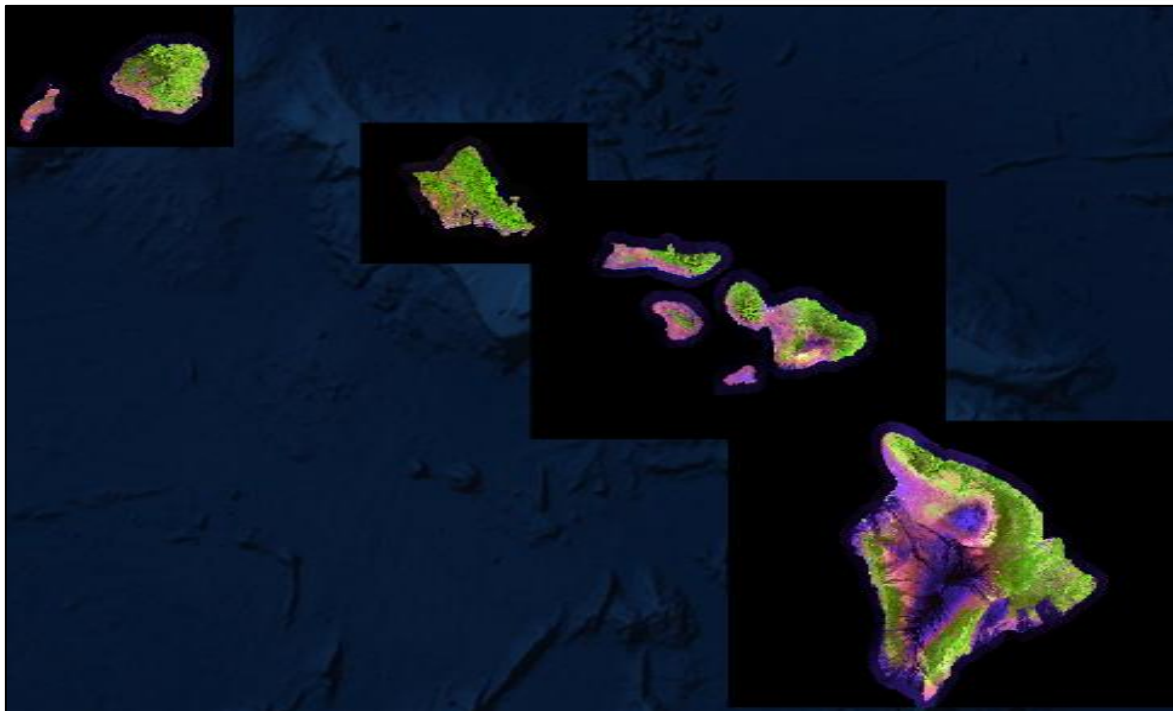
In Hawaii, satellite remote sensing has been challenged by persistent cloud coverage, making it incapable of monitoring the rapid environmental changes happening in the islands. Our analysis of all Landsat-8 imagery since 2013 over Oahu showed that 98% of scenes have cloud cover of more than 20%, with the average cloud cover being 62% and only one scene of <10% cloud cover. HawaiiView overcame this significant challenge by producing the HiMACC (Hawaii Moving-average Cloud-free Composite) dataset using the Landsat-8 imagery from 2013-2020. A total of 24 cloud-free top-of-atmosphere (TOA) reflectance images over six different years (2014-2019) in five counties were created for public access (see <https://bit.ly/2ILmzJo>) and ready for environmental analysis.



Persistent cloud over mountain ridge in Oahu



Example of true-color cloud-free mosaic for Oahu



Example of false-color Landsat-8 cloud-free composite Imagery for the whole State: 2013-2015

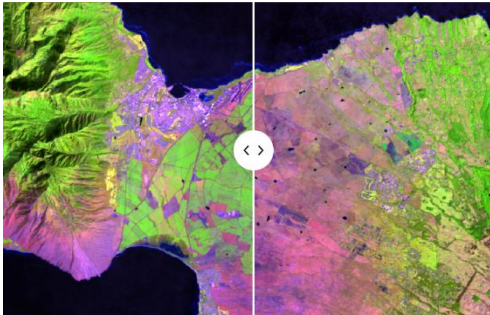
HawaiiView is a member of the AmericaView Consortium, a nationally coordinated network of academic, agency, non-profit, and industry partners and cooperators that share the vision of promoting and supporting the use of remote sensing data and technology within each state. AmericaView is funded by USGS grant agreement G18AP00077.



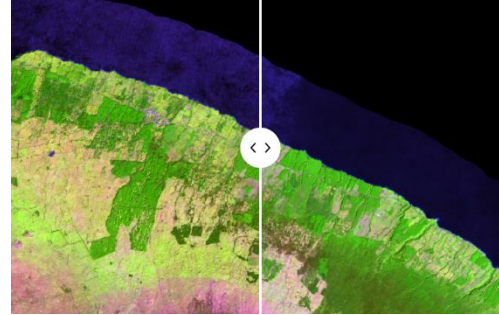
AmericaView Website:
www.AmericaView.org
Christopher McGinty, Executive Director:
chris.mcginty@americaview.org
Lisa Wirth, Program Manager:
lisa.wirth@americaview.org
Brent Yantis, Board Chair:
rodney.yantis@louisiana.edu

BENEFITS TO HAWAIIVIEW

- The most recent Landsat cloud-free mosaic in Hawaii was for 2007. In this grant cycle, we made Landsat-8 cloud-free mosaics for every year between 2014 and 2019 for the whole State.
- One Master graduate student was trained and supported for processing satellite imagery.
- This unprecedented dataset significantly enhances the value of Landsat program for Hawaii by enabling the use of satellite imagery for studying environmental changes such as urban expansion, agricultural abandonment, forest restoration, volcanic eruption, and land-climate interaction (see <https://bit.ly/2ILmzJo>).



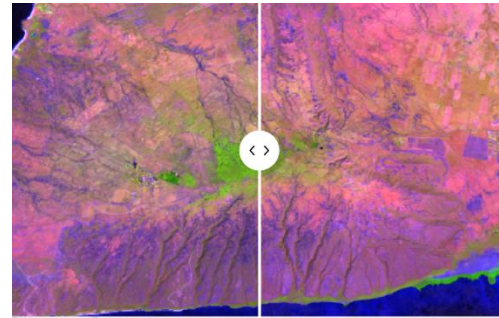
Agricultural abandonment, Central Maui



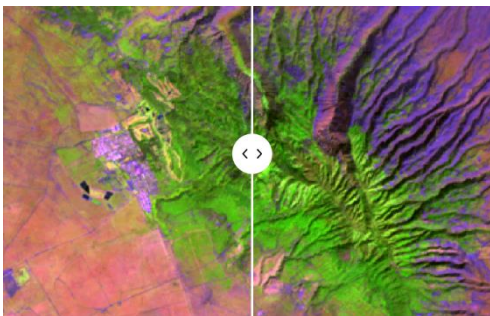
Eucalyptus tree removal, Big Island



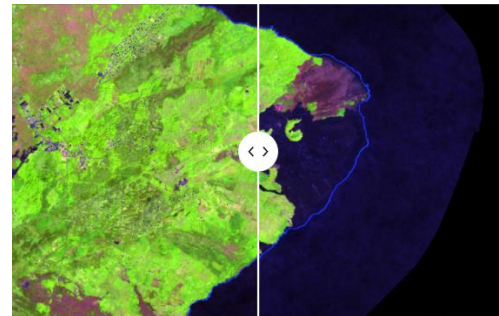
Urban expansion, West Oahu



Forest loss, Molokai



Forest restoration, Lanai



Volcanic eruption, Big Island

HawaiiView Principal Investigator:

Qi Chen

University of Hawai'i at Mānoa

(808) 956-3524

qichen@hawaii.edu



<http://hawaiiview.org>



<https://bit.ly/3lOmoex>