

# Hawaii researchers focus on data to combat Zika virus

April 5 2016, by Marina Starleaf Riker

---



In this February 2013 photo provided by the Pacific Disaster Center, Ray Shirkhodai, executive director of the Pacific Disaster Center, demonstrates how to use the mobile app, Disaster Alert, at the center based in Kihei, Hawaii. A Zika outbreak has taken hold in Latin America, but researchers thousands of miles away in Hawaii are trying to figure out where it might spread. Researchers from the University of Hawaii at the Pacific Disaster Center are working with data to show where the virus might spread, and which countries might need more help to combat it. (Pacific Disaster Center via AP)

As the Zika outbreak takes hold in Latin America, researchers thousands of miles away in Hawaii are using data to figure out where it might spread next.

In the last three months, researchers from the University of Hawaii at the Pacific Disaster Center have focused on combatting the mosquito-spread virus.

So far, the Maui-based center has worked to map the spread of Zika, which can help health officials and local governments figure out where to target mosquito eradication efforts or increase access to health services.

Gwen Tobert, a foreign affairs officer with the State Department, said they're using the center's products to follow how the Zika outbreak is developing and to better understanding how it affects communities in Latin American countries. She said their maps help officials to decide where and how to respond to the outbreak.

The World Health Organization recently declared Zika virus a "[public health emergency](#) of international concern," which is linked to birth defects and has infected thousands of people in Latin America.

Pacific Disaster Center Executive Director Ray Shirkhodai said his organization is using data that's publicly available—for instance, the number of Zika cases—as well as data on rainfall, the location of roads and airports to show where Zika could spread.



In this February 2013 photo provided by the Pacific Disaster Center, the Pacific Disaster Center's app, Disaster Alert, maps hazards like infrastructure damage in disaster zones so emergency responders can be aware of dangerous situations in Kihei, Hawaii. A Zika outbreak has taken hold in Latin America, but researchers thousands of miles away in Hawaii are trying to figure out where it might spread. Researchers from the University of Hawaii at the Pacific Disaster Center are working with data to show where the virus might spread, and which countries might need more help to combat it. (Pacific Disaster Center via AP)

They've also worked directly with governments in Latin American countries to gather information such as locations of hospitals and health care policies to figure out which countries could respond better to an outbreak. For instance, a map that charts data involving ambulance response as well as the number of available hospital beds and physicians shows Brazil could recover faster from a potential health crisis like Zika than Paraguay or Bolivia.

"The impact has been on the ground and pretty real," Shirkhodai said, adding that the center is working with government officials to figure out what other kinds of products might be useful.

In recent years, the Pacific Disaster Center has worked with agencies ranging from the Department of Homeland Security to the Department of Defense to create apps to map disasters. Their work has been used to direct international rescue efforts during disasters ranging from a 2015 earthquake in Nepal to Tropical Cyclone Winston in Fiji last month.

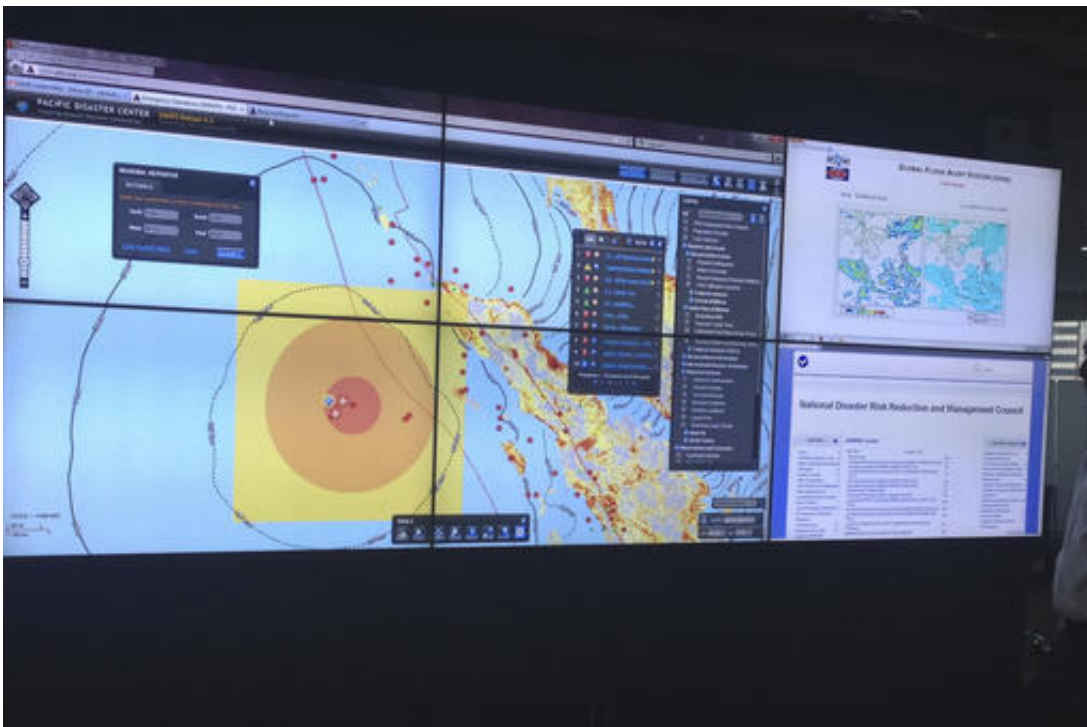


In this 2013 photo provided by the Pacific Disaster Center is the Pacific Disaster Center based in Kihei, Hawaii. The researchers at the center work to aggregate global data to track global disasters like Zika virus or avalanches. A Zika outbreak has taken hold in Latin America, but researchers thousands of miles away in Hawaii are trying to figure out where it might spread. Researchers from the University of Hawaii at the Pacific Disaster Center are working with data to show where the virus might spread, and which countries might need more help to combat it. (Pacific Disaster Center via AP)

The Federal Emergency Management Agency works closely with the Pacific Disaster Center to map storms and other hazards in the Pacific, said Susan Hendrick, an agency spokeswoman. FEMA also worked with the center to understand disasters' impact on local residents and infrastructure.

During Typhoon Haiyan in the Philippines in 2014, Brian Steckler, who recently retired as director of the Naval Postgraduate School's Hastily Formed Networks program, said the school teamed up with the Pacific Disaster Center to help set up Internet service for emergency responders. The groups also helped to map out areas where the storm had damaged Internet infrastructure and phone lines.

That information was then charted on the Pacific Disaster Center's mobile app, Disaster Aware, so emergency responders could know where potentially dangerous areas were.





In this April 2012 photo provided by the Pacific Disaster Center, The Pacific Disaster Center's app, Disaster Alert, is displayed at the Association of Southeast Asian Nations Coordinating Centre for Humanitarian Assistance in Jakarta, Indonesia, to map an earthquake. A Zika outbreak has taken hold in Latin America, but researchers thousands of miles away in Hawaii are trying to figure out where it might spread. Researchers from the University of Hawaii at the Pacific Disaster Center are working with data to show where the virus might spread, and which countries might need more help to combat it. (Pacific Disaster Center via AP)

"We also let the public use laptops to be able to reach out to loved ones and tell them they're OK, or insurance companies to tell them they have a claim," Steckler said.

The University of Hawaii has been managing the Pacific Disaster Center since 2006, and was recently awarded a contract up to \$75 million with the U.S. Department of Defense to run the center for the next five years.

© 2016 The Associated Press. All rights reserved.

Citation: Hawaii researchers focus on data to combat Zika virus (2016, April 5) retrieved 9 April 2024 from <https://medicalxpress.com/news/2016-04-hawaii-focus-combat-zika-virus.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--