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美国气象卫星监视南美洲地区自然灾害及大气情况

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The satellite aid to South America and another that was repositioned in 2003 to get a better view of Japan are NOAA's contributions to improving the Global Earth Observation System of Systems, a coalition of more than 60 countries working to unify Earth observation by 2015 and improve environmental policies around the planet.

"We hope it sets an example for South America and others to share their observations to make our total global forecasting work a little better," said Gregory Withee, assistant administrator of NOAA Satellites and Information Services. "We're all in this together ... because weather is global."

The satellites - the first GOES was launched in the 1970s - deliver both visual and infrared images, and are used to monitor storms, detect sea surface temperatures and wildland fires. They also can take cloud temperatures, show ozone distribution and track the conditions that can produce aircraft icing.

South America has received images from existing GOES-series satellites for decades, but those have focused primarily on the United States and its immediate surroundings. So whenever a storm kicks up in the Northern Hemisphere, the satellite that usually delivers images to South America at least every 30 minutes instead rapidly scans the northern trouble spot, reducing South American images to as little as once every 3 hours.

During U.S. hurricane season, this happens as much as 40 percent of the time, NOAA officials said.

In weather terms, such gaps can be an "eternity," said 1st Lt. Ricardo Valenti, who oversees a roomful of Air Force and civilian contractors tracking weather at the Argentine National Meteorological Service.

A hailstorm can develop in minutes, taking out a farmer's entire soybean crop, he said. An undetected ash cloud, expelled by a volcano during a gap in satellite coverage, can stop a jet engine over the Andes.

"We can't monitor what we can't see," Valenti said. "There's no anger. We accept that it's like this. But that's why we made the request."

Last year, South American meteorologists formally requested that the satellite be repositioned, rather than the more likely scenario of keeping it as an in-orbit spare after the launch later this spring of the 13th GOES-series satellite, which will continue monitoring U.S. storms.

Argentina and Brazil are the only South American nations with government satellites, yet they lack weather forecasting capabilities, said Conrado Varotto, executive director of the Argentine National Commission for Space Activities. Argentina's only satellite, for example, takes photos for agricultural purposes, or assesses damage after disaster strikes, he said.

AP Graphic While Russia, China, Japan and richer nations in Europe have environmental satellites, poorer regions can't afford to launch ones as capable as a GOES, which costs roughly \$400 million to put in orbit - more than eleven times the Argentine space program's annual budget.

"This is important for South America because they need data," NOAA's administrator, Vice Adm. Conrad Lautenbacher Jr., told The Associated Press. "By having continuous coverage it will help provide warnings in time to save lives and protect property."

Latin America has no shortage of natural disasters, and its recovery efforts are strapped for cash. The United States donated \$1.4 million in relief and disaster preparedness to South America in fiscal year 2005, according to the Office of Foreign Disaster Assistance.

Flooding and landslides in Venezuela, Guyana and Colombia in February 2005 killed 100 people and left tens of thousands without homes. In March 2004, what some meteorologists considered the first recorded South Atlantic hurricane ravaged the southern Brazilian state of Santa Catarina, rendering 2,000 people homeless. Venezuela's flooding and landslides in 1999, that country's worst natural disaster in decades, killed thousands.

The repositioned satellite should help provide more warning of brewing storms. But it's a temporary solution. Similar satellites have broken down unexpectedly within two years of launch,

and most have been retired after 10 years. Although the satellite destined for South America still works perfectly and has 11 more years of fuel, it was launched in 1997 and its life span is unpredictable.

Additionally, the U.S. still owns the satellite and it is subject to being moved in case another satellite fails. Still, Varotto is grateful for the satellite and NOAA's plans to shoulder the "minimal" cost of maintaining it in orbit.

"This is a typical win-win situation. For the U.S., it isn't costing them a cent more," Varotto said, "but from the point of view of the benefits to South America, it's as if the United States made the decision to earmark millions of dollars for the region."

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