National Aeronautics and Space Administration

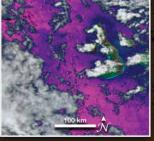


NASA Applied Sciences Program



Yellowstone - United States August 5, 1987 Upsala Glacier - Argentina April 14, 1986

km







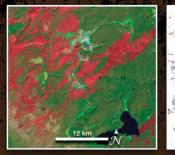
Tesso Nilo - Indonesia June 3, 1990

www.nasa.gov

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Yellowstone - United States August 2, 1989

www.nasa.gov





Tesso Nilo - Indonesia August 8, 2002

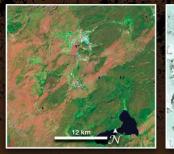
Upsala Glacier - Argentina January 14, 2001

Galápagos Islands - Ecuador June 24, 1998

National Aeronautics and Space Administration



NASA Applied Sciences Program



Yellowstone - United States July 26, 2001

Upsala Glacier - Argentina February 19, 2005

12 km

<u>100 km</u>

July 7, 1998



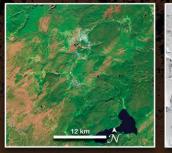
Tesso Nilo - Indonesia May 1, 2007

www.nasa.gov

National Aeronautics and Space Administration

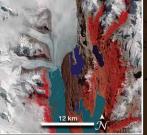


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Yellowstone - United States September 24, 2011

www.nasa.gov







Tesso Nilo - Indonesia June 21, 2014

Upsala Glacier - Argentina March 16, 2014 Galápagos Islands - Ecuador March 12, 1999





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Yellowstone. United States

In the summer of 1988, lightning and humanignited fires consumed vast stretches of Yellowstone National Park located in the United States. These images show a portion of the park prior to the burn, the scars left in the wake of the fires, and the slow recovery in the 23 years that followed. Green shades indicate forests, while red shades indicate burn scars.

Photo credit: Jeff Gunn





Photo credit: Calvoonte

Upsala Glacier. Argentina

Many glaciers around the world are in retreat due to rising global temperatures. These images of Upsala Glacier in Los Glaciares National Park. located in the Andean Mountains in Argentina, show how the glacier has retreated 7.2 kilometers (~4.5 miles) between 1986 and 2014-an average rate of approximately 260 meters (~853 feet) per year.



Photo credit: Dag Peak

Galápagos Islands. Ecuador

These images show phytoplankton blooms in the Galápagos Marine Reserve following the 1997-98 El Niño event. During the start of a La Niña (in May 1998) ocean temperatures plummeted and the ocean exploded with large phytoplankton blooms. Chlorophyll pigments in phytoplankton enable scientists to monitor blooms from space.

Chicrophyll (ma/m²)



Tesso Nilo. Indonesia

These images show deforestation (light tan shades) within the lush green tropical forests of Tesso Nilo National Park in Indonesia. Established in 2004, the park boundary is outlined in red. The biggest driver of deforestation in Indonesia is agriculture. For example, vast amounts of land are being converted to accommodate large-scale production of palm oil.

Photo credit: Jennykapau