OCEANS OF EARTH

How are our oceans changing?

Earth from MODIS Satellite

Water on Earth is very abundant—about 71 percent of Earth's surface is covered by water.

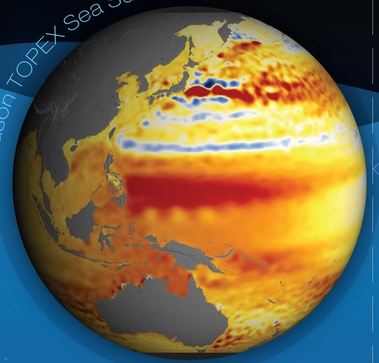
There are more than 326 million trillion gallons of water on Earth.

Earth's oceans contain about 96.5 percent of all the planet's water.

Less than 3 percent of all water on Earth is freshwater (usable for drinking).

More than two-thirds of Earth's freshwater is locked up in ice caps and glaciers.

Jason TOPEX Sea Surface



Changing sea levels will affect everyone on our planet, and NASA has been monitoring these trends for decades.

As global temperatures increase, the ocean responds by expanding.

Factoid: Ocean levels are currently rising at the rate of 0.13 inches per year.

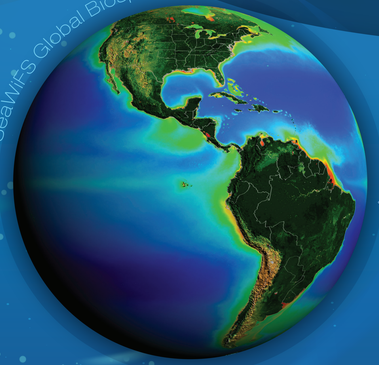
The Greenland ice sheet is melting at the rate of 287 billion tons a year, and the Antarctic ice sheet is losing 134 billion tons a year. Both will be factors in sea level rise.

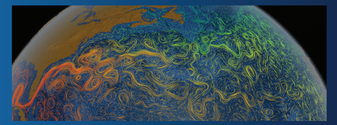
22-year Sea Surface Height Change

-2.76 0 (in) +2.76

Monitoring Our Oceans

SeaWiFS Global Biosphere



Earth's oceans are teeming with life, which creates changes in ocean color that are visible from space. Tiny plants, phytoplankton, bloom for hundreds of miles, coloring the oceans and giving us clues about complex marine ecosystems.

Driven by wind, temperature, salinity, and other forces, currents on the ocean surface cover our planet. Some span hundreds to thousands of miles across vast ocean basins in well-defined flows. Others are confined to particular regions and form slow-moving, circular pools. This visualization is based on data collected during field observations and by NASA satellites.