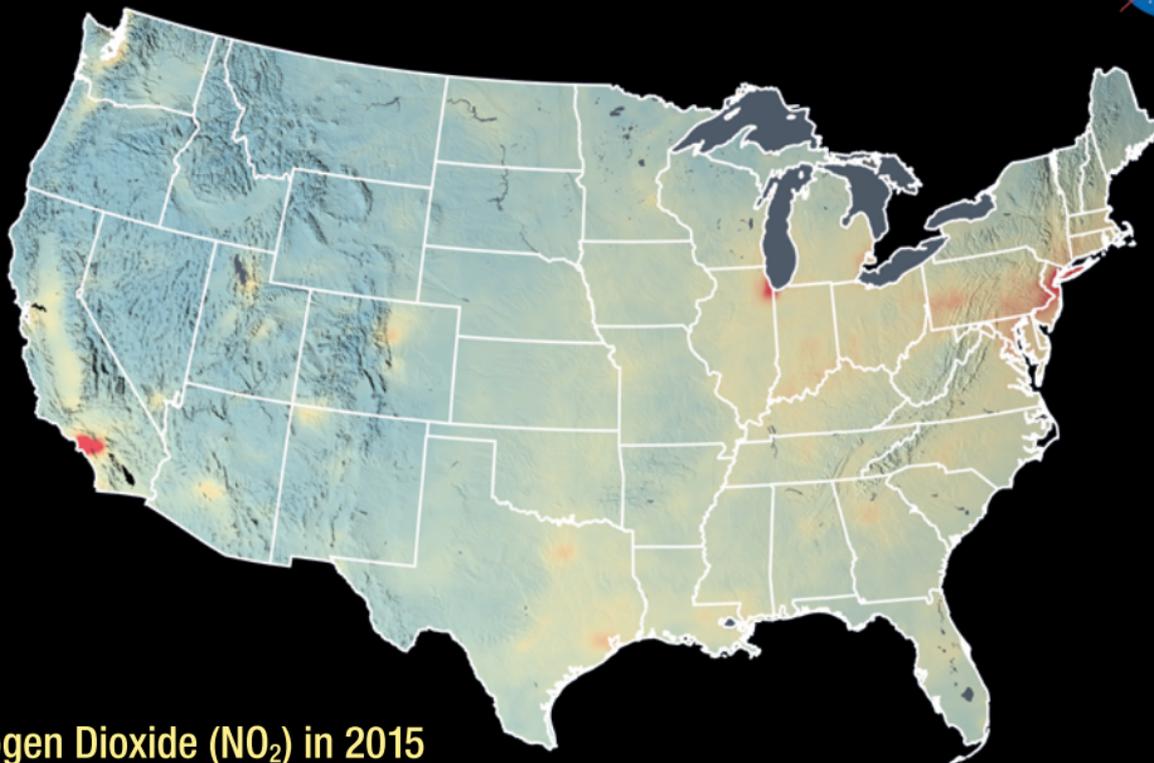
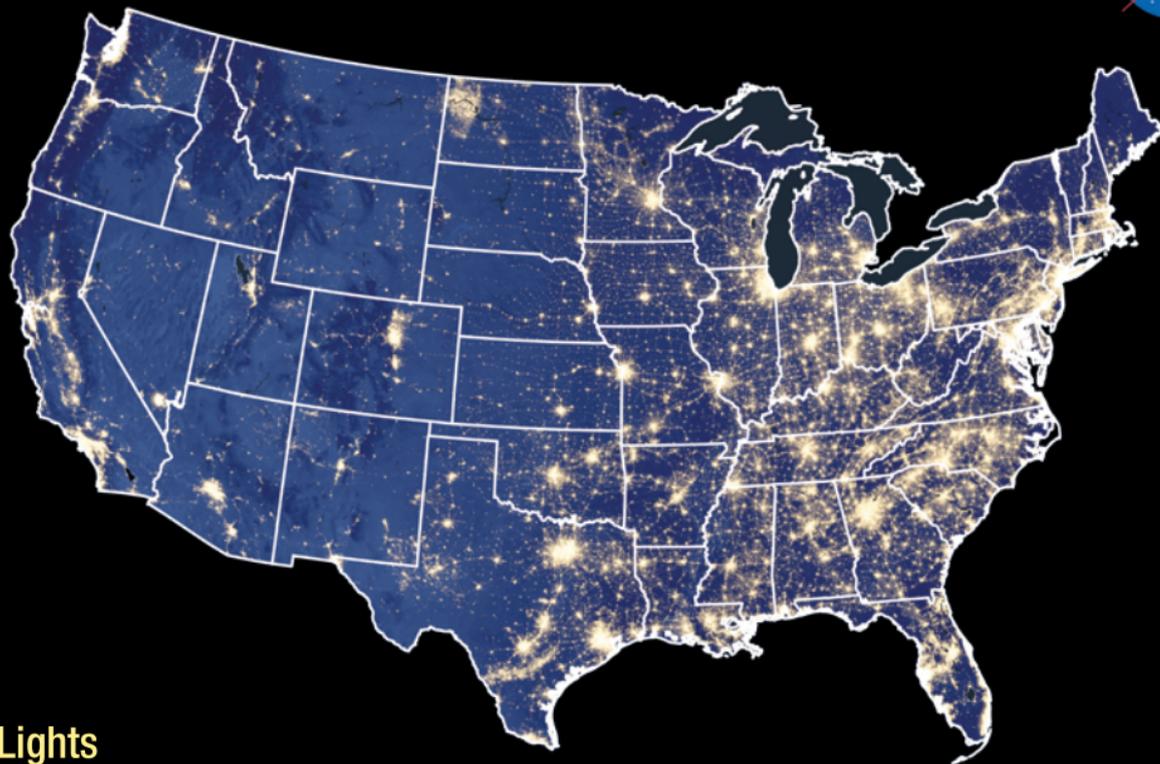


Nitrogen Dioxide (NO₂) in 2005

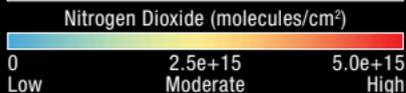
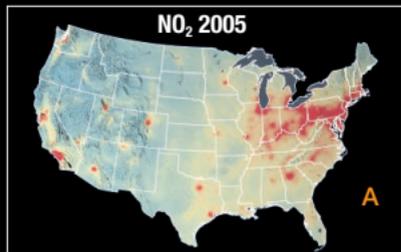


Nitrogen Dioxide (NO₂) in 2015

National Aeronautics and Space Administration



City Lights



www.nasa.gov

NASA HAQAST:

Connecting NASA Data and Tools with Health and Air Quality Stakeholders

In 2016 the NASA Applied Sciences Program launched the Health and Air Quality Applied Science Team (HAQAST). HAQAST's mission is to support air quality and public health management in the U.S. with satellite data, aircraft and ground-based measurements, and sophisticated computer modeling.

The HAQAST research team includes leading scientists from across the U.S., spanning a wide range of universities and federal agencies. HAQAST research links advanced data and tools with real-world information needs, building on the success of 2011 – 2016 Air Quality Applied Science Team (AQAST).

HAQAST connects decision-makers with NASA's unparalleled fleet of earth-observing satellites, which are powerful tools for monitoring changes in air quality. Here, maps **A** and **B** show the annual mean observations of tropospheric nitrogen dioxide (NO_2) from the Aura Ozone Monitoring Instrument. NO_2 is unhealthy to breathe, and is an ingredient in smog and haze. In the U.S., NO_2 has decreased from 2005 to 2015, a public-health success that results from advanced technologies and effective policies across the country.

Night-time lights (shown in Map **C**) observed by the Visible Infrared Imager Radiometer Suite (VIIRS) onboard the NASA-NOAA Suomi National Polar-orbiting Partnership (NPP) satellite are a good marker of energy use. We can see from these maps that higher levels of pollution occur in the same regions where energy use is concentrated, because NO_2 is released from the combustion of fuels for transportation, electricity, and more.

To find out more about HAQAST and what the team can do for you, visit: haqast.org