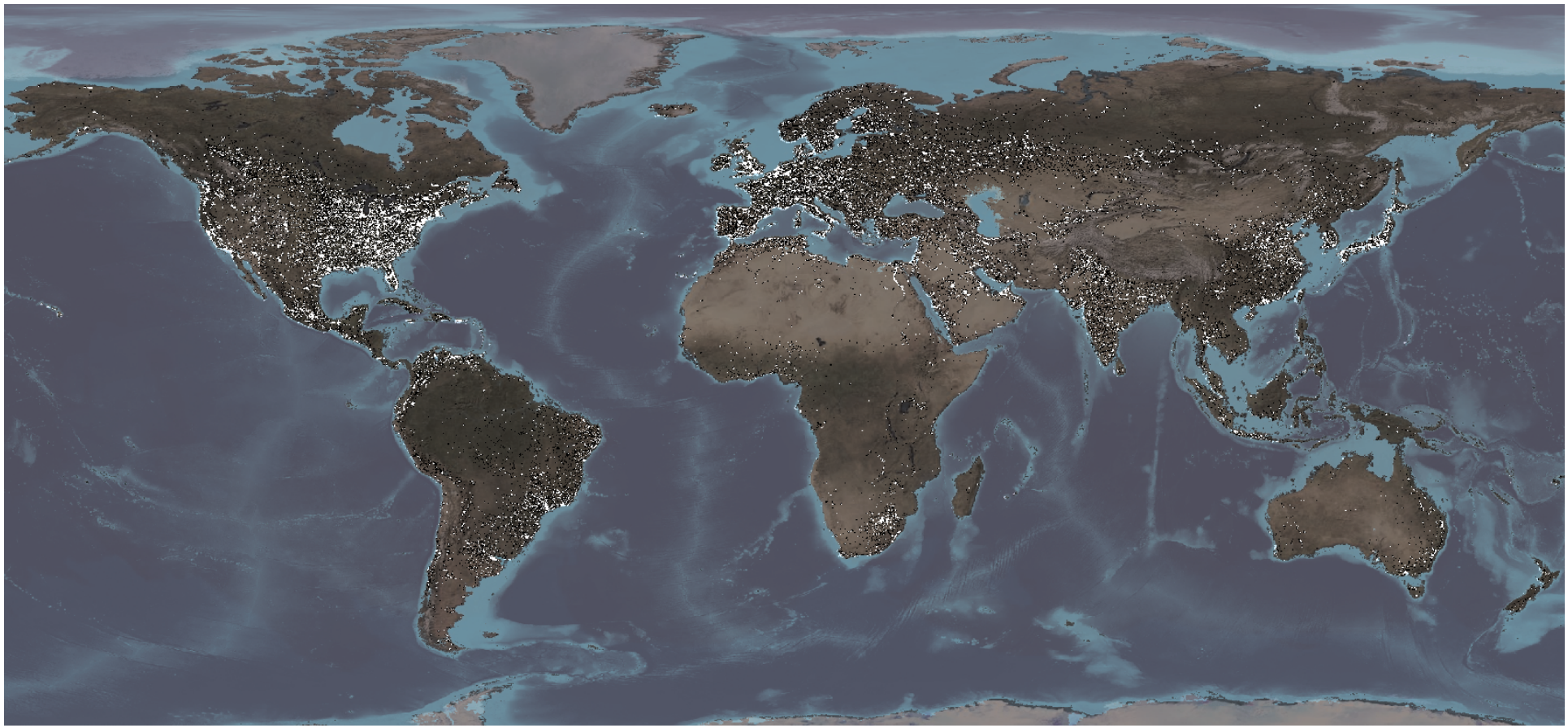
# National Oceanic and Atmospheric Administration

National Environmental Satellite, Data, and Information Service



**NOAA's National Geophysical Data Center serves as the Nation's archive and research center for Nighttime Lights of the World Imagery. These satellite images are acquired from U.S. Air Force Defense Meteorological Satellites. The Nighttime Lights of the World contain the first satellite-based global inventory of human settlements derived from the Defense Meteorological Satellite Program (DMSP) Operational Linescan System (OLS). The DMSP-OLS has the unique capability to observe faint sources of nighttime light present at the Earth's surface, including cities, towns, villages, gas flares, and fires. NGDC scientists have developed mathematical calculations to combine cloud-free portions of OLS observations from many nights to produce composite images such as these showing the lights for entire continents. Each DMSP satellite has a 101 minute, sun-synchronous near-polar orbit at an altitude of 830km above the surface of the earth. The visible and infrared sensors (OLS) collect images across a 3000km swath, providing global coverage twice per day.**