

**Statement by Valda Vikmanis Keller, U.S. Head of Delegation to the
65th Session of UN Committee on the Peaceful Uses of Outer Space, on
Agenda Item 12
“Space and Climate Change”
June 7, 2022**

Thank you, Mr. Chair and distinguished delegates. For decades, NASA, NOAA, and the United States Geological Survey (USGS) have focused on fundamental observations and modeling to understand the impact of changes to our climate and to our lives. Since the late 19th century, the Earth’s average surface level temperature has risen more than one degree Celsius (1.8 degrees Fahrenheit). Sea level has risen by about 12 inches since 1900, and is rising three millimeters per year right now. For the second year in a row, NOAA scientists observed a record annual increase in atmospheric levels of methane, a powerful, heat-trapping greenhouse gas. Meanwhile, NOAA also reports that last year marked the tenth consecutive year that carbon dioxide increased by more than 2 parts per million, which represents the fastest sustained rate of increase in the 63 years since monitoring began. Together, NASA and NOAA data show that global emissions continue to move in the wrong direction at a rapid pace. The evidence is consistent, alarming, and undeniable.

Rising temperatures and sea levels together with changing patterns of precipitation and ocean acidification are impacting nearly all areas of our lives and livelihoods.. In the United States, severe weather in the form of droughts, wildfires, and hurricanes is causing record-breaking economic damage. Climate challenges are already having a direct impact on communities around the world, and were identified by the World Economic Forum as among the greatest risks to global well-being. In the years ahead, the widespread and localized impact of the changing climate will drive increasing demand for data, analysis, and tools to support science-informed decisions that will help us build climate resilient communities.

Today, NASA is flying 24 Earth observing systems in space, including six on the International Space Station. In March, NOAA launched its GOES-T satellite, bringing to 16 the number of Earth observing satellites it operates. These systems are measuring greenhouse gases in the atmosphere, quantifying the rates of sea level rise and glacial ice melt, watching for the conditions that can lead to wildfires and their cascading effects, and monitoring soil moisture and crop stress, just to name a few of the things we do.

Later this year (in November), NASA is planning to launch the Surface Water and Ocean Topography (SWOT) mission. A joint partnership with France, with contributions from Canada and the United Kingdom, SWOT will provide the first global survey of Earth's surface water, including detailed observations of the ocean's surface topography, and measurements of how water bodies are changing over time. The NASA and USGS Landsat mission in particular continues to provide researchers with 50 years of global land and near-shore solar-reflected and emitted thermal infrared measurements to better quantify the impacts of surface warming, wildfires, droughts and floods at scales where many are managing their land resources. Landsat 9 continues our commitment to provide a systematic, continuous, and well calibrated Earth observation record that a community of global data users can use to investigate, document, and interpret environmental changes at low latency across space and time.

Recently, NASA and the European Space Agency joined forces to lead and support a global response to climate change. The partnership is focused on improved understanding of the Earth System, climate change, and the application of that knowledge, as well as collaborating on an open data policy that promotes open sharing of data, information, and knowledge.

The United States appreciates the value of free, open and accessible data to both advance knowledge of our complex planet and provide decisionmakers with information critical to our future on our changing planet. The unique vantage point of sustained, trusted, space-based observations provides critical information to advance our understanding of Earth systems, addressing the multitude of components that interact to shape our present and future environment.

In fact, later today the NOAA Administrator Dr. Richard Spinrad will sign the Space for Climate Observatory (SCO) Charter on behalf of the United States, fulfilling Vice President Kamala Harris' promise made in November 2021.

At the end of this decade, another billion people will be living on our planet, putting more pressure on our Earth's systems. NASA, NOAA, and USGS are moving with urgency and focus, and in concert with our partners, to meet the unrelenting challenge of a changing climate. Climate change demands science equal to the challenge it presents, and the United States will provide the space-based data needed to understand, mitigate, and adapt to our changing planet.