**Statement by Kevin Conole, United States Representative, on
Agenda Item 7, "Matters Related to Remote Sensing of the Earth by Satellite,
Including Applications for Developing Countries and Monitoring of
the Earth's Environment"   --   February 14, 2022**

Thank you, Mr. Chair.   The United States is committed to maintaining space as a stable and productive environment for the peaceful uses of all nations, including the uses of space-based observation and monitoring of the Earth's environment.   The U.S. civil space agencies partner to achieve this goal.   NASA continues to operate numerous satellites focused on the science of Earth's surface and interior, water and energy cycles, and climate.   The National Oceanic and Atmospheric Administration (NOAA) operates polar-orbiting, geostationary, and deep space terrestrial and space weather satellites.   The United States Geological Survey (USGS) operates the Landsat series of land-imaging satellites, which is celebrating its 50-year anniversary of observing the Earth, establishing a robust time-series to study climate change.   This constellation of research and operational satellites provides the world with high quality, sustained observations of our Earth's lands, interior, oceans, and atmosphere.

Mr. Chair, throughout the last year, NASA expanded the use of Earth observations of basic and applied research.   NASA launched the TROPICS pathfinder mission in June to improve observations of tropical cyclones.   Six TROPICS satellites will work in concert to provide microwave observations of a storm's precipitation, temperature, and humidity, which will help scientists understand the factors driving tropical cyclone intensification and will contribute to weather forecasting models.

NOAA continues to operate GOES-East and GOES-West to provide high-resolution visible and infrared imagery as well as lightning observations of more than half the globe.   NOAA's GOES-T satellite is scheduled for launch on March 1, 2022.   Together with NOAA-20, the GOES satellites provide decision makers and the public with 24/7 access to highly accurate, high resolution observations critical for improved weather predictions and environmental monitoring. In addition, NOAA and NASA, along with our European partners, continue to study the oceans with the Jason-3 mission.

NASA and the U.S. Agency for International Development (USAID) continue to partner with leading technical organizations around the world to strengthen the capacity of partners in more than 50 countries, using satellite data to address critical challenges in climate change, food security, water and related disasters, land use, and air quality.   SERVIR has an active network of hubs in

eastern and southern Africa, West Africa, the Hindu-Kush Himalaya, lower Mekong, and the Amazonia regions.   SERVIR co-develops innovative solutions to improve resilience and sustainable resource management at local, national, and regional scales.

The USGS and USAID are partnering to implement the U.S. Government's SilvaCarbon program, which aims to transfer technical capacity to 26 countries in the use of satellite data to monitor deforestation and forest degradation to manage their lands to achieve sustainable development goals. Additionally, the USGS and USAID are leveraging electro-optical and SAR satellite imaging resources, to provide operational information following international landslide, earthquake, and volcano disasters, such as the August 2021 magnitude 7.2 earthquake in western Haiti.

In 2021, the World Meteorological Organization Extraordinary Congress adopted the Flash Flood Guidance System (FFGS) Sustainability Strategy to ensure this important system, supported by NOAA and the USAID, together with the National Hydrometeorological Services worldwide, including Environment and Climate Change Canada, will continue to provide operational forecasters and disaster management agencies with real-time informational guidance products pertaining to the threat of small-scale flash flooding.

The USGS, NASA, and NOAA continue to develop and deploy new satellite-based drought monitoring systems to support the U.S. Agency for International Development's Famine Early Warning Systems Network and the GEOGLAM Crop Monitor for Early Warning.   The USGS, in collaboration with university partners, is researching and implementing processes to improve near-real time yield forecasts based on Earth observations and Machine Learning techniques, and to convert long term climate forecasts into long-term crop condition forecasts.   Ever-improving integrated monitoring and forecasting systems help identify the most vulnerable at-risk populations, guiding timely and effective humanitarian assistance.

In 2021, Landsat satellites continued to add approximately 50 million square kilometers of land observations daily and the USGS distributed more than 600 million Landsat products to users around the globe.   This year, Landsat 8 will be joined by Landsat 9; launched in September by NASA.   With the commissioning of Landsat 9, Landsat 7 will end its science operations after more than two decades in orbit and more than 70 billion square kilometers of Earth's landmass collected. Landsat's International Cooperators will continue to receive direct downlinks of

imagery for their location from Landsats 8 and 9, enabling regional access and near real-time exploitation of Landsat observations. A follow-on mission, Landsat Next, is now in pre-formulation with NASA.

Also in 2021, the USGS released a reprocessed version of its Landsat archive, improving on the radiometry and geometry and, for the first time, offering the surface reflectance and surface temperature geophysical parameters as a standard product. Updates were also made to the product format and metadata following emerging international standards for analysis ready data and improving its usability and utility. Finally, the USGS relocated the Landsat archive to the commercial cloud, allowing direct access to the entire 50-year, 300 billion square kilometer and growing collection. Thank you, Mr. Chair.