Statement by Kevin Conole, United States Representative, on Agenda Item 9:
"Space-system-based Disaster Management Support,"
February 11, 20120

Thank you, Madame Chair. The United States is pleased to provide our annual statement on the use of space-system-based support (from public, commercial and new space ventures) for disaster risk management. Although wildfires, floods, hurricanes, and other hazards continued to threaten our lives and livelihoods in the past year, we were encouraged that resilience practitioners and emergency services increasingly turned to Earth observation science and location technologies to prepare and mitigate impacts. In many cases when disasters did strike, notably greater situational awareness existed from space-based perspectives and simulations to respond more rapidly and efficiently. Progress continues to open access to critical data whenever and wherever possible to improve information products and decision tools that are able to mobilize early action. Throughout 2019, innovations in space-based applications merged with frontier technologies in artificial intelligence, cloud computing, and visualization technologies. New public-private partnerships formed across multiple sectors, including humanitarian and civil society groups, to translate knowledge into sustainable practice.

The United States made significant contributions through international and intergovernmental bodies, including the Group on Earth Observations (GEO), and implementing mechanisms, including the Sendai Framework for Disaster Risk Reduction, toward sustainable development. This included advancing the science and technology leading to the successful release of the 2019 Global Risk Assessment as well as the Global Risk Assessment Framework with the UN Office of Disaster Risk Reduction. The U.S. remains committed to aligning our efforts with the campaign to advance the Sendai Framework targets. In 2019, the U.S. helped generate specialized maps and models, predictive tools and forecast products, and capacity development globally. Other novel advancements utilized radar-based sensors and processing technologies to see through clouds of tropical cyclones and storms to quickly assess building damage and weakened dams. Space-based projects to assess earthquake and volcano activity, landslide susceptibility, and changes in coastal, ocean and land cover/use moved from local pilot projects to global demonstrations. In particular, the United States engaged across the Caribbean in a major effort to advance resilience planning and

preparedness for hurricanes, including augmenting early warning systems for storm surges, extreme winds, and flooding.

Understanding that disasters know no borders and have transboundary consequences and solutions, the U.S. emphasizes regional partnerships. To this end, the U.S. continues to create and strengthen key relationships through the UN, GEO, the Committee on Earth Observation Satellites (CEOS), and the Coordination Group for Meteorological Satellites (CGMS), reaching out to engage a diverse stakeholder community of institutions and new virtual partnerships to deliver a wide array of data and analyses when and wherever needed. The CEOS Working Group on Disasters made notable progress with new demonstration projects targeting the value of Earth observations for planning and decision making near seismic and volcano hotspots. Complementary satellite geodetic-based measurements using the Global Navigational Network of Satellites made progress, transitioning from research to application for tsunami early warning systems.

NASA innovates through a robust DISASTERS Program, which harnesses science results to inform decision makers on the extent of exposure, vulnerability, and impact. The U.S. is pleased to continue our participation in the International Charter on Space and Major Disasters, which has proved again over the last year how such a data-sharing mechanism is a unique and invaluable approach to global cooperation in response to devastating events. Under the auspices of the Charter, the U.S. Government and commercial companies provided numerous data and information products for disaster response throughout the year, including to support the Bahamas before and after Hurricane Dorian and Australia's efforts to fight their devastating bush fires. NOAA's operational satellites aid disaster response and recovery efforts in the U.S. and around the world, supporting severe weather predictions to protect lives and livelihoods, oil spill detection and monitoring, drought outlooks, volcanic ash advisories, and harmful algal bloom forecasting. Regarding earthquakes, USGS and NASA rely heavily on satellite radar data obtained by UN member states to perform a broad survey of fault ruptures and ground failures, as was the case with the July 2019 Ridgecrest earthquakes in California.

The U.S. focuses multi-agency, science enterprise, and non-governmental networks for safer communities and sustainable development. In particular, the SERVIR-Mekong hub hosted at the Asian Disaster Preparedness Center in

Bangkok, Thailand, made considerable progress integrating Earth observations and geospatial technologies addressing regional water and land management concerns.

In 2019, NOAA joined EUMETSAT and the American Meteorological Society held their first Joint Satellite Users Conference bringing together meteorological satellite users from more than 50 countries, representing all regions of the globe. The conference highlighted how the latest generation of satellites is improving predictions of severe weather and flooding, providing more accurate hurricane forecasts, detecting and tracking wildfires around the globe, and informing drought forecasts to assist with food security.

NOAA and its partners in the Americas continued the GEONETCast Americas network, delivering near real-time Earth observation data, via a low-cost, satellite-based, direct-broadcast service, to support decision makers across the Western Hemisphere with information for weather forecasting, drought prediction, wildfire detection and monitoring, early warning systems, and environmental monitoring. The number of GEONETCast Americas stations has grown dramatically in recent years as NOAA transitioned to broadcasting data and imagery from its newest generation of satellites, GOES-16, GOES-17, and NOAA-19 to support meteorological and environmental forecasts in the Americas. There are currently 91 GEONETCast Americas stations in 19 countries.

In 2019, the NASA-led GEO Community Activity of Global Flood Risk Monitoring included progress on radar-based mapping of damage and loss, community scale modeling and mapping of flash floods and landslide susceptibility, and tracking of areas prone to significant inundation.

The United States is committed to assisting in the effective management of disasters worldwide and the reduction of disaster risk to promote community resilience through science knowledge, predictions, simulations, and intelligent solutions. In closing, I would like to express our appreciation for our many international partnerships that promote free and open sharing of critical data that will lead to greater utilization of space-based information for societal benefit. Thank you, Madame Chair.