



U.S. SENATE COMMITTEE ON  
**COMMERCE, SCIENCE, & TRANSPORTATION**

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**U.S. Senator Maria Cantwell**

**Senate Commerce Subcommittee Hearing on Landsat at 50 and the Future of U.S. Satellite-based Earth Observation**

Witnesses:

Steve Volz, Assistant Administrator for Satellite and Information Services and Acting Assistant Secretary for Environmental Observation and Prediction (National Oceanic and Atmospheric Administration); Kate Calvin, Chief Scientist (NASA); Daniel Jablonsky, President and Chief Executive Officer (Maxar Technologies); Kevin Gallagher, Associate Director, Core Science Systems (United State Geological Survey); Waleed Abdalati, Director, Cooperative Institute for Research in Environmental Sciences (University of Colorado)

Thursday, December 1, 2022

**Opening Remarks**

**[VIDEO](#)**

**CANTWELL:** Thank you, Mr. Chairman, and thank you to Senator Lummis for holding this important hearing. And to our witnesses -- adding a lot of insight and valuable information about the success and opportunities for us in this area.

We know that the unmatched scientific legacy of the US Geological Survey's Landsat program, and the key partnerships that they've had with NASA, have been successful. And of course, NASA being in the news now with the landmark Artemis 1 mission, which just reached a point at almost 270,000 miles from Earth, farther than any other human-related spacecraft.

I'd like to start by congratulating them, NASA and the Artemis program, as well as the workforce in my state and across the nation who participated in this. With 42 Washington companies contributing components for Artemis, our state remains an aerospace leader and NASA is keeping the United States in a world leadership position here as well.

NASA, of course, does a lot more than explore space. And since its founding, it's had a mission to help us understand Earth, a mission shared by the USGS and the National Oceanic and Atmospheric Administration. And for over 50 years, these agencies have been working with their academic and commercial partners and have given the US a leadership role in developing and deploying satellite-based remote sensing systems for monitoring the Earth.

Now, I can't tell you how important we feel this is today. In the case of Landsat, publicly available data yielded over \$2 billion in annual benefits to U.S. users, and over \$1 billion in annual benefits to users outside the United States. The total global Earth observation commercial market is projected to be almost \$8 billion by 2030.

You may have gone over all this data. But this data, these services, this market represents sustained growth and opportunities. Particularly in areas like agriculture, to crop insurance to urban planning, and a very important subject for us in the northwest and my colleagues here on this committee – wildfires.

In Washington, the data...[are processed]... by NOAA Western Regional Center in Seattle, which houses offices for the National Weather Service and National Environmental Satellite Data and Information Services. Data from these offices are invaluable in helping us cope with these increasing wildfires.

During the season, and my colleagues I know in Western states saw this, an unbelievable increase in these instances. For example, the Bolt Creek fire burned approximately 15,000 acres east of Seattle in King County. We're used to having these fires on the other side of the Cascades, on the east side of the Cascades, we're not so used to having them on the west side of the Cascades. And Earth observation data [was] essential for real time fire mapping, measurements, [as] part of suppression and assessing post...burn [hazards].

This is incredibly important because in this particular area, it's very steep and it's one of our two highway passes across the Cascades. And without that data and information on that highway, it becomes very precarious.

So, looking forward, we know that there is going to be a growing need around wildland fire prediction and long term adaptation. We must be vigilant about these fires and residents who just suffered through the Bolt Creek fires have to worry now about landslides. Which is why all of this information, as those of you who are involved in this already know, that that kind of fire damage leaves you very, very vulnerable.

So the United States must continue to sustain its growth in Earth observation capabilities in alignment with our community needs and scientific consensus. And the symbiotic development of research and operational capabilities managed by NASA, NOAA and USGS will, I believe, remain very critical to how the partners in the private sector also develop.

So I look forward to having an opportunity, Mr. Chairman, I don't want to get ahead of you and Senator Lummis on questions, but thank you to the witnesses and thank you for holding the hearing.