

Oct 15, 2017

Attached is the report “Earth Science Missions what they measure, and how they apply to the real world” and the Summary Chart for NASA and NOAA missions that have been terminated or budgets reduced. In addition, we would like to address below how detrimental these cuts will become.

DoD relies on data collected from NASA and NOAA Earth Science satellites and Instrumentation for their internal planning and to address both current and future domestic and global security issues. Skeptics of climate change have focused their objection on use of this data by climatologists for long term climate change modeling: and it is for this reason that the current administration is reducing the funding or terminating several data gathering NASA and NOAA Earth Science Missions. Falling victim to these funding cuts is the planned future critical use of these data for near-term (days) or medium-term (weeks or months) climate and weather-related conditions.

These include:

- Visualizing, tracking, and predicting the real-time strength of hurricanes and monsoons
- Tracking sea ice during the Arctic winter for safe marine transport
- Monitoring and tracking ash and sulfur dioxide (SO<sub>2</sub>) to provide safe aviation flight paths after volcanic eruptions
- Monitoring and tracking El Niño ocean conditions and Asian monsoons in real-time and seasonal predictions for water management, agriculture, and community preparedness
- Monitoring air quality

These are but a few near- and medium-term applications discussed in our document and identified in the Summary Chart.

Other international satellites have the capability to gather Earth data but all satellites have operational life times: it therefore becomes necessary to deploy newer satellites to provide not only backup and replacements but to also provide additional sets of data and to implement improved instrument technologies – these NASA and NOAA Earth Science missions meet these criteria.

We are at serious risk of losing critical US (and global) capability to assess and plan for not only long-term climate change but also to assess near and medium-term climate and weather-related conditions: action by congress is paramount to prevent this loss.

Please let us know if there is anything else we can do for your office to support the continued funding of these critical missions. As I mentioned to you earlier, I will be in Australia and New Zealand from October 19 through November 11 and will address any additional actions when I return.

Sincerely,  
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