

GAO Highlights

Highlights of [GAO-16-769T](#), a testimony before the Subcommittee on Environment, Committee on Science, Space, and Technology, House of Representatives

Why GAO Did This Study

Weather data are instrumental for planning, executing, and sustaining U.S. military operations and for meeting civilian needs, such as weather forecasting and climate research. As existing weather satellite systems age, DOD faces potential gaps in its space-based weather monitoring capabilities. As a result, DOD and other stakeholders, including the military services, the intelligence community, and U.S. civil agencies such as NOAA, are now in a precarious position to fill key capability gaps with immediate and near-term solutions. DOD conducted an AOA to identify and compare the operational effectiveness and life cycle costs of potential solutions.

This testimony is based on a report GAO issued in March 2016 on its assessment of DOD's AOA and focuses on the extent to which it informed DOD's plans for providing weather-related capabilities and addressed input from stakeholders.

GAO reviewed DOD's AOA documents and interviewed DOD officials, including stakeholders within the military services, and NOAA officials.

What GAO Recommends

In the March 2016 report, GAO recommended that DOD establish formal mechanisms for coordination with NOAA, among other things, and DOD concurred.

View [GAO-16-769T](#). For more information, contact Cristina Chaplain at (202) 512-4841 or chaplainc@gao.gov.

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DEFENSE WEATHER SATELLITES

DOD Faces Acquisition Challenges for Addressing Capability Needs

What GAO Found

GAO found in March 2016 that the Department of Defense (DOD), in conducting a requirements review and Analysis of Alternatives (AOA) from 2012 to 2014, generally performed a thorough review for identifying capability gaps in meteorological and oceanographic data—also referred to as weather data—that needed to be met and determining the operational benefit of satisfying these gaps.

In doing so, the AOA determined that some capabilities with military utility could be covered by other assets or addressed with modeling development. The AOA also offered analysis that was useful for informing plans for a space-based solution for three capabilities facing near-term needs: ocean surface vector wind, tropical cyclone intensity, and energetic charged particles. GAO found that DOD was developing plans based on this analysis for a Weather System Follow-on program to address these areas.

The AOA was less useful for informing plans for two of the highest-priority capabilities—cloud characterization and theater weather imagery data—now facing near-term gaps over the Indian Ocean. While DOD consulted with a wide range of stakeholders in conducting the AOA, it did not effectively collaborate with the National Oceanic and Atmospheric Administration (NOAA), which, on a case-by-case basis represents DOD's interests with international partners. Specifically, NOAA was not involved in reviews of the AOA or regular discussions with AOA study leadership. The lack of formal coordination and collaboration with NOAA, such as employing a mechanism that identified roles and responsibilities for the two agencies during the AOA, contributed to an incorrect assumption about the continued availability of critical weather data from European satellites. As a result, the AOA did not fully assess solutions for these high priority capabilities.

GAO reported that DOD was exploring options outside of the AOA process for mitigating these pending capability gaps, including continued or increased reliance on data provided by international partners.