POLAR SATELLITES

Agencies Need to Address Potential Gaps in Weather and Climate Data Coverage

Why GAO Did This Study

Environmental satellites provide critical data used in weather forecasting and measuring variations in climate over time. In February 2010, the White House's Office of Science and Technology Policy disbanded the National Polar-orbiting Operational Environmental Satellite System (NPOESS)—a tri-agency satellite acquisition that had encountered continuing cost, schedule, and management problems—and instructed the National Oceanic and Atmospheric Administration (NOAA) and the Department of Defense (DOD) to undertake separate acquisitions. Both agencies have begun planning their respective programs—the Joint Polar Satellite System (JPSS) and the Defense Weather Satellite System (DWSS)—including creating program offices and transitioning contracts.

GAO was asked to summarize the status of ongoing work assessing (1) NOAA's and DOD's plans for their separate acquisitions and (2) the key risks in transitioning from NPOESS to these new programs. In preparing this statement, GAO relied on the work supporting previous reports, attended monthly program management meetings, reviewed documentation on both programs, and interviewed agency officials.

What GAO Recommends

GAO is not making new recommendations in this statement.

View GAO-11-954T or key components. For more information, contact David A. Powner at (202) 512-9286 or pownerd@gao.gov.
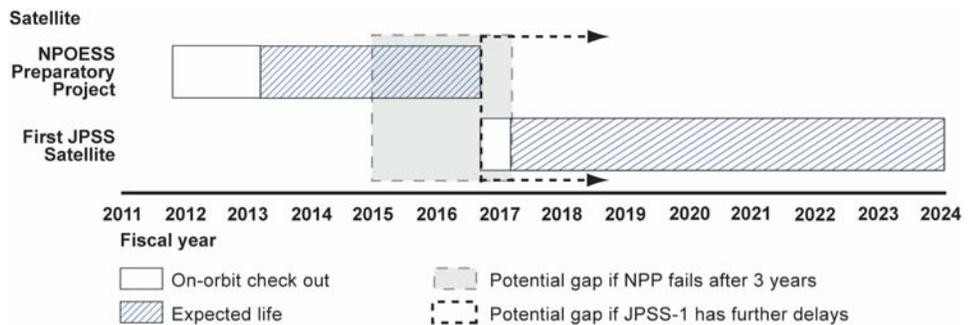
What GAO Found

In May 2010, GAO reported on the transition from NPOESS to two separate programs, and recommended that both NOAA and DOD expedite decisions on the cost, schedule, and capabilities of their respective programs. Since that time, both agencies have made progress on their programs, but neither has finalized its plans or fully implemented the recommendations. NOAA is currently focusing on the October 2011 launch of the NPOESS Preparatory Project satellite—a demonstration satellite that the agency now plans to use operationally in order to minimize potential gaps in coverage. In addition, NOAA has transferred contracts for satellite sensors from the NPOESS program to the JPSS program. However, NOAA officials stated that the agency slowed down the development of the first JPSS satellite due to budget constraints, causing a delay in the launch date. As a result, NOAA is facing a potential gap in satellite data continuity. Such a delay could significantly impact the nation's ability to obtain advanced warning of extreme weather events such as hurricanes.

Potential Gaps in Satellite Coverage

Source: GAO analysis of NOAA data.

Meanwhile, DOD began planning for its satellite program. Department officials reported that DWSS is to consist of two satellites with three sensors: an imager, microwave imager/sounder, and a space environment sensor. The first satellite is to be launched no earlier than 2018. The department has not, however, finalized the cost, schedule, and functionality of the program. It expects to do so in early 2012. Until both NOAA and DOD develop and finalize credible plans for their respective programs, it will not be clear what the programs will deliver, when, and at what cost.

In its prior report, GAO also recommended that NOAA and DOD establish plans to mitigate key risks in transitioning from NPOESS to the successor programs, including ensuring effective oversight of JPSS program management, and addressing cost and schedule implications from contract and program changes. Both agencies have taken steps to mitigate these risks, but more remains to be done. For example, NOAA could not provide firm time frames for completing its management control plan or addressing residual contracting issues. Moving forward, it will be important for the agencies to continue efforts to mitigate these risks in order to ensure the success of their respective programs.

_____ **United States Government Accountability Office**