

GAO Highlights

Highlights of [GAO-15-722T](#), a testimony before the Subcommittee on Space, Committee on Science, Space, and Technology, House of Representatives

Why GAO Did This Study

The United States has spent tens of billions of dollars to develop, assemble, and operate the ISS over the past two decades. NASA plans to spend about \$22 billion more from fiscal year 2016 through 2020—with over half of that planned for transportation—on the ISS. In January 2014, the Administration proposed extending the life of the ISS to at least 2024 to take further advantage of the investment in the ISS. Since 2005, Congress enacted several laws to increase utilization of the ISS by commercial and academic researchers. The NASA Authorization Act of 2010 required NASA to enter into a cooperative agreement with a not-for-profit entity to manage the ISS National Laboratory and in 2011 it did so with CASIS. CASIS is charged with maximizing use of the ISS for scientific research by executing several required activities.

This statement will provide an overview of (1) NASA's budget for ISS and the factors affecting budget levels through 2020, (2) several challenges that could impact effective utilization of ISS by both NASA and CASIS, and (3) steps that NASA and CASIS could take to better document and assess CASIS's progress in this regard.

This statement is based primarily on GAO's April 2015 report ([GAO-15-397](#)) as well as other prior reports and testimonies. GAO also conducted a limited amount of additional audit work in June 2015 to update certain information.

View [GAO-15-722T](#). For more information, contact Shelby S. Oakley at (202) 512-4841 or oakleys@gao.gov.

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INTERNATIONAL SPACE STATION

Challenges to Increased Utilization May Affect Return on Investment

What GAO Found

Based on GAO analysis of the National Aeronautics and Space Administration's (NASA) fiscal year 2016 budget estimate, the agency anticipates that the costs to operate, sustain, perform research, and provide crew and cargo transportation to the International Space Station (ISS) are projected to increase by almost \$1 billion—or almost 53 percent—from fiscal year 2015 to fiscal year 2020 when the projected costs are expected to exceed \$4 billion. The majority of the total projected cost increase for ISS is attributable to commercial crew and cargo transportation. The budget for ISS cargo and crew transportation is currently planned to increase by over \$700 million from fiscal year 2016 to fiscal year 2020—or over 55 percent of the total ISS budget—which includes the purchase of six Russian Soyuz seats in 2018 and commercial crew missions beginning in fiscal year 2019. The costs to operate the ISS and perform research are expected to be stable with only slight increases through fiscal year 2020.

NASA and the Center for the Advancement of Science in Space (CASIS)—a non-profit entity selected to manage non-NASA research on the ISS National Laboratory—must overcome several challenges to increase utilization and achieve a better return on investment. NASA and CASIS officials told GAO that the ISS will be challenged to meet an expected increase in demand for crew time and certain research facilities. Securing cargo transportation has also presented challenges. CASIS-sponsored researchers have experienced cost increases of almost \$500,000 because of a cargo resupply launch failure in October 2014 and delays to other cargo resupply missions. GAO found that absorbing the increased cost has been a challenge for CASIS given its limited research budget and it could be faced with additional cost increases given the June 2015 launch failure of another cargo resupply mission.

In April 2015, GAO found that CASIS had taken steps to manage and promote research activities on the ISS National Laboratory, but that CASIS and NASA could do more to objectively define, assess, and report progress toward increased utilization. While CASIS had established annual metrics, it did not establish measurable targets for these metrics. GAO has previously reported that performance metrics should have quantifiable targets to help assess whether overall goals are achieved. Consequently, GAO recommended that the ISS program and CASIS develop measurable targets for CASIS's metrics for fiscal year 2016 and beyond. NASA concurred with this recommendation and indicated that these targets should be established by the end of 2015. GAO's April 2015 report also found that while NASA performs an annual assessment of CASIS's performance, the assessment is not documented. This type of documented information can support future assessments of return on investment. GAO recommended that NASA document the annual program assessment of CASIS performance. NASA concurred with this recommendation and plans to take action in response to CASIS's 2015 annual report. Because CASIS is allocated at least 50 percent of ISS research capacity, ensuring that CASIS continues to make progress promoting research activities and achieving its goal to increase utilization of ISS is essential to demonstrate a return on investment for the tens of billions of dollars already invested and that will continued to be invested in ISS.