

# Congress of the United States

## House of Representatives

COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY

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May 1, 2020

The Honorable Gene L. Dodaro  
Comptroller General of the United States  
U.S. Government Accountability Office  
441 G Street, NW  
Washington, DC 20548

Dear Mr. Dodaro,

We are writing to request that the Government Accountability Office (GAO) examine a number of issues pertaining to the Center for the Advancement of Science in Space (CASIS). CASIS is a non-profit organization that currently manages the International Space Station National Laboratory (ISSNL), which was designated as such by Congress in the NASA Authorization Act of 2005. NASA entered into a ten-year cooperative agreement with CASIS to manage the ISSNL in 2011 and subsequently extended the agreement through September 2024. For many years, concerns have persisted regarding CASIS's use of the ISSNL allocation, its internal governance structures, and its transparency and accountability to NASA and Congress. An external review commissioned by NASA and released to the public on April 6 concluded that CASIS has failed to address these concerns. We believe that a broad GAO examination of the organization's performance and management is necessary to determine the appropriate next steps.

The ISS is a unique platform from which to conduct scientific research. It is critical that CASIS's management of the ISSNL supports the full potential of a diverse range of research endeavors in a microgravity environment situated in low Earth orbit (LEO). Congress has demonstrated its commitment to these research efforts by mandating that at least 50% of ISS research capacity and crew hours must be dedicated to non-NASA, ISSNL-managed research activities.<sup>1</sup> Congress intended this mandate to ensure that commercial and other non-NASA federal research entities would enjoy access to the unique research opportunities that only the ISS can provide.

In light of these longstanding objectives for the ISSNL, we find the conclusions of the NASA-commissioned Independent Review Team (IRT) to be deeply troubling. The IRT report identified major problems in the NASA-CASIS relationship, the evolution of CASIS's mission

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<sup>1</sup> S. 3729, NASA Authorization Act of 2010, Pub. Law No. 111-267, accessed here:  
<https://www.congress.gov/bill/111th-congress/senate-bill/3729>.

over the past decade, and the balance between ISSNL research and commercialization resources overseen by both NASA and CASIS.<sup>2</sup> The report noted that CASIS has failed to define consistent priorities for the ISSNL, partly due to confused guidance from NASA that insufficiently articulated the Agency's objectives and "used CASIS and its results mainly for public relations."<sup>3</sup> The report also stated that CASIS's governance structure has failed to evolve along with the organization's mission. Several specific problems identified by the IRT are causes for particular concern:

- *Selection process and use of the 50% ISSNL resource allocation:* The IRT report documented a number of significant issues regarding CASIS's management of the 50% ISSNL allocation of research capacity and crew hours aboard the ISS. This allocation is a significant asset and must be overseen with care. Yet the report criticized CASIS's model for project selection, concluding that the organization utilized selection criteria for research projects that did not sufficiently prioritize "commercialization and progressive improvement of scientific knowledge." The report characterized CASIS's project selection process as "opaque" and reliant upon flawed tools and methodologies. The report also cast doubt upon the entire management framework for the 50% allocation. By interpreting the 50% resource allocation holistically rather than through the lens of tangible resources, CASIS failed to manage its designated crew time appropriately and risked disrupting essential NASA-run activities and operations aboard the ISS.<sup>4</sup>
- *Governance structure:* CASIS is responsible for overseeing a substantial allocation of federal resources. Between the enactment of its cooperative agreement (CA) with NASA in FY 2011 and the end of FY 2018, CASIS received roughly \$109 million in federal funding to promote research and development aboard the ISSNL. The IRT report criticized the governance structure that CASIS has instituted to oversee its duties and manage its funding. According to the report, the structure of the CASIS Board and the relationship between the Board and the CEO is characterized by "dysfunction," due partly to an excessively large Board. Additionally, CASIS opted to provide financial compensation to its Board members, which the IRT criticized as an unusual arrangement for a non-profit that contradicted the traditional emphasis on "mission, not personal interest" for non-profit Board members. The report noted that using the CASIS Board in place of the Congressionally-mandated ISS National Laboratory Advisory Committee (INLAC) did not meet the INLAC's intent of representing users. Further, NASA has neglected to staff the INLAC, which was required to be a FACA Committee, and the Board does not follow the requirements under the FACA law.<sup>5</sup>
- *Transparency and Accountability:* The IRT report identified a series of gaps in the transparency of CASIS's operations and its accountability to NASA. The report faulted both NASA and CASIS for permitting CASIS's poorly understood selection process to persist without proper oversight. The report described CASIS's internal leadership as "insular," resulting in a CASIS Board that intervened too directly in the operational

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<sup>2</sup> International Space Station (ISS) Cooperative Agreement Independent Review Team, "Final Report to NASA," Delivered February 4, 2020.

<sup>3</sup> IRT, "Final Report to NASA," see Footnote 2.

<sup>4</sup> *Id.*

<sup>5</sup> *Id.*

management of the organization. The report noted that CASIS recently shifted its portfolio allocation to emphasize longer-term optimization for potential future commercial value without any documented rationale for the shift. Finally, the report highlighted the breakdown in CASIS's relationship with NASA due to miscommunication, neglect, tension and competition for resources aboard the ISS.<sup>6</sup>

The criticisms set forth in the IRT report represent continuations of longstanding issues surrounding CASIS's operations and governance. As early as 2013, the NASA Office of Inspector General (OIG) noted that CASIS's early progress had been hampered by organizational challenges, and that CASIS's performance goals were disproportionately focused on "organizational milestones" for itself rather than its mission to promote scientific research on the ISSNL.<sup>7</sup> In 2015, GAO found that CASIS had still failed to develop sufficient performance metrics for its operations, and that NASA had neglected to populate a Congressionally-mandated advisory committee, the INLAC, which was intended to strengthen oversight of CASIS.<sup>8</sup> In 2018, the NASA OIG faulted NASA's oversight of CASIS as a contributing factor in the organization's failure to meet expectations<sup>9</sup>; in follow-up testimony before the Committee in July 2019, the NASA IG identified persistent issues revolving around performance metrics, internal financial management, and the selection process for ISSNL research activities.<sup>10</sup> The problems identified in the IRT report represent the culmination of nearly a decade of performance and management issues that CASIS has failed to address.

We are concerned about CASIS's ability to fulfill Congress' vision for the ISSNL and the research possibilities of low Earth orbit. The unique environment offered by the ISSNL is an invaluable resource to facilitate research and development. Congress has sought to encourage commercial and cross-agency partnerships as one path to the full utilization of this resource, but CASIS's organizational struggles appear to have undermined progress. As Congress addresses broader questions surrounding the ISS, its ongoing mission, and the future of NASA-supported research and development in low Earth orbit, it is imperative to ensure that an effective and accountable entity is in place to manage the full range of activities conducted through the ISSNL.

To assist the Committee as it considers the future of the ISSNL and LEO research and development, we request that GAO undertake a comprehensive review of CASIS to evaluate whether significant changes to the organization's mission, management, and governance structure are necessary. ask GAO to examine the following:

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<sup>6</sup> IRT, "Final Report to NASA," see Footnote 2.

<sup>7</sup> NASA Office of Inspector General, "NASA's Efforts to Maximize Research on the International Space Station," Report No. IG-13-019, July 2013, accessed here: <https://oig.nasa.gov/docs/IG-13-019.pdf>.

<sup>8</sup> GAO, "International Space Station: Measurable Performance Targets and Documentation Needed to Better Assess Management of National Laboratory," GAO-15-397, April 2015, accessed here: <https://www.gao.gov/assets/670/669851.pdf>.

<sup>9</sup> NASA Office of Inspector General, "NASA's Management of the Center for the Advancement of Science in Space," Report No. IG-18-010, January 2018, accessed here: <https://oig.nasa.gov/docs/IG-18-010.pdf>.

<sup>10</sup> Testimony of NASA Inspector General Paul K. Martin before the House of Representatives Committee on Science, Space, and Technology, Subcommittee on Space and Aeronautics, "Examining NASA's Plans for the International Space Station and Future Activities in Low Earth Orbit," July 2019, accessed here: <https://oig.nasa.gov/docs/CT-19-001.pdf>.

1. The means of accounting for, documenting, and reporting on the use of CASIS's 50 percent allocation of ISS resources, and how additional resources requested or unused CASIS resources are allocated;
2. The current CASIS process for selecting and evaluating non-NASA research and development activities, any planned changes to the selection process, and conformance with relevant NASA policies, procedures, or individual agreements with ISS users;
3. CASIS's financial management and conformance with best practices and standards for federally funded entities;
4. The transparency and accountability of CASIS's organization and operations, any planned changes to CASIS's organization and operations, and consistency with other federally sponsored entities involving cooperative agreements; and
5. The extent to which NASA's response to the IRT recommendations addresses any findings related to (1) – (4);
6. The extent to which NASA's plans and focus for CASIS and the ISSNL align with statutory direction and authorization of the ISS National Laboratory.

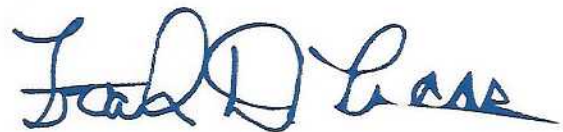
Pursuant to Rule X of the U.S. House of Representatives, the Committee on Science, Space, and Technology is delegated oversight jurisdiction over all laws, programs, and Government activities relating to nonmilitary research and development.<sup>11</sup>

Your assistance with this matter is greatly appreciated. If you have any questions, please contact Pamela Whitney of the Committee staff at 202-225-6375.

Sincerely,



Eddie Bernice Johnson  
Chairwoman  
Committee Science Space and  
Technology



Frank Lucas  
Ranking Member  
Committee on Science Space and  
Technology

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<sup>11</sup> Rule X, Organization of Committees, U.S. House of Representatives.



Kendra S. Horn  
Chairwoman  
Subcommittee on Space and Aeronautics



Brian Babin  
Ranking Member  
Subcommittee on Space and Aeronautics