

## Perspective Blog - August 2022

### 2023-2032 Planetary Science and Astrobiology Decadal Survey

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This April, the National Academies of Sciences publicly released the 2023-2032 Planetary Science and Astrobiology Decadal Survey, a 782-page document recommending a slew of priority planetary science objectives for the next 10 years. The decadal survey has historically pushed for space missions, specific research avenues, and funding adjustments. This year's decadal survey advocated for, among other things, a flagship orbiter and probe mission to Uranus, nine New Frontiers class missions themes, a higher cost cap for Discovery missions, and – in a departure from previous decadal surveys – recommendations for increasing Inclusion, Diversity, Equity, and Accessibility (IDEA) in the planetary sciences.

Of the many topics tackled by the report, several stand out as key policy agenda items. For starters, NASA has been unable to fund a large percentage of highly-rated project proposals in Research and Analysis (R&A). Adjusting for inflation, the Planetary Science Directorate (PSD) at NASA has *lowered* its relative investment in R&A over the years, dropping from 14% of the PSD's annual budget in 2010 to a projected 7.7% in FY23. The survey recommends the PSD increase its investment in R&A to 10% of the PSD's total annual budget by 2028.

NASA also struggles with intra-agency collaboration. Dr. Robin Canup, co-chair of the decadal survey, highlighted the lack of science objectives in the upcoming Artemis missions during her recent testimony to the House Science Committee: “The Planetary Science Division currently [has] the responsibility for executing lunar science, but they don't have the authority to implement any requirements on the Artemis program. The report argues that the organizational structure needs to evolve, so as to give the science directorate at NASA that authority.”

The new “State of the Workforce” section reports severe underrepresentation for Black, Latinx and LGBTQ+ researchers in planetary science, and high counts of sexual harassment across the field. The survey recommends a focused data collection and monitoring campaign, targeted fellowship opportunities, a code of conduct, and ongoing training to deal with implicit bias.

Finally, the report urges for fast and effective planetary defense technologies, recommending a Near-Earth Object (NEO) Survey follow-up mission to track potentially dangerous asteroids and comets. Unfortunately, NASA has already elected to delay the launch of the first NEO Surveyor to 2028, likely pushing any future planetary defense activities to the next decade.

Read the full decadal survey here:

<https://www.nationalacademies.org/our-work/planetary-science-and-astrobiology-decadal-survey-2023-2032>

#### Author Bio:

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