



Australian Government



Australian  
Space Agency

# Australian sustainability of space activities policy

## *Summary of consultation feedback*

November 2024

[space.gov.au](https://space.gov.au)



The Australian Space Agency consulted with the sector to inform the development of an Australian sustainability of space activities policy. We asked the sector for feedback on the proposed vision of the policy, its themes and the role of the Australian Government and other stakeholders. We received 45 responses from individuals and organisations across industry, academia, government, and the public. There were several points that were common across multiple responses which are outlined below.

## Policy vision

**Recognising innovation and industry:** The vision should directly recognise the importance of innovation and the role of the industry in driving the sustainability of space activities in Australia. Industry has a key role in ensuring stable access to space services and capabilities for current and future generations of Australians.

**Using positive language:** The policy vision should use more positive, uplifting and future focused language to ensure a positive commercial tone for the implementation of the policy. This is particularly true for commercial space activities from Australia.

**Reflecting the definition for sustainable space activities:** The vision should reflect the Australian definition for the sustainability of space activities. The statement could more explicitly refer to sustainability and the economic, social and environmental aspects of sustainable space activities.

## Policy themes and opportunities

**Prioritising space debris mitigation and remediation:** Reducing risks to space assets that provide essential services to Australia through space debris mitigation and by remediating space debris should be the top priority policy theme. Of the policy themes proposed for consultation, respondents identified the following two themes as highest priority<sup>1</sup>:

- space debris mitigation combined with Space Traffic Management (STM), Space Situational Awareness (SSA), and space weather services with 81% of respondents selecting it in their top three
- space debris remediation with 77% of respondents selecting it in their top three.

While space debris remediation capability is nascent in Australia, an increase in capability could lead to a more economically resilient sector. The capability would provide global space market opportunities and could support Australia's transition to a circular economy.

**Addressing environmental impacts:** The policy should address the environmental impacts of space activities across their lifecycle to protect Australia's natural environment and support the transition to net zero. These impacts include:

- land and marine pollution from the re-entry of space objects
- the ablation of rocket bodies and satellites in the atmosphere
- emissions from fuels such as rocket fuels
- scope 3 emissions.

Feedback suggested that addressing the environmental impacts of space activities can support Australia to act as a responsible global participant in the space economy.

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<sup>1</sup> Respondents were asked which of the themes proposed for consultation were the highest priority for the sustainability of Australian space activities and were able to select up to three.

**Incorporating science, research and development activities:** The policy should include academic and industry-led research and development (R&D) activities. R&D is an essential enabler of sustainable space activities and includes:

- developing technologies for sustainable space missions
- performing environmental studies
- analysing re-entry risks and methods of de-orbiting.

Multiple responses noted that Australia could strengthen its position in the global space economy by producing cutting-edge solutions that enable more sustainable space activities.

**Addressing the importance of STEM skills:** The policy should address the importance of STEM education and skills for developing a sustainable space sector. Several respondents mentioned that managing Australia's education programs to meet the needs of a developing space sector such as by adding space education to STEM curriculums would enable the sustainable growth of the sector.

## Priority activities identified through consultation

**Developing an industry framework:** An industry framework would provide the most benefit to organisations wanting to adopt sustainable business practices. A total of 71% of respondents selected it as the most beneficial type of guidance<sup>2</sup>. The framework could include objectives, metrics to measure the cumulative impact of space activities, targets or measures of success, and actions.

**Monitoring civil space objects:** Most respondents agreed that they would benefit from an Australian civil space monitoring capability. The benefits mentioned included:

- better protecting Australian space assets
- ensuring national space activities are consistent with international obligations
- enabling the de-contamination of astronomical data.

The capability combined with Australia's geographical advantages would also provide the opportunity to build an export industry around SSA.

**Providing guidance for minimising space debris risks:** Most Australian space organisations agreed that they would benefit from guidance on minimising the risks associated with space debris and aligning with internationally accepted standards and certifications. Organisations recognised the need for guidance on collision avoidance manoeuvres and noted that this could leverage existing industry-led codes of practice.

**Collaborating internationally:** Multiple respondents identified the importance of strong international networks and international collaboration for the sustainability of Australian space activities. Strong international relations support the resilience of space supply chains and drive partnerships between Australian companies and universities and their international peers. Australia can leverage its geographical advantages to gain access to international opportunities and build partnerships.

**Supporting community understanding of First Nations knowledge:** The space sector recognised the need to raise community understanding of First Nations cultural and scientific knowledge. It was noted that this could involve educational initiatives that show how First Nations perspectives can complement the systems-thinking and transdisciplinary approaches to space and sustainability.

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<sup>2</sup> Respondents were asked which type of guidance on how to adopt sustainable business practices would provide the most benefit and could choose from of a voluntary code of conduct, professional standards, an industry framework, or other.

**Educating the community:** Educating the Australian public on the benefits of the space sector and the role of space in the everyday lives of Australians is key to building social license around space activities. Several respondents noted that the public should be engaged at all education levels, age groups and through multiple channels to ensure a diverse audience is reached.

**Exploring technological solutions to protect dark and quiet skies:** Technological solutions have an important role to play in protecting Australia's dark and quiet skies. However respondents raised that care should be taken not to place regulatory burden on the sector. Formal requirements should consider the technological and economic viability of solutions and how the sector can build and sustain competitive advantage, conscious of potential compliance costs. Solutions identified by the sector included:

- satellite sun visors
- advanced materials to limit radio frequency emissions
- an Electromagnetic Compatibility (EMC) testing regime
- satellite antennas with steerable beams
- adaptive optics to enhance observational capabilities
- greater reliance on inter-satellite links instead of ground stations.