

15 December 2024

Please find SIAA's feedback on Australian Space Agency's Australian sustainability of space activities policy as follows.

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Consultation prompts

- Are there other key issues an Australian sustainability of space activities policy should address?
- To what extent is the proposed vision of this policy fit for purpose? Refer to page 3 for the proposed vision.
- Are there any policy themes missing? I.e. environmental considerations such as ablation of satellites in the atmosphere, ground infrastructure, R&D.
- What is the priority order of the themes?

SIAA RESPONSE

SIAA commends the expansive nature of the definition to include both sustainable outer space activities and environmental impact, as well as the sustainability of the sector overall. We also commend wording around providing benefits of space for 'current and future generations' as a key focus for sector sustainability. Within the space sustainability definition, the specific reference to access to 'downstream benefits' is somewhat restrictive and should consider that for sustainability of downstream space capability, sustainability for upstream space capability needs to be ensured.

SIAA strongly supports that the space sustainability policy highlights that an intention of the policy is to strengthen the economic resilience of the Australian space sector.

We would suggest that this sustainability policy vision look to address the importance of industry more directly in driving space sustainability, which leverages Australia's focus on sustainability for the benefit of future generations. We would welcome more direct recognition of the role of industry as playing a key part in ensuring Australia has 'stable access to space services and capabilities'. We are also interested in the use of the word 'stable' and would suggest that 'ongoing' may be more appropriate, to support the longevity of a sustainable space sector. We would also suggest that the vision could articulate wording around 'safe, stable and sustainable access to space', as well as reference the importance of the criticality of space for life on earth. The definition of 'safe' should encompass both security and cyber security.

Page 3 of the policy emphasises the role of Government in addressing sustainability challenges. We would welcome recognition here that Government will work with industry to support the adoption of sustainable space practices in partnership with the Australian space sector.

Regarding missing policy themes, SIAA notes that there is no mention of criteria that can assist Australia in meeting the net zero targets or integrating economic circular economy approaches. We note that this would need to be explored in partnership with other parts of government and would welcome the opportunity to support engagement across these topics with the Australian space industry.

SIAA suggests that industry would appreciate further direction from the Agency on how 'additional compliance costs', noted on page 3 will be effectively mitigated. SIAA supports the Agency's intention to not have a sustainability policy increase additional compliance costs, however we would suggest that industry will be eager to understand how, in practice, compliance costs will not be increased. We further note that the policy suggests that "the Australian sector is nascent and unlikely to achieve holistic capability uplift around the adoption of sustainability principles and practices purely through market forces." SIAA is eager to further understand how the Australian Space Agency will support industry to adopt sustainability principles that cannot be adopted through market forces alone.

SIAA requests further definition around what "Reducing risks to space assets that provide essential services to Australia through space debris mitigation and related activities" refers to. Is this CI? What are these assets?

SIAA suggests further explanation to assist industry in understanding how the Agency is seeking to improve supply chain sustainability across the space sector, as noted on page 5.

There is a need for clarification on what space assets are being referred to that 'provide essential services to Australia', as noted on page 12. How does this align with work being undertaken to protect space assets that provide essential services to Australia which is currently ongoing across other government departments?

We would suggest that the priority order of themes be as follows:

- Encouraging best business practice and building an economically resilient sector through the adoption of sustainable business processes.
- 1) Reducing risks to space assets that provide essential services to Australia through space debris mitigation and related activities.
- 2) Remediating space debris to protect the space assets that provide essential services to Australia.
- 3) Supporting the development and implementation of rules and norms that seek to support the safety, stability and sustainability of outer space, through international engagement.
- Building social license around space activities including fostering positive relationships with impacted communities.
- Supporting astronomy and space science by advocating for the protection of dark and quiet skies.
- Elevating First Nations cultural and scientific knowledge to complement and harness Australia's scientific, economic and wholistic potential.

We would further suggest that the two themes highlighted in yellow above require further differentiation to assist with clarity of the seven themes.

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Consultation prompts

- To what extent would the adoption of sustainable business processes drive the transformation, growth and competitiveness of Australia's industries?
- In what ways would your organisation benefit from guidance material on how to adopt sustainable business processes and practices?
- What type of guidance material would provide the most benefit? You can consider options such as a voluntary code of conduct with high-level principles, professional standards, or an industry framework with objectives, metrics, targets, and actions.

SIAA RESPONSE

The adoption of sustainable business practices would bring Australian industry in line with global partners and at pace with overall transitions to a cleaner economy. This would align business with the Australian government's strategic objectives.

SIAA would benefit from guidance material to assist us in effectively acting as a channel to industry to further amplify guidance material developed by the Agency. Further, by ensuring that SIAA is informed on the Australian Space Agency's sustainability policy, as supported by guidance material, we can ensure that we remain able to correctly outline Australia's policy positions and advise industry effectively. SIAA suggests the clear designation of an appropriate point of contact for the Agency's Sustainability Policy to ensure that the space sector understands who they can engage with on the policy, to minimise wait times and ensure that the policy is effectively implemented. If the guidance material and point of contact are not effectively shared and outlined to industry, the space sector will not understand and meet their obligations. The space sector requires adequate resources, training, and advertisement, to ensure compliance. Businesses are more at risk of non-compliance, either through lack of knowledge or a lack of understanding of the importance of the policy, if they do not have clear guidance materials and a point of contact.

The most useful guidance material would include a one-page explanation (executive summary) and frameworks with objectives, metrics, and actions that industry can easily digest and work to

implement. We would suggest that these are available in multiple formats and referenced in multiple arenas (conference presentations, social media, website, videos/webinars, etc.)

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Consultation prompt

- To what extent does Australia's participation in international forums on space contribute to a more resilient economy and strengthen national resilience?

SIAA RESPONSE

Australia's participation in international forums demonstrates a tangible commitment to advancing matters of sustainability and cooperating with key international partners. Australia will reap diplomatic and socio-economic benefits from being a key, respected player in global forums. Participation in international forums further promotes Australian space sector capabilities, which can be more trusted due to Australia's position as an international partner in UN COPUOS and other international forums. Participation in international forums directly drives partnerships between Australian companies and universities and international partners, which should continue to be emphasised as a key part of what Australia's participation in international forums on space offers the Australian economy. We believe that this point could be emphasised more. We would also suggest that India is mentioned as part of the 'What Australia's international partners are doing' of this section and India's work in supporting the sustainability of space, both in their national policy and industry capability should be further emphasised. We also suggest that the reference to Australia's rover that will operate on the Moon as part of the United States Artemis Programme be more formally referenced as the Australian Space Agency's Lunar Trailblazer Mission.

Both APRSAF and IAC 2025 provide a significant opportunity for Australia to collaborate with other countries e.g. the Indo-Pacific region and/or Europe (via ESA) to co-develop space sustainability goals.

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Consultation prompts

- How would reducing risks to space assets support the resilience of Australia's supply chains and strengthen our national resilience?
- Would your organisation benefit from best practice guidance material on how to minimise the risk of creating space debris and manage the risks associated with existing space debris? If so, what type of guidance material would provide the most benefit?
- How would your organisation benefit from an Australian civil space object monitoring capability that tracks space debris and alerts organisations of potential risks?
- Why/why not should an Australian civil space object monitoring capability be industry-led?

SIAA RESPONSE

1. Reducing risks to space assets would bolster industry's confidence and secure supply chain opportunities by mitigating risk factors. We commend Australian Space Agency for the recognition that "Management of the radio frequency spectrum is critical to ensure efficient and equitable access for the services that use it", as this is a key sustainability concern for Australian space companies operating in ground segment.
2. SIAA would benefit from guidance material on how to minimise the risk of creating space debris and manage the risks associated with existing space debris as useful resources that SIAA can share with members and the broader Australian space industry. Guidance materials also ensure that SIAA and the Australian space industry are well informed in their understanding of policy aims and objectives.
3. A central monitoring capability could provide an additional credible source of tracking information, increasing Australia's access to key data. SIAA notes that there are a range of Australian space companies and organisations that could enable a capability like this, and we would suggest that this policy signal the Agency's awareness of industry's existing capability here and the intention to engage with industry as part of building this capability. Further Australian development in this area should be complementary to existing offerings across the space sector.
4. Australian civil space monitoring should be industry led, with industry already taking a leading role in this area. SSA/SDA in Australia should be industry led as industry provides greater flexibility in product offerings and importantly, adds redundancy in the SSA/SDA network.

Access to Australian SSA capability provides Australian Defence services with the ability to own a data asset, which can be shared with international partners, also can provide real-time response capabilities for Australia's use, without having to rely on international partners for this capability. Further, Australia's geography can cover a large chunk of the sky, providing Australia with a strategic advantage that can support partners in the Indo-Pacific and internationally.

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Consultation prompts

- How could your organisation benefit from First Nations knowledge and/or support First Nations peoples?
- What are the barriers for your organisation in engaging with First Nations peoples?

SIAA RESPONSE

While we do engage with some First Nations businesses and space industry colleagues, Space Industry Association of Australia would benefit from greater engagement with First Nations peoples. In the development of IAC 2025 Congress design, SIAA has engaged with First Nations Australians as part of the development of ideas. Increased engagement would allow SIAA to be better informed on First Nations knowledge as an industry mouthpiece. This would positively affect our engagements through IAC, internationally and with industry. It is important to note that a key barrier for SIAA and industry members to engage with First Nations people is organisational capacity, with many small space businesses potentially unable to achieve the levels of engagement that they would like with First Nations people and knowledge. There is a role for Australian Space Agency to play here in facilitating greater engagement. SIAA also recommends replacing the 65,000 years reference to 'since time immemorial' as advised throughout our IAC 2025 engagement.

SIAA recommends easy access to knowledge on how to implement a Reconciliation Action Plan (RAP) in the space industry which could be shared with the industry more broadly.

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Consultation prompt

- How could the Australian Government support the space sector to build and maintain social license? Consider best practice guidance material, an advisory service, or support with community engagement.

SIAA RESPONSE

SIAA agrees that social license should be a major focus for government, industry and related stakeholders to grow and sustain public interest, which will in turn ensure that space has a bipartisan understanding across government. To support the space sector to build and maintain social license, there is a need to reach all groups across genders, age, racial and ethnic diversity, and ability. This would be better supported through the development and expansion of educational and media campaigns, that would foster community engagement. The policy should place a greater emphasis on space delivering services for Australia as a whole, and frame this within national implications of the impact of a loss of space capability that would affect all Australians.

Australian Space Agency has a unique opportunity to engage with the Federal Department of Education to showcase material that Australian Space Agency has already developed as part of the Australian curriculum. Australian Space Agency should further engage with each Australian State and Territory's Department of Education to support the implementation of space education with STEM education curriculums.

Australian Space Agency does not need to bear the burden of raising the social license of space alone and should actively seek to work with industry partners in support of this initiative. Australian organisations like One Giant Leap Foundation directly engage in STEM and space education and encourage young Australians to seek a career in the Australian space sector. SIAA Academy also works with VET providers and JSC's to raise profile of the types of jobs in space and how they map to VET sector. SIAA Academy partners with job agencies to advertise jobs in space and to give workshops on what job pathways exist. This also gives another outlet to sectors adjacent to the space industry. As such, Australian Space Agency should seek to partner with organisations to leverage existing offerings that can raise the social license of the space sector in Australia, by helping these organisations expand their programs.

STEM education has a critical role to play here, and this should be done in combination with increasing public awareness of the importance of space for supporting Australians' everyday lives, disaster resiliency, emergency management, critical infrastructure, national security, and more.

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Consultation prompt

- Should Australian satellites contain technological solutions to reduce their impact on radio and optical astronomy?

SIAA RESPONSE

Australian satellites should contain technological solutions to reduce their impact of radio and optical astronomy. Maintaining dark sky areas for radio and optical astronomy is a key component of space sustainability. Australian Space Agency has an ongoing role to play to educate space companies on the importance of dark and quiet skies by outlining the benefits that this will pose the Australian space industry. This will assist Australian space companies to understand the importance of dark and quiet skies. It is important to acknowledge that the regulatory burdens placed on Australian space companies to reduce their impact on radio and optical astronomy should not adversely affect companies' ability to conduct business and develop capability in a timely and cost-effective manner.

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Consultation prompt

- To what extent, if any, would an increase in space debris remediation capability in Australia translate to a more economically resilient sector?

SIAA RESPONSE

An increase in space debris remediation capability in Australia would assist Australia to develop a more robust and prepared sector for future challenges, with space debris posing an increasing challenge to the space industry. This capability would further unlock opportunities for businesses to adapt and evolve to create new technologies to deal with space debris.

Space debris remediation should be closely aligned with cyber security as this is often the cause of space debris. All parties should educate the space sector to ensure cyber security awareness and protection.

Should you have any questions regarding feedback, please get in touch with me, or please contact SIAA's Head of Membership, Isobel Haddow.

We look forward to continuing to engage with the Agency and the space industry to further promote the sustainability and long-term viability of the Australian space sector.

Kind regards,

Lisa Vitaris

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Space Industry Association of Australia