6 February 2023

English only

Committee on the Peaceful Uses of Outer Space
Scientific and Technical Subcommittee
Sixtieth session
Vienna, 6–17 February 2023
Item 12 of the provisional agenda*
Long-term sustainability of outer space activities

Australia – Input to the Working Group on the Long-term Sustainability of Outer Space Activities

The present conference room paper was prepared by the Secretariat on the basis of information received from Australia. The information was reproduced in the form it was received. Related texts by Australia are available in documents A/AC.105/C.1/L.409/Add.3 and A/AC.105/C.1/2023/CRP.6.

* AC.105/C.1/L.405.

Australia –input to the Working Group on the Long-term Sustainability of Outer Space Activities

January 2023

1. Australia is committed to the development and implementation of rules and norms that seek to support the safety, stability and sustainability of outer space. The Guidelines for the Long-term Sustainability of Outer Space Activities (LTS Guidelines) provide an effective framework to support this outcome, and Australia is committed to their implementation.
2. This submission follows input provided by Australia in November 2022 for the consideration of the Working Group on the Long-term Sustainability of Outer Space Activities (LTS 2.0 Working Group). It includes case studies developed by the Australian Space Agency (the Agency), which outline Australia's experiences, practices and lessons learned in implementing parts of the Guidelines, namely A. Policy and regulatory framework for space activities; and C. International cooperation, capacity-building and awareness (see **Attachment A**). These case studies are structured consistent with the United Kingdom's reporting approach for voluntary implementation of the LTS Guidelines (A/AC.105/C.1/2020/CRP.15 and A/AC.105/C.1/2021/CRP.16).
3. Australia is committed to its obligations regarding the registration of space objects, including in accordance with the Registration Convention. Australia's implementation of these obligations is reflected in the regulatory framework for civil space activities. The *Space (Launches and Returns) Act 2018* requires the keeping of a Register of Space Objects, and the entry into the Register of particulars for space objects that are launched into Earth orbit or beyond under an Australian launch permit, overseas payload permit or authorisation certificate. The Australian Space Agency's Office of the Space Regulator supports the registration of space objects. This includes:
    - Standardised communications with permit applicants regarding expectations and requirements; and
    - Internal procedures and communication to follow up with permit holders after launch.

   This supports implementation of LTS Guideline A.5 – enhance the practice of registering space objects.
4. Additionally, the Agency has adopted a regulatory engagement framework to structure its approach to outreach on regulations including practices relevant to the long-term sustainability of space activities. The framework has user needs at its core, with the Agency's understanding of stakeholders' needs and characteristics continuing to evolve through further engagement. The purpose of the framework is to support the Agency's ongoing engagement with the Australian space sector, including in supporting a culture of safety. The regulatory engagement framework also supports the Agency to target awareness raising and engagement, generate insights and implement ongoing improvements to the regulation of space activities. This approach supports implementation of LTS Guideline C.4 – raising awareness of space activities.
5. Australia supports the aims of the LTS 2.0 Working Group. In our view, the sharing of experiences, practices and lessons learned from voluntary national implementation of the LTS Guidelines is key to raising awareness of, and facilitating capacity building in, implementation of the LTS Guidelines as a whole. We will continue to actively engage with the LTS 2.0 Working Group as we work towards supporting the safety, stability and sustainability of outer space.

Attachment A

A.5	A.5 – Enhance the practice of registering space objects	Australia
Thoughts or approach to implementation	Australia is committed to its obligations regarding the registration of space objects, including under the *Convention on Registration of Objects Launched into Outer Space* (**Registration Convention**). Australia's implementation of its obligations regarding registration are reflected in the *Space (Launches and Returns) Act 2018* [**the Act**] (Part 5) which requires the responsible Minister to keep a Register of Space Objects, and enter in the Register the following particulars for a space object that is launched into Earth orbit or beyond under an Australian launch permit, overseas payload permit (OPP) or authorisation certificate: (a) The (Australian) registration number given to the space object; (b) the launch facility; (c) the date of the launch; (d) the space object's basic orbital parameters, including: i. the nodal period; and ii. its inclination; and iii. its apogee and perigee; (e) the space object's general functions; (f) if a country other than Australia is also a launching State for the space object – the name of that country; (g) any other particulars prescribed by the rules for the purposes of this paragraph. In keeping the Register, the Minister must have regard to the Registration Convention and any other international agreement or arrangement relating to the registration of space objects to which Australia is a Party. The Minister must also cause the Register to be made publicly available on the Department's website (https://www.industry.gov.au/australian-space-agency/regulating-australian-space-activities/register-space-objects). Under the Registration Convention, Australia provides information to UNOOSA as soon as practicable after receipt of information from a permit holder. Further requirements related to registration are set out in the *Space (Launches and Returns) (General Rules) 2019* [**the General Rules**] and include those described below. **Australian Launch Permits** The General Rules indicate that an application for the grant of an Australian launch permit requires, for any launch that is proposed to include one or more payloads (s 50(g)), information for each payload including the proposed trajectory and (if applicable) orbit of the payload. A standard Australian launch permit condition (s 39, General Rules) is that the holder of the permit must (among other things) give the Minister as soon as practicable after the launch of a space object authorised by the permit:	

	• the information about the orbital parameters of the space object mentioned in paragraph 1(d) of Article IV of the Registration Convention; • if a country other than Australia is a launching state for the space object – whether the other launching state has indicated it wishes to register the space object. The General Rules (s 50(j)(vi)) also include requirements (in certain circumstances) regarding informing the Agency when payload end of mission manoeuvres commence. **Overseas Payload Permits** Applications for overseas payload permits (s 77(1)(c), General Rules), include the proposed trajectory and (if applicable) orbit of the payload and (s 77(1)(e)) the information required for the registration of the payload under paragraph 1 of Article IV of the Registration Convention. As a condition of an OPP, the permit holder is required to provide, as soon as practicable after the launch of the object, the information about the orbital parameters of the space object mentioned in paragraph 1(d) of Article IV of the Registration Convention. The permit holder is also required to inform, as soon as practicable, of any change that is proposed to the orbital parameters of the space object. The permit holder must notify the responsible Minister within 1 month of the change. The Agency works closely with permit holders to receive information required.
Current progress and/or proposed future activities	The Office of the Space Regulator supports the registration of space objects. This includes: • Standardised communications with permit applicants to make clear expectations and requirements; and • Internal procedures and communication to follow up with permit holders after launch.
Experiences, challenges and lessons learnt	The Agency has noted requests for guidance on the level of detail required in the reporting of orbital parameters. In addition, as involvement in space activities has increased, the Agency has increased the number of assessment and engagement staff in the Office of the Space Regulator.
Comments on specific needs for capacity building to support implementation	National space legislation plays an important role in supporting Australia's implementation of its international obligations, including those under the Registration Convention. In addition to establishing a system for the regulation of space activities carried on either from Australia or by Australian nationals outside Australia, the Act was developed with the objective of implementing certain of Australia's obligations under the UN treaties on outer space.

	Review of existing space legislation can support identification of opportunities within the regulatory framework to enhance the practice of registering space objects. Dialogue with other regulators to share learnings, experiences and methods associated with registration is key to this work.

C.4	C.4 – Raise awareness of space activities	Australia
Thoughts or approach to implementation	The Australian Space Agency (the Agency) raises awareness of space activities, including related to space sustainability, through multiple initiatives including: • nationwide engagement with the space sector on topics including sustainability, most recently through a series of engagement roundtables held across Australia in 2022; • development of a space sustainability framework; • an established regulatory engagement framework; and • investment in communication and outreach activities, for example through the Australian Space Discovery Centre. This case study focuses on the regulatory engagement framework and the Agency's approach to outreach on regulations and practices relevant to the long-term sustainability of space activities. The regulatory engagement framework has user needs at its core, with the Agency's understanding of stakeholders' needs and characteristics continuing to evolve through further engagement. The purpose of the framework is to support the Agency's ongoing engagement with the Australian space sector, including in building a culture of safety. The framework is built around the following: 1. **Engage** – targeted engagement including web content, guidelines, workshops, forums, advisory groups and user experience testing. 2. **Gather** – structures and processes for storing data and information, including our customer relationship management system (CRM), submission and reporting dashboards, web traffic monitoring and internal document management systems. 3. **Analyse** – scheduled data and information analysis, including sentiment analysis and other analytics to identify hot issues, trends and challenges in space regulation and how it is administered. 4. **Generate insights** – conduct workshops internally and with targeted stakeholder groups to clearly define problems and identify potential solutions or opportunities to improve. 5. **Act** – a distinct decision point for the Agency to either lead a change, seek to influence a change, or make an informed decision to not act. This framework ensures that engagement will result in clear insights from the information received, enabling monitoring and evaluation of the effectiveness of communications, and supporting informed decision-making.	
Current progress and/or proposed future activities	To date, the Agency has focused on developing updated guidance material to help the Australian space sector understand regulatory requirements and assessment processes. Four of these guidelines are publicly available on the Australian Space Agency website (https://www.industry.gov.au/australian-space-agency/regulating-australian-space-activities/conducting-australian-space-activities), with plans to publish further guidelines in early 2023. The aim of this updated guidance material is to support improved understanding of the regulatory framework, including practices being	

	employed to enhance the long-term sustainability of outer space activities. The Agency is also undertaking a review of its website to make content easier to find, more engaging and accessible. The Agency has held workshops with internal stakeholders and industry to gather feedback on potential improvement of the application and assessment processes. The Agency plans to run 'user-experience testing' on all communication and guidance material in mid-2023 to ensure it meets the needs of target audiences. In December 2022, the Agency established an open group of non-government space sector representatives, the Space Regulation Advisory Collective (SRAC). SRAC provides a forum to hear from non-government actors on a range of space regulation issues. This will include facilitated forums on dedicated topics, providing input into the work of the Agency's Office of the Space Regulator, as well as a mechanism to raise awareness of regulation of space activities. Membership of SRAC will include industry, academia and other non-government entities. The Agency is also rolling out a new customer relationship management (CRM) system to support coordinated engagement with the space sector and the broader community.
Experiences, challenges and lessons learnt	One purpose of regulatory engagement is to provide confidence in the Agency as a regulator within the space sector and more broadly across the Australian public. Therefore, the Agency has expanded the scope of its engagement to consider a wide range of groups that may be impacted by space activities, for example: • community groups around proposed launch sites; • affected industry; and • First Nations Australians experiencing potential impacts on cultural heritage. Broadening the scope of engagement is challenging for several reasons: • the volume of interest groups across Australia is large; • as a relatively new industry, the impact of space activities is often not known or easily understood; • effective engagement requires a degree of local knowledge; • cultural norms and protocols need to be considered, particularly with First Nations engagement, and can vary across the country; and • broad engagement inevitably brings a wider range of views, all needing respect and due consideration. To address these challenges, the Agency has identified a range of needs and characteristics that each stakeholder group is likely to have. The Agency will test, validate, and refine these expectations. The start-up nature of many commercial space companies creates regulatory engagement challenges. These companies have limited resources, are often running to customer-driven timelines and have a high need to demonstrate capability to the market. Developing updated guidance material, further streamlining assessment processes, and

	providing a degree of certainty around assessment timeframes is contributing to improved relationships with these stakeholders.
Comments on specific needs for capacity building to support implementation	The regulatory engagement framework provides a foundation for a dedicated engagement function. It also enables the Agency to work with others to target awareness raising and engagement, generate insights and implement ongoing improvements to regulation of space activities.