

# WRegSAT I, 2025 Regulatory Challenge

## Supplementary Brief – Evolution of Australian Space Regulation

### The Context for Evolution of the Regulatory Framework for Australian Space Activities

Even though Australia was involved in the vanguard of the initial extension of human activity into the space domain in the 1950s and 60s, predominantly at Woomera in South Australia, this was government activity, and as such, government had no need for broader regulation, beyond the internal orders, instructions and policies that guided the officials involved in such activity.<sup>1</sup> In the 70s and 80s Australia government activity in orbital launches and in satellites diminished significantly after Great Britain, Europe and the United States withdrew from their previous activities at Woomera, and the Australian government opted to draw on the space activities of its allies, particularly the United States.<sup>2</sup> Nevertheless, Australia continued its relationship with space through astronomy and deep space communication, and became a global leader in the utilisation of space-derived services, such as satellite communications and space data for weather, for geosciences, for mapping and for military uses, including at Pine Gap.<sup>3</sup>

Australia was similarly involved in the vanguard of the international governance of space activities. At the end of 1958, after the launch of Sputnik I (the first artificial satellite, followed by six other satellites successfully inserted into orbit in 1958), Australia joined 17 other states to collectively establish the *ad hoc* Committee on the Peaceful Uses of Outer Space (COPUOS).<sup>4</sup> The delegates constituting COPUOS subsequently managed a hectic program of work, keeping pace with developments during the space race, presenting drafts of five space-specific treaties to the UN General Assembly between 1966 and 1979.<sup>5</sup> Australia subsequently ratified the *Outer Space Treaty* at the first opportunity, but delayed by three years the ratification of the *Liability Convention* (possibly prompted by the impending de-orbit of Skylab), and ratified the remaining three (the *Rescue and Return*

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<sup>1</sup> M L James, 'Into Space From Australia — the Early Days' (Conference Paper, National Conference on Engineering Heritage, 3–5 December 1990) 53.

<sup>2</sup> Senate Standing Committee on Economics, Parliament of Australia, *Lost in Space? Setting a New Direction for Australia's Space Science and Industry Sector* (Report, November 2008) 25–6 ('*Lost in Space?*').

<sup>3</sup> Joel Lisk and Melissa de Zwart, 'Watch This Space: The Development of Commercial Space Law in Australia and New Zealand' (2019) 47(3) *Federal Law Review* 444, 445.

<sup>4</sup> United Nations Committee on the Peaceful Uses of Outer Space ('*UNCOPUOS*'), *Question of the peaceful use of Outer Space*, GA Res 1348 (XIII), UN GAOR, 13th sess, 792<sup>nd</sup> plen mtg, UN Doc A/RES/1348(XIII) (13 December 1958).

<sup>5</sup> United Nations Office for Outer Space Affairs, 'Space Law Treaties and Principles' (Web Page) <<https://www.unoosa.org/oosa/en/ourwork/spacelaw/treaties.html>>.

*Agreement, the Registration Convention and the Moon Agreement*) all in 1986,<sup>6</sup> in support of the Hawke government's pursuit of a nuclear disarmament agenda.<sup>7</sup>

The predominant impetus for national laws regulating space activities though, was the prospect of commercial launch sites established on Australian territory. Up until 1984 all launches were operated by governments (USSR, US, France, Japan, China, UK, ESA and India), but in 1984 the Reagan administration in the US adopted a policy of promoting commercial space capabilities, including commercial launch.<sup>8</sup> Australia's need for communication and television services across its vast landmass, and the desire to establish a small constellation of satellites for this purpose,<sup>9</sup> contributed to the market demand signal for commercial launch services. In 1987 the Institute of Engineers Australia recognised that, even if Australia at that time lacked the technology to develop launch vehicles itself, at least the launches could take place from Australian territory. The Institute conducted a scoping study on a commercial spaceport at Cape York and that study received support from the Hawke federal government and later the Bjelke-Peterson government in Queensland.<sup>10</sup> Throughout the 1990s four separate consortia<sup>11</sup> recognised the commercial potential of prospective spaceports across the country.<sup>12</sup> In spite of such enthusiasm, ultimately no commercial spaceports materialised.<sup>13</sup> The enactment of domestic legislation in 1998 to regulate the prospective commercial space activity is sometimes given as a contributing factor for the failure of these proposed commercial spaceports to materialise.<sup>14</sup>

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<sup>6</sup> Dates of ratification by Australia can be found at Department of Foreign Affairs and Trade, 'Australian Treaties Database' (Web Page) <<https://info.dfat.gov.au/Info/Treaties/Treaties.nsf/WebView?OpenForm&Seq=4>>.

<sup>7</sup> Cait Storr, 'Why Did Australia Sign the Moon Treaty?' (The Interpreter, 14 July 2021) <<https://www.lowyinstitute.org/the-interpreter/why-did-australia-sign-moon-treaty>> notwithstanding that 'nuclear disarmament' would be a mischaracterisation of the purpose of the treaties.

<sup>8</sup> Ronald Reagan Presidential Library & Museum, 'Statement on Signing the Commercial Space Launch Act' (Web Page, 30 October 1984) <<https://www.reaganlibrary.gov/archives/speech/statement-signing-commercial-space-launch-act>>.

<sup>9</sup> Gareth J Evans, *Australian Telecommunications Services: A New Framework*. Australian Government Publishing Service, 1988.

<sup>10</sup> Institute of Engineers Australia, *Cape York International Spaceport: Part 1 of a Feasibility Study* (February 1987).

<sup>11</sup> Space Transportation Systems, International Resources Corporation, United Launch Systems and Kistler Aerospace.

<sup>12</sup> Helen Meredith, 'Selling Space', Australian Financial Review (online, 26 July 2000) <<https://www.afr.com/companies/manufacturing/selling-space-20000726-k9jpp>>

<sup>13</sup> John Oxley Library, 'Whatever Happened to the Cape York Spaceport?', State Library of Queensland (Blog Post, 21 October 2013) <<https://www.slq.qld.gov.au/blog/whatever-happened-cape-york-spaceport>>.

<sup>14</sup> Steven Freeland, 'When Laws Are Not Enough : The Stalled Development of an Australian Space Launch Industry' (2004) 8 *University of Western Sydney Law Review* 79.

In light of the government's obligations under the *Outer Space Treaty*,<sup>15</sup> especially Article VI imposing international responsibility on the State for all national activities irrespective of government involvement, and its potential liability under the *Liability Convention*,<sup>16</sup> Australia followed the lead of a small number of other states that had by then enacted national space legislation<sup>17</sup> – by enacting the *Space Activities Act 1998*. In addition to managing the government's prospective liability and implementing other aspects of its obligations under the space treaties, this Act established a licensing framework for launches and returns, including of satellites or other payloads on overseas launch vehicles by Australian nationals. The government also established the Space Licensing and Safety Office (SLASO) within the Department of Industry (under various names) to consider applications for licences and permits under the *Space Activities Act 1998* (Cth).

Having established the regulatory framework in anticipation of launches from commercial spaceports, Australian commercial space activity was, as it turned out, quite sparse. Up to 2017, only two satellites (FedSat and the Buccaneer Risk Mitigation Mission) were at least partially manufactured in Australia – in universities collaborating with the Department of Defence, rather than in a commercial setting – and of the nine Australian-registered satellites launched during that period, all were launched overseas.<sup>18</sup>

Nevertheless, broader recognition had grown among politicians and others of the increasing commercial and military importance of sovereign space capability in response to a number of trends. First, the growing commercial space industry in the United States, including the increasingly public ambitions of the nascent SpaceX company led by Elon Musk, and the need for such commercial operators to secure foreign infrastructure, supply chains and customers in an inherently international business.<sup>19</sup> Secondly, the development of counter-space capabilities by potential adversaries of Australia's close ally, the United States, as manifested by the Chinese test of an anti-satellite missile in 2007, and the request that Australia 'step-up' its engagement in space affairs.<sup>20</sup> And

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<sup>15</sup> Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, opened for signature 27 January 1967, 610 UNTS 205 (entered into force 10 October 1967) ('Outer Space Treaty').

<sup>16</sup> Convention on International Liability for Damage Caused by Space Objects, opened for signature 29 March 1972, 961 UNTS 187 (entered into force 1 September 1972) ('Liability Convention').

<sup>17</sup> The development of domestic space legislation among states is detailed in: United Nations Office for Outer Space Affairs, 'Schematic Overview of National Regulatory Frameworks for Space Activities' (Conference Room Paper No 10, Committee on the Peaceful Uses of Outer Space Legal Subcommittee, 63rd sess, 15 April 2024) <[https://www.unoosa.org/res/oosadoc/data/documents/2024/aac\\_105c\\_22024crp/aac\\_105c\\_22024crp\\_10\\_0\\_html/AC105\\_C2\\_2024\\_CRP10E.pdf](https://www.unoosa.org/res/oosadoc/data/documents/2024/aac_105c_22024crp/aac_105c_22024crp_10_0_html/AC105_C2_2024_CRP10E.pdf)> Comprehensive space laws were enacted in Brazil, Canada, Germany, Norway, Russia, South Africa, Sweden, Ukraine, The United Kingdom and the United States ahead of 1998.

<sup>18</sup> Australian Space Agency, *Register of Space Objects*, Online Database (2024) <<https://space.gov.au/register-space-objects>>.

<sup>19</sup> Space Industry Association of Australia, *Advancing Australia in Space*, White Paper, (21 March 2017).

<sup>20</sup> Commonwealth of Australia, *2016 Defence White Paper* (White Paper, Department of Defence, 25 February 2016).

thirdly, the increasing dependence of a modern Australian economy and society striving to stay at, and even move beyond, the cutting edge of global technological developments.<sup>21</sup> South Australian politicians in particular, keenly aware of Australia's space heritage at Woomera in South Australia, persisted with efforts to revive the Australian space industry by leveraging that growing recognition. Christopher Pyne, a federal politician from South Australia, and the Minister for Industry, Innovation and Science at the time, announced a review of the *Space Activities Act* in October 2015 to "ensure Australia's civil space regulation effectively stimulates innovation and investment in this growing industry sector."<sup>22</sup> Meanwhile, the South Australian government had spent six years from 2008 preparing for a bid to host the biggest global annual space conference, the International Astronautical Congress (IAC) and in 2014 Adelaide was selected as the location for IAC in September 2017.<sup>23</sup>

This context of the growing commercial and military importance of sovereign space capability, and the hosting of the IAC as an event attracting around 5,500 international and national attendees, was politically ripe for a positive government 'announceable'. The federal government, in anticipation of such an 'announceable', initiated a 'Review of Australia's Space Industry Capability' in July 2017, and although the Expert Reference Group did not deliver its report until February 2018, nevertheless the government took the opportunity during IAC in September 2017 to announce the establishment of the Australian Space Agency.<sup>24</sup>

This gave amendments to the *Space Activities Act* greater priority for parliamentary consideration than they might otherwise have had. Since October 2015 the Department of Industry had already received public, government and international submissions on review of the Act, commissioned an analysis report on the Act, developed a Legislative Proposals Paper, and received public submissions on that Paper even before the announcement of the Australian Space Agency.<sup>25</sup> Amendments were drafted under a new name, the *Space Activities Amendment (Launches and Returns) Bill*, which was introduced into Parliament on 30 May 2018, finally agreed by both houses on 23 August 2018 and received Royal Assent on 31 August 2018.<sup>26</sup> The *Space (Launches and Returns) Act 2018* did not represent a comprehensive revision of the *Space Activities Act 1998*. Rather, it kept much of the existing content, retained the focus on launches and returns (the title being changed

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<sup>21</sup> Expert Reference Group, *Review of Australia's Space Industry Capability: Report from the Expert Reference Group* (Report, Australian Government, March 2018).

<sup>22</sup> Christopher Pyne, 'Atmosphere Is Right for a Review of Our Space Activities' (Media Release, 24 October 2015).

<sup>23</sup> Adelaide Convention Centre, 'International Astronautical Congress 2017' (Case Study, 2017) <<https://www.adelaidecc.com.au/wp-content/uploads/2023/08/ACC-Case-Study-IAC-2017-1.pdf>>.

<sup>24</sup> Simon Birmingham, 'Opening Remarks to the 68th International Astronautical Congress' (Speech, 25 September 2017).

<sup>25</sup> Department of Industry, Innovation and Science, 'Reform of the Space Activities Act 1998 and Associated Framework' (Consultation Paper, Australian Government, 2017) <<https://consult.industry.gov.au/reform-of-the-space-activities-act-1998-and-associated-framework>>.

<sup>26</sup> *Space Activities Amendment (Launches and Returns) Bill 2018* (Cth).

specifically to recognise this limited scope), broadened the framework marginally to include high power rockets and launches from mobile platforms (including aircraft), gave regulators broader margins of discretion, introduced a requirement for a debris mitigation strategy with applications for licences and permits (without detail on what it should contain), updated the insurance requirements, and replaced the subordinate regulations with rules<sup>27</sup> that could be made and amended by the Minister. The broader margins of discretion, and the change to rules, rather than regulations, were overtly intended to provide regulatory agility and thereby support entrepreneurship and innovation in a dynamic industry.<sup>28</sup>

The rules were amended in 2023 to remove most requirements that a suitably qualified expert (SQE) be an un-related party of the applicant. The changes mean that applicants can now use in-house capability.<sup>29</sup> Second stage amendments are planned and include removing the three-stage application process for a launch facility licence, adding further exceptions to the meaning of ‘accident’ and clarifying the Minister’s power to approve a suitably qualified expert.<sup>30</sup>

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<sup>27</sup> *Space (Launches and Returns) (General) Rules 2019 (Cth)*; *Space (Launches and Returns) (High Power Rocket) Rules 2019 (Cth)*; *Space (Launches and Returns) (Insurance) Rules 2019 (Cth)*.

<sup>28</sup> Commonwealth, Parliamentary Library, Bills Digest (Digest No 15 of 2018–19, 13 August 2018) <[https://www.aph.gov.au/Parliamentary\\_Business/Bills\\_Legislation/bd/bd1819a/19bd015](https://www.aph.gov.au/Parliamentary_Business/Bills_Legislation/bd/bd1819a/19bd015)>.

<sup>29</sup> Department of Industry, Science and Resources, 'Changes to Space (Launches and Returns) Rules' (Web Page, 2023) <<https://www.industry.gov.au/news/changes-space-launches-and-returns-rules>>.

<sup>30</sup> Gilbert + Tobin, 'Technology, Innovation, and Regulation: Developments in the Australian Space Sector' (Web Page, 7 September 2023) <<https://www.gtlaw.com.au/insights/technology,-innovation,-and-regulation-developments-in-the-australian-space-sector>>.