



Promoting Cooperative Solutions for Space Sustainability

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March 17, 2017

Rep. Brian Babin
Chairman, Space Subcommittee
Committee on Science, Space & Technology
U.S. House of Representatives
2318 Rayburn House Office Building
Washington, DC 2003

Rep. Ami Bera
Ranking Member, Space Subcommittee
Committee on Science, Space & Technology
U.S. House of Representatives
2318 Rayburn House Office Building
Washington, DC 2003

Subject: Letter for the record for the hearing on “Regulating Space: Innovation, Liberty, and International Obligations.”

Dear Chairman Babin and Ranking Member Bera:

The Secure World Foundation (SWF) is dedicated to ensuring the long-term sustainable use of space for benefits on Earth. We believe that the development of new and enhanced space capabilities is critical to addressing many of the challenges we face on Earth, and improving the lives of all humanity. As such, SWF has a keen interest in the topics discussed at the hearing organized by your subcommittee on March 8, 2017. We submit the following letter in support of the subcommittee’s deliberations.

The space domain is currently undergoing rapid changes. An increasing number of countries are building and operating their own satellites for a variety of reasons, including to promote national pride, to foster science, technology, engineering, and mathematics (STEM) education, or to kick-start their own commercial space sector. At the same time, billions of dollars in public and private capital are flowing into dozens of space start-up companies. Some of these start-ups are bringing innovation and expanding capabilities to existing commercial space sectors, such as communications and remote sensing. Others are trying to build or expand commercial markets in launch services, human spaceflight, and exploration, which historically have been the domain of governments. Still others are venturing into activities such as asteroid mining that have never been done, and hold significant promise.

These changes have both positive and negative implications. On the positive side, the changes are leading to greatly increased innovation, lowering of costs, and greater access to beneficial satellite services for everyone. However, the growth and diversification of space activities and the influx of new actors also has the potential to exacerbate many of the current challenges to the long-term sustainable use of space, including: on-orbit crowding, radio-frequency interference, the proliferation of space debris, and the chances of an incident in space sparking or escalating geopolitical tensions and conflict on Earth.



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We believe it is critical for the United States to establish an appropriate oversight framework that encourages commercial space activities and innovation, while also mitigating against the worst negative externalities that could result from unchecked and irresponsible behavior. We encourage Congress to consider a middle ground approach between burdensome over-regulation and a complete laissez-faire approach, either of which would stifle increasing space activity and innovation. Both the government and the private sector have important roles to play in ensuring the long-term sustainability of space, and that the eventual solution needs to incorporate the best capabilities of both.

Much of the current debate on this issue is focused on whether the United States has a legal obligation under Article VI of the 1967 Outer Space Treaty to authorize commercial space activities, and how that obligation is implemented. While the legal aspects are critical, the decision on how to provide national oversight of space activities cannot be based solely on legal opinion. There are other important factors such as national security, economics, and geopolitics that must be taken into account in making such an important public policy decision.

The United States can use this opportunity to enhance its leadership role in the international community on space governance. Many countries have established, or are in the process of establishing, national policy and regulation for space activities. Historically, other countries have modeled their national policy and regulation on the example provided by the United States. Thus, how the United States approaches the current issue could have widespread international implications. If the United States adopts an approach that undermines the rule of law and national obligations under the Outer Space Treaty, it would likely have a negative impact on the interests of the United States and the international legal framework it has helped develop over the last sixty years. Moreover, an approach that provides unfettered freedom of access for private sector entities could create risks for U.S. commercial companies in the future, particularly from foreign competitors. As more countries acquire the capability to engage in commercial space activities, it will be important for U.S. companies to be working inside a predictable international legal framework that can encourage and protect investments.

With these goals and concerns in mind, SWF believes that the following areas are priorities for a future U.S. oversight framework:

- 1. Reduce national security restrictions.** Nearly all the existing regulatory burdens and constraints on U.S. commercial space activities stem from national security restrictions. Export controls on satellites, mainly put in place over fears of technology transfer to China, have already caused the U.S. space sector to lose a significant portion of global market share. Several categories of remote sensing and on-orbit activities are heavily restricted, or, in some cases, have been off limits for U.S. commercial entities, enabling foreign competitors to leap ahead and establish global markets. Reducing these national security restrictions would go a long way towards lessening the burden on the commercial sector, supporting innovation, and enabling the commercial sector to enhance



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U.S. national security space capabilities. Doing so would also reduce the unintended incentive that export controls have provided to other countries to develop their own technologies, which has helped proliferate the very capabilities export controls hoped to restrain.

- 2. Modernize and streamline the licensing process.** The existing interagency licensing process for activities covered by current authorities is far too slow, inefficient, and uncertain. It is not uncommon for companies to spend many months waiting on their license, with no clear end date, and for licenses to be denied for unnamed reasons the company cannot easily discover. Civil agencies, such as those in the Department of Commerce or Department of Transportation, should have clear authority to approve and issue licenses without burdensome interagency debates or undue interference from the national security community, and there should be a rigorous and transparent appeals process for licenses that are denied. Licensing requirements, such as ground station visits, that are outdated and no longer applicable for current technology should be reduced or eliminated. Finally, there should be a presumption of approval of licenses for space activities that are not first-of-kind. Together, these changes would reinforce the competitive advantage the United States holds as new commercial space companies choose jurisdictions in which to establish operations.
- 3. Provide more certainty to private sector innovators.** There are several types of commercial space activities planned for the near future that do not clearly fall under any of the existing licensing authorities. These gaps create uncertainty that gives rise to real-world challenges for start-up companies trying to secure investors and insurers, a phenomenon many new space companies are struggling with. Providing a clear legal pathway for all commercial space companies, including those with new and innovative ideas, to secure a license would send a strong positive signal to markets and encourage more entrepreneurship.
- 4. Enhance the data and services available to make responsible decisions on orbit.** Improving space situational awareness (SSA) data and services for all space actors, governmental and commercial, is essential to ensuring the long-term sustainability of space. Historically, the U.S. government, and in particular the U.S. military, has been the primary global provider of these data and services. However, the vast increase in the number of satellites, with at least 18,000 currently planned to be launched in the next decade, threatens to overwhelm the military's current SSA capabilities, and distract from its core national security mission. At the same time, private sector SSA capabilities are rapidly improving, with multiple entities now offering access to data and services that will likely equal, or surpass, those of the government in the near future. While we believe that these private sector SSA capabilities should be leveraged to the utmost, we still believe that there are aspects of SSA that are inherently governmental responsibilities. The Department of Transportation should be empowered to work with the private sector,



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academia, and the international community to develop public SSA data and services that enhance the safety and efficiency of space activities for all.

- 5. Continue U.S. engagement in international discussions on best practices and transparency and confidence building measures.** The global nature of space cannot be ignored. More than sixty countries are currently engaged in space activities, and many are putting in place national frameworks to enable their own commercial space sectors. Over the last decade, there have been significant international discussions on a variety of sustainability, safety, and security topics both within the United Nations system and outside of it. The value of these discussions has been that many more countries are now aware of, and engaged on, space sustainability and security issues than ever before. Withdrawing from these discussions will only ensure they continue without U.S. participation and create opportunities for other nations to use such discussions to advance their own interests. Continued U.S. participation, and constructive engagement, will help ensure that the United States maintains its historical leadership role and can continue to shape the outcomes to fit its national interests.

SWF pledges to do its part to help achieve these goals through our own complementary activities. In 2016, we were a founding member of the Hague Space Resources Working Group that brings together governments, academia, and the private sector to discuss best practices and oversight frameworks for enabling commercial space resource utilization. In February 2017, we released our *Handbook for New Actors in Space*, which provides an overview of the international framework, national law and policy, and space operations best practices for both governments and commercial operators. And throughout 2017, we plan to hold a series of workshops to facilitate discussions among commercial space operators about best practices and norms for cubesats, large constellations, and rendezvous and proximity operations in orbit that the private sector can develop on its own independent from governments.

In conclusion, SWF would like to once again commend the subcommittee for focusing on such an important issue, and express our support for helping to develop an oversight framework that can help bring about sustainable commercial innovation in space that will provide new and enhanced space capabilities to address the challenges we face on Earth.

Respectfully,

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