

# “NewSpace” in China in Needs of New Laws

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## **Abstract**

China’s space activities have been government dominated and international cooperation has been limited and more political than economic in nature. The political atmosphere has begun to loosen and there have been signs of initial evolution of commercial space activities in China. The proactivity under the XI government represents more opportunities for joint space efforts. In response to the emergence of new actors and expanding cooperative efforts, upgraded regulatory institutions and rules are in demand, including the enactment of a comprehensive space law, the amendment of export control system, and the improvement of space governance mechanisms.

## **1. “NewSpace” in China**

### **1.1 The Emergence of New Space Actors**

Commercial use of space is transiting from long-term, strategic goals to a series of concrete and more open policy signals. In the 2000 and 2006 White Papers on Space Activities the space industry is considered as an integral part of the state’s comprehensive development strategy.<sup>1</sup> The 2011 and 2016 White Papers designated a diversified investment system as part of the development measures, the latter White Paper using the term “space commerce” for the very first time in this policy documents series.<sup>2</sup> The State Council encouraged and directed social capital into the construction of civil space infrastructure through government procurement and remote sensing

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1 Section I, Aims and Development Principles, 2000 and 2006 White Paper on China’s Space Activities, [www.scio.gov.cn/zfbps/index.htm](http://www.scio.gov.cn/zfbps/index.htm), January 2018.

2 Section IV, Policies and Measures for Development, 2011 and 2016 White Paper on China’s Space Activities, [www.scio.gov.cn/zfbps/index.htm](http://www.scio.gov.cn/zfbps/index.htm), January 2018.

satellites and navigation ground systems were listed as priority sectors.<sup>3</sup> The National Development and Reform Commission and Ministry of Industry and Information Technology encouraged “commercial use-oriented aerospace products” and declared the goal of completing the construction of satellite system for remote sensing, communication and navigation before 2020 with the pledge of loan and taxation support.<sup>4</sup> The 2016 Whiter Paper further specified that the access mechanism would be established by a list of allowing for non-governmental investment. Within the background of the Military reformation, civil-military integration was raised to a national-level strategy with a specialized central commission.<sup>5</sup> Space sector was prioritized in this strategy with the aims of strengthening military-civil coordination, resource, and data sharing in space programs and opening up to non-governmental capital, which could be a milestone for reconstructing China’s space industry.<sup>6</sup> China embraced the “negative list” system to facilitate overseas investment.<sup>7</sup> Space industry is not on the prohibition list, meaning foreign investment being treated as permitted and foreign enterprises are encouraged to invest in the development and manufacture of environment-friendly new material for space industry and ground testing facility for launch vehicles and.<sup>8</sup>

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- 3 The guiding opinions on innovating the investment and financing mechanism for the key fields and encouraging social investment, No. 60[2014], State Council, para. 24. [www.gov.cn/zhengce/content/2014-11/26/content\\_9260.htm](http://www.gov.cn/zhengce/content/2014-11/26/content_9260.htm), January 2018.
  - 4 Notice on implementing the major projects of industrial transformation and upgrade, [http://gys.ndrc.gov.cn/gyfz/201605/t20160518\\_802018.html](http://gys.ndrc.gov.cn/gyfz/201605/t20160518_802018.html), Medium and Long Term Development Strategy of China’s Civil Space Infrastructure, and [www.ndrc.gov.cn/gzdt/201510/W020151029394768113250.pdf](http://www.ndrc.gov.cn/gzdt/201510/W020151029394768113250.pdf). National Development and Reform Commission is macroeconomic management agency with the function to formulate policies for economic and social development, to maintain the balance of economic development and guide restructuring economic system.
  - 5 The civil-military integration as national security and whole development, <http://cpc.people.com.cn/xuexi/n1/2017/0123/c385474-29043923.html>. The meeting of Political Bureau of the Communist Party Central Committee decided the establishment of Central Committee of Developing Civil-military Integration, [www.mohrss.gov.cn/SYrlzyhshbzb/dongtaixinwen/shizhengyaowen/201701/t20170123\\_265440.html](http://www.mohrss.gov.cn/SYrlzyhshbzb/dongtaixinwen/shizhengyaowen/201701/t20170123_265440.html), January 2018.
  - 6 Guideline on deepening military-civilian integration in science, technology and industry for national defense, State Council General Office, No. 91 [2017], preamble and para. 19, [www.gov.cn/zhengce/content/2017-12/04/content\\_5244373.htm](http://www.gov.cn/zhengce/content/2017-12/04/content_5244373.htm), January 2018.
  - 7 There are 7 versions of Catalogue for the Guide of Foreign Investment Industries since its first issuance in 1995. The 2015 and 2017 Catalogue have been realigned to confirm with the “negative list “ system and is divide into three categories: encouraged, restricted and prohibited.
  - 8 The 2017 Catalogue for the Guidance of Foreign Investment Industries issued by the National Development and Reform Commission and the Ministry of Commerce, 28 June 2017, [www.gov.cn/xinwen/2017-06/28/5206424/files/e4489bbd621542a480ff4c45c42fa202.pdf](http://www.gov.cn/xinwen/2017-06/28/5206424/files/e4489bbd621542a480ff4c45c42fa202.pdf), January 2018.

There have been signs of initial evolution of commercial space activities in that more and various actors being involved and showing interest. Local governments, universities, and research organs are seeking to expand their participation in space activities. More than a dozen companies are active in the business of operating remote sensing and telecommunication satellites, developing and manufacturing payload including microsatellites and constellation, and some of them already have their own satellites.<sup>9</sup> The entities outside of the space industry are watching closely, researching and planning what they can do in this burgeoning economic sector being encouraged by the policy direction and space commerce achievement in other nations.

### 1.2 The Expanding Potential of Cooperative Efforts

China's space cooperation relations are expanding more as decorative flowers than bearing fruits. Cooperation is limited, more political than economic in nature, and more on paper than concrete. From 2011 to 2016, China has concluded more than 40 agreements and memorandums with governments, space agencies or other entities of 29 countries.<sup>10</sup> However, the joint effort for actual space activities mostly happens at the bilateral level in the form of short-term projects and aid to developing countries, such as satellite exportation, in-orbit delivery of satellites, and providing launch services and ground systems for Nigeria, Venezuela, Pakistan, Indonesia, Bolivia, and Laos. The more assertive feature of foreign policy under President Xi Jinping is bringing new motivation to strive for achievement in space cooperation. It is the ripe time for China to break this bottleneck in its space undertakings. Space cooperation is being included into China's proactive institution establishment and agenda-setting efforts, including the initiation of "the Silk Road Economic Belt and the 21<sup>st</sup>-Century Maritime Silk Road". Further, the concept of space-based infrastructure is under discussion to expand cooperative ventures in telecommunication, navigation, and remote sensing.<sup>11</sup>

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9 For instance, 21<sup>st</sup> Century Aerospace Technology, founded in 2001, visions to a remote sensing satellite operator and data and service provider. Currently, it owns several small satellites, including DMC3/TripleSat Constellation, at [www.21at.com.cn](http://www.21at.com.cn). Chang Guang Satellite Technology was founded in 2014 with shareholders including Jilin Province and aims to cover full chain of satellite and owns Jijin-1 satellite, which is China's first self R&D high-resolution commercial video integral satellite, at [www.charmingglobe.com](http://www.charmingglobe.com). OneSpace aims at developing low-cost, small-scale launch vehicles for small commercial satellites and special purpose spacecraft. It has gained investment from state-and private-owned enterprises, and Chongqing government, at [www.onespacechina.com](http://www.onespacechina.com). Siwei Worldview, with a mixed investment from China and the U.S. companies, provides remote sensing data, at [www.spaceview.com.cn](http://www.spaceview.com.cn), January 2018.

10 Section 5.2 of 2016 White Paper of China's Space Activities.

11 Speeches at the Aerospace Internationalization Forums of 2015, 2016 and 2017.

## 2. New Space in Need of New Laws

### 2.1 The Necessity of New Laws

There is no space law in China, which can be attributed to historic, political, legal, and bureaucratic reasons. Essentially, the current regulatory regime is policy-oriented with administrative regulations as supplementary support.<sup>12</sup>

There are some regulatory regimes for space activities, and it is not a total legal vacuum. There are two provisional regulations on registration of civil space objects and licensing regimes for civil launches; as well as regulations on export control and telecommunications applicable to space activities.<sup>13</sup>

The involvement of unconventional entities in China would magnify the inadequacy in current legal regulation and further build up the necessity of improving the regulatory regimes for authorization and supervision of space activities and liability. There are no predictable and systematic regulatory institutions or rules for non-governmental capital, despite the more open policy signals. It is not clear to what extent domestic private and overseas investment can be accepted in space sector, for instance, whether these companies are allowed to develop solid rockets or purchase the essential parts from the aerospace state-owned enterprises such as CASIC and CASTC.<sup>14</sup> There are no specific export control rules for space products, technologies and services, and in practice they are subject to the regulation for military ones.<sup>15</sup> In addition, the enactment of a space law could be a channel to eliminate miscommunication, misinterpretation, misrepresentation, and ill assumptions about China's intentions in space.

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12 "Note by the Secretariat, United Nations General Assembly," Committee on the Peaceful Uses of Outer Space, Information on National Legislation Relevant to the Peaceful Exploration and Use of Outer Space, A/AC.105/932, 2 February 2009, [www.unoosa.org/pdf/reports/ac105/AC105\\_932E.pdf](http://www.unoosa.org/pdf/reports/ac105/AC105_932E.pdf).

13 The Administrative Measures for Registration of Objects launched into Outer Space (Registration Regulations), promulgated in 2001 by the Commission of Science, Technology and Industry for National Defense (COSTIND) and the Ministry of Foreign Affairs; and Interim Measures on the Administration of Licensing the Project of Launch Civil Space Objects (the Licensing Measures), issued by the COSTIND in 2002. The Regulation on Telecommunications promulgated in 2000, Decree No. 291. The Regulations on Export Control of Military Products first released in 1997 and revised in 2002. The Administrative Regulations on Export Control of Missiles and Missiles Related Items and Technologies in 2002 and The Regulations on Export Control of Nuclear Products of 2006.

14 China Aerospace Science and Industry Corporation (CASIC) and China Aerospace Science and Technology Corporation (CASTC) were founded in the 1990s as the primary contractors for the space programs. At [www.spacechina.com](http://www.spacechina.com) and [www.casic.com.cn](http://www.casic.com.cn), January 2018.

15 The relevant regulatory documents include the Regulation on the Administration of Arms Export Control (amended in 2002); the Regulation on Export Control of Missiles and Missile-Related Items and Technologies, and the Measure for Administration on Import and Export License for Dual-Use Items and Technologies.

China's space industry extends to governmental and military organs from different sectors and involves research and production units from enterprises and universities. China's space bureaucracy consists of confusing lines of authority: a mix of overlapping military sectors, governmental organs, research institutions, and state-owned enterprises with complicated finance-allotments, cooperative and collaborative, and chain-of-order connections among them. Its operation is a high-cost, low-efficiency puzzle for the outsiders, including local and foreign new-comers, and there is a need to streamline the governance structure.

### **2.2 More Endogenous Need for Upgrading Space Regulation**

The current unsatisfying situation could be fundamentally remedied by a comprehensive space law adopted by the National People's Congress (NPC), and regulations on export control of and foreign investment in aerospace products and technologies. The proposal for space legislation emerged at the NPC in the 1990s, and space law was incorporated into the NPC five-year legislation plan in 2013. Based on the degree of maturity, the NPC legislation plan is categorized as: will be deliberated; could be deliberated; and in need of further study and analysis. Space law is listed in the last category. Over the years, the consensus on the necessity and importance of space legislation has been increasingly solid, yet there are doubts and hesitations. However, the NewSpace entails more endogenous need for a space legal system than merely implementing international obligations.

### **3. Conclusions**

Within the historic background of constructing the rule of law, there are reasons to believe that regulation for space activities in China would be upgraded to a basic and comprehensive law supplemented by a series of administrative regulations. Whether space law remains in the next NPC legislation plan or not, the need for new laws cannot be overstated.

