

# Oxford Research Encyclopedia of Planetary Science

## Space Law and China

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Subject: Space Law Online Publication Date: Feb 2019

DOI: 10.1093/acrefore/9780190647926.013.66

### Summary and Keywords

China has made remarkable achievements in the space sector and has become one of the most relevant players in the outer space domain. Highlights of this process have been the deployment in orbit of the first Chinese space station, Tiangong-1, on September 29, 2011, and the landing of the Yutu rover on the lunar surface on December 14, 2013.

While technological developments have occurred at such a rapid pace, the same cannot be said of the regulatory framework governing Chinese space activities, which still lays at its infant stage. Indeed, unlike other major spacefaring countries, China lacks a comprehensive and uniform national space legislation; as of now, China has enacted two low-level administrative regulations addressing the issues of launching and registration of space objects.

With the growth of the Chinese space program, such a lack of structured national space law is beginning to show its limits and to raise concerns about its negative impact on business opportunities and the ability of China to fully comply with international obligations. One should keep in mind that international space treaties (China is part to four international space law treaties) are not self-executing, thus requiring states to adopt domestic measures to ensure their effective implementation.

Importantly, Chinese authorities appear to be aware of these issues; as stated by the Secretary-General of the Chinese National Space Administration (CNSA) in 2014, national space law has been listed in the national legislation plan, and the CNSA is directly engaged in such a process. However, questions remain as to how this drafting process will be conducted and what legal form and content the law will have. For example, China could either decide to proceed with a gradual approach, consisting in the adoption of laws addressing selected issues to be eventually assembled into one single law or to directly move to the adoption of one comprehensive law.

In any case, if enacted, a Chinese national space law would represent an important step in the advancement of the Chinese space program and in the progress of international space law as such.

Keywords: national space law, Chinese space law, licensing, liability, registration

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## Introduction

Over the last decade, China has achieved remarkable results in the space sector and has become one of the most relevant and influential space player. Sending the first Chinese astronaut in space in 2003, launching the first Chinese space station, Tiangong-1, on September 29, 2011, and landing the Yutu rover on the lunar surface on December 14, 2013 are the highlights of this process.

While China has made notable steps forward from a technological standpoint, the same cannot be said of the regulatory framework applicable to Chinese space activities, which still lays at its infant stage. Indeed, unlike other space actors, such as Russia, the United States, and several European states, China does not possess a comprehensive legislation regulating domestic space activities. In fact, China has only passed two low-level administrative regulations addressing the issues of launching and registration of space objects so far.

This situation is the result of a strategic decision taken by the Chinese authorities in the 1980s, when priority was given to close the technological gap with the United States and the Soviet Union rather than focusing on legal developments. Nowadays, however, as China is capable of competing with other space players on near-equal footing, one may wonder if the present minimal regulatory structure is adequate to cope with the demands and goals of the Chinese space program. Arguably, there are at least four factors that may lead China to consider expanding its national space legislation: (1) the growing size of Chinese space activities; (2) the global nature of the space services provided by China; (3) the emergence of a domestic private sector; (4) the interest of foreign entities to engage in space activities in China or in cooperation with Chinese entities.

In this respect, at various occasions, Chinese officials have stressed the importance of having a regulatory framework that matches the reality of the Chinese space program. However, if China decided to modify its domestic space legislation, questions remain on which road it would take if it were to adopt a comprehensive law or if individual legislative instruments regulating specific issues were to be enacted, for example. Importantly, in the past 12 years, China has been issuing policy-orientated documents, the so-called “white papers,” that enumerate the achievements of the Chinese space program and highlight its goals.

The present article will first analyze the existing Chinese space regulations. It will then discuss the possible future developments of Chinese space law and the concrete steps taken in this direction by the Chinese legislator.

# Current Chinese Space Law and Policy: An Analysis

## Preliminary Remarks

Chinese space law consists of the 2001 *Measures for the Administration of Registration of Objects Launched into Outer Space* (hereinafter the Registration Measures)<sup>1</sup> and the 2002 *Interim Measures on the Administration of Licensing the Project of Launching Civil Space* (hereinafter the Licensing Measures).<sup>2</sup> In addition, the *Interim Instrument of Space Debris Mitigation and Management* (hereinafter the Space Debris Interim Instrument) entered into force in 2010. In order to understand why these measures have been adopted, one should take into account that China is part to four United Nations' space law treaties, namely the 1967 Outer Space Treaty, the 1968 Rescue and Return Agreement, the 1972 Liability Convention, and the 1975 Registration Convention. The space treaties are not self-executing, in the sense that they require states to take regulatory/legislative steps to comply with the obligations that they set. Accordingly, China has passed the above measures to implement the requirements to "register" space objects and to authorize the launch of objects in outer space.

Importantly, the Registration and Licensing Measures have been enacted in the form of departmental regulations, which constitute one of the lowest level of laws in China.<sup>3</sup> Chinese laws are ranked on the basis of their respective legislative bodies. At the top of the ladder, there is the Constitution of People's Republic of China adopted by the National People's Congress (NPC). The Constitution has binding force and no other law or regulation can contravene it. In second place, there are laws enacted by the NPC and its Standing Committee, the body exercising the supreme legislative power of the state. In third position, there are administrative regulations adopted by the State Council, which is the highest national administrative organ. The fourth place is occupied by ministerial regulations formulated by the Ministries and Commissions of the State Council. In fifth place, there are local decrees issued by the local People's Congresses, and administrative and local rules issued by an administrative agency or by a local People's government. The fact that the Registration and Licensing Measures have taken the form of ministerial regulations tells us two things: (1) at the time of their adoption, these Measures dealt with issues that were not deemed to be a matter of national priority by the Chinese legislator; (2) the form that it was chosen was considered to be sufficient to achieve the Measures' intended goals.

## The 2001 Measures for the Administration of Registration of Objects Launched into Outer Space (The Registration Measures)

The purpose of the 2001 Registration Measures is to ensure the implementation of the requirements set in the 1975 Registration Convention, which demands states parties to reg-

ister their space objects in a national register as well as to transfer relevant information to the U.N. Secretary-General for inclusion in an international registry.

The Registration Measures contain 16 articles addressing several aspects related to the registration of space objects. They begin by defining a space object as “an artificial satellite, crewed spacecraft, space probe, space station, launch vehicle and parts thereof, and other human-made objects launched into outer space.”<sup>4</sup> Essentially, under the Measures, an object requires two elements to be classified as a “space object,” namely (1) being man-made; (2) entering outer space.

Interestingly, this definition is more comprehensive than the one provided in Article I of the Registration Convention, where a space object “includes component parts of a space object as well as its launch vehicle and parts thereof.”

Next, the Registration Measures clarify their scope by setting out that registration is requested for all space objects launched from the territory of China as well as space objects jointly launched abroad by China and other states.

The obligation to register falls upon all governmental departments, juridical persons, other organizations and natural persons of China which launch or procure the launching of a space object.<sup>5</sup> In this respect, Article 7 of the Measures points out that it is the owner of the object that has the primary responsibility to register it. Furthermore, where a space object is launched from Chinese territory but it is owned by a foreign government or entity, the Chinese corporation that provides the launching service shall register the object in the national registry. In simpler terms, the Chinese government and all the subjects falling under its jurisdiction are under the obligation to register all the objects launched into outer space into the national registry. In case a space object launched from Chinese territory belongs to a foreign country/entity, China will still register it.

The State Administration for Science, Technology and Industry for National Defence (SASTIND) is responsible for maintaining the national registry.<sup>6</sup> The registrant shall provide the SASTIND with a series of information ranging from the name of the owner of the space object to its basic orbital parameters. The registrant shall also complete the registration requirements within 60 days from the date of the launch.<sup>7</sup> In case some significant changes occur, such as a change of ownership in orbit, the inoperability of the space object, a breakdown, a cessation of function and re-entry into the earth’s atmosphere, the registrant shall modify the registration within 60 days accordingly. The information contained in the registry can only be accessed upon specific approval by the SASTIND.

The SASTIND, via the Ministry of Foreign Affairs, is also responsible for the international registration of the objects launched by China. Accordingly, it shall notify the Secretary-General of the United Nations, which maintains the International Register, about launches performed from Chinese territory or even outside in case China decides to act as the state of registry for objects jointly launched with other states. Notification shall be effected within 60 days after the registration in the national registry has taken place.<sup>8</sup> Notably, this requirement is more stringent than the one laid down in Article 4, Paragraph 1 of the

Registration Convention, which requests states parties to provide information to the U.N. Secretary-General “as soon as practicable.”

Overall, the Registration Measures represent a valid instrument to implement the requirements set forth in the Registration Convention, at times even improving upon them. However, it is also true that the Measures’ provisions present some shortcomings. For example, while referring to objects launched into outer space, they do not clarify where outer space begins; this may become an issue in relation to the applicability of the Measures to objects that operate at the border between airspace and outer space, namely at altitudes between 80 and 100 km above sea level. Another problem concerns the interpretation of the expression “main owner” of a space object, as neither the Registration Measures nor the Registration Convention use this expression.

### **The 2002 Interim Measures on the Administration of Licensing the Project of Launching Civil Space**

The purpose of the 2002 Licensing Measures is to set forth the legal regime for the licensing of launches of civil, non-military, objects into outer space. The Measures include five chapters and 26 articles that lay down detailed procedures on how to apply for a license, on one side, and describe the rights and duties of the licensee, the supervisory mechanisms and the penalties to be imposed in case of violation of the license’s terms, on the other side.

The Licensing Measures are applicable to the launching of space objects from Chinese territory as well as to the launching of space objects from foreign territory if the space object is owned by China or if its ownership is transferred to Chinese natural or juridical persons or organizations.<sup>9</sup> Thus, any person or organization willing to undertake a launch project shall apply for examination and approval from the SASTIND, and it is prohibited from carrying such project until an authorization is obtained.<sup>10</sup> The need for such an authorization is to be found in Article VI of the Outer Space Treaty, which establishes the international responsibility of states for national activities in outer space, including those of governmental and non-governmental entities, and requires states to authorize and continuously supervise the activities of non-governmental entities. The text of the Licensing Measures reveals that China understands “launching” from a territorial and personal basis. Indeed, both launches from Chinese territory (territorial jurisdiction) and launches undertaken by Chinese natural and juridical persons outside the territory of China (personal jurisdiction) require authorization and licensing from Chinese authorities. The license represents a means for China to ensure the safety of the operation, to guarantee consistency with international obligations, and to control the licensed activity.

The general project contractor or the final owner of the satellite or other spacecraft are under the obligation to apply for the license. Such a license can be obtained if the proposed activity: (1) does not endanger national security and public health; (2) is consistent with environmental protection laws; (3) and the applicant possess the required technical and financial capabilities.<sup>11</sup> The applicant is further requested to obtain an insurance cov-

ering liability for damage or other losses caused to third parties and other liability cases incurred by launching a space object.<sup>12</sup>

Applications shall be submitted to the SASTIND nine months prior to the launch.<sup>13</sup> The SASTIND shall review the application within 30 days from receipt and shall grant or reject the attribution of a license. Once issued, a license shall include the name and address of the licensee, the main elements of the project, the time frame of the launch and the duration of the project. A license cannot be altered or transferred<sup>14</sup> and it shall be immediately terminated once the project is completed.<sup>15</sup> If the licensee wishes to modify information in the license or cancel it, the SASTIND should be notified 90 days before the expiration of the license for modification<sup>16</sup> or cancellation.<sup>17</sup>

The licensee shall comply with the terms of the license and with the laws and regulations of China. In case of violation, the SASTIND shall order the licensee to rectify the violation within a deadline or shall withdraw the license if the violation is serious.<sup>18</sup> Furthermore, depending on the gravity of the violation, administrative penalties can be imposed on the licensee, for example if it concealed the truth, practiced fraud, or caused damage to national interests.<sup>19</sup> Additionally, if any natural or juridical person, or any organization, undertakes a project of launching without authorization, the SASTIND shall terminate the illegal activity and impose administrative sanctions.<sup>20</sup> If these activities constitute criminal acts, the licensee will face charges of criminal liability.

Overall, the Licensing Measures provide a good foundation to comply with the requirements of Article VI of the Outer Space Treaty and to administer the launch of civil space objects. However, there are two aspects of the Measures that remain controversial. First, it remains doubtful whether the scope of the license, apart from covering the launch itself, also extends to activities actually occurring in outer space once the launch is complete. In other words, as the Measures only focus on the “launching” phase, it is not clear whether the behavior of the licensee in space is regulated by the Measures and if the government is provided with effective means to control it.

Second, there is the issue of liability. According to the space treaties, if a state qualifies as the “launching state” for a private space object, it is internationally liable for the damage that it may cause, even if the object is under the control of the private operator at the time of the damage. In order to protect their legal position, states usually include in their national space legislation a right of recourse against the operator to get compensation for the part of the damage that they may have to pay. The compensable amount often corresponds to the amount of the insurance that the private entity is required to purchase. The Chinese Licensing Measures do not include this right of recourse; this means that in case of damage caused by a licensed private entity, Chinese authorities lack the legal foundation to ask compensation from it.

### The 2010 Space Debris Interim Instrument

The 2010 Space Debris Interim Instrument has been enacted to enable the domestic implementation of a series of international technical standards and recommended practices aimed at reducing the pollution of the space environment during the launch, operation, and disposal of a space object, and at diminishing the likelihood of accidents.

The expression “space debris” refers to “all man-made objects, including fragments and elements thereof, in Earth orbit or re-entering the atmosphere, that are non-functional.”<sup>21</sup> Attention toward the problems posed by space debris has significantly increased in recent years due to the danger that they pose to the safety of active space objects. Indeed, because of the high velocity (7,500 m/s or above) with which they move, they may destroy or significantly reduce the operational capability of a satellite by colliding with them.

Upon the initiative of the world’s major space agencies, space debris mitigation guidelines were formulated in 2002. These guidelines established a series of measures and good practices aimed at reducing the creation of space debris. The guidelines were voluntary in nature and not legally binding under international law. Nevertheless, not only space agencies have been implementing them for over a decade but also states have introduced a series of space debris mitigation requirements as part of their process to authorize private space activities.

Under the 2010 Space Debris Interim Instrument, the authority in charge of the management of space debris arising from civil spacecraft is the SASTIND. The Interim Instrument requires operators to comply with a series of technical standards, including: (1) control of debris release during normal operations; (2) minimization of debris generated by accidental explosions; (3) choice of safe flight profile and operational configuration; (4) post-mission disposal of space objects, either by re-orbiting or de-orbiting.<sup>22</sup>

Article 8 of the Instrument makes clear that every subject willing to obtain a license to launch a civil space object must include in its applications space debris mitigation measures. Article 9 imposes on licensees the duty to constantly monitor the risk of collision between their spacecraft and space debris.

## White Papers on Space Activities

In the past 12 years, China has complemented the existing regulatory framework of Chinese space activities with a series of policy-orientated documents, the “white papers” on space activities. The white papers are issued every five years by the Information Office of the State Council; the first white paper was published in 2006, the latest in 2016.<sup>23</sup> The white papers are very broad in scope, ranging from space exploration to international cooperation. Essentially, they give an overview of the progress made by the Chinese civil space program in the preceding five years and delineate the policy and strategic objectives of the next five years.

Even though the white papers are not legally binding (they do not constitute “law” *per se*), they are significant because they reflect the growing size of the Chinese space activities and the more active role played by China at international level. The importance of the white papers stems from three elements:

- they promote transparency over the nature and implementation of the Chinese space program and, thus, facilitate the acceptance of China as a reliable partner for international cooperation projects;
- they mirror the position that China has taken within international law, such as the promotion of the peaceful uses of outer space and respect of international obligations;
- they demonstrate that Chinese authorities are aware of the importance of giving a formal and consistent framework to the Chinese space program.

## Future Possible Developments of Chinese Space Law

### The Changing Nature of Chinese Space Activities

As mentioned in the Introduction, China is one of the few major space players to lack a structured national space legislation. Nevertheless, there are at least four factors that may contribute to gradually change this situation. First, the Chinese space program is growing in size and scope. China has developed the technical capability to independently undertake all sort of space activities, ranging from ambitious space exploration projects to the building of a permanent Chinese space station. The more Chinese space activities expand, the more there is a need for China to give them proper administration. Historically, China has suffered from a lack of harmonization among the subjects involved in its space program, which include different ministries and various governmental bodies. This has often resulted in overlap of competences, delays and slow decision-making. The adoption of national space legislation could offer an opportunity to improve the present state of affairs by attributing clearer tasks and facilitating the implementation of policies and goals. Second, the space services provided by China are of global nature. China possesses advanced capabilities to manufacture and launch into the earth’s orbit satellites on behalf of domestic and foreign customers. While the legal relation between China and foreign entities is usually regulated by bilateral agreements, it would be beneficial to have a permanent legal foundation to govern them. The current domestic space regulations do not seem to provide such a solid foundation as their wording is somewhat general and, at times, has a controversial meaning. For example, under the Registration Measures, China is committing to register all space objects launched from its territory, including foreign ones. Other space launch providers, such as the United States, have chosen an opposite direction and only register domestically owned space objects. The reason to do so is to be found in Article VIII of the Outer Space Treaty, according to which a state shall exercise jurisdiction and control over an object that it has registered. However, if an object is



owned and operated by a foreign entity, it is not possible for the state of registration to effectively comply with these requirements. This may turn into a serious problem if that object causes damage, as this event may bring to the table the responsibility and liability of the state of registration. Considering that China is performing a growing number of launches of foreign space objects, it may consider to review its registration policy, and the drafting of a national space legislation may offer the opportunity to do so. China is also on the verge of offering navigation satellite services on a global scale through its Beidou navigation satellite system. These activities require an adequate legal framework that clarifies the management of the system and the accessibility to its services. A similar framework is currently missing. Third, domestic private space actors are emerging. So far, the few private entities involved in the Chinese space program have had direct ties with the government. A paramount example of this kind is represented by China Great Wall Industry Corporation (CGWIC). CGWIC is the sole commercial organization authorized by the Chinese government to provide satellites, commercial launch services and to carry out international space cooperation. Nevertheless, CGWIC does not operate in a fully independent manner as it is a state-owned company. Nowadays, however, there are more traditional private entities that are slowly, but gradually, being involved in Chinese space activities. For instance, one can mention Landspace, which is one of China's first private space launch companies. Landspace has concluded a contract to launch a Danish nanosatellite at the end of 2018. The presence of active private space actors may lead China to reconsider the status of its Space Licensing Measures, specifically the absence of a right of recourse against private operators. Until there were no independent private space launch providers, this did not constitute a serious problem. However, the situation has now changed and China might find it useful to insert such a right into its legislation to better protect its legal position. The fourth and final factor is the interest of foreign entities to engage in space activities in China or in cooperation with Chinese entities. In this respect, in July 2017 the first-ever Chinese experiment was brought on board the International Space Station. This event was the result of a contract concluded by Chinese universities and the American company NanoRacks. If China intends to allow foreign entities to engage in business activities in China, it needs to put into place a regulatory environment that promotes this kind of ventures and, at the same time, guarantees the rights of foreign entities, in relation to questions of the protection of intellectual property rights and the settlement of disputes in particular.

### **Comprehensive Versus Selected Chinese National Space Legislation**

Considering the changing nature of its space program and the diversification of the actors involved in it, China may consider to expand its existing space legislation. In this regard, one is left to wonder which direction China will take in terms of the scope and type of this legislation. Practice reveals that states tend to choose between two options: (1) adopting a comprehensive national space legislation that regulates all aspects of domestic space ventures; (2) enacting single legislative instruments that govern only specific space activities.

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Several European states, such as France, Austria, Belgium, and the Netherlands, have selected the first option and have, therefore, passed legislation covering the launch and operation of objects in outer space from their national territory or by nationals outside domestic borders. The adoption of a comprehensive national space legislation does not, in itself, prevent a state to enact implementing legislation. For instance, France passed a comprehensive national space law in 2008 and a series of implementing acts in the years that followed.

Other states have chosen the second option, hence enacting legislation that addresses a specific kind of space activity, that is, the distribution of high resolution satellite data by private entities (Germany) or the utilization of space resources (Luxembourg). The United States represents a peculiar case, in the sense that, through the years, it has passed individual laws in areas where a private space sector was emerging, for instance in telecommunication, launching, remote sensing, sub-orbital flights, and space resources utilization. In 2011, the U.S. legislator decided to combine all the existing laws under Title 51 of the U.S. Code.

Ideally, and certainly from a long-term perspective, China should aim at enacting a comprehensive national space legislation. This goal was also announced by the Secretary-General of the CNSA in 2014, who stated that a national space law had been listed in the national space plan and that such a law should be introduced by 2020 upon its drafting by the CNSA. Realistically, however, there are significant challenges toward achieving this goal. First, there is a time issue; drafting a comprehensive space legislation for a country like China is a time-consuming endeavor that might require years to be completed. Second, there is the problem of the scope of the law. Taking into account the size and the implications of the Chinese space program, it seems extremely daunting to put together a law that properly regulates all aspects of Chinese space activities and find an adequate balance among the interests and actors involved. Third, there is the problem of the choice of law. As described earlier, the present Chinese space legislations have been adopted with the lowest possible form among the rank of Chinese laws. To serve its purpose, a comprehensive national space legislation should be enacted with a level of law higher than a departmental regulation; this, however, would require time and effort to convince the Chinese legislator on the need for such a law.

Instead, a gradual, step-by-step approach seems to be more realistic at the present time. The first step should consist in adopting rules on the most urgent matters for the Chinese space program as well as in updating the existing ones. These rules could be enacted in the form of departmental regulation so as to speed up the process and avoid law-making-related obstacles. Once these regulations have proven their relevance and workability, they could be assembled, together with the pre-existing ones, into one single document and included in the agenda of the national legislation plan of the National People's Congress for adoption as a unitary law of higher level.

### Possible Steps of Chinese Space Law-Making

It is difficult to foresee which direction China will take. It is known that the CNSA is working on a national space legislation; however, there is no official update on its status and no draft has been released so far.

Interestingly, an area that could see the release of dedicated legislation is that of satellite navigation. China began the construction of its satellite navigation system, called Beidou (or BDS), in 2000 with the ultimate goal of using and distributing satellite navigation services in an independent manner from foreign providers, such as the American GPS. China began offering Positioning, Navigation and Timing (PNT) services within its territory in 2011, in the Asia-Pacific region in 2012 and is expected to provide them on a global basis by 2020. Achieving this objective ranks among the highest priorities of the Chinese space program, as stated in the 13th Five Year for National Informatization Planning issued in 2016.

In order to manage and provide global satellite navigation services, China announced its intention to set out an adequate regulatory framework. The seriousness of this commitment has been already demonstrated by the release of the 2016 Beidou White Paper, which clarifies the structure and policy of the BDS. As part of this process, Chinese authorities have also recognized the need for a proper legal basis to govern the BDS. Notably, a regulation on satellite navigation has been listed into the Research Items of the State Council Legislative Work Plan for 2016 upon proposal by Equipment Development Department of the Central Military Commission. Even though the term “Research Items” represents a low priority and no draft has been published until now, it might be an indication that a law on BDS might be released in the not too distant future.

As a matter of fact, operating a navigation satellite system on a global basis raises numerous legal questions that call for a proper legal framework. For instance, one may wonder: who is in charge of operating the BDS system and responsible for providing services not only domestically but also globally? Can the distribution task be allocated to a third party or shall it remain in governmental hands? Will services be available on a free basis, or will civilian have the possibility to access an augmented signal upon payment of a fee? How will liability claims deriving from the use of the BDS signal be dealt with?

Another area which has the potential to be interested by legislative developments is that of space resources utilization. In recent years, both the United States and Luxembourg have passed laws that enable the private appropriation and utilization of outer space natural resources. China is, at least indirectly, affected by these moves as it is the only country currently engaged in lunar activities, including the plan to launch a mission to collect samples of the lunar soil in 2019. Therefore, it seems reasonable to wonder whether China is pondering the enactment of an act dealing with the extraction and utilization of resources obtained in outer space. However, up to this moment, Chinese authorities not only have not clarified the country’s position on the legality and illegality of space mining but also have not officially stated their intention to draft legislation in this area. Importantly, on January 16, 2018, the Ministry of Economy of Luxembourg and the China na-

tional Space Administration (CNSA) signed a Memorandum of Understanding (MoU) that provides a framework for the development and implementation of scientific, technical, economic, and political cooperation between Luxembourg and China in the exploration and use of outer space for peaceful purposes. The areas of potential cooperation include economic, legal, regulatory and technological aspects of the utilization of space resources.

## Conclusion

In a relatively short period of time, China has made remarkable technological advancements in the space sector that have enable it to undertake successful space missions in low earth orbit and beyond. Importantly, such technological advancements have not been matched by comparable progress in the regulatory field. Indeed, so far China has only enacted two low-level legislation regulating certain aspects of its space activities. While this situation might have been acceptable in the past, it is no longer sufficient to adequately manage the ever-growing Chinese space program, especially if one takes into account its global nature. Arguably, failure to modify the present state of affairs might undermine future advancements and be detrimental to financial opportunities in the space sector. Notably, however, Chinese authorities seem to be aware of the need to upgrade and expand national space legislation. It remains to be seen the scope and type of such legislation and the timing of its possible release.

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(2.) Order No. 12 of the Commission of Science, Technology, and Industry for National Defence of the People's Republic of China, November 21, 2002.

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(3.) Legislation Law of the People's Republic of China, adopted at the Third Session of the Ninth National People's Congress on March 15, 2000.

(4.) Article 2, Registration Measures.

(5.) Article 4, Registration Measures.

(6.) Article 5, Paragraph 1, Registration Measures.

(7.) Article 8, Registration Measures.

(8.) Article 12, Registration Measures.

(9.) Article 2, Licensing Measures.

(10.) Article 3, Licensing Measures.

(11.) Article 6, Licensing Measures.

(12.) Article 19, Licensing Measures.

(13.) Article 6, Licensing Measures.

(14.) Article 12, Licensing Measures.

(15.) Article 11, Licensing Measures.

(16.) Article 13, Licensing Measures.

(17.) Article 14, Licensing Measures.

(18.) Article 16, Licensing Measures.

(19.) Article 24, Licensing Measures.

(20.) Article 25, Licensing Measures.

(21.) See the technical report on space debris, United Nations General Assembly. Technical report of the Scientific and Technical Subcommittee on space debris. UN Doc. A/AC.105/720, 1999.

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