THE ROLE OF INTERNATIONAL LAW IN CHINESE SPACE LAW AND ITS RELEVANCE TO PACIFIC RIM SPACE LAW AND ACTIVITIES

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I. INTRODUCTION

China successfully launched its first human-made satellite, *Dongfanghong-I*, on April 24, 1970,[1] which marked the commencement of China's space era. In the past four decades, China realized a series of space dreams such as human space flight and lunar exploration, which marked the fast development of China's space technology. China has now joined the ranks of the world's space powers.[2] However, China's space legislation seriously lags behind the development of its space technology.[3] China's space activities are in the stage of administrative management which is oriented by space policies, supplemented by administrative regulation, and without integrated space law.[4]

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[1] Info, Office of the St. Council, *China's Space Activities in 2000 (White Paper)*, Part II, (Beijing, China, Nov. 2000) [hereinafter *2000 White Paper*], available at http://www.china.org.cn/e-white/8/20-3.htm#a.

[2] *See* YANSONG, XU, CHINA'S SPACE ACTIVITIES: PRESENT AND FUTURE 57-60 (United Nations Institute for Disarmament Research), http://www.unidir.org/pdf/articles/pdf-art2663.pdf; *see also*, Info, Office of the St. Council, *China's Space Activities in 2006 (White Paper)*, Part II, (Beijing, China, Oct. 2006) [hereinafter *2006 White Paper*], http://china.org.cn/english/2006/Oct/183588.htm.

[3] Yun Zhao, *National Space Legislation in Mainland China*, 33 J. SPACE L. 427 (2007).

[4] *Id.* at 428; *see also*, Prof. Dr. Li Juqian, Assoc. Professor Council-Member of China Inst. of Space Law, Dir. of Pub. Int'l Law Research Inst. Sch. of Int'l Law, China Univ. of Political Sci. and Law Beijing, China, Address at Pacific Rim National Space Law Summit, *Current Legal Status and Developments in Chinese Space Law and its Relevance to Pacific Rim Space Law and Activities* (May 20, 2009), http://rescommunis.wordpress.com/2009/05/20/pacific-rim-national-space-law-summit-china/; *see also*, Comm. on the Peaceful Uses of Outer Space (COPUOS), *Information on National Legislation Relevant to the Peaceful Exploration and Use of Outer Space*, UN. Doc. A/AC.105/932 (Feb. 2,

Prompted by international space legislation and the development of China's space activities, the Chinese government is accelerating its efforts to research China's domestic space legislation and improve its space policies.[5] This paper is divided into four parts. The first part introduces China's space legislation and policies over the past thirty years since the reform and opening. The second part elaborates the characteristics of China's space legislation and policies, as well as problems of China's space legislation and the reasons for those problems. The third part introduces the role international space legislation, including U.N., multilateral, and bilateral space treaties which China has joined in promoting and improving China's space legislation and policies. The fourth part addresses the effect of China's space policies on the space activities and legislation of Pacific Rim countries, as well as the effect of Pacific Rim countries' space legislation and activities on China's own space legislation and space policies.

II. STATUS OF CHINESE SPACE LEGISLATION

According to the Law of the People's Republic of China on Legislation,[6] the legal system of China has several levels. At the highest level, with the most significant legal effect, is the Constitution adopted by the National People's Congress; no laws, administrative regulations, local regulations, autonomous regulations, separate regulations, or rules may contradict it.[7] At the second level is the law adopted by the National People's Congress and its Standing Committee.[8] At the third level are the administrative regulations adopted by the State Council and

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2009) [hereinafter *Info. on Nat'l Legislation*] (note by the secretariat based on information received by Jan. 26, 2009 from China, the Czech Republic, Germany, Mongolia, the Republic of Korea, and Turkey), *available at* http://www.oosa.unvienna.org/pdf/reports/ac105/AC105_932E.pdf.http://www.unoosa.org/pdf/reports/ac105/AC105_932E.pdf.

[5] *See* Juqian, *supra* note 4; *see also*, *Info. on Nat'l Legislation*, *supra* note 4.

[6] Li fa fa [Law on Legislation] (promulgated by the Standing Comm. Nat'l People's Cong., Mar. 15, 2000, effective July 1, 2000) 2000 Standing Comm. Nat'l People's Cong. Gaz. 112 (P.R.C.), *available at* http://www.china.org.cn/english/government/207420.htm.

[7] *Id.* at ch. IV, art. 78.

[8] *Id.* at ch. II, § 1.

local regulations adopted by local peoples' congresses.[9] At the lowest level are rules of the departments under the State Council and of the local governments.[10] This legal system thus forms a rigorous multi-level system.[11]

In China, the National People's Congress has not formulated space law, nor has the State Council or Local People's Congresses at various levels made administrative regulations or local regulations on space activities.[12] That is to say, there is no space legislation at law or administrative regulation level in China. Related space legislation exists at the level of administrative rules.[13]

A. Status of Space Legislation at the Level of Administrative Rules

In the aspect of civilian use of outer space, together with the Ministry of Foreign Affairs, the Commission of Science, Technology and Industry for National Defence (COSTIND) released the first regulation on space activities,[14] Measures on the Administration of Registration of Space Objects, on February 8, 2001.[15] These measures constituted the nationalization of the multilateral Convention on Registration of Objects Launched into Outer Space[16] in China. On November 21, 2002, the COSTIND released the Interim Measures on the Administration of Permits for Civil Space Launch Projects (Interim

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[9] *Id.* at ch. I, art. 2; ch. III, art. 56; ch. IV, § 1, art. 63.

[10] *Id.* at ch. IV, § 2, art. 71.

[11] *See also* China's Regulations, World Security Institute, http://www.wsichina.org/space/subprogram.cfm?subprogramid=2&charid=1 (last visited Nov. 14, 2009) [hereinafter China's Regulations].

[12] *See* Juqian, *supra* note 4; *see also*, *Info. on Nat'l Legislation*, *supra* note 4.

[13] China's Regulations, *supra* note 11; *see also*, Yun Zhao, *supra* note 3 at 428.

[14] Yun Zhao, *supra* note 3 at 431.

[15] Measures for the Administration of Registration of Objects Launched into Outer Space (Order No. 6 promulgated by the Comm'n of Sci., Tech., and Indus. for Nat'l Def. (COSTIND) and the Ministry of Foreign Affairs, Feb. 8, 2001), *translated in* 33 J. Space L. 437 (2007), [hereinafter Measures for Administration of Registration of Objects], *available at* http://www.spacelaw.olemiss.edu/library/space/China/Laws/JSL_33.2_China%20Law.pdf.

[16] Convention on Registration of Objects Launched into Outer Space, *opened for signature* Nov. 12, 1974, 28 U.S.T. 695, 1023 U.N.T.S. 15.

Measures).[17] It established a management system requiring permits for the entry of spacecraft into outer space from the territory of China for non-military purposes.[18] In affiliation with the Interim Measures, the Examination and Approval Procedure of Permits for Civil Space Launch Projects was promulgated.[19] On August 18, 2002, together with the Ministry of Finance, the COSTIND formulated the Measures on the Administration of Special Research on the Civilian Use of Defence Science and Technology Industry. It included provisions for nationally funded scientific research activities such as the transfer of space technology from military use to civil use through the Defence Science and Technology Industry.[20] Other related administrative rules, such as regulations on foreign damages caused by space objects, the management of the commercialization of space, international space cooperation and coordination, etc. are under research and drafting.[21]

Additionally, in with respect to the military use of outer space, the State Council and Military Commission of the Communist Party of China (CPC) Central Committee jointly released the Regulations on Export Control of Military Items of the People's Republic of China on October 22, 1997.[22] This regulation was amended on October 15, 2002. It requires that the State manage military exports through a licensing system[23] so that only military trading companies that have legally obtained

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[17] Interim Measures on the Administration of Permits for Civil Space Launch (Decree No. 12 promulgated by the Comm'n of Sci., Tech, and Indus. for Nat'l Def. (COSTIND), Nov. 21, 2002, effective Dec. 21, 2002) [hereinafter Interim Measures], Asian LII (last visited Oct. 23, 2009), *available at* http://www.asianlii.org/cn/legis/cen/laws/imotaopfcslp771/.

[18] *Id.* at ch. I, art. II.

[19] *Id.* at ch. II.

[20] *See, e.g.*, Evan S. Medeiros, Testimony presented to the U.S.-China Economic and Security Review Commission, Analyzing China's Defense Industries and Implication for Chinese Military Modernization, (Rand Corp., Feb. 6, 2004), at 5-6, *available at* http://www.rand.org/pubs/testimonies/2005/RAND_CT217.pdf.

[21] *See* Yun Zhao, *supra* note 3, at 434-35.

[22] Regulations on Control of Military Products Export (promulgated by the St. Council and the Cent. Military Comm'n, Oct. 22, 1997, effective Jan. 1, 1998, revised Oct.15, 2002) [hereinafter Military Export Regulations], *available at* http://www.nti.org/db/china/engdocs/exconmpe_1002.htm.

[23] *Id.* at ch. II, art. 13.

military export authorization[24] can legally export certain military products. Military exports are reviewed and approved by the State Bureau of Military Products Trade or by the State Bureau of Military Products Trade in joint consultation with the relevant departments in the State Council and the Central Military Commission.[25] To this end, the Military Products Export Control List was announced by the COSTIND and the General Reserve Department of the Peoples' Liberation Army (PLA) on November 11, 2002 and has been implemented since November 15, 2002.[26] In this list, Category 8 – Rocket, Missile, Military Satellite and its auxiliary equipment – is related to military space products. In this category, strict regulation has been made on the export of military satellites and carrier rockets, which also provides a reference for the management of related civilian space products. On August 22, 2002, the State Council promulgated the Regulations of the People's Republic of China on Export Control of Missiles and Missile-related Items and Technologies[27] as well as the Missiles and Missile-related Items and Technologies Export Control List.[28] These Regulations are formulated for the purpose of safeguarding the State security and social and public interests, and for the prevention of the proliferation of mass destruction weapons through export control.[29]

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[24] *Id.* at ch. II, art. 15.

[25] *Id.* at ch. II, art. 16.

[26] Yun Zhao, *supra* note 3 at 433.

[27] Regulations of the People's Republic of China on Export Control of Missiles and Missile-related Items and Technologies (promulgated by the St. Council, Aug. 22, 2002) [hereinafter Control Regulations], *available at* http://www.nti.org/db/China/engdocs/expreg_0802.htm.

[28] Missiles and Missile-related Items and Technologies Export Control List (promulgated by the St. Council, Aug. 22, 2002), *available at* http://www.nti.org/db/China/engdocs/conlist_0802.htm; *see also*, http://www.nti.org/db/China/engdocs/liujy_0802.htm.

[29] Control Regulations, *supra* note 27, at art. 1, 3; Military Export Regulations, supra note 22; *see also*, Fu Cong, Department of Arms Control and Disarmament, Ministry of Foreign Affairs of China, presentation at the Tokyo Workshop on Non-Proliferation Export Control Regimes, An Introduction of China's Export Control System, (Dec. 1997), *available at* http://www.nti.org/db/china/engdocs/cong1297.htm.

B. Related Policies on Space Activities

China's space policies are explicitly shown in such documents as the White Papers of China's Space Activities in 2000[30] and 2006.[31] These two White Papers elaborate the policies, positions, and standpoints of Chinese Government in the space arena. They are authoritative documents on China's space industry. Policies concerning space industry regulated in the Industrial Policies Outline of National Defense Industry (Outline)[32] are also a part of the China's Space Policies. The Outline was approved by the State Council in April 2004 and was jointly promulgated by the COSTIND and the State Development and Reform Commission. Since the commencement of China's space undertaking, rich experience has been gained, and a series of effective management systems formed, in the area of space technology management, international commercial launch services, among others.[33]

In 2007, the COSTIND adopted the Eleventh-Five-Year-Plan[34] on Space Development and the Eleventh-Five-Year-Plan of the Space Science Program to guide and regulate space activities as well as the research in the space sciences. These two plans clarified the guiding ideology, development objectives, and

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[30] *2000 White Paper*, *supra* note 1.

[31] *2006 White Paper*, *supra* note 2.

[32] Info. Office of the St. Council, *China's National Defense in 2004 (White Paper)* (Beijing, China, Dec. 2004), *available at* http://www.china.org.cn/e-white/20041227/index.htm.

[33] *2006 White Paper*, *supra* note 2; *see, e.g.*, Memorandum of Agreement Regarding International Trade in Commercial Launch Services, with Annex, U.S.-P.R.C., Jan. 26, 1989, State Dep't No. 89-116, 1989 WL 428857 [hereinafter Launch Services Memorandum]; Control Regulations, *supra* note 27; Interim Measures, *supra* note 17; Measures for Administration of Registration of Objects, *supra* note 15; Qi Yongliang, *A Study of Aerospace Legislation in China*, 33 J. Space L. 405 (2007).

[34] Press Release, Chinese National Space Administration, Eleventh - Five-Year-Plan of the Science Space Program issued by COSTIND, (Mar. 19, 2007), http://www.cnsa.gov.cn/n615709/n620682/n639462/94761.html; *see also*, Yun Zhao, *National Space Legislation in Mainland China*, 33 J. SPACE L. 427, 435-36 (2007); *Blueprint for Aerospace Development in Next Five Years*, CHINA VIEW, Oct. 19, 2007, http://news.xinhuanet.com/english/2007-10/19/content_6912455.htm; *Info. on Nat'l Legislation*, *supra* note 4; *see also China Unveils Landmark Space Program*, CHINA DAILY, Mar. 12, 2007, *available at* http://www.china.org.cn/english/news/202430.htm.

major tasks of space development.[35] Meanwhile, in order to promote the development of the satellite application industry, the COSTIND and the State Development and Reform Commission jointly issued the Several Opinions Relevant to the Promotion of Development of the Satellite Application Industry, which provided guidance on the principles, methods and objectives of the promotion of development of satellite application industry.[36]

Additionally, China established a relatively systematic policy mechanism on the mitigation of space debris. Firstly, under the unified leadership of the China National Space Administration (CNSA), a Space Debris Action Plan (2006-2010)[37] was drafted. This action plan makes the mitigation of space debris not only a policy, but also an action to protect the space environment. Secondly, during the Tenth-Five-Year-Plan, China started to formulate space debris mitigation standards that would be appropriate for the legal and technological context in China at the time.[38] In the System Framework of National Defence Science and Technology Industry Standards, some project standards for space debris technology were provided. In July 2005, China formally issued the Standard QJ3221 for Space Industry—Requirements on Space Debris Mitigation.[39] Finally, in

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[35] The Eleventh-Five-Year-Plan on Space Development was approved by the State Council and issued by COSTIND on October 18, 2007. Five important scientific projects were included in this plan, namely manned space flight project, lunar exploration project, high-resolution earth observation project, compass satellite navigation system project, and new launch vehicle project. The Eleventh-Five-Year-Plan of the Science Space Program was approved by the State Council and issued by COSTIND. It published the first blueprint of Chinese government on future space scientific development.

[36] Eric Hagt, *Mutually Assured Vulnerabilities in Space,* World Security Institute, http://www.wsichina.org/space/focus.cfm?focusid=99&charid=1; *see also, 2006 White Paper*, *supra* note 2.

[37] Dr. Feng Jiehan, Wuhan Univ. Inst. of Int'l Law, Wuhan, Hubei, P.R.C., Space Debris Mitigation: Policies, Law, and Standards Development in China, presentation at the International Interdisciplinary Congress on Space Debris (May 2009) (PowerPoint presentation), *available at* http://www.mcgill.ca/files/iasl/Session_3_Feng_Jeihan.pdf; *see also*, Peter B. de Selding, *China Says Work Underway to Mitigate Space Junk*, SPACE NEWS, Sept. 3, 2007, https://www.space.com/spacenews/070903_businessmonday_china_debris.html.

[38] The Ministry of Sci. and Tech., *Progresses for Space Debris Study*, CHINA SCI. & TECH. NEWSLETTER NO. 340, Aug. 20, 2003, *available at* http://www.most.cn/eng/newsletters/2003/200411/t20041130_17740.htm.

[39] According to Article VI of the Standardization Law of the People's Republic of China, Trade standards shall be formulated by competent administrative authorities

2006, the drafting of Space Debris Standards Framework System Table (first edition) was completed. This table divided the standards for space debris into three categories: namely, the general standard, management standard, and technology standard. It also planned anticipated levels of response to these standards, such as an international standard, a national standard, an industry standard, and an enterprise standard.

III. COMMENTS ON CHINESE SPACE LEGISLATION

From the aforementioned legislations and policies on space activities, one can see that Chinese Space Legislation and Policies have the following characteristics. Firstly, China has established relatively perfect development policies for the space industry. Explicit guidance on structural adjustments, development plans, and directions for space industries were set up in China's Space Activities in 2000, China's Space Activities in 2006, Eleventh-Five-Year-Plan on Space Development, Industrial Policies Outline of Defence Industry. Though these documents are promulgated by COSTIND, they are approved by the State Council, which represents the position of the Central Government. These documents are not legally binding, but they have obvious effects when space industries are mainly led by the government.[40]

Secondly, in the aspect of mitigation of space debris, the Chinese government set up a systematic quasi-regulatory

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under the State Council and reported to the department of standardization administration under the State Council for the record, and shall be annulled on publication of the national standards. *See* Standardization Law, Art. VI (promulgated by Standing Comm. Nat'l People's Cong., Dec. 29, 1988, effective Apr. 1, 1989) Asian LII (last visited Oct. 24, 2009) (P.R.C.), *available at* http://www.asianlii.org/cn/legis/cen/laws/slotproc450/; *see also* Guidelines for De-Commissioning of Satellite and Mitigation of Space Debris (promulgated by the Office of the Telecomm. Auth., July 21, 2007), *available at* http://www.ofta.gov.hk/en/report-paper-guide/guidance-notes/gn_200706.pdf; *see also*, Jeff Foust, Futron Corp., Bethesda, Md., Session 3 – Current Coordination and Implementation: Summary, presentation at the International Interdisciplinary Congress on Space Debris (May 2009) (PowerPoint presentation), *available at* http://www.mcgill.ca/files/iasl/Session_6_Jeff_Foust.pdf.

[40] *See* LAW MAKING IN THE PEOPLE'S REPUBLIC OF CHINA: TERMS, PROCEDURES, HIERARCHY, AND INTERPRETATION, TAO-TAI HSIA AND CONSTANCE AXINN JOHNSON 24 (Law Library of Congress 1986).

mechanism. The Space Debris Action Plan (2006-2010)[41] is a policy document issued by CNSA. The Space Debris Standards Framework System Table and the Standard QJ3221 for Space Industry – Requirements on Space Debris Mitigation are industrial standards which have quasi-legal binding force. These documents are important domestic measures to implement the Space Debris Mitigation Guidelines of the U.N. Committee on the Peaceful Uses of Outer Space (COPUOS) and the Inter-Agency Debris Coordination Committee (IADC) Space Debris Mitigation Guidelines.

Thirdly, existing Chinese civil space legislation and policies are formulated by subordinate bodies of the State Council such as COSTIND, and the Ministry of Foreign Affairs, among others. Meanwhile, legislation on the military use of outer space is made by the State Council and the Military Commission of the CPC Central Committee. Enforcement regulations of related rules and military space policies are elaborated by COSTIND and the General Reserve Department of the PLA.[42]

Fourth, Chinese regulations and policies for space activities almost cover all areas of space activities. National space legislation should at least include the following five aspects. First, the approval and authorization of space activities; second, the supervision of space activities; third, the registration of space objects; fourth, the liability and compensation for damage; and fifth, the other regulations such as issues related to insurance and compensation and intellectual property rights (IPR). There is no integrated space law in China and the number of special regulations is very small.[43] But the aforementioned areas are regulated by documents or policies. For example, the approval and authorization of space activities and the registration of space objects are regulated by administrative rules. Damages caused by space objects are addressed by normative documents,

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[41] *See* Dr. Feng Jiehan, *supra* note 37.
[42] China's Regulations, *supra* note 11.
[43] *See* Juqian, *supra* note 4.

while the issues of insurance and IPR[44] are progressively reflected in bilateral treaties or domestic documents.[45]

Of course, generally speaking, the limitations of Chinese space legislation are apparent and not in line with the development of Chinese space technology or the status of China as a space power. Therefore, attention should be paid to Chinese space legislation.[46]

Firstly, there is no space legislation at the levels of law and regulation. The level of existing space legislation is too low.[47] The space law system with Chinese characteristics has not been established. Actually, direct space legislation only includes the Measures on the Administration of Registration of Space Objects[48] and the Interim Measures on the Administration of Permits for Civil Space Launch Projects.[49] Other rules are to some extent related to space activities, but are not considered special space legislation.

These two measures are promulgated by the State Council and belong to the category of administrative rules. Only the Regulations of the People's Republic of China on Export Control of Missiles and Missile-related Items and Technologies belong to the category of administrative regulation. Special space regulations and laws should be urgently developed.[50] The establishment of an integrated space law and space law system is a direction in which Chinese space legislation is proceeding.[51]

Secondly, because of the lack of integrated space legislation,[52] the management of space activities and legislation is

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[44] *See e.g.*, Intellectual Property Protection in China, Bilateral Cooperation Plan on Intellectual Property in 2007 Signed by China and U.K, Ministry of Comm., Nov. 13, 2006, http://www.chinaipr.gov.cn/Frontier/243726.shtml; *see also, generally*, Judicial Protection of IPR in China, http://www.chinaiprlaw.com/english/laws/laws.htm.

[45] *See, e.g.*, Inter-Agency Space Debris Coordination Committee (IADC), Steering Group and Working Group 4, *IADC Space Debris Mitigation Guidelines*, IADC -02-01 (Sept. 2007), *available at* http://orbitaldebris.jsc.nasa.gov/library/IADC_Mitigation_Guidelines_Rev_1_Sep07.pdf.

[46] *See* Qi Yongliang, *supra* note 33, at 406, 409-10.

[47] *See* Juqian, *supra* note 4.

[48] *See* Measures for Administration of Objects, *supra* note 15.

[49] *See* Interim Measures, *supra* note 17.

[50] *See* Qi Yongliang, *supra* note 33, at 410.

[51] *Info. on Nat'l Legislation*, supra note 4; *2006 White Paper*, *supra* note 2.

[52] *Info. on Nat'l Legislation*, *supra* note 4.

quite complicated. Several departments have the same power to administrate space activities and to set rules and regulations. The divided power to manage space activities and legislation will inevitably lead to the discordance of space legislation and policies.[53]

Because of the lack of integrated space legislation especially in the area of the civilian and military use of outer space, there is no unified agency to manage space activities. The policies and regulations only focus on their own areas. When a space activity has the purpose of both military use and civilian use, it may be that several departments would like to take charge of it or that no department would manage it.[54]

Finally, though almost all areas of space activities are covered by China's space policies, with the development of space technologies and activities, the following aspects of Chinese space legislation need to be improved: IPR protection to promote the commercialization of space activities; space environment protection; legislation on insurance for commercial space activities; rescue systems in view of the success of human space flight; liability for space damages; management mechanism of space activities; and so on.[55]

From the reality of Chinese space legislation, it can be seen that the management of space activities is governed by administrative policies. It is difficult to improve the imperfections of space legislation and upgrade the level of space legislation in a short time. Space legislation is not even included in the Eleventh-Five-Year-Plan on Legislation of the National People's Congress. Thus, it is feasible to speed up the pace to make administrative regulations and separate legislations on space activities so as to increase the efficiency of Chinese space legislation. In fact, relative government agencies have started to formulate Measures on Space Activities and Measures on the Compensation for Damages Caused by Space Objects.[56]

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[53] *See* Juqian, *supra* note 4.

[54] Medeiros, *supra* note 20, at 5-6; *see also*, Qi Yongliang, *supra* note 33; China's Regulations, *supra* note 11; Yun Zhao, *supra* note 3.

[55] Yun Zhao, *supra* note 3, at 435; *2006 White Paper*, *supra* note 2.

[56] Qi Yongliang, *supra* note 33, at 410.

IV. THE ROLE OF INTERNATIONAL LAW IN CHINESE SPACE LEGISLATION

International law related to space activities mainly include the international space treaties formulated within the framework of the U.N.; regional cooperation conventions; and, bilateral or multilateral treaties signed among countries or international organizations. Though the documents adopted by U.N. General Assembly do not have binding force, they are vital sources of international space law. The Chinese government acceded to the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space[57] (Outer Space Treaty); the Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space[58] (Rescue and Return Agreement); the Convention on International Liability for Damage Caused by Space Objects[59] (Liability Convention); and the Convention on Registration of Objects Launched into Outer Space[60] (Registration Convention). These treaties provided the basis for the domestic legislation of space activities in China.[61]

Multilateral treaties to which China acceded include the Constitution of Asia-Pacific Space Cooperation Organization,[62]

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[57] 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* Jan. 27, 1967, 18 U.S.T. 2410, 610 U.N.T.S. 205 [hereinafter Outer Space Treaty]. China acceded to the Outer Space Treaty on December 30,1983.

[58] Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space, *opened for signature* Apr. 22, 1968, 19 U.S.T. 7570, 672 U.N.T.S. 119 [hereinafter Rescue and Return Agreement] China acceded to the Rescue and Return Agreement on December 14, 1988.

[59] Convention on International Liability for Damage Caused by Space Objects, *opened for signature* Mar. 29 1972, 24 U.S.T. 2389, 961 U.N.T.S. 187 [hereinafter Liability Convention]. China acceded to the Liability Convention on December 12, 1988.

[60] Convention on Registration of Objects Launched into Outer Space, Jan. 14 1975, 28 U.S.T. 695, 1023 U.N.T.S. 15 [hereinafter Registration Convention]. China acceded to the Registration Convention on December 12, 1988.

[61] Ling Yan, *Comments on the Chinese Space Regulations*, 7 Chinese Journal of International Law 681, 682 (2008).

[62] Convention of the Asia-Pacific Space Cooperation Organization, available at http://tradeinservices.mofcom.gov.cn/en/b/2005-10-28/18583.shtml (last visited Oct. 25, 2009); *see also*, Press Release, China Nat'l Space Admin. (CNSA), COSTIND Held Press Conference for the Signing of APSCO Convention, Nov. 2, 2005, http://www.cnsa.gov.cn/

which was signed with Asia Pacific Space Cooperation Organization (APSCO) member states in October, 2005. Bilateral treaties between China and the countries with which it cooperates include: Cooperative Agreement between the China National Space Administration and the Russian Space Agency on Joint Chinese-Russian Exploration of Mars in March, 2007;[63] the Chinese and American Memorandum of Agreement on Satellite Technology Safeguards;[64] the Memorandum of Agreement on Liability for Satellite Launches;[65] the Memorandum of Agreement Regarding International Trade in Commercial Launch Services;[66] and the 1988 Protocol on Research and Production of the Earth Resource Satellite and Supplementary Protocols on the Joint Research and Manufacturing of Earth Resource Satellite between China and Brazil.[67] In addition, on May 24, 2007 the first meeting between China and the Space Cooperation Steering Committee of the European Space Agency (ESA) was held in the headquarters of ESA in Paris. Both parties signed the China-E.U. Space Cooperation Actuality and Cooperative Plan Protocol. [68] These multilateral and bilateral treaties also

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n615709/n620682/n639462/54452.html (last visited Nov. 16, 2009; *2006 White Paper*, *supra* note 2.

[63] On March 26, 2007, the Administrator of the China National Space Administration, Sun Laiyan, and the head of the Russian Space Agency, Anatoly Perminov, both signed the "Cooperative Agreement between the China National Space Administration and the Russian Space Agency on joint Chinese-Russian exploration of Mars". According to this Agreement, China and Russia will use a carrier rocket to launch China's small satellite and Russia's Forbes detectors. Then the Forbes detectors will send China's small satellite into the orbit of Mars. After that, the small satellite will automatically complete the mission of space environment exploration. Both will also conduct joint explorations of the space environment of Mars, including an exploration of the occultation of Mars' ionosphere. *See China and Russia Join Hands to Explore Mars*, PEOPLE'S DAILY ONLINE, May 30, 2007, http://english.people.com.cn/200705/30/eng20070530_379330.html.

[64] Memorandum of Agreement on Satellite Technology Safeguards, U.S.-P.R.C., Feb. 11, 1993, State Dep't No. 93-56, 1993 WL 152924.

[65] Memorandum of Agreement on Liability for Satellite Launches, U.S.-P.R.C., Dec. 17, 1988, State Dep't No. 89-114, 1989 WL 428798.

[66] *See* Launch Services Memorandum, *supra* note 33.

[67] *See* Zi Yuan CBERS (China-Brazil Earth Resources Satellite), http://www.globalsecurity.org/space/world/china/zy-1.htm (last visited Nov. 16, 2009).

[68] China National Space Administration, China-EU Space Agreement Signed for Further Cooperation, May 24, 20-07, http://www.cnsa.gov.cn/n615709/n620682/n639462/102448.html.

provide guidance for the improvement of Chinese space legislation and policies.

Generally speaking, the role of international law in Chinese space legislation is manifested in the following ways:

On the one hand, international space treaties and documents within the framework of U.N. have directly promoted Chinese space legislation. Existing space legislation in China was generated because of the promotion of international space conventions and documents within the framework of UN.[69] Article 6 of the Outer Space Treaty stipulates that the activities of non-governmental entities in outer space shall require authorization and continuing supervision by the appropriate State Party to the Treaty.[70] In order to fulfill this obligation, the Chinese government formulated the Interim Measures on the Administration of Permits for Civil Space Launch Projects.[71] Article 1 of the Measures clarifies that the present measures are formulated with a view to performing the obligations of China as a contracting State to the international outer space convention.[72] The Registration Convention requires a launching state to register the space object it launches.[73] To this end, Article 1 of the Measures on the Administration of Registration of Space Objects stipulates that the purpose of the Measures is to perform the obligations of China as a contracting state to Registration Convention.[74] Thus, one of the objectives of Chinese space legislation is to perform its international obligation.

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[69] *See, e.g.*, Yun Zhao, *supra* note 3, at 430 (stating that CNSA was established to fulfill international obligations); *see also*, Ling Yan, *Comments on the Chinese Space Regulations*, 7 CHINESE J. OF INT'L L. 681, 689 (2008).

[70] Outer Space Treaty, *supra* note 57, at art. 6.

[71] *See* Interim Measures, *supra* note 17.

[72] Article 1 of the Interim Measures stipulates that the present measures are formulated with a view to regulating the administration of civil space launch projects, promoting the healthy development of civil space industry, maintaining the state security and the public benefits, and performing the obligations of China as a contracting state to the international outer space convention. *Id.* at art. 1.

[73] Registration Convention, *supra* note 60, at art. II (1).

[74] Article 1 of the Measures on the Administration of Registration stipulates that the present measures are formulated with a view to strengthening the administration of space activities, establishing the registration system of space objects, maintaining the benefits of China as a launching sate, and performing the obligations of China as a contracting party to the Registration Convention. Measures on the Administration of Registration, *supra* note 15, at art. 1.

On the other hand, other international space treaties and documents facilitate research on the formulation of Chinese space policies and legislation. With the expansion of China's space cooperation, more and more bilateral and multilateral conventions are signed.[75] International documents to which China is a party are increasing, thus giving a boost to the process of creating and expanding Chinese space legislation and policies.[76] After joining the IADC, China participated in drafting the Space Debris Mitigation Guidelines[77] and joined COPUOS to adopt them. The Chinese government has also made efforts to create normative documents on the mitigation of space debris and research on the legislations of space environment protection.[78]

Meanwhile, the two protocols[79] between China and Brazil mentioned IPR protection in the commercialization of outer space bilateral agreements between China and America and addressed the issue of service trade of commercial launching.[80] These agreements urge the Chinese government to make research on legislation of IPR protection and service trade of commercial launching.[81]

In the U.N. Conference on Disarmament (UNCD), the Chinese government actively participates in and facilitates international negotiations on the prevention of an arms race in outer space. China holds that international legal documents to pre-

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[75] *See, e.g.,* Draft Treaty on the Prevention of the Placement of Weapons in Outer Space, the Threat or Use of Force Against Outer Space Objects, *submitted to* plenary session of the Conference on Disarmament, Feb. 12, 2008 [hereinafter Draft Treaty], *available at* http://www.ln.mid.ru/brp_4.nsf/0/0D6E0C64D34F8CFAC32573EE002D082A; *see also*, China and Russia Jointly Submit a Treaty, http://www.fmprc.gov.cn/eng/zxxx/t409610.htm (last visited Nov. 17, 2009).

[76] Qi Yongliang, *supra* note 33, at 406-407.

[77] Inter-Agency Space Debris Coordination Committee (IADC), Steering Group and Working Group 4, *IADC Space Debris Mitigation Guidelines*, IADC -02-01 (Sept. 2007), *available at* http://orbitaldebris.jsc.nasa.gov/library/IADC_Mitigation_Guidelines_Rev_1_Sep07.pdf.

[78] *2006 White Paper*, *supra* note 2, at Part III, Major Tasks.

[79] *See* CBERS – China-Brazil Earth Resources Satellite, http://www.brazil.org.cn/tecnologia/cibers_en.htm (last visited Nov. 16, 2009).

[80] *See* Launch Services Memorandum, *supra* note 33 .

[81] *2006 White Paper*, *supra* note 2.

vent arms race in outer space should be formulated.[82] Chinese space policies on the prevention of militarization and weaponization involve performing China's obligation of peaceful exploration and use of outer space.[83]

V. ITS RELEVANCE TO PACIFIC RIM SPACE LAW AND ACTIVITIES

In the Pacific Rim, space legislation of the United States, Japan, and Canada are relatively advanced and perfect. Their space legislation provides a reference for Chinese space legislation, while Chinese space legislation and policies have also had an impact on the space policies and activities of other Pacific Rim countries.

Firstly, China's space policy on the peaceful use of outer space affects the space activities and legislations of Pacific Rim countries. In recent years, the Chinese government has actively advocated for the peaceful use of outer space. In the meetings of COPUOS and the UNCD, China actively promoted the prevention of arms race and weaponization in outer space. On May 22, 2006, the delegations of China and the Russian Federation distributed in the UNCD documents titled, "Verification Aspects of PAROS;"[84] "Definition Issues Regarding Legal Instruments on the Prevention of Weaponization of Outer Space;"[85] and "Existing International Legal Instruments and the Prevention of the Weaponization of Outer Space."[86] On February 12, 2008, China and Russia jointly submitted to the UNCD in Geneva a Draft

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[82] *See* Letter from Hu Xiaodi, Permanent Representative of China to the Conference on Disarmament, China's Position on and Suggestion for Ways to Address the Issue of Prevention of an Arms Race, addressed to the Secretary-General of the Conference on Disarmament (Feb. 9, 2000) [hereinafter Arms Race Letter], *available at* http://www.nti.org/db/China/engdocs/cparoswp.htm; *see also*, *Info. on Nat'l Legislation*, *supra* note 4.

[83] Arms Race Letter, *supra* note 82; *see also*, NTI, *China's Attitude Toward Outer Space Weapons*, http://www.nti.org/db/China/spacepos.htm (last visited Nov. 17, 2009).

[84] Verification Aspects of PAROS, U.N. Doc. CD/1781 (May 22, 2006), http://documents-dds-ny.un.org/doc/UNDOC/GEN/G06/616/05/pdf/G0661605.pdf?OpenElement.

[85] Definition Issues Regarding Legal Instruments on the Prevention of the Weaponization of Outer Space, U.N. Doc. CD/1779 (May 22, 2006), http://documents-dds-ny.un.org/doc/UNDOC/GEN/G06/615/77/pdf/G0661577.pdf?OpenElement.

[86] Existing International Legal Instruments and the Prevention of the Weaponization of Outer Space, U.N. Doc. CD/1780 (Aug. 26, 2004), http://www.fmprc.gov.cn/ce/cegv/eng/cjjk/cjjzzdh/t199363.htm

Treaty on the Prevention of the Placement of Weapons in Outer Space, the Threat or Use of Force against Outer Space Objects.[87] In this regard, China proposed that a new international legal document[88] should be passed through negotiation to prevent the weaponization and arms race in outer space and safeguard the peace of outer space.

These space policies and diplomatic policies play a positive role in guiding Pacific Rim countries to carry out their space activities for peaceful purposes and consider their space legislation for the same objective.[89] Affected by China's space policy of peaceful use of outer space, some Pacific Rim countries may reconsider their policies of the militarization and weaponization of outer space.

Secondly, space legislation of Pacific Rim countries also plays an important role for the improvement of Chinese space legislation. In the Pacific Rim, the legislation of the United States, Japan, and Canada are relatively mature. They established good space law systems. Their experiences provide vital references for China to establish a reasonable space legislation framework and space law system as well as to set up a rational management mechanism for space activities. Their mature space legislation in turn promotes the orderly development of space technologies, providing China with an incentive to establish better space legislation as soon as possible.

For example, the United States established excellent rules to regulate the mitigation of space debris. The U.S. National Aeronautics and Space Agency (NASA) put forward Procedural Requirements for Limiting Orbital Debris NPR8715.6;[90] and

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[87] Draft Treaty, *supra* note 75.

[88] *See, e.g.*, Draft Treaty, *supra* note 75; *see also*, Ministry of Foreign Affairs, of the People's Republic of China, *China and Russia Jointly Submit a Treaty*, Feb. 12, 2008, http://www.fmprc.gov.cn/eng/zxxx/t409610.htm.

[89] *See, eg.*, Draft Treaty, *supra* note 75.

[90] OFFICE OF SAFETY AND MISSION ASSURANCE, NASA, NPR 8715.6A, NASA PROCEDURAL REQUIREMENTS FOR LIMITING ORBITAL DEBRIS (w/ Change 1 – 5/14/09) (May 14, 2009) (expiration date May 14, 2014), *available at* http://nodis3.gsfc.nasa.gov/npg_img/N_PR_8715_006A_/N_PR_8715_006A_.pdf.

NASA Technical Standard NASA-STD-8719.14.[91] There are also the U.S. Government Orbital Debris Mitigation Standard Practices,[92] and the Federal Communications Commission's Second Report and Order of Mitigation of Orbital Debris (FCC-04-130).[93] These rules clarify the responsibilities of related agencies to mitigate orbital debris and also put forward the procedural rules. China's relative policies mostly focus on substantive standards and rules, while procedural rules and the coordination among departments are neglected. The U.S. system of mitigation of orbital debris can help China to establish its own system of mitigation of space debris.

Thirdly, space activities in Pacific Rim, especially activities in which China participates, will improve the Chinese space legislation. For instance, the Memorandum of Agreement on Liability for Satellite Launches Between the Government of the United States of America and the Government of the People's Republic of China,[94] the Memorandum of Agreement Regarding International Trade in Commercial Launch Services,[95] the Protocol on Research and Production of the Earth Resource Satellite between China and Brazil, and the Supplementary Protocols on the Joint Research and Manufacturing of Earth Resource Satellite[96] set examples for the establishment of liability sharing

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[91] OFFICE OF SAFETY AND MISSION ASSURANCE, NASA, NASA-STD-8719.14, PROCESS FOR LIMITING ORBITAL DEBRIS (w/ Change 4 – 9/14/09) (Aug. 28, 2007), *available at* http://www.hq.nasa.gov/office/codeq/doctree/871914.pdf.

[92] NASA, US DEP'T OF JUSTICE, US GOVERNMENT ORBITAL DEBRIS MITIGATION STANDARD PRACTICES (1997) *available at* http://www.orbitaldebris.jsc.nasa.gov/library/USG_OD_Standard_Practices.pdf .

[93] FED. COMM. COMM'N, SECOND REPORT, FCC 04-130, SECOND REPORT IN THE MATTER OF MITIGATION OF ORBITAL DEBRIS (June 9, 2004), *available at* http://fjallfoss.fcc.gov/edocs_public/attachmatch/FCC-04-130A1.pdf.

[94] Memorandum of Agreement on Liability for Satellite Launches, U.S.-P.R.C., Dec. 17, 1988, State Dep't No. 89-114, WL 428798 ; *see also*, Convention on International Liability for Damages Caused by Space Objects, U.S.-P.R.C., Mar. 29, 1972, *available at* http://www.faa.gov/about/office_org/headquarters_offices/ast/media/Conv_International_Liab_Damage.pdf.

[95] *See* Launch Services Memorandum, *supra* note 33.

[96] *See CBERS – China-Brazil Earth Resources Satellite*, http://www.brazil.org.cn/tecnologia/cibers_en.htm (last visited Nov. 17, 2009); *see also*, Zi Yuan CBERS (China-Brazil Earth Resources Satellite), GlobalSecurity.org, http://www.globalsecurity.org/space/world/china/zy-1.htm (last visited Nov. 17, 2009); CBERS: Complementary Protocol on CBERS Application System, P.R.C.-Braz., Sept. 2004, *available at* http://mtc-m18.sid.inpe.br/col/dpi.inpe.br/banon/2006/08.03.18.55/doc/appl_01_2004.pdf (last vis-

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ited Nov. 17, 2009); Press Release, Chinese Nat'l Space Admin., China-Brazil Signed Protocol to Deepen the Space Coop. (May 31, 2009), http://www.cnsa.gov.cn/n615709/n620682/n639462/168786.html.

CURRENT LEGAL STATUS AND RECENT DEVELOPMENTS OF APSCO AND ITS RELEVANCE TO PACIFIC RIM SPACE LAW AND ACTIVITIES

Haifeng Zhao[*]

I. INTRODUCTION

This article will discuss the new regional intergovernmental space cooperation organization - the Asia-Pacific Space Cooperation Organization (APSCO), along with its legal framework and its relationship with the space law and space activities of Pacific Rim.

What is the purpose of space cooperation? International cooperation in space activities is determined by their characters, i.e., high cost, high risk, and high-technology. The cooperation between space faring nations is necessary for the purpose of reducing space exploration costs of individual participants, allocating risk, and allowing nations to share benefits emanating from a more efficient allocation of resource and technological efforts. International space cooperation can promote national scientific, technological, economic, and even political interests.[1]

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[1] *See* 《外层空间法》[OUTER SPACE LAW] 304 (He Qizhi & Huang Huikang, eds., Qingdao Press, 2000).