

# CONTEMPORARY CHINESE POLICY AND PRACTICE REGARDING INTERNATIONAL COOPERATION IN SPACE ACTIVITIES: OPPORTUNITIES & CHALLENGES FOR CANADIAN ACTORS

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## Abstract

This paper reviews the Chinese policy and practice regarding international cooperation in space activities, and also touches the opportunities and challenges facing Canadian actors looking to broaden their partnerships and establish cooperation with Chinese actors. The paper covers: (i) a brief background on contemporary Chinese policy on international cooperation in general; (ii) China's policy on international cooperation in space activities as reflected in a series of "white papers" issued since 2000 and in formal statements in international forums; (iii) a survey of China's array of cooperation mechanisms: multilateral, regional and bilateral; and (iv) challenges and opportunities for Canadian actors.

As the paper demonstrates, Chinese foreign policy, as expressed also by the current leadership, stresses "win-win cooperation" as the cornerstone of the policy. This general policy is even more prevalent in the context of space activities, as captured in the space policy white papers. The costs, risks and complexities associated with space activities call for the pooling of infrastructure, financial resources and technologies. Accordingly, China participates in most of the multilateral organizations and forums on space activities and hosts regional organizations and activities, most notably the China-led Asia Pacific Space

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Cooperation Organization (APSCO). China has also concluded over 80 bilateral space cooperation agreements with 29 states and international organizations, which include both developed and developing nations.

A report submitted to the U.S. Congress noted China's exponential and steady growth of budgets allocated to space activities. China continuously demonstrates increase in the spectrum and scope of projects. All this suggest opportunities. A 2010 report submitted to the Canadian parliament indicated China as Canada's second largest trading partner after the U.S, with potential growth in key sectors that include aerospace. However, such cooperation faces serious challenges, mainly by U.S' export control rules limiting also non-U.S actors from dealing with China.

KEYWORDS: China, international cooperation, Chinese policy, space activities

## 1. Introduction

The high risks, costs and potential benefits of space activities, and the high barrier of required initial funds, technology and infrastructure, mandates international cooperation. Certainly, Canadian actors are actively engaged in international cooperation and seeking to widen and vary the scope of their partners. China, being the world's second largest economy, a top space power and in an accelerated process of developing and expanding its space capabilities and projects, seems to be an obvious address for expanding Canadian actors' cooperation. But what is the Chinese policy on such cooperation? And what are the opportunities and challenges facing potential cooperation with China? These are the questions this paper addresses.

## 2. Chinese policy on international cooperation

There is no comprehensive Chinese space law, and though there are regulations and other administrative legal instruments<sup>1</sup>, these are relevant to international cooperation only in the margins. International cooperation is a matter of government action more than laws, hence the increased importance of policy, which drives the actions of governments. In the context of China there is an even greater importance,

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<sup>1</sup> Yun Zhao, *National Space Law in China, An Overview of the Current Situation and Outlook for the Future* (Brill 2015).

since traditionally the policy, especially policy prescribed in the five years plans and other official policy paper of the CPC (the Communist Party of China) and the central government, has direct and immediate effect that can be compared to that of laws in Western countries.

## **2.1 Contemporary Chinese policy on international cooperation in general**

The Peoples Republic of China (PRC) was established in 1949. Modern China's perception, attitude and policy regarding international cooperation is influenced by past experience during pre-PRC China, the good experience of the Silk Road era and, perhaps more predominately, the engraved experience of foreign invasion, intervention and exploitation during what the Chinese call "100 years of humiliation" (百年国耻) starting from the first Opium war (1842). China's policy is also just as much influenced by China's current status as an awoken giant and its ambitious goals for the future. Thousands of years of intercourse with or seclusion from the outside world, old fears and new dreams blended together and digested in a discourse expressing China's unique philosophy and world-view.

China's relations with the outside world are as diverse as its history. In the long imperial era, different dynasties and even different emperor of the same dynasty had different circumstances and policies. The PRC had placed international cooperation as an important principle from the beginning, but with different degrees and focus since the 'reform and opening up' policy introduced by Deng Xiaoping in 1978 and remains in force today. The importance of international cooperation was reiterated again in recent policy forums, notably the 3rd Plenum of the 18th Central Committee of the CPC in November 2013 which resulted in a not-so-common massive policy paper, the 20,000-characters roadmap known as the *Decision by the CPC Central Committee on Several Major Issues Concerning the Comprehensive Deepening of Reform*; and the Central Conference on Work Relating to Foreign Affairs, held by the Central Committee of the CPC in November 2014, only the second such conference since the founding of the PRC. In these and other forums the principle of international cooperation was presented as an important policy principle. The notion of international cooperation for mutual benefit was introduced to the interim constitution of the PRC, the Common Program<sup>2</sup>, at the day it was established in 1949, and it is now reiterated with the leitmotif

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<sup>2</sup> The *Common Programme of the Chinese People's Political Consultative Conference*, adopted by the First Plenary Session of the Chinese People's PCC on September 29th, 1949 in Peking.

of “win-win cooperation”<sup>3</sup> (合作共赢), which appears in numerous speeches on international relations by Chinese President Xi Jinping and other high rank officials<sup>4</sup>.

## 2.2 Chinese policy on international cooperation in space activities

Since 2000, China's State Council, the Chinese government, publishes periodic “white papers” on civil space policy. Three such white papers have been published so far, in 2000, 2006 and 2011, all of which include an extensive reference to international cooperation and place it as a core principle. Only the most recent will be presented herein, but it represents continuation from the previous white papers on this issue.

The 2011 white paper (titled: “2011年中国的航天”)<sup>5</sup>, devotes the fifth and final chapter to international exchange and cooperation, providing:

*“China maintains that international exchanges and cooperation should be strengthened to promote inclusive space development on the basis of equality and mutual benefit, peaceful utilization and common development...The Chinese government has adopted... fundamental policies with regard to developing international space exchanges and cooperation...”*

Since China is still a developing country and is still in the process of modernization and catching up on technology, it has a clear interest to promote international cooperation. Indeed, the white papers openly stated that international cooperation is

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<sup>3</sup> See, for example, Li Shishi (李适时), President of Chinese Society of International Law, Enrich the Connotation of the Five Principles of Peaceful Coexistence in the New Era, Remarks at the International Colloquium on the Five Principles of Peaceful Coexistence and the Development of International Law (Beijing, May 27, 2014); Liu Zhenmin, Following the Five Principles of Peaceful Co-existence and Jointly Building a Community of Common Destiny, Speech at the International Colloquium Commemorating the 60th Anniversary of the Five Principles of Peaceful Co-existence; Wang Yi (王毅), *2014 in Review: A Successful Year for China's Diplomacy*, address at the opening ceremony of the Symposium on the International Development and China's Diplomacy in 2014 co-hosted by China Institute of International Studies and China Foundation for International Studies (Beijing December 24, 2014).

<sup>4</sup> See, for example, a report in the People's Daily (the CPC's newspaper), “Seek ‘win-win cooperation’, Xi Jinping's keywords on the Chinese program on governance” (original Chinese: “寻求“合作共赢”的中国方案 (习近平治国理政关键词)”), online at <http://politics.people.com.cn/n1/2016/0418/c1001-28282393.html> (viewed May 12, 2016). See also Xi Jinping, *The Governance of China* (English version, Foreign Languages Press, 2014).

<sup>5</sup> 中华人民共和国国务院新闻办公室. 2011年中国的航天 (The State Council Information Office of the People's Republic of China: China's Space Activities in 2011), original Chinese and English translation available online at <http://www.scio.gov.cn/zfbps/ndhf/2011/201112/t1073720.htm> (viewed January 14, 2015).

servicing national interests and the need for modernization and social and economic development. The white papers stresses that cooperation does not replace the need for indigenous capabilities and according to the principle of self-reliance, China develops and maintains indigenous capabilities across the board.

China's policy on international cooperation was also presented in official statements of Chinese delegates to the UN and COPUOS, statements that, being official statements in an international forum, were carefully crafted and should thus be carefully read.

At the 60<sup>th</sup> session of the UN General Assembly in 2005, Mr. Ma Xinmin, the Director of the Department of Treaties and Law in the Chinese Ministry of Foreign Affairs, made a statement<sup>6</sup> in which he declared:

*"...China is willing to strengthen international exchanges and co-operation with the rest of the world in the field of space science and technology and their applications, and to make its contributions to the sustainable social and economic development at both global and regional levels..."*

At the 51<sup>th</sup> session of COPUOS's Legal Subcommittee held in Vienna in 2012, China, together with Ecuador, Japan, Peru, Saudi Arabia and the United States, proposed a new agenda item to be considered for COPUOS' multi-year workplan titled "Review of the international mechanisms for cooperation in the peaceful exploration and use of outer space"<sup>7</sup>. The new agenda item was finally approved and became part of the agenda of COPUOS's Legal Subcommittee since its 52<sup>th</sup> session of 2013. Under the new agenda item, member states submit information on their mechanisms for international cooperation in space activities. The working group established for this purpose will submit a concluding report on the issue. China was one of the first countries to provide

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<sup>6</sup> "Statement on the issue of International Cooperation in the Peaceful Uses of Outer Space", Statement made by Mr MA Xinmin as the representative of China at the Fourth Committee of the 60th Session of the UN General Assembly, on Item 29, New York, October 18, 2005 (A/C.4/60/SR.11). An English translation was provided by the Chinese Ministry of Foreign Affairs and published in Ma Xinmin, *Statement on the issue of International Cooperation in the Peaceful Uses of Outer Space*, 6(2) Chinese Journal of International Law (2007), 507.

<sup>7</sup> United Nations General Assembly, Committee on the Peaceful Uses of Outer Space, Report of the Legal Subcommittee on its fifty-first session held in Vienna from 19 to 30 March 2012, A/AC.105/1003, April 10, 2012, p 26.

the said information on its own policy and practice at the same 52th session<sup>8</sup>, in which it declared:

*“International cooperation typifies the successful experience of humankind’s exploration and use of outer space, and it is the fundamental guiding principle for countries in conducting their activities in outer space. China, as a developing country is committed to the long-term peaceful exploration and use of outer space, has participated in international cooperation of mutual benefit on the basis of shared achievements and responsibilities...Going forward, the Chinese Government is ready to work with other countries to seek actively an effective mechanism of cooperation on issues such as space debris that influence the long-term sustainability of outer space activities, and will continue to engage on a voluntary and equal basis in international space cooperation that is open, mutually beneficial and non-discriminatory.”*

It is important to note that China views ‘international cooperation’ as *a basic norm in Space Law* or “the fundamental guiding principle for countries in conducting their activities in outer space”<sup>9</sup>.

Another declaration by Mr. Ma Xinmin, at the 57th session of COPUOS in 2014<sup>10</sup>, reiterated the same policy.

The Chinese policy, as presented in the white papers and declarations in international fora, supports cooperation with multilateral fora, inter-governmental and non-governmental organizations, as well as regional and bilateral cooperation initiatives. China emphasizes the importance of the framework of the United Nations and the importance of regional space cooperation in the Asia-Pacific area. Chinese policy further reiterates its special attention for cooperation with developing countries, while valuing space cooperation with developed countries.

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<sup>8</sup> United Nations General Assembly, Committee on the Peaceful Uses of Outer Space, Legal Subcommittee, Fifty-second session (Vienna, 8-19 April 2013), Agenda item 12, *Review of international mechanisms for cooperation in the peaceful exploration and use of outer space: information received from Member States*, Addendum, A/AC.105/C.2/102/Add.1.

<sup>9</sup> The official Chinese version is: “国际合作...是指导各国外层空间活动的基本准则”.

<sup>10</sup> “China’s space policy, legislation and international cooperation”.

### 3. China's array of cooperation mechanisms

China participates in different types of forums, organizations and cooperation initiatives:

#### 3.1 Multilateral cooperation

China has gradually joined most if not all multilateral forums and organizations related to space activities. It is an active participant in the various forms of the UN and in particular COPUOS, to which it joined on November 3, 1980<sup>11</sup>. Other multilateral initiatives China joined include: the United Nations Platform for Space-based Information for Disaster Management and Emergency Response (“UN-SPIDER”)<sup>12</sup>, which established in 2010 a Beijing office, the only one outside Europe<sup>13</sup>; the UN initiative of Regional Centers for Space Science and Technology Education (UN-RCSSTE)<sup>14</sup>, which established a RCSSTE center for the Asia Pacific region in Beijing<sup>15</sup>; the Group on Earth Observations (GEO)<sup>16</sup>; the Inter-Agency Space Debris Coordination Committee (IADC)<sup>17</sup>; the International Space Exploration Coordination Group (ISECG)<sup>18</sup>; and the International Committee on Global Navigation Satellite Systems (ICG)<sup>19</sup>. China has therefore not just joined the multilateral organizations, but in a couple of cases opened branches in Beijing to serve as a regional base for the Asia – Pacific.

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<sup>11</sup>UNGA Resolution 35/16: Enlargement of the Committee on the Peaceful Uses of Outer Space, online at [http://www.unoosa.org/oosa/SpaceLaw/gares/html/gares\\_35\\_0016.html](http://www.unoosa.org/oosa/SpaceLaw/gares/html/gares_35_0016.html) (viewed January 16, 2015). See also:

和平利用外层空间委员会. <http://www.people.com.cn/GB/channel2/20/20000320/19401.html>; *The Committee on the Peaceful Uses of Outer Space - COPUOS*, online at <http://www.people.com.cn/GB/channel2/20/20000320/19401.html> (viewed January 16, 2015); United Nations Committee on the Peaceful Uses of Outer Space: Members, online at [www.unoosa.org/oosa/en/COPUOS/members.html](http://www.unoosa.org/oosa/en/COPUOS/members.html) (viewed January 16, 2015).

<sup>12</sup> <http://www.un-spider.org>.

<sup>13</sup> <http://www.un-spider.org/news-and-events/news/un-spider-opens-office-beijing-after-vienna-and-bonn> (viewed March 4, 2015).

<sup>14</sup> <http://www.unoosa.org/oosa/en/SAP/centres/index.html> (viewed March 4, 2015).

<sup>15</sup> CNSA, *UN establishes RCSSTE center for Asia Pacific region in Beijing* (2014-11-19), online at <http://www.cnsa.gov.cn/n360696/n361228/n361378/656714.html> (viewed March 4, 2015).

<sup>16</sup> <https://www.earthobservations.org>; China's membership: <https://www.earthobservations.org/members.php> (viewed March 4, 2015).

<sup>17</sup> <http://www.iadc-online.org> (viewed March 4, 2015).

<sup>18</sup> <http://www.globalspaceexploration.org/wordpress> (viewed March 4, 2015).

<sup>19</sup> <http://www.unoosa.org/oosa/SAP/gnss/icg.html> (viewed March 4, 2015).

There is also the UNESCO - China joint initiative for utilizing earth observation for the conservation, management and sustainable development of worldwide natural and cultural heritage, biosphere reserves and geoparks. The International Center on Space Technologies for Natural and Cultural Heritage (HIST) was jointly established by UNESCO and the Chinese Academy of Sciences in 2011.<sup>20</sup> Based in Beijing, it is hosted, financed, and uses the infrastructure of the Chinese Institute for Remote Sensing and Digital Earth (RADI). HIST' operations are not limited to China, and its flagship project is at the Angkor World Heritage site in Cambodia, including the famous Temple of Angkor Wat.

### 3.2 Regional cooperation

China supports regional cooperation and is poised to take a leading role in such endeavors. As mentioned above, two multilateral initiatives have their regional headquarters for the region in Beijing serving the Asia Pacific region: UN-SPIDER and UN-RCSSTE.

Moreover, China hosts and leads the Asia-Pacific Space Cooperation Organization (APSCO)<sup>21</sup>, which was established in 2005 and is headquartered in Beijing. It is an inter-governmental organization with full international legal status<sup>22</sup> and in 2009 COPUOS granted APSCO the status of a permanent observer.<sup>23</sup> APSCO currently has eight member states: Bangladesh, China, Iran, Mongolia, Pakistan, Peru, Thailand and Turkey.<sup>24</sup> All countries in the Asia Pacific are invited to join APSCO.

APSCO holds workshops on space technology and space law and even launched a Master Program on Space Technology Application in 2010 in cooperation with Beihang

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<sup>20</sup> Information on this section was provided in a visit to HIST headquarters in Beijing in February 2014 and in written material made available on this visit.

<sup>21</sup> <http://www.apsco.int>.

<sup>22</sup> Zhu Lijing, *The Legal Personality of The Asia-Pacific Space Cooperation Organization*, 1 AALCO Journal of International Law (2012).

<sup>23</sup> Decision at the 52nd Session of UN-COPUOS meeting in Vienna, on 12 June 2009, see APSCO - Introduction of the Organization and its Space Cooperative Activities, presentation for Secure World Foundation (no date), online at <http://swfound.org/media/41415/11.%20pres%20swf-cas%20space%20policies%20and%20laws%20-%20xu%20yansong%20-%20apsco%20intro.pdf> (viewed March 4, 2015).

<sup>24</sup> [http://www.apsco.int/AboutApsco.asp?LinkNameW1=APSCO\\_Member\\_States&LinkCodeN=11](http://www.apsco.int/AboutApsco.asp?LinkNameW1=APSCO_Member_States&LinkCodeN=11) (viewed March 4, 2015).



University in Beijing<sup>25</sup>. APSCOO conducts or facilitates cooperation in remote sensing projects for the benefit of its member states, including the Data Sharing Service Platform, the Asia-Pacific Ground Based Optical Space Observation System (APOSOS) and the Satellite Ground Receiving Station in Thailand.<sup>26</sup> APSCO views the European Space Agency (ESA) as a model, though it is still far from ESA's scope of activities.

### 3.3 Bilateral cooperation

China has concluded over 80 bilateral space cooperation agreements with 29 international organizations and states such as Russia, ESA, Pakistan, Brazil, France, Italy, Indonesia, Venezuela and Argentina.<sup>27</sup>

China and Brazil in particular have a long history of cooperation<sup>28</sup> and China has pronounced this cooperation as a model for South-South cooperation. The following is but a sample of recent cooperation agreements or Memorandum of Understandings (MOUs) China have signed with other countries: (i) with developing countries: Bolivia - 2011<sup>29</sup>, Chile - 2013<sup>30</sup>, Algeria - 2013<sup>31</sup>, Indonesia - 2014<sup>32</sup>, Venezuela - 2014<sup>33</sup>; (ii)

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<sup>25</sup> APSCO - Introduction of the Organization and its Space Cooperative Activities, presentation for Secure World Foundation (no date), online at <http://swfound.org/media/41415/11.%20pres%20swf-cas%20space%20policies%20and%20laws%20-%20xu%20yansong%20-%20apsco%20intro.pdf> (viewed March 4, 2015).

<sup>26</sup> Id.

<sup>27</sup> Mr. Ma Xinmin, China's space policy, legislation and international cooperation, declaration at the 57th session of COPUOS, Vienna, June 11-20, 2014.

<sup>28</sup> Protocol on Remaining Continuity, Increasing Cooperation, and Utilization of China-Brazil Earth Resources Satellite Between National Space Administrations of People's Republic of China and The Federative Republic of Brazil (May 19, 2009) - 中华人民共和国国家航天局和巴西联邦共和国航天局关于中巴地球资源卫星保持连续性、扩大合作及其应用的议定书。

<sup>29</sup> Cooperative Agreement of the Peaceful Utilization of Outer Space Between National Space Administrations of People's Republic of China and The Plurinational State of Bolivia (August 10, 2011) 中华人民共和国国家航天局与多民族玻利维亚国家航天局关于和平利用外层空间的合作协定。

<sup>30</sup> See, for example, the agreement from 2009: 中华人民共和国国家航天局和智利共和国农业部关于开展对地观测合作的谅解备忘录 - Memorandum of Understanding on Earth-Observation, between China National Space Administration and Chile's Ministry of Agriculture (March 22, 2013).

<sup>31</sup> 中华人民共和国政府与阿尔及利亚民主人民共和国政府关于在空间科学、技术及应用领域的合作协定 Cooperation Agreement on Space Science and Technology and their applications, between China Government and Algeria Government (December 12, 2013).

<sup>32</sup> 中国国家航天局与印度尼西亚海上安全协调机构关于印尼遥感地面站项目合作的谅解备忘录 Memorandum of Understanding on Cooperation Program Regarding Indonesian Remote Sensing Earth Station, between China National Space Administration and Indonesian Ocean Safety Coordination Administration (October 6, 2014)/

<sup>33</sup> 中委遥感卫星二号项目合同. Contract of No.2 Remote Sensing Satellite, Between China and Venezuela (October 5, 2014).

with Western developed countries: the European Space Agency - 2011<sup>34</sup>, Italy - 2011<sup>35</sup>, France - 2014<sup>36</sup>, Germany – 2014<sup>37</sup>. Generally speaking, the agreements with developing countries include Chinese support, as in building and launching satellites to serve the developing countries. The agreements with western countries are more varied and geared more towards scientific cooperation. The cooperation with Brazil includes launching technologies and facilities, and the cooperation with Russia has a long history, dating back to the Soviet Union, and is across the board, including for China's manned space program.

## 4. Opportunities and challenges for Canadian actors

### 4.1 Challenges

Canadian actors interested in cooperation with Chinese actors face several challenges. These include culture gap, different business and work habits and insufficient tradition of working relations between the two space industries, despite framework agreements already in place. The biggest challenge however is the issue of export controls, and especially the US' International Traffic in Arms Regulations (ITAR).

Chinese export control regulations apply to space products and technologies due to their dual-use nature. Therefore, every agreement for international cooperation must be approved according to the applicable rules and procedures. Since the mid-1990s, China is expanding and strengthening its previous weak export controls, and the process is ongoing to meet international standards. Domestic regulations and decrees were promulgated, administrative structures revamped and a 2003 white paper on

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<sup>34</sup> China - European Space Agency agreement of 2011: Agreement on Mutual Support of Observe-Control Net and Its Manipulation between China National Space Administration and European Space Agency (September 21, 2011) - 中国国家航天局与欧洲空间局关于测绘网络及操作相互支持的协定.

<sup>35</sup> Frame Agreement on Cooperation in Peaceful Space Activities between China National Space Administration and Italian Space Agency (Agenzia Spaziale Italiana) (November 23, 2011) 中国国家航天局与意大利空间局关于在和平空间活动领域进行合作的框架协议.

<sup>36</sup>中华人民共和国国家航天局和法兰西共和国国家空间研究中心关于加快推进中法天文卫星和中法海洋卫星研制的合作备忘录

Memorandum of Cooperation on Promoting Chinese-French Astronomy and Ocean Satellites Research, between China National Space Administration and French National Space Research Center (March 27, 2014).

<sup>37</sup>中华人民共和国国家航天局与德意志联邦共和国宇航中心关于探索与和平利用外层空间合作的谅解备忘录 Memorandum of Understanding on Cooperation in Exploration and Peaceful Utilization of Space, between China National Space Administration and German National Space Administration (October 10, 2014).

nonproliferation policy issued<sup>38</sup>, but enforcement is still a major issue. In terms of multilateral fora on nonproliferation, China did not join the two most relevant to space products and technologies: The Missile Technology Control Regime (MTCR)<sup>39</sup>, to which it applied; and the Wassenaar Arrangement on export controls for dual un-use goods and technologies<sup>40</sup>. However, China holds a dialogue with both. The MTCR set is supplemented by the 2002 International Code of Conduct against Ballistic Missile Proliferation (Hague Code of Conduct/HCOOC), to which China did not join either. Chinese domestic regulations on export controls of conventional arms and missile technology<sup>41</sup> meet international standards. However, with regards to dual-use products and technologies China still lags behind. China's 2002 Regulations on Export Control of Missiles indeed meet international standards and China applied in the following year to join the MTCR but was denied membership. Although the Chinese regulations and enforcement procedures were found to meet MTCR standards, a number of MTCR member states, most notably the United States, have blocked China's entry raising questions about China's willingness or ability to fully implement and enforce its own rules and procedures.<sup>42</sup> The consequence of denial membership from China is the denial of certain benefits this membership entails, mainly access to new technology and participation in space-related projects that are not available to non-regime members. This includes participation in the International Space Station (ISS). The question of admitting China to the MTCR involves therefore also political and commercial considerations.<sup>43</sup>

Canada has its own export controls rules. Certain specific goods and technology are controlled for export from Canada to other countries, in order to ensure that exports of certain goods and technology are consistent with Canada's foreign and defence

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<sup>38</sup> This section on export controls is based on: Li Hong, *Chinese Nonproliferation Policy and Export Control Practice*, presentation in Taipei, August 28, 2013; and Chin-Hao Huang, *"Bridging the gap": Analysis of China's export controls against international standards*, Final Project Report to the Foreign and Commonwealth Office Counter-Proliferation Programme (2012). For further reading on export controls on space products and technologies see Michael C. Mineiro, *Space Technology Export Controls and International Cooperation in Outer Space* (Springer 2012).

<sup>39</sup> <http://www.mtc.info/english/partners.html>.

<sup>40</sup> <http://www.wassenaar.org/participants/index.html>.

<sup>41</sup> Regulations on Export Control of Missiles and Missile- Related Items and Technologies of the PRC, 2002.

<sup>42</sup> Chin-Hao Huang, *"Bridging the gap": Analysis of China's export controls against international standards*, Final Project Report to the Foreign and Commonwealth Office Counter-Proliferation Programme (2012).

<sup>43</sup> Victor Zaborsky, *China's Bid to Join the MTCR: Cost and Benefits*, 2 *Asian Export Control Observer* (2004), 12.

policies. The export controls are applied under the Export and Import Permits Act of 1985<sup>44</sup> and administered by the Export Controls Division<sup>45</sup>. The Canadian rules are beyond the scope of this paper, as they are easily obtained, unlike the Chinese rules, and are not the biggest obstacle for cooperation with China, as the US' ITAR is. An official guide to Canada's export controls rules is available online and it includes a list of items which export is controlled<sup>46</sup>.

The more important set of export control rules that poses the biggest obstacle to cooperation with China is the US' ITAR rules<sup>47</sup> that apply not only to American actors but also on non-American actors who use American technology or components. The regulations are administered by the US Department of State, Directorate of Defense Trade Controls (DDTC) and require DDTC approval prior to the export, re-export or re-transfer in a foreign country of any ITAR-controlled article. According to the 'See Through' rule, an article that is subject to the ITAR will retain its ITAR status even when incorporated into a higher-level platform. Therefore, any system that includes an American component listed under the ITAR regulations, even if this component is minor, is itself subject to the ITAR rules<sup>48</sup>. The application of the ITAR rules is therefore extraterritorial and very wide. ITAR rules will apply to many Canadian-made systems and disrupt many cooperative initiatives. As Jakhu noted:

*"[The] positive outcomes of Canada's space cooperation with the US also result in some negative implications. Perhaps the most significant undesirable implication for Canada is the mandatory requirement for*

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<sup>44</sup> Export and Import Permits Act (R.S.C., 1985, c. E-19), online at <http://laws-lois.justice.gc.ca/eng/acts/E-19/> (viewed May 16, 2016).

<sup>45</sup> <http://www.international.gc.ca/controls-controles/index.aspx?lang=eng>.

<sup>46</sup> A guide from 2015 is available online at [http://www.international.gc.ca/controls-controles/export-exportation/TOC-exp\\_ctr\\_handbook-manuel\\_ctr\\_exp.aspx?lang=eng](http://www.international.gc.ca/controls-controles/export-exportation/TOC-exp_ctr_handbook-manuel_ctr_exp.aspx?lang=eng) (viewed May 16, 2016).

<sup>47</sup> International Traffic in Arms Regulations (ITAR). On the ITAR regulations see, for instance, Space Foundation, ITAR and the U.S. Space Industry (January 9, 2008), online at <http://www.spacefoundation.org/programs/research-and-analysis/whitepapers-and-analysis/itar-and-us-space-industry> (viewed December 1, 2014). In May 2013 the ITAR regulations have gone through a reform with regards to space technology. On the 2013 reform see, for instance, Dara Panahy and Bijan Ganji, *ITAR Reform: A Work in Progress*, 26(3) *The Air & Space Lawyer* (2013). On export controls and space technology in general see Michael Mineiro, *Space Technology Export Controls and International Cooperation in Outer Space* (Springer 2011).

<sup>48</sup> See also Michael Mineiro, *The Impact of U.S. Export Controls on Canadian International Multi-Use Mission Collaboration: An Assessment with Recommendations for Canadian Space Policy*, 26 *Space Policy* (2010), 99.

*compliance with the American export control regulations for Canada and Canadian entities... Michael Mineiro correctly asserts that '[w]hen U.S.-origin space technologies are involved Canada's ability to collaborate internationally may be conditional on US law and policy. As a result, US export control law can be directly linked to the success or failure of Canadian collaboration". This loss of autonomy on Canada's part only restricts its freedom to cooperate with other countries, especially those outside the OECD, like Russian, China and India...To a good extent, the scope and nature of Canadian space cooperation with countries other than the US depend upon (are determined) by the American political (both foreign and space related) relations with these countries. Such an uncomfortable position in the 1970s also was an important factor for Canada's choice of the Third Option, which paved the way for Canada's space cooperation with Europe."*<sup>49</sup>

Indeed, the ITAR provide the US with an effective veto power on any Canadian cooperation with a third country, if Canada will be using US technology or components, even as a small part of an entire system. The administering of the veto power by the DDTIC, may be subject to political and commercial pressures, as well to differences in policy on international cooperation and proliferation between the countries.

## 4.2 Opportunities

A report submitted to the U.S. Congress noted China's exponential and steady growth of budgets allocated to space activities<sup>50</sup>. China continuously demonstrates increase in the spectrum and scope of projects. A 2010 report submitted to the Canadian parliament<sup>51</sup> indicated China as Canada's second largest trading partner after the U.S, with potential growth in key sectors that include aerospace. All this suggest opportunities. Moreover, China is interested in expanding its network of cooperation agreements, and has the resources to back any cooperation, in terms of finance, infrastructure and technology and both Canada and China have expressed interest in bilateral cooperation.

Preparatory work for bilateral cooperation with China has been made. The Canadian Space Agency (CSA) has signed an MOU with the China National Space Administration (CNSA) in 1996 and renewed it in 2001, though no real cooperation was

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<sup>49</sup> Ram S. Jakhu, Canada's International Space Cooperation, IAA Study Group 5.11 on Comparative Assessment of Regional Cooperation in Space: Policies, Governance and Legal Tools.

<sup>50</sup> The Institute for Defense Analyses, Global Trends in Space (June 2015).

<sup>51</sup> Canadian Trade and Investment Activity: Canada - China, Trade and Investment Series, The Library of Parliament (Publication No. 2010-41-E, July 22, 2010).

virtually non-existent<sup>52</sup>. Nevertheless, attempts continue and in a high-level meeting in Beijing in 2005, the President of CSA and the Administrator of CNSA expressed their desire to intensify their efforts to “explore the potentials to cooperate in the areas of space technology, space application and space science”<sup>53</sup>. There was indeed a continuation in preparing the framework for such cooperation. Another agreement was signed in 2007, a framework agreement for scientific and technologic cooperation<sup>54</sup>. The agreement is financed and managed through Canada’s International Science and Technology Partnerships Program and a few projects have already been launched following a Call for Proposals, though none really was space related<sup>55</sup>. All in all, the parties are interested, and the ground is ready. As Jakhu noted:

*“Though, so far space cooperation between Canada and China is almost non-existent, the necessary ground work has been put in place and important suggestions and political maneuvers are being made for this purpose, perhaps waiting for the right time to initiate a meaningful space cooperation.”<sup>56</sup>*

Considering the application of the ITAR rules, the main opportunities open for Canadian actors include all cooperation initiatives that do not fall within the scope of the ITAR rules. The cooperation European agencies may serve as an example, since also they have to take ITAR as a consideration. This includes scientific cooperation, sharing of data, including satellite images, and the use of remote sensing for agriculture, preservation of natural and cultural heritage, and more. Since China has its own indigenous launching vehicles and facilities, cooperation can focus on other fields. Agreements that were signed by European agencies in recent years include the agreements or MOUs with Sweden (September 16, 2015), Germany (October 10, 2014); France (March 27, 2014); Italy (November 23, 2011); the European Space Agency (November 18, 2005;

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<sup>52</sup> Ram S. Jakhu, Canada's International Space Cooperation, IAA Study Group 5.11 on Comparative Assessment of Regional Cooperation in Space: Policies, Governance and Legal Tools.

<sup>53</sup> CNSA, China and Canada continued peaceful space cooperation (November 2005), available online at <http://www.cnsa.gov.cn/n615709/n620683/n639518/n772099/53308.html>.

<sup>54</sup> Canada Treaty Information, Agreement for Scientific and Technological Cooperation Between the Government of Canada and the Government of the People's Republic of China, 16 January 2007, available online at

<http://www.treaty-accord.gc.ca/text-texte.aspx?id=105085>.

<sup>55</sup> Jakhu, Canada's International Space Cooperation, cited in note 37.

<sup>56</sup> Jakhu, Canada's International Space Cooperation, cited in note 37.

September 21, 2011); and the UK (January 14, 2005). Interested Canadian actors may study these agreements.

Moreover, China is set to establish its own international space station around 2020, and experimental modules have already been deployed and successfully tested. China is interested in international cooperation also with its international space station, and although Canada is part of the ISS, Canadian actors may consider partnering with the Chinese space station to expand the options for conducting experiments in outer space, by using the space at the Chinese space station and sharing the costs with the Chinese space agency.

As Jakhu noted, "The global political climate is becoming more conducive to Canada-China space cooperation"<sup>57</sup>. There is definitely a gap between the potential and the practice, waiting to be filled.

## 5. Conclusion

Chinese policy consistently supports international cooperation in general, and specifically in space activities. Still a developing country, and in an ongoing process of modernization and catching up on technology, China has a clear interest to promote international cooperation. At the same time, being the second largest economy in the world provides China with the financial resources to back any cooperation. China has joined practically all multilateral fora on space issues and is the host and leading member of the Asia-Pacific Space Cooperation Organization (APSCO). In terms of bilateral cooperation, China has signed cooperation agreements with many countries, developing and developed alike, with an increase in the scope and depths of cooperation. The Chinese interest in cooperation and ability to back such cooperation offers opportunities to Canadian actors. However, there are challenges, mainly the ITAR rules. Therefore, cooperation should focus on activities and products that do not fall under the ITAR rules and cooperation of European space agencies may serve as a model. As China keeps pushing ahead in its space program, and in specific with the Chinese Space Station, the opportunities for international cooperation in space activities will increase. With several framework agreements between Canada and China, the scene is set and a void is waiting to be filled.

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<sup>57</sup> Jakhu, *Canada's International Space Cooperation*, cited in note 37.

## References

- [1] Chin-Hao Huang, "Bridging the gap": Analysis of China's export controls against international standards, Final Project Report to the Foreign and Commonwealth Office Counter-Proliferation Programme (2012).
- [2] Dara Panahy and Bijan Ganji, ITAR Reform: A Work in Progress, 26(3) *The Air & Space Lawyer* (2013).
- [3] Ram S. Jakhu, Canada's International Space Cooperation, IAA Study Group 5.11 on Comparative Assessment of Regional Cooperation in Space: Policies, Governance and Legal Tools.
- [4] Li Hong, Chinese Nonproliferation Policy and Export Control Practice, presentation in Taipei, August 28, 2013.
- [5] Li Shishi (李适时), President of Chinese Society of International Law, Enrich the Connotation of the Five Principles of Peaceful Coexistence in the New Era, Remarks at the International Colloquium on the Five Principles of Peaceful Coexistence and the Development of International Law (Beijing, May 27, 2014);
- [6] Liu Zhenmin, Following the Five Principles of Peaceful Co-existence and Jointly Building a Community of Common Destiny, Speech at the International Colloquium Commemorating the 60th Anniversary of the Five Principles of Peaceful Co-existence.
- [7] Michael C. Mineiro, *Space Technology Export Controls and International Cooperation in Outer Space* (Springer 2012).
- [8] Victor Zaborsky, China's Bid to Join the MTCR: Cost and Benefits, 2 *Asian Export Control Observer* (2004), 12.
- [9] Wang Yi (王毅), 2014 in Review: A Successful Year for China's Diplomacy, address at the opening ceremony of the Symposium on the International Development and China's Diplomacy in 2014 co-hosted by China Institute of International Studies and China Foundation for International Studies (Beijing December 24, 2014).
- [10] Yun Zhao, *National Space Law in China, An Overview of the Current Situation and Outlook for the Future* (Brill 2015).



- [11] Zhu Lijing, The Legal Personality of The Asia-Pacific Space Cooperation Organization, 1 AALCO Journal of International Law (2012).
- [12] The Common Programme of the Chinese People's Political Consultative Conference, adopted by the First Plenary Session of the Chinese People's PCC on September 29th, 1949 in Peking.
- [13] 中华人民共和国国务院新闻办公室. 2011年中国的航天 (The State Council Information Office of the People's Republic of China: China's Space Activities in 2011), online at <http://www.scio.gov.cn/zfbps/ndhf/2011/201112/t11073720.htm> (viewed January 14, 2015).
- [14] Canadian Trade and Investment Activity: Canada - China, Trade and Investment Series, The Library of Parliament (Publication No. 2010-41-E, July 22, 2010).
- [15] The Institute for Defense Analyses, Global Trends in Space (June 2015).