

A Regional Initiative for Studying the Status of National Space Laws

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Abstract

This paper studies how a new regional approach may enhance legislating or implementing national space laws and regulations through the “National Space Legislation Initiative (NSLI),” which has been implemented under the framework of the Asia-Pacific Regional Space Agency Forum (APRSAF). APRSAF was established in 1993 and has been enhancing space activities and international cooperation in the Asia-Pacific region. The NSLI is a new APRSAF initiative launched in 2019 with a view to effectively studying the status of national space laws in the Asia-Pacific region. It aims to promote information sharing and mutual learning on the practices and examples of national space laws in the Asia-Pacific region. It also aims to enhance the capacity of drafting and implementing national space laws in the Asia-Pacific countries in accordance with international norms, including especially established international law rules. This paper first examines the current situations concerning national space law developments in the Asia-Pacific region and analyses how the NSLI can advance it within the APRSAF framework. In addition to analyzing the NSLI's study reports, the significance and implications of this Initiative will also be stated for the reference and future partnership in other countries and regions.

1. Introduction

The purpose of this paper is to study how a new regional approach may enhance legislation or implementation of the national space laws and

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regulations through the National Space Legislation Initiative (NSLI). The NSLI is a new initiative launched in 2019 during the 26th session of the Asia Pacific Regional Space Agency Forum (APRSAF) held in Nagoya, Japan.¹ This paper covers the progress of the NSLI activities, of which the duration of work is until 2021.

APRSAF was established in 1993 and has been enhancing space activities and international cooperation in the Asia-Pacific region.² It is the largest space forum in the Asia-Pacific region attended by approx. 500 participants from over 40 countries including not only from space agencies, but also from international organizations, national government bodies, academia, and industry. Under the plenary, the APRSAF currently operates four working groups and promotes various initiatives using space technologies. Such initiatives include so-called “Sentinel Asia” and “SAFE Evolution” respectively for environment and disaster monitoring in tackling common regional issues, and “Kibo-ABC” for capacity building in manned space technologies.³ The NSLI was added as the first initiative dedicated to space policy and law in the APRSAF framework.

Responding to the growing interests in space policy and law in the Asia-Pacific region, recently APRSAF has initiated a new effort of “space policy community building” in the region. As explored in detail in the next section, there is a trend that more and more countries in the region establish their national space agencies and national space policy and law. In parallel, there have been greater needs for information on space policy and law among the participants of APRSAF.

With this background, APRSAF began holding the space policy plenary session during the 24th session held in 2016, in Bangalore, India. Since then, APRSAF has been providing the opportunities for exchanging the information on national space policy and law and for networking among space policy practitioners in the region in order to enhance the mutual understanding in relations to respective national policy and laws. Such efforts include the Space Policy Practitioners Workshop and the Inter-regional Space Policy Dialogue between the Asia-Pacific and Europe co-organized by APRSAF and the European Space Policy Institute (ESPI).⁴ For the further advancement of these activities, the NSLI was proposed as the next step for the space policy community building activities and was welcomed during the APRSAF Plenary. The activities under the NSLI cover not only information

1 For the general information of the NSLI, see, NSLI website, https://aprsaf.org/initiatives/national_space_legislation/, (accessed 31.07.20).

2 For the general information on the APRSAF, see, APRSAF website, <https://aprsaf.org/about/>, (accessed 31.07.20).

3 For the general information on the initiatives under APRSAF, see, APRSAF, About Initiatives, <https://aprsaf.org/initiatives/about/>, (accessed 31.07.20).

4 See, APRSAF, New Efforts, https://aprsaf.org/capacity_building/, (accessed 31.07.20).

exchange but also the first joint work among the space practitioners in the region. The NSLI aims to report on the status of national space laws for the submission to the legal subcommittee (LSC) of the United Nations Committee on Peaceful Use of Outer Space (UNCOPUOS) in 2021.

Following this Introduction section, this paper first introduces the status of national space law development in the Asia-Pacific region. The third section describes in detail how the work of the NSLI is actually implemented and the fourth section analyses the report of the NSLI, the main work of the Initiative. The fifth section evaluates the significance and implication of the NSLI for future reference, and the final section provides the conclusion.

2. The Development of the National Space Legislation in the Asia-Pacific Region

Space activities in the Asia-Pacific region is becoming active in the recent years, and there is a growing number in the establishment of national space agencies. As far as we know, four countries in West Asia (Bahrain, Saudi Arabia, Turkey, and the United Arab Emirates (UAE)), one country in South East Asia (Philippines), and two countries in Oceania (Australia, New Zealand) for a total of seven countries in the Asia-Pacific newly established their national space agencies and one country in South East Asia (Malaysia) reorganized their space agency, in the last six years.

The specific purpose and objective of their space policy differs among these countries, but we suggest that there are six common areas of interest: establishment of basic space technology, promotion of space application, national security, promotion of space industry, capacity building, and international cooperation.

Considering the recent trend in commercial space activities and the shift of space utilization to commercial use, the role and necessity of national legislation dedicated to space activities will increase. Also, to implement the United Nations space treaties, it is important that each country establish their national space legislation in accordance with these international regimes. For example, in the Asia Pacific region, Australia, Korea, Indonesia, Japan, New Zealand, Philippines, and the UAE have established national space legislation. (In Australia, the Space (Launches and Returns) Act 2018 replaced the existing Space Activities Act 1998 to promote innovation and growth of the space industry.) India, Malaysia, and Thailand are considering establishing their own national space legislation.

3. The Work of the NSLI and its Implementation

As mentioned in the Introduction section, the NSLI was launched during APRSAF-26 held in Nagoya, Japan in November 2019. The NSLI was

established with two objectives: 1) to promote information sharing and mutual learning on the practices and examples of national space legislation and policies in the Asia-Pacific region, and 2) to enhance the capacity of countries in the Asia-Pacific to draft and implement national space legislation and policies in accordance with international norms.⁵ The NSLI member organizations include seventeen national governmental organizations such as space agencies and related ministries from nine countries in the Asia-Pacific region (Australia, India, Indonesia, Japan, Korea, Malaysia, Philippines, Thailand, and Vietnam). Practitioners in space policy and law who are nominated by each above participating organization form a Study Group consisted of about forty members to draft a report on the status of national space legislation in the Asia-Pacific region.

The two co-chairs lead the discussion in the Study Group: Prof. Setsuko Aoki, Professor of Keio University Law School, and Dr. Dao Ngoc Chien, Deputy Director General, Department of High Technology of Vietnam Ministry of Science and Technology (MOST). The Secretariat of the NSLI is managed by JAXA to support the work of the co-chairs and the Study Group. The expected duration of work of the NSLI and its Study Group is until the submission of the report to the annual session of APRSAF in 2021.

The original schedule of the Study Group was to hold face-to-face meetings on the margins of UNCOPUOS/LSC and annual meetings of APRSAF. However, considering the COVID-19 situation and the difficulty of having face-to-face meetings, the workplan of the Study Group was reconsidered to hold monthly tele-conferences until the submission of the report to UNCOPUOS/LSC in 2021, and afterwards organize teleconferences as needed until the submission of the report to the annual session of APRSAF in 2021. For each tele-conference, there are about thirty participants from the nine member countries, and the Study Group has held seven tele-conferences (each lasting for 2 to 2.5 hours) so far.⁶

The discussions are based on the questionnaire (an excel form for information on national space legislation, so called “information form”) which was submitted from the member organizations. By using the questionnaire, the members could compare the status of national space legislation among the member organizations. The members have discussed widely covered topics, including the overview of space activities, the status of national space legislation, and the ratification status of international regimes. The status of national space legislation specifically refers to laws and regulations regarding radio frequencies, export control, satellite operation, rocket launch and commercial activities. Further information is mentioned in the next section.

5 NSLI, *op. cit.*

6 As of writing and submission of the paper to the Colloquium on the Law of Outer Space, session E7 of the International Astronautical Congress Cyberspace Edition.

4. The Report on the Status of the National Space Legislation in the Asia-Pacific Region⁷

The report from the NSLI is drafted based on information sharing and discussion using the questionnaire which consists of questions and answers about the topics which are referred from the United Nations' Resolution adopted by the General Assembly on the report of the Special Political and Decolonization Committee, "Recommendations on national legislation relevant to the peaceful exploration and use of outer space" (A/RES/68/74) (hereinafter referred to as the "2013 UNGA Resolution").

The 2013 UNGA Resolution is subject to States and consist of eight elements: (1) the scope of space activities under national regulatory framework; (2) national jurisdiction over space activities; (3) authorization by a competent national authority; (4) conditions for authorization; (5) continuing supervision and monitoring; (6) national registry of space objects; (7) liability for damage; and (8) continuing supervision over non-governmental entities.

The questionnaire consists of three sections. that is: (1) overview of space activities; (2) ratification status regarding international regime; and (3) national legislation related to space activities. It was prepared by the NSLI Secretariat based on the aforementioned 2013 UNGA Resolution. Each section has questions dedicated to the eight elements, and members fill out answers in the form. A total of sixteen questions with some sub-questions are asked. The intentions behind the questions and initial findings obtained through information sharing and discussion are as below.

4.1. Questions and Intentions

1. What kinds of space activities have been conducted in your country, including by government agencies, private entities, research institutes, and/or laboratories?

Question 1 aims to determine what kinds of space activities the member States are engaged in including governmental and non-governmental entities as premise of national legislation. This question corresponds to the scope of space activities targeted by national regulatory framework.

2. Is there an independent space agency in your country? Is there any national legislation to establish such an agency?

Question 2 aims to determine the development of space activities in member States with a hypothesis that the establishment of national space agency is one of the major milestones of the development of national space activities, and national legislation will be needed to establish such agency.

⁷ The title of the report is tentative and may change.

3. Has your country become a party to the five UN treaties on outer space?

4. Is your country a member of COPUOS?

Question 3 and 4 aim to examine how the international regime based on the UN treaties (Outer Space Treaty, Astronaut Rescue and Return Agreement, Liability Convention, Registration Convention, and Moon Treaty) works in member States as a premise to examine how national legislation meets the 2013 UNGA Resolution.

5. Does your country submit national registry information to the UN?

Question 5 aims to determine whether the registration of space objects is common practice in the member States, as registration is required by the Registration Convention and is one of the key elements of the 2013 UNGA Resolution.

6. Does your country have any independent national legislation concerning space activities?

Question 6 aims to determine what kind of approach is taken for national legal frameworks for space activities. It is recognized in the 2013 UNGA Resolution that there can be different approaches to national legislation, that is, by means of unified acts or a combination of national legal instruments.

7. Does your country have any laws governing the control and management of radio wave allocation?

8. Does your country have any laws governing export control?

Question 7 and 8 aim to examine whether member States have established their national legislation in accordance with progress in their national space activities, such as operation of spacecraft and dealing with sensitive goods and technologies within the international legal regime.

9. Are there any universities or other laboratories in your country that operate or are planning to operate satellites? Is there any national legislation for operating satellites?

10. Has your country, including private entities, launched any satellites from other countries? Are there any licenses required in your country?

11. Does your country, including private entities, have or plan to have any launch sites within its territory? Is there any national legislation for these launch sites?

12. Does your country, including private entities, launch or plan to launch rockets, including suborbital rockets? Is there any national legislation for these launch sites?

Question 9, 10, 11, and 12 aim to determine the progress of national space activities including those conducted by non-governmental entities, and the development of national legislation corresponding to these activities. The necessity of national legislation depends on the development of space activities and players in each country. Especially, authorization, continuing supervision and monitoring of space activities conducted by non-governmental entities are key elements of the 2013 UNGA Resolution.

13. If a private entity intends to launch a launch vehicle or satellite, is TPL mandatory in your country?

14. In relation to question 13, does your country have a governmental indemnification mechanism for private entities with regard to liability?

Question 13 and 14 aim to determine whether member States have national legislation that satisfies the responsibility for a launching state and supports commercial launch activities.

15. What kinds of legal measures have been taken with regard to space debris mitigation in your country?

Question 15 aims to determine whether legal measures for space debris mitigation have been established, which is emphasized in the 2013 UNGA Resolution as a key element to ensure the safety of space activities.

16. If your country has legislation for "Space commercialization" related to Question 6, what is regulated in the legislation?

Question 16 aims to determine whether member States have legislation that promotes commercial space activities.

4.2. Initial Findings

All the member States are engaged in satellite data utilization and development of CubeSat. All the member States have satellites in some manner. Although launch vehicle and launch site are not common infrastructure, space activities of member States, including activities conducted by private entities, are developing.

The Outer Space Treaty can be seen as a norm in all the member States. That means in accordance with the advancement of space activities including those conducted by private entities, national legislation will be needed for the nation to comply with the Treaty, especially Article VI which requires member States to authorize and supervise non-governmental entities' space activities.

Registration of space objects cannot be seen as a common practice in member States. In accordance with the advancement of space activities, member States should consider establishing national legislation including registration of

space objects, radio frequency allocation, export control, and space debris mitigation to comply with international norms.

5. Evaluation of the Significance and Implication of the NSLI

The significance and implication of the NSLI seem to be found from both regional and international perspectives. As for the regional perspectives, the NSLI enhances the legislating and implementation capacity of national space law through mutual learning of various States' practices in this region. Furthermore, by enhancing the understanding of each country's legal and regulatory framework, the NSLI also would build a collaborative platform for tackling the common regional issues. The other important significance is that the NSLI will contribute to the global agenda, such as the sustainability of space activities and the stable use of outer space. These points are also mentioned in the "Nagoya Vision" adopted at APRSAF-26.⁸ The international perspectives of the NSLI significance are especially found in the following three points.

First, the NSLI is a good example of contribution for developing international space law through the submission of States' practices to the UNCOPUOS/LSC. In the LSC, this result would be a valuable contribution to the discussion under the agenda item of "national legislation relevant to the peaceful exploration and use of outer space." This agenda item started in 2008 to make building blocks for national space legislation which could serve as a reference for States which had not yet made their own national laws. As referred to in the section 4 of this paper, these multiyear efforts resulted in the 2013 UNGA Resolution, since this plays an important role as useful building blocks consisting of eight elements.

States are expected to make national space laws, preferably taking note of the 2013 UNGA Resolution and furnish information on respective national laws to the UNCOPUOS/LSC when it is newly made. Likewise, not only when a new law is made, but also whenever relevant practice and analysis of individual national space legislation is made relating to the 2013 UNGA Resolution, it is also welcomed that the outcome and result would be submitted to the UNCOPUOS/LSC under the agenda item of national legislation relevant to the peaceful exploration and use of outer space. This is exactly what the NSLI is trying to achieve. Its submission of the report for the 2021 LSC session will be recognized as a significant contribution by States members of the UNCOPUOS.

Second, that this is a collective effort through a regional space cooperative mechanism of APRSAF adds to the value of the NSLI. The UNCOPUOS/LSC

8 APRSAF, Outcome Documents, https://aprsaf.org/annual_meetings/aprsaf26/outcome_documents.php, (accessed 28.08.20).

discussed “review of international mechanisms for cooperation in the peaceful exploration and use of outer space” from 2013 to 2017 (its outcome report, A/AC.105/C.2/112 (13 April 2017)) to find common elements in legal mechanisms in various international space cooperation. The strategy here is that once common elements are found, applying such elements at the beginning of space cooperation would facilitate and enhance space activities for States which have just started space activities. The one of the findings of this agenda item is the importance of making regional mechanisms, be they legally binding or non-legally binding. It is found that regional cooperation mechanisms are most promising venue for furtherance of space activities.

Once a regional space mechanism is established, then finding a good cooperative project and joint working project is dispensed with for its future development. APFSAF has been around for almost three decades now, and with a view to maintaining and strengthening its regional cooperation. New engagement such as the NSLI would be pertinent and also in line with the LSC agenda.

Third and most essential from the purely legal point of view, is that the NSLI falls under one of the efforts to better implement the Outer Space Treaty. Article VI of the Outer Space Treaty imposes unique obligation to the States Parties that a State is directly and internationally responsible for space activities conducted both by governmental agencies and non-governmental entities. This is quite a deviation from customary international law where States are responsible only for an internationally wrongful act attributable to States agencies. It is only the Outer Space Treaty among all treaties that imposes such a strong responsibility on State Parties. Thus, activities by non-governmental entities will require “authorization and continuing supervision” by the corresponding State, which is in normal cases, implemented by national space legislation. In this regard, the NSLI has a potential to strengthen the national mechanisms of authorization and supervisions which will lead to implement the Outer Space Treaty.

Drafting national space activities law is not an easy task and there is no one-fits-all model law due to a diverse development phases of space activities with equally diverse historical background, as well as a wide variety of national legal systems among States.

In fact, that was the reason that agenda item national space legislation started in 2008 with a view to making building blocks to be used in the future by States. Some members of the NSLI have already made national space laws, and the NSLI joint study will be a valuable reference to the other States which are considering establishing their own national law. But the merit of international and regional cooperation is that States which have already adopted national laws are also benefited by the interactions with other States with or without national laws. This is a good opportunity to evaluate the value of national laws. This Initiative may lead to the amendment of an

already existent national law. Close communications through the NSLI will be a real educational opportunity to all member States to take stock of their individual national laws for the better implementation and possible future amendment.

6. Conclusion

As discussed in this paper, the NSLI provides one effective regional model for enhancing the capability in establishing and implementing national space legislation. The significant features of the NSLI include:

- Community building among the space law and policy practitioners in the region;
- Mutual learning of States' practices through exchanging information using a common format among space law practitioners in the region;
- Joint analysis and drafting a report on the status of space-related laws in the region by space law practitioners;
- Direct contribution to the UN agendas and global space community; and
- Building a foundation for future discussion on common regional issues.

APRSAF will continue to promote the mutual understanding of national laws and regulations in the region to contribute to the regional development of space activities and society. It will further consider promoting partnerships with other regions and communities in the field of space law.

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