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Commentaries on the Law Concerning Japan Aerospace Exploration Agency 2002

Tunku Intan Mainura¹

¹Universiti Teknologi MARA

I. INTRODUCTION

As provided by the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies 1967, there are four key international obligations that States must fulfil when embarking in their space related activities. Firstly, the obligation that requires State to control the type of activity that those under State's jurisdiction wish to undertake and to continue supervising space activities that have been undertaken until they end. This key obligation is based on States' obligation to use and explore outer space for the benefit of and in the interest of all countries, States' obligation not to appropriate outer space by claim of sovereignty, by means of use or occupation, or by any other means, State's obligation to only use outer space for peaceful purposes, State's obligation to authorise and supervise the activities of non-governmental entities in outer space, State's obligation to retain jurisdiction and control over the object and over any personnel while in outer space, and State's obligation to avoid harmful contamination and also adverse changes in the environment of the earth and outer space resulting from the introduction of extraterrestrial matter². The second key obligation that States must fulfil is the obligation that requires States to be internationally responsible and liable for all space activities carried out both by its governmental agencies and non-governmental entities. This key obligation is based on State's obligation to be responsible for all the activities carried out both by the governmental agencies and non-governmental entities and State's obligation to be internationally liable for damage to another State if State is the State that launches or procures the launching of an object into outer space including the moon and other celestial bodies, and even if State is only the State from whose territory or facility an object is launched³. The third key obligation that State must fulfil is the obligation that requires State to register its space objects within its national registry⁴. The fourth key obligation that State must fulfil is the obligation that requires State to encourage international cooperation when its entities are involved in their space-related activities. This key obligation is based on State's obligation to cooperate with other States in using and exploring outer space, State's obligation to protect the interest of all astronauts irrespective of their nationalities, State's obligation to allow other States the opportunity to observe the flight of space objects launched by State, State's obligation to inform the Secretary General of

¹ Faculty of Law, Universiti Teknologi MARA, 40450 Shah Alam, Malaysia (tunkuintan@yahoo.co.uk)

² Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies 1967 [hereinafter referred to as '1967 Outer Space Treaty'], Article I, II, III, IV, VI and Article IX. Further discussion on the provisions can be found in Jakhu, R., 'Application and Implementation of the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies 1967', (1997) Proceedings of the Fortieth Colloquium on the Law of Outer Space 442; Cheng, B., Studies in International Space Law, (UK: Oxford University Press, 1997); Kopal, V., 'The question of defining outer space', (1980) 8 (2) Journal of Space Law 168; Porras, D. A., 'The "Common Heritage" of outer space: Equal benefits for most of mankind', (2006) 37 (1) California Western International Law Journal 143.

³ 1967 Outer Space Treaty, Article VI and VII. Detailed discussion on the issue of damages can be found in Hurwitz, B., State Liability for Outer Space Activities in Accordance with the 1972 Convention on International Liability for Damage Caused by Space Objects, (Netherlands: Martinus Nijhoff, 1992) 58. See also Kayser, V., Launching Space Objects: Issues of Liability and Future, (Netherlands: Kluwer Academic Publishers, 2001), Haanappel, P. P. C., The Law and Policy of Air Space and Outer Space: A Comparative Approach, (Netherlands: Kluwer Law International, 2003); Peterson, M.J., International Regimes for the Final Frontier, (USA: State University of New York Press, 2005) and Goh, G. M., Dispute Settlement in International Space Law: A Multi-Door Courthouse for Outer Space, (Boston: Martinus Nijhoff Publishers, 2007).

⁴ 1967 Outer Space Treaty, Article VIII. See Matte, N. M. (ed), Space Activities and Emerging International Law, (Montreal: McGill University, Centre for Research of Air and Space Law, 1984); Wassenbergh, H. A., Principles of Outer Space Law in Hindsight, (Boston: Martinus Nijhoff Publishers, 1991); Diederiks-Verschuur, I. H. P., An Introduction to Space Law, 2nd edition, (Netherlands: Kluwer Academic Publishers, 1999); Metcalf N. K., Activities in Space - Appropriation or Use?, (Uppsala: Iustus Forlog, 1999) and Jasentuliyana, N., United Nations Conference on the Exploration and Peaceful Uses of Outer Space: International Space Law and the United Nations, (Netherlands: Kluwer Law International, 1999).

the UN, the public and the international scientific community about the nature and results of outer space activities, and State's obligation to allow other States to visit its stations, installation, equipment and space vehicles on the moon and other celestial bodies⁵. To implement its key international law obligations, therefore, the provisions that must be incorporated into a legal framework of State are provisions that allow State to authorise and supervise the activities that those under State's jurisdiction wish to undertake and to continue supervising space activities that have been undertaken until they end (authorisation and supervision), provisions that require State's entities to be responsible towards the consequence of their space activities (responsibility and liability), provisions that make it compulsory to register space objects within State's national registry (registration of space objects) and provisions that require State to encourage international cooperation when State's entities participate in space-related activities (international cooperation)⁶.

II. PROVISIONS OF THE LAW CONCERNING JAPAN AEROSPACE EXPLORATION AGENCY 2002

In Japan, the law relevant to its space-related activities is the Law Concerning Japan Aerospace Exploration Agency 2002. Primarily, the purpose of this new law is to establish the name, purpose, and scope of activities of the Japan Aerospace Exploration

⁵ 1967 Outer Space Treaty, Article I, V, X, XI and XII. See also Ma, X., 'Statement on international co-operation in the peaceful uses of outer space', (2007) 6(2) Chinese Journal of International Law 507; Noichim, C., 'Promoting ASEAN space cooperation', (2008) 24 (1) Space Policy 10; Verheugen, G., 'Europe's space plans and opportunities for cooperation', (2005) 21 Space Policy 93; Vereshchetin, V. S., 'International space law and domestic law: problems of interrelations', (1981) 9 Journal of Space Law 31.

⁶ See reports, comments and suggestions by Reif, S. U., 'Report, Shaping a legal framework for the commercial use of outer space: recommendations and conclusions from Project 2001', (2002) 18 Space Policy 157, Hermida, J., Legal Basis for a National Space Legislation, (The Netherlands: Kluwer Academic Publications, 2004), Gerhard M., 'National Space Legislation', in Marietta Benko and Kai-Uwe Schrogl (ed.), Essential Air and Space Law, (Netherlands: Eleven International Publishing, 2005); Hobe, S., and Neumann, J., Report on the Global and European challenges for space law at the edge of the 21st century, (2005) 21 Space Policy 313. Reif wrote on the recommendations and conclusions from workshop of Project 2001, where she reported that during the workshop, recommendations have been made by experts in space law regarding the provisions that should be incorporated into national space legislation which are based on the content of international law and State's international obligations. Known as 'compulsory building block', the provisions that should be incorporated into national space legislation are the regulations on the authorisation and supervision of space activities, regulations on the registration of space objects, and indemnification provisions. Similarly, Hermida also dealt with questions relating to the common features of the national space legislation. He proposed that 'national space legislation must be comprehensive in scope and comprise the regulation of all space activities, clearly identify its space policy objectives which conform to international obligations, provides a straightforward licensing regime, a clear and reasonable continuing supervision regime for all non-governmental entities to verify their compliance with international standards, and a transparent procedure for the recording of all space objects. He also recommended that the existing national space legislation of other countries could be used as examples when enacting national space legislation. He maintained that 'even if States have established their domestic norms differently as a consequence of their own legal and political individual characteristic there are common denominators in all these domestic jurisdiction'. Basing on the content of international law, he thus recommended three compulsory 'building block' provisions that should be incorporated into national space legislation, namely regulations on the authorisation and supervision of space activities, regulations on the registration of space objects, and indemnification provisions. Gerhard wrote on the two research projects which he was involved in that were jointly carried out by the Institute of Air and Space Law of the University of Cologne and the German Aerospace Centre (DLR). He discussed on the issue of national space legislation, where based on the outcome of the projects, he concluded that national space legislation should have provisions on authorisation and supervision, registration and indemnification and any other additional related aspects, for example regulation of insurance law and transportation regulation. He confirms that the three building blocks (authorisation and supervision, indemnification and registration of space objects), are based on the international obligations found in the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies 1967 in particular Article VI (2), Article VII and Article VIII. Hobe and Neuman report how States should implement elements of international space law into their national space legislation, based on the discussions and recommendations that were made by experts in air and space law regarding the importance of national space laws and common provisions that should be incorporated into them. In the attempt to create national space legislation, they reported that the international and national space legislation should be closely harmonised. In finding for common provisions that should be incorporated into national space laws, they deliberated on the question of whether other laws concerning hazardous activities, in particular air-flight activities, could be made as a model for legislating space law. Drawing analogies with air-flight activities and after finding similar features between air law and space law, they therefore confirmed that air law is relevant especially on provisions concerning definitions of outer space, registration and liability.

Agency⁷. The adoption of this law abolishes two previous laws, namely the Law Concerning National Aerospace Laboratory of Japan and the Law concerning National Space Development Agency of Japan 1969⁸.

A. *Authorisation and Supervision*

As have been identified above, one of the provisions that must be incorporated into national space legislation is the provision that allows States to authorise and supervise the activities that those under States' jurisdiction wish to undertake and to continue supervising space activities that have been undertaken until they end. From an examination of Japan's national space legislation, the Law Concerning Japan Aerospace Exploration Agency 2002, it can be seen that it does not conform to this provision because the Law Concerning Japan Aerospace Exploration Agency 2002 has no provisions on the authorisation and supervision of its space-related activities. The incorporation of such provisions into the Law Concerning Japan Aerospace Exploration Agency 2002 is important because it will indicate that Japan is conforming to its obligation under international space law. As such, it may be concluded that due to the *lacunae*, the Law Concerning Japan Aerospace Exploration Agency 2002 is not sufficient to meet Japan's key obligations under international space law.

B. *Responsibility and Liability*

The next provision that must be incorporated into national space legislation is the provision that requires States' entities to be responsible towards the consequences of their space activities. From an examination of Japan's national space legislation, the Law Concerning Japan Aerospace Exploration Agency 2002, it can be seen that it conforms to this provisions because Japan's national space legislation contains provisions on responsibility and liability. However, the implementation of these provisions in the Law Concerning Japan Aerospace Exploration Agency 2002 is very narrow and limited.

1) *Liability for Damage:* The Law Concerning Japan Aerospace Exploration Agency 2002 is very limited in providing for matters related to liability. This is because provisions for liability are only in respect of a consigned launch.

When the Japan Aerospace Exploration Agency (JAXA) enters into an agreement with a Consignor with respect to a consigned launch, JAXA may also enter into special arrangements with the Consignor in respect of JAXA's liability for compensation for damage caused by the consigned launch to a third party. Under this situation, if a third party has suffered damage, JAXA is liable to compensate the injured third party for the damage caused. However, if the damage is caused by wilful misconduct of any of the parties related to the consigned launch, JAXA can make a claim from such parties for the expenses already paid by JAXA to the injured third party⁹.

2) *Insurance:* The provisions on insurance can be found in the Law Concerning Japan Aerospace Exploration Agency 2002. From the examination of the Law Concerning Japan Aerospace Exploration Agency 2002, it can be concluded that the provisions on insurance are applicable to two situations. Firstly, the launch of satellites by any party, and secondly, the launch of satellite under a consignment agreement made between JAXA and a consigner.

Under the first situation, that is a launch made by any party, the Law Concerning Japan Aerospace Exploration Agency 2002 provides that JAXA must not launch any satellites without first entering into an insurance contract with the party concerned. Nevertheless, the Law Concerning Japan Aerospace Exploration Agency 2002 does not provide for the exact amount of the insurance, but merely provides that the amount will be defined by the Ministers¹⁰. For the second situation, that is a launch made

⁷ Law Concerning Japan Aerospace Exploration Agency 2002, Section 1.

⁸ Law Concerning Japan Aerospace Exploration Agency 2002, Supplemental Provisions, Section 16. See also comments made by Steven in Steven, B., '*Japan's space program: a fork in the road?*', (Pittsburgh: RAND Corporation, 2005), where he discussed the evolution of Japan's space activities and argued that although Japan is very advanced in its space technology, the few launching failures that Japan has suffered have affected Japan's confidence in its space industry. See also comments made by Saito in Saito, S., '*Japan's space policy background and outlook*', (1989) 5 (3) Space Policy 193, where he gave an insight into the legal and political aspect on the usages and explorations of the outer space that are undertaken by Japan. See also comments made by Yoshida in Yoshida, H., '*The meaning of Japan's space commercialization efforts*', (1992) 8 Space Policy 325, where he discussed Japan's approach in regards of its national space activities, in particular on the development of its space technology and the implications of commercialisation of space activities towards the politics and economic development of Japan.

⁹ Law Concerning Japan Aerospace Exploration Agency 2002, Section 22.

¹⁰ Law Concerning Japan Aerospace Exploration Agency 2002, Sections 21 (1) & (2). The Minister will decide on the amount after considering the amount that the insurers are able to underwrite and other relevant matters, so that those amounts may be appropriate to protect the victims.

under a consignment agreement, the Law Concerning Japan Aerospace Exploration Agency 2002 provides that when JAXA wants to perform the launch of a satellite, it must also enter into an insurance contract with the Consignor. Similar to the above general provisions on the requirement of an insurance contract, the Law Concerning Japan Aerospace Exploration Agency 2002 however does not provide for the exact amount of the insurance, but merely provides that the amount will be defined by the Ministers¹¹.

Therefore, based on the above provisions, it can be concluded that the Law Concerning Japan Aerospace Exploration Agency 2002 has provisions on the requirement of insurance for parties who want to launch a satellite from Japan.

- 3) *Indemnification:* The Law Concerning Japan Aerospace Exploration Agency 2002 has limited provisions on the indemnification for damage caused by its subjects through their space-related activities. This can be seen through its provisions which provides that if a third party has suffered damage, JAXA is liable to compensate the injured third party for the damage caused but if the damage is caused by a wilful misconduct of any of the parties related to the consigned launch, JAXA can make a claim from such parties for the expenses already paid by JAXA to the injured third party¹².
- 4) *Criminal Offences:* The Law Concerning Japan Aerospace Exploration Agency 2002 makes cross-reference to the Japanese Criminal Code when it concerns criminal offences. This can be seen in its provisions that 'the executives and employees of the Agency shall be regarded as officials engaged in public services by law with regard to the application of the Criminal Code (Law No. 45 of 1907, as amended) and other penal regulations'¹³.

The Law Concerning Japan Aerospace Exploration Agency 2002 however has one provision on the criminal charges that can be brought against offenders under this Act. In order to ensure the insider secrecy of JAXA, when an executive or ex-executive of JAXA discloses any confidential information regarding JAXA or other related matters, the violator of the provisions will be subjected to imprisonment for a maximum term of one year or a maximum fine of 500,000 yen¹⁴.

- 5) *Civil Penalty:* Apart from the criminal offence stated above, the Law Concerning Japan Aerospace Exploration Agency 2002 provides for three situations when an executive of the Agency who has committed that violation is subjected to a correctional fine for a maximum amount of 200,000 yen¹⁵. Firstly, failure of the executive of JAXA to obtain the authorization or approval in case the authorization or approval must be obtained from the competent Minister, for example when JAXA wants to increase its capital¹⁶; secondly, when any of the executive of JAXA conducts any activities other than those allowed by the provisions under the Law Concerning Japan Aerospace Exploration Agency 2002¹⁷; or, thirdly, when any executive of JAXA launches any satellite without entering into an insurance contract with the other party. In my view, the fact that the reason why Law Concerning Japan Aerospace Exploration Agency 2002 treats the above acts or omissions made by the executives of JAXA as serious is a virtue because it contributes to the positive welfare of JAXA.

C. *Registration of Space Objects*

One of the provisions that must be incorporated into national space legislation is the provision that requires States to register their space objects within their national registry. From an examination of Japan's national space legislation, the Law Concerning Japan Aerospace Exploration Agency 2002, it can be seen that it does not conform to this provisions because it contains no provisions on registration of its space objects. The incorporation of such provisions into the Law Concerning Japan Aerospace Exploration Agency 2002 is important because it will indicate that Japan is conforming to its obligation under international space law. As such, it may be concluded that due to the *lacunae*, the Law Concerning Japan Aerospace Exploration Agency 2002 is not sufficient to meet Japan's key obligations under international space law.

Between 1970 to 2013, there are a total of 169 space objects that have been launched by Japan¹⁸. However, Japan had not fully implemented its international obligation under the 1976 Registration Convention because it has not register 12 of them to the United Nations Office of Outer Space Affairs (UNOOSA)¹⁹.

¹¹ Law Concerning Japan Aerospace Exploration Agency 2002, Section 21(3).

¹² Law Concerning Japan Aerospace Exploration Agency 2002, Section 22.

¹³ Law Concerning Japan Aerospace Exploration Agency 2002, Section 17.

¹⁴ Law Concerning Japan Aerospace Exploration Agency 2002, Section 30.

¹⁵ Law Concerning Japan Aerospace Exploration Agency 2002, Section 31.

¹⁶ Law Concerning Japan Aerospace Exploration Agency 2002, Section 6.

¹⁷ Law Concerning Japan Aerospace Exploration Agency 2002, Section 18.

¹⁸ United Nations Office of Outer Space Affairs, Online Index of Objects Launched into Outer Space,

<<http://www.unoosa.org/oosa/search.do>>.

D. International Cooperation

One of the provisions that must be incorporated into national space legislation is the provision that requires States to encourage international cooperation when their entities participate in space-related activities. From an examination of Japan's national space legislation, the Law Concerning Japan Aerospace Exploration Agency 2002, it can be seen that it does not conform to this provisions because the Act does not have any provisions that encourages international cooperation when its entities participate in space-related activities. The incorporation of such provisions into the Law Concerning Japan Aerospace Exploration Agency 2002 is important because it will indicate that Japan is conforming to its obligation under international space law. As such, it may be concluded that due to the *lacunae*, the Law Concerning Japan Aerospace Exploration Agency 2002 is not sufficient to meet Japan's key obligations under international space law. Additionally, in practical terms, although it may seem that international cooperation could be dealt with by political processes, the incorporation of the provisions into the Law Concerning Japan Aerospace Exploration Agency 2002 may contribute towards the good management of an effective space programme.

III. THE CHARACTERISTICS OF THE LAW CONCERNING JAPAN AEROSPACE EXPLORATION AGENCY 2002

The desirable characteristics of national space legislation are that it is comprehensive in scope and comprises the regulation of all space activities, clearly identifies its space policy objectives which conform to international obligations and provides a straightforward licensing regime²⁰. From the examination of the Law Concerning Japan Aerospace Exploration Agency 2002 it is observed that, it is not comprehensive in scope because it does not comprise the regulation of all its space activities. Except for the limited provisions on liability, it is also not comprehensive in the sense of not providing the regulations needed for regulating its space-related activities. This is because; the Law Concerning Japan Aerospace Exploration Agency 2002 does not have provisions on authorisation and supervision, registration of space objects and international cooperation. The Law Concerning Japan Aerospace Exploration Agency 2002 also does not clearly identify its space policy objectives. Due to the fact that the Law Concerning Japan Aerospace Exploration Agency 2002 is mainly concerned about the creation and administration of the new agency, the Japan Aerospace Exploration Agency (JAXA), and matters pertaining to the transitional procedure of the nature of JAXA, it therefore not a licensing regime, what more to be regarded as providing a straightforward licensing regime.

IV. CONCLUSION

The purpose of this article is to analyse Japan's national space legislation, the Law Concerning Japan Aerospace Exploration Agency 2002, based on the analytical framework identified above. It can be concluded that the Act does not fully contain the provisions needed to fulfil Japan's key international obligations, and as such is insufficient to meet Japan's international obligations. In particular, it does not contain provisions that would allow Japan to authorise and supervise the activities that those under Japan's jurisdiction wish to undertake and to continue supervising the space activities that have been undertaken until they end, require Japan to register its space objects within its national registry and require Japan to encourage international cooperation when Japan's entities participate in space-related activities. The incorporation of these provisions into the Law Concerning Japan Aerospace Exploration Agency 2002 is important and necessary because it will indicate that Japan is conforming to its obligation under international space law. As such, it may be concluded that due to the *lacunae*, the Law Concerning Japan Aerospace Exploration Agency 2002 is not sufficient to meet Japan's key obligations under international space law. As to the provisions on international cooperation, in addition to the legal reason of incorporating it into the Law Concerning Japan Aerospace Exploration Agency 2002, in practical terms, the incorporation may contribute towards the good management of an effective space programme.

As for the three desirable characteristics of national space legislation, Japan's law should be comprehensive in scope and comprise the regulation of all space activities, clearly identify its space policy objectives which conform to international obligations, and provide a straightforward licensing regime. From the examination of the Law Concerning Japan Aerospace Exploration Agency 2002 it is observed, firstly, that it is not comprehensive in scope because it does not comprise the regulation of all its space activities. Except for the limited provisions on liability, it is also not comprehensive in the sense of not providing the regulations needed for regulating its space-related activities. This is because; the Law Concerning Japan Aerospace Exploration Agency 2002 does not have the provisions on authorisation and supervision, registration of space objects and international cooperation. Secondly, the Law Concerning Japan Aerospace Exploration Agency 2002 does not clearly identify its space policy objectives. Thirdly, due to the fact that the Law Concerning Japan Aerospace Exploration Agency 2002 is mainly concerned about the creation and

¹⁹ United Nations Office of Outer Space Affairs, Online Index of Objects Launched into Outer Space,

<<http://www.unoosa.org/oosa/search.do>>.

²⁰ See *supra* note 5 and accompanying text.



administration of the new agency, the Japan Aerospace Exploration Agency (JAXA), and matters pertaining to the transitional procedure of the nature of JAXA, it therefore not a licensing regime, what more to be regarded as providing a straightforward licensing regime.



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