

Research Article**The United Kingdom's Outer Space Act 1986****Tunku Intan Mainura**

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Introduction

An ideal national space legislation of a state should contain provisions that reflect its conformity to the key international obligations as proclaimed by international customary law and advice by experts in space law. As such, an ideal national space legislation should contain the provisions that allow states to authorise and supervise space activities that those under states' jurisdiction wish to undertake and to continue supervising the space activities that have been undertaken until they end (Authorisation and Supervision), provisions that require states' entities to be responsible towards the consequences of their activities (Responsibility and Liability), provisions that require states to their register space objects within their national registry (Registration of Space Objects) and provisions that encourage international cooperation when states entities participate in space-related activities (International Cooperation). Equally important to the provisions are the features of the legislation. In regards to the provisions on authorisation and supervision the best features are provisions that clearly lay down the procedure that needs to be followed by the applicant of a licence when he wants to undertake space activities and the procedure that needs to be followed by the Minister involved when dealing with the application submitted to him for approval, provisions that allow Minister involved to issue any documentation or guidelines for the purpose of clearly highlighting and elaborating states' key obligations under international law, provisions providing for exceptions to the requirement of an authorisation, provisions that require the consent of a licensee before the licence is revoked and provisions that allow for parties to appeal when they are not satisfied with the outcome of the authorisation and supervision. In regards to the provisions on responsibility and liability the best features are provisions on insurance and identifying the amount of insurance needed, provisions that indemnify the government for action taken against it, provisions that clearly specify or identify the types of action or omission that amount to breach of national space legislation as criminal offence and state a fixed monetary amount or equivalent as regards to the punishment imposed under criminal offences and provisions that clearly specify or identify the types of action or omission that amount to breach of the national space legislation leading to civil penalty and state a fixed monetary amount or equivalent as regards to the punishment imposed under civil penalties. In regard to the provision for registration of space

objects the best features are provisions that specifically lay down the information that is required for registering space objects and provisions that also allow any person to inspect the Register. In regard to the provisions on international cooperation, the best feature is a provision that clearly state that states are required to encourage participants of space-related activities to forge international cooperation when they participate in space-related activities. As regards to the desirable characteristics of national space legislation, the best desirable characteristics are national space legislation that is comprehensive in regulating space activities that is intended for, clearly identifies space policy objectives which conform to international obligations and national space legislation that provides a straightforward licensing regime¹.

Based on the above ideal legal framework, the Outer Space Act 1986 will be analysed. This will determine whether the Outer Space Act 1986 conforms to the UK's key international law obligations and whether it contains the provisions and characteristics that were recommended.

1.1 Introduction

The United Kingdom (the UK) is an active participant in space-related activities. These activities are either carried out domestically or through its participation as a member of the European Space Agency². The UK space activities can be divided under the categories of space science and technology, space research and exploration, and space education³. As at 1 January 2013, the UK has ratified all other UN outer space treaties except for the Agreement Governing the Activities of states on the Moon and Other Celestial Bodies 1979 (1979 Moon Agreement)⁴.

1.1 Provisions of the UK's Outer Space Act 1986

In the domestic scene of UK, the national space legislation that governs its outer space activities is the Outer Space Act 1986, which came into force on 31 July 1989. It was enacted

¹ I, M. Tunku, 'A legal framework for outer space activities in Malaysia', PhD thesis, Newcastle University (2010).

² UK Space Agency official website <<http://www.bis.gov.uk/ukspaceagency/>>

³ UK Space Agency official website <<http://www.bis.gov.uk/ukspaceagency/>>

⁴ United Nations Office of Outer Space Affairs official website <http://www.oosa.unvienna.org/pdf/limited/c2/AC105_C2_2013_CRP05E.pdf>

specifically to give the Secretary of State certain powers, the most important of which is to issue licences regarding the launching and operation of space objects and the carrying out of other activities in outer space by persons connected with that country so as to ensure that it complies with the international obligations of the United Kingdom⁵. In drafting the Outer Space Act 1986, the provisions of the International Treaties and Convention that it considered most relevant were Articles VI, VII and IX 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, Article I-IV of the Convention on International Liability for Damage Caused by Space Objects 1972 and Articles I-IV of the Convention on Registration of Space Objects Launched into Outer Space 1975⁶. Generally, the Act has three main purposes: to secure compliance with UK's international obligations under UN treaties and conventions covering the use of outer space, including liability for damage caused by space objects and registration of objects launched into outer space; to introduce a licensing regime for space activities carried on by UK nationals and companies; and to ensure that the Government of the UK has sufficient power in domestic law to monitor and control the nationals' and companies' space-related activities so that the UK can be assured that they meet with the international obligations⁷. The basic nature of this Act is that it requires the UK individuals and organisations that want to participate in space-related activities to firstly apply for a licence from the Secretary of State⁸ through the UK Space Agency⁹.

Since 1986, the Outer Space Act 1986 has been amended a number of times through Orders in Council to either extend its powers to Crown Dependencies and Overseas Territories or to amend the fees¹⁰. In 2005, in order to ensure that the Outer Space Act 1986 was up to date with the evolving international situation and the challenges posed by future space projects, a review of the Outer Space Act 1986 together with other relevant documentations and bodies was undertaken¹¹. There

⁵ Outer Space Act 1986, Preamble.

⁶ R. Close, 'Outer Space Act 1986: Scope and Implementation', Project 2001, Working Group on National Space Legislation, Need and Prospects for National Space Legislation', Proceedings of the Project 2001, Workshop on National Space Legislation, 5/6 December 2000, Munich, Germany.

⁷ UK Space Agency official website < <http://www.bis.gov.uk/ukspaceagency/>>.

⁸ Outer Space Act 1986, Preamble.

⁹ UK Space Agency official website < <http://www.bis.gov.uk/ukspaceagency/>>. The United Kingdom Space Agency (UKSA) is an agency of the Government of the United Kingdom that coordinates civil space activities in the UK which replaces the British National Space Centre (BNSC) on 1 April 2010.

¹⁰ UK Space Agency official website < <http://www.bis.gov.uk/ukspaceagency/>>.

¹¹ UK Space Agency official website < <http://www.bis.gov.uk>

are three objectives of this review. Firstly, 'to analyse the way in which the BNSC¹² implements the Outer Space Act 1986 based on the changes in the national and international situation namely the national, international and EU legislation, and requirements for indemnity and insurance and their provision, secondly, to investigate the licence application process, where feedback from interested parties on the practice are taken, and thirdly, to confirm the continuing need for licensing, and if so determine the benefits to the UK, and suggest any changes to the procedure or processes in order to increase cost-effectiveness and relevance to the changing situation'¹³.

The Outer Space Act 1986 is divided into four segments and contains provisions on the application of the Act, the licensing of activities, other controls and general provisions. Nevertheless, due to its main focus on providing for regulation in matters pertaining to licensing, this Act has been viewed as 'an insurance based licensing regime because the intention was to operate a simple licensing regime involving essential technical checks with no significant increase in public service manpower'¹⁴.

We shall now proceed to analyse the provisions of the Outer Space Act 1986.

1.2.1 Authorisation and Supervision

One of the provisions that must be incorporated into national space legislation is the provision that requires states to authorise and supervise the activities that those under states' jurisdiction wish to undertake and to continue supervising the space activities that have been undertaken until they end. An examination of the UK's national space legislation, the Outer Space Act 1986, shows that it conforms to this because it has provisions on the authorisation and supervision of its space-related activities.

In authorising space-related activities, the Outer Space Act 1986 determines which kind of space activity requires authorisation and supervision from the Secretary of State, and who must seek authorisation and supervision. By virtue of Section 1, authorisation is needed for the activities of launching or procuring the launch of a space object, operating a space object, or any activity in outer space, whether carried on in the United Kingdom or elsewhere¹⁵. This rule however,

[/ukspaceagency/](#)>. The review includes a series of interviews with key UK Government officials, contractors and individuals engaged in support of the UKSA in its role as licensing and monitoring authority.

¹² The British National Space Centre (BNSC) was an agency of the Government of the United Kingdom, organised in 1985, that coordinated civil space activities for the UK. It was replaced on 1 April 2010 by the United Kingdom Space Agency (UKSA).^[3]

¹³ UK Space Agency official website < <http://www.bis.gov.uk/ukspaceagency/>>.

¹⁴ R. J. Tremayne-Smith, 'Outer Space Act 1986', Berlin Workshop on Project 2001 +, January 2004, at <www.uni-koeln.de/jur-fak/instluft/projectplus/tremayne-smith.ppt>.

¹⁵ Outer Space Act 1986, Section 1.

is subject to three exceptions whereby a person is allowed to embark on a space-related activity even though he does not have a licence. Firstly, if a person is acting as an employee or agent of another person, he does not have to have a licence before he carries out the space-related activities. Secondly, no licence is required if arrangements have been made between the United Kingdom and another country to secure compliance with the international obligations of the United Kingdom in respect of its space-related activities. This arrangement however must firstly be certified by Order in Council. Thirdly, a licence is not required if the Secretary of State is satisfied that the requirement is not necessary to secure compliance with the international obligations of the United Kingdom¹⁶. As regards to who must have authorisation and supervision, the Outer Space Act 1986 applies to United Kingdom nationals, Scottish firms, and bodies incorporated under the law of any part of the United Kingdom¹⁷. In my opinion, this application provision makes it clear as to when and to whom the Outer Space Act 1986 applies. For example, hypothetically, by referring to the provision on application, we can determine whether the Outer Space Act 1986 is applicable to a firm registered in Scotland which launched a space object from Japan. In this regard, the answer to this scenario is in the affirmative because by virtue of Section 1 and 2 of the Outer Space Act 1986, it can clearly be seen that the provisions of the Outer Space Act 1986 are applicable to a Scottish firm which carried out launch activities whether in the United Kingdom or elsewhere. In order to see more clearly the application of the Outer Space Act 1986, we shall now examine a hypothetical situation where a Malaysian company wants to launch a space object from the UK. The issue that needs to be addressed here is whether the Outer Space Act 1986 is applicable to the Malaysian company. Based on the examination of Section 1 of the Outer Space Act 1986, the Outer Space Act 1986 will be applicable to the Malaysian company, because it is provided that the Outer Space Act 1986 applies to the activity of launching of a space object. Nevertheless, based on the examination of Section 2 of Outer Space Act 1986, the Outer Space Act 1986 will not be applicable to the Malaysian company because it is provided that the Outer Space Act 1986 only applies to United Kingdom nationals, Scottish firms, and bodies incorporated under the law of any part of the United Kingdom. From the examinations of the above two sections, the sections seem to suggest that although the Malaysian company does not fall under the category provided by Section 2 of the Outer Space Act 1986 and thus is not bound by the provisions of Section 2, nevertheless, the Malaysian company will still be bound by the provisions of Outer Space Act 1986 based on its Section 1. In the situation when a person is not exempted from applying for a licence, he must therefore apply for the licence from the Secretary of State through the UK Space Agency¹⁸. By virtue

¹⁶ Outer Space Act 1986, Section 3(1).

¹⁷ Outer Space Act 1986, Section 2(1).

¹⁸J.A. Vedda, 'Study of the Liability Risk-Sharing Regime in the United States for Commercial Space Transportation', 1

of Section 3 of the Outer Space Act 1986, prima facie a person is not allowed to carry out any space activity unless he is firstly granted a licence from the Secretary of State. If such person has participated in any space activity without first obtaining permission from the Secretary of State, he has breached the Act, and is therefore liable on conviction on indictment to a fine and on summary conviction to a fine not exceeding the statutory maximum¹⁹.

When an application for a licence is made by the applicant, in return, the Secretary of State, subject to the discretionary power vested in him, must determine whether or not to issue a licence²⁰. Due to the fact that the Secretary of State 'may grant a licence as he thinks fit'²¹, it may seem that the Secretary of State is not bound by exact criteria as to how he shall decide on whether to allow or refuse a licence. However, the fact is, although the Secretary of State has the discretionary power to decide, the Outer Space Act 1986 specifically provides that he is never to authorise any space activity that will result in three consequences. These consequences are, firstly, activities that will jeopardise public health or the safety of persons or property, secondly, activities that will be inconsistent with the international obligations of the United Kingdom, and thirdly, activities that will impair the national security of the United Kingdom²². Thus, if space activities would result in the above-mentioned situations, a licence will not be issued by the Secretary of State²³.

The application of Section 4 was explained during the questions and answers session in the House of Commons when in 2001, the then Secretary of State for Trade and Industry, Ms Hewitt, stated that:

'The launching and operation of satellites by United Kingdom nationals is governed by the Outer Space Act 1986. UK nationals wishing to carry out such launch and movement activities must apply to my Department for a licence. I have discretion as to whether to grant a licence and on the conditions to which a licence should be made subject, but before granting a licence I must be satisfied that the activities (i) will not jeopardise public health or the safety of persons or property, (ii) will be consistent with the international obligations of the UK, and (iii) will not impair national security'²⁴.

In addition to the discretionary power discussed above, the Secretary of State is also vested with other powers in connection with the issuance of a licence. These powers include the making of regulations relating to the procedure of

August 2006, Aerospace Report No. ATR-2006 (5266)-1, <[www.faa.gov/about/office_org/headquarters_offices/ast/reports_studies/media/Risk_Study\(final\).pdf](http://www.faa.gov/about/office_org/headquarters_offices/ast/reports_studies/media/Risk_Study(final).pdf)>

¹⁹ Outer Space Act 1986, Section 12(1) and (2).

²⁰ Outer Space Act 1986, Section 4(1).

²¹ Outer Space Act 1986, Section 4(1).

²² Outer Space Act 1986, Section 4(2).

²³ Outer Space Act 1986, Section 4(2).

²⁴ House of Commons, Hansard Volume No. 375, Part No.60, Written answers by Ms Hewitt for 27 November 2001, Column 788W, Spacecraft.

licensing, for example the conditions that should be included in the licence, the time limits that must be followed pertaining to the application process, and the supporting documents and the amount of fee that should be submitted together with the application form²⁵. In practice, in conforming to these powers, the authorisation system of the UK is assisted by the existence of two documents known as the 'Revised guidance for applicants – Outer Space Act 1986'²⁶ and 'Outer Space Act 1986 Licence Application Form - Notes to help you complete the form'²⁷, which are issued by the UK Space Agency. While the first document contains information that the licensee needs to know before making the application, the second document assists the applicant in applying for the licence. I view these two documents as necessary to complement the UK's authorisation and supervision system because of two main reasons. Firstly, as a legal reason, the documents are in conformity with the power given to the Secretary of State by the Outer Space Act 1986, whereby in connection to the issuance of a licence, the Secretary of State is vested with powers to make regulations relating to the procedure of the application of the licence, the conditions that should be included in the licence, the time limits that must be followed pertaining to the application process, and the supporting documents and the amount of fee that should be submitted together with the application form²⁸. These documents are in conformity with the power given to the Secretary of State by the Outer Space Act 1986 because these documents clearly establish the procedures and conditions that the licensee has to follow. For example, the document entitled 'Revised guidance for applicants – Outer Space Act 1986' gives guidance on the exact amount of insurance that the applicant of the licence is required to have if he wants to undertake any space-related activity that needs to be authorised under the Outer Space Act 1986. Thus, it serves as clear legal information on the value of how much insurance cover the applicant needs to have, and helps to avoid situations where the Secretary of State will refuse an application on the ground that the applicant does not have significant insurance. Secondly, as a practical reason, these two documents serve as assisting tools to enable the application for a licence to be

²⁵ Outer Space Act 1986, Section 4(3), Section 5 and Section 11. According to the Statutory Instrument 1989 No. 1306, The Outer Space Act 1986 (Fees) Regulations 1989, a fee of £1,000.00 shall be paid to the Secretary of State on the grant of a licence under the Act where application is or was made before or after 31st July 1989. However, this amount was amended through Statutory Instrument 1998 No. 2032, The Outer Space Act 1986 (Fees) Amendment Regulations 1998, whereby effective from 29 September 1998, the fees of £1,000.00 was increased to £6,500.00.

²⁶ UK Space Agency official website <<http://www.bis.gov.uk/assets/ukspaceagency/docs/osa/revised-guidance-for-applicants-jul-11-sw.pdf>>

²⁷ UK Space Agency official website <<http://www.bis.gov.uk/assets/ukspaceagency/docs/osa/osaappfor2010.pdf>>

²⁸ Outer Space Act 1986, Sections 4(3), 5 and 11.

made easily and thus saves time, as these documents are quite self-explanatory and further explain and elaborate the provisions of the Outer Space Act 1986. Thus, the applicants can understand fully the requirements that are needed in order for them to apply for the licence before embarking on their space-related activities. Without these documents, time might be lost unnecessarily by making mistakes in filling the form and refilling it and having the officers of UKSA answer questions when it concerns a straightforward answer. Thus, these documents make the application procedure more transparent hence avoids potential delays in the application procedure and makes it more efficient for the licensing authority. Furthermore, these documents are important and necessary because if all the information were to be incorporated into the Outer Space Act 1986, the Act would be very bulky. Additionally, in a situation where information in the documents needs to be changed, for example the amount of the fee, it can be easily amended. On the other hand, if the fee was to be incorporated into the Outer Space Act 1986 and later needed to be changed, the Act would have to go through a lengthy process of amendment.

As regards to the second stage of the UK's licensing regime concerning the supervision of activities that are currently being undertaken, the supervision of space activities is done by giving the Secretary of State the power to revoke, vary or suspend the licence²⁹. This means that even where a licence has been initially granted to the licensee, the Secretary of State may also revoke, vary or suspend the licence³⁰. This provision is intended to serve as a checking point to ensure that the licensee abides by the rules that are in force as well to ensure that the licensee does not abuse the licence at any point throughout the validity period of the licence. Although it is provided by the Outer Space Act 1986 that the consent of the licensee is normally required, this rule is subject to two exceptions. Firstly, the consent of the licensee is not required if the Secretary of State finds that the condition of the licence or any regulation made under the Act has not been complied with, and secondly, the consent of the licensee is not required if the Secretary of State finds that revocation, variation or suspension of the licence is required in the interests of public health or national security, or to comply with any international obligation of the United Kingdom³¹. Thus, unless the reason for revocation, variation and suspension of the licence is because either a condition of the licence or any regulation made under the Outer Space Act 1986 has not been complied with, or it is required in the interests of public health or national security, or to comply with any international obligation of the UK, revocation, variation and suspension can only be done with the consent of the licensee³².

In addition to the power of the Secretary of State to supervise space-related activities by either revoking, varying or suspending a licence as discussed above, by virtue of Section

²⁹ Outer Space Act 1986, Section 6.

³⁰ Outer Space Act 1986, Section 6.

³¹ Outer Space Act 1986, Section 6(1).

³² Outer Space Act 1986, Section 6.

8(1) of the Outer Space Act 1986, in supervising the space-related activities of its entities, the Secretary of State is also vested with the power to give directions to the licensee to secure compliance with the international obligations of the United Kingdom or with the conditions of the licence, if the Secretary of State finds that an activity is being carried on in contravention of the licensing requirement, or in contravention of the conditions of a licence. This direction, which includes the termination of the activity or the disposal of the space object, can be in the form of an injunction, an interdict or by order under Section 91 of the Court of Session Act 1968³³. However, if the licensee fails or refuses to comply with the above directions given by the Secretary of State, the Outer Space Act 1986 further provides that a warrant may be issued by a Justice of the Peace against the licensee, whereby the powers conferred by the warrant include power to use reasonable force against the licensee³⁴.

Now that we have analysed the general provisions on the authorisation and supervisions of the space-related activities as provided by the Outer Space Act 1986, we shall now proceed to analyse the provisions that provide for the situations when the licensee has committed offences against the Act.

1.2.2 Responsibility and Liability

One of the provisions 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 the UK's national space legislation, the Outer Space Act 1986, it can be seen that the UK's national space legislation conforms to this provision because the Act has provisions on responsibility and liability.

1.2.2.1 Liability for Damage

The Outer Space Act 1986 has no separate provisions for liability but it nevertheless has a provision that requires the licensee to obtain insurance cover so as to insure himself against liability incurred in respect of damage or loss suffered by third parties, in the UK or elsewhere, as a result of the activities authorised by the licence³⁵.

1.2.2.2 Insurance

The Outer Space Act 1986 has a provision that requires the licensee to obtain insurance cover so as to insure himself against liability incurred in respect of damage or loss suffered by third parties, in the UK or elsewhere, as a result of the activities authorised by the licence³⁶. In practice, upon examination of the 'example of typical licence' issued by the UKSA, it can be observed that the licensee has the obligation to insure and continue to insure itself against all liabilities that may arise in respect of damage or loss suffered by third parties, in the UK, or elsewhere, as a result of the licensed activities, and in the event that the satellite does not reach its planned orbit, the Secretary of State may require the licensee

to make additional insurance arrangements³⁷. In practice, the UK government requires insurance against third-party liability claims arising from commercial space launches³⁸. The applicant for a licence must prove that he has taken out third-party liability insurance for a minimum of £100 million for launch or in-orbit stages of the mission. The insurance must also cover any possible expenses of the UK government. Additionally, the launch operator is also obliged to indemnify the UK Government for the international claims presented to the UK under the Liability Convention³⁹. This practice on the requirements of insurance was emphasised during the questions and answers session in the House of Commons when, in 2006, the Secretary of State for Trade and Industry, stated that:

'The Department administers the Outer Space Act 1986, which requires that such space activities be licensed. Anyone who carries on a licensable activity gives an unlimited indemnity to the Government against claims. The Department seeks to secure indemnification in part by requiring £100 million insurance cover. If the insurance policy proved insufficient to cover a particular claim, the licensee would be required to indemnify the Government of the excess. However, if the licensee were unable to meet this, the Government would have to fund the remainder from its own resources. Hence, there is a contingent liability'⁴⁰.

1.2.3 Registration of Space Objects

One of the provisions that must be incorporated into states' national space legislation is the provision that requires states to register their space objects within their national registry. From an examination of the UK's national space legislation, the Outer Space Act 1986, it can be seen that it conforms to this provision because the UK's national space legislation contains provisions on registration of its space objects.

The registration regime of space objects launched by the UK can be found under Section 7 of the Outer Space Act 1986, consisting of procedures of registering a launched space object with the Secretary of State. In this regard, the Secretary of State shall maintain a register space of space objects which has particulars of such space objects as the Secretary of State considers appropriate to comply with the international obligations of the United Kingdom. Any person may inspect a

³⁷UK Space Agency official website<
<http://www.bis.gov.uk/ukspaceagency/>>.

³⁸House of Commons, Committee of Trade and Industry, 'UK Space Policy', Tenth Report, Session 1999-2000, Appendix 3. HC 335.

³⁹J.A. Vedda, 'Study of the liability risk-sharing regime in the United States for commercial space transportation', 1 August 2006, Aerospace Report No. ATR-2006 (5266)-1, <[www.faa.gov/about/office_org/headquarters_offices/ast/reports_studies/media/Risk_Study\(final\).pdf](http://www.faa.gov/about/office_org/headquarters_offices/ast/reports_studies/media/Risk_Study(final).pdf)>

⁴⁰House of Commons Hansard written answers for 7 March 2006 (pt 17) column 1294W, <<http://www.publications.parliament.uk/pa/cm/cmhn0603.htm>>.

³³Outer Space Act 1986, Section 8(1).

³⁴Outer Space Act 1986, Section 9(1).

³⁵Outer Space Act 1986, Section 5(2) (f).

³⁶Outer Space Act 1986, Section 5(2) (f).

copy of the register on payment of such fee as the Secretary of State may prescribe. In practice, the UK Space Agency acts on behalf of the Secretary of State and is responsible for maintaining the national register of space objects⁴¹.

Since 1969, there are a total of 38 space objects that have been launched by the UK. Due to the non-existence of a launching site in the UK, they are launched from other states, for example from the USA, French Guiana, South Australia, Kenya, Russia and the Sea Launch Vessel in the Western Pacific Ocean⁴². However, the UK had not implemented its international obligation under the 1976 Registration Convention fully because it did not register 10 of its space objects to the UNOOSA⁴³.

1.2.4 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 the UK's national space legislation, the Outer Space Act 1986, it can be seen that it does not conform to this provision because the Act does not have any provision that encourages international cooperation when its entities participate in space-related activities. The incorporation of such provision into the Outer Space Act 1986 is important because it will indicate that the UK is conforming to its obligation under international space law. As such, it may be concluded that due to the lacunae, the Outer Space Act 1986 is not sufficient to meet UK'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 provision into UK's national space legislation may contribute towards the good management of an effective space programme.

1.3 Conclusion

The purpose of this article is to analyse UK's national space legislation, the Outer Space Act 1986, based on a developed analytical framework⁴⁴. Based on the analysis of the UK's national space legislation, the Outer Space Act 1986, it can be concluded that the Act does not fully contain the provisions

needed to fulfil the UK's key international obligations, and as such is insufficient to meet the UK's key international obligations. Those key international obligations require the UK to control the space activities that those under the UK's jurisdiction wish to undertake and to continue supervising them through to their end, require the UK to be internationally responsible and liable for all space activities carried out both by its governmental agencies and non-governmental entities, require registration of the UK's space objects within its national registry and require the UK to encourage international cooperation amongst the participants of its space-related activities. In particular, there should be a provision in the UK law that allow the UK to authorise and supervise the activities that those under UK's jurisdiction wish to undertake and to continue supervising the space activities that have been undertaken until they end (authorisation and supervision), provisions that require the UK's entities to be responsible towards the consequence of their space activities (responsibility and liability), provisions that require the UK to register space objects within the UK's national registry (registration of space objects) and provisions that require the UK to encourage international cooperation when the UK's entities participate in space-related activities (international cooperation). However, in the UK's situation, the Outer Space Act 1986 does not fully contain the provisions needed to fulfil the UK's key international obligations. In particular, it does not contain the provisions that encourage international cooperation when the UK's entities participate in space-related activities. The incorporation of such provision into the Outer Space Act 1986 is important because it will indicate that the UK is conforming to its obligation under international space law. As such, it may be concluded that due to the lacunae, the Outer Space Act 1986 is not sufficient to meet UK'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 provision into UK's national space legislation may contribute towards the good management of an effective space programme.

⁴¹ 'Review of existing national space legislation illustrating how states are implementing, as appropriate, their responsibilities to authorize and provide continuing supervision of non-governmental entities in outer space', Committee on the Peaceful Uses of outer space, Legal Subcommittee Fortieth session Vienna, 2-12 April 2001, note 56. United Nations Office of Outer Space Affairs' document number A/AC.105/C.2/L.224.

⁴² United Nations Office of Outer Space Affairs official web site, <<http://www.unoosa.org/oosa/search.do>>.

⁴³ United Nations Office of Outer Space Affairs official web site, <http://www.unoosa.org/oosa/search.do>.

⁴⁴ I. M. Tunku, 'A legal framework for outer space activities in Malaysia', PhD thesis, Newcastle University (2010).