SPACE POLICY AND REGULATION IN THE UK AND EUROPE
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1. INTRODUCTION

In this presentation I shall give an account of the development of space regulation and policy in the United Kingdom, as well as the current European position and some considerations for the future. In addition, I will look at the interaction of the European Union policy with the European Space Agency (ESA).

Although many European countries have been active in space for some years, their focus on policy is relatively recent. The United Kingdom falls within that pattern in terms of policy, although UK space laws have been in place since 1986. European laws are also of fairly recent origin, and some are not yet fully formulated.

2. SPACE POLICY IN THE UNITED KINGDOM PRIOR TO 2010

The UK Space Agency was created on 1 April 2010, and became a fully executive agency a year later, on 1 April 2011. Prior to its formation some government departments and non-departmental public bodies conducted their own space activities, pursuing specific interests and policies.

There were ten such organisations, including the Department for Business, Innovation and Skills (BIS), the Meteorological Office and the Ministry of Defence (MoD), to the Department for Children, Schools and Families. The British National Space Centre (BNSC), formed in 1985, coordinated the space activities of these ten entities, but had no independent budget and did not manage its partners' activities. It played an advisory role through its Policy Unit, which communicated to the Government advice emanating from its Space Advisory Council and reviewed by a number of committees.

The BNSC was the point of contact between the UK and ESA, as well as the European Commission and space agencies of other countries. It channelled the UK's contribution to ESA, investing in ESA programmes according to the budgets and priorities of the bodies it represented.

3. THE UK SPACE AGENCY

The UK Space Agency has from 2010 performed the international functions of the BNSC, and has exercised the powers granted under the Outer Space Act 1986. These are discussed later, in Section 4.

A major change brought about by the formation of the UKSA was the centralisation of the space budget within an independent agency empowered to pursue the national interest in space, rather than the necessarily narrower interests of each government department and other bodies. The consequence of this change for policy has been that the Agency can look at a national policy framework, rather than that of individual departments.

At the time of UKSA's formation the Space Leadership Council was also appointed, to advise the Agency on policy and strategy priorities. The SLC comprises senior representatives from across industry, the research community and government. The SLC is not an executive body, but is advisory.

The UKSA Steering Board was set up subsequently to advise the Minister and the UKSA Chief Executive on the strategies to be adopted by the UK Space Agency. It also advises on the targets to be set for quality of service and financial performance, and the Agency's performance, operation and development, including its management of risk. The Steering Board is not an executive body, but is advisory.

4. THE REGULATORY FRAMEWORK

The Outer Space Act 1986 (OSA) provides the legal and regulatory framework for space activities carried out by organisations established in the UK and by UK nationals,[1] wherever conducted.[2] Jurisdiction under the OSA is, therefore, *in personam*, rather than territorial or subject-matter jurisdiction. The Act has been extended to Crown Dependencies and British Overseas Territories.[3]

All space activities[4] carried out by individuals or organisations established in the UK or its Crown Dependencies and Overseas Territories must be licensed[5] under the OSA.

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1 OSA, Sec. 2 provides:
(1) This Act applies to United Kingdom nationals, Scottish firms, and bodies incorporated under the law of any part of the United Kingdom.
(2) For this purpose "United Kingdom national" means an individual who is-
(a) a British citizen, a British Dependent Territories citizen, a British National (Overseas), or a British Overseas citizen,
(b) a person who under the British Nationality Act 1981 is a British subject, or
(c) a British protected person within the meaning of that Act.

2 OSA, Sec. 1(a).

3 OSA, Sec. 15(6); Outer Space Act 1986 (Guernsey) Order 1990 S.I. 1990/248, Art. 2; Outer Space Act 1986 (Isle of Man) Order 1990 S.I. 1990/596, Art. 2; Outer Space Act 1986 (Jersey) Order 1990 S.I. 1990/597, Art. 2; Outer Space Act 1986 (Gibraltar) Order 1996 S.I. 1996/1916, Arts. 1, 3, Sch; Outer Space Act 1986 (Cayman Islands) Order 1998 Statutory instruments 1998 2563 Applicants from one of the UK's Overseas Territories to which the Act has been extended (Cayman Islands, Gibraltar, Bermuda) will need to apply to their own Governor's office for an OSA licence. A list of Crown Dependencies and Overseas Territories: http://www.fco.gov.uk/en/publications-and-documents/treaties/uk-overseas-territories/list-crown-dependencies-overseas

4 OSA, Sec. 1 provides:
This Act applies to the following activities whether carried on in the United Kingdom or elsewhere-
(a) launching or procuring the launch of a space object;
(b) operating a space object;
(c) any activity in outer space.
"Procuring" is not defined. However, examples of licences under the OSA define "Licensed Activity" as "procuring from a launch service provider a service comprising the launch and deployment into … orbit of the Satellite … and operation of the Satellite."
See http://www.bnsc.gov.uk/assets/channels/industry/OSA2008Example.pdf

5 OSA, Secs. 3(1) and 4. No licence is required by employees or agents, or in case of activities whereby the UK's international obligations are discharged by arrangements with another country or otherwise; OSA, Sec. 3(2), (3).

The OSA confers licensing[6] and other powers on the Secretary of State for Business, Innovation and Skills. The Secretary exercises these powers through UKSA. The OSA seeks to ensure compliance with the UK's obligations under international treaties and principles covering the use of outer space, including liability for damage caused by space objects, the registration of objects launched into outer space and the principles for remote sensing of the Earth. The OSA also empowers the Secretary of State to ensure that operators comply with the terms of their licence, that unlicensed activities are terminated, and that there is appropriate disposal of space objects.[7]

All persons to whom the OSA applies (UK nationals or those established in the UK) whether licensed or not, must indemnify the UK Government against any claims for damage or loss arising out of licensable activities.[8] This is a mandatory statutory obligation, on which no financial limit is set.[9]

At the time of its enactment, this obligation was consistent with that under US legislation. The US soon thereafter amended its laws[10] to put a limit on this obligation[11]. The UK is considering changes to its indemnity obligations, but has yet to do so. Whether such limitation would constitute an illegal subsidy under EU competition laws remains debatable. However, it is worth noting that the European Commission has not challenged the 2008 French law[12] limiting operators' liability. This may indicate that the European Commission would accept limited liability and any implied subsidy.

5. SPACE POLICY OF THE UNITED KINGDOM

The policy-making structure of the UK Space Agency engages a broad range of space-sector participants in order to permit the development of vigorous policies. Prior to the formation of the Agency there was no single entity and forum for debating or evolving a truly national policy. Instead, the UK exercised its policy choices within the framework of ESA, which accounted for virtually the entire UK space budget.

The formation of UKSA substantially arose from the Report prepared by the Innovation and Growth Team in 2009.[13] The Report of the IGT, known as the Innovation and Growth Strategy (IGS), set out a number of Recommendations, among them the formulation of a National Space Policy. Another of the Recommendations of the IGT was the formation of an independent space agency.

The IGT's remit included the proposal of a space policy to be pursued by the UK in the following 20 years. A team within the Cabinet Office was assigned the task of investigating and recommending the proposed policy, but its report has been postponed for further review.[14]

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6 OSA, Sec. 3(1).

7 OSA, Sec. 8

8 OSA, Sec. 10

9 OSA, Sec. 10(1) provides:

> A person to whom this Act applies *shall* indemnify Her Majesty's government in the United Kingdom against any claims brought against the government in respect of damage or loss arising out of activities carried on by him to which this Act applies. [Emphasis added]

10 See 49 U.S.C. 70112 and 70113

11 Insurance is required up to a specified limit, after which the Government will meet the obligation.

12 Article 15 of the law 2008-518 of 3 June 2008 relative to space operations

13 Space Innovation and Growth Strategy, see UKSA site http://www.bis.gov.uk/ukspaceagency.

14 The UKSA Website will post updates on these matters in future.

Although no national Space Policy has yet been articulated or agreed in the UK, there are certain driving elements that are inherent in the implementation of the IGS Recommendations. Broadly, current UK policy seeks to:

1. Encourage the economic growth of the space sector and its contribution to the national economy, as well as its share of the international market;

2. Maintain and advance the expertise and leadership role it plays in particular technologies and services; and

3. Increase employment in high technology industries.

6. POLICY CONSIDERATIONS

In relation to space, a coherent policy needs to encompass many considerations. These include scientific, technical, economic and social factors. Both civilian and military security considerations must be taken into account. This is not only because each has an impact on the other, but also relates to the dual-use of space assets and capabilities, introducing additional complexity in arriving at a national policy.

Because the major portion of the UK space budget consists of its contribution to ESA, much of the focus in advancing UK space policy is on ESA projects supported by the UK.

7. ROLE OF ESA IN UK SPACE POLICY

UK contributions to ESA accounts for about 80% of the UK space budget. It is, therefore, not surprising that ESA has a strong influence on the UK space policy. ESA's Industrial Policy Committee, which decides the projects to be undertaken by ESA, also has an impact on ESA policies.

ESA's direct impact on the UK is also demonstrated by the *juste retoure* system operated by ESA, securing expenditure in the UK in proportion to the contribution made by the UK. At the last ESA Ministerial, in November 2012, the UK increased its contributions by £60m a year over the next five years, resulting in ESA deciding to base its satellite communication headquarters at ESA Harwell in the UK.

ESA's programmes are limited to the extent that Members provide funding for them. The UK can also influence ESA policy to some extent, in relation to the ESA optional programmes to which it contributes. ESA has two types of programmes: one type is mandatory, and the other is optional, including such programmes as telecommunication, navigation and Space Situational Awareness (SSA). An example is the Manned Space Programme, to which the UK does not contribute.

8. ESA AND THE EUROPEAN UNION

In order to fulfil the EU's objectives of independence in such areas as global positioning services, (currently provided by GPS), and monitoring and enforcement of climate change measures, several programmes have been developed. Among them are GMES and Galileo, both of which highlight the fact that there is a need for clear European policy direction in space. In addition, there are other areas in which a European Policy may be desirable. For example, although the individual Member States have ratified the Outer Space Treaties, the EU may need to address ratification in its own right.

At a meeting with ISPL and other space specialists in March 2012, the Space Unit of the European Union sought to identify areas of interest that could benefit from a focus on European policies, rather than on disparate national policies. One of the areas that emerged to be of particular interest to the Commission is the promotion of gathering, processing and dissemination of space-derived data.

It must be noted that the implementation and formulation of any EU space policy must meet the limitations contained in the Lisbon Treaty[15]. This constrains the Commission from harmonization of Member State space policies and activities. Harmonization would result from an EU Directive requiring Member States to legislate a set of laws, with some identical provisions, in a particular area. While this constraint on harmonization may seem to limit EU action, it is worth noting that there is no such bar on *coordination*, under which Member States may work together to implement their laws toward a common objective.

The significance of this in terms of space policy is that the European Commission can facilitate and encourage coordination of policies and laws among Member States. The European Commission can also rely on its competence in industrial policy to create a single market in space services and systems.

At this time, the space policy of the EU is not certain in the form and direction it will take. Space policy will emerge from the EU Space Unit, within the Enterprise and Industry Directorate. What is clear is that it will seek to achieve certain ends, namely to have independent space capability that is secure and ensures future European security; to advance science; and to provide reliable climate information to equip Europe to meet the challenges of climate change.

On 15 November 2012, the ESA Council of Ministers adopted a Draft Political Declaration to effectively work with the European Commission in evolving a coordinated approach to space policy to best serve Europe. In its declaration ESA commits "to play our role in ensuring the coherence and coordination between the respective processes on both the ESA and EU sides". This is a step toward the desirable position that research and development agencies are involved in the formulation of space policy at all levels.

9. CONCLUSION

It is imperative that space policies and the legal framework implementing them are adopted with the recognition that space environment and activities are international in nature, and that they take account of policies and laws, as well as activities undertaken, in other States.

This does not necessarily mean that everyone should have identical policies and laws, but that they should be coordinated, and should take account of what is occurring elsewhere.

To facilitate this approach, policy makers and legislators should conduct comparative studies and research, examine the impact of proposed alternative policies, and formulate laws that could give effect to particular policies.

It is our collective mission to assist in the creation of a sustainable and coherent set of policies that bring the benefits of space to all.

15 Treaty on the Functioning of the EU, TFEU, Article 189.