NATIONAL REGULATION OF SPACE ACTIVITIES

State of the art and national regulatory trends concerning space activities

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PURPOSE OF THIS LECTURE

- To briefly describe certain national laws and regulations that regulate space activities of some countries
- To outline the nature and scope of specific laws and to determine some regulatory trends in this field

INTRODUCTION

- Under international law: the launching state is liable for any damage caused by its space object to a person or his/her property in another state
- States are obliged to register their space objects; not to place in orbit weapons of mass destruction etc.
- These international legal obligations need to be implemented at national level through national laws
- Almost all nations are using space for their needs, primarily for telecommunications, and to a good extent for earth observation and weather forecasting.
- Governments dominate the space sector; but there is a strong trend towards commercialization and privatization of space activities
- Consequently, specific national space laws and regulations are drafted and being adopted

THE ROLE OF STATE

- ***State as a provider of infrastructure and public services***

  - State constructs infrastructure and/or makes provision of a public service which is beyond the economic means of the private sector

  - If an activity is new, is appealing to a limited number of people, or is of no immediate economic value, public funds are devoted for such an activity

  - If an activity is considered to be a public service for the common good (as opposed to private activity undertaken for profits)

- ***State as a regulator of activities of private entities***

  Why does a government regulate activities?

  - to protect public interest (from economic, cultural, strategic threats)
  - to maintain order and security
  - to enhance a particular activity
  - to manage (scarce) resources
  - to enhance a particular economic - political policy

RATIONALE FOR THE ADOPTION OF NATIONAL SPACE LAWS

1. **to develop and enhance national space capability and industry** (for instance, allocation of public funds, tax incentives, etc.); governments invested heavily in research and development of space technology and they still do so to a large extent)

2. **to insure public safety, including the protection of the environment** (setting and implementation of technical standards, operational requirements, etc)

3. **to control the development, use & transfer of (dual-purpose) space technology** (for security reasons; export control laws and International Traffic in Arms Regulations – ITARs)

4. **to delineate the legal authority of specific government ministries, agencies or officials (**i.e. who in the Government should be in-charge or responsible for development and/or regulation of space activities (setting up of space agencies and regulatory bodies)

5. **to domestically implement and secure compliance with State's international obligations**

INTERNATIONAL SPACE LAW REQUIRES THE ADOPTION OF NATIONAL SPACE LAWS

- The implementation of international treaties within national systems depends upon the national constitutional and legal system of a State
- There may be a need for an implementing legislation

A. STATE RESPONSIBILITY FOR THE PRIVATE SPACE ACTIVITIES

- Under international space law, a State is responsible and could be held liable for the activities of its public and private entities.
- Need for State authorisation for space activities & continuous supervision of national space activities; this is effected through
  - Licensing (including licensing requirements or conditions imposed)
  - Procedures for monitoring (viz. 'continuing supervision') & imposing sanctions – punishing non-compliance behaviour

INTERNATIONAL SPACE LAW REQUIRES THE ADOPTION OF NATIONAL SPACE LAWS

B. LAUNCHING STATE IS LIABLE FOR ITS PUBLIC AND PRIVATE SPACE ACTIVITIES

- A State is internationally liable for any damage caused by its space object, whether operated / launched by its public or private entity
- Some sort of national regulatory mechanism is required to pass on a state's international liability to its private entities and to be reimbursed by the concerned private entity that has caused the damage
- Liability involves *monetary r*eimbursement to the launching State, if held liable

C. REGISTRATION OF SPACE OBJECTS

- Under the 1967 Outer Space Treaty and the 1975 Registration Convention, the launching State is obliged to register its space objects launched into outer space.
- This requires the setting up of a national space register and procedure for recording as well as notifying to the UN.

INTERNATIONAL SPACE LAW REQUIRES THE ADOPTION OF NATIONAL SPACE LAWS

- Therefore, it is necessary that a national legislative action must be taken in order to implement these international obligations
- In addition, each State may have its own particular reasons for adopting specific national space laws and regulations
- These reasons and constitutional systems determine the timing, nature and scope of national space laws and regulations
- The development of international law of space activities is more or less at stand-still position
- National regulation of space activities is the fastest growing field of space law

THE UNITED STATES OF AMERICA

- The US is the obvious leader in the field of national space law
- The US is the largest space power
- The US is a pioneer in the commercialisation and privatisation of space activities
- The US Acts and Regulations deal with Launch Services, Satellite Telecommunications, Remote Sensing, Navigational Satellite Services, and Material Processing in Space (patents) etc.
- The American space laws and regulations will be discussed by Michael Mineiro
- Some other states have also taken initial steps, but the U.S. legislative initiatives lead the world as most of the states are following the US approaches and practices

THE UNITED KINGDOM

- **Purposes of the 1986 UK Space Act are:**

- **to delineate the legal authority of the Secretary of State; and**
- **to secure compliance with the international obligations of the United Kingdom, with respect to the launching and operation of space objects and the carrying on of other activities in outer space by persons connected with the United Kingdom**

- **A license is required from the Secretary of State for the following activities to be carried on in the United Kingdom or elsewhere :**

- **launching or procuring the launch of a space object;**
- **operating a space object; and**
- **any other activity in outer space**

- **by the United Kingdom nationals and Scottish firms**

Requirement of a license

- **A license is NOT required :**

- **by a person acting as an employee or agent of another; or**
- **for activities for which arrangements have been made with another country to secure compliance with the international obligations of UK**

- **Secretary may exempt anyone from the requirement of a license when license is not necessary to comply with UK's international obligations**

- **License is granted only if the activities authorised by the license:**

- **will not jeopardise public health or the safety of persons or property,**
- **will be consistent with the international obligations of the UK, and**
- **will not impair the national security of the United Kingdom**

Conditions of a license

- General : License may be issued for such period and subject to such conditions, as considered necessary

a) permitting inspection of licensee's facilities and equipment;

b) requiring the licensee to provide information as to :

- date and territory or location of the launch,
- basic orbital parameters, including nodal period, inclination, apogee and perigee, and
- any other relevant information as considered necessary

Conditions of a license (Conti.)

c) requiring the licensee to conduct operations in such a way as to :

- prevent the contamination of outer space or adverse changes in the environment of the earth,
- avoid interference with the activities of others in the peaceful exploration and use of outer space,
- avoid any breach of the UK's international obligations, and
- preserve the national security of the UK

d) requiring the licensee to insure himself against liability incurred in respect of damage or loss suffered by a third party

e) providing for the termination of the license on a specified event

f) governing the disposal of the payload in outer space

Transfer, revocation or suspension of a license

- No license can be transferred without the consent of the issuing authority
- License may be revoked, varied or suspended :

- for breach of a condition of license or any Regulation under the Act
- when revocation, variation or suspension is required in the interests of public health or national security, or to comply with any international obligation of the United Kingdom

- Secretary is required to maintain a Register of Space Objects to comply with UK's international obligations

- The licensee is obliged to indemnify the government against any claims brought against the government in respect of damage or loss

- Person who carries on an activity in contravention of licensing requirement commits an offence

- If proved that the offence has been committed with the consent of a director or other similar officer, he as well as the body corporate is guilty of a punishable offence

CANADA

- Canada became the third country in the world to design and build its own satellites when it launched the Alouette I research satellite in 1962.
- Canada is a medium space power and has no comprehensive national space law
- Specific laws and regulations are being slowly adapted and adopted to regulate certain aspects of space activities:
- A minor change was made in the Canadian Aeronautics Act and the Canadian Aviation Regulations to make them applicable to ‘rockets’ and thus to regulate the launch of a rocket
- Several changes have been made in the existing Broadcasting Act, Telecommunications Act, and Radiocommunications Act, in order to make them applicable to broadcasting and telecommunications by satellite
- A slight amendment to the *Criminal Code was adopted to extend Canada’s criminal jurisdiction over astronauts working on the International Space Station.*
- Adoption of the Canadian Space Agency Act to establish this public agency
- Adoption of An Act Governing the Operation of Remote Sensing Space Systems to regulate remote sensing activities, on similar bases as in the US.

PEOPLE'S REPUBLIC OF CHINA

- The most advanced space power in Asia. The third nation in the world to send humans in space and to conduct an anti-satellite test in outer space

- The 2006 White Paper indicates that China plans to strengthen its space legislation; i.e.

  "To formulate laws, regulations and space industrial policies for guiding and regulating space activities, increase the level of administration by law, and create a legislative environment favorable for the development of space activities."

- It is believed that China is currently involved in the drafting of a comprehensive national space legislation

THAILAND

- Since the early 1980's, the Geo-Informatics and Space Technology Development Agency, (or GISTDA) under the Ministry of Science and Technology (MOST), which is responsible for and carries out earth observation activities.

- Under a 30 year concession (until 2021) from the Government, Shin Satellite Public Company Limited operates the national satellite system known as THAICOM. It provides telecommunication services in Thailand, Cambodia and Laos.

- The Ministry of Information and Communication Technology (ICT) carries out its "authorization and continuing supervision" responsibility (pursuant to Article VI of the Outer Space Treaty) of these satellites.

- There is no plan for the adoption of a comprehensive space law

SOUTH KOREA

- In 1989, South Korea established Korea Aerospace Research Institute (KARI) in order to carry out its space research activities

- The 1996 Basic Long-term Space Development Program of Korea indicated Korea's plan to own 20 satellites by 2015, to manufacture launching vehicles, to construct a launching range & start launching its payloads.

- Korea's first satellite, KITSAT-1 small experimental satellite. It also launched telecommunications satellites, KOREASATs and remote sensing satellites, KOMPSATs.

- In cooperation with Russia, Korea is developing its own launch vehicles (KSLV) and is constructing a launch facility

- South Korea is the first Asian country that has adopted dedicated comprehensive national space legislation; i.e. Aerospace Industry Development Promotion Act (Law No. 7538 of 2005) in order to
  - to promote the peaceful use & scientific exploitation of outer space;
  - to ensure national security;
  - to further develop the national economy; and
  - to effectively use and manage space objects

FRANCE, GERAMNY & INDIA

- French space program is the largest in Europe. In 2008, it adopted a comprehensive national space law in 2008.

- Germany's space activities are extensive (only second to France); a specific space law is being drafted

- India's space capability and programs are similar to that of China, except human space flights and military uses. There is no specific space in the country, except a limited number of policy directives. India is currently drafting a detailed national space legislation

CONCLUSIONS & FINAL REMARKS

- There is a clear decline in the adoption of international space law; but national space laws and regulations are being adopted and expanded

- There is a trend towards commercialization and privatization of space activities in Asia; this necessitates the adoption of national laws and regulations governing national space activities

- Other main reasons for adopting specific national space laws and regulations are:

  - to regulate space activities effectively so that they are developed and carried out according to national priorities and policies;
  - to protect public heath and safety;
  - to implement international obligations; especially those relating to governmental responsibility and liability for the space activities

- For the last several years, the UN Office of Outer Space Affairs (OOSA) has been actively promoting the ratification of international space treaties and the adoption of national space laws. It is planning to have a standard draft national space legislation that might be used by countries that do not have sufficient space law expertise. These efforts are believed to have positive impact, especially on small countries.

- It will be imperative to achieve and maintain some uniformity of national space laws in order to avoid conflicts and confusions.

THANK YOU !!!