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Session 2: Legal Strategies for Developing Moon  
Bases under International Cooperation

# International Mechanisms for Space Cooperation: Report of the COPUOS LSC Work

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# Overview

- 1 Introduction- Purpose of the Presentation
- 2 Summary of the 5-year agenda item “Review of International Mechanisms for Cooperation in the Peaceful Exploration and Use of Outer Space (“IMC”)”
- 3 Categorization of the IMC
- 4 Final Report of the IMC
- 5 Conclusion

# 1 Introduction- Purpose of the Presentation

Space activities have flourished last 50 years through international cooperation.



To pursue a better international mechanism for space cooperation, “international cooperative mechanisms” has been studied as a multi-year agenda item in the Legal subcommittee of the UNCOPUOS from 2013 to 2017.



Report of the outcome of the LSC work published in April 2017 (A/AC.105/C.2/112)

## 2 Summary of the 5-year agenda item “Review of International Mechanisms for Cooperation in the Peaceful Exploration and Use of Outer Space (“IMC”)” (1)forum

Discussed in:

Committee on the Peaceful Uses of Outer Space (COPUOS)

A subsidiary organ of the UN General Assembly

Permanent organ since 1959 84 States as of 2017

Organization: (i) Scientific and Technical Subcommittee (STSC)

(ii) Legal Subcommittee (LSC)

(iii) Main Committee

## (2) Background of the IMC

Space Activities flourished through cooperation.

1996 UNGA Resolution Space Benefit Declaration

clarifies the principles and conditions of space cooperation based on UN space treaties

- on an equitable and mutually acceptable basis;
- contractual terms should be fair and reasonable (e.g., intellectual property rights)
- particular account should be taken of the needs of developing countries;
- governmental and non-governmental; commercial and non- commercial; global, multilateral, regional and bilateral.

(cont'd)

To further clarify the conditions

29 March 2012 “IMC” proposed by the US, cosponsored by China, Ecuador, Japan, Peru and Saudi Arabia

Methodology: analyze various mechanisms to conduct international collaboration with a view to **identifying common principles and procedures.**



Reference for the future cooperative projects.

### (3) Information provided to the COPUOS/LSC

2013

Australia, Kazakhstan and Portugal (A/AC.105/C.2/102);

Austria, China and Germany (A/AC.105/C.2/2013/CRP.14);

United States (A/AC.105/C.2/2013/CRP.17); and

Intergovernmental Agreement on the International Space Station (ISS) (A/AC.105/C.2/2013/CRP.24)

2014

Algeria, Germany, Kenya (A/AC.105/C.2/105)

Argentina (A/AC.105/C.2/105/Add,1)

International Law Association (A/AC.105/C.2/105/Add.2)

Russia (A/AC.105/C.2/2014/CRP.23)

Japan (A/AC.105/C.2/2014/CRP.24)

Canada (A/AC.105/C.2/2014/CRP.25)

Turkey (A/AC.105/C.2/2014/CRP.26)

ESA (A/AC.105/C.2/2014/CRP.28)

(cont'd)

2015

Japan, Spain (A/AC.105/ C.2/107)

Austria  
(A/AC.105/C.2/2015/CRP.14)

2016

Belgium, Poland, Thailand, Turkey  
& WMO (A/AC.105/C.2/109),

Jpan and France  
(A/AC.105/C.2/2016/CRP.18)

**Draft Report of the WG**  
(A/AC.105/C.2/2016/CRP.14)



(cont'd)

2017

Belgium, Poland, Thailand, Turkey & WMO (A/AC.105/C.2/111)

Austria and Germany (A/AC.105/C.2/111/Add.1)

International Institute of Space Law (IISL) (A/AC.105/C.2/2017/CRP.30)

**Draft Report of the WG** (A/AC.105/C.2/2017/CRP.15)

### 3 Categorization of the IMC (1) common categorization based on the information provided to the LSC

1 legally-binding          non-legally binding

2 universal (global), multilateral, bilateral

3 norm-creating, or disposal (contractual)

4 establishing international organization (IGO & NGO)

## (2) Information from the USA and Canada: similarity found in the categorization

### USA

- A. Multilateral and Bilateral Legally Binding Agreements
- B. Legally Non-Binding Principles and Technical Guidelines
- C. Multilateral Coordination Mechanisms
- D. International Fora

### Canada

- I. Multilateral and Bilateral Legally Binding Agreements
- II. Non-Binding Instruments
- III. Legally-Non-Binding Principles and Technical Guidelines
- IV. Multilateral Cooperation Mechanisms
- V. International Fora

# (3) Examples of the agreements USA used as IMC

## A. Multilateral and Bilateral Legally Binding Agreements

- \* ISS Intergovernmental Agreement, Memoranda of Understanding, and subsidiary agreements (“Implementing Arrangements”)
- \* Agreement on the Promotion, Provision and Use of Galileo and GPS Satellite-Based Navigation Systems and Related Applications
- \* Bilateral Framework Agreements for Civil Space Cooperation (with Argentina, Brazil, Canada, France, India, Israel, Japan, Norway, Russia, Sweden, Ukraine, etc.)

## B. Legally Non-Binding Principles and Technical Guidelines

- \* UN Principles;

## C. Multilateral Coordination Mechanisms

- \* The Committee on Earth Observation Satellites (CEOS);
- \* International Charter on Space and Major Disasters
- \* International Space Exploration Coordination Group (ISECG)

## D. International Fora

- \* International Astronautical Federation (IAF);

# (4) Categorization of IMC by the European Space Agency (ESA)

Three types of cooperation mechanisms

1 ESA as a mechanism of international cooperation

- between member states of the ESA

2 ESA as an actor of international cooperation

- ESA cooperating with non-member States

- ESA cooperating with international organizations

(cont'd)

### Among ESA

- The ESA Convention ESA

International legal personality with treaty-making power

- The Organs of ESA: the Council; the Director General

\* Mandatory activities and optional activities as central element of the cooperation mechanism

Several forms of legal instruments used by ESA

a) Cooperation agreements;

b) Other international agreements;

c) Implementing arrangements (usually under a high-level agreement)

d) Memoranda of Understanding (with legal obligations)

e) Exchange of Letters (with legal obligations)

# 4 Final Report of the IMC (A/AC.105/C.2/112, 13 April 2017)

## (1) overview

- I Summary of the work conducted by the WG under its multi-year work plan
- II Basic Framework for international cooperation
- III Areas of cooperation
- IV Actors and forums of cooperation
- V Modes of international cooperation
- VI Regional variation in cooperation mechanisms
- VII Bilateral cooperation mechanisms
- VIII Multilateral cooperation mechanisms
- IX Conclusions

## (2) only States and int'l Organizations to both States and Private entities

### Areas of cooperation

-from basic science to commercial use to even the areas of security (transparency and confidence-building measures (TCBM))

### Actors and forums of cooperation

- UN both a forum and actor
- States
- various types of organizations
- companies,
- private universities and research laboratories



### (3) Powers of regional cooperation

Governmental space organizations:

European Space Agency (ESA);  
Asia-Pacific Space Cooperation  
Organization (APSCO)

Governmental organizations which  
could involve space affairs

- EU
- ASEAN

Regional Forums

- Asia-Pacific Regional Space Agency  
Forum (APRSAF);
- African Leadership Conference on  
Space Science and Technology for  
Sustainable Development
- Space Conference of Americas

contents of cooperation counts

## (4) Mechanisms favored by States: bilateral

Combination of FA and IA (i)

**Framework Agreements** legally-binding (=treaty)

- government-to-government or space agency to space-agency
- basic legal principles in bilateral space cooperation in general
- adopted even without an immediate specific project.

**Implementing Arrangements/Agreements (IA)** legally non-binding

- space agency to space agency or between other specific governmental agencies
- mission description and allocation of the responsibilities of each party + basic legal principles

## (cont'd) FA and IA

FA : legally binding

Basic legal rules applicable all future cooperative missions



1 Copy and pasted the contents of the FA

**2 detailed contents of a specific day-to-day management**

1 + 2 = IA  
IA = non-legally binding

## (ii) FA with the US government-to-government

	Argentina	Canada	France	Norway	Russia	Sweden	Ukraine
Year of the signature (incl. that of the extending the agreement)	2011	2010	2007	2006	2007	2015	2008
Purpose	○	○	×	×	×	×	○
Definitions	○	○	×	×	×	×	○
Scope of cooperation	○	○	○	○	○	○	○
Implementing Arrangements	○	○	○	○	○	○	○
Funding/financial arrangements	○	○	○	○	○	○	○
Customs duties and taxes	○	○	One Article	One Article	One Article	One Article	○
Entry and exit of personnel	○	○					○
overflight	○	○					○
Intellectual property rights	○	○	○	○	○	○	○

(cont'd)	Argentina	Canada	France	Norway	Russia	Sweden	Ukraine
Transfer of goods and technical data	○	○	○	○	○	○	○
Cross-waiver of liability	○	○	○	Allocation of risks ○	○	Allocation of risks ○	○
Publication of public information and results	○	○	○	×	○	×	○
Registration of space objects	○	○	○	×	○	×	○
consultations	One	○	One	○	One	○	One
Dispute settlement	Article	○	Article	×	Article	×	Article
Existing rights and obligations (relationship to other agreements)	○	○	○	○	○	○	○
List of implementing arrangements/Annexes	×	○	×	○	×	×	×
Entry into force and duration	10 years	10	10	5 (10)	○	10	○
Amendments	○	○	○	○	×	○	○
Termination	○	○	○	○	○	○	○

### (iii) FA with NASA space agency-to-space agency

	Brazil	Germany	India	Israel
Signed (incl. extending the agreement)	2010	2010	2007	2006
counterpart	AEB	DLR	ISRO	ISA
purpose	○	○	○	○
Definitions	×	○	○	○
Scope of cooperation	2 articles	○	○	○
Implementing Arrangements	○	○	○	○
Funding/financial arrangements	○	○	○	○
Customs duties and taxes	One	○	○	○
Entry and exit of personnel	Article	○	○	○
overflight		○	○	○
Intellectual property rights	○ Annex	○	○	○

(cont'd)

	Brazil	Germany	India	Israel
Cross-waiver of liability	×	○	○	○
Registration of space objects	×	○	○	○
Transfer of goods and technical data	×	○	○	○
Publication of results and public information	×	○	○	○
Consultation and dispute settlement	○	○	○	○
Continuing obligations	○	×	○	○
Amendment	○	○	○	○
Entry into force and duration	10	10	10	10
Termination	○	○	○	○

## (iv) FA with Russia government-to-government

	Australia	Brazil	Germany	Mexico	ROK	Spain
Signed (incl. extending the agreement)	2007	2010	2001	1996	2004	2006
Purpose	○	×	○	○	○	○
Definition	×	×	×	×	×	○
Applicable law	○	○	○	○	○	○
Cooperative organizations	○	○	○	○	○	○
Areas of cooperation	○	○	One	○	One	○
Forms of cooperation	○	○	Article	○	Article	○
Complementary agreements	×	○	×	○	×	×
Working Groups	×	○	×	×	×	×
Financing	○	○	○	×	○	○
Intellectual property	○	○	○	×	○	○



(cont'd)	Australia	Brazil	Germany	Mexico	ROK	Spain
Exchange of information and hardware	○	○	One	×	○	○
Protection of property	○	○	Article	×	○	○
Liability	○	○	○	×	○	○
Customs regulation	○	×	○	×	○	○
Export control	○	×	○	×	×	○
Assistance to the activities of personnel	○	○	○	×	○	○
Economic and industrial types (forms) of activity	○	○	○	×	○	○
Settlement of disputes	○	○	○	×	○	○
Final provisions: duration	10 years	10	5	10	10	10
Attachment (intellectual property (IP); IP and confidential information	○	Annex IP	○	×	○	○

# (v) FA with France

(cont'd)	Algeria	Brazil	China	Mexico
	2006	1997	1997	2014
Purpose	○	○	○	
Applicable law; relationship with other agreements	○	○	○	
Area of cooperation	○	○	○	
Forms of cooperation	○	○	○	
Designation of the space agency as a competent body	○	○	○	
Joint Committee (JC) (set broad directions for cooperation) to be established	○	×	×	?
Implementing Agreements to be made by the JC	○	○	○	
Intellectual Property (IP) detailed rules in the Annex	○	○	○	
Transfer of Information and data	○	○	○	
Financial arrangements	○	○	indirect	
Entry and exit of personnel; customs, duties and taxes	○	○	○	
Liability (cross-waiver of liability)	○	×	×	

(cont'd)	Algeria	Brazil	China	Mexico
Promotion of the Industrial and commercial cooperation	○	○	○	
Cooperation on legal questions of mutual interest	×	×	○	
Settlement of disputes (negotiation, arbitration procedures)	negotiation	Negotiation, etc.	○	?
Amendment	○	○	○	
Duration	10	10	5	
Annex (Intellectual Property)	○	○	○	

# (vi) IA as MOU for cooperation in the use of USGS Landsat sensing satellite data

model provision

identical provisions from the FA

	Argentina	Gabon	ESA	Japan	Norway	Saudi Arabia	South Africa	Thailand
	2013	2013	2012	2013	2013	2013	2013	2013
Purpose and scope of cooperation	○	○	○	○	○	○	○	○
Existence of the Framework agreement	○	×	×	×	○	×	×	×
Responsibilities of the parties (NASA 6; each space agency 14)								
International mission cooperation								
Science and applications development								
User service arrangements								
Financial arrangements and legal authorization								
Duties, fees, and taxes								
Entry and exist of personnel								

Model provisions commonly used in the IA

Borrowed provisions from the FA

model provision

Same provisions from the FA

	Argentina	Gabon	ESA	Japan	Norway	Saudi Arabia	South Africa	Thailand
Laws, warranties, rights, and liability								
Exchange of technical information								
Consultations and settlement of disputes								
Entry into force, duration, and termination								
Annex I: definition of terms								
Annex II: Landsat 8 Annual Access fee agreement								

Model provisions commonly used in the IA

IA ≡ description of the mission concerned+ standardized provisions of the IA + borrowed provisions from the FA

# (5) A Multilateral Mechanism selected by States

## (i) ISS three-tier mechanism

A number of implementing arrangements concluded between space agencies: **made when new rules are needed**

MOU between NASA and corresponding space agencies (government of Japan): **day-to-day mission responsibilities and management**

ISS Intergovernmental Agreement (ISS/IGA) **basis for this specific project**

# (ii) 1998 ISS/IGA

1 objects and scope

2 international rights and obligations

3 definitions

4 cooperating agencies

5 Registration; jurisdiction and control

6 ownership of elements and equipment

7 management

8 detailed design and development

9 utilization

10 operation

11 crew

12 transportation

13 communications

14 evolution

Blue letters  
Often found in the  
bilateral IA

15 funding

16 cross-waiver of liability

17 liability convention

18 customs and immigration

19 exchange of data and goods

20 treatment of data and goods in  
transition

21 intellectual property

22 criminal jurisdiction

23 consultations

24 space station cooperation review

25 entry into force

26 operative effect as between certain  
parties

27 amendments; 28 withdrawal

Red letters  
Found in the  
bilateral FA

# (iii) Characteristics of the ISS/IGA

Formula

ISS/IGA  $\hat{=}$

standard clauses of FA  
(liability, IP, movement of data,  
goods and personnel,  
consultation and final  
provisions)

+

elements found in  
the standard IA of  
big projects  
(jurisdiction, registration,  
mission description,  
management, etc.)

This formula could be used for the next multilateral bit exploration project, e.g., the one to be generated from the ISEF consideration

Contents of such elements would differ depending on the projects



# 5 Conclusion: how to make international cooperative framework for establishing moon bases

Big project    lessons from the ISS project



- treaty-based cooperation
- multi-tier legal frameworks needed    prototype of FA and IA would be a reference to consider moon bases project(s)

For the detail: See, A/AC.105/C.2/112 (13 April 2017)