



# **SPACE ACTIVITIES AND REGULATORY FRAMEWORK OF LUXEMBOURG**

**An Overview in Relation to the Application  
for Membership in the UN COPUOS**

# Structure

- I. Activities Connected with Outer Space
- II. Regulatory Framework
- III. Conclusion.



# I. Activities Connected with Outer Space

## A. European Space Agency (ESA)



2000: Cooperation Agreement with the European Space Agency (ESA) to participate in the ARTES program

2005: Luxembourg becomes the 17<sup>th</sup> Member State of ESA

2008: First National Action Plan for Space R&D

2012 - 2015: Presidency of ESA (together with Switzerland)

## B. SES (Société Européenne des Satellites) **SES**<sup>^</sup>

Second largest geostationary telecommunication satellites operator by revenue

1985: creation of Société Européenne des Satellites

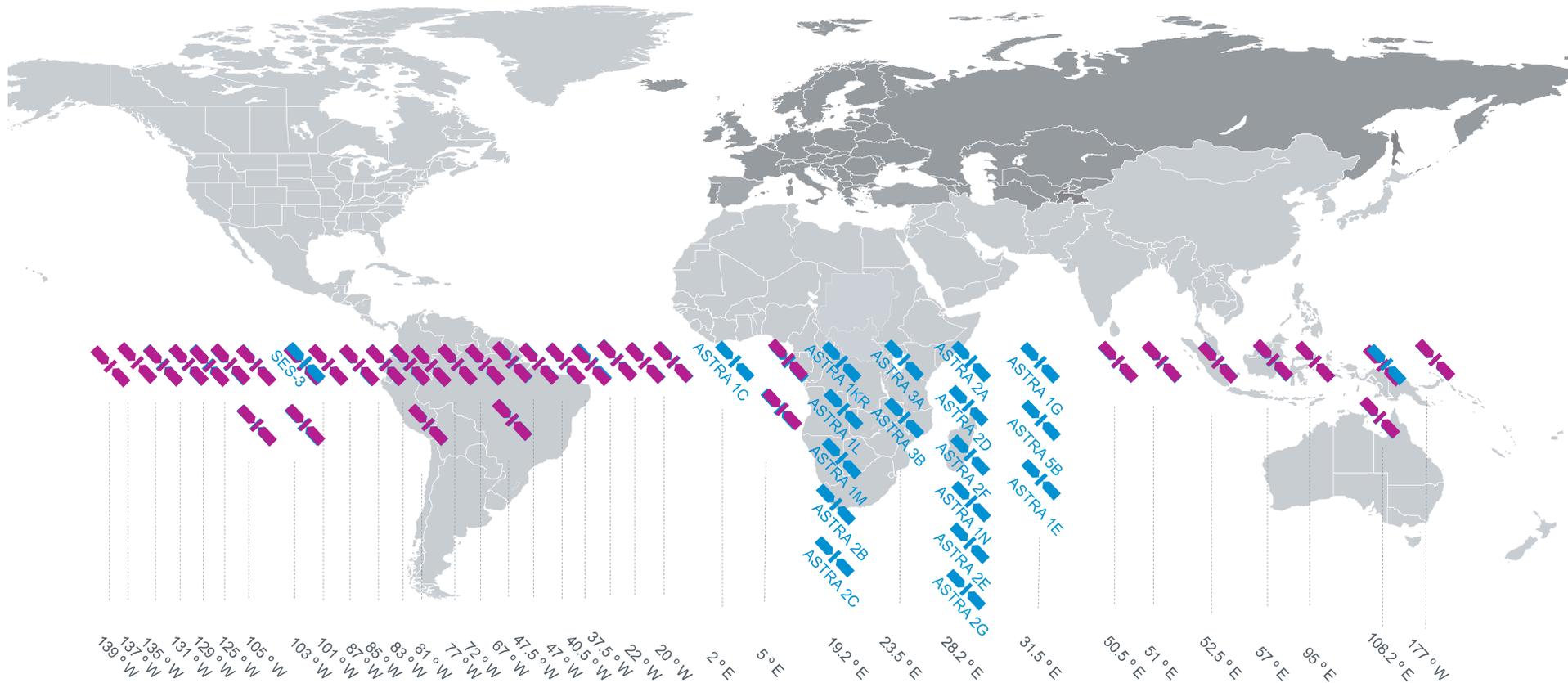
1988: first concession granted by the State of Luxembourg

1988: first launch of a satellite - ASTRA 1A

2014: 18 Luxembourgish geostationary communications satellites in orbit

March 22, 2014: Astra 5 B launched by Ariane rocket (communication, EGNOS).

# SES Full Payloads under Luxembourg License (marked blue)



■ Full payload under Luxembourg license    
 ■ Part of the payload under Luxembourg license    
 ■ Payload under license of another administration

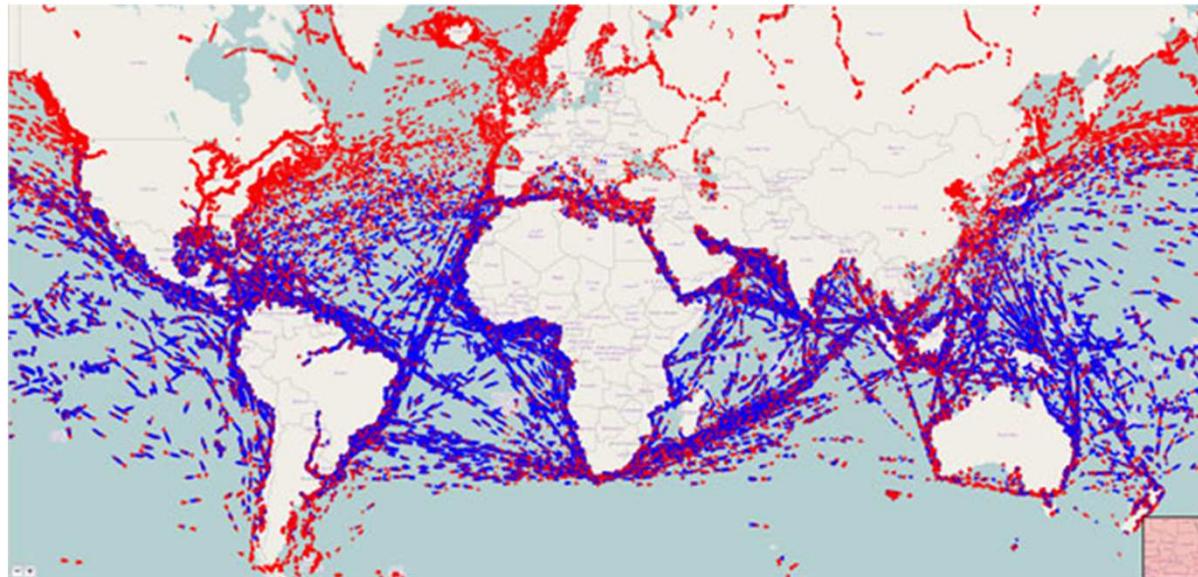
## C. LuxSpace



2 LEO microsattellites in orbit offering AIS (Automatic Identification System of ships) services

2011: launched VesselSat 1

2012: launched VesselSat 2



## D. Emergency.lu

Task: to fill the communication gap in the first hours and days after a large-scale disaster

Deployments: Philippines, South Sudan, Mali and soon Nepal and Venezuela



- ▲ Target customers: United Nations, and other actors in global humanitarian community (e.g. Red Cross, NGOs, European Civil Protection agencies)
- ▲ Luxembourg Government, Ministère de la Coopération et de l'action Humanitaire, Direction de la Coopération au Développement
- ▲ SES TechCom, SES, HITEC, Lux Air Rescue

*"I congratulate Luxembourg industry for such a creative solution."*

*Ban Ki-Moon*

*Secretary-General of the United Nations*

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Effective operation between the Government and industry

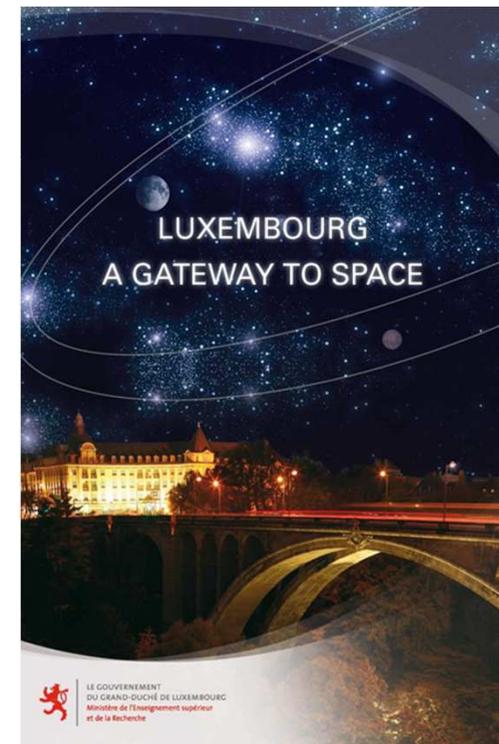
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## E. National Action Plan for Space R&D

[http://www.mesr.public.lu/recherche/esa/gateway to space/Ministere brochure ville.pdf](http://www.mesr.public.lu/recherche/esa/gateway%20to%20space/Ministere_brochure_ville.pdf)

Main implementation axes of the national strategy:

- ESA Programmes (85%)
  
- National Initiatives (11%):
  - LuxLAUNCH
  - LuxIMPULSE - National program managed by ESA
    - ❖ Technological developments
  - LuxYGT – program for Luxembourg graduates
  
- Bilateral and multilateral cooperation (4%)



## F. University of Luxembourg



- Faculty of Science, Technology and Communication
- Faculty of Law, Economics and Finance:

SES Chair in Satellite Communications and Media Law:

Master program (option) in Space Communications Regulatory Framework

1st Year: Space Communication Regulatory Framework  
in a Regional (European) Perspective

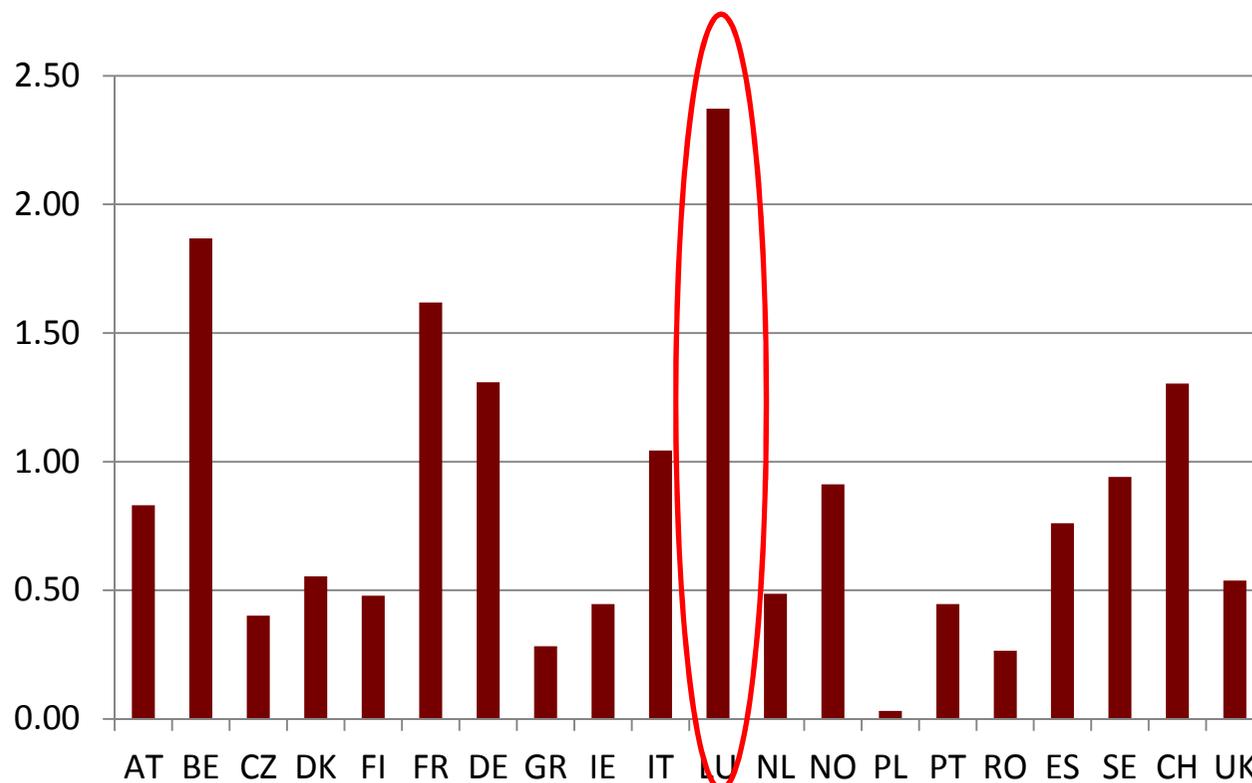
2nd Year: Space Communication Regulatory Framework  
in an International Perspective

[mahulena.hofmann@uni.lu](mailto:mahulena.hofmann@uni.lu)

- Interdisciplinary Centre for Security, Reliability  
and Trust (SnT).



## G. Space activities in Luxembourg and in Europe: Contributions 2012 in relative terms



<i>Portion of space activities in GDP</i>	<b>Luxembourg</b>	<b>European average</b>
<b>Space industry + satellite operators</b>	<b>4,3%</b>	<b>0,1%</b>
<b>Space industry (upstream)</b>	<b>0,02%</b>	<b>0,06%</b>

## II. Regulatory Framework: International

- Luxembourg is State Party of  
[1967 Outer Space Treaty](#) : ratified 2005 by Law of 31 July 2005  
[1972 Liability Convention](#) : ratified 1983 by Law of 9 June 1983  
[1963 Bann of Nuclear Weapon Tests Treaty](#)  
[1992 ITU Constitution and Convention](#) since 1866

- Signatory to  
[1968 Rescue Agreement](#): signed 1968

- [1961 GA Resolution 1721 B \(XVI\)](#)

Information on Astra satellites furnished to UN Secretary General in accordance with the 1961 Resolution;

Luxembourg examines the possibility of the establishment of an „appropriate registry“ of space objects provided for in Art. II of 1968 Registration Convention as a precondition for accessing the Convention.

# Regulatory Framework: National

## 1991 Law on Electronic Media, as amended:

### **Article 20 (1)**

#### **Concession**

No one can establish and exploit a Luxembourgish satellite system without having first obtained a concession.  
The concession is granted by the Government, by the proposal of the minister responsible for telecommunications and for the media.

### **Article 20 (3)**

#### **Specifications**

Any concession is accompanied by a book of obligations, whose provisions must be respected at all times by the concessionaire.

### **Article 20 (7)**

#### **Provisions to be included in the Specifications**

- (b) The activities that must be carried out in the territory of the Grand-Duchy;
- (d) Monitoring of the activity of the concessionaire by one or more Government commissioners.

2005 Law on the Organization and Management of RF Spectrum, as amended

2013 L.i.R. Regulation regarding the Frequency Plan

## Example of a Concession

- Based on [1991 new Law on Electronic Media](#)
- Limited duration, but renewable.

### Content:

The Government grants a concession to establish and operate a Luxembourg satellite system for specific services.

The operator may use Luxembourg's orbital and frequency rights in specific bands and orbital positions.

- The „Book of Obligations“ foresees provisions on the following topics:
  - Territoriality
  - Frequency coordination
  - Continuity of operation
  - Insurance (covering the risk of Luxembourg as a launching State)
  - Supervision by the Government
  - Sanctions in case of non compliance with the concession.

### III. Conclusion

- The application of Luxembourg for membership with the United Nations Committee on the Peaceful Uses of Outer Space was received by the Secretariat on 8 November 2013 and was circulated to member States of the Committee in *note verbale* OOSA/2013/12, CU 2013/249/OOSA/CPLA.
- Given its space activities, Luxembourg believes that it will be able to make a useful contribution to the work of the Committee and its Sub-Committees.
- Luxembourg would appreciate if its application for membership be accepted.