Proposal for a Near Space Legal Regime to Separate Airspace and Outer Space

by
M. Gupta & T. Sgobba IAASS
Presentation Structure

I. Understanding the Problem
II. Past and Current Debates
III. Background of the IAASS Study
IV. Proposed Draft Convention
V. Definitions
VI. Important Provisions
Near Space:

Proposed region between 18-160 km, rather than a simple demarcation line between airspace and outer space at 100 km

Rationale:

• *The upper limit* of Air Traffic Control region is at 18 km
• *The lower limit* of Earth orbits is at 160 km
Understanding the Problem

- The issue of delimitation of outer space stays unresolved since 1967
- Current legal challenges:
  - Suborbital flights, local and point-to-point
  - High altitude platforms loitering operations
  - Unregulated space traffic bound and return overflight risk
Near Space legal regime aims

- Account for emerging development and operations of hi-altitude platforms and suborbital systems;

- Ensure that citizens of all nations are equally protected from the risks posed by over-flying space systems and objects during launch and re-entry operations;

- Provide legal certainty to business.
Past and Current Debates

• Theories on delimitation of air space and outer space
  • Functionalism
  • Spatialism
  • Lowest point of orbital flight
  • Aerodynamic lift

• Many proposed denominations
  - Manfred Lachs (neutral Zone or neutralia, 1970) as a region of innocent passage
  - Thomas Gangale (mesospace, 2018)
  - Joseph Pelton (protozone 2019)
  - Liu Hao & Fabio Tronchetti (Exclusive Economic Utilization Space, 2019)
Background of the IAASS Study

- IAASS launched an internal study to draft a *Legal Convention for Near Space* to be presented to the Legal Sub-committee of UN COPUOS in 2020
- The study Draft Convention is being circulated among civil society
- It is an attempt to encourage a detailed discussion on the legal parameters of Near Space
Proposed Draft Convention

- Aims to balance the national economic and security interests of countries below with the collective international interest for safe and free transit through Near Space.

- Draft identified legal challenges and considered aviation law, outer space law.

- Law of the sea was used as a reference model.

- Additionally, international trade agreements and national space legislations were studied.
Near Space related definitions

- Near Space is defined as a region of space between 18-160 km above sea level, which is above and adjacent to national airspace, but is separate from airspace; separate from outer space; not part of the underlying country territory but subjected to the underlying country jurisdiction

- Horizontal boundaries of Near Space are TBD
  - either, coincide with national airspace boundaries of underlying country
  - or, include EEZ and contiguous zone

- ‘Aero-space object’ any system meant for operation in Near Space.
- Suborbital fight: ‘a rocket-powered flight up to any altitude during which the vehicle does not reach orbital velocity’ (i.e., not a matter of altitude but of velocity and trajectory)
Important Provisions

- Underlying State would not have sovereignty but jurisdiction over Near Space
- Innocent passage of civil/commercial systems is freely allowed but has to comply with (TBD) internationally agreed safety standards to be enforced by national regulatory bodies
- Near Space over High Seas under ICAO, similar to Art.12 Chicago Convention
- Underlying State has right to use and administer to exclusion of others
  - Gives economic priority rights to underlying State
  - Can permit placement of stationary or hovering objects
  - Governing principles for private activities: near feasible universal access, highest degree of safety and security, uniformity of standards and international cooperation