SWF/ IFRI

Legal Challenges of OOS and ADR Liability: An Overview

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Overview

• Drivers for ADR and OOS from legal perspective
• Backdrop of international liability system
• Discussion of ‘fault’
• Models for risk allocation and insurance
• Prerequisites for ADR + OOS missions
I. Drivers

- ADR and OOS: essential tools in sustaining space activities
  - Balance of interests between all actors
  - Debris remediation as expression of ‘precautionary principle’

- Accompanied by inevitable risks
  - Models to be developed for risk allocation, taking traditional philosophy of space activities into account
  - Assumption of (own) risk; insurance coverage (?)
  - Cooperation subject to conditions conform to international law

- Notification and ‘informed consent’ of States
  - Art IX OST (protection of outer space); Art IV REG (registry details as indication of ‘sovereign’ rights over satellites)
II. Legal Backdrop

- Heritage of 5 UN Treaties, notably OST, REG and Liability Convention LIAB
  - Provisions on conduct of space activities; duties of States
- Arts I, III OST
  - International cooperation and understanding; peaceful use
- Art VI OST
  - International State responsibility
- Art VII OST and LIAB
  - Launching state liable for damage caused by space object

*ITU aspects not covered here*
III. Specifics of Fault Liability relevant to ADR

- No liability for damage to outer space environment
  - Absence of rules here; no ‘polluter pays’ principle
  - Only via national law (at licensing level; increasing impact of EU Directives on use of chemicals etc.)

- Absolute/fault liability dichotomy between damage on earth and in outer space Arts. II, III LIAB
  - Historical

- Fault liability for collisions in outer space, Art III LIAB
  - Damage from space object to a space object (+ persons)
  - Debris as space object, Art I (d) LIAB
  - Measure of fault?
IV. Measure of Fault

• Definitions: *per* general ‘common’ law
  – Failure to maintain accepted level of ‘professional’ standard
  – Gross negligence clearer = willful, manifestly reckless conduct

• Difficulties with ‘fault’ in outer space
  – Technical recommendations, not binding, but relied on
  – IADC/ UN/ EU/ ITU Debris Mitigation Guidelines
  – State practice? Guideline terms cannot be ignored

• Time factor re guidelines, particularly as to state of the art?
  – Non-retroactivity of technical standards; parallels in tort liability
  – N.B. standards *alone* do not always dictate liability in law
V. ‘Fault’ as seen through Calculus: Heralding a new light on liability for ADR?

- **Interpretation of fault by US Supreme Court:** $B < PL$
  - $B = \text{burden of taking precautions}$
  - $P = \text{probability that risk or collision will occur}$
  - $L = \text{cost of injury (or liability)}$

- **Liability arises where burden (of debris removal/collision avoidance) is less than cost of injury, multiplied by probability of occurrence**

- **Where $B \geq \text{cost of injury, no liability}**
  - See e.g. UK 2011 Impact Assessment, with probability calculations for collisions in LEO
  - $7.7 \times 10^{-6} = \text{rare, but potential occurrence}$
VI. Expediencies of Liability for Outer Space Activities and ADR: Forms of Dispute Resolution

• **Firstly**, international liability system not exclusive
  - **Art XI.2 LIAB**: domestic courts are competent to hear disputes
  - or: International arbitration
    - Applicable law likely to play decisive role *in casu*

• **Secondly**, a further expediency of international law
  - State responsibility continues for outer space activities
    - **Art VI OST**
    - Presupposes national monitoring and control
    - **Possibly even duties to undertake ADR?**
    - Debris removal highly relevant for sustainability
VII. Models for ADR and OOS

• For service contractors or client States: agreement/acceptance by Agency, State or IGO of international liability
  – General exclusion of international state resp.+liability in outer space not possible
  – Unless inter-partes dedicated project model e.g. ISS
  – Assumption of ‘own risk’ preferred = risk lies where it falls

• Liability apportionment agreements; prototypes exist in field of launchers’ liability
  – E.g. Declaration by certain European Governments on the Launchers Exploitation Phase of Ariane, Vega, and Soyuz from the GSC 2007, entry into force 2009
VIII. Commercial OOS

• Realistic concept, where ventures backed by acceptance of state or IGO external ‘fault’ liabilities as indicated
• Risk allocation between contract partners traditionally known in commercial sector, with liability waivers between parties and contractors
• No exceptions for gross negligence
  – National space laws
• Insurance? Mathematics of TPL?
• States and Agencies: coordinated re-entry management systems
IX. Outlook

- Authorisation, Notification and Collateral risk
  - ADR Missions for plurality of states through service provider?
- Collateral risk: insurance and TPL?
- Process of consultation and notification
- Fault; status of guidelines: UNCOPUOS SubC working group D. Q re failure to
- Negligence if ADR not undertaken?
- Concepts for fees and reward for successful missions
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