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 <u>alone</u> 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 = burden of taking precautions

  P = probability that risk or collision will occur

  L = 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 ≥ cost of injury, no liability**
  - See e.g. UK 2011 Impact Assessment, with probability calculations for collisions in LEO
  - 7.7*10 -6 = 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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