

FROM THE SPACE TREATIES TO NATIONAL SPACE LAW

20 November 2014 – University of Houston Law Center

Frans G. von der Dunk

Harvey & Susan Perlman Alumni / Othmer Professor of Space Law

University of Nebraska, Lincoln



ROAD MAP

- Key concepts of liability, indemnification & reimbursement
- Key clauses 1967 Outer Space Treaty
- Main thrust of 1972 Liability Convention
- Translation at the national level:
 - Revisiting United States & France from international perspective
 - Visiting other space-faring countries with relevant national space legislation

SOME DEFINITIONAL ISSUES

- Liability is:
the accountability of a person or legal entity to compensate damage caused to another person or legal entity, as determined by specific legal rules and principles and based upon specified sources of law
- Indemnification is:
a sum of money paid in compensation for loss or injury
- Reimbursement is:
a sum of money paid in compensation for indemnification

ARTICLE VI, OUTER SPACE TREATY

- Establishes “international responsibility for national activities in outer space”
 - Incl. if conducted by private entities!
- Requires “authorisation & continuing supervision” by “appropriate State”
- ➔ ‘Need’ for national space law / licensing system
- Main question:
 - *What private activities constitute ‘national activities in outer space’ requiring regulation?*

LIABILITY CONVENTION

- Elaborates Art. VII, Outer Space Treaty
- Establishes liability “launching State” for “damage caused by space object”
 - Incl. if launched/operated/owned by private operators!
 - No limit to compensation (cf. Art. XII)
- ➔ ‘Need’ for national space law / licensing system
- Main question:
 - *To what extent would launching States transfer international liability to private operators?*

TOWARD NATIONAL SPACE LAWS

1. Implementation international treaty obligations
 - Authorisation & supervision; arrangements for reimbursement of *international* liability claims
2. Proper incorporation in national legal order
 - E.g. indemnification *national* liability claims
3. Implementation national policy priorities
 - E.g. support for (certain types of) private space activities – amongst others by offering advantageous liability regimes!

REVISITING UNITED STATES

- 1984 / 1988 Commercial Space Launch Act
 - National: indemnification as per three tier-structure
 - International: other way around!
 - 1st tier: US government pays international claim & requires reimbursement by licensee / insurer up to MPL / sum reasonably insurable / US\$ 500 million
 - 2nd tier: US government pays international claim & ... will not be reimbursed by licensee / insurer
 - 3rd tier: ... US government pays international claim & ... will not be reimbursed by licensee / insurer ...
- ➔ US effectively acts as insurer above reimbursement limit

REVISITING FRANCE

- 2008 Law on Space Operations
 - National: indemnification as per two tier-structure
 - International: again other way around
 - 1st tier: French government pays international claim & requires reimbursement by authorised entity up to amount determined by Finance Act – currently € 50–70 million
 - 2nd tier: French government pays international claim & ... will not be reimbursed by authorised entity
 - ➔ France effectively acts as insurer above reimbursement limit

VISITING NORWAY

- 1969 Act on launching objects from Norwegian territory into outer space
 - Permission required for launch from Norwegian territory, vessels & aircraft; outside if by Norwegian citizen / company (Sec. 1)
 - “Certain terms can be set for such permission” (Sec. 1)
 - Minister can issue relevant regulations (Sec. 2)
 - *Note: Act established before Liability Convention!*

VISITING SWEDEN

- 1982 Act on Space Activities
 - License required for space activities from Sweden / elsewhere by Swedish citizen / company (Sec. 2)
 - Incl. launching & operation of space objects
 - Excl. launching of sounding rockets
 - Licensee required to provide full reimbursement for international liability claims paid by Swedish government (Sec. 6)
 - ... “unless special reasons tell against this” (Sec. 6)

VISITING UNITED KINGDOM

- 1986 Outer Space Act
 - License required for launching, procurement or operation of space object / any other activity in outer space (Secs. 1, 3)
 - License required for UK nationals (Sec. 2)
 - Licensee shall reimburse UK government for “any claims brought against the government in respect of damage or loss arising out of activities carried on by him” (Sec. 10)
 - Insurance capped at £ 100 million → € 60 million (further to Sec. 5)

VISITING RUSSIAN FEDERATION

- 1993 Law on Space Activities
 - License required for all space activities (Art. 9)
 - License required by Russian citizens & companies, & by foreign citizens & companies under jurisdiction Russian Federation (Art. 9)
 - Compulsory insurance imposed on licensee incl. for third-party damage in amounts t/b established (Art. 25)
 - Russian government provides full indemnification, as applicable t/b reimbursed by licensee up to insured sum (Art. 30)

SOME INSURANCE PRACTICE

- Maximum insurance requirements imposed
 - Proton US\$ 300 million
 - Soyuz US\$ 100–300 million
 - Molniya US\$ 150 million
 - Zenith US\$ 150–500 million
 - Dnepr US\$ 100–150 million
 - Tsyklon US\$ 100 million
 - Rockot US\$ 100 million
 - Cosmos US\$ 100–150 million
 - Strela US\$ 100 million
 - Start US\$ 80 million

VISITING SOUTH AFRICA

- 1993 Space Affairs Act
 - License required for launching (from South Africa / elsewhere by South Africans) & other space activities (by South Africans) (Sec. 11)
 - License must deal with “international obligations and responsibilities” of South Africa (Sec. 11)
 - License “may (...) contain conditions relating to liability of the licensee resulting from international conventions” (Sec. 14)
 - *Suggests* unlimited reimbursement (Sec. 14)

VISITING UKRAINE

- 1996 Law on Space Activities
 - License required for all space activities in Ukraine or abroad under jurisdiction Ukraine (Art. 10)
 - Liability for damage caused during space activities & “size of such damage which is subject to compensation” t/b established by further Ukrainian legislation (Art. 25)
 - Insurance, incl. presumably against third-party liability / reimbursement Ukrainian government, t/b established by further Ukrainian legislation (Art. 24)

VISITING AUSTRALIA

- 1998 Act about space activities
 - Licenses / permits / authorisations / certificates required for launches by Australian nationals / from Australia (Secs. 11-15)
 - Insurance / financial requirements (Secs. 47, 48)
 - Incl. liability Australia under the Liability Convention
 - 1st tier: MPL / A\$ 750 million
 - No requirement to reimburse beyond 1st tier (Sec. 69)
 - 2nd tier: for Australian government up to A\$ 3 billion
 - *Note: 3rd tier under Liability Convention also for Australian government ...*

VISITING BRAZIL

- 2001 Edict & enclosed Regulation
 - License required for launching from Brazil by nationals & foreigners (Artt. 1, 2)
 - License only granted if sufficient technical, economic & financial qualifications can be documented (Art. 6)
 - License requires proof of “[p]urchase of insurance to cover possible damages to third parties, according to the degree of risk of the activities to be carried out by applicant, where appropriate, in the value previously established by [the Brazilian space agency]” (Art. 9)

VISITING BELGIUM

- 2005 Law on the activities of launching, flight operations or guidance of space objects
 - Authorisation required for space activities (Art. 4)
 - Authorisation required for such activities if conducted from within jurisdiction Belgium (Art. 2)
 - Belgian government entitled to reimbursement from authorised operator for international claims (Art. 15)
 - Reimbursement *may* be limited (Art. 15)
 - Insurance requirement *may* be imposed (Art. 5)

VISITING SOUTH KOREA

- 2005 Space Development Promotion Act
 - License required for launches from South Korea / with South Korean-owned launch vehicles elsewhere (Art. 11)
 - Liability insurance required (Art. 15)
 - Liability licensee includes as applicable obligation of reimbursement South Korean government (Art. 14)
 - Limit of liability (as per Art. 14) determined by 2007 Space Liability Act: 200 billion Won (Art. 5)

VISITING THE NETHERLANDS

- 2007 Law incorporating rules concerning space activities
 - License required for space activities (Sec. 3)
 - License required for such activities if performed in the Netherlands; possibly under circumstances if by Dutch citizens elsewhere (Sec. 2)
 - Dutch government entitled to redress by licensee of international claim (Sec. 12)
 - Insurance limited to “maximum possible cover”; limit also applicable to redress obligation (Secs. 3, 12)

VISITING AUSTRIA

- 2011 Federal Law on the Authorisation of Space Activities
 - Authorisation required for all space activities (Sec. 3)
 - Authorisation required if such activities are carried out from Austria / by Austrian nationals (Sec. 1)
 - Insurance obligatory for authorisation (Sec. 4)
 - Up to € 60 million
 - Austrian government has right of recourse against authorised operator for international claims up to insured amount (Sec. 11)

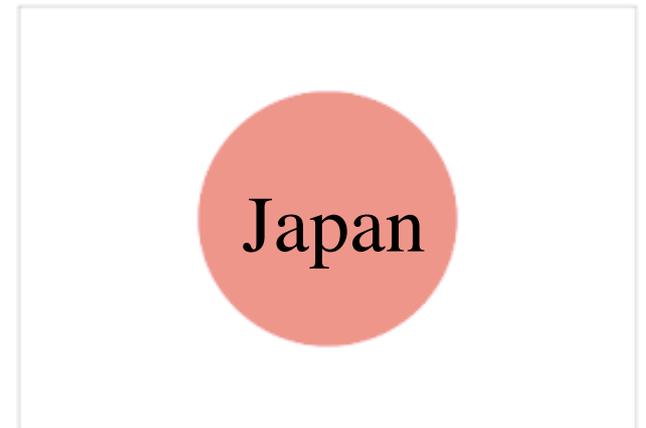
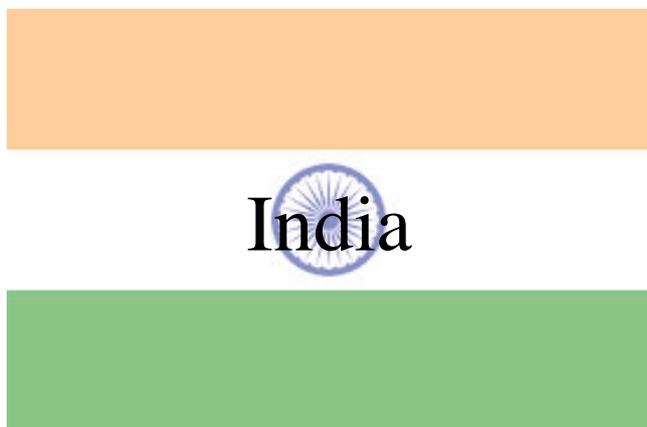
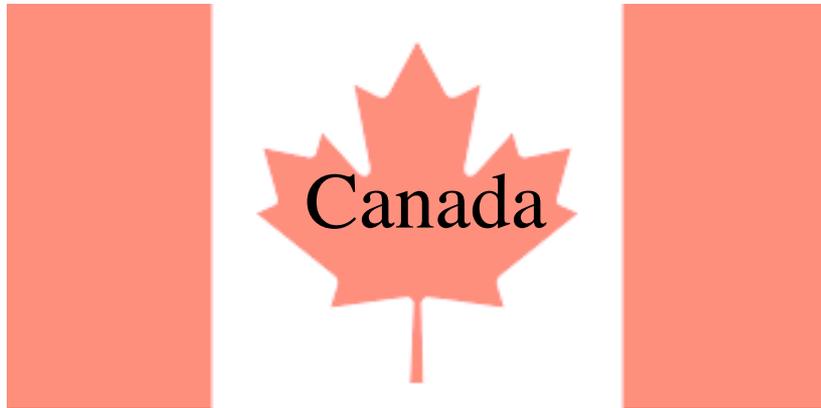
VISITING KAZAKHSTAN

- 2012 Law on Space Activities
 - License required for space activities conducted by individuals and legal entities – “in accordance with the legislation of the Republic of Kazakhstan on licensing” (Art. 13) – *to be developed*
 - Will *inter alia* have to determine scope of licensing obligation & extent of (international)(third-party) liability, incl. insurance & reimbursement / indemnification issues
 - *Note: bilateral treaty Russia–Kazakhstan on use Baikonur cosmodrome (= Russian facility on Kazakh territory) allows Kazakhstan to derogate to Russia*

VISITING CHINA

- No national law on space activities yet
- Communist country → state entity Great Wall Industrial Corporation for launch activities
 - Presumably Chinese government takes care of third-party liability claims above ≈ US\$ 100 million
- Hong Kong:
 - 1997 Outer Space Ordinance, to cater for transition UK → China; largely follows UK Act
- Discussions on national space law gearing up...

MISSING SO FAR:



CONCLUDING REMARKS (1)

- Discussion focused on third-party liability
 - Esp. international, but national usually taken on board at the same time
 - Inter-party liability not addressed but sometimes taken on board (e.g. in US: waiver between 2 private parties; special arrangement for use of government facilities)
 - Employee damage not addressed either (but cf. US: ‘informed consent-light’ for manned spaceflight)
- Liability just one element in the mix

CONCLUDING REMARKS (2)

- Huge variety in scope of licensing obligations further to Art. VI, Outer Space Treaty – ref. *‘national activities in outer space’*
 - Some apply to activities conducted from territory
 - Some apply to activities conducted by nationals
 - Some apply to both, in sometimes rather different fashion
 - Some apply only to launch activities – most relevant for liability under Art. VII, Outer Space Treaty & Liability Convention

CONCLUDING REMARKS (3)

- Considerable variety in transferring international liability to private operators – ref. Art. VII, Outer Space Treaty & Liability Convention
 - Some have flexible limits
 - Some have fixed limits
 - Convergence amongst European countries
 - Some leave it unclear / up to negotiations
 - Proceeding from opposite default scenarios
 - To the extent providing for cap on reimbursement, most link it to cap on mandatory insurance

CONCLUDING REMARKS (4)

- Fear of ‘flags of convenience’ & ‘license shopping’ at the international level
 - Exaggerated? Cf. ‘beauty’ Liability Convention & nature of space activities ↔ maritime activities
 - However: intra-US ‘beauty contest’ between states soliciting manned spaceflight operators ...
- Many states yet to formally address the issue
 - ➔ UN COPUOS has developed set of ‘model building blocks’ for national laws to establish some measure of harmonization ...