LEGAL ASPECTS OF REMOTE SENSING AND EARTH OBSERVATION DATA

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Three Main Areas Addressed

I. Backdrop: RS Activities and EO Data
   • RS as one of the main applications of space law
   • Spatial data in info society era and access to info

II. Key Legal Issues in RS Activities and Data Policy
   • Scope of IPR’s, data exchange licensing = contract law / access / data sharing
   • Freedom of information

III. Basic Legal Framework for RS Activities
   • International law
   • National laws and data policies
I. RS Activities

• Increasing use of satellite images
  - Risk/Disaster management, global protection
  - Protection of environment, natural resources
  - Information society services - open access (Google maps)
  - Public interest

• Commercialisation of RS activities
  - Public and private uses at commercial level
  - Increasing commercial interest in spatial data
  - Impact on data policy issues
I. EO Data

• **Essentially electronic information**
  - Facts compiled / stored / archived
  - Raw (Primary) data - Processed data
  - Spatial data - Space information products and services

• **Access to EO data**
  - Subject to state controls on dissemination
  - Dissemination influenced by irreversible commercialisation of space activities
  - Incentives to claim some form of data protection ‘right’, even if only in arranging land / spatial facts
II. Key Legal Issues: IPRs, Freedom of Information & Public Interest

- Licensing Practices
  - Two main modes: through official distributors, or directly to end-users
  - Use restricted to object of licence
  - Maintenance of ownership and IPRs over primary data and derived products

- IP Related Issues
  - Raw data as intangible signals (economic copyright)
  - Additional levels of processing and enhancing data
  - Economic v artistic rights
  - Database protection preventing extraction and unauthorised re-use
II. Key Legal Issues: IPRs, Freedom of Information & Public Interest

• **Public Interest**
  - 21\textsuperscript{st} century information society
  - Common heritage of mankind (inter-generational equity)
  - Information as public good
  - Justification of private power limitation

• **Increased Access and Freedom of Information**
  - Arguments on making EO data more easily available
  - Public good from socio-economic perspective
  - Competition and creativity
  - FOI => lead by US
  - Public interest in certain types of information
III. Legal Framework for RS: International Law

• Five UN Treaties on Outer Space
  - Freedom of space activities (Art. I OST)
  - National authorisation and supervision of space operations (Art. VI OST)
  - Applicability of national jurisdiction (Art. VIII OST)

• UN Principles Relating to Remote Sensing of the Earth from Outer Space (1986)
  - National resources management improvement (I)
  - Benefit and common interest of all countries (II)
  - Protection of Environment (X)
  - Natural disaster prevention (XI)
III. Legal Framework for RS: International Law – UN RS Principles

- **Access to data and sensed state**
  - Freedom of observation - No prior consent (XIII)
  - Sovereignty over own wealth and national resources
  - Access on a non-discriminatory basis and on reasonable cost terms (XII)
  - No obligation for data exchange on private commercial sector

- **Responsibility**
  - International responsibility for national space activities (XIV)
III. Legal Framework for RS: International Law – UN RS Principles

- Only document of universal nature
- Not binding – UNGA Resolution
- RS definition is very narrow
- Does not regulate private players
- Generality of provisions results in poor enforcement mechanism, if at all
III. Legal Framework for RS: International Law – Relevant Agreements

  Cooperation and data exchange (e.g. Tahiti Earthquake, Flood in Pakistan 2010)

- **Tampere Declaration Disaster Communication (1991)**
  (now in Tampere Convention, *ante*)

- **WMO Resolution 40 (1995)**
  Incentive: to broaden and enhance free and unrestricted exchange of meteorological and related data and products
III. Legal Framework for RS: National Regulations and Space Policy Implications

- **National RS Regulations**
  

- **Data Policies and National Laws on IPRs and FOIAs**
  
  - Australia, New Zealand – custodianship
  - USA – open records laws
  - Europe – intellectual property rights

- **Data Policies at Agency / Organisation Level**
  
  - Inter-organisational data exchange (e.g. at WMO level)
  - May 2010: New ESA Data policies enabling greater access
Conclusions

• Lack of efficient international regulation at international level
  - negative effect on the development of business models
    (legal impossibility of controlling foreign satellites)
  - Need for a simpler form of collaboration

• Conversion of the UN principles into a legally binding new agreement? Or compromise approach via space policies?
Conclusions

• Different approaches to EO data
  - Shift from strict control to transparency and easier access
  - Need for flexibility in access to and use of EO data (derivative products containing spatial data)

• Development of revenue-based business models
  - Interaction of spatial data systems with user-friendly systems (controlled access, derivative works)
  - Digital music industry as a model?
Thank You!

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