

Torinoumi, Japan, Tsunami, March 11, 2011; Disaster Charter Activated



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## Remote Sensing & GSG

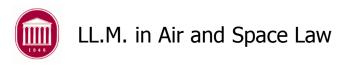
• How is global space governance affected by earth observation?

• What role does RS play in international disaster relief law (IDRL)?

• What does the future of IDRL look like?



- Humanitarian rights
  - —Is there a *legal* right to water, food, shelter, assistance during natural disasters?
  - —Specific provisions of treaties may allow for these rights
  - -To apply absent a treaty, as customary int'l law, State Practice and *opinio juris* needed



• Disasters

—Natural (human-Rights Law) —Man-made (humanitarian law)

- Increasingly reported
  - —~1,200 in 1970s, ~5,287 mid-2000s
  - -Large increase in requests for international assistance



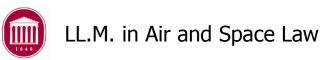
- Increase in non-governmental organizations
- Individuals/small groups
- Red Cross/Crescent Societies



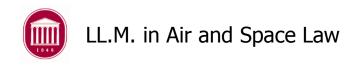


## Tampere Convention

- Designed to reduce telecommunications barriers
  - -Removes licensing issues
  - -Eases import problems for telecommunications equipment
  - -Mandates inventories
  - -Recognizes sovereignty of State receiving the assistance



- Regulatory problems
  - —Weird laws
  - —Unwanted help (clothing)
  - -Visas/denial of entry for relief personnel
  - —NGO legal status under national laws (taxes/banks)



- International Relief Union(?)
- Treaties
  - -Often very application specific
  - —Tampere Convention (telecom)
  - -Convention on Assistance...Radiological Emergency
  - -Code of Conduct for International Red Cross and Red Crescent Movement



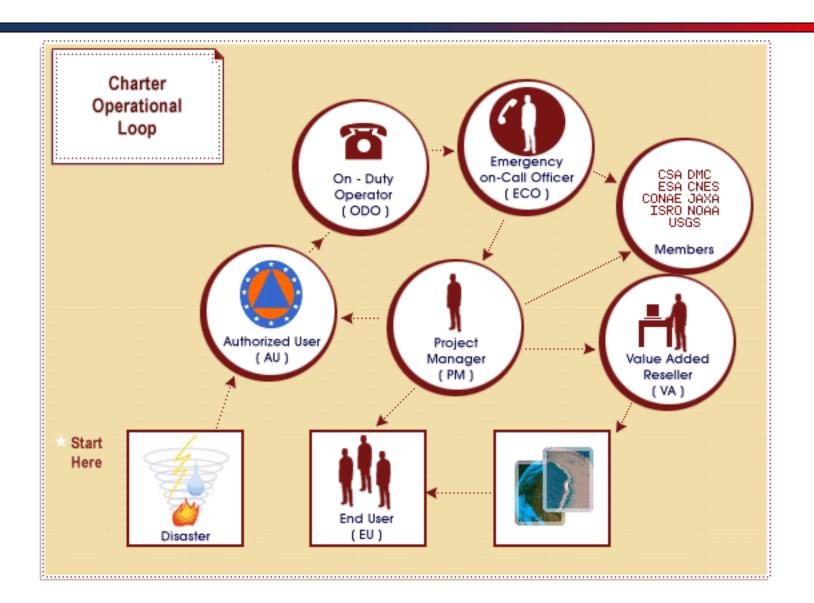
- Regional agreements
  - —Association of Southeast Asian Nations (ASEAN) Disaster Treaty
  - -Hyogo Framework for Action
    - Need for legislation in the field of disaster relief/preparedness
- Disaster Charter
  - —Significant development in *space-based* disaster relief

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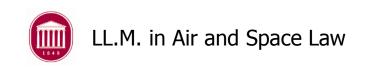
- Purpose: sharing satellite data at all stages of disaster
  - -Before, during, after
  - -But there are time limits
- Members are voluntary

-Charge little to no cost for data





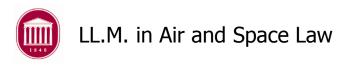
- Limitations
  - -use in emergency situations only
  - -Cannot effectively use in disaster preparedness
  - —Not *binding* on States (lacks the force of a formal treaty)



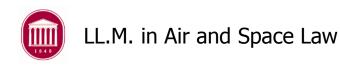
- Legal basis for the Charter
  - -Outer Space Treaty
    - Freedom of use & exploration (Art. I)
    - Using space for common good (Art. I)
    - Promotion of cooperation (Art. IX)
  - -United Nations Remote Sensing Principles
    - Cooperation (principle V)
    - Technical assistance (Principle VII)



- Legal Basis
  - —U.N. Principles Principle XI
    - "Remote Sensing shall promote the protection of mankind from natural disasters. To this end, States participating in remote sensing activities that have identified processed data and analysed information in their possession that may be useful to States affected by natural disasters, or likely to be affected by impending natural disasters, shall transmit such data and information to States concerned as promptly as possible."

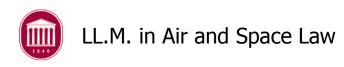


- Problems for remote-sensing as a disaster relief tool
  - —Political (local governments may not work well with NGOs/U.N./Disaster Charter)
  - —Legal
  - -Sovereignty concerns (Visas/security issues)



# U.N. Organizations

- UNITAR (training & research)
- UNOSAT (operational sats.)
- UN-SPIDER (United Nations Platform for Space-based Information for Disaster Management and Emergency Response)
  - -Helps institutional structuring

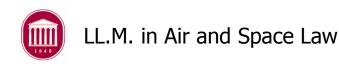


- Legal Barriers
  - -National security
  - -Privacy
  - -Intellectual property
  - -Licensing
  - —Data disharmony
- Would an int'l treaty help?



## Future Considerations

- Three pronged approach
- 1st: maintain current efforts
- 2nd: creation of new IDRL Principles
- 3rd: solidification into hard law treaty



#### Status Quo

• The current status of disaster relief efforts has provided much fruit

• States are increasingly realizing the value of remote sensing in IDRL

• Disaster Charter is being more frequently utilized

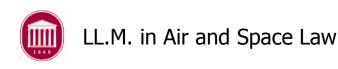


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# **IDRL** Principles

• UN Remote Sensing Principles have achieved some success (though imperfect)

• Similar principles could be established to integrate all space-based resources into future IDRL (RS; GNSS; telecom)



## Treaty Law

- Eventual goal is hard law
- Difficult, but not impossible

• Principles, if respected by States, could help create customary int'l law, which in turn could be codified into treaty



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#### Conclusions



Mississippi River Delta-NASA/Tera