Policy considerations on realizing value: Connecting space and natural resource management

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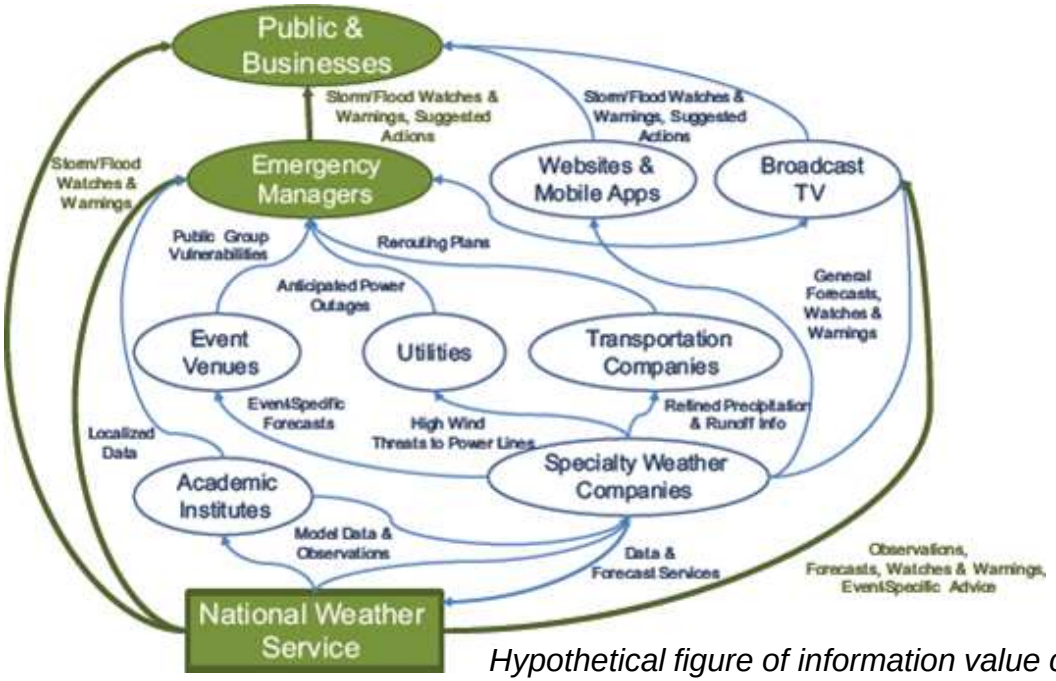
Key policy considerations

I. Data access: Open data sharing
II. Obstacles to data utilization
III. Regional cooperation trends and opportunities
IV. Other

I. Data access: Open data sharing

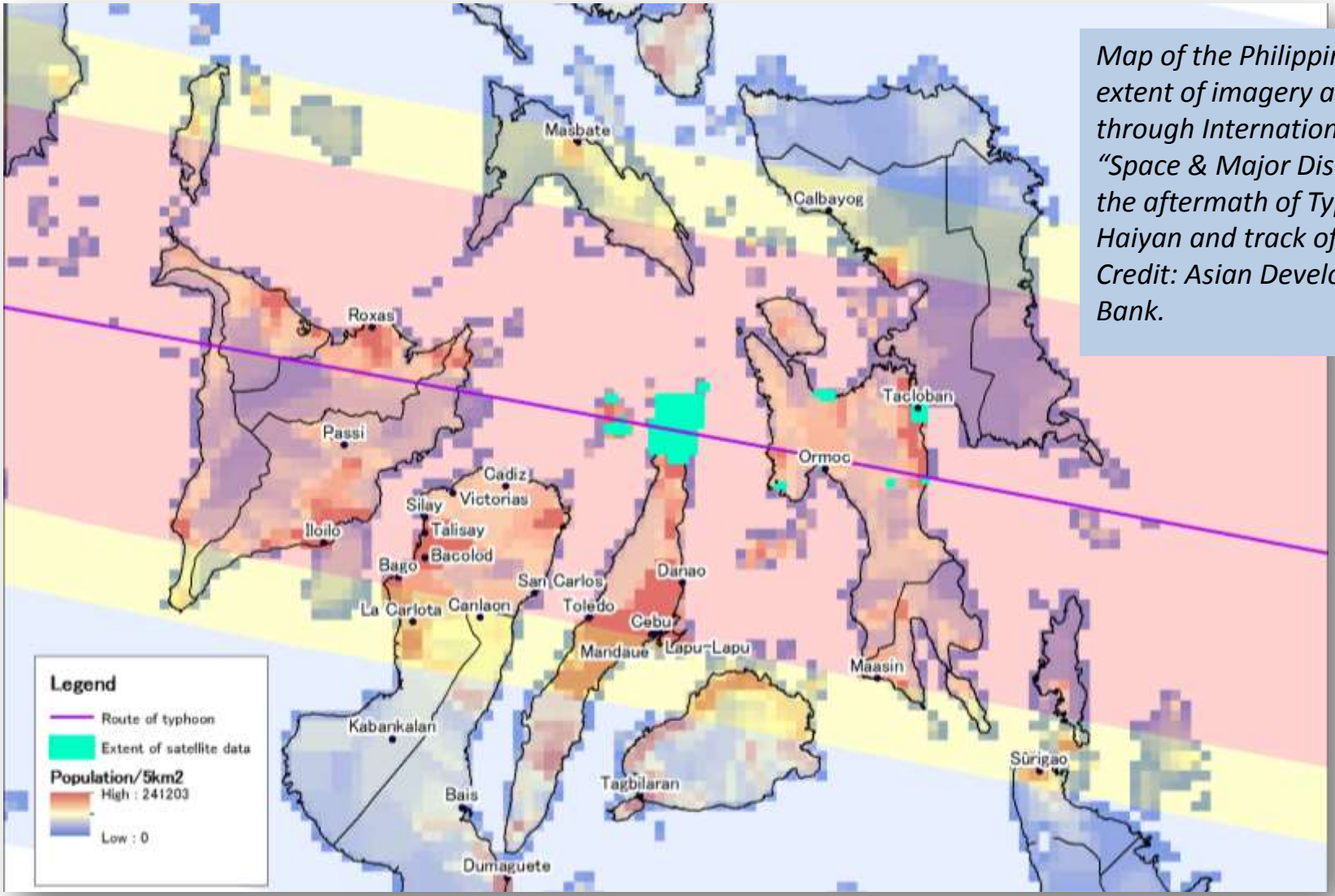
- Early recognition of link between accessibility of public data and societal benefit, scientific progress, and commercial exploitation
- Definition of role of government in emerging information value chain – example: U.S. Weather Enterprise



- Open access data policies now even more common – for agencies, for international programs, etc.
- Assumption that accessibility = realizing value

Hypothetical figure of information value chain in U.S. weather enterprise. Credit: "4 Leverage the Entire Enterprise." Weather Services for the Nation: Becoming Second to None. Washington, DC: The National Academies Press, 2012."

Persisting Challenges: Access is limited



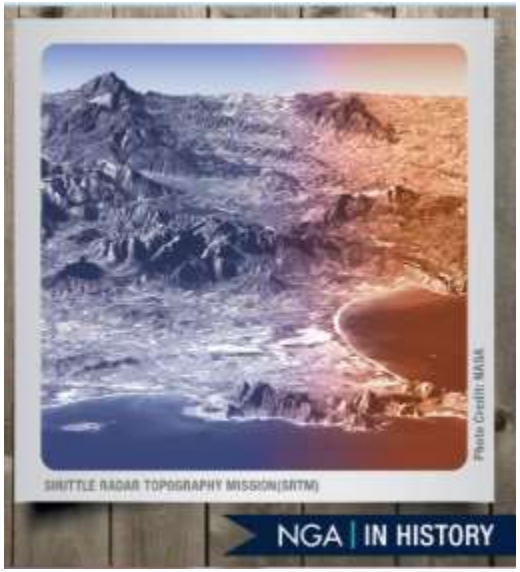
Map of the Philippines showing extent of imagery available through International Charter "Space & Major Disasters" in the aftermath of Typhoon Haiyan and track of the storm. Credit: Asian Development Bank.

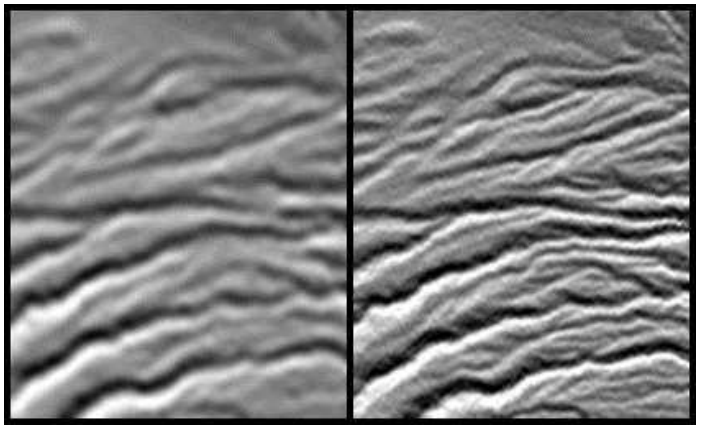
Access is sometimes unclear

"While the debates on open data and the diverse policy and legal documents on the subject widely employ ***the terms free, full and open, these terms are not always used in a consistent manner***."

- *Harris, R. and Baumann, I. (2015) Open data sources and satellite Earth observation. Space Policy (32), pp 44-53.*

The release of certain datasets may not be immediate, may undergo review of access limitations or reusability restrictions.





Left image credit: NASA. Right image caption: Comparison of 90-meter and 30-meter SRTM digital elevation model data of a site in the Crater Highlands of Tanzania. Credit: NASA/JPL-Caltech/NGA.

Access policies must evolve

- Important conversation in the United States resulting from new capabilities being developed/launched/operated by private sector as data source for use in development of models, forecasts and other weather-related information products
- Key challenges: data quality, validity, reliability (including archiving); access and reusability restrictions

How can data access policies evolve to meet new technological trends, while maintaining progress towards greater sharing?

II. Obstacles to data utilization
Lack of technical resources

Pictures from 2015 SRTM-2 capacity-building workshops.

Limited public awareness

"**Addressing Public Awareness to Improve Access to and Use of Space Applications**" - Poster presented at GLAC 2014

Findings

Public awareness efforts can help advance the access to and use of space applications by:

- Exposing potential users to the benefits of space applications and fostering valuable connections among user communities;
- Influencing decision makers towards creating favorable conditions to make good use of trained personnel and technology solutions, specifically with respect to:
  - the enabling environment
  - the costs of organizational change

Recommendations

- Improve coordination between capacity building and awareness efforts when targeting specific audiences
- Develop hybrid programs that attract different audiences
- Encourage the primary agencies responsible for space applications to mount an awareness campaign
- Foster greater interaction among decision makers, users and general public
- Develop measures of awareness at institutional, national and regional levels
- Recognize that outreach/awareness efforts are important not just to share news and findings, but also in support of efforts to promote the access and use of space applications

Interagency bottlenecks

- Interagency bottlenecks impact domestic utilization and international efforts
- Interagency bottlenecks and lack of coordination
  - Gaps analysis rarely government-wide
  - Expanding conversation to include preparedness/emergency response bodies, as well as non-space agencies (example: U.S. NSWP)

III. Regional cooperation trends

- DRM and natural resource management are shared priorities, useful avenues to strengthen regional cooperation
- Regional cooperation can take multiple forms, leveraging shared political goals, cultural heritage, economic partnerships, etc.
- Key benefits:
  - Share resources and expertise;
  - Exchange best practices sharing (technical, non-technical, success stories);
  - Develop niche capabilities
  - Enable political sustainability of missions/programs by aligning efforts with larger policy objectives (e.g. foreign policy, economic policy, etc.)

IV. Other considerations

- Considerations for creating new institutions
  - Mandate
  - Governance structure
  - Resource needs
  - Coordination and partnership
- Explore alternatives that bring space to existing institutions and communities in a meaningful and sustained way (e.g. success story– Sendai Framework for Risk Reduction)

- Other relevant organizations or efforts:
  - Relevant regional meetings: LARS, AARSE, TIGER Workshop 2016, etc.
  - Specialized training resources (e.g., CIEHLYC webinar series)
  - Global programs with regional components, such as GEONETCast

Thank you!