Recommendations and Areas for Improvement

- Stakeholder engagement
 - · Engage end-users
 - Identify benefits of EO to societal segments (public, commercialization of EO data)
 - Identify planned and unexpected benefits (different types of value and impact)
 - Other stakeholders who can accept roles (GEO, OECD, FAO, World Bank)
- Identify best practices for assessing value of EO
 - Stories from across the value chain (value network) and include industry (startups and large companies)
 - Models, templates, definitions of terms (utilize current glossaries)
 - Clarify assumptions, applicability, and limitations of studies
- Need a repository of published studies reporting on the value of EO
 - Sharable database of studies (metadata catalog with links to publications)
- Work with economists to create "matrix" of needs and approaches
 - · Toolbox which resources to use for each issue
 - Interdisciplinary impact assessments (e.g. environmental impacts, resource management, disaster response)
 - Include developing countries (e.g. environmental economics, transportation economics, ...)
- Link value of EO with policies
 - Impact of EO on policy making and on policy compliance
 - Policy impact on EO

Areas for improvement

- Attribution of value considering entire system
- Common framework: definition, terminology, ontology, methodology & documentation
- Communication targeting specific group: policymakers, decision makers, general public etc.
- Valuation of SDIs (& non spatial)
- Easier (shared) access to studies (repository?)

Areas for improvement – Best Pract.

- Value chain / decision trees (broader and better use of)
- Enhanced reproducibility, transparency & documentation, etc.
- Increased use of peer review for more credibility
- Enabling voluntary contributions through core team
- Topical interdisciplinary journal on EO (open access)
- Identifying new uses & new users for EO (short & long term)

Areas for improvement

 Obtain more data on the EO applications and data use (e.g. via Google, Amazon, individual users & data citation & DOIs)

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Areas of Improvement

- Stakeholder involvement and actionable intelligence action to be applied and measured
 - Sharing knowledge is not the end step...it must be actionable
- Temporal aspects
 - Need time to be considered within the benefit analysis
 - Similar to a logic model that shows different potential outcomes; target setting
- Creating guiding principles
 - Evidence based process
 - Testing case study from previous research
 - · Caution against one perfect case study, but can create guiding principles with common elements
- Bring communities together
 - Make sure stakeholders are aware of how to use information available to prevent risk
 - Link EO to public interest; for example, consider youth engagement
 - · Bring interdisciplinary content and communities together
- Find the policy relevant question

How can we develop a common knowledge base and a common set of definitions so we can build upon advances in methods and practices?

- How do we build a bottom-line valuation that has confidence and trust, that economists can live with?
- How can we maximize the value of a repository? (e.g., user-friendly; easy to assess; clear description of methodology and use cases; provides comparability across methods and use cases)
- Shared taxonomy of benefits
- Strategies to build trust in EO valuation
 - Common approaches
 - Validation
 - Peer review

Should we "benchmark" case studies to identify best practices? How?

- Yes, we should.
- Sequence: Practices → Common practices → Best practices
- Sequence: Repository → Adoption rates → Identification of best practices
- What is a framework (principles)?
 - Model that provides definition of benefits, rationale for selection of methodologies, way to interpret what you have
- Questions that need to answer first:
 - What is the nature of the market?
 - What are we trying to evaluate? (e.g., impact v. contribution)
 - Who is asking the question? What is the decision that they are trying to make?
 - Are there spillovers? (A lot of spillovers when talking about data)