Measuring the Value of Environmental Satellites: An International Effort

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CGMS Socioeconomic Benefits Tiger Team

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Coordination Group for Meteorological Satellites (CGMS)

- Exchanges technical information
- Harmonizes meteorological satellite mission parameters
- Encourages complementarity, compatibility and mutual back-up

16 Members

6 Observers
SETT Activities

- Completed literature review
- Identified of socio-economic expertise in CGMS members, the WMO, and in related institutions
- 3 Workshops
  - Developed of Guidance Document for CGMS Members (In Progress)
    - Identified and described relevant economic methodologies
    - Outlined common terminology
    - Final editing and distribution
  - Agreed on pilot socioeconomic benefit study (In Progress)
    - Identified what to measure
    - Drafted concept note
    - Seeking inputs/resources to move forward
Literature Review:
How to optimize investment in observing systems
Literature Review:

The potential impact of use of Earth observations for volcanic ash advisories.
Approaches

**IMPACTS/VALUE OF INFORMATION**
(Economists, Social Scientists, Communicators)

**ALL OBSERVING SYSTEMS**

**Meteorological Satellite Systems**

- Japan Meteorological Agency Applications
- NASA Applications
- Other Applications

**macro**

**micro**
Key Elements

- Context
- Framing the study
- Methodologies
- A general framework
- Lessons learned
- Key terminology
- Example studies
Pilot SEB Study

Purposes

• Case study of best practices/lessons learned for CGMS
• Assessment of the socioeconomic benefits of improved operational sea ice products resulting from enhanced satellite data
The remoteness of the Polar Regions limits the amount of direct observation of sea ice. Hence, more than 95% of the data used in sea ice analyses are derived from the remote sensors on polar-orbiting satellites. Sea ice analyses and forecasts are primarily prepared using satellite imagery and ice reconnaissance.” (U.S. National Ice Center)
“Improved” How?
Value…
Of What? To Whom?

Marine Transportation

Commercial Fishing

Native Communities
Previous Analysis

• Canadian Ice Service savings from RADARSAT-1 million/year = CAN 7.7

• Savings from improved routing information to commercial shipping = CAN 18 million/year

• Canadian Coast Guard savings million & 7 million/year. = between CAN 3.6
Next Steps

• Finalize & socialize the draft concept note
• Identify resources available for the SEB study:
  • Operational analysis
  • Economic analysis
• Develop a plan for communicating the results
The Way Forward

• Distribute Guidance Document to CGMS members

• Move forward with the pilot Socioeconomic Benefit Study (SEB) and identify resources needed for successful completion
Thank you.

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