PERSPECTIVES ON VALUATION

APPROACHES TO VALUING THE SOCIO ECONOMIC VALUE OF EARTH
OBSERVATIONS FROM SPACE

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VALUATION STUDIES IN AUSTRALIA

Department of Finance and Department of Resources in support of budget submissions

Geoscience 2010
Geospatial in Geoscience Australia (2010)

Geoscience Australia in support of program proposals
Earth observation from space (2010)
Earth observations from space (2015)
THE NATURE OF VALUE

- Earth Observation From Space generates both use on non-use values
- Methodologies must match the characteristics of value
PRODUCTIVITY APPROACHES

• Need to estimate productivity impacts
  • Higher output, lower costs
  • Better decisions

• Requires both specific productivity impacts plus levels of adoption by sector

• Extrapolating from case studies can be challenging

• Surveys, workshops, case studies

• Assessing direct and indirect benefits requires Input-Output analysis or CGE modelling
ECONOMIC WELFARE APPROACHES

- Requires estimation of the demand and supply curve
- Stated preference
- Revealed preference
- Willingness to pay survey techniques can be expensive
- Low response to surveys
- Removing bias a key challenge
- Need some innovative approaches
OPTIONS ANALYSIS

An option is the right but not the obligation to make a further investment.

Objective is to avoid extinguishing options too early.

Each step produces information on which to make more informed decisions.

Appropriate in areas of high uncertainty.
ISSUES FOR ANALYSTS

Who is the audience?
- Government decision makers
- Industry for investment, pricing or advocacy
- Research institutions for funding
- NGOs

What is the nature of the products and services
- Public good
- Private good

How to gather data.
- Willingness to pay
- Case studies for productivity and adoption levels
- Benefits transfer

Accommodating uncertainty
- Options valuation?
ISSUES

• Consensus on definition of the sector and approaches to evaluation is highly desirable.

• Need a body of work that would facilitate cross checking and helping countries work up their own assessments.
AUSTRALIAN SPACE AGENCY FIRST BIRTHDAY

Australian Civil Space Strategy 2008 to 2028

- Size of the industry
- Contribution to GDP
- Employment
- Research and innovation
- Education (STEM)
- Awareness
CASE FOR FREE DATA COLLECTED BY GOVERNMENTS

- Short run marginal cost is low and for data made available through web based services is close to zero.