

Decadal Survey Update to SSB

Mark Abbott

Oregon State University

Co-Chair, Committee on Earth Science
and Applications from Space

Disclaimer: These slides represent a personal assessment of the issues discussed by the CESAS. This document should not be cited or quoted because the views expressed do not necessarily reflect those of CESAS, SSB, or the NRC.

2nd NRC Decadal Survey in Earth Science and Applications from Space

- Fundamental considerations
 - Consensus recommendations on an integrated approach
 - Covers 2019-2028
 - Programs carried out by NASA, NOAA, and USGS
 - Consider
 - Science priorities
 - Implementation costs
 - New technologies and platforms
 - Interagency partnerships
 - International partners

In Addition To Tight Budgets...

- Consider the issues associated with continuity
 - Balance of new vs. continuing measurements
 - Climate-centric architecture
 - And more climate measurements shifted from NOAA to NASA
- Role of the “National Plan for Civil Earth Observations”
- Weather and climate missions
- Future approaches to land imaging

Elements of the Draft SOT

- Assess scientific progress since first Survey
 - Balance of science and applications
- Assess gaps and opportunities
- Prioritize measurements for key science “targets”
 - Open up the scope of mission concepts
 - Identify criteria that may warrant re-examination of priorities
- Realistic budget scenarios

SOT, continued

- Develop a robust, resilient, and balanced portfolio
 - Decision rules to help navigate the unexpected
 - Include R&A as well as data management
- Expect agency-specific tasks from NOAA and USGS
 - For example
 - New approaches to research-to-operations transitions
 - Risk assessment and tolerance
 - Etc.

Status

- NASA, NOAA, and USGS have had the draft SOT for about a month
 - Expect a unified response in the near future.
- Other parts of the NRC (Boards covering atmospheric sciences, oceans, hydrology, and the solid Earth) will be collaborators to the SSB
 - Includes membership and staffing
- Earliest start for the survey now appears to be March 2015
 - Nominations cannot be processed until there is a contract and an approved study.

The Passover and Other Questions

- Why is this survey different from all other surveys?
 - Requires study of the Earth as a system
 - Research driven by user needs
 - Science informs policy
 - Inherently multiagency; R20 is a perennial issue
- How will this survey differ from the inaugural survey?
 - No longer appropriate to recommend towards an aspirational budget
 - CATE for big ticket items
 - Likely that the science to be “valued” to avoid having one recommended activity grow at expense of all others
 - Increased opportunities to consider “new space” ideas