

# CESAS RESPONSE TO MIDTERM REPORT

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August 27<sup>th</sup> 2024

# GENERAL COMMENTS

- CESAS has reviewed and discussed the Midterm Review in closed sessions and will do so further in upcoming open sessions.
- We extracted seven topics for which Midterm recommendations either refer to CESAS directly (Topic 1) or for which CESAS attention seems warranted (Topics 2-7).
- We have a preliminary sense of priorities and possible actions.

# GENERAL QUESTIONS

- We seek guidance from the Midterm Review committee chairs regarding our interpretation and priorities to ensure our understanding matches their intent [for midterm]
- We seek guidance from sponsors regarding priorities and actions [for ESD, NOAA, USGS]
- How was the Midterm Review received by sponsors? Are there specific issues CESAS should be aware of? [for ESD, NOAA, USGS]

CESAS committee members identified 7 areas where CESAS had suggestions/questions about the mid-term and how we can best provide support.

1. Ensuring alignment of ESD programmatic changes with Decadal Survey balance and priorities
2. Understanding and strategizing budget shortfalls
3. Community communication, needs assessment, constituency, and engagement
4. DEI and Access
5. Landsat/SLI
6. Balance between continuity and exploration
7. Guidance for the next Decadal Survey

**Cross-Cutting Topic - Greater CESAS Engagement with sponsors (Midterm includes references in multiple locations)**

## COMMENTS

- The Midterm Review makes multiple references to increased engagement with CESAS prior to NASA making changes to the Decadal Program.
- A key question is then when and how to do that.
- Improved engagement along these lines will help us address any topic raised within the Midterm

## QUESTIONS

- What does that engagement look like (how often, what format)?

# Topic 1: Ensuring Alignment of ESD Programmatic Changes with Decadal Balance and Priorities

(Recs on p. 32 and 34, along with Recs on specific programs p. 47-49)

## COMMENTS

- The Midterm refers specifically to CESAS as responsible for following up on this topic.
- In particular, the **recommendation says ESD should consult CESAS (preferably in advance) about changes to the Decadal Program.**
- Providing feedback and community input for this topic is something Karen wanted us to focus on - with the Midterm guidance, perhaps her need from CESAS is now different.
- Through the Recs on p. 47-49, the Midterm provides substantial guidance on recent Decadal Program changes - doing work for us that we might otherwise need to do.
- The Midterm notes that ESD has not fully complied with the Decadal decision rules. We might choose to explore this with ESD if it is productive for future decisions.
- **CESAS could do more if/when asked to review programmatic changes and ensure Decadal alignment.** Better (and earlier) communication is needed to accomplish this.
- Current communication methods are not effective for reviewing program changes and providing feedback.
- Currently, ESD presentations are too general for CESAS to understand and help guide programs.
- Currently, CESAS is also not well positioned to provide good feedback. During meetings, it lacks sufficient time to discuss changes and provide feedback after having just hear about the issues.
- The Midterm was frustrated by "why are we finding out about this now", and CESAS has experienced the same concern. Earlier dialogue that anticipates issues is desirable.
- The comment on p. 33 is important: **"NASA's plans, as presented to the committee, do not yet appear to successfully integrate the various program elements into a comprehensive and balanced plan for Earth system observation".**

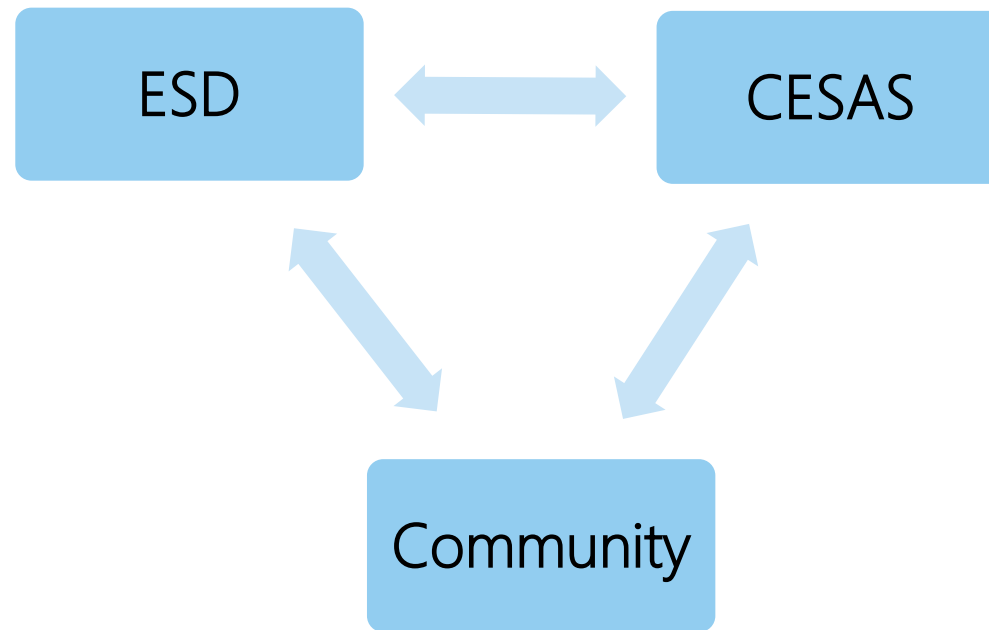
## QUESTIONS

- Has the balance between directed and competed projects (Explorers, Venture) matched the Decadal's priority for promoting competed projects? Is the cadence of competed opportunities sufficient? Are any adjustments needed and how can CESAS help? [for ESD]
- Has the Decadal's emphasis on not exceeding cost caps been realized? Are any adjustments needed and how can CESAS help? [for ESD]
- Has the Decadal's emphasis on partnerships for sharing cost been realized, recognizing the already strong emphasis of NASA/NOAA/USGS in this area? Are any adjustments needed and how can CESAS help? [for ESD]
- regarding the recommendation on decision paralysis, how can CESAS help? [for ESD]
- Do we have a definitive description of what constitutes a "balanced plan for Earth system observation" (Midterm provides partial guidance)? If not, how do we do this? [for ESD and Midterm]

## Topic 1: Ensuring Alignment of ESD Programmatic Changes with Decadal Balance and Priorities

(Recs on p. 32 and 34, along with Recs on specific programs p. 47-49)

### Planning, Execution, Communication



*Need to:*

- have a plan built around DS*
- balance the execution of the plan and project changes given changes in the budgetary landscape*
- broadly communicate challenges and changes in a timely manner*

# IDEAS

- **Improve CESAS reviewing of the Decadal program.** Restructure our ESD interactions to be more effective regarding Decadal Program monitoring.
  - Set an expectation that program changes are discussed early, broadly, and often.
  - Define a set of reporting metrics, perhaps structure as “stop light” charts. This would ensure that ESD provides the information needed by CESAS and CESAS stays focused on those issues within its charter. One example is “maintaining the Decadal’s desired balance between directed and competed programs”. Another example is “adherence to the Decadal’s guidance for priority on staying within the cost cap”.
  - Share prepared presentations and information in advance of meetings and telecons. ESD would provide requested information in advance and CESAS would review prior to meetings and telecons to have a structured response.
  - Ideally, with the right set of metrics, and targeted information provided by ESD, CESAS will provide useful feedback within its limited timeframe for discussion.
  - We could choose to increase our open meeting/telecon cadence for sponsor interaction if it would help.
  - We would need to decide if this is within our charter or does it go beyond our scope by getting too involved in implementation?
- **Help with a better definition of a “balanced” program.** Identify guidelines about what constitutes a “balanced plan for Earth system observation” [e.g., 1) Midterm (p. 33) notes this includes accounting for beginnings/ends of programs, maintaining healthy workforce/community; 2) Decadal expected balance between directed and competed projects]
- **Suggest specific programmatic changes to increase Decadal robustness.** CESAS can provide guidance regarding programmatic improvements to the Decadal Program and its constituent projects.
  - It might be helpful to re-read the section of the 2007 Decadal leading up to the recommendation: “NASA’s ESD should establish a cross-mission Earth system science and engineering team to advise NASA on execution of the broad suite of decadal survey missions within the interdisciplinary context advocated by the decadal survey. The advisory team would assist NASA in coordinating decisions regarding mission technical capabilities, cost, and schedule in the context of overarching Earth system science and applications objectives.”

## Topic 2: Dealing with Budget Shortfalls

(Recs on p. 27 and 46)

### COMMENTS

- This topic reflects the tactical issue of how budget shortfalls have impacted this Decadal execution.
- This is a “**root cause**” topic behind the programmatic changes (Topic 1). Budget shortfalls force you to make programmatic changes.
- A significant portion of this was due to **issues outside the Decadal Program** (e.g., top line decreases, POR growth), which squeezed the budget available for the Decadal Program. **The Decadal did not include guidance on how to deal with such issues.**
- The Midterm assessed the shortfall causes, and CESAS has done its own assessment. The two approaches are not fully aligned, so more could be done if it would be productive.

### QUESTIONS

- o Does ESD want CESAS to provide a more detailed breakdown of the budget shortfall causes? (This is a backward-looking analysis.) [for ESD]
- o Alternatively, CESAS could spend time identifying the types (but not amounts) of shortfall causes and provide guidance for dealing with each in the future. (This is a forward-looking analysis.) [for ESD]

## **Topic 3: Community Communication, Needs Assessment, Constituency, and Engagement**

*(Recs on p. 27, 49, 52-53, and 55)*

### **COMMENTS**

- This includes **both general guidance and specific guidance for two topics (modeling, AI)**.
- CESAS believes better **information exchange** is important to addressing all of these issues.
- CESAS could be more engaged with sponsors, earlier in the cycle as issues arise.
- The overall topic includes some items that are important for sponsors but may not need direct CESAS attention. CESAS could monitor progress.

### **QUESTIONS**

- Do our sponsors want increased or changed interaction? [for ESD, NOAA, USGS]

### **IDEAS**

- Work with sponsors to support community interaction at Town Halls (AGU, AMS).
- Add community input session in CESAS meetings and advertise.
- (Some relevant ideas are presented within the other topics in this document.)

## Topic 4: DEI and Access

(Rec on p. 29 and 52)

### COMMENTS

- The report puts a strong emphasis on this topic.
- We believe the Midterm intended this to be an action for ESD, not for CESAS. CESAS can offer to support ESD as needed.
- The **cadence of competed opportunities** is directly related to this topic (as noted previously in the Venture lessons-learned study).

### QUESTIONS

- How can CESAS help? [for ESD]

## Topic 5: Landsat/SLI

(Rec on p. 41)

### COMMENTS

- This recommendation gets at the issue of **LS/SLI not being an equal partner** when it comes to budgets and planning, the result being cuts in other Decadal priorities.
- It is a rich topic, with significant impact on ESD and the Decadal Projects.

### QUESTIONS

- Does the budgetary relationship imply that Landsat is higher priority than other Decadal recommendations?
- Does it implicitly receive highest priority in the Decadal budget wedge (perhaps reflecting that it is inherently a POR commitment)?
- Should changes be made for the next Decadal regarding the Landsat/SLI element? [for ESD, USGS]

## **Topic 6: Balance Between Continuity and Exploration**

*(Section on p. 53-54, Finding p. 54)*

### **COMMENTS**

- This big topic, with growing importance that is highlighted in the Midterm report and briefing, yet it is only supported with a Finding. Tied to this is NASA's relationship with other agencies (e.g., NOAA partnership on p. 44-45).
- Large studies (e.g., KISS study Continuity of NASA Earth Observations from Space: A Value Framework (2015)) have tackled it without achieving a definitive answer so far.

### **QUESTIONS**

- How can CESAS add value? [for ESD, NOAA, USGS]

## Topic 7: Guidance for Next Decadal

Chapter 5 is dedicated to this topic. Several of the topics above are included as part of this chapter

### COMMENTS

- The Midterm Review provides some strong guidance (a focus on DEIA, engagement, and balance), but more is needed.
- This is a big topic, but central to the CESAS charter.
- Some major issues need to be addressed. Among these are:
  - *Expanded Decision Rules.* Were the decision rules sufficient, and what could be changed/added?
  - *Dealing with External Budget Pressures.* How ESD should deal with external funding pressures (not due to Decadal project growth) and how they squeeze the Decadal Project budget.
  - *POR Growth Impacts and Management.* How ESD should manage POR growth that squeezes Decadal Project budgets.
  - *Rules for Impacting Next Decadal.* How ESD should deal with issues beyond the Decadal period (i.e., changes to planned project runout and impact on next Decadal).
  - *Improved Community Interaction.* Improved process for community interaction during Decadal preparation and execution, notably role of CESAS.
  - *Better Integration of LS/SLI into Planning.* How SLI/LS should be integrated into Decadal Program prioritization and budget tradeoffs.

### QUESTIONS

- Did the Midterm Review expect CESAS to take this on in a more comprehensive way? [for Midterm]

### IDEAS

- *Scope a CESAS Guidance Effort.* Identify topics that CESAS could explore from among the list provided and decide on a means for CESAS to provide guidance.



**THANK YOU**

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