

DRAFT

SAB Work Plan Topic: Open Data / Open Science

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Description of Planned Work:

NOAA has a long history championing and operationalizing open data and open science (ODOS). Cloud computing, the use of containers, and other technology advances have created many opportunities for accelerating open data and open science, but it can be challenging balancing contemporary expectations for open data and open science with the practical realities of working with complex legacy NOAA systems and scientific cultures.

There are quite a few reports about the need for open data and open science, with sometimes long lists of requirements. These reports provide a variety of advice, but sometimes can be less than helpful in describing the nuanced trade-offs required and considerations involved when balancing a fixed budget, a fixed project period, community norms, and legacy systems with large accumulated technical debt, which is the case for many NOAA projects and initiatives, against rapidly evolving technologies and expectations related to open data and open science.

In this report, we will focus on open data / open science, its applications to NOAA, and, in particular, questions and frameworks that SAB members can use when listening to presentations to the SAB about open data and open science.

As part of the process of gathering information for this report, we will ask a number of speakers to provide responses to the following questions and discuss their responses and related questions with the Working Group.

1. Do you use a particular framework or set of principles for open data/open science in your mission and the work of your office/division? If so, can you please describe these? Are the principles helpful? Do you have any suggestions for how they can be improved?
2. What are some of the ways that applying open data / open science principles are different for the work in your office/division than would be for other components of NOAA, and more generally, for other disciplines or application domains? Or if there are no relevant differences, please let us know.

3. The expectations (eg. from open data to open FAIR data with license, or from open access publication to open access publication with DOI for all data and software so that results can be reproduced) for open data/open science are growing and the underlying technologies are rapidly evolving. How does this impact your mission? Have you developed any approaches or strategies for managing the changing expectations and evolving technologies?
4. What are some of the challenges that you face applying open data/open science principles to your mission? Are there any tradeoffs between meeting your internal mission and serving the user community with open data/open science? Are there any criteria you use to manage these tradeoffs?
5. What do you need or what are you missing to meet these challenges?
6. What are some new or different opportunities that open data / open science practices could better enable or inspire? How will this help you support your mission and user community?
7. How do you evaluate whether the open data / open science approach you are using for your mission serves the needs of your user community? What are some of the barriers and impediments providing open data/open science to your user communities? How varied is your user community and what kinds of challenges does that create for meeting their open data / open science expectations?

Deliverables:

The Working Group (WG) will write a report covering some aspects of open data / open science and their applications related to NOAA, with a focus on some of the challenges, trade-offs, barriers, and resource needs described above. We will also prepare a presentation to accompany the report.

Timetable:

Months 2022	Activity
March - July	Presentations by NOAA and outside experts to the ODOS Working Groups
April	The ODOS Scoping Document presented at

	the Spring SAB Meeting
Aug - Oct	Drafting and review of WG Report
Nov / Dec	Preparation of final report and presentation at SAB Fall Meeting

Participants: SAB Members, NOAA liaisons, NOAA Federal Advisory Committees, and other collaborators working on this Topic, including the following: Brad Colman, Scott Glenn - EISWG Co-Chairs (or some other member of EISWG as appropriate)

Resources needed: We need some staff assistance and propose to continue using Courtney Edwards.

Potential Challenges:

The topic of open data and open science is quite broad and there are two main challenges when writing a report such as the one proposed here. First, scoping the effort narrowly enough so that the information can be gathered and the report written in the proposed time frame. Second, focusing and framing the effort so as to be useful to NOAA.

