

## **What SLR Stakeholders Really Want: We asked!**

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The Study of Environmental Arctic Change (SEARCH) is concerned with a number of changing climate issues, among them land-ice loss and sea level rise (SLR). The SEARCH Land Ice Action Team (LIAT) is tasked with engaging stakeholders in need of "the best" projections of future sea level. Our team has taken a proactive approach to this engagement, inviting SLR stakeholders to join the team, attending stakeholder community conferences, and soliciting stakeholder needs through personal communication and on-line surveys. The results have confirmed some of our (and perhaps your) preconceived thoughts, but also have resulted in some surprising discoveries.

The extreme diversity of the SLR stakeholder community is perhaps its most challenging characteristic when considering the most useful form of future SLR knowledge to satisfy stakeholder needs. All stakeholder respondents desired credible, well-vetted, information, but while most agreed that federal-based sources, such as the National Climate Assessments, were best, not all agreed. Some noted a mistrust of information coming from a distant source and preferred state or even more local knowledge. Fully probabilistic projections were expected to be preferred, but a scenario-framework was more commonly requested usually justified by the stakeholder's need to communicate the information to other audiences farther removed from the scientific community. Map-based output was very popular, but less desired by some if it was accessed from a website such as Climate Central that is viewed by some respondents as "politically left-leaning".

Underscoring our findings is the conclusion that trustworthiness of scientific information is an inescapable characteristic of SLR projections. Stakeholders consider this characteristic carefully but it is important for scientists to realize that stakeholders are also very involved in assigning this level of trustworthiness, not just the science community. The assigned level of trust is based on a variety of factors, including stakeholder/science interactions on other scientific issues and even some stakeholder experiences unrelated to scientific knowledge, such as regulatory issues. It is important to recognize that some of these factors lie beyond the scientific SLR community's control, but this does not absolve the scientific community's responsibility to address this critical trustworthiness issue. Working to increase stakeholder trust in the science communities that produce projections of future sea level must be part of the effort to effectively communicate those projections. An ideal way to increase trust is to directly engage stakeholders in their efforts to incorporate SLR projections in their work. In short, stakeholders not only need to know the scientific knowledge, they need to know the scientists that produced it enough to increase stakeholder trust that scientific knowledge.

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