

Appendix H Additional lessons learned from decision framing

This appendix is a companion to section 7.1, and provides additional details about lessons learned during the decision-framing step of the CADS project (see also section 3.1).

H-1.1 Project start through webinar series

It was valuable for the leadership team to spend several conference calls to develop the initial decision framing before engaging stakeholders. Without a clear starting focus, it would have been difficult to communicate with stakeholders about the aims and intended scope of the project.

Having a core team of stakeholders provide feedback on the initial decision frame and project design was an essential starting point for engaging a broader suite of stakeholders. Discussions during this early webinar helped ensure that the decision frame and planned products would meet the needs of stakeholders concerned about conservation in SF Bay. The core team could be used much more effectively, however. One call with this core group of stakeholders is not enough to get thorough feedback on the initial decision framing and project design. Additional phone calls with a core team would likely reveal gaps in resources needed to adequately engage a broader suite of stakeholders and to capture their inputs during the webinar series and workshop. With enough notice, a core team can assemble and provide many background and summary materials on existing conservation plans and planning tools. Through deeper engagement and communication with a core team early in the project, this could ensure more dedicated commitment and support throughout the project.

Assembling and organizing information on existing conservation plans was essential for ensuring that the CADS Phase 1 recommendations would be compatible with previously adopted conservation objectives and the diverse set of stakeholders working to conserve SF Bay. Without support from a core team of stakeholders, it was quite difficult for the leadership team alone to carry out this task; the leaders had underestimated the time it would take to assemble these key pieces of information. Due to lack of internal capacity, the focus was on reviewing existing conservation plans for the stated conservation objectives and proposed management actions. Missing was a review of existing and relevant decision-support tools, which would have been made possible through a deeper engagement with a core team of stakeholders. Having a summary of these decision-support tools would have been helpful to better inform the upcoming expert elicitation process.

The series of four orientation webinars with a broader suite of stakeholders was valuable for discussing the decision frame and sketching out some of the key ingredients for arriving at recommended resource allocations for each subregion. Having the leadership team respond to questions from stakeholders that arose throughout the webinar series was important to keep the process open and transparent. That said, it was a great challenge for the leaders to provide thorough responses with usually only one week between webinars on top of assembling the necessary preparatory materials and presentation for the subsequent webinar. Again, it would be helpful to have the support from a broader suite of stakeholders and a project manager that can delegate and track tasks during these hectic periods of the project. With a higher level of organization and capacity during the webinar series, the leaders working with a core team can develop a more firm structure of decision elements (e.g., objectives and action categories) and supporting materials (i.e., summaries of conservation plans and decision-support tools) to be used for arriving at draft recommendations for each subregion during the upcoming workshop.

Although not a primary focus, the webinar series was also useful for describing how structured decision making (SDM), along with its own set of jargon, would be applied as a process in reaching these recommendations. Despite an effort to downplay the importance of the process in favor of getting to useable products for decision-makers, stakeholders indicated that too much time was spent on describing the process. It is difficult to find the right balance, but one insight we had was that when describing SDM the terminology should be clearly defined and whenever possible the terms should match those that are familiar to the stakeholders. For example, SDM uses the term ‘fundamental objectives’ for the ultimate desires of stakeholders when making a decision. In this report, we use the term ‘conservation objectives’ instead, because it is more familiar to stakeholders and avoids using unfamiliar jargon. The original jargon of SDM was used during the webinar series when describing the process in an effort to stay more general, but it was confusing for the stakeholders to not use more familiar terminology within the decision context. This led to a lot of time being spent on defining and re-defining terms, time that could have been more efficiently devoted to the CADS process.

H-1.2 Stakeholder workshop

The workshop that followed the webinar series was critical to the success of CADS Phase 1. During plenary, broad agreement was reached about the overall structure of the decision to be made within each subregion. There was also general consensus about key ingredients for subregional decision tools, including conservation objectives, action categories, future scenarios for resources and external environmental drivers, and an approach to develop resource allocation options. Each subregional breakout group developed a draft decision tool (comprised of an influence diagram showing linkages between the key ingredients) that was to be completed following the workshop. Having a clear set of guidelines (Appendix D) is key to having the breakout groups provide the needed products by the end of the workshop.

Timing.-The leaders originally anticipated that the subregional decision tools would be developed and finalized through the orientation webinar series and stakeholder workshop alone. Originally, there was great concern of asking for too much time commitment from stakeholders and maintaining the CADS process as an efficient use of their time. The leadership team learned through the webinar series, however, that a number of the participants were concerned that there would not be enough time to complete these intermediate products to their satisfaction by the end of the workshop. At the workshop, then, the leadership team used a more scaled-back approach that allowed more time to develop complete drafts of the necessary ingredients, which could then be refined through further work after the workshop. Given the scope and complexity of the tasks during the workshop, however, 2.5 days felt very rushed. The 2.5-day format was originally chosen as a result of feedback from the 2011 workshop and input from stakeholders that they would be unable to commit to a week-long process, especially given the number of participants that were invited to be involved in CADS. Having 3.5 days would allow the stakeholders to complete their draft subregional decision tools with enough time to review each of them in plenary on the final morning. With only 2.5 days, the subregional teams struggled to complete their draft decision tools by the end and there was no time to discuss them in plenary and to discuss next steps. Furthermore, it is crucial to communicate clearly with stakeholders that the intended product of the workshop is a draft set of decision tools that will

be refined with a core group of stakeholders following the workshop. Otherwise, there is a sense of disappointment about unfinished work.

Some stakeholders believed that it would have been better to wait until BEHGU was finalized before holding the CADS workshop. When the CADS Phase 1 project was funded, BEHGU was scheduled to be completed in mid-2014. The leadership team therefore postponed scheduling the webinar series and workshop until spring/summer 2014. At that time, however, finalization of BEHGU was delayed until July 2014. In consultation with BEHGU leadership, the CADS leadership team decided to schedule the CADS workshop in May and the preparatory/orientation webinars during April. They reasoned that by this time, the draft subregional BEHGU recommendations would be available and could be incorporated in the CADS process. As it turned out, the recommendations were drafted but not finalized before the workshop in May, but we did incorporate the draft recommendations into the CADS process as thoroughly as possible. Coordination with leaders of parallel conservation planning processes and clearly communicating with a broader suite of stakeholders about the paired timelines is important to maintain stakeholder buy-in and avoid criticisms of lack of coordination at the leadership level.

Although the plan was to complete influence diagrams and a scaled-back elicitation process during the workshop, the amount of time needed to refine the decision-question and review the SDM process consumed a significant portion of the workshop time. Some participants expressed frustration with having committed the time and not finalizing a product. Therefore, a process was developed whereby each of the subregional working groups would continue to review and refine their decision models over time. This enabled the process to better incorporate the BEHGU recommendations as they were finalized, allowed participants to incorporate recommendations from other regional planning documents, and allow for review and refinement of the subregional decision tools. Some participants who were either frustrated or had not expected to commit further time to the process decided not to continue, while others checked in at key points in the process. The continuation of the decision tool development also engaged some additional participation from individuals who were unable to attend the workshop,

Spatial scales.-Stakeholders that were more accustomed to working together and developing conservation plans for a particular subregion were relatively complimentary of the approach used during the workshop. In particular, they appreciated splitting stakeholders into subregional groups to work toward recommended subregion-specific resource allocation options. Others who were more accustomed to focusing on individual projects expressed concerns that the scope of the decision was too broad, or they at least struggled to see beyond the spatial boundaries of the locations where they worked. Some stakeholders wanted to start by applying the structured-decision-making approach to finer-scaled, project-level decision questions rather than starting with such a complex multi-scaled one. The project proposal for CADS Phase 1 was part of a larger proposal that included a second phase that focuses on developing recommendations for a particular conservation area, using San Pablo Bay National Wildlife Refuge as a case study. The leaders believed that the SF Bay-wide ecosystem and subregion-specific decision tools would inform the structure of a refuge-specific decision tool, embedding it within the broader regional-scale decision question. A challenge, then, in

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CADS Phase 1 was developing a culture of subregion-scale collaboration that had not existed before the project in some of the subregions. Time must be invested in developing these collaborations, ideally in a workshop setting, before expecting progress on identifying recommendations for resource allocations that span multiple stakeholders.

Process and preparation.-It was very valuable distributing a hardcopy information packet containing information about the project, detailed progress to date, and a guide to workshop breakouts (Appendix D). Lacking, however, were additional documents describing existing decision-support tools and other conservation planning documents that would have been useful as reference particularly during breakout sessions. In particular, some stakeholders involved with the BEHGU commented that the BEHGU segment-level recommendations and future sediment and sea-level rise scenarios were not presented in a way that was useful to the participants.

Although the collaborative decision analytic (CDA) and embedded structured-decision-making (SDM) approaches (Thorne et al. 2015) were valuable for generating products needed to arrive at subregional recommended allocations, many stakeholders struggled to follow along with the process due to their lack of familiarity with it. Aside from the leaders and core team, almost none of the stakeholders had previous experience in applying CDA or SDM to addressing a conservation decision question. Even though preparatory materials were made available and presented briefly during the webinar series, it was not sufficient for ensuring everyone could follow along during the workshop. As stated above, the codified SDM terminology should be translated into a familiar language for all the participants. The difficulty, however, is that describing the SDM process in terms that newcomers can easily understand can take multiple days of focused discussion and working through examples before users gain a basic understanding of the process and can use it with simple conservation projects. Finding a common set of terminology across a broad set of stakeholders under any context presents a great challenge. Even if a majority of stakeholders follow a common set of terms, there will likely be a significant number of individuals who have differing sets of terms and/or contrasting definitions for the same set of terms. Whatever the vernacular, there must be time invested in defining and discussing terms until all participants are speaking the same language. We did find that it was effective pairing an SDM expert with a subregional coordinator that could help ensure the terminology was understood during the breakout sessions.

Roles and expertise.-There were at least two unfilled organizational roles that would have increased efficiency and quality of products from the workshop. First, in addition to having one SDM expert and one locally knowledgeable coordinator per breakout group, it would also be useful to have another SDM expert who roams between breakout groups to ensure products were being produced in a timely and consistent fashion. Although there are unique conditions in each subregion, it is important to integrate and represent them in a consistent manner and whenever possible to use the same set of measurable conservation objectives and action categories in each subregion so they can scale up across subregions. Second, some stakeholders were concerned that assumptions going into the process were not being documented adequately. By having someone explicitly assigned to note-taking in plenary and one note-taker for each breakout group, this would ensure thorough documentation of assumptions and definitions for each component of the subregional decision tools.

In addition to filling additional organizational roles, ensuring adequate representation of the relevant decision-makers and experts in each of the breakout groups is important. Although a broad range of experts were invited to participate, not all who were invited were available to attend the workshop. Some breakout groups therefore lacked representatives of particular stakeholder groups that manage

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significant amounts of land in their focal subregion, and other groups lacked expertise especially with subtidal and intertidal ecosystems, climate change, and sediment dynamics. Some experts at the workshop had already worked through many of the scientific questions being raised for CADS (as part of the BEHGU process), but there were other experts at the workshop who had not been involved with BEHGU and so they needed to get up to date with some of the information that had already been developed. Expertise lacking throughout was economic forecasting, which would have given the subregional breakout groups a better sense for future resource availability. A gap analysis of needs for expertise should be conducted as preparation for an SDM workshop, to ensure that all the necessary knowledge is present. That said, the SDM process itself can be used to identify the crucial uncertainties and where additional expertise is needed through sensitivity analysis.

Following the workshop.- We recognized that some references that had not been compiled in advance were needed to complete the subregional decision tools. For example, the Subtidal Goals were summarized and made available for each of the subregional groups. Providing key background information and documents is important to ensure that the subregional allocation recommendations are based on existing research and conservation planning efforts.

Although not originally planned, working with a small group of stakeholders to revise and complete the subregional decision tools over the course of several months following the workshop was essential to the success of this project. We cannot overemphasize the importance of stakeholder engagement over an extended period to ensure that the decision tool structure, composition, and associated recommendations are sufficiently vetted and usable by the stakeholders involved.

Some stakeholders called for more consistency in developing recommendations for each of the subregions. In particular, they wanted to have more discussions with the entire group of stakeholders following the workshop but before completing the decision tools on choosing key elements that could have been made more consistent among subregions (i.e., action categories and measurable attributes for the objectives and other model components). Although there was some cross-over in refining the decision tools after the workshop via the leadership team, the action categories and possibly measurable attributes could have been developed more consistently to allow for better integration among subregions. The leaders did hold two draft results webinars to which all stakeholders were invited, but by this time some of the decision tools had already become draft final and stakeholders were unable to revisit and revise them to achieve more consistency among subregions. Having additional discussions, while potentially very valuable, would have required additional time commitment from stakeholders who were already stretched thin with completing the decision tools. Planning and communicating the time commitment required to work through the steps of the project are critical to having useful recommendations at the end.