Guidelines for CONVERSE Scientific Advisory Committees (SAC)

The fundamental role of the SAC is to act as the point of contact and two-way communication between observatory scientists and the broader scientific community. A SAC's activities may change depending on parameters of a scenario or eruption:

- During times between eruptions:
  - The SAC is the primary body that helps facilitate making connections between scientists within and external to the observatories. This could take several forms, one of the most important being coordinating and running workshops and scenario exercises where scientists can meet, develop connections, and discuss potential research topics.
  - In addition, the SAC should be the initial point of contact for researchers interested in eruption response who do not have a pre-existing contact within the observatory. For example, a researcher could email the SAC with a brief description of their research interests and ask for names of potential collaborators to contact.
  - The SAC would participate in discussions with the observatory Scientist in Charge (SIC) and other USGS leadership about how best to organize the external community during a response. For example, identifying in advance ways in which external researchers could provide assistance during an eruption (e.g., having support for processing data or samples, potentially training a small group of volunteers who could help with operations in the event of a major eruption, training volunteers in how best to amplify the USGS messaging through social media during a response, etc.) could make it possible to draw upon additional resources during a response. For example, a team of external researchers (possibly ECR) could be trained to process images and video data so that the resulting information could be fed quickly back into the eruption response, or a group of external researchers could be trained in how to process and document samples as they are collected during a response.
  - The SAC would work with observatory leadership to clearly outline the roles and responsibilities of the SAC during different levels of eruption response, and the criteria for evaluating requests for research activities and support.
  - The SAC would work with the community and observatory staff to identify a prioritized list of samples and data that need to be collected during the eruption response in order to make the most effective science possible. This could include time-series sampling, sampling ephemeral deposits, time-series physical and/or geochemical data, etc. This would also require developing detailed information about how these samples/data should be collected (as well as gathering any equipment or specialized sample containers needed) so that any person on the field team would be capable of doing the work (when possible given the priority on hazard mitigation).
  - The SAC could facilitate development of some "off the shelf" proposals for research that anticipate the most likely activity for a particular area, PIs who would be involved, and observatory collaborators.
  - The SAC could develop FAQ documents outlining a pathway for researchers to get involved in eruption response, including how to get connected with potential collaborators, how to handle permitting and access requests, etc.

- During an eruption with limited hazard potential and/or during the run-up to an eruption:
  - The SAC would work with observatory leadership to identify mechanisms for the external community to provide support to the observatory, and to line up specific individuals to fill these roles and facilitating a way for new people to sign up for those roles
  - The SAC will be informed and up to date of what the observatory is already doing and thus will be at the best position to share that information with proposers and inquirers, lessening the load from observatory staff
  - The SAC would put out a call for proposals to the external community and would begin reviewing proposals and providing advice to the SIC about the time sensitivity of proposals and their potential to contribute to the active response as well as to longer-term goals for better understanding of volcanic processes that would feed into future response. At this stage, although priority would be given to those proposals with the highest time sensitivity and potential to contribute to the immediate response, it is likely that other proposals could be evaluated as well. During this time it might be possible for the SAC to facilitate connections and new collaborations between observatory staff and external scientists, but this would likely be a minor component.
  - The SAC could help inform the community by coordinating Town Hall meetings to describe the current unrest/activity and the present restrictions on access and sampling
- During a major eruptive crisis:
  - The SAC would continue to review proposals, but with an explicit focus on the highest-priority proposals. At this stage, although broader proposals would be accepted, it is likely that the only proposals that would be passed on to the SIC would be those that are: 1) time-sensitive, 2) contribute to the immediate response, and 3) already have identified an observatory collaborator. The SAC would inform the community that other proposals would be considered after the immediate eruption response.
  - The SAC would coordinate any requests from the observatory for assistance, including any data/sample processing or analyses that could be done by external scientists, and/or calls for volunteers to help with operations (if that would be of assistance).
- After a major eruptive crisis:
  - The SAC would review and process any proposals that were not able to be handled during the crisis.
  - The SAC would work with observatory and USGS leadership on an “after-action” assessment to identify ways in which the process could be improved.
  - The SAC would report out to the community about the results of research done during the eruption and what data and samples could be collected, as well as any issues or opportunities that arose during the response.
  - The SAC would help coordinate scientific efforts that build on the eruption response efforts, and/or those that are not time-sensitive but still use data or samples collected during the response.
  - The SAC would return to a focus on community-building and planning activities.