

# Basic Elements of Broader Impacts in the SBE Sciences

**Scientific Opportunities:** opportunities for exploration, learning, and broadening participation

**Communicative Products:** the vehicles by which researchers share their findings (including null results) with other researchers, policymakers, and the public.



## **Who Can the Scientific Opportunities and Communicative Products Empower?**

For research to have a broader impact, it should empower people to accomplish a goal tomorrow that they were unable to accomplish in the past. So, we ask researchers to consider "Who can your research empower?" In some cases, the beneficiaries will include students, early career investigators, and other academics. In other cases, it is possible to go further and consider other people who, and organizations that, can use the proposed research to advance science or improve others' quality of life. This consideration can include communities, public-service organizations and entrepreneurs who can use the research to innovate.

## **Whose Quality of Life Can the Empowerment Improve?**

Where Question 1 asks about who is empowered, this question asks about who benefits from that empowerment. To answer this question, researchers can consider specific communities, organizations, or populations whose quality of life can be improved by new research. Consistent with the term "broader," we encourage researchers to think expansively about how their work can benefit others. Even when a project's immediate societal benefits are not apparent, and the probabilities of particular outcomes are difficult to calculate, researchers can help others understand the potential public value of their work by articulating broadly beneficial outcomes that become possible as a result of their proposed course of action.