



Science Subprogram Strategy Brief 2017-2022



INTRODUCTION

Science is integral to the David and Lucile Packard Foundation's work. The Foundation makes a deliberate attempt to ground the framing, design and implementation of its programs on the best available scientific research and evidence. More specifically, Foundation programs use research and analysis to help develop grantmaking strategies and estimate return on investment, but programs also support scientific research as part of the grantmaking strategies themselves. The Foundation also uses research as part of its monitoring and evaluation of strategies, and the Conservation and Science (C&S) Program counts scientists among its staff. The Foundation has supported and made use of research that has transformed the way that the Foundation and its peers conduct business.

The Foundation also maintains an explicit commitment to the support of science through the C&S program, particularly in the Science subprogram. The previous Science Subprogram Strategy formally began December 2009. This subprogram fills a unique niche in the C&S program by supporting scientific research that can advance overall C&S goals and strategies.

In recent years, roughly half of the subprogram's grantmaking has supported three grantees – Communications Partnership for Science and the Sea (COMPASS), the Partnership for Interdisciplinary Studies of Coastal Oceans (PISCO), and the Leopold Leadership Program (LLP). Approximately another quarter of the subprogram funding has been co-programmed under the U.S. West Coast strategy.¹ The balance of the funding has supported scientific research and assessments aimed at directly advancing our conservation strategy goals. The Science subprogram is also the point of contact for institutional grantees that the Foundation supports including the Monterey Bay Aquarium Research Institute (MBARI) and Stanford's Center for Ocean Solutions (COS).

In 2016, we commissioned an evaluation of the subprogram's grantmaking, excluding the support we provide to COMPASS, PISCO, and LLP. The strategy presented here reflects the findings of that evaluation as well as consultation with colleagues and partners inside and outside of the Foundation.

The goal of this Science Subprogram Strategy is to maximize the contributions of science and the scientific community to achieving the Foundation's conservation goals. Through grantmaking, convening, and other forms of support, this strategy will marshal research and generate new knowledge, concepts, and tools to advance the goals of the C&S program.

RECENT HISTORY

From 2010-2015, the Science subprogram: a) supported key institutions like COMPASS and LLP; b) served a scientific "spine" function in support of the C&S subprograms and their strategies (similar to how the Organizational Effectiveness program serves the Foundation's programs); and, c) served as the institutional liaison for MBARI and COS. The bulk of the grant dollars went to three institutions: COMPASS, PISCO and LLP. Much of the remaining grantmaking was made in collaboration with other C&S subprograms, guided by the "Linking Knowledge with Action" framework, which posits that when conducted and connected appropriately, science will produce new knowledge that will be used in decision-making, and ultimately will lead to better conservation outcomes.

¹ Prior to 2009, there was little synergy among our marine conservation work on the U.S. West Coast, our science grants along the U.S. West Coast, and our grants to COS and MBARI. To remedy this, we directly incorporated a set of science goals within the U.S. West Coast strategy, and the Science program officer works as part of a team in implementing that strategy.

Grants made under the “Linking Knowledge with Action” framework were generally aimed at yielding results that could contribute to near term (1-3 years) decision-making in support of the goals of the C&S program’s conservation strategies. The external evaluation carried out in 2016 found that many of the grants had contributed significantly to C&S strategies and goals. In addition, the evaluation found that the Science subprogram also enriched the existing programs and work of the other program officers by introducing new questions, approaches, networks, and scientists. The subprogram’s work also increased collaboration across C&S through the explicitly inclusive nature of the grantmaking approach of the subprogram.

The evaluation noted that some grants and other approaches developed by the Science subprogram showed particular promise. Some of these grants:

- accelerated the development of models to address fisheries management and ecosystem management, particularly in the face of climate impacts.
- demonstrated that good science, conducted with resource users and published in peer-reviewed literature, can have significant, direct effects on resource management policy.
- developed databases that enabled risk assessments and prioritization of grantees’ work.
- showed that timely and salient scientific data can positively influence state and federal discussions about management of natural resources, including catalyzing reconsideration of government priorities and management strategies.
- when made to a combination of non-governmental organizations (NGOs) and academics, accelerated the development of robust new ways of assessing and managing living marine resources in both developed and developing country settings.

The evaluation also highlighted some failures and opportunities for growth, especially in communicating the goals and expectations of many of the grants. Foundation staff sometimes struggled to find scientists who could competently engage end-users in the formulation of their research (nominally a pre-requisite to funding by the subprogram). Most grantees did not have a clear understanding of how their work fit into the broader arc of work the subprogram or the Foundation was undertaking. In addition to these challenges, a number of grants did not achieve their intended goals.

In the revised Science Subprogram Strategy described below, based on the evaluation and our experience with targeted grantmaking under the “Linking Knowledge with Action” framework, we have decided to shift the research grants portion of the Science subprogram’s work away from a primary focus on individual grants to now focus on a set of initiatives that will involve several grants over a defined period of time to achieve specific objectives. Over time, the subprogram will still have the flexibility to respond to emerging opportunities, but we will now devote somewhat greater resources to a smaller number of strategic initiatives. Our experiments with this approach have led us to believe that this modification will aid in communicating clear intentions and expectations with all involved parties and will help to increase the subprogram’s impact.

FUNDING LANDSCAPE

Most of our peer funders support research that directly contributes to their strategies. For example, the research showing as much as a \$50 billion benefit to converting all fishing in the world to sustainable management (also referred to as the “global upside” study) was jointly supported by the Packard Foundation, the Walton Family Foundation, the Waitt Foundation, and the Helmsley Charitable Trust.

We often collaborate on such studies with other funders to broaden the utility and impact of our collective work.

However, very few other funders have a dedicated science element working across their conservation programs. As described in this document, the Science subprogram funds a variety of activities, including direct support for basic and use-inspired research, support for strategy-relevant research, and capacity building for the scientific community (communications and leadership). It also funds research across all of the C&S Program's priorities: oceans, climate, marine birds, and western lands conservation. Taken together, this portfolio is unique among funders and allows us to leverage work across our strategies and to support science in unique ways.

THEORY OF CHANGE

The premise of the Science Subprogram Strategy is that science can be a powerful force for achieving conservation goals, both by directly informing key management and policy decisions and by helping to build a political case for action. Better scientific knowledge can thus result in more positive and durable outcomes for people and the environment. This premise is then put to work in the service of the strategies in the C&S program's portfolio.

The work of the Science subprogram includes the following assumptions:

Roles and impacts of science

- In certain circumstances, science has the capacity to set or shape the agenda of natural resource issues, and can also directly inform decision-making in productive ways.
- Basic scientific research on topics relevant to conservation challenges is often foundational for informing sound conservation strategies.

Conditions for maximizing the contribution of science to the Foundation's work

- Science is most effective in shaping the discourse or informing decisions when it is seen by the users as being credible, legitimate, and salient.
- The reputation and skill of a researcher contributes to the credibility, legitimacy, and salience of the science they produce. However, personal relationships, perceived motivations, background, and other social and political factors are also important and must be accounted for.
- Legitimacy and salience will increase when local and trusted experts either lead or are engaged throughout the research process.
- When properly engaged early in the process, potential users lend increased credibility, legitimacy, and salience to science and are more likely to use the resulting research in their decision-making. Integrating science and scientists directly into the development and implementation of solutions will build a richer and more effective community of practice working on the issue at hand.
- Better integration of science across disciplinary boundaries – including between social and natural sciences – will often increase the utility and effectiveness of the resulting science.

Support for scientists to engage

- The scientific community needs the skills, networks, and support to be able to effectively deploy their science to shape resource management or policy discussions and to effectively engage end users in their research.
- Standing capacity to use science to engage, or to support scientists to engage, often makes the difference between science being part of a decision and being left out of a decision. Scientists and other science users often must be able to act on short notice to take advantage of strategic

opportunities to inform or influence decisions, and such opportunities are frequently unpredictable.

Importantly, we recognize that science alone is not sufficient to ensure positive management and decision outcomes; cultural and structural changes are often required to effect the change we seek. Political dynamics, historical factors, corruption, economics, and other factors play key, even dominant, roles in decisions. In a practical sense, this means that we will need to work closely with other subprograms to ensure that the outputs of the Science subprogram's work support or are integrated into the execution of C&S strategies. This strategy's theory of change will generally be applied in the context of, and in service of, one or more of the Foundation's overarching conservation goals. We will carefully coordinate with the work of other strategies to ensure a smooth transition when the primary responsibility for science-focused projects shifts from the Science subprogram to another subprogram or strategy team.

Box 1. Marine Reserves – The role of science in driving change

Twenty years ago, marine reserves were rare, and their potential role in helping manage oceans sustainably was poorly understood. Today, new networks of marine reserves are being established every year, and reserves show up in a wide variety of management settings. Reserves play a role in industrial-scale fisheries, biodiversity conservation, community management of reefs, resilience planning, and more. Science played a key role in launching marine reserves into mainstream management and policy discourse, and science continues to play a key role in the development, monitoring, and assessment of reserves around the globe. The Foundation's strategic investment in the research, capacity, and convenings that helped catalyze this movement provide valuable insights that continue to guide our Science grantmaking.

The story of how marine reserves went from an academic concept to a key management tool provides an illustrative case example of the ways science and scientists can shape and support change as well as the time-frames over which that influence plays out. In particular, the development of the science of marine reserves demonstrates:

- How scientific insights, communicated to the policy community in an effective way, shaped the discourse on marine protected areas in California;
- How the body of research on reserves was developed through interaction with decision-makers to meet society's expressed need to better understand management options;
- The role that strategic communication approaches – involving scientists, stakeholders, and policymakers – played in ensuring that the research was accessible and put to use both in shaping policy and in guiding implementation;
- How the scientific community that focuses on marine reserves, when provided with the appropriate capacity and training, was able to support – and continues to support – the creation of marine reserves in state, national, and international waters.

Throughout these processes, science and scientists played a number of crucial and enabling roles. Science helped set the agenda and frame the questions that policy-makers were asking, helping to define the problem – biodiversity loss and the inadequacy of management tools – and to expand the scope of answers being sought to include reserves. As the discourse shifted to an exploration of how reserves might be implemented, the scientific community helped to discover and elucidate options to meet policy, management, and stakeholder needs. The decision-support tools that enabled those involved in the process to articulate and assess choices were likewise grounded in scientific research and analysis. At the current stage, science is key to the evaluation and assessment of the network of marine protected areas. Throughout the process, science and scientists, properly trained and resourced, were key elements in the mobilization and persuasion of actors.

We conceptualize the process by which change happens as occurring in stages. Science and scientists play different roles in each stage of the change process (see Box 1). We will support science and scientists in each of these roles and stages, based on where they can have the biggest positive influence in achieving the Foundation's conservation goals.

Beyond contributing directly to desirable outcomes, science can also catalyze change inside and outside the Foundation by surfacing new ways of thinking and spurring innovation. As we implement this strategy, we will deliberately seek these catalytic opportunities. The Science subprogram evaluation noted, for example, that an initial Science subprogram grant focused on data-limited methods in fisheries stock assessments did not achieve its desired outcome, but it did spur an entire line of work among grantees which is now poised to enable resource-poor fishing communities to achieve accreditation under programs like the Marine Stewardship Council. This kind of opportunity can be transformative to the work of our grantee partners and to the way Foundation staff conduct their work.

SCIENCE SUBPROGRAM STRATEGY

The goal of the Science subprogram is to maximize the contribution of science and the scientific community to achieving the C&S program's strategic goals. The primary focus of the Strategy is to support these goals through the development, synthesis, connection, convening, and communication of science (and other expertise) and through the support of the scientific community. To facilitate this focus, the subprogram will pursue the following four objectives:

1. **Field Capacity:** Building and supporting capacity and associated infrastructure for engagement of science and scientists in resource and management discourses.
2. **Research Initiatives:** Supporting basic research and user-driven science in pursuit of our conservation goals.
3. **Convening:** Using the Foundation's convening power to connect science and scientists with influential actors.
4. **Societal Support for Science:** Strengthening support for and effective use of science in the United States.

Objective 1: Support the capacity of science and the scientific community to engage with resource and management decisions.

Within the issue areas and geographies relevant to the Foundation's strategies, we will support scientific leadership, communications, network building, and direct community and policy engagement by the scientific community. By building and maintaining the science infrastructure that supports scientists to engage in topics relevant to the Foundation's conservation goals, we can tap the capacity of the scientific community to more effectively find and illuminate options that positively affect policy and social change. We will provide capacity for a bigger and better-connected scientific community to focus on and comprehensively engage in the entire science-to-action process. This will include everything from formulating research questions in partnership with user communities to engaging in solution development and on-the-ground implementation. Importantly, this will also include building up the scientific capacity of key geographies so that local scientists can be key players and leaders throughout this process, and so that governments who seek progressive change can tap expertise that is deeply embedded in their own context and culture.

Our work will support the infrastructure and capacity that enables scientists to undertake research and engage in Foundation priority issues, including:

- *Communications*: Key insights from science are not always brought to the fore in discussions of natural resources and their relationship to human communities and human well-being, or else those insights take many years to emerge. In a number of cases, this is due to a lack of communication capacity or skill on the part of those undertaking the research. COMPASS, LLP, the Pew Fellows, and other programs have demonstrated the strong link between communications and social change. We will advance the capacity and skill of the scientific community in our focal geographies to connect their knowledge and insights effectively with the right people at the right time. This will leverage not only our own investments but also the millions of dollars already being invested by other funders in research and development in conservation.
- *Leadership*: The Leopold Leadership Program and its related training programs have demonstrated that building the leadership capacity of conservation scientists can help focus scientific resources on conservation-relevant issues, which in turn can lead to action on issues relevant to the Foundation's goals. In many of the geographies in which C&S seeks to support change, U.S.-based scientists are not the ideal actors to advance the program's goals. Building in-country scientific capacity could be more effective at generating the relevant science and connecting it to decision-making than could the use of foreign experts. Increasing the investments in building and supporting leadership within the scientific community could leverage other funders' investments, increase capacity focused on our priority issues in key geographies, and build an enduring network of actors who can maintain focus on the successes the Foundation supports even after the Foundation's investments come to an end.
- *Communities of Practice, Collaborations, and Networks*: Connecting multiple researchers and research groups can yield insights far beyond the capability of individuals. In some cases, building networks of scientists will help advance or sustain the progress we seek. The network of researchers involved in PISCO acted in a collaborative and coordinated fashion to address U.S. West Coast-wide issues. This network of researchers played key roles in developing and advancing the science, practice, and policy related to marine reserves in California and around the world. Similarly, the Ocean Modeling Forum has shown early promise for building a more coherent and effective community of ocean modeling experts with a focus on accelerating model innovations in service of decision-making.
- *Criteria*: We have historically made these investments primarily in the U.S. and have focused on ocean conservation. We will seek opportunities to pursue this capacity work in areas where: a) the Foundation has a meaningful presence; b) we identify a need that can be filled by science; and c) where the Foundation adds unique value. As we implement this strategy, we will continue our focus on capacity building related to ocean conservation, and we will seek one or two more opportunities focused on areas where science can significantly advance Foundation strategies.

Outcomes

Outcome 1: *Increased capacity of the scientific community to support the Foundation's conservation goals.* Research communities are strengthened to provide robust scientific underpinning for the conservation work of the Foundation, and these communities are producing relevant and timely research and are communicating and connecting that research to relevant audiences in a way that ensures impact on Foundation goals.

Objective 2: Support basic research and user-driven science in pursuit of our conservation goals.

We will pursue this objective through the development and implementation of time-bound initiatives that support scientific capacity-building, research, synthesis, assessment, and associated communications to help advance conservation goals relevant to the work of our program strategies. In addition, we will retain some flexible funding that allows the Foundation to support the occasional exploratory research or assessment project that may help to identify emerging issues or elevate the attention given to problems or solutions relevant to our goals.

Other C&S strategies often also include support for scientific research and assessment. The Science subprogram plays a distinct role as a complement to the science supported within other strategies by:

- *Addressing gaps in scope:* While each C&S subprogram funds science when it directly supports its strategies, some kinds of research are out-of-scope for an individual strategy but would still yield significant value to one or more subprograms. Research might be out-of-scope because it would require such a long-term investment or would require such a large scope of work to yield an impact that it cannot be justified within the context of a time- and scope-limited strategy. For example, the climate-impacts initiative that the Science subprogram will implement under the Ocean Strategic Framework will use research and other new knowledge to develop a comprehensive understanding of what climate change will mean for the work of our Oceans program. This will, in turn, help all of our ocean strategies better understand and account for the impacts of climate change, even though climate is not an explicit focus within those strategies. Similarly, the data-limited stock assessment work that we support has the potential to transform all of our ocean strategies with new, low-cost stock assessment methods.
- *Filling strategic gaps:* In some cases, a topic falls between the cracks of our existing strategies such that we do not fund it even though it could contribute to our goals. In some of these cases, research could play a role in advancing the topic to the point that it could fit into our strategies or the strategies of other funders. For example, coastal habitats (mangroves, sea grasses, salt marshes) provide critical fisheries habitat and also provide valuable carbon storage (“Blue Carbon”). The Gulf of California program has invested in this topic in a limited way, but with some support of the underlying science, this work could be expanded and connected to advancing both fisheries reform and land use work in Indonesia and eventually elsewhere.
- *Exploring and developing emerging issues:* The research community routinely puts new issues on the public’s agenda (e.g., ozone, plastics in the ocean, climate change, lead in drinking water). Philanthropy is uniquely situated to identify research areas likely to lead to important emerging issues. For example, the Science subprogram is supporting research to demonstrate the limits of bioenergy in mitigating climate change, even as national governments and others are considering deployment of bioenergy at scale. The subprogram has also supported the emerging field of environmental DNA, which has the potential to revolutionize how we measure and monitor species in the ocean. Some of this research, while basic in nature, lays the foundation for future innovation and effective conservation.
- *Providing bandwidth or expertise.* In some cases, a subprogram strategy would be aided by science-related work but the subprogram staff lack the expertise or bandwidth to effectively make or manage the appropriate grant or contract. When appropriate, the Science subprogram will work

closely with another subprogram to develop and/or manage grants or contracts to support Foundation goals.

Outcomes

Outcome 2: Each initiative, upon implementation, will include specific outcomes and a Monitoring, Evaluation, and Learning (MEL) plan. Because of the nature of the initiatives, these outcomes will be defined in partnership with other program officers during the development and implementation of each initiative. In general, initiatives will focus on priorities that span multiple subprograms, strategies, or Foundation goals. The completion of five Science initiatives will have demonstrably increased the impact of the Foundation's conservation strategies.

Current and Proposed Initiatives

Three science subprogram initiatives have already been approved by the Board under other strategies:

U.S. West Coast Fisheries and Habitat: Continuing the partnership with the U.S. West Coast subprogram, the Science subprogram will develop a distinct strategic focus in service of the strategy goals. Specific goals and outcomes are in development, but are likely to include:

- Addressing climate change in California and Oregon coastal resource management;
- Laying the scientific groundwork for a productive and positive review of Oregon's Marine Reserve Program in 2023; and
- Building data-limited methods into California's revised fisheries management approaches.

Climate Impacts on the Oceans: As approved under the Ocean Strategic Framework, the Science subprogram is developing an initiative in the area of the most significant long-term threat to ocean health: climate change and ocean acidification. This work will help to develop an understanding of what climate change will mean for our ocean strategies, how to integrate that understanding into our strategies, and how to support our grantees and the broader ocean community to adapt to the impacts of climate change on ocean ecosystems.

Data-Limited Methods in Fisheries (cross-cutting ocean strategies): The ability to accurately assess fish stocks without resorting to the expensive and data-intensive approaches used in many industrialized fisheries would transform fisheries management across our strategies. Researchers are working on multiple data-limited methods. Adding to our recent investments in this space will enable the final stage development and subsequent deployment of data-limited methods across all of our ocean conservation strategies. The initiative would result in credible data-limited stock assessment methods being ready to be communicated and implemented in formal fisheries management contexts, including California and the Marine Stewardship Council (MSC).

As this shorter term initiative ends, and as grant dollars are available, we will develop and implement new initiatives in consultation with other programmatic staff involved in the Foundation's conservation work and with the C&S Program Committee. The selection of initiatives will be based on an assessment of the areas of greatest need and potential impact. The selection process will involve input from across C&S and the Foundation, as appropriate, and will account for the following criteria:

- Priority – How does this work relate to the Foundation's relative conservation priorities?
- Potential for impact – What are the potential benefits to the Foundation's strategies or identified learning goals (e.g., linkage to MEL questions)?

- Readiness for investment – What is the capacity and availability of researchers to undertake this work effectively (e.g., can we invest in a grantee who can realistically deliver on the goals)?
- Timeframe – How does the timing and duration fit into our portfolio of other initiatives (e.g., do we have a balance of ongoing and short-term projects, and projects with short- and long-term payoffs)?

Objective 3: Use the Foundation’s convening power to connect science and scientists with influential actors inside and outside of the Foundation.

The Foundation’s ability to convene scientists and key players related to our goals is sometimes unique and distinct from the role grantees can play. The evaluation of the Science subprogram identified this as an opportunity to expand our influence and impact. The scope of the Science subprogram is distinct both within the Foundation and among peer funders. Furthermore, many scientists, NGOs, government actors, and other funders look to the Foundation for expertise and leadership. We will take advantage of opportunities where our convening power related to science and scientists will uniquely strengthen our programs and advance our goals.

Outcomes

Outcome 3.1: *Increased collaboration and synergy between subprograms.* The Science subprogram will have found and leveraged connections among other subprograms’ strategies and learning goals in ways that have built collaboration among staff and synergy among strategies.

Outcome 3.2: *Expanded science networks.* The Science subprogram’s work will have resulted in expanded science networks for C&S staff and for the staff at other organizations relevant to our work. The expanded networks will include researchers who are collaborating directly with relevant staff or developing products and insights that support the Foundation’s goals.

Outcome 3.3: *Strengthened connections among partners.* The Science subprogram will have used the Foundation’s convening power to build stronger connections among peer funders, stakeholders, and researchers focused on the Foundation’s conservation priorities. These connections will have led to new collaborations and additional support for our priority topics.

Objective 4: Strengthen support for and effective use of science in the United States

Science sits at the core of many of the Foundation’s priorities, yet societal support for science – both the funding of science and its use in policy and decision-making – is widely perceived as under threat. The private sector, once a strong voice in support of basic science, is seen as a less unified and forceful champion than it was a generation ago. Increasingly, the scientific community is treated as a politicized actor, undercutting the value of science in social and policy discourses.

There are two levels at which we believe we can help to address these issues:

First, with a relatively limited contribution of grant funding, we will target efforts to build public support for science and to maintain and strengthen the integrity of science in decision-making as it relates to our conservation goals. This work could include support for NGOs helping to defend scientific integrity.

Second, the Science subprogram will explore how the Foundation can use its voice to contribute to broader efforts to strengthen support for and the use of science, including in the U.S. at the federal

level. This will include looking at non-grantmaking opportunities where the Foundation can appropriately support policy discussions or public perception and understanding of science and its place in society. We will be alert to opportunities where the Foundation’s voice can play a productive role.

Outcomes

Outcome 4: *Increased support for the nation’s research enterprise, particularly in the area of environment and conservation; decision-makers are held accountable for misuse or diminishment of science in decisions.* Stakeholders in the nation’s research enterprise – particularly related to natural resource management – will base their work to build support for funding of science on more robust, strategic communication efforts; diminishment of the role or integrity of science in decision-making will be called out and held accountable.

LEVERAGING FOUNDATION INVESTMENTS

MBARI. The Foundation’s ongoing investment in MBARI’s research and operations presents significant opportunities. MBARI’s expertise in and focus on changing ocean conditions has informed, and will continue to inform, the Science subprogram’s work on climate change. As new principal investigators are hired by MBARI, the Science subprogram will work to find ways to leverage their new expertise in pursuit of the Foundation’s conservation goals. We will also work closely with MBARI to support efforts to align institutional structures and incentives to enable greater collaboration and alignment with other actors in the conservation field. For example, the Science subprogram is supporting the collaboration of The Nature Conservancy with MBARI to develop a new video lander. MBARI has devoted significant staff time and other resources to this nascent partnership. The Science subprogram will continue to support this partnership and will use this as an opportunity to help MBARI and The Nature Conservancy draw lessons from this experience to enable and encourage similar future partnerships.

Other Institutions. The Science subprogram has initiated and continued conversations with long-term grantees about how their work aligns with the Foundation’s strategies and goals. As we begin to shift our capacity-focused support away from institutions and more toward outcomes, the Science subprogram will continue to work with grantees to the extent that their missions and programs continue to align their work with the Foundation’s conservation goals.

IMPLEMENTATION

While Objective 4 is intended to support the broader scientific enterprise in the United States, the first three objectives work together in service of the Foundation’s conservation strategies globally. In addition, Objectives 1, 2 and 3 are strongly interlinked, so grants allocated to one objective will also often support progress towards other objectives. (See Figure 1.) For example, the support we provide for a research initiative (Objective #2) may also help to build field capacity relevant to the work of our program (Objective #1).

As an example, our Ocean Climate Impacts initiative is likely to sit squarely in the center of this diagram. In countries like Indonesia, our grant dollars can help us to

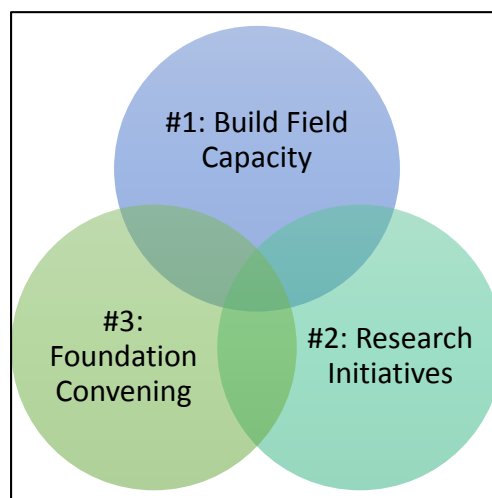


Figure 1. Interlinkage among strategic objectives

Table 1: Science Subprogram Objectives

Note that the U.S. West Coast Fisheries and Ecosystem Science initiative is co-developed with and complementary to the U.S. Marine subprogram and works directly in support of that subprogram's goals. Funding for PISCO would draw from both the Capacity and the U.S. West Coast Fisheries and Ecosystem Science initiatives. The Ocean Climate Impacts initiative was approved under the Foundation's Ocean Strategic Framework.

Objective #1: Field Capacity. Strengthen institutions and networks that provide capacity and support to scientific fields relevant to the Foundation's conservation goals (oceans, climate, marine birds, western lands).

Objective #2: Research Initiatives.

- U.S. West Coast Fisheries and Ecosystem Science
- Ocean Climate Impacts
- Data-limited Methods in Fisheries
- Emergent Science Opportunities

Objective #3: Convening. Leveraging the profile and convening power of the Foundation to advance discussions and learning relevant to our strategies.

Objective #4: Societal Support for Science. Education and outreach related to the integrity of science in decision-making and the value of science-based decision-making and scientific research in the United States.

build the institutional and network capacity of the in-country scientific community to focus their research on understanding the impacts and implications of climate change. This support may also fund some of the key research that will underpin that understanding. Our convening power can help ensure that the research gets appropriately connected to stakeholders and decision-makers.

Our work under Objective #1 will help to build the capacity of the scientific field to ensure the effective use of science in conservation. This will include support for science and scientists, such as the Foundation's past support for PISCO, COMPASS, and the Leopold Leadership Program. We will explicitly support capacity and research in areas relevant to our strategies. Importantly, our Field Capacity support will shift to be more explicit in its support of specific outcomes related to the Foundation's conservation strategies. This will continue to include work to build effective science networks, to support science communication, to develop leadership in the scientific community, and to build capacity for basic research. In general, this grantmaking will support conservation science, with a particular focus on the Foundation's conservation goals (i.e., ocean and climate-related fields).

The dominant focus of our work will be implemented through Research Initiatives (Objective #2). This will allow us to concentrate our impact on cross-cutting or particularly transformative research, communications, or other science-related activities that require a commitment beyond the scope of other subprogram strategies. These initiatives will include capacity-building where appropriate, investing in research, and convening. The Research Initiatives will allow us to narrow our focus and follow an issue through multiple stages of development rather than simply developing a collection of individual grants.

A small portion of the Research Initiative grants will be reserved to allow us to respond more opportunistically to the changing conditions and needs of strategies within the C&S program. This provides crucial flexibility across the Foundation's entire conservation portfolio and allows us to support learning or to address emergent gaps in strategy or scope where research can play a unique role. This might include, for example, research projects that explore the core assumptions that underlie the

Foundation's conservation strategies, such as whether addressing equity and social justice issues through the scientific community can unlock significant new capacity to address our conservation goals.

As we conduct our grantmaking, we will support open and effective sharing of data, information, and insights from our activities and grants. The Foundation's work is rooted in science and scientific thinking, and the kind of usable, interdisciplinary research core to our work benefits from transparency and collaboration. When possible and appropriate, research and data supported by the Science subprogram will be open-source, open-access, and shared effectively with the public and key audiences. This will include adopting some form of guidelines for grantees such as those based on the Transparency and Openness Promotion guidelines adopted by many scientific journals, including *Science*.

Finally, very few other funders invest in conservation science in the way that the Foundation does. We regularly hear interest from other funders in learning more about what is coming out of our Science subprogram grants because they see value to their work in some of the questions we are exploring. This gives us the opportunity to help support our peer funders while simultaneously building partnerships in support of our goals. We will take advantage of other opportunities as they arise to support our philanthropy colleagues in this way.