



The California State University

COUNCIL ON OCEAN AFFAIRS, SCIENCE & TECHNOLOGY (COAST)

CSU COAST 2022-2027 Strategic Plan

Introduction

The California State University (CSU) Council on Ocean Affairs, Science & Technology (COAST) was established in 2008 to integrate systemwide expertise and resources and promote research that advances our knowledge of ocean and coastal systems. Today, COAST is an active and robust community of hundreds of CSU faculty members, researchers, and students from diverse disciplines actively working to answer questions about our oceans and coasts and address our most pressing challenges.

At its core, COAST provides several critical functions that serve the CSU, the state of California, and national and international communities:

- Supports ocean and coastal research.
- Provides a community for researchers with ocean and coastal interests from across the CSU.
- Develops current and future ocean and coastal scientists, scholars, and leaders.
- Communicates the best available science to stakeholders to promote evidence-based decision-making and policy development.

This strategic plan for 2022-2027 articulates COAST’s ambitious vision, mission, and goals that reflect the organization’s evolution and desired future directions. The plan outlines the specific strategies that COAST will enact over the next five years in order to realize its aspirations and serve the CSU, California, the nation, and the world.

Context

Anthropogenic pressures on ocean and coastal ecosystems have increased over the last 100 years and are expected to intensify in the future with consequences for both ecosystems and humans. Experts have identified five main human-induced drivers that directly impact ecosystem processes: natural resource over-exploitation, land conversion, invasive species and disease, pollution, and climate change (M.E.A. 2005). Impacts on our oceans and coasts include but are not limited to sea-level rise, marine heat waves, ocean acidification, pollution from plastic and other contaminants, habitat modification, and declines in fisheries stocks due to overharvesting.

Our ocean and coastal resources provide immense social, cultural, economic, and ecological value, and there is an urgent need to conserve and protect these resources in the face of numerous threats while promoting their sustainable use and enjoyment alongside economic growth and development. To reconcile these sometimes competing interests, an integrated suite of complementary, intersecting approaches to address the growing list of ocean and coastal challenges is paramount. The success of these approaches will require multidisciplinary perspectives that include fundamental understanding of ocean and coastal ecosystems as well as the social dynamics of the communities that rely upon them. By virtue of its position within the CSU, the nation’s largest public four-year university system, COAST is perfectly poised to bring together and support researchers from a broad array

Marine science involves many disciplines from life, physical, and social sciences. Multidisciplinary approaches that take into account different facets of problem-solving are necessary to understand our oceans and coasts and the people who rely on them.

of academic disciplines to develop innovative scientific, technological, sociological, and economic solutions and inform decision-making and policy development that will foster stewardship of our oceans and coasts for generations to come.

Advancing CSU research

Faculty growth and excellence are driven by research, scholarship and creative activities. In the CSU, research activities are often aimed at developing practical solutions to address the complex issues affecting the state's current and future residents. To this end, CSU faculty and students pursue real-world research projects that foster innovation and collaboration and contribute to the success of California's major economic sectors. This research, which involves students directly and is integrated into the curriculum, enhances student success, drives interdisciplinary collaboration, and is critical to the CSU achieving its educational mission.

Through its portfolio of faculty- and student-centered support programs, COAST provides financial resources and opportunities to CSU faculty members and students engaged in ocean and coastal research and training. This support, in conjunction with campus resources, allows for additional research opportunities that advance faculty scholarship and enhance student education. The benefits are immense:

- Increased intellectual capital.
- Advancement of basic and applied science.
- Enhanced teaching and enriched educational experiences.
- Well-trained graduates with critical thinking and analytical skills who are prepared to successfully join the workforce.

COAST provides a robust foundation for research and capacity building in the CSU. Since its inception, COAST has awarded over \$7.8M to faculty members and students, resulting in over \$20M in external funding (primarily federal) awarded to the CSU. Recently, COAST leveraged \$530,000 in additional federal and state funding to support faculty-led research and training opportunities for students.

COAST supports research by CSU faculty members and students at multiple geographic scales. The research that COAST funds advances science, informs ocean and coastal management, and is often used in decision-making both inside and outside of California.

- Research supported by COAST along California's 840-mile coastline often benefits the communities surrounding individual CSU campuses. These are the communities that our students come from, and, in many cases, they are lower income communities and communities of color that have been underserved for decades. This allows students to participate in place-based research and projects that include aspects of environmental and social justice, and this type of engagement has been shown to increase retention of students from historically excluded groups in STEM. Furthermore, the research itself may benefit the students, their families, and their local communities.
- Much COAST-supported research is based in California where lessons learned are directly applied statewide. These results are also applicable on broad geographic scales and can be adapted and used anywhere in the world.

- Research projects outside of California allow faculty members and students to become citizens of the world. Gaining globally-informed perspectives and exchanging diverse ideas and approaches with collaborators, stakeholders, and different communities enhances their ability to successfully address the challenges we currently face and prepares them to lead in the coming decades.

COAST-funded projects also support communities in which the capacity to conduct scientific research is limited. COAST recognizes the values of broad participation in research and the co-production of knowledge with communities that have valuable cultural and traditional ecological knowledge, particularly California tribal communities, which COAST recognizes as sovereign nations. Engagement with California tribes is important to the disruption of the paradigm that only information gathered through modern, western European-based scientific methods is valid and valuable. Working with community members is critical to addressing issues that are scientifically complex and are embedded in a fabric of more complicated societal conditions, including racism, poverty, and environmental justice.

COAST recognizes California Native American tribes as sovereign nations and valuable partners. COAST respects tribal culture and heritage and is committed to the inclusion of traditional tribal ecological knowledge in the science it funds. COAST also recognizes that it works and funds research in the unceded lands of hundreds of California tribes.

Training a diverse future workforce

Geosciences, including ocean sciences, and ecology and evolutionary biology are some of the least racially and ethnically diverse fields (Bernard and Cooperdock 2018, Marin-Spiotta et al. 2020, Dutt 2020, O’Brien et al. 2020), and these are the disciplines most represented among COAST members. Equity and inclusion are essential to increasing diversity, which is about far more than just numbers. For diversity initiatives to succeed, people from minority groups must *feel* welcomed, valued, included, and like they belong.

The CSU is an ideal place to develop a more diverse ocean and coastal workforce through hands-on research, training, and professional development opportunities for students. In addition to being the nation’s largest public four-year university system, the CSU is also one of the most racially, ethnically and economically diverse university systems. Seventy percent of CSU students are people of color, roughly 80% receive financial aid, and nearly one-third of undergraduate students are the first person in their family to attend college.

Research experience is critical to pursuing an advanced degree or successfully entering the workforce. However, students with limited financial resources who work to put themselves through school and receive financial aid often cannot volunteer to work in a research group for free, and unpaid labor often occurs or is expected in marine science (Osiecka et al. 2022). The inability of students to engage in hands-on research because of economic inequities further perpetuates and exacerbates disparities in marine science for students from historically excluded groups (Jensen et al. 2021).

Another critical element for success of students from historically excluded groups is changing institutional culture and norms. Students may continue to experience prejudice and discrimination during their time at the CSU despite the diversity of the student population. For example, students of color and women may be discouraged from pursuing STEM degrees because of negative stereotypes, and they may have trouble finding research mentors who make them feel accepted and included.

As a systemwide affinity group within the CSU, COAST is deeply committed to increasing participation in marine science by people from historically excluded groups. COAST engages students who have diverse lived experiences and prepares them to successfully join the workforce. The program has a strong history of student engagement through its various programs: to date over 1,800 students have received COAST support for research, internships, travel, and field experiences. The ultimate goal is to realize an ocean and coastal workforce and professoriate that reflect the nation's diversity, particularly that of California.

COAST uses the term 'historically excluded' to refer to people from groups that were systematically prevented from participating in STEM and are therefore currently underrepresented in STEM today. This includes, but is not limited to, people of color, members of the LGBTQIA+ community, women, underrepresented ethnicities, first-in-family students, socioeconomically disadvantaged individuals, people with disabilities, and veterans.

'Historically excluded' communicates that the lack of representation is not the result of a passive process. Rather, systemic actions, both intentional and unintentional, have contributed to the low representation of certain groups and identities in STEM, and in marine science specifically. Historical exclusion calls upon all members of the COAST community to review their practices and create an inclusive environment where 1) individuals, particularly students, of all identities and backgrounds are able to thrive and 2) the demographics of the COAST community better reflect those of the world around us.

Supporting evidence-based decision making

It is critical that governments (including tribal governments), non-profits, the private sector, and communities have access to the best available scientific data and information when formulating policies and making decisions. For example, state and federal agencies are often tasked with difficult decisions about how to sustainably manage natural resources while not depressing economic growth. However, they often do not have the required scientific and technical expertise in-house and need to collaborate with the scientific community to conduct the research needed to support evidence-based decision making. In California, public universities meet this need and are essential partners for state agencies.

Making the results of scientific research accessible to this wide range of audiences is a persistent challenge that sometimes prevents critical information from reaching stakeholders and informing decision-making processes. COAST is uniquely positioned to conduct and translate CSU-based ocean and coastal research to stakeholders because of its wide geographic scope, emphasis on solution-oriented research, and its value as an honest broker that facilitates access to the best available science without advocating for specific outcomes or decisions.

To leverage the attributes listed above, COAST established the State Science Information Needs Program (SSINP) in 2019. SSINP focuses directly and exclusively on supporting the state of California's highest priority ocean and coastal related needs for scientific information. The goal of the program is to provide the science needed for informed policy development and evidence-based decision making in a timely and actionable manner that stakeholders can understand. To date, SSINP has resulted in an investment of \$3.2 million in new research to address a number of the state's most critical needs for scientific research.

Vision

COAST envisions a CSU that takes a leadership role in understanding our oceans and coasts by catalyzing transformative scientific research and developing a well-educated, diverse, and scientifically literate workforce and society.

Mission

COAST's mission is to promote research and education to advance our knowledge of ocean and coastal systems. COAST cultivates a robust community of faculty and student scholars who conduct research to inform solutions for local, state, national, and global ocean and coastal issues and promotes broad, inclusive, and diverse participation and workforce development.

Values

The values below reflect an intentional commitment to build capacity in these areas, and they will guide COAST's priorities for the next five years. These values will be incorporated into all of COAST's decisions and activities, and they will be demonstrated in the way COAST utilizes its resources to support CSU faculty members and students.

- *Diversity, equity and inclusion:* COAST strives to increase equity and create a more inclusive marine science community in which individuals from diverse backgrounds and groups that have been historically excluded from marine science and related fields feel included, supported, and valued.
- *High quality research and education:* COAST supports world class, cutting-edge research to advance knowledge and enhance education.
- *Marine and coastal ecosystems:* COAST works to advance the sustainable and equitable use and enjoyment of our ocean and coastal resources for current and future generations.
- *Environmental justice:* COAST supports a holistic approach to ocean and coastal issues that considers both people and the environment and how these issues intersect with concepts of equity and justice.
- *Community building and engagement:* COAST believes the positive synergy of broad coalitions of people with diverse perspectives and approaches is the best way to address the challenges we face.
- *Career advancement of faculty members and student researchers at all stages:* COAST supports faculty members and students throughout their career arcs, enabling them to conduct scientific research and achieve their professional goals.

Goals

COAST has identified four overarching goals for the next five years:

1. Create a more inclusive and diverse marine science research community for CSU faculty members, students, and beyond.
2. Increase opportunities and capacity for a diversity of faculty members to obtain extramural funding and conduct research.
3. Enable a diversity of students to successfully develop as researchers and professionals.
4. Elevate COAST member expertise as a primary resource for informed decision-making in government, industry and local communities.

Implementation Plan

The strategies and actions outlined below for each goal constitute an ambitious course of action. New strategies and activities that have not been undertaken previously are listed in *italics*.

The order in which the goals are presented is deliberate and important. The first goal is to create a more inclusive and diverse marine science research community. This will guide each of the following goals and their respective strategies and actions. Goal 1 does not stand apart from the others; instead, it informs the other three and, in turn, they help COAST achieve its vision.

GOAL 1: Create a more inclusive and diverse marine science research community for CSU faculty members, students, and beyond.

Across the globe, the cultures and identities of those who study and manage our oceans and coasts often do not reflect local coastal communities. This mismatch reduces the quality of the science and the effectiveness of management practices. COAST recognizes the historical exclusion and current underrepresentation of people from a multitude of identities as a severe problem in marine science. In order to ultimately be an organization that better reflects the overall demographics of CSU students and the communities we serve, COAST is committed to the development of an equitable culture that fosters inclusion and diverse perspectives.

COAST will consider its proximal goal of increasing diversity to be achieved when anyone in the CSU who wants to pursue marine science and related disciplines has the opportunity to do so and feels like they belong. COAST's ultimate goal will be achieved when demographic data show that the CSU marine science community is reflective of California's myriad communities.

Strategies and actions:

1. Partner with individuals and organizations representing historically excluded and currently underrepresented groups to increase awareness of historic, current, and emerging issues in academia, social science, and STEM to inform positive change in marine science and related fields.
 - a. Listen to and learn from representatives of historically excluded and currently underrepresented groups to inform our actions.
2. Increase awareness of structural exclusion in higher education, STEM, and marine science.

- a. Engage COAST faculty members, students, staff and administrators in anti-bias and anti-racist resources and trainings.
 - i. Quantify participation including total number of participants, number of first-time participants, and demographic information.
 - ii. Conduct pre- and post-training surveys, analyze results, and report findings.
3. Collect and analyze the demographic information of those participating in COAST programming.
 - a. *Document participation by historically excluded and underrepresented groups in marine science and establish a baseline to assess change.*
 - i. *Quantify participation by individuals from historically excluded and currently underrepresented groups.*
 - ii. *Compare the results to statistics describing the broader CSU community.*
 - iii. *Repeat periodically to assess change and include results in regular reporting efforts.*
4. Remove barriers to participation and promote inclusion of people from historically excluded and currently underrepresented groups.
 - a. *Provide demographic information about participation in marine science to the CSU campus leadership and COAST members with intent to inform policies, hiring practices and retention efforts to close the gaps in representation.*
 - b. Serve as a resource for campuses with regard to best practices for increasing participation at all levels.
 - c. Actively engage faculty members and students from historically excluded and currently underrepresented groups through virtual and in-person meetings and campus visits, student events and organizations, and meetings with campus leadership.
 - d. Review all COAST program materials and actions with a lens toward increasing participation, identifying and removing discriminatory practices, and mitigating implicit bias.
 - e. Engage CSU faculty and staff to produce and evaluate communication and networking strategies that are designed to ensure inclusive outcomes.
5. *Improve visibility of and access to COAST-related opportunities within the CSU for people from historically excluded and currently underrepresented groups.*
 - a. *Disseminate relevant materials to organizations representing historically excluded and currently underrepresented groups. This specifically includes using existing relationships with organizations to distribute job announcements from hiring committees for COAST-related faculty positions at CSU institutions*
 - i. *Develop and implement protocols for disseminating relevant information.*
 - b. *Provide resources to campuses to support recruitment of diverse faculty candidates in marine science and related fields throughout the CSU.*
 - i. *Develop and maintain a list of minority-serving institutions with strong marine and coastal science programs and encourage search committees to send announcements directly to these programs.*
6. Explicitly support anti-bias and anti-racist policies and actions within the CSU and the larger marine and coastal science community.

- a. Elevate and communicate support for policies and actions taken by other organizations (as appropriate) through email, social media, meetings and the COAST website.

GOAL 2: Increase opportunities and capacity for a diversity of faculty members to obtain extramural funding and conduct research.

COAST provides funding to CSU faculty members to increase their ability to lead successful research programs and develop collaborations that lead to better science. Small investments in the form of seed grants help faculty to leverage their results to secure additional external funding, which is extremely beneficial in the retention, tenure and promotion process; this is especially important for junior faculty. Additionally, when COAST funds student research, it increases faculty members' capacity to conduct research, publicize results, and secure additional funding.

Unfortunately, funding and investments are not equally distributed among disciplines or among researchers in those disciplines. At the national level, non-White principal investigators (PIs) are funded at consistently lower rates than White PIs across a number of different disciplines (Chen et al. 2022, Ginther et al. 2011). The funding disparity that exists between White and non-White researchers continues to widen along with advancement toward tenure and promotion, resulting in a professoriate that does not reflect the demographics of CSU students and communities. COAST's commitment to equity will be reflected in funding mechanisms for faculty to address this issue.

Through research, CSU faculty members create and advance knowledge in their fields, make discoveries that improve our lives and help us better understand the world around us, and build strong programs that attract and train our future scientists. Collectively and over time, researchers help to create a knowledgeable and well-trained workforce that fosters creative discovery, develops diverse and innovative solutions to real world issues, and expands our knowledge base for the common good.

Strategies and actions:

1. Directly fund ocean and coastal basic, applied, use-inspired, and solution-oriented research.
 - a. Secure additional long-term, sustained funding to increase COAST's ability to support faculty research.
 - b. Leverage COAST funds by providing match to faculty to secure additional external research funding from sources that require non-federal match.
 - c. Work with stakeholders to develop funding opportunities that are aligned with their needs and priorities.
 - d. Partner with nationally recognized marine research institutions to secure funding for CSU-based research.
 - e. Collaborate with other CSU affinity groups to promote faculty expertise and attract external funding.
 - f. *Cultivate relationships with philanthropic organizations to develop new sources of funding.*

2. Better position faculty members to obtain extramural funding.
 - a. Provide seed grants to faculty members to generate preliminary data and develop proposals for submission to external sponsors.
 - i. Track outcomes to demonstrate impact of programs.
 - b. Communicate and distill information on external funding opportunities outside of main academic funding sources, particularly at the state level, and assist faculty in pursuing funding.
 - c. Foster and support collaborative efforts among CSU faculty members and promote inclusion of faculty members from historically excluded groups as well as new faculty members.
 - d. *Provide grant writing workshops.*
3. *Promote equity and eliminate bias that leads to discrimination in our review processes for faculty funding opportunities.*
 - a. *Develop and incorporate policies and procedures to ensure that diverse groups of faculty members are equitably supported.*
 - i. *Provide bias-awareness training modules and/or workshops to reviewers on the racial and gender disparities that exist in grant funding.*
 - ii. *Ensure the pool of reviewers is diverse in gender, race and ethnicity to the extent possible.*
 - iii. *Collect demographic data on applicants and reviewers.*
4. Prioritize funding for faculty members who do not have tenure, have not previously received COAST support, and/or are transitioning to new research areas.

GOAL 3: Enable a diversity of students to develop as researchers and professionals.

Many CSU students face significant challenges including discrimination and exclusion, financial hardship, and a lack of role models. These barriers can prevent them from pursuing their goals and realizing their full potential. Providing financial resources to students is a way to tackle a number of these issues because financial need intersects with a number of other identities for CSU students:

- Over 80 percent of students receive financial aid, and nearly half of all undergraduates receive the Pell Grant.
- Seventy percent of students are people of color.
- Nearly one-third of undergraduates are the first person in their family to attend college.

Providing financial support to students and ensuring that they are adequately compensated for their time are critical elements in creating a more inclusive and diverse marine science community and workforce. COAST has a number of different programs for undergraduate and graduate students that give them the means to support themselves while in school, fund their research, and gain professional experience. The funding decreases financial barriers and enables more students to fully participate in research and professional training experiences that provide them with the foundational skills they need to succeed along their future career trajectories,

including critical thinking, effective communication, and self-efficacy.

COAST also recognizes the need to provide mentorship and non-financial support to students, particularly those from historically excluded groups. COAST is committed to providing a safe and nurturing environment for students and supporting their overall well-being along with their professional development. COAST will do this as part of direct interactions between staff members and students, through programming for students, and by enabling faculty members to be better mentors and allies. be better mentors and allies.

To broaden participation further, COAST will increase the overall amount of funding available to students and establish new programs specifically intended to support students who have financial need. Coupled with increased awareness among the faculty of our students' lived experiences, this will increase equity, diversity, and inclusion and build a stronger coalition of future ocean and coastal scholars, researchers and leaders.

Marine science is different from many other STEM fields because ocean and coastal research projects often involve field work, which can be prohibitively expensive. Students may need to travel to field sites or obtain specialized personal gear (e.g., SCUBA equipment, special clothing or outerwear, waterproof footwear) to be able to conduct field work safely.

Without proper gear, field work can be extremely unpleasant, and negative experiences can discourage students from participating further. However, positive field experiences strengthen students' scientific identities and increase their retention in STEM programs (Race et al. 2021, Beltran et al. 2020).

Strategies and actions:

1. Provide funding to support undergraduate and graduate participation in research and field experiences as a way to contribute to their education and professional development and remove financial barriers to student participation in marine science.
 - a. *Establish a new program that provides financial support to students to facilitate their participation in field experiences.*
 - i. *Quantify participation by students from historically excluded groups.*
 - ii. *Document impact of awards through student reports.*
 - b. *Establish a new fellowship program to provide two years of full support to marine science master's students.*
 - i. *Quantify participation by students from historically excluded groups.*
 - ii. *Quantify time to degree and number of alumni pursuing PhDs or entering the workforce in degree-related positions.*
 - iii. *Document impact of awards through student reports.*
 - c. Provide funding directly to students to conduct hands-on research through the Undergraduate Student Research Support Program and Graduate Student Research Awards.
 - i. *Quantify participation by students from historically excluded groups.*
 - ii. *Document impact of awards through student reports.*
 - d. Partner with nationally recognized marine research institutions to develop research-based training opportunities for CSU students.

- i. *Quantify participation by students from historically excluded groups.*
 - ii. *Quantify time to degree and number of alumni pursuing PhDs or entering the workforce in degree-related positions.*
 - iii. *Document impact of awards through student reports.*
- 2. Provide paid internships for students as a way to contribute to their professional development and remove financial barriers to student participation in ocean and coastal science.
 - a. Quantify participation by students from historically excluded groups.
 - b. Quantify the number of interns who attribute subsequent employment to their internship experience.
 - c. Document impact of experience through student reports.
- 3. Provide funding to students to present the results of their research at scientific meetings and conferences through the Student Travel Award Program.
 - a. *Quantify participation by students from historically excluded groups.*
 - b. Document impact of awards through student reports.
- 4. *Provide professional development that helps students advance as scholars, researchers, community members and leaders.*
 - a. *Provide workshops, skill building activities, metacognitive development, materials, and mentorship that will supplement the skills students develop through coursework and research opportunities.*
 - i. *Quantify participation by students from historically excluded groups.*
 - ii. *Document impact of awards through surveys.*
 - b. *Connect marine science students from across the CSU to build a broad professional network.*
 - i. *Create a new section on the website to host postings from student awardees and internship alumni.*
 - ii. *Recruit students from throughout the system for synchronous, online activities.*
 - iii. *Have annual cohorts interact so that more senior students can mentor younger students.*
 - iv. *Host an annual student meeting.*
- 5. Increase awareness among faculty members, students, staff and administrators of the adversity many CSU students face and promote development of diverse, equitable, and inclusive research groups, classrooms and campus culture.
 - a. Provide workshops and training on implicit bias, active bystander intervention, effective and inclusive mentoring, development of diverse, equitable, and inclusive research groups, and inclusive teaching.
 - b. Continue to provide access to DEI related resources to improve awareness of structural racism, discrimination and inequities and ways to increase inclusion, retention and success of students from historically excluded and currently underrepresented groups.

GOAL 4: Elevate COAST member expertise as a primary resource for informed decision-making in government, industry, and local communities.

A hallmark of the CSU is a focus on scholarship to identify and address society's most urgent challenges. COAST scientists often work closely with local communities to conduct applied, interdisciplinary, action-oriented research that informs decisions, policies, and practices throughout California and beyond.

COAST strives to ensure that its members' collective knowledge is used to support informed, evidence-based decision-making and the development of responsible policy. COAST is committed to ensuring that the best available scientific information is part of the public discourse and is communicated such that it is accessible to all. This type of engagement may in turn help scientists be better positioned to access funding outside of traditional academic sources that would not be available to them otherwise.

COAST sees the state of California as one of its biggest stakeholders. California is the most populous state in the nation with 11.8 percent of its people (U.S. Census Bureau, 2020) and, in 2021, was responsible for 14.7 percent of the country's total gross domestic product (U.S. Bureau of Economic Analysis, 2022). California often leads the nation in technological innovation and development as well as environmental policies and protections. It is the ideal place to work to ensure that the scientific knowledge generated will have far-reaching effects and will ensure the sustained use of our marine and coastal resources for the future.

Strategies and actions:

1. Engage with stakeholders (e.g., local communities, resource managers, policy and decision makers) and tribal governments regarding their needs for scientific information for evidence-based decision making and policy development.
 - a. Cultivate relationships, often in collaboration with faculty members, to enable effective networking and communication.
 - b. Stay apprised of state policy initiatives and needs for scientific evidence to support policy development and informed decision-making.
 - i. Meet with state agency staff and legislative staff to discuss priority issues.
 - ii. Monitor policy development and state guidance.
 - c. Communicate stakeholder needs to COAST members to facilitate their ability to engage on critical topics.
 - d. Increase awareness among stakeholders of COAST member expertise and the capacity of the CSU to conduct research to meet their needs for scientific information.
2. Showcase the relevant expertise of COAST faculty members.
 - a. Develop materials for distribution that highlight faculty expertise on topics of significant interest to stakeholders and decision-makers.
 - b. Identify high priority topics and convene legislative briefings that include COAST experts.
 - c. Promote inclusion of COAST experts in briefings convened by other entities.
 - d. Maintain a database of the expertise of COAST members and use it to connect members with decision-makers.

- e. Communicate the activities, successes and impacts of COAST members, including students, to stakeholders and the public.
- 3. Fund scientific research to support evidence-based and informed decision-making.
 - a. Secure funding specifically for projects that support stakeholder needs for scientific and technical information.
 - b. Develop requests for proposals in response to stakeholder needs for scientific information to inform decision making and policy development.
 - i. Facilitate stakeholder-PI relationships to ensure results are used to advance decision-making.
- 4. *Promote community-engaged research, including partnerships with California tribes.*
 - a. *Publicize community engagement by COAST members.*
 - b. *Share best practices to enable faculty members to better engage communities in their research as appropriate.*
 - i. *Provide training for and facilitate communication among COAST members.*
- 5. Develop public engagement skills among COAST members.
 - a. Provide workshops and training on effective communication strategies and public science engagement.

Implementation Time Frame

All of the activities listed above are ongoing and continuous with the exception of new efforts that will be initiated during the five-year period covered by this plan.

Activity	Initiate in
<u>GOAL 1: Create a more inclusive and diverse marine science research community for CSU faculty members, students, and beyond.</u>	
Strategy 3. Collect and analyze the demographic information of those participating in COAST programming. Action a. Document participation by historically excluded and underrepresented groups in marine science and establish a baseline to assess change.	2022
Strategy 4. Remove barriers to participation and promote inclusion of people from historically excluded and currently underrepresented groups. Action a. Provide demographic information about participation in marine science to the CSU campus leadership and COAST members with intent to inform policies, hiring practices and retention efforts to close the gaps in representation.	2024
Strategy 5. Improve visibility of and access to COAST-related opportunities within the CSU for people from historically excluded and currently underrepresented groups. Action a. Disseminate relevant materials to organizations representing historically excluded and currently underrepresented groups. This specifically includes using existing relationships with organizations to distribute job announcements from hiring committees for COAST-related faculty positions at CSU institutions.	2023
Action b. Provide resources to campuses to support recruitment of diverse faculty candidates in marine science and related fields throughout the CSU.	2023
<u>GOAL 2: Increase opportunities and capacity for a diversity of faculty members to obtain extramural funding and conduct research.</u>	
Strategy 3. Promote equity and eliminate bias that leads to discrimination in our review processes for faculty funding opportunities. Action a. Develop and incorporate policies and procedures to ensure that diverse groups of faculty members are equitably supported.	2023

<u>GOAL 3: Enable a diversity of students to develop as researchers and professionals.</u>	
<p>Strategy 1. Provide funding to support undergraduate and graduate participation in research and field experiences as a way to contribute to their education and professional development and remove financial barriers to student participation in marine science.</p> <p>Action a. Establish a new program that provides financial support to students to facilitate their participation in field experiences.</p>	2022
<p>Action b. Establish a new fellowship program to provide two years of full support to marine science master’s students.</p>	2025
<p>Strategy 3. Provide funding to students to present the results of their research at scientific meetings and conferences through the Student Travel Award Program.</p> <p>Action a. Quantify participation by students from historically excluded groups.</p>	2022
<p>Strategy 4. Provide professional development that helps students advance as scholars, researchers, community members and leaders.</p> <p>Action a. Provide workshops, skill building activities, metacognitive development, materials, and mentorship that will supplement the skills students develop through coursework and research opportunities.</p>	2022
<p>Action b. Connect marine science students from across the CSU to build a broad professional network.</p>	2024
<u>GOAL 4: Elevate COAST member expertise as a primary resource for informed decision-making in government, industry, and local communities.</u>	
<p>Strategy 4. Promote community-engaged research, including partnerships with California tribes.</p> <p>Action a. Publicize community engagement by COAST members.</p>	2022
<p>Action b. Share best practices to enable faculty members to better engage communities in their research as appropriate.</p>	2023

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