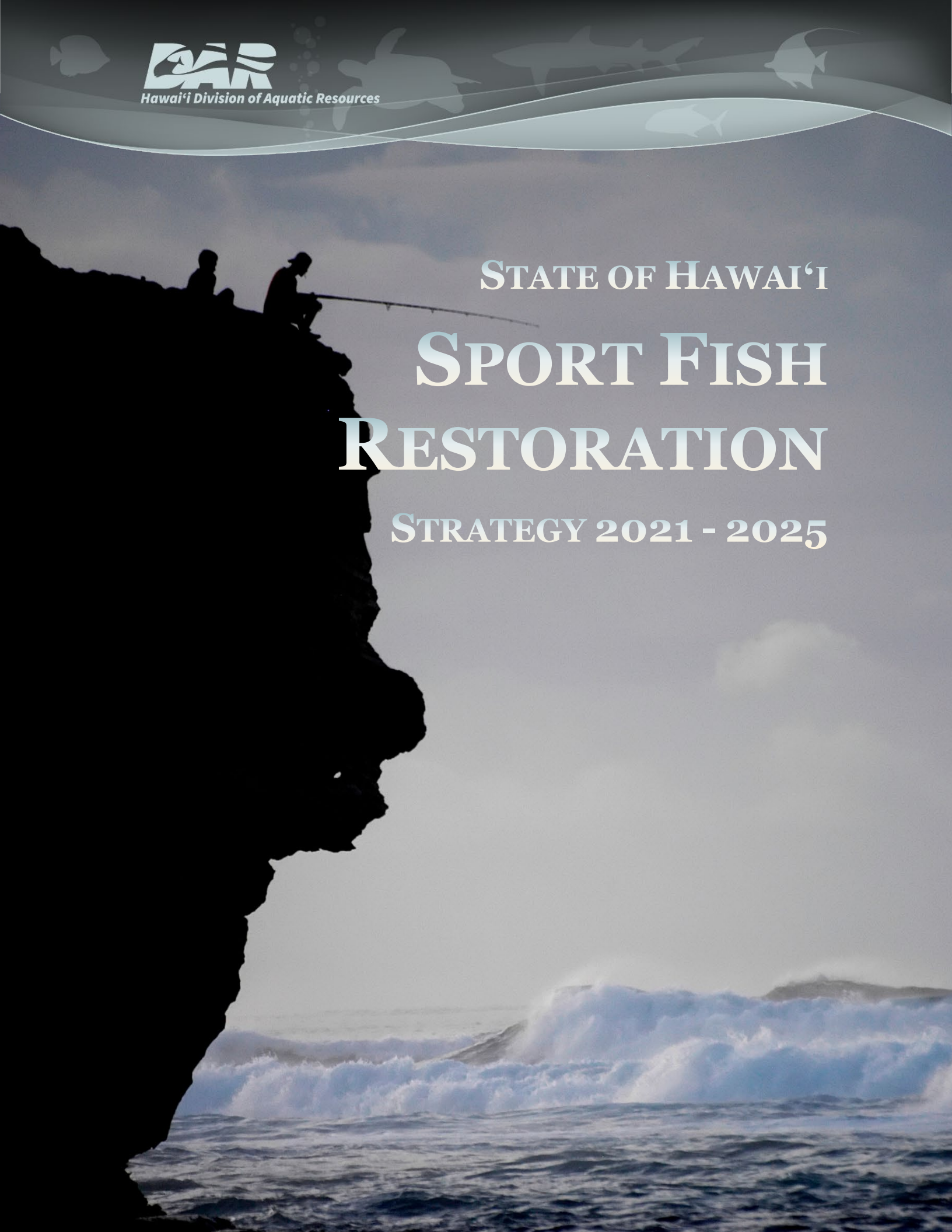
Hawai'i Division of Aquatic Resources



State of Hawai'i

Sport Fish Restoration

Strategy 2021 - 2025

Message from the
Division of Aquatic Resources

The mission of the State of Hawai‘i Department of Land and Natural Resources Division of Aquatic Resources is *to work with the people of Hawai‘i to manage, conserve and restore the state’s unique aquatic resources and ecosystems for present and future generations*. There are three tiers[1] supporting the division’s programs and policies. At the foundation, the division’s goal is for aquatic resources to flourish and sustain a diversity of wildlife and ecosystem services. The next tier is to manage sustainable non-commercial uses to benefit all people of Hawai‘i. Finally, with ecosystems and public use managed appropriately, the division regulates commercial uses for the economic and social benefits that go with it. The integrity of each successive tier is critical to the next, and all are connected much like our aquatic resources mauka to makai.

Sport fishing, which in Hawai‘i includes subsistence, cultural, and recreational fishing, has been a priority for the division for over thirty-five years. In 2017, Hawai‘i’s aquatic resources supplied more than 7 million local meals and the non-commercial value of catch was estimated between $7 - $12 million USD[2]. These and other statistics provide just a glimpse of the real value and significance sport fishing provides.

This strategy is the culmination of decades of sport fishing, research, and collaboration. While the goals and initiatives are written by DAR, their purpose is to benefit the users who made this program possible. These fishers and boaters have our support and sincerest gratitude, because by working together, the legacy of fishing in Hawai‘i continues to be celebrated and preserved.

– Brian Neilson, Administrator

1 Department of Land and Natural Resources, “Policy for Commercial Activities on State Owned and Managed Lands and Waters, Policy #1,” State of Hawai‘i (January 30, 1998).
2 Shanna Grafeld et al., “Follow That Fish: Uncovering the Hidden Blue conomy in Coral Reef Fisheries,” PLOS ONE 12, no. 8 (August 3, 2017): e0182104, https://doi.org/10.1371/journal.pone.0182104.

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About the
Sport Fish Restoration Strategy

The State of Hawai'i *Sport Fish Restoration Strategy 2021 – 2025* outlines the goals, objectives, and strategies for the Department of Land and Natural Resources (*DLNR*) Division of Aquatic Resources (*DAR*). The division receives between $3.5 - $4 million USD annually from the U.S. Fish and Wildlife Service (*USFWS*), Sport Fish Restoration (*SFR*) Program, authorized under the Dingell-Johnson SFR Act (16 U.S.C. 777 – 777k, 64 State. 430). 85% of these funds are allocated to DAR projects related to sport fishing, sport fish species, and their habitats. The remaining 15% is allocated to boating access projects administered through the DLNR Division of Boating and Ocean Recreation.

SFR Projects

DAR's Sport Fish Restoration program includes the following priorities:

- Stock fish for recreational purposes
- Apply technical experience to sport fish management
- Provide public access for fishing
- Restore, conserve, manage, and enhance sport fish populations
- Support aquatic education

Cycle of Success

Funded through excise taxes on fishing equipment, motorboat and small engine fuels, import duties, and interest, the SFR program funds states and territories based on the number of paid license holders and land area. The USFWS distributes funds to state fish and wildlife agencies, which implement programs to benefit sport fishing for their users. More information about this program is available at https://www.fws.gov/wsfrprograms/

CONTENTS

There are four pillars within the Sport Fish Restoration Strategy, each supporting essential aspects of an effective and sustainable program. Across all of its goals, objectives, and strategies, the mission of the SFR Program is *User Pay, User Benefit*. Sport Fish users engage in recreational, cultural, subsistence, and other forms of fishing. The goals, objectives, and actions of these four pillars are all in service to these users and to sport fishing in Hawai‘i.

PILLAR	GOALS	OBJECTIVES
FISHERIES	Provide diverse and sustainable sport fishing opportunities for present and future generations.	1. Maintain and promote sport fishing opportunities statewide. 2. Enhance the sport fishing experience based on stakeholder input, science, and culture. 3. Explore, develop, and implement additional sport fishing opportunities statewide.
STAKEHOLDER ENGAGEMENT	Promote sport fishing through effective communication and partnership.	1. Communicate to fishers and other resource users the benefits of the Sport Fish Restoration Program. 2. Develop and implement effective partnerships between the Division and stakeholder groups. 3. Conduct and support aquatic education and outreach for the broader public.
BIOLOGICAL	Inform adaptive and cooperative management through inquiry-based science of sport fisheries, fishes and their ecosystems.	1. Increase DAR’s knowledge of sport fish biology through scientific investigation. 2. Monitor sport fishing activities, species, and habitats to understand changes over time. 3. Integrate scientific outcomes and conclusions into adaptive policy and management. 4. Expand the division's capacity to share scientific outcomes and to manage natural resources through collaboration.
INTERNAL OPERATIONS	Ensure a high-quality Sport Fish Restoration program that is adaptive and sustainable.	1. Improve the sustainability, accountability, and transparency of the Sport Fish Restoration program. 2. Maintain and build capacity to effectively facilitate and implement the goals and objectives of the Sport Fish Restoration Strategy. 3. Increase the efficiency and efficacy of the division's Sport Fish Restoration Program administration.

TIMELINE

The *Example Activities* boxes of each of these pillars provide examples of the next steps and ongoing efforts for 2021 – 2025. These activities represent the Division’s plan for supporting and implementing the goals of this strategy. For more information, visit https://dlnr.hawaii.gov/dar/sport-fish-restoration-projects/

FISHERIES

GOAL: PROVIDE DIVERSE AND SUSTAINABLE SPORT FISHING OPPORTUNITIES FOR PRESENT AND FUTURE GENERATIONS.

As the first pillar of the Sport Fish Restoration Strategy, *Fisheries* represents the wide range of services and opportunities supported by DAR. Examples include fish aggregating devices (**FADs**), artificial reefs, public fishing areas (**PFAs**), and stocking fish species. The program supports not only maintaining favorite fishing spots and monitoring fishery populations, but also expanding opportunities through infrastructure development, research, education, and outreach events. Division staff are joined by keiki to kupuna (children to elders) in fishing days, trainings, and tournaments. Communities take active roles in stewarding PFAs by replanting native species that provide habitat for sport fish species. Fishers report the status of visited FADs and volunteer their time to maintain the state's extensive network. Working together to support the program's diversity of fishing opportunities, these users are part of the driving force behind the preservation and celebration of Hawai'i's rich fishing legacy.

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OBJECTIVES & ACTIONS

Objective 1: Maintain and promote sport fishing opportunities statewide.

F 1.1. Stock fish species to improve sport fishing.

F 1.2. Support existing sport fishing opportunities at fish aggregating devices (FADs), artificial reefs, public fishing areas (PFAs) and shoreline access points.

F 1.3. Provide and maintain PFAs for sport fish species.

Objective 2: Enhance the sport fishing experience based on stakeholder input, science, and culture.

F 2.1. Improve and expand the services offered at PFAs and access points.

F 2.2. Restore and develop habitat to benefit sport fishing.

F 2.3. Increase the number of stakeholders knowledgeable of and utilizing public fishing opportunities.

Objective 3: Explore, develop, and implement additional sport fishing opportunities statewide.

F 3.1. Promote underutilized fishing activities among existing and potential users.

F 3.2. Develop new PFAs and opportunities.

OUTCOMES:

- Diverse sport fishing opportunities are available on all islands.
- Fishing opportunity infrastructure and access points are well-maintained.
- Public is informed and making use of sport fishing opportunities.
- Sport fish populations are maintained at sustainable levels.
- Users are pleased with their fishing experience.
- New piloted fishing opportunities improve existing programs.

EXAMPLE ACTIVITIES

F 1.1 #114 Survey fishers to prioritize which species they want to see stocked.

F 1.2 #131 Conduct rapid on-site evaluations of current sport fishing infrastructure conditions.

F 2.2 #221 Use native plants and artificial structures to improve habitats for sport fish species.

F 3.1 #313 Encourage take of invasive species through fishing tournaments, cooking and tasting demos, and community recipes.

F 3.2 #325 Identify reservoirs and freshwater bodies where PFAs might be developed or expanded.

Stakeholder Engagement

Goal: Promote sport fishing through effective communication and partnership.

Communication is one of the most essential elements of the Sport Fish Restoration program. This involves not only sharing project results and resources with users, but also seeking and applying user input for the program itself. Partnership is a collaborative approach to co-managing sport fish resources, and creates more opportunities to benefit users. But beyond the users, whose fishing- and boating-related expenses support this program, *stakeholder* includes all people of Hawai‘i. The federal sport fish program specifies that all aquatic resource education is relevant to sport fishing and cultivating a community-wide appreciation for fishing. The objectives of this pillar can be summarized into a three-fold approach: share project outcomes, partner with users, and promote aquatic education throughout Hawai‘i.

Stakeholder engagement is not limited to this pillar alone; it is such an important part of this strategy that it is both a pillar and a recurring component of each of the other three. For *Fisheries*, technical workshops, keiki teaching days, and conversations with fishers at PFAs all promote fishing opportunities. Many of the research and monitoring studies in the *Biological* pillar depend on fishers to collect and share data, and *Internal Operations* promotes transparency and inclusivity as key to delivering a high-quality program. Overall, the importance of stakeholder engagement cannot be stated enough, and the Division is very fortunate to have the support of knowledgeable and passionate people who are dedicated to sharing, conserving and enjoying sport fish resources.

OBJECTIVES & ACTIONS

Objective 1: Communicate to fishers and other resource users the benefits of the Sport Fish Restoration Program.

- S 1.1. Implement an education and outreach program specific to Sport Fish Restoration projects.
- S 1.2. Improve in-reach between DAR, Sport Fish Restoration projects, and education & outreach staff.
- S 1.3. Create and maintain user-friendly resources that communicate the results and conclusions of research studies.

Objective 2: Develop and implement effective partnerships between the division and stakeholder groups.

- S 2.1. Identify and develop the existing and potential partnerships for Sport Fish Restoration projects.
- S 2.2. Co-develop policies and management plans with stakeholder groups.
- S 2.3. Include fishers in the research and data collection stages of Sport Fish Restoration projects studies.

Objective 3: Conduct and support aquatic education and outreach for the broader public.

- S 3.1. Communicate the benefits of Sport Fish Restoration projects for Hawai‘i's aquatic resources.
- S 3.2. Promote awareness and stewardship of the aquatic resources of Hawai‘i.

OUTCOMES

- Fishers are more knowledgeable of the SFR Act and benefits.
- Communications are strategic and coordinated within the division.
- Fishers are consulted in prioritizing fishing improvements.
- SFR projects are supported by a diverse network of partners.
- Trust is improved between stakeholders and the public.
- Non-DAR partners are knowledgeable of SFR projects.
- Public support for sport fishing increases.
- Public stewardship extends mauka to makai.

EXAMPLE ACTIVITIES

S 1.2 #121 Project leaders submit periodic updates on how their work is benefiting fishers.

S 2.1 #218 Communicate opportunities with fishing associations, organizations, programs, and businesses to cultivate state-supported community for sport fishing.

S 2.2 #227 Collect and share monitoring data with communities that support their local management plans.

S 3.3 #231 Explore and share community fishing standards and pono practices in Hawai‘i.

S 3.2 #324 Utilize engaging and experience-based learning to provide educational outreach to the public.

Biological

Goal: Inform adaptive and cooperative management through inquiry-based science of sport fisheries, fishes and their ecosystems.

The balance of sustainable sport fishing and healthy fish populations is an essential element of the Sport Fish Restoration program. Division staff and fishers apply their understanding of sport fish biology and ecology to improve populations and ecosystems. Aquatic habitats and sport fish species are connected statewide and unique to their local environments. Even a single fish species may exhibit different behaviors from one island to the next. For this reason, it is important to study not only sport fishing species, but also their statewide distributions, movements, and dependencies on other species and habitats mauka to makai (ridge to reef).

DAR's responsibilities in research and monitoring are widespread. Our Hawai'i Marine Recreational Fishing Surveys (HMRFS) bring DAR surveyors to boat ramps and fishing sites to collect data voluntarily shared by fishers. DAR biologists use cast nets and water samples to study the state's estuaries, where many sport fish species live as juveniles. And each year, the Division works with fishers and other partners to conduct fish tagging and tracking studies, fish and habitat surveys, and many other important inquiry-based investigations. Most importantly, the *Biological* pillar includes consulting with users, sharing methods and results, and developing partnerships. This collaborative approach improves cooperative and adaptive management, and is part of a strategy to improve sport fishing statewide.

Photo credit: Jason Mehlinger

OBJECTIVES & ACTIONS

Objective 1: Increase our knowledge of sport fish biology through scientific investigation.

B 1.1. Study age, growth, reproductive cycles, and other life history characteristics of sport fishes.

B 1.2. Conduct studies on sport fish movements and habitat use.

Objective 2: Monitor sport fishing activities, species, and habitats to understand changes over time.

B 2.1. Maintain, develop, and expand effective methods to collect sport fishing-dependent data.

B 2.2. Monitor important sport fish habitats and the effects of environmental stressors and conditions on ecosystem health.

B 2.3. Evaluate and refine current monitoring methods of sport fish assemblages and population dynamics to allow for more comprehensive ecosystem-based studies.

Objective 3: Integrate scientific outcomes and conclusions into adaptive policy and management.

B 3.1. Integrate research outcomes into the development and implementation of management interventions.

B 3.2. Ensure that research and monitoring is relevant to priority management questions and data gaps.

B 3.3. Evaluate the efficacy of policy and management for sustainable sport fishing.

Objective 4: Expand the Division's capacity to share scientific outcomes and to manage natural resources through collaboration.

B 4.1. Develop and foster partnerships with scientists to expand the division's capacity to study sport fishes and their habitats.

B 4.2. Share current research findings in an accessible and usable format for decisionmakers, stakeholders, and the public.

B 4.3. Design and implement studies that include stakeholders and prioritize collaborative research.

EXAMPLE ACTIVITIES

B 1.2 #120 Develop, implement, and evaluate tagging studies, especially those that include and engage fishers.

B 2.1 #215 Expand ways that CREEL survey results are shared with fishers.

B 3.3 #332 Incorporate community monitoring data and observations into adaptive management strategies.

B 4.3 #433 Adapt Eyes on the Reef model for community-based ecosystem monitoring.

OUTCOMES

- Rules better serve sport fishing and users under sustainable use.
- Projects provide accessible, timely information to the public.
- Scientific investigations broaden our understanding of sport fish biology.
- Sport Fish populations are better managed with relevant and recent scientific data.
- The division implements effective management that is iterative and adaptive.
- Program's capacity to conduct research and analyses are expanded through partnership.
- Relationships with community groups create new opportunities for collaboration.

Internal Operations

Goal: Ensure a high-quality Sport Fish Restoration program that is adaptive and sustainable.

The final pillar is a commitment to efficient and effective program management. While DAR staff participated in planning and drafting this strategy, the world was facing unprecedented hardship amidst the COVID-19 global pandemic. Lasting economic impacts and social changes necessitate a clear vision for the short- and long-term. By anticipating changes and planning for multiple scenarios, the division will increase its adaptability not only in resource management but in its own day to day operations.

The *Internal Operations* pillar represents the division's pursuit of financial stability, capacity-building, and planning. Cross-training staff, scientific integrity, and outlining administrative procedures all benefit the quality of the sport fish program. Even this planning document, created for transparency as much as for internal guidance, is a step in the right direction. These objectives address strained resources and lean budgets, but they also strengthen internal resiliency to future challenges. This way, the program can continue to benefit users and sport fishing through uncertain times.

Photo credit: Sterling Kaya

OBJECTIVES & ACTIONS

Objective 1: Improve the sustainability, accountability, and transparency of the Sport Fish Restoration program.

- O 1.1. Anticipate and adapt to changing funding scenarios due to the COVID-19 Pandemic.
- O 1.2. Develop diverse funding mechanisms to meet the 3:1 state to federal match requirement.
- O 1.3. Provide accessible and up-to-date program financial information to the public.

Objective 2: Maintain and build capacity to effectively facilitate and implement the goals and objectives of the Sport Fish Restoration Strategy.

- O 2.1. Build and maintain project capacity within the program.
- O 2.2. Improve retention of Sport Fish Restoration personnel.
- O 2.3. Develop and implement programs that increase the desirable and relevant expertise of current and future staff.

Objective 3: Increase the efficiency and efficacy of the division's Sport Fish Restoration Program administration.

- O 3.1. Create internal guidance documents for program administration and projects.
- O 3.2. Establish regular communication between DAR programs, DLNR divisions, USFWS Sport Fish Program, and other resource management agencies.
- O 3.3. Implement and update the Sport Fish Restoration Program's Strategic Plan.

EXAMPLE ACTIVITIES

O 1.2 #125 Recruit and train volunteers to provide in-kind support like fisher data collection and fishing skills trainers.

O 1.3 #131 Disseminate program info broadly through diverse outlets like meetings, social media, and bait and tackle shops.

O 2.1 #227 Support staff to attend trainings, develop new skills, and improve their expertise.

O 3.3 #332 Conduct annual program reviews using the strategic plan to track and evaluate progress.

OUTCOMES

- The SFR program is proactive in addressing budgetary constraints.
- Transparency creates more goodwill between stakeholders and the division.
- Scientific investigations are conducted with integrity by DAR staff.
- Succession planning helps facilitate smooth transitions for projects, including delegating and training current staff to take over projects where needed.
- Communication and coordination create widespread institutional knowledge throughout the division.
- Division's regulations and policies reflect the adaptive and iterative approach to management.

State of Hawai‘i. (2021). Hawai‘i Sport Fish Restoration Strategy 2021.

This Sport Fish Restoration program is supported by the U.S. Fish and Wildlife Service, Sport Fish Restoration Program and through your purchases of fishing equipment and motor boat fuels.

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Fisheries GOAL: Provide diverse and sustainable sport fishing opportunities for present and future generations.

OBJECTIVE 1: Maintain and promote sport fishing opportunities statewide.

OBJECTIVE 2: Enhance the sport fishing experience based on stakeholder input, science, and culture.

OBJECTIVE 3: Explore, develop, and implement additional sport fishing opportunities statewide.

	Objective		Strategies		Actions
F1	**Maintain and promote sport fishing opportunities statewide.**	F1.1	Stock fish species to improve sport fishing.	110	Continue stocking freshwater species at PFAs.
				111	Conduct feasibility studies for stock enhancement of target fishery species.
				112	Integrate research findings into stocking activities.
				113	Investigate new or renewed stock enhancement for marine species.
				114	Survey fishers to prioritize which species they want to see stocked.
				115	Develop partnerships with fish ponds, aquariums, and other groups to raise and make stock available for public fishing.
		F1.2	Support existing sport fishing opportunities at fish aggregating devices (FADs), artificial reefs, public fishing areas (PFAs) and shoreline access points.	120	Maintain and update information for accessing and using FADs, artificial reefs, and shoreline access points.
				121	Ensure FADs, artificial reefs and access points are maintained and functioning.
				122	Support fishers and community groups that can observe and report the status of marine sport fishing opportunities.
				123	Utilize online mapping resources to publicly share common fishing opportunities and fishing methods at different locations throughout the state.
				124	Coordinate with partner agencies and landowners to ensure public accesses are maintained for fishers.
		F1.3	Provide and maintain PFAs for sport fish species.	130	Identify PFAs, access points, and jurisdictional authority over those locations.
				131	Conduct rapid on-site assessments (ROSA) of current sport fishing infrastructure conditions across the main Hawaiian islands.
				132	Evaluate assessments and make repairs where it is efficient and prioritized.
				133	Ensure PFAs are accessible and safe for all users.
F2	**Enhance the sport fishing experience based on stakeholder input, science, and culture.**	F2.1	Improve and expand the services offered at PFAs and access points.	210	Prioritize and implement improvements based on rapid on-site assessments (ROSA) surveys and user input.
				211	Improve ADA compliance at public fishing accesses.
				212	Consider the wide diversity of fishing methods when prioritizing improvements.
				213	Build new fishing platforms.
				214	**Provide fishing gear disposal bins, fish cleaning stations and fish waste dumpsters.**
		F2.2	Restore and develop habitat to benefit sport fishing.	220	Develop and explore sport fish enhancement tools for estuaries.
				221	Use native plants and artificial structures to improve habitats for sport fish species.
				222	Develop and implement artificial reefs that are effective for sport fish habitat and production.
				223	Promote volunteer groups to take an active role in fishery debris cleanups, and salvage and donate as much recoverable fishing tackle as possible.
		F2.3	Increase the total number of stakeholders knowledgeable of and utilizing public fishing opportunities.	230	Host events, initiatives, and competitions at PFAs.
				231	Compare the number of users accessing fishing sites before and after public information campaigns.
				232	Promote family-friendly fishing opportunities for everyone from kupuna to keiki.
				233	Provide knowledge and skills trainings for fishers.
				234	Create and maintain online maps of public fishing infrastructure and access points.
				235	Invite school classes, community groups, and other members of the public to fish with DAR staff.

Fisheries GOAL: Provide diverse and sustainable sport fishing opportunities for present and future generations.

OBJECTIVE 1: Maintain and promote sport fishing opportunities statewide.

OBJECTIVE 2: Enhance the sport fishing experience based on stakeholder input, science, and culture.

OBJECTIVE 3: Explore, develop, and implement additional sport fishing opportunities statewide.

F3	**Explore, develop, and implement additional sport fishing opportunities statewide.**	F3.1	Promote underutilized fishing activities among existing and potential users.	310	Increase targeted fishing for species based on biological data.
				311	Coordinate tagging studies with catch and release campaigns that engage fishers in conservation.
				312	Provide trainings that are targeted to expanding less common fishing methods in different areas across the state.
				313	Encourage take of invasive species through fishing tournaments, cooking and tasting demos, and community recipes.
				314	Develop designated fishing areas at popular spots where fishing activities are not regulated or not permitted.
		F3.2	Develop new PFAs and opportunities	320	Consult with stakeholders for ideas and priorities.
				321	Evaluate the scalability and long-term sustainability of pilot fishing opportunities.
				322	Consider wave attenuation projects using artificial reefs.
				323	Evaluate closed fishing areas periodically to consider reopening them for sustainable levels of sport fishing.
				324	Support agency partners in establishing designated fishing access points in their managed areas such as breakwalls, harbors, and piers.
				325	Identify reservoirs and freshwater bodies where PFAs may be developed or expanded.

STAKEHOLDER

Stakeholder GOAL: Promote sport fishing through effective communication and partnership

OBJECTIVE 1: Communicate to fishers and other resource users the benefits of the Sport Fish Restoration Program.

OBJECTIVE 2: Develop and implement effective partnerships between the Division and stakeholder groups.

OBJECTIVE 3: Conduct and support aquatic education and outreach for the broader public.

Objective		Strategies		Actions	
S1	Communicate to fishers and other resource users the benefits of the Sport Fish Restoration Program.	S 1.1	Implement an education and outreach program specific to Sport Fish Restoration projects.	110	Create and widely share background information on the Sport Fish Restoration Act.
				111	Identify user groups and opportunities to provide information on the program.
				112	Develop a communication plan with key messaging, approach, and evaluation strategies.
				113	Maintain an education and outreach presence at public events, community gatherings, tournaments and other opportunities with fishers.
				114	Implement user surveys to check knowledge, identify needs, and assess the efficacy of stakeholder communication activities.
				115	Engage in regular talk story with fishers that is not solely driven by rulemaking or management.
				116	Host and support fishing opportunities that reconnect fishers with Native Hawaiian cultural and traditional fishing practices.
				117	Update Sport Fish Restoration stakeholder communication strategies to address knowledge gaps and user feedback.
				118	Promote direct communication between project staff and stakeholders, including in-person and digital communication opportunities.
				119	Emphasize the importance of biological studies and habitat restoration activities to sport fishing
		S 1.2	Improve in-reach between DAR, Sport Fish Restoration projects, and education and outreach staff.	120	Develop internal guidance for all SFR projects to include an education and outreach component.
				121	Project leaders submit periodic updates on how their work is benefiting fishers.
				122	Dedicate field days for projects to host education and outreach staff.
				123	Coordinate outreach opportunities across DAR projects to promote consistent messaging, efficient stakeholder interactions, and upper-level strategic planning.
				124	Provide opportunities and resources for project staff to receive training in education & outreach best practices and Department policies for public communication.
				125	Work with project staff to develop relevant and useful outreach tools like rulers, stickers, and other practical items.
		S 1.3	Create and maintain user-friendly resources that communicate the results and conclusions of research studies.	130	Develop an online map tool that connects users with spatial fishery data.
				131	Maintain a social media presence in groups, pages, and other platforms where fishers commonly seek and share information.
				132	Publish scientific articles, technical reports, and other print communications to the website for public access.
				133	Use graphics and visual aids in outreach materials, presentations, and digital media.
				134	Audit and update the DAR website to more clearly provide visitors with Sport Fish Restoration information and resources.
				135	Develop resources that users prioritize as needed infrastructure and tools.
				136	Use modern digital media to provide project information and updates.

Stakeholder GOAL: Promote sport fishing through effective communication and partnership

OBJECTIVE 1: Communicate to fishers and other resource users the benefits of the Sport Fish Restoration Program.

OBJECTIVE 2: Develop and implement effective partnerships between the Division and stakeholder groups.

OBJECTIVE 3: Conduct and support aquatic education and outreach for the broader public.

S2	**Develop and implement effective partnerships between the Division and stakeholder groups.**	S 2.1	Identify and develop the existing and potential partnerships for Sport Fish Restoration projects.	210	Create a database of partnerships, programs, and community resources.
				211	Develop partnerships outside of DLNR with government agencies, educational institutions, and non-governmental organizations that work with sport fishers and boaters.
				212	Emphasize partnerships and collaborations that promote fisheries as a way of trust-building and supporting fishers statewide.
				213	Adapt project updates into a biannual external newsletter to share with non-DAR partners.
				214	Host volunteer work days and partner with community groups to make visible and hands-on improvements at PFAs as a means of promoting community ownership of the sport fishing experience.
				215	Attend professional meetings and conferences to build relationships and consult with programs working towards similar goals.
				216	Identify underrepresented fisher groups and develop an inclusive engagement strategy.
				217	Support partner and community announcements and opportunities within DAR's network of fisher contacts.
				218	Communicate opportunities with fishing associations, organizations, programs, and businesses to cultivate a state-supported community for sport fishing.
		S 2.2	Co-produce policies and management plans with stakeholder groups.	220	Assess public perceptions of and satisfaction with management.
				221	Incorporate community knowledge and input into ecological, socioeconomic, and cultural considerations for management.
				222	Prioritize community-based planning and co-produce solutions.
				223	Integrate the outcomes from fisher working groups into the division's policy and management.
				224	Convene working groups with key stakeholders that represent the diversity of Hawaii's sport fishing communities.
				225	Join existing community forums and groups to discuss relevant Sport Fish Restoration policies and management plans with members.
				226	Support partners to develop and implement their own sport fish restoration projects by providing relevant expertise and permitting guidance.
				227	Collect and share monitoring data with communities that support their local management plans.
				228	Provide guidance documents for communities to conduct their own baseline assessments, monitoring activities, and evaluations.
				229	Investigate current and emerging technology to meaningfully engage communities in understanding, improving, and complying with rules and regulations.
				230	Explore and share community fishing rules and pono practices in Hawai'i.
		S 2.3	Include fishers in the research and data collection stages of Sport Fish Restoration projects.	231	Explore, implement and support programs to encourage data sharing such as tournaments, prizes, photo competitions, and more.
				232	Recognize the experience and value of fishers and ask them to support the division in fish capture studies.
				233	Highlight the contributions of fishers when reporting research findings and in outreach materials.
				234	Survey fishers to determine what inspires them to contribute in data collection and use the results to increase fisher participation.
				235	Create opportunities for stakeholders to interface directly with biologists and scientists.
				236	Prioritize projects with strong stakeholder engagement outcomes, even if biological or fisheries outcomes are marginally useful.
				237	Include businesses that service fishers, like bait and tackle shops, as a means of promoting engagement.

Stakeholder GOAL: Promote sport fishing through effective communication and partnership

OBJECTIVE 1: Communicate to fishers and other resource users the benefits of the Sport Fish Restoration Program.

OBJECTIVE 2: Develop and implement effective partnerships between the Division and stakeholder groups.

OBJECTIVE 3: Conduct and support aquatic education and outreach for the broader public.

S3	**Conduct and support aquatic education and outreach for the broader public.**	S 3.1	Communicate the benefits of Sport Fish Restoration projects for Hawaii's aquatic resources.	310	Assess public attitudes and perceptions of sport fishing in Hawaii.
				311	Promote the positive impact that designated PFAs have on reducing fishing pressure elsewhere.
				312	Provide educational presentations at events, schools, and other community gatherings.
				313	Use photos and videos to show community members participating in management and promoting the sustainable use of their resources.
				314	Encourage an appreciation for fishing and its cultural, traditional, and historic significance in Hawaii.
				315	Engage young people in experiences like fishing for and cooking fish, conducting scientific investigations, and other hands-on learning programs.
				316	Create opportunities for staff to provide public talks, presentations to community groups and organizations, radio interviews, etc..
		S 3.2	Promote awareness and stewardship of the aquatic resources of Hawai‘i.	320	Provide educational presentations at events, schools, and other community gatherings.
				321	Conduct tours and interpretive experiences for the public.
				322	Include non-fishers in conservation messaging on fisheries management topics.
				323	Improve people's perceptions of a functioning aquatic ecosystem.
				324	Utilize engaging and experience-based learning to provide educational outreach to the public.
				325	Communicate the cultural legacy of pono practices and other management strategies in Hawaii.

Biological GOAL: Inform adaptive and cooperative management through inquiry-based science of sport fisheries, fishes and their ecosystems.

OBJECTIVE 1: Increase our knowledge of sport fish biology through scientific investigation.

OBJECTIVE 2: Monitor sport fishing activities, species, and habitats to understand changes over time.

OBJECTIVE 3: Integrate scientific outcomes and conclusions into adaptive policy and management.

OBJECTIVE 4: Expand the division's capacity to share scientific outcomes and to manage natural resources through collaboration.

	Objective	Strategies		Actions	
B1	Increase our knowledge of sport fish biology through scientific investigation.	B 1.1	Study age, growth, reproductive cycles, and other life history characteristics of sport fishes.	110	Develop or support studies of sport fish fecundity, recruitment/larval delivery, size and age at maturation, periodicity of spawning and mortality rates.
				111	Catalogue and organize life history studies of each species to make information more accessible.
				112	Develop a list of priority species and identity knowledge gaps.
				113	Continue to train DAR staff in new and current methodologies for data collection and analysis.
				114	Expand sample collection through fisher engagement at PFAs, tournaments, fish markets, and other opportunities.
		B 1.2	Conduct studies on sport fish movements and habitat use.	120	Develop, implement, and evaluate tagging studies, especially those that include and engage fishers.
				121	Examine sport fish movements related to disturbances and impacts like human use, pollution, and climate change.
B2	Monitor sport fishing activities, species, and habitats to understand changes over time.	B 2.1	Maintain, develop, and expand effective methods to collect sport fishing-dependent data.	210	Test and implement new technologies to monitor sport fish such as acoustic telemetry, remotely operated vehicles, and camera systems.
				211	Implement long-term studies on artificial reefs to better understand production value for sport fish species.
				212	Expand the shoreline fishing and intercept survey efforts to all islands with a focus on priority species habitats.
				213	Explore and promote the use of fishery data collection apps.
				214	Explore new technologies and techniques for collecting and recording fishery-dependent data.
				215	Expand ways that CREEL survey results are shared with fishers.
				216	Promote data collection for underrepresented fishing methods such as lay nets and spearfishing.
		B 2.2	Monitor important sport fish habitats and the effects of environmental stressors and conditions on ecosystem health.	220	Assess and monitor abiotic and biotic parameters and conditions within estuaries statewide.
				221	Monitor coral reef ecosystems in relation to reef fish populations and expand monitoring efforts statewide
				222	Expand the DAR database to include in situ instrument time series data.
				223	Monitor sport fish habitat restoration sites to assess the efficacy of these activities.
				224	Include climate-related research questions into monitoring and assessment studies.
				225	Examine the interactions of physical habitat, environmental parameters, and sport fish to assess ecosystem health and function.
		B 2.3	Evaluate and refine current monitoring methods of sport fish assemblages and population dynamics to allow for more comprehensive ecosystem-based studies.	230	Propose and evaluate new approaches to monitoring species assemblages.
				231	Improve utility of datasets by ensuring data can be normalized to a common scale for multiple methods and sites.
				232	Expand the use of eDNA methods into sport fish monitoring efforts.
				233	Improve the quality and number of LWR equations for sport fishes, developed from juveniles and adults.
				234	Integrate partner datasets for ecosystem level analyses.
				235	Incorporate abiotic and biotic data (such as pH, salinity, conductivity) when developing new methods and studies.
				236	Develop data collection methodologies and analyses that enhance the division's ability to export sport fish data for larger ecosystem-based studies.
B3	Integrate scientific outcomes and conclusions into adaptive policy and management.	B 3.1	Integrate research outcomes into development and implementation of management interventions.	310	Compare scientific data among and between the main Hawaiian Islands to identify differences, similarities, and trends across the archipelago.
				311	Identify the abiotic and biotic conditions of healthy estuaries during juvenile sport fish life stages.
				312	Apply monitoring data to identify how different sport fish species use the three estuary types (embayment, riverine, lagoonal).
				313	Analyze the connectivity among life history stages and freshwater, estuarine, and marine habitats.
				314	Inventory important sport fish habitats, assess habitat conditions, and prioritize restoration activities.
				315	Conduct regular reviews of biological monitoring studies to align with current and future management priorities.

Biological GOAL: Inform adaptive and cooperative management through inquiry-based science of sport fisheries, fishes and their ecosystems.

OBJECTIVE 1: Increase our knowledge of sport fish biology through scientific investigation.

OBJECTIVE 2: Monitor sport fishing activities, species, and habitats to understand changes over time.

OBJECTIVE 3: Integrate scientific outcomes and conclusions into adaptive policy and management.

OBJECTIVE 4: Expand the division's capacity to share scientific outcomes and to manage natural resources through collaboration.

B3	Integrate scientific outcomes and conclusions into adaptive policy and management.	B 3.2	Ensure that research and monitoring is relevant to priority management questions and data gaps.	320	Develop priority management indicators and evaluation metrics for sport fish monitoring projects.
				321	Evaluate study design effectiveness in informing management and adjust projects accordingly.
				322	Require technical reports and encourage peer-reviewed publications to share research findings.
				323	Develop evaluation process for programs monitoring and research projects.
				324	Provide opportunities for stakeholders to identify management questions and gaps.
				325	Provide staff trainings that increase capacity to conduct study design, data processing, analysis, and technical writing.
				326	Convene regular meetings between project staff and division leadership to discuss management priorities.
		B 3.3	Evaluate the efficacy of policy and management for sustainable sport fishing.	330	Assess the ecological effects of restoration activities, rules and regulations, and other management strategies.
				331	Prioritize evaluation and monitoring studies of restoration activities in important sport fish habitats like estuaries.
				332	Incorporate community monitoring data and observations into adaptive management strategies.
				333	Ensure that stakeholders are updated on the status of fisheries and the effectiveness of management practices.
				334	Incorporate stakeholder feedback into adaptive management decisions.
B4	Expand the division's capacity to share scientific outcomes and to manage natural resources through collaboration.	B 4.1	Develop and foster partnerships with scientists to expand the division's capacity to study sport fishes and their habitats.	410	Ensure that sport fish research and monitoring is informed by the latest science.
				411	Develop and foster research collaborations and re-evaluate these regularly.
				412	Develop and foster partnerships with educational institutions, labs, and other research teams.
				413	Establish ongoing graduate student research collaborations on sport fish projects.
				414	Emphasize partnerships that evaluate mauka to makai parameters to understand effects on sport fish.
				415	Ensure that sport fish projects align with partner methodologies to the greatest extent possible to optimize our collective capacity for analysis.
				416	Increase data sharing of sport fish data with clearly documented methods and data sharing agreements to prevent misinterpretation
				417	Develop statistical tools to calibrate data so that it may be integrated with similar and relevant datasets.
		B 4.2	Share current research findings in an accessible and usable format for decision-makers, stakeholders, and the public.	420	Lead and co-author peer-reviewed studies on sport fish species and ecosystems with an emphasis on open-access publications.
				421	Ensure online information is current and representative of the research.
				422	Interpret results for non-scientific audiences in project summaries, updates, posts, and other mediums.
				423	Use the DAR database to summarize results and effort by the Sport Fish Restoration projects in a public-facing dashboard .
				424	Train and equip project field teams with the skills and tools to provide opportunistic outreach to anyone curious about their work.
				425	Develop events and opportunities around National Hunting & Fishing Day with project staff interacting with stakeholders and the public.
		B 4.3	Design and implement studies that include stakeholders and prioritize collaborative research.	430	Design fisher monitoring studies to measure catch and effort data, improve community-supported monitoring, and promote fisher participation in research efforts.
				431	Include local communities in the planning process for scientific investigations taking place in their aquatic environments.
				432	Integrate traditional and cultural ecological knowledge into scientific investigations.
				433	Adapt the Eyes on the Reef model for community-based ecosystem monitoring.
				434	Clarify the uses of scientific, common, and Hawaiian names for species to make sure people can identify species correctly.

Int. Operations GOAL: Ensure a high-quality Sport Fish Restoration program that is adaptive and sustainable.

OBJECTIVE 1: Improve the sustainability, accountability, and transparency of the Sport Fish Restoration program.

OBJECTIVE 2: Maintain and build capacity to effectively facilitate and implement the goals and objectives of the Sport Fish Restoration Strategy.

OBJECTIVE 3: Increase the efficiency and efficacy of the division's Sport Fish Restoration Program administration.

Objective		Strategies		Actions	
O1	**Improve the sustainability, accountability, and transparency of the Sport Fish Restoration program.**	O 1.1	Anticipate and adapt to changing funding scenarios due to the COVID-19 Pandemic.	110	Require all projects to complete prioritization exercises under reduced funding scenarios for the next two year.
				111	Complete programmatic prioritization exercises under different funding scenarios for the next five years.
				112	Develop evaluation criteria to assist with prioritization exercises for DAR leadership.
				113	Update work plans to incorporate reduced capacity as a result of furloughs or budget cuts.
		O 1.2	Develop diverse funding mechanisms to meet the 3:1 federal match requirement.	120	Develop preliminary plans to implement a non-commercial fishing license for residents and non-resident fishers.
				121	Seek in-kind contributions like sponsored and discounted ad/aid space through media services.
				122	Encourage projects to explore in-kind contributions for project materials and equipment, including discounts and partnerships with vendors.
				123	Integrate DAR restoration projects, partner projects, and sportfish projects where possible.
				124	Explore partnerships and funding opportunities to increase match.
				125	Recruit and train volunteers to provide in-kind support for projects like fisher data collection and fishing skills trainers.
		O 1.3	Provide accessible and up-to-date program financial information to the public.	130	Publish annual statistics and infographics on project budgets that include match and in-kind contributions to share how Sport Fish Restoration funds are expended and supported within the state program.
				131	Disseminate Sport Fish Restoration information broadly through diverse outlets and venues like meetings, social media, and bait and tackle shops.
				132	Inform stakeholders of any budgetary restrictions that may affect the program's services and benefits.
O2	**Maintain and build capacity to effectively facilitate and implement the goals and objectives of the Sport Fish Restoration Strategy.**	O 2.1	Build and maintain project capacity within the program.	210	Maintain resources to ensure progress on Sport Fish Restoration projects.
				211	Develop clear goals, objectives, and reporting protocols for project teams.
				212	Identify gaps in the sport fish program and establish or increase capacity to address them.
				213	Increase opportunities to provide match for Sport Fish Restoration funding.
				214	Develop a code of conduct to formalize scientific integrity in DAR projects.
		O 2.2	Improve retention of Sport Fish Restoration personnel.	220	Identify and evaluate opportunities to create civil service staff positions to support the Sport Fish Restoration Program.
				221	Budget opportunities for project staff to attend professional meetings and conferences where possible.
				222	Develop and expand staff career ladder opportunities.
				223	Increase opportunities for staff to connect with and develop relationships with partners and communities.
				224	Support staff in leadership and mentorship positions with relevant training and resources.
				225	Create opportunities for leadership to engage with staff through check-ins, input on management decisions, and follow-up.
				226	Recognize staff achievements and reward exceptional staff reviews.
				227	Support staff to attend trainings, continued education, develop new skills, and improve their expertise.
		O 2.3	Develop and implement programs that increase the desirable and relevant expertise of current and future staff.	230	Anticipate project staffing needs and create succession plans for retiring staff.
				231	Provide opportunities for cross-training and inreach to broaden staff capabilities and interests.

Int. Operations GOAL: Ensure a high-quality Sport Fish Restoration program that is adaptive and sustainable.					
OBJECTIVE 1: Improve the sustainability, accountability, and transparency of the Sport Fish Restoration program.					
OBJECTIVE 2: Maintain and build capacity to effectively facilitate and implement the goals and objectives of the Sport Fish Restoration Strategy.					
OBJECTIVE 3: Increase the efficiency and efficacy of the division's Sport Fish Restoration Program administration.					
O3	**Increase the efficiency and efficacy of the division's Sport Fish Restoration Program administration.**	O 3.1	Create internal guidance documents for program administration and projects.	310	Create and update Standard Operating Procedures (SOPs) for programmatic administration.
				311	Develop a guidance document and template for staff interested in developing Sport Fish Restoration project proposals.
				312	Create and update an internal FAQ for staff about the Sport Fish Restoration program.
				313	Develop Standard Operating Procedures (SOPs) and summaries for all Sport Fish Restoration projects.
				314	Create guidance for technical report writing for the purposes of analyzing and interpreting results from sport fish projects.
				315	Create an internal review process for technical reports and manuscript submittals relating to Sport Fish Restoration projects.
		O 3.2	Establish regular communication between DAR programs, DLNR divisions, USFWS Sport Fish program, and other resource management agencies.	320	Provide annual project updates to non-Sport Fish Restoration programs within DAR, such as the Aquatic Invasive Species Program, Protected Species, Coral Program, and Restoration Program.
				321	Integrate project updates into a division newsletter or similar resources.
				322	Give presentations on Sport Fish Restoration projects and also seek information on partner programs to identify opportunities for collaboration.
				323	Coordinate management objectives with other divisions and agencies to identify priorities, gaps, and opportunities to reinforce one another's sport fish-related programs.
				324	Provide DLNR leadership with annual program summaries and updates on progress at the project level.
				325	Include division leadership in meetings with Fish and Wildlife Service Sport Fish Restoration Program Administration.
		O 3.3	Implement and update the Sport Fish Restoration Program Strategic Plan.	330	Prepare and share an annual Sport Fish program Strategy progress review.
				331	Establish regular communication between DAR programs, DLNR divisions, USFWS Sport Fish program, and other resource management agencies.
				332	Conduct annual program reviews using the strategic plan to track and evaluate progress.
				333	Include DAR staff in strategic planning every five years to adapt the pillars to the dynamic needs of Hawaii's Sport Fish program.

SPORT FISH RESTORATION STRATEGY 2021 - 2025

Fisheries			
Goal:	**Provide diverse and sustainable sport fishing opportunities for present and future generations.**	**OUTCOMES (by Objective)**	**Metrics**
OBJECTIVE 1:	**Maintain and promote sport fishing opportunities statewide.**	Diverse sport fishing opportunities are available on all islands.	types/locations, #participants,
F 1.1	Stock fish species to improve sport fishing.	Fishing opportunity infrastructure and access points are well-maintained.	freq. of repairs; freq. of maintenance, sustainable funding, #community reports
F 1.2	Support existing sport fishing opportunities at fish aggregating devices (FADs), artificial reefs, public fishing areas (PFAs) and shoreline access points.	FAD longevity is improved across the network.	
F 1.3	Provide and maintain PFAs for sport fish species.	Public is informed and making use of sport fishing opportunities.	#promotions for PFAs, # users and change over time
		Sport fish populations are maintained at sustainable levels.	# stocked fishes, spp., # fish caught
OBJECTIVE 2:	**Enhance the sport fishing experience based on stakeholder input, science, and culture.**	Users are pleased with their fishing experience.	User satisfaction surveys and perceptions change over time; rate of returning users
F 2.1	Improve and expand the services offered at PFAs and access points.	More people are participating in sport fishing.	# participants
F 2.2	Restore and develop habitat to benefit sport fishing.	Fishing accesses are safer and more convenient for public use.	# improvements, user satisfaction and perceptions
F 2.3	Increase the total number of stakeholders knowledgeable of and utilizing public fishing opportunities.	Sport Fishing is promoted through more events and initiatives.	# events/initiatives, # participants
OBJECTIVE 3:	**Explore, develop, and implement additional sport fishing opportunities statewide.**	Fishing opportunities are provided in public spaces managed by partner agencies and land owners.	# opportunities, # partnerships, locations
F 3.1	Promote underutilized fishing activities among existing and potential users.	Underutilized fishing activities diversifies opportunities and promotes a more sustainable sport fishing program statewide.	population health, growth of underutilized types
F 3.2	Develop new PFAs and opportunities	Sport Fishing participation increases as a result of new PFAs.	# areas, # participants, # new participants
		New piloted fishing opportunities improve existing programs.	Improvements, evaluations, pilots

STAKEHOLDER			
Goal:	**Promote sport fishing through effective communication and partnership**	**OUTCOMES (by objective)**	**Metrics**
OBJECTIVE 1:	**Communicate to fishers and other resource users the benefits of the Sport Fish Restoration Program.**	A centralized information hub provides accessible and current details of the SFR program and projects.	visitor counts on SFR web pages
S 1.1	Implement an education and outreach program specific to Sport Fish Restoration projects	Fishers are more knowledgeable of the SFR Act and benefits.	user knowledge surveys
S 1.2	Improve inreach between DAR, Sport Fish Restoration projects and education and outreach staff	Fishers are more supportive of the SFR program.	user satisfaction surveys
S 1.3	Create and maintain user-friendly resources that communicate the practical results and conclusions of research studies	Communications are strategic and coordinated within the division.	# communications, # reached, groups targeted
		Fishers are informed and making use of current fishing opportunities.	participation #s, user knowledge surveys
		The rate of returning fishers increases at maintained fishing opportunities.	# times individual accesses a fishing opportunity; user usage surveys
OBJECTIVE 2:	**Develop and implement effective partnerships between the Division and stakeholder groups.**		# suggestions collected, prioritization list,
S 2.1	Identify and develop the existing and potential partnerships for Sport Fish Restoration projects.	Fishers are consulted in prioritizing fishing improvements	$ match from partners, # partners, #partnership projects, new vs. returning partners
S 2.2	Co-produce policies and management plans with stakeholder groups.	SFR projects are supported by a diverse network of partners	# trainings, # trainers, # trainers train, frequency
		Training of trainers exponentially increases the reach for fishing education and outreach	instances of public feedback incorporated into management; relationships with community groups/clubs (#, history, invites); internal transparency and communication
S 2.3	Include fishers in the research and data collection stages of Sport Fish Restoration projects.	Trust is improved between stakeholders and the public	# partnerships initiated by partners with DAR,
OBJECTIVE 3:	**Conduct and support aquatic education and outreach for the broader public.**	Non-DAR partners are knowledgeable of SFR projects.	# participants, trends in fishing gear sales,
S 3.1	Communicate the benefits of Sport Fish Restoration projects for Hawaii's aquatic resources.	Number of people fishing sustainably increases among the general public.	# user conflicts reported w.fishers; public testimony; DLNR facebook page comments regarding sport fishing
S 3.2	Promote awareness and stewardship of the aquatic resources of Hawai'i.	Public support for sport fishing increases.	improved public support for water quality initiatives; public participation (see outreach reports)
		Public sense of stewardship extends mauka to makai	

Biological Goal: Inform adaptive and cooperative management through inquiry-based science of sport fisheries, fishes and their ecosystems.	OUTCOMES (by Objective)	Metrics
OBJECTIVE 1: Increase our knowledge of sport fish biology through scientific investigation.	Division can more effectively manage sport fish species at sustainable levels.	List of spp., life histories, how recently studies were done, population status and trends
B 1.1 Study age, growth, reproductive cycles, and other life history characteristics of sport fishes.	Scientific investigations broaden our understanding of sport fish biology.	Research results
B 1.2 Conduct studies on sport fish movements and habitat use.	Relevant and up-to-date research provides a more accurate depiction of sport fish species.	Recent publications and reports
	Biological studies improve our analysis and interpretation of monitoring data.	recent publications and reports; monitoring outcomes
OBJECTIVE 2: Monitor sport fishing activities, species, and habitats to understand changes over time.	Sport Fish populations are better managed with relevant and recent scientific data.	# surveys, dates, locations, coverage
B 2.1 Maintain, develop, and expand effective methods to collect sport fishing-dependent data.	Fishing-dependent data coverage is improved and expanded.	data sets, geographical/temporal distribution, demographic distribution, #roving surveys
B 2.2 Monitor important sport fish habitats and the effects of environmental stressors and conditions on ecosystem health.	New methodologies are piloted and adapted to benefit monitoring efforts.	# pilots, evaluations & adaptations, response rate / refusal rate,
B 2.3 Evaluate and refine current monitoring methods of sport fish assemblages and population dynamics to allow for more comprehensive ecosystem-based studies.	The division improves its understanding of temporal changes under environmental stressors.	frequency, changes over time
OBJECTIVE 3: Integrate scientific outcomes and conclusions into adaptive policy and management.	The division implements effective management that is iterative and adaptive.	Success/failures of regulations and their enforcement; population trends; frequency of reviews and iterations of management programs (adaptations);
B 3.1 Integrate research outcomes into development and implementation of management interventions.	Rules better serve sport fishing and users under sustainable use.	ppn status, CPUEs, in-water surveys, # participants,
B 3.2 Ensure that research and monitoring is relevant to priority management questions and data gaps.	Research and monitoring efforts are tailored to specific management priorities.	gaps, updates, priorities
B 3.3 Evaluate the efficacy of policy and management for sustainable sport fishing.		
OBJECTIVE 4: Expand the division's capacity to share scientific outcomes and to manage natural resources through collaboration.	Projects provide accessible, timely, and relevant information to the public.	#publications, #open access journals, publication dates, #technical reports and conversion to publications, #citations, public posts/announcements, presentations
B 4.1 Develop and foster partnerships with scientists to expand the division's capacity to study sport fishes and their habitats.	Program's capacity to conduct research and analyses are expanded through partnership.	
B 4.2 Share current research findings in an accessible and usable format for decision-makers, stakeholders, and the public.	Relationships with community groups create new opportunities for collaboration.	# partnerships/collaborations, range of diversity, partner types,
B 4.3 Design and implement studies that include stakeholders and prioritize collaborative research.	Relationships with community groups create new opportunities for collaboration.	# new collaborations, partners approaching DAR for collaborations, # community group partnerships

INTERNAL OPERATIONS Goal: Ensure a high-quality Sport Fish Restoration program that is adaptive and sustainable.	OUTCOMES (by Objective)	Metrics
OBJECTIVE 1: Improve the sustainability, accountability, and transparency of the Sport Fish Restoration program. O 1.1 Anticipate and adapt to changing funding scenarios due to the COVID-19 Pandemic. O 1.2 Develop diverse funding mechanisms to meet the 3:1 federal match requirement. O 1.3 Provide accessible and up-to-date program financial information to the public.	The Sport Fish Restoration Program is proactive in addressing budgetary constraints.	- # budget forecasting scenarios - frequency of forecasting exercises - $/% anticipated vs. actual; did exercise prepare projects for reality?
	Transparency creates more goodwill between stakeholders and the division	- $ spent on different program categories - $ allocated to program - website visits to financials page - inquiries from stakeholders
OBJECTIVE 2: Maintain and build capacity to effectively facilitate and implement the goals and objectives of the Sport Fish Restoration Strategy. O 2.1 Build and maintain project capacity within the program. O 2.2 Improve retention of Sport Fish Restoration personnel. O 2.3 Develop and implement programs that increase the desirable and relevant expertise of current and future staff.	Program runs more efficiently with dedicated staff.	- projects meet deadlines - reports are produced timely - meet project quotas and deliverables - projects on track with timelines - public satisfaction
	Staff morale is high.	- low turnover - productivity - performance evaluation scores - creativity and initiative
	Succession planning helps facilitate transitions for projects, including delegating and training current staff to take over projects where needed.	- established scope of work - SOPs - # reports/record-keeping on projects - project file indexes/locations
	Scientific investigations are conducted with integrity by DAR staff.	- code of conduct
	Staff are trained to support team tasks.	- # staff knowledgeable/capable of completing project tasks - reduced gaps in productivity
OBJECTIVE 3: Increase the efficiency and efficacy of the division's Sport Fish Restoration Program administration. O 3.1 Create internal guidance documents for program administration and projects. O 3.2 Establish regular communication between DAR programs, DLNR divisions, USFWS Sport Fish program, and other resource management agencies. O 3.3 Implement and update the Sport Fish Restoration Program Strategic Plan.	Communication and coordination creates widespread institutional knowledge throughout the division.	- # project collaborations - coverage of research as result of partnership - # presentations to DAR staff - Dashboard spatial coverage of DAR projects
	Project leaders produce consistent and accessible technical reports.	- technical reports - # site visits/downloads - technical report SOP
	Program is adaptive to the dynamic nature of natural resource management.	- # updates to Strategy - frequency of updates - # staff included and engaged
	Division's regulations and policies reflect the adaptive and iterative approach to management.	- # policy/reg recommendations - # updates - frequency of evaluations
	Program coordinates its goals and objectives with DLNR partner divisions and other resource management agencies.	- # project collaborations - coverage of research as result of partnership - # presentations to non-DAR - Dashboard spatial coverage of projects"