SAFE®
SAVING ANIMALS FROM EXTINCTION
SHARK AND RAY

2025-2029

Conservation Program Plan

By 2035, we have built diverse partnerships to deliver effective action for the conservation and recovery of sharks and rays.

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The Cornerstone: Program Plans

Building on AZA Community Commitments

Our story so far

SAFE Shark and Ray aims to enable evidence-based support for conservation action for all 1200+ species of sharks and rays; engage action among key collaborators and the public; support science-based shark conservation communication; and create opportunities for direct, impactful, and collaborative support for conservation and recovery of this taxa.

Operating under the International Union for Conservation of Nature (IUCN) One Plan Approach, this program plan integrates ex situ and in situ conservation. It coordinates and maximizes the collective expertise and opportunities of zoo and aquarium professionals working with elasmobranchs in human care, and conducts in situ research and conservation action for the recovery of sharks and rays in the wild.

As one of the original SAFE programs within the Association of Zoos and Aquariums (AZA), SAFE Shark and Ray is entering its ninth year since inception, and has successfully completely its second Conservation Program Plan. As a model and highly visible SAFE program with a broad species focus, the vision statement created during the planning process extends the designated timeframe for this third, five-year plan, as our goal is to remain relevant, intentional, agile, and responsive to conservation needs throughout this Conservation Program Plan and beyond.

Our Vision

By 2035, we have built diverse partnerships to deliver effective action for the conservation and recovery of sharks and rays.

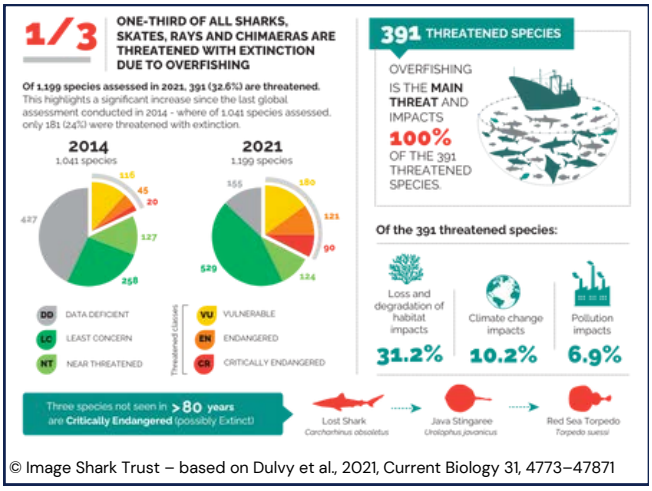
Though global shark conservation has made great strides in recent years, there is much that needs to be done. This team has increased its capabilities, strengths, and opportunities for collaboration and partnership through implementation of our previous conservation program plans.

With a broad species focus, this new 5-year plan capitalizes on where the AZA community is best positioned to produce the most meaningful impacts on the conservation of sharks and rays. We will remain flexible and intentional about focusing on taxa-specific programs, projects, and partnerships that align with objectives outlined in this plan, and work to advance research and conservation for both in situ and ex situ populations. Our plan positions AZA, alongside diverse internal and external stakeholders in global shark conservation, as influential advocates for science-based shark conservation, and empowers and equips our partners to bring their unique strengths to a collaborative effort for elasmobranch conservation and research.

Efficient and effective facilitation of the planning process following the IUCN Conservation Planning Specialist Group Model ensured that we produced a concrete plan to address the most pressing conservation threats, and maximize all available resources, to safeguard sharks and rays against extinction threats and support efforts to recover populations.

Conservation Target & Status of Taxa

Sharks and their relatives, skates and rays (*Class: Chondrichthyes, Subclass: Elasmobranchii*), form one of the most fascinating and charismatic groups of marine wildlife. Globally, there are over 1200 species reflecting a huge diversity in biology, behavior and habitat. Though they face anthropogenic challenges common to all wildlife, the overwhelming threats are from destructive fishing practices. Inadequate governance and ineffective fisheries management are depleting populations across the world's ocean.

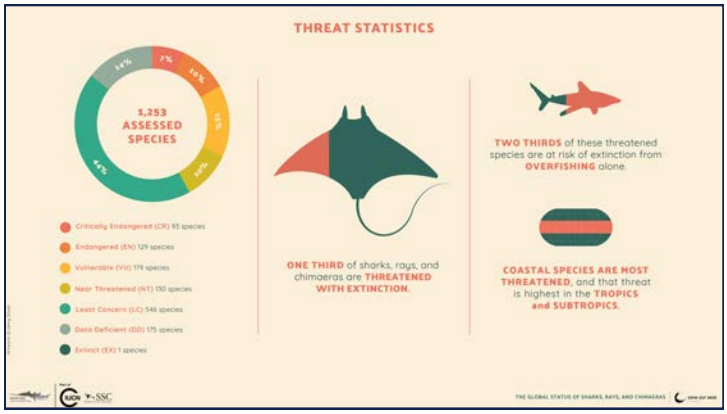


© Image Shark Trust – based on Dulvy et al., 2021, Current Biology 31, 4773–47871

The 2014 IUCN Red List of Threatened Species for sharks and rays estimated that one-quarter of sharks and rays were at risk of extinction.

A 2021 reassessment, released by the Global Shark Trends Project, increased the percentage to over one-third of species, and listed 90 species listed as critically endangered species.
Since these reports were released, much has happened in the world of shark conservation in the areas of research, policy, and collaboration to address the emerging threats and changing marine ecosystem.

In December 2024, a new IUCN Global Status of Sharks and Rays Report was released that updated these assessments to 1,253 species assessed, with current data indicating that **2/3 of threatened species are at risk of extinction due to overfishing alone**.



Conservation Target & Status of Taxa
continued

This Conservation Program Plan details how we can use AZA institutions' unique position, access and knowledge base to engage in the global collaborative effort to secure a positive future for sharks and rays through a science-based approach to conservation.

The SAFE Shark and Ray program adopts a holistic approach to the conservation of all 1200+ shark and ray species, supporting and integrating with the goals of science-based conservation. Species-specific initiatives will be encouraged and incorporated into the program, and will be conspicuously linked to the wider goals.

The broad species focus adopted by this program plan necessitates a focus on where the AZA community can best produce a meaningful impact on the conservation of shark and ray species. The target is to establish AZA as an influential advocate for science-based shark conservation.

SAFE Shark and Ray partners are empowered and equipped to bring their unique strengths to this collaborative, while building upon:

- The unique connection with, and influence on, a broad group of non-specialist public audiences to deliver credible communication of shark conservation priorities and solutions.
- The wealth of experience caring for a diversity of sharks in a human-care setting to provide invaluable veterinary skills, techniques and datasets that produce positive outcomes for animals in in situ and ex situ research and conservation.
- The respect and position within wider communities to promote targeted behavior change actions with key stakeholder groups and audiences.

Threats

Overfishing

Overfishing is the primary threat for all threatened species and is the only threat for two-thirds of these species. Many species of sharks and rays are targeted for their meat and fins in commercial, artisanal, and subsistence fisheries. Others are caught incidentally in fisheries for bony fishes or other taxa that exhibit faster life histories that enable them to better withstand fishing pressures. While some non-target species are retained in significant numbers for international trade, other incidentally caught species may be kept for their meat for local consumption, or their fins for sale in international markets. Other uses include animal feeds, skins and other body parts made into apparel and accessories, liver oil for pharmaceuticals, and biodiesel fuel.

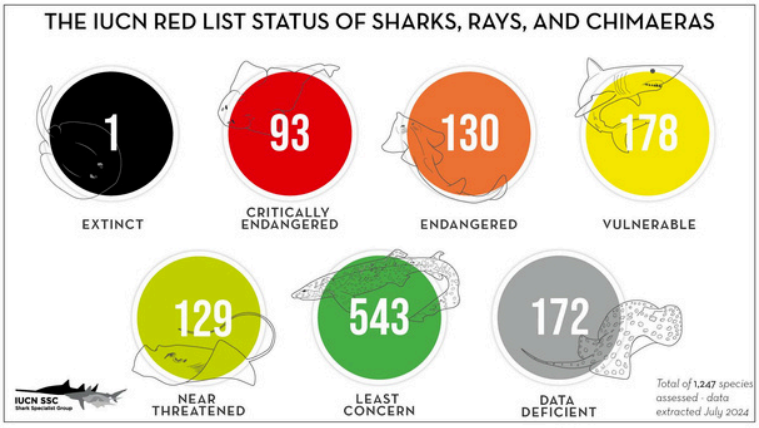
Shark and ray fisheries operate at local, national, regional and international scales and support complex global markets as well as local community economies. Effective conservation requires coordinated action on a global scale.

Overfishing is exacerbated by:

1. ***Lack of Species and Population-Specific Data***

Many government agencies and non-governmental organizations are involved in ongoing study of patterns of shark diversity, abundance, threat, and conservation solutions.

The July 2024 Assessment from the IUCN Red List of Threatened Species identifies that of 1247 species, 172, or 14%, are data deficient.



2. ***Need for Policy and Legislation***

Policy initiatives involving species and habitat protection, fisheries management and trade regulation play a vital role in shark and ray conservation.

However, there is a lack of appropriate policy and legislation for, and implementation of, effective management measures such as population-level take limit quotas, and marine protected areas.

The United States National Oceanic and Atmospheric Administration (NOAA) and international agencies have historically recommended a variety of domestic and international policy and regulatory actions to achieve sustainable shark populations, however adoption and implementation of many of these is still inadequate.

We have developed a robust area of work to influence conservation policy through our goals, objectives, and actions listed in the ***Implementation Strategy***

Threats
continued

3. Habitat Loss and Degradation
The loss of habitat, such as mangroves and estuaries which are critical nursery areas, to residential and commercial development, agriculture, aquaculture, and natural system modifications, like dams or dredging, worsen the impacts of overfishing in nearly one-fifth of species.

4. ***Climate Change***
Anthropogenic climate change through the burning of fossil fuels threatens 10% of shark and ray species with extinction and exacerbates overfishing and habitat loss through two mechanisms. Effects of climate change are rapidly degrading coral reef ecosystems due to increased sea surface temperatures and subsequent decreases in coral cover from bleaching and disease. Further, many temperate species are declining in the equatorward portion of their range because it is less ecologically suitable due to higher water temperatures.

5. Pollution
Pollution from a wide variety of both point-source and non-point sources can be a non-lethal stressor that compounds other threats.

6. ***Misaligned Public Attitudes***
Media portrayals of sharks are subject to exaggeration and misrepresentation. Negative human/shark interactions, with a focus on a narrow group of species, influence the wider public perception of the taxa. Popular shark documentaries frequently focus on a limited and unrepresentative scope of research methods and professional diversity.

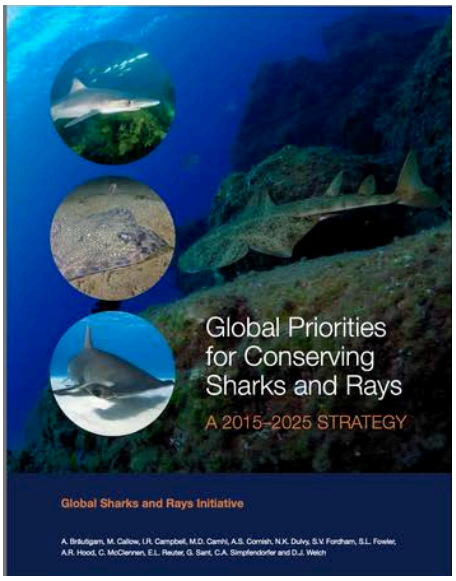
Though the impact of this representation on public attitudes about shark conservation is unproven, it is widely anticipated to be a factor in engaging support for conservation efforts.

Recently, attention has turned to the media portrayal of conservation solutions for sharks and rays. However, research has identified a mismatch between scientists' recommended approaches to shark conservation and the reporting of more values-based campaigns.

Effective, science-based, inclusive and accessible communication can be a powerful ally to shark and ray conservation efforts. It's vital to engage a broad cross section of public audiences in the priorities for contemporary conservation and the vital role of science, policy advocacy and sustainable fisheries management. As trusted messengers for conservation solutions for the general public, our program is uniquely situated to capitalize on our massive audiences to influence positive behavior change to benefit elasmobranch conservation.

*Our focus in this conservation program plan on **"Living with Sharks"** uses proven methodologies from IUCN and current social science research to identify emerging conflicts, engage communities and develop communication strategies around human/shark interactions. These tactics foster coexistence with predatory marine wildlife and prevent the potential roll-backs of shark protection measures.*

Recovery Plan



The 2022-2024 SAFE Shark and Ray Conservation Program Plan is aligned with the Global Priorities for Conserving Sharks and Rays: A 2015-2025 Strategy, published by the Global Shark and Ray Initiative (GSRI). While soon to be completed, the Strategy's goal is stated as, *"By 2025, the conservation status of the world's sharks and rays has improved – declines have been halted, extinctions have been prevented, and commitments to their conservation have increased globally."* GSRI's ambitious goal is yet to be fully realized, and therefore this program plan will continue to align with the 2015-2025 Strategy, where feasible.

Our 2025-2029 SAFE Shark and Ray Conservation Program Plan also aligns with, and complements the strategies of, other international organizations including the IUCN Species Survival Commission Shark Specialist Group, the Shark Conservation Fund, American Elasmobranch Society, and Save Our Seas Foundation.

IUCN SSC
Shark Specialist Group

We will also continue to align this work with the Kunming-Montreal Global Biodiversity Framework and its goal of halting species extinction by 2030 and achieving recovery by 2050.

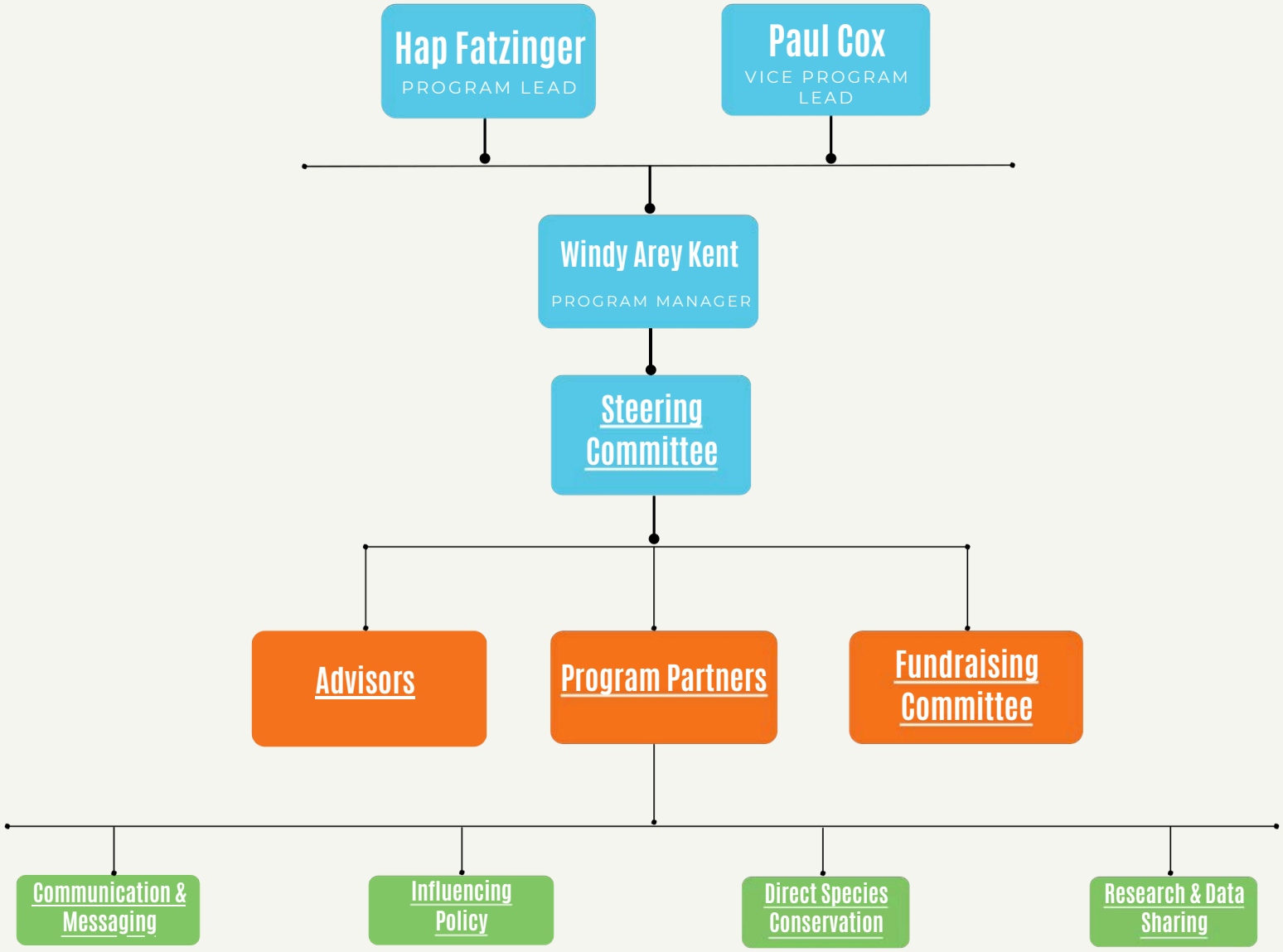
THE BIODIVERSITY PLAN
For Life on Earth

Our plan will build on, and further define, existing partnerships and projects; incorporate new and diverse groups of stakeholders as identified through the planning process; and outline specific funding criteria for the life of the plan.

Our SAFE Program Vision: By 2035, we have built diverse partnerships to deliver effective action for the conservation and recovery of sharks and rays.

Operational Structure

2025 ORGANIZATIONAL CHART



For the required contact list in each category, **click the hyperlink** in the associated box, or see Appendix A

Pillars of Work

1

Research & Data Sharing

- Expanding our networks beyond AZA and SAFE partners to include other zoological associations and in situ researchers
- Creating a structure for monitoring elasmobranch research priorities
- Increasing data sharing for greater impact
- Advancing elasmobranch science, health, and in situ and ex situ care and husbandry

2

Direct Species Conservation Action

- Understand the science and strategies for breeding, reproduction and reintroduction
- Better defining what conservation and recovery looks like for elasmobranchs
- Better coordination and collaboration with other AZA-shark conservation programs to identify species in need and maximize resources

3

Influencing Conservation Policy

- Empowering expertise within zoos and aquariums to advocate for policy and management processes
- Expanding, engaging and aligning with international partners to leverage our influence and impact
- Aligning with partners to address global shark trade and communicate demand issues
- Coordinating global efforts on international fisheries policies

4

Communications & Messaging

- Expanding audiences and representation, including internationally
- Developing audience-specific messaging and tools
- Promoting collective conservation action for elasmobranchs
- Sharing of best practices to increase communication between partners
- Coexisting with sharks to minimize human/wildlife conflict

Objectives & Actions

To allow for flexibility within this document, and to enable the reader to easily follow the plan, we have included the Objective and Action Tables in the Implementation Strategy section.

Our team worked with a diverse group of global participants to develop these objectives and action tables. We followed the IUCN Species Survival Commission Conservation Planning Specialist Group process and conducted a series of six in-person and virtual workshops from February-August, 2024.

Plan Reviews

The SAFE Shark and Ray program recommends that in addition to review by the AZA Wildlife Conservation Committee, this Conservation Program Plan receive reviews from the following:

- Aquarium Affairs Committee
- Conservation Education Committee

Status of Taxa within AZA

Elasmobranchs are common in AZA-accredited facility animal populations because of their continued conservation significance as critical to healthy marine ecosystems globally, and guests' growing fascination with sharks and rays.

Elasmobranchs are under the purview of the Marine Fishes Taxonomic Advisory Group (MFTAG) (all shark and marine ray species) and Freshwater Fish Taxonomic Advisory Group (FFTAG) (freshwater ray species). The 2022-2024 SAFE Shark and Ray Program Plan reported 12 species managed as Species Survival Programs (SSPs) within their respective TAGs. Since then, AZA reimagined SSPs in collaboration with TAGs and the Wildlife Conservation Committee, and decreased the number of species collaboratively managed by both the MFTAG and FFTAG to four programs:

- zebra shark, *Stegostoma tigrinum* [Signature SSP]
- spotted eagle ray, *Aetobatus narinari* [Signature SSP]
- sandtiger shark, *Carcharias taurus* [Provisional SSP]
- white-blotched river ray, *Potamotrygon leopoldi* [Provisional SSP]

Regional Collection Plans (RCP) for both taxon advisory groups are scheduled for publication in late 2024. The most current species data across taxa is below and sourced from the Freshwater Fishes Regional Collection Plan (RCP) in 2017, and the Marine Fishes RCP (2019):

Representing:	FFTAG	MFTAG
Individuals	538	4598
Species	10 (plus 3 unconfirmed/hybrid)	99
Orders	1	11
Families	2	21
Genus	3	53

Many sharks and rays require advanced husbandry and veterinary care, a sophisticated life support infrastructure, a planned financial investment, and in some cases, complex habitat square footage for successful long-term care. These needs require thoughtful planning and a strong financial commitment. The increase in the number of species illustrates the importance of sharks and rays to the conservation and environmental education missions of AZA member facilities and illustrates continual improvement in husbandry and understanding of species biology.

There are currently 271 unique chondrichthyan species entered in the SAFE Shark and Ray International Census of Chondrichthyans in Human Care (Chondro Census), representing 247 facilities across 55 countries - including AZA facilities. ***This represents an 18% increase in facilities participating in the Census since 2020.***

Conservation & Stakeholder Engagement

Many organizations are committed to working collaboratively with SAFE Shark and Ray to elevate and amplify shark conservation now, and in the future. The SAFE program has benefitted greatly from increased participation from program partners. Over the past 3 years we:

- Increased the number of organizations, NGOs and businesses that became program partners by **62%**

- Grew the number of partners contributing time and resources to projects and programs
  - **12** organizations in leadership roles for SAFE projects
  - **52+** organizations that are actively engaged in SAFE projects

- Expanded our roster of partner and non-partner organizations contributing financially to SAFE Shark and Ray
  - As of publication, 29 organizations contributed over $325,000 to the program

- Increased participation in Shark & Ray Awareness Day by **140%** over the three year plan (see next section for details)

- Increased global participation in projects
  - Added **4** Regional Coordinators and **2** Vice Chair positions to the Chondro Census
  - Secured international representation on the Best Practices for Elasmobranch Handling Events Working Group
  - Garnered international interest from World Association of Zoos and Aquarium colleagues to engage with the Sustainable Feed Project moving forward
  - Achieved global participation in Shark & Ray Awareness Day

29

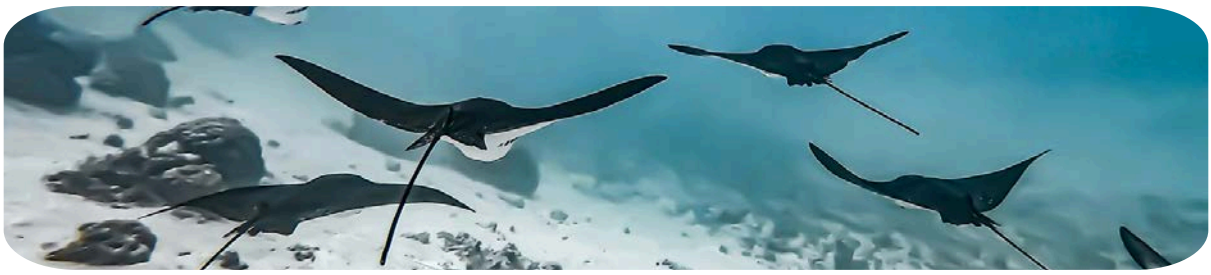
Funding partners

140%

INCREASE in participation in Shark & Ray Awareness Day

65+

Partners, Contributors & Funders



Progress & Success

- Established and funded a full-time **Conservation Program Manager.**
- Successfully **achieved annual fundraising goals** to support projects and personnel, including receiving two AZA Conservation Grant Fund awards; partners hosting numerous fundraising events for SAFE; and support from businesses and individuals.
- Developed a **Best Practices for Elasmobranch Handling Events** resource, which includes digital and printed reference materials with an app prototype rolled out at the 2024 Annual Conference.
- The **Elasmobranch Blood Project** successfully collected 110 samples from partners to establish blood reference intervals for elasmobranchs. Cownose rays are completed and additional species are in progress including whitespotted bamboo sharks, brown banded bamboo sharks, Atlantic stingrays and yellow stingrays.
- Managed, maintained and increased participation in the **International Census for Chondrichthyans in Human Care** and increased volunteers to support the implementation globally.
- In partnership with the Aquarium Conservation Partnership, launched the **Sustainable Feed Project** to assess the sustainability of seafood fed as animal feed in our operations. 55 organizations participated with 10 of those organizations supporting a pilot Business Commitment to "feed sustainable" seafood to animals in our care.
- Worked with the AZA Conservation team to evaluate shark research and conservation project data from the 2021 and 2022 Annual Report on Conservation and Science (ARCS) database, and develop a queryable **list of elasmobranch research projects** in AZA organizations to share broadly with the in situ research community.
- **Hosted a Symposium** at the 2024 annual meeting of the American Elasmobranch Society (AES) titled 'Contributions of Aquariums to Elasmobranch Research' highlighting the unique and important elasmobranch research efforts conducted and led by aquariums, and to promote increased collaboration between the field research and aquarium communities.
- Increased support for AZA aquatics community at **CITES Conference of the Parties (COP 19)** by promoting and supporting the inclusion of an AZA Aquatics Expert for the AZA COP team.
- Created social media platforms for SAFE and distributed a monthly newsletter to ~400 subscribers.
- Completed a **formal evaluation of our Messaging Framework** to identify and address barriers to partner integration, and their areas of need, and delivered 5 virtual and in-person training sessions for AZA members focusing on the evaluation outcomes.

For a full 2022-2024 Project Summary, See Appendix B

2022-2024 SAFE Shark and Ray Conservation Program Plan

Highlights

at a glance

LAUNCHED SAFESHARKS.ORG WITH 26,500 UNIQUE VISITORS SINCE JUNE 2022!

65

PROGRAM PARTNERS, FUNDERS & CONTRIBUTORS

54+

PARTNERS CELEBRATED

SHARK & RAY AWARENESS DAY 14 JULY

1500 + hours

developing resources for

ELASMOBRANCH BEST PRACTICES IN HANDLING & WELFARE

11

SUDS FOR SHARKS FUNDRAISERS GENERATING $17,500+!

CHONDRO CENSUS

271 species in
247 facilities in
55 countries

$52,643

awarded through the AZA

CONSERVATION GRANT FUND

5

Joint policy support letters delivered

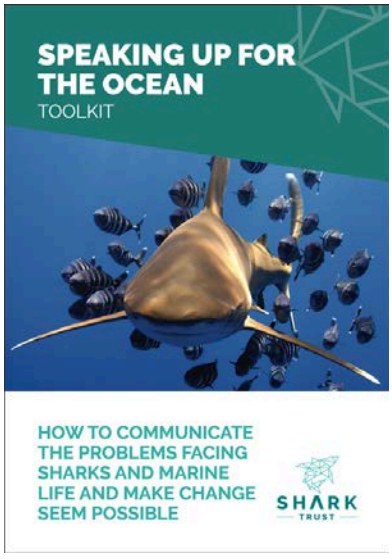
Public Awareness Activities

A cornerstone of the SAFE Shark and Ray Conservation Program Plan is messaging and communications. Beyond our focus on *what* messaging we share with our partners and stakeholders, we make deliberate and intentional efforts around *how* those messages are shared with our diverse and various audiences.

The SAFE Shark and Ray Messaging Framework was developed in consultation with a cross-section of the shark science community under the first SAFE Shark and Ray Conservation Program Plan, and links to the priorities outlined by global scientists working on shark research and conservation.

The goals are to:

1. Shift the damaging narrative by unifying conservation messaging around elasmobranchs
2. Incorporate the the latest social science research to create content meaningful for our diverse audiences
3. Maximize the positive impacts for sharks and rays in the wild by engaging audiences in conservation action



The SAFE Shark and Ray 2022-2024 Program Plan's focus was on implementation and adoption of the Framework within our partner organizations, and evaluating the effectiveness of the tools with partners and social scientists. We have begun training partners on how to incorporate and integrate the Framework to maximize and measure impact with in-person and online audiences.

The focus and goal in the 2025-2029 Conservation Program Plan is to continue to assess, refine and grow the adopters of the Messaging Framework, including internationally. We are identifying and addressing needs and barriers for our partners, as well as how we can best train them to effectively implement the available tools and resources.

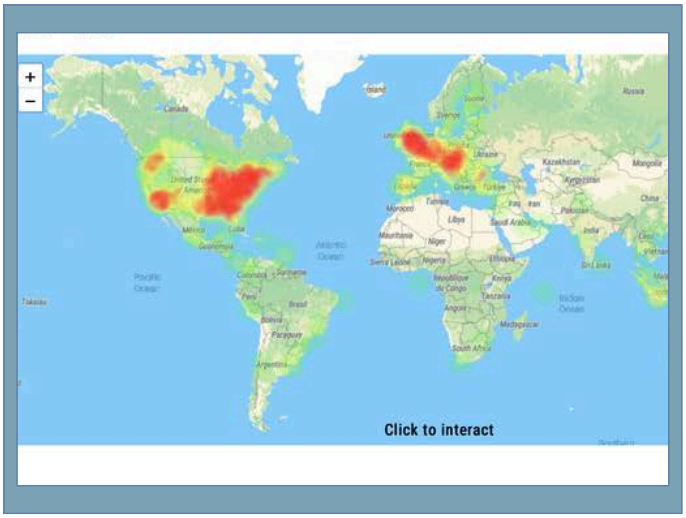
We will include more international partners, and engage a variety of disciplines within the AZA community to incorporate the Framework including exhibits/design professionals, animal care staff, and social media, public relations and marketing teams.

SHARK & RAY 14 JULY AWARENESS DAY

Our signature event, Shark & Ray Awareness Day, occurs annually on **July 14th**. We have seen steady growth in the partners and non-partners engaging their audiences in-person and online, over the 2022-2024 SAFE Shark and Ray Program Plan. Our goal is to continue to grow engagement with audiences over the next 5 years.

Some highlights from the past three years include:

- A **140% increase** in on-site events hosted by partners and non-partner organizations, from 23 events reported in Year 1 to 55 events reported in Year 3.
- **1700 posts** using 2024 Shark & Ray Awareness Day hashtags over a 3-day period on Instagram.
- Exponential increase in Fundraising for SAFE during Shark & Ray Awareness Day with partner and non-partner organizations raising funds for SAFE using our online donation portal.
- **International participation** in an online quiz posted for Shark & Ray Awareness Day in Years 1 and 2.



*The 2024 Shark & Ray Awareness Day Toolkit was downloaded from our website **1142 times - A 53% increase over 2023!***

We thank you for your ongoing support of our program

We are working collaboratively to coordinate conservation action across zoos, aquariums and a global network of partners to increase knowledge, support research, create a powerful narrative and engage audiences in positive actions for sharks and rays.

Acknowledgements

The SAFE team would like to thank each of the following for helping us to create this plan:

- IUCN Conservation Planning Specialist Group, especially Jamie Copsey, for leading us through this planning process
- Katelyn Herman, Windy Arey Kent, Lauren Switters-Bauby, and Ashley Kidd for facilitation support
- The SAFE Steering Committee
- 45+ workshop participants for spending many hours to create this robust plan
- AZA Conservation Team
- Hap Fatzinger and Paul Cox for their leadership through this process and beyond

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SHARK AND RAY

Contact Lists

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Partner Contact List

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Conservation Coordination	Beth Firchau	AZA Florida Reef Tract Rescue Project Coordinator	conservationcoordination@outlook.com
The Dallas World Aquarium	Paula Carlson	Director of Husbandry	paula@dwazoo.com
Discovery Cove	Denise Swider	Curator of Fishes and Birds	Denise.Swider@DiscoveryCove.com
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Jenkinson's Aquarium	Danni Logue	Animal Welfare Program Coordinator	danni.logue@jenkinsons.com
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New England Aquarium/Anderson Cabot Center for Ocean Life	Sarah Empesta	Manager, Interactive Exhibits	stempesta@neaq.org
North Carolina Aquarium at Fort Fisher	*Vacant*		
North Carolina Aquarium at Pine Knoll Shores	Emily Fessler	Education Curator	emily.fessler@ncaquariums.com
North Carolina Aquarium at Roanoke Island	*Vacant*		
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Oregon Coast Aquarium	Kerry Carlin-Morgan	Director of Education	kerry.morgan@aquarium.org
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Riverbanks Zoo & Garden	Kendra Bottini	Aquarium Curator	kbottini@riverbanks.org
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Wands and Wishes Occassions	Caroline Kauffman	Owner	
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Zoo Tampa	Kathryn King	Supervisor of Animal Care - Aquatics	kathryn.king@zootampa.org
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Wands and Wishes Occassions	Caroline Kauffman	Owner	caroline@wandsandwishesoccasions.com
Sharks 4 Kids	Jillian Morris	President	jillian@sharks4kids.com

2022-2024 PROJECT SUMMARY

RESEARCH AND CONSERVATION

Elasmobranch Blood Project - This area of research has garnered significant engagement, recieving 110 blood samples from partner organizations for analysis. A filter has been created allowing TRACKS animal management software users to easily access and export data they would like to contribute to the project. Four volunteers have begun the process of organizing the raw data into Excel sheets to be analyzed. The first publication to result from this project is in preparation and will include reference intervals for cownose rays from multiple institutions.

Chondro Census - This database of elasmobranchs in human care settings currently contains entries of 71 species entered from 247 facilities in 55 countries. The program's leadership recently expanded to sign on two, new Vice Chairs to help maintain and grow program participation from facilities around the world. They will spearhead the project's participation recruitment and continue building the network's strength and cohesiveness.

Best Practices in Handling and Welfare Group - This team made significant strides towards their goals of developing resources for in situ and ex situ practitioners, and has logged 1500+ hours of staff time to date. Decision trees have been developed and 20 supporting documents created to guide users through evaluation of elasmobranch handling events. An app is being developed to be beta tested by users in 2025.

Conservation Network Catalog - Working with AZA staff in "mining" 2021 and 2022 ARCs reporting data, the SAFE team has created a google document that outlines elasmobranch research within the AZA-community. We are currently working on 2023 data and will publish this document for open access on the SAFEsharks.org website. Our goal is to connect the in-situ research community with current ex-situ projects, so that both can learn from each other, as well as share data and best practices to benefit sharks and rays in human care, as well as in the wild.

SUSTAINABLE FISHERIES

With the Aquarium Conservation Partnership, and in collaboration with Seafood Watch and FishChoice, we launched the Sustainable Feed Project. To date, this project has engaged 55 AZA-member organizations to enter their feed procurement data into the My Assessment Tool, as well as take a sustainability survey. We are launching the Pilot "Business Commitment" with 10 organizations in October 2024.

COMMUNITY CONNECTIONS

Annually, we have celebrated Shark and Ray Awareness Day with 85+ partners and contributors hosting in-person and online events. We have increased participation each year, and also engaged partners in hosting Suds for Sharks fundraising events for the program. The team produced a Messaging Audit for educators and communicators to evaluate their current shark conservation messaging, and are working with external evaluators to assess current engagement and recommend future actions. We successfully launched, and regularly maintain, the "action hub", SAFEsharks.org. We are active on social media, including Facebook and Instagram, and have ~400 subscribers to our digital newsletter to share regular program updates and information.

COMMUNITY CONNECTIONS CONTINUED

We also utilize several AZA Network communities for content and information sharing, as well as publish yearly reports and other digital resources. Our team has delivered over 25 presentations over the past 2 years at local, regional, national, and international conferences and events. The **Diversifying Shark Media** project began with an exploratory workshop with a variety of contributors having inclusion, media, and communication expertise that was delivered as part of the Sharks International 2022 digital event. These recommendations were included as part of an op-ed written by Dr. David Shiffman about a recent publication on representation issues surrounding Shark Week. As part of our ongoing commitment to diversity issues, the SAFE team also sponsored the 2023 Minorities in Shark Science event held at the National Aquarium.

INTERNATIONAL ENGAGEMENT

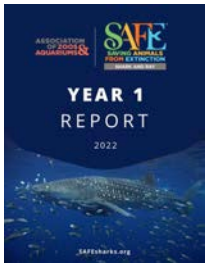
Policy - This group has solicited and delivered on five joint policy letters that align to SAFE Shark and Ray conservation objectives. In partnership with the Aquarium Conservation Partnership (ACP), we produced and submitted these letters that collectively engaged the support of 84 AZA institutions. Additionally, 2023 saw the first engagement of program partners in the Shark Trust's Big Shark Pledge, a public engagement campaign to gain support for high seas shark fisheries management. **IUCN Conservation Planning Workshops -** SAFE Shark and Ray provided $50,000 in funding support, along with SAFE representation, for two strategy and conservation planning workshops in 2023; the ReShark workshop in Seattle and the Shark Ray 360 workshop in Chicago. The SAFE team also now has a trained facilitator to help with the IUCN CPSG planning process in the future.
CITES – SAFE Shark and Ray partner representatives from the Georgia Aquarium attended COP19 to participate as an aquatics expert to provide a direct connection to our work and the AZA CITES Team.

FUNDRAISING AND ADVANCEMENT

SAFE leadership held an advancement workshop in 2022 to develop fundraising strategies, and consulted with partners on how to recognize, acknowledge, and solicit for financial program support. We have been able to raise all the necessary funds to meet our goals; however, with new AZA projects launching around elasmobranch conservation, we know the competition for these funds will increase and we will need to continue to identify new funding streams for the program. We have also been successful in securing two AZA Conservation Grant Fund awards for the program, the first in 2021 and the other in 2023.

ANNUAL REPORTS AVAILABLE

Year One Report



Year Two Report

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SAFE®
SAVING ANIMALS FROM EXTINCTION
SHARK AND RAY

2025-2029

Implementation Strategy

Research and Data Sharing

Co-Led by Beth Firchau and Steve Kessel

Goal	Objective 1	Objective 2	Objective 3
A: Promote and support research that enhances elasmobranch wellbeing and welfare and advances health care and husbandry managed in collections and in the wild, and that can also be used to inform in situ conservation decision makers.	Create a centralized database of ex situ research data including demographics, etc. for life history info and SSG benefit	Leverage the AZA Community's experience, expertise and resources to advance elasmobranch science and wellbeing	Identify research priorities for elasmobranch husbandry and welfare
B: Identify funding sources and develop criteria for reviewing elasmobranch projects.	Develop criteria for developing, reviewing and monitoring elasmobranch projects for project endorsement and/or recommendation for funding	Identify potential funding sources and provide resources to program partners and grant applicants	
C: Foster collaborative elasmobranch research leveraging relationships with field scientists, NGOs, international associations, and universities	Promote communication exchange of elasmobranch research experience, expertise and resources .	Promote collaboration of elasmobranch researchers	

Action Table - Research and Data Sharing

Obj.		Action	Timeframe	Lead	Collaborators	Budget	Metric
A1	a)	Construct a working group to ID data parameters in situ & ex situ to align with IUCN SSG Aquarium WG to identify best ways to support current initiatives for data entry	Q1 2025 Ongoing through Q1- Q4 2025 Q4 2025	Lisa Hoopes	Paula Carlson (Co-lead), IUCN SSG Aquarium Working Group, ChondroCensus, Program Partners	Program Partner Participation Program Partner Participation in meetings; Potential Workshop $25,000	*Outputs:* a) Working group is created b) Meetings are held to QAQC (Quality Assurance, Quality Control) the progress of data collection c) Data standards document that supports IUCN needs
	b)	Promote the accuracy of conservation and research activity reporting for S&R program partners (Engage with AZA Conservation dept to promote the accuracy of ARCS reporting for S&R Conservation - can be applied to different conservation groups)	Q2 2025 Q4 2025 Q4 2029	Matt Sequin	SAFE Coral (Beth Firchau); AZA Conservation Science Team;		*Outputs:* *a)* Develop a task force to meet with AZA conservation science team to discuss ARCS process and data accuracy b) Task force develops a digital platform experience to clarify ARCS reporting process and improve accuracy of reporting c) Evaluate improvement in accuracy of ARCS reporting *Outcome:* Researchers are actively engaging with the database to increase collaboration and reduce redundancy
A2	a)	Compile list of shark & ray welfare/wellbeing indicators for welfare assessments for distribution to program partners	Q3 2025	Linda Penfold	ACSC Welfare Longevity Group, Rachel Stein, Erica Bauer, (Aquatic Welfare representative on the Welfare Committee)	In-kind support from partners	*Output:* List compiled and made available on AZA & ACSC Websites *Outcome:* Reporting of increased welfare and wellbeing for animals in our care

b)	Administer the ChondroCensus	Q1 2025 Ongoing Q4 2026 Ongoing Q2 2026 Q3 2026	Jennie Janssen	Program Partners, Census Members, Regional Coordinators, Co-Vice Chairs, Beth Firchau, Jack Jewell, Leah Neal, Lisa Hoopes	ChondroCensus data input - Participants $5,000/5 years used as needed $2500/year = $10,000	*Outputs:* a) Evaluate current RC participation. b) Recruit new RCs for new regions. c) Census participant clean-up (removal of old champions, adding replacements, etc.). d) Website improvements, including multilingual functions. e) Establish a vehicle to report to participants on a regular basis to inform onChondroCensus accomplishments. f) Reporting at conferences, including internationally, annually *Outcome:* Improved networking with regionally important organizations.
c)	Administer the Best Practices in Elasmobranch Handling Project	Q2 2025 Q4 2025 Q4 2025-27 Q1 2026,2028 Q2 2026, 2028	Hans Walters	Beth Firchau (Co-Lead), Program Partners; Best Practices Working Group	$25,000/workshop = $100,000 $7,000 x 2= $14,000	*Outputs:* a) Working Group Created b) Recruit new project leadership to shadow through the first year of project roll out and 2025 workshop. c) Funding secured & workshop hosted d) Administering Workshops (BPWG) e) Tool Revision and Updating (Content) f) Program Software Updates

	d)	Advance Blood Project	Q4-2025 Q4 2027 Q1 - 2028 Q2 and Q4 2025, 2027	Alexa Delaune	Jill Arnold (Co-Lead), Program Partners, Beth Firchau; Project Contributors and Volunteers	Blood Samples collection equipment, shipping and processing: $22,000 Editorial Support (Program Partners); $0 Program Partners, MFTAG, FFTAG, S/R Steering Commitee - Workshop (1 day virtual); $0 AES / RAW or similar (Q2) and AZA (Q4) ($6,000/ year = $12,000)	*Outputs:* a) Obtain a statistically significant sample size of the four target species for this year. b) Publish species reference interval work in scientific papers c) Select next group of animals to target and repeat steps one and two d) Build awareness and create membership scale for the blood project by outreach to those communities most likely to participate in and need the resource *Outcome:* Increased participation in project by 10% annually
A3	a)	Solicit feedback from MFTAG and FFTAG and AZA RMC for institutional research and data sharing needs	Q1 2025 Q2 2025 Q2 2026, 2027	SEZARC - Linda Penfold	MFTAG Chair Paula Carlson, FFTAG Chair George Brandy, Tony Niemann, Sandy Trautwein, Monica McDonald Ashley Franklin (RM staff)	In kind support from program partners	*Outputs:* a) Develop document outlining ways to share data to protect intellectual property b) Develop a list of research needs c) Add Emerging Needs to centralized research database
	b)	EAZA/WAZA/AZA Strategic Framework on Animal Wellbeing connection - review existing frameworks to ID potential research priorities	Q3 2025	Sandy Trautwein	Lisa Hoopes (Co-Lead), Erica Bauer, AZA Welfare/Wellbeing Committee	In kind support from program partners	*Output:* List of potential research priorities based on review of existing frameworks
B1		Create a WG that IDs potential projects, criteria, and process upon which SAFE S&R endorsement is gained	Q1 2025	Steve Kessel	Linda Penfold, SAFE S&R - Windy Arey-Kent	In kind support from program partners	*Output:* Criteria developed for project evaluation
B2	a)	Provide examples of previously funded grants	Q3 2025 Q3 2025	Kelli Cadenas	Windy Arey-Kent, Program Partners, Tony Niemann		*Outputs:* a) A page is created on safesharks.org and/or document for grants b) Maintain copies of funded grants to share with grant applicants as needed
	b)	Create & maintain a list of elasmobranch-centric grants that have just been announced on safesharks.org	Updated annually	Windy Arey Kent	Program Partners , Fundraising Committee of SAFE S&R		*Output:* Explore logistics to have grant opportunities posted on safesharks.org annually

	c) Identify individuals who might conduct preliminary reviews and feedback for grant proposals	Ongoing	Hap Fatzinger	SAFE S&R leadership, Linda Penfold, Steve Kessel, Windy Arey Kent		*Output:* List of reviewers is created and maintained *Outcomes:* Potential collaborators increase their understanding of SAFE projects, and how their research aligns with SAFE priorities
	d) Cross-reference with other SAFE Program grant administration professional development	Q2 2025 and Q2 annually Q4 2026 and Q4 annually	Beth Firchau (recruit S/R champion)	AZA SAFE Coral (Beth Firchau)		*Outputs:* a) Create a task force and create professional development opportunity b) Update opportunity and promote opportunity c) Offer professional development opportunity to align with following year grant cycles
	e) Develop a centralized list of S&R research projects that is used by orgs in situ & ex situ and evaluate use of said list (ARCs for Sharks)	Q2 2025 Updated Annually	Steve Kessel	Tony Niemann, Hap Fatzinger, MFTAG, FFTAG, Windy Arey-Kent, Kelli Cadenas, AZA ARCS (TBD or Katey Leban), Program Partners Jen Wyffels, Kady Lyons, James Gillis		*Outputs:* a) Database developed and posted on safesharks.org b) Determine best way to track use of list via website or Google *Outcome:* Increased access to content by the research community to increase collaboration and sharing of data
C1	Promote and support where possible for SAFE S&R project contributors to attend conferences/workshops as well as encourage targeted sessions to promote and build awareness of in-situ & ex situ collaborations: IAC (Int'l Aquarium Congress), RAW, AES/ASIH	Ongoing	Windy Arey-Kent	SAFE S&R Steering Committee	~$1000 annually added to travel budget	*Output:* Targeted sessions are created and evaluated for SAFE alignment *Outcome:* An increase in awareness and support of SAFE projects amongst the shark conservation community is observed, as well as an increase in visibility for our partners participation in SAFE.
C2	Determine program partners to host training opportunities for colleges and universities with programs that focus on SAFE Shark and Ray priorities.	Q4 2026	Linda Penfold	Program Partners, Lisa Hoopes, Steve Kessel, Andy Rhyne		*Outputs:* a) Support SAFE S&R internship, post doc training, etc. Identify b) funding sources for training programs *Outcomes:* SAFE is able to capture and report number of trainees and their connection with SAFE S&R annually

Direct Species Conservation Action

Co-led by Hap Fatzinger and Riley Pollum

Goal	Objective 1	Objective 2	Objective 3
D: Increase collaboration amongst AZA shark conservation efforts for breeding and reintroduction	Identify needs and gaps with participating programs and partners to implement successful breeding and reintroduction.	Work with partners to define parameters and roles of the SAFE program, AZA organizations and accredited partners and collaborators to maximize resources and avoid duplicating efforts.	
E: Contribute to the process for identification of species in need of ex situ conservation and reintroduction efforts in collaboration with partners	Include SSP, TAG's, non-AZA regional zoo/aquarium associations, wild population management partners in the assessment process.	Develop opportunistic species list for potential ex situ breeding and reintroduction.	Inform & help refine the prioritization framework in collaboration with ReShark.
F: Identify the strategies for successful ex situ breeding and reproduction of prioritized species	Assemble current reproductive methods/capabilities of SAFE collaborators, both natural and Assisted Reproductive Technologies (AST).	Further develop the knowledge to support reproductive technologies.	Develop tools and resources for institutions housing elasmobranchs to improve infrastructure for breeding.
G: Create a "Genetic Database" for elasmobranchs with prioritization for reintroduction	Provide funding and resources for genetic testing of species.	Sample ex situ priority species.	Work with research partners to sample in situ species. Expand participation through effective communication and access to Genetic Database

Action Table – Direct Species Conservation

Obj	Action	Timeframe	Lead	Collaborators	Budget	Metric
D1	a) Define partner roles and responsibilities b) Communicate roles and responsibilities to partners and participating organizations c) Utilize a pre-developed communications framework for sharing project content	Q2 2025 Q4 2025	Hap Fatzinger	MFTAG, FFTAG, SSP, ReShark, StAR, Shark Ray 360, Conservation International, Geneticists, SEZARC, SAFE partners, Chondro Census team, Comms team, EAZA, Elasmobranch TAG		*Output:* Document created to define the landscape of shark and ray ex situ breeding for reintroduction programs, including where SAFE S&R fits in. Share information among all interacting parties *Outcome:* Increased understanding by all partners in what is needed to identify the relationship among collaborators and what roles each participant plays in order to achieve successful breeding and reintroduction of elasmobranchs
D2	a) Host a virtual workshop of all parties to discuss SAFE contributions b) Commit time and resources to implement SAFE responsibilities c) On an annual basis, review SAFE roles and responsibilities to ensure success	Q3 2025	Hap Fatzinger	As identified in D1		*Output:* Document that defines SAFE roles and responsibilities *Outcome:* Formalize SAFE roles in reintroduction programs to increase level of engagement and leverage management support through SAFE
E1	a) Create central distribution list of partners (who, what, when, where) b) Verify contacts, ensuring they are up to date on an annual basis c) Communicate directly with Husbandry/animal care teams to engage relevant program partners	*2025* Annual Ongoing	Hap Fatzinger	SSP's, MFTAG, FFTAG, NGO partners, Research partners, IUCN SSG, local, regional, national fisheries management agencies Comms team		*Outputs:* a) Process created to collect partner contact information b) Quarterly information updates disseminated through SAFE comms channels *Outcome:* All partners fully understand process and opportunities to participate
E2	a) Apply ChondroCensus data & IUCN Red List to inform species selection b) Explore Red List, CC,Species 360 and Tracks data for synergy	Q2 2025 Ongoing assessment	Riley Pollum/	ReShark Prioritization Working Group, Chondro Census team		*Output:* List of species developed A list is created of IUCN Red List Species (Threatened status) in human care

E3		Liaise between ReShark and SAFE to develop a workshop for chondrichthyan prioritization for ex situ conservation efforts	Q4 2025	Riley Pollum	Hap Fatzinger ReShark Prioritization Working Group	$35,000 for workshop $5,000 for publication fees	*Output:* Workshop is held to prioritize species from the list created from E2. Peer-reviewed publication of results. *Outcome:* A transparent prioritization process is developed and implemented for greater understanding and participation in the ex situ conservation of sharks and rays.
F1	a) b)	Develop a white paper framework, based on *Stegostoma*, for breeding & reproduction Publish paper and distribute broadly for open access	Q2 2026	Linda Penfold	MFTAG, SSP, StAR, Kady Lyons, Leah Neal, Lise Watson, Jack Jewell, Lance Adams, Caitlin Hadfield	$5000 for Publication expenses	*Output:* Summarize ex situ reproductive protocols, updated from Elasmobranch Husbandry Manual, StAR, Animal Care Manual, etc. into a white paper *Outcome:* Partners are informed and knowledgeable about current, species specific reproductive techniques
F2	a) b) c) d)	Develop species-focus working groups to increase knowledge Create trusted partnerships and leverage relationships to work with institutions developing assisted reproductive technologies to break down barriers in sharing information and processes Host a virtual or in-person workshop for global partners to convene Create 1-2 additional species-specific white papers on reproductive protocols	Q1 2026 Q3 2026 2026 Q4 2028	Hap Fatzinger	MFTAG, ReShark SR360 Jen Wyffels (Ripleys), Kady Lyons, Lance Adams	$35,000 for workshop $5000 Publication expenses	*Outputs:* a) Species focus groups created, and workshops implemented b) 1-3 white papers published for broad distribution *Outcome:* Partners demonstrate an increase in efficacy, knowledge and trust between partners to increase collaboration and information sharing
F3	a) b) c)	Gather data on facility needs to expand & support breeding programs Develop tools for staff development and understanding of Assisted Reproductive Technologies (ART) and natural breeding processes Onboard new facilities to participate in program	Q4 2026 Q2 2027 Ongoing	Hap Fatzinger	MFTAG FFTAG Shark Ray 360 ReShark StAR Project		*Output:* Needs and tools identified by partners and compiled into a project list to be developed and shared out to increase the ability of organizations to participate *Outcomes:* *a)* Use best practices from active case studies to expand resources for other priority species b) Increase new facilities participating in breeding by 10% annually

G1	a) b) c) d) e)	Create a Genetics Work Group Identify platform to support a database Develop funding stream to support database development Manage database Provide funding for analysis of samples	Q1 2025 Q3 2025 Q2 2025 Q4 2025 Q4 2025	Riley Pollum Linda Penfold Hap Fatzinger Genetics Work Group Hap Fatzinger	AZA PMC, Studbook keepers, TRACKs Data Solutions, Kevin Feldheim, StAR Team, SEZARC	$15k Year 1 Funding needed for online platform $5k annually to maintain database $2k annually for sample tests	*Outputs:* a) Database created and maintained b) 100% Funding is achieved to support database c) 100% Funding is made available to process samples d) 100% of partners are accessing the database and providing samples
G2	a) b)	Develop the procedure list for submitting samples Widely communicate with organizations the process and protocols for submitting samples	Ongoing	Riley Pollum	Genetics Working Group, Kevin Feldheim Comms team		*Outputs:* a) Genetics are identified for ex-situ identified species b) Communications plan for project identifies audience, channels and frequency of communication
G3	a) b)	Identify researchers and partners with access to priority species in the wild Widely communicate with researchers and partners the process and protocols for submitting samples	Ongoing	Steve Kessel SAFE Comms rep	Genetics WG, ReShark, MFTAG, AES Comms team		*Outputs:* a) Genetics are identified for in-situ ranges of identified species b) Communications plan for the project identifies audience, channel, and frequency of communications

Influencing Conservation Policy

Co-led by Paul Cox and Steve Lacy

Goal	Objective 1	Objective 2	Objective 3	Objective 4
H: Activate the global network of aquariums and zoos to collectively voice support for global fisheries and species-specific recovery policy actions	Identify and prioritize key annual international fisheries and species recovery policy opportunities.	Engage SAFE S/R partners involved in shark/fisheries policy to identify strengths and opportunities for collective action.	Coordinate timely and relevant policy support action engaging all levels of AZA and partner institutions as a collective voice.	Drive impactful & measurable public campaigns to engage visitors and followers in support of policy actions.
I: Coordinate national and regional initiatives, with international partners in areas of priority for shark and ray conservation, to support implementation of policy measures	Identify policy implementation priorities referring to IUCN Species Survival Commission, government committees/groups, CITES planning community, GSAP toolkit and other relevant resources.	Identify partner expertise, national/regional presence and resources to highlight areas of overlap and opportunity.	Develop and deliver projects addressing implementation issues that coordinate efforts between SAFE and international partners.	
J: Establish and strengthen partnerships with local communities, to include Indigenous Peoples where applicable, to enable 'on the ground' policy implementation that is responsive to their community needs	Review existing initiatives and partnerships working with indigenous people and local actors on shark and ray policy implementation.	Working with partners, support opportunities to engage with local communities, including indigenous peoples where applicable, to understand policy needs and pathways for implementation.		

Action Table – Influencing Conservation Policy

Obj.	Action	Timeframe	Lead	Collaborators	Budget	Metric
H1	Conduct annual policy horizon scanning workshop (online) with key external partners and stakeholders	Q1 2025, annually	Steve Lacy	Shark Trust/ ACP/WCS/SAI/ Species 360/IUCN SSG/ NOAA	In kind	*Output:* Annual policy briefing and timetable distributed to SAFE partners via SAFE Network & ACP Policy Working Group. Annual review report summarizing previous year's activity.
H2	Conduct annual SAFE Shark and Ray policy forum (Mid-Year) to present annual policy briefing and call for participation.	Q1 2025, annually	Steve Lacy	Shark Trust /SAFE Steering Committee/AZA Gov Affairs/ACP	$3000 annual attendance/ travel to mid-year for leads	*Output:* Delivery of Shark and Ray Policy Forum at AZA mid-year and online follow-up briefing to partners. *Outcome:* 75% of SAFE S/R Partners report feeling informed, engaged and committed to participation in upcoming actions.
H3	Consult, produce, distribute and collate policy letters to relevant policymakers from AZA/SAFE/ACP partners. Include developing opportunities through messaging group hubs for engagement of overseas partners in international issues.	As required (2-3 per year)	Steve Lacy	Shark Trust/ Shark League/ Shedd/ACP Policy WG/SAFE S/R Messaging Group	In kind	*Outputs:* a) Delivery of 3 policy support letters per year to relevant policymakers. b) Increase partner engagement to 50+ per letter, increasing to 75+ from 2026. *Outcome:* US policymakers report clear expression of collective voice from Z/A in support of shark policy actions.
H4	a) Work with messaging group to create and distribute Big Shark Pledge implementation toolkit to enable engagement of visitors in support of Oceanic Shark policy action.	Q1 2025	Paul Cox	Shark Trust/Shark League	In kind (Shark Trust)	*Outputs:* a) Toolkit distributed and MoU agreed with 20+ SAFE partners. b) Quarterly report of visitor engagement numbers. *Outcomes:* *a) 25% of SAFE partners report* successful engagement of visitors/deeper awareness of international policy. b) Public support activated towards implementation of policy objectives. c) 25% SAFE partners report confidence in promoting policy actions to visitors.
	b) Use first year campaign partnership to develop a partnership model to enable assessment and engagement with other campaigns in following years.	Q4 2025	Paul Cox	Shark Trust//SAFE Messaging Group	In kind	*Output:* Partnership model document, agreement terms and key criteria for assessment of new campaigns.
	c) (As part of horizon scanning workshop) identify and assess potential advocacy campaigns using partnership model.	Q1 annually	Paul Cox	WCS/SAI/Shark Trust/Species 360/IUCN SSG/ACP/NOAA	In kind	*Output:* Agreement with relevant partner organization for campaign partnership.

	d)	Deliver annual public campaign	Q2 - Q4, annually	Paul Cox	SAFE Messaging Group/ TBD	$10,000 per year	*Outputs:* a) Toolkit distributed and MoU agreed with 25+ SAFE partners each year. b) Quarterly report of visitor engagement numbers. *Outcome:* By 2029 50% SAFE partners report confidence in promoting policy actions to visitors.
I1	Conduct review and produce summary analysis to highlight key policy areas, priorities, and implementation challenges.		Q2 2025, annually for review	Coralie Palmer	Shark Trust/ S&R Specialist Group/ SSC Marine Conservation Committee/ WCS (Luke Warwick)	In kind	*Outputs:* a) Initial Report published 2025 b) Annual review 2026-29
I2	a)	Survey potential external partners highlighted from review in action for N.1. to identify who is doing what and where needs gaps exist.	Q4 2025	Coralie Palmer	Shark Trust/S&R Specialist Group/ SSC Marine Conservation Committee/ Wildlife Conservation Society (Luke Warwick)/ Shark League/ AZA members	In kind	*Output:* Spreadsheet finalized of potential partners
	b)	Call for participation to AZA and other regional zoo association members.	Q4 2025	Paula Carlson/ Chris Coco	Aquarium working Group of IUCN/ EAZA, EUAC	In kind	*Output:* Results of call compiled
	c)	Analysis of combined results of above two actions identify potential partnership links.	Q1 2026	Paul Cox	Paula Carlson, Chris Coco, Coralie Palmer	In kind	*Output:* Potential collaborative project links identified - 3 possible projects (yr1).
I3	a)	Convene a project planning workshop engaging internal and external partners and stakeholders to develop a costed project plan(s) for submission to funders/CGF	Q1 2026, annually	Paula Carlson/ Chris Coco/ Corali Palmer/ Paul Cox	S&R Specialist Group/ SSC Marine Conservation Committee/ Wildlife Conservation Society (Luke Warwick)/ Shark league/ AZA members	$10,000 per year (plus In kind)	*Output:* Project plan/proposal, partner commitment letters and funding plan.
	b)	Secure project funding	Q4 2026, annually	Paul Cox	Windy Arey-Kent	In kind	*Output:* Project funds
	c)	Coordinate delivery of project(s)	According to project plan	Paul Cox/Windy Arey-Kent	According to project plan	Identified in project plan	*Output:* Project deliverables *Outcome:* Measurable improvement in implementation of policy at local level with reduction in fisheries pressure on populations (To be defined in project plan)
J1	Join the IUCN Shark Specialist Group Human Dimensions Working Group		Q2 2025	Paul Cox/ Shark Trust	IUCN SSG HDWG	In kind	*Output:* Membership of group and ongoing engagement with activities - reporting back to SC.
J2	Conduct annual communities engagement review workshop to identify & review existing initiatives and partnerships working with local actors and indigenous people on shark and ray (fisheries) policy implementation.		Q3 2027, annually	Coralie Palmer/ Paul Cox	S&R Specialist Group/ SSC Marine Conservation Committee/ Wildlife Conservation Society (Luke Warwick)/ Shark league/ AZA members/IUCN CEESP	In kind	*Output:* Scoping and opportunities report detailing existing and potential initiatives that would be appropriate for the program.

J3	Where applicable and practical, develop, coordinate and deliver projects linking NGO partners, local communities and SAFE partners which complement SAFE S/R policy goals and objectives.	2028 onwards	Coralie Palmer/ Paul Cox	TBC	Self-funding - project grants required to fund delivery	Outputs and outcomes to be defined as part of the project development process.

Communications and Messaging

Co-led by Kelli Cadenas and Windy Arey Kent

Goal	Objective 1	Objective 2	Objective 3	Objective 4
K: Define messaging versus communication within SAFE Shark and Ray, in order to increase productivity of each area of communications and messaging.	Better define roles and responsibilities for communications, as well as for communication & messaging roles within SAFE working groups/projects.	Adding additional support from communicators within the AZA community to provide guidance, expertise and contributions to the comms working group.	Identify and adapt how we are communicating out to increase engagement and productivity of partners participating in projects.	
L: Achieve targeted and strategic communications to increase active engagement from program partners.	Use Comm strategies to increase engagement from partners on SAFE projects.	Define "active" partnerships and their value to SAFE *and* the partner orgs.		
M: Update and deliver unified messaging across institutions, to strengthen the SAFE S/R brand, increasing action and engagement from guests to promote and create positive behavior change.	Keep messaging relevant for partners through continuous evaluation and monitoring of messages, including rationale behind the messaging.	Identify and reduce barriers for partner engagement with our messaging tools to increase the number of partners using and delivering SAFE Shark and Ray messaging.	Co-create branded content and show partners how to use SAFE content to share with their audiences within their organizations.	Engage with social science research/researchers to identify the tools and methods to promote behavioral and attitudinal changes for shark and ray conservation.
N: Sharing of best practices to increase impactful/meaningful communication between stakeholders and partner institutions.	Communication plans need to be incorporated into every project to reach vital audiences and increase project participation.	Evaluating with partners to help us measure impact of each SAFE project.	Evaluate/assess how we share information between internal and external conservation projects that impact sharks.	Work with local communities to identify challenges and develop best practices to tackle the impacts of shark conservation success.

Action Table - Communications and Messaging

Obj.	Action	Timeframe	Lead	Collaborators	Budget	Metric
K1	a) Create a document that identifies and defines roles and responsibilities for communications about SAFE, as well as SAFE projects	Q1 2025	Kelli Cadenas, Windy Arey Kent	AZA Conservation and AZA Comms teams		*Outputs:* a) Document created and distributed to comms team and partners b) Document updated and distributed annually, as needed
	b) Create a document that identifies and defines roles and responsibilities for SAFE communications team	Q2 2025	Kelli Cadenas, Windy Arey Kent,	Comms team		*Outputs:* a) Document created and distributed to all comms team b) Document updated and distributed annually, as needed *Outcome:* All members understand their roles and have self-efficacy to follow through with their responsibilities
	c) Updating, revising and create onboarding opportunities and resources that engage *across departments* for partner organizations	Q4 2025	Stacia White, Debbi Stone, Windy Arey Kent	Kelli Cadenas, Comms team, partners, AZA Comms team	In-kind support partners assisting	*Outputs:* a) Development of resources/training materials for partners to include digital materials for distribution, along with virtual and in-person training opportunities b) Hold at least 2 partner update meetings virtually, one post-AZA MYM and one post-Annual Conference *Outcome:* 50% increase in engagement from staff across departments of partner organizations
	d) Create a contact list that identifies additional staff contacts (education communications) at partner orgs. for use by SAFE comms team	Q1 2026	Stacia White, Debbi Stone, Windy Arey Kent, Kelli Cadenas	Comms team, partners		*Output:* List created, maintained, and updated annually
K2	Identify and onboard at least 2+ communications professionals from partner organization to participate in Comms Team	Q3 2025	Windy Arey Kent, Kelli Cadenas			*Output:* Increased participation and engagement from communications professionals in the working group *Outcome:* Comms team has an increased understanding of industry practices and applies those in all communications
K3	a) Create and distribute a google survey to partners to establish baseline of current partner participation in projects	Q3 2025 Q3 2027 as a follow-up	Windy Arey Kent	Kelli Cadenas, Comms team, AZA Comms team		*Outputs:* a) Survey created and distributed which measures current level of partner participation in SAFE projects b) Follow up surveys continuously assess and measure project participation *Outcome:* 75% of partners are participating and contributing to SAFE projects, where applicable

	b)	Work with partner communications professionals to evaluate internal processes and procedures for communications, identifying areas for improvement, and providing suggestions for future communications	Q4 2025, then Q4 annually	Windy Arey Kent, Kelli Cadenas	Comms team, partner professionals		*Outputs:* a) Document created that clearly defines Standard Operating Plan for comms b) Annual review of SOP's *Outcome:* Improved processes for communications that increase partner engagement and productivity by 50%
L1	Review current strategies to assess who is currently receiving SAFE communications and how they are engaging with, using, and implementing the communications tools at their organization		Q3 2025	Kelli Cadenas, Windy Arey Kent	Reps from Partner Comms and marketing teams, education teams and IR's		*Outcomes:* a) SAFE Comms team increases their understanding of current communications efforts and how they are able to better engage with partners b) SAFE partners work across disciplines within their organizations to create and share accurate messages c) Staff and communicators increase their confidence and ability to share shark science and conservation to diverse audiences
L2	a)	Using industry best practices, continue to monitor, evaluate, and update current communication channels, including social media, newsletters, and website for efficacy and reach	On-going	Kelli Cadenas, Windy Arey Kent	SSRE, Reps from Partner Comms and Marketing Teams, Marketing Committee	$500 annual budget for website, graphics and newsletter support.	*Output:* Comms team meets at least 3x/year to strategize communications for SAFE *Outcome:* 10% annual increase in social media users, newsletter subscribers, and website traffic
	b)	SAFE Leadership team to develop and share with partners the criteria and levels for partner engagement (active vs. inactive)	Q4 2025	Kelli Cadenas, Windy Arey Kent	Steering Committee		*Outputs:* a) Document created and shared with all partners b) Document assessed and updated as needed, annually
	c)	Quarterly updates through communications channels that highlight and amplify successes and contributions of partner efforts within SAFE projects	Quarterly	Kelli Cadenas - Comms Team	Project Leads, Partner Comms & Marketing Teams		*Outputs:* a) 1 newsletter/quarter that highlights partner contributions b) 10 social media posts/quarter that highlight partner contributions to projects c) Highlight SAFE partner contributions to projects in annual newsletter *Outcomes:* a) 10% increase annually in partner sharing of SAFE content on social media b) Partners have increased opportunities to amplify their SAFE contributions with their audiences

M1	Assess current messaging for cultural relevance and understanding, and adapt content for different languages/cultures, as needed a) Survey international partners to identify who is using the Framework, and any issues with current language/meaning b) Adjust and adapt Messaging Framework to address survey results c) Deliver tools in additional languages.	Q4 2025 Q2 2026 Q2 2026	Paul Cox, Windy Arey Kent	Messaging Team, EAZA, WAZA, JAZA, IUCN SSG AWG, SEAZA, etc.		*Output:* Survey completed by global partners; Messaging updated to reflect survey input, and tools created in additional languages for broader implementation *Outcome:* 25% increase in international partners engaging with, and using, SAFE Messaging Framework
	a) Provide webinars and training for partners and communicators, nationally and internationally, on how to use and implement SAFE Messaging Framework	On-going Q2 2026	Paul Cox, Windy Arey Kent	Messaging Team, AZA, WAZA, EAZA, JAZA, etc.	$5000 for online platforms and toolkit production	*Outputs:* a) Deliver at least 2 webinars annually. b) Deliver webinars to international partners *Outcome:* Increase international engagement and use of SAFE Messaging Framework by 25%
	b) Work with the international shark science community to annually update and refine shark conservation messaging to be current and relevant, adapting messaging as new information is made available	Q1 annually, on-going	SAFE Comms team-Kelli Cadenas, Windy Arey Kent	Messaging team, IUCN SSG, IUCN SSG AWG, AES members, NOAA Fisheries	$3500 for translation services	*Outcome:* Messaging will continuously reflect the most current science and promote opportunities to engage the public campaigns to protect sharks and rays
M2	Use existing survey data, and additional data to be *collected on a regular basis*, to identify and address barriers for partners in adopting and delivering SAFE messaging a) Analyze current survey data for barriers b) Address any known barriers and deliver revised Framework, as needed c) Survey partners at least 2 additional times to continuously address any changes or barriers to implementation	Q1 2026, Q1 2028	Windy Arey Kent, Paul Cox	Messaging team, Inform Evaluation and Research, SSRE, Partner Comms professionals	Funding for future comms/messaging evaluations	*Outputs:* a) Creation and distribution of surveys to partners b) Updates and Revisions to Messaging Framework *Outcome:* 100% of SAFE partners are delivering content using the SAFE Messaging Framework
M3	a) Develop and distribute toolkits annually for Shark & Ray Awareness Day	Q1 annually (March)	Paul Cox	Messaging Team, Partner Education Directors & social media/PR	Funding needed to develop resources for SRAD $3000 annually	*Output:* SRAD Toolkits distributed to all partners by April of each year *Outcomes:* a) Increased participation in partners using SRAD materials by 10% annually b) SRAD materials highlight relatable and measurable conservation engagement opportunities for diverse audiences

	b) Work with partners & comms professionals to develop and provide relevant and shareable social media resources for partners	On-going	Comms team - Kelli Cadenas, Windy Arey Kent	Messaging Team, Partner Education Directors & social media/PR, Messaging team - Paul Cox		*Output:* Create social posts at least 2x/week on all platforms *Outcome:* Increase in partner share rate of SAFE posts by 10% annually
	c) Facilitate online and in-person trainings presentations to increase participation and reduce barriers to implementing the SAFE Messaging Framework	Q1, Q2 2025 On-going as developed and warranted annually	Paul Cox, Windy Arey Kent	Messaging Team, Steering Committee members AZA Learning Services Team	Funding needed for online platforms $500 for supplies	*Outputs:* a) 4 webinars/year in year 1 b) Up to 4 webinars/year in subsequent years, based on demand and participation *Outcomes:* a) Increased participation in webinars annually b) Demonstrated increase in confidence levels, as well as knowledge and attitude changes, for webinar participants
	d) Create and distribute messaging plan to address hot-button topics in the news about sharks and rays	Q3 2025 On-going/As needed	Paul Cox	Messaging Team, Partner Comms and Marketing/PR teams, NOAA Comms, local & regional governments/enforcement, ACP		*Output:* Messaging Plan distributed to partners and communicators *Outcome:* SAFE team is proactive, responsive, and timely in addressing communication needs around hot-button topics for sharks and rays
M4	Engage with the SSRE SAG, speaking up for the Ocean toolkit, and other social scientists and resources to identify proven and effective methods for promoting behavior change	Q3 2025	Windy Arey Kent	SSRE SAG, CEC, IZE, Framing Matters	Funding needed for onboarding social scientists to assist with projects	*Outcomes:* a) SAFE materials highlight current science and methods for engaging audiences in behavior change to protect sharks and rays b) SAFE Partner communication professionals demonstrate increased confidence in their abilities to deliver and encourage audiences to participate in shark conservation actions
N1	Project leads work with Comms teams to create communication plans for each project	Q2 2025 Ongoing, as projects develop	Kelli Cadenas	Individual Project Leads, Comms Team		*Output:* Each SAFE project has a clearly defined Communication plan that identifies content, timelines, audiences & preferred communication channels
N2	Project leads work with Comms team to identify outcomes and outputs for each project		Kelli Cadenas	Individual Project Leads, Comms Team		*Output:* Each SAFE Comms plan has clearly outlined metrics
N3	Comms team works with project leads to evaluate and measure impact of individual projects and develops a plan to share that information broadly	Q4 2027	Kelli Cadenas, Evaluation teams	Individual Project Leads, Comms Team, external evaluators	$12,000 for external evaluators	*Outcome:* SAFE demonstrates an increase in partner participation in projects, as well as an increased reach & impact on identified audiences
N4	a) Working group established recruiting representatives from East Coast institutions to define “Living with Sharks” project plan and partnership agreement	Q1 2025 - Q2 2025	Paul Cox	Shark Trust		*Outputs:* a) Working group of 4-6 representative individuals and terms of reference agreed. b) Outline project plan agreed, and funding sources identified

b)	Action research plan developed and key stakeholder groups (e.g. Coastal Conservation Association, Beach Lifeguards) identified and engaged.	Q3 2025 - Q2 2026	Paul Cox, Working Group	Shark Trust, CCA, External Evaluation Contractor	Funding reqd. for Evaluator ($15,000 - ST seek external funding)	*Output:* Research project report identifying (and quantifying) key issues for East Coast communities and set of recommendations for best practice codes of conduct
c)	Development, delivery and promotion of best practice toolkits for identified stakeholder/community groups on eastern seaboard	Q3 2026 - Q2 2027	Paul Cox, Working Group	Shark Trust, CCA, other	Funding for toolkit development	*Output:* Set of toolkits outlining best practices for key groups that address issues identified in research. *Outcome:* Key stakeholder groups feel engaged and sympathetic to shark conservation measures - contributing to positive media coverage and a reduction in opposition to shark protection measures.

Glossary

Abbreviations used in Action Tables

ACP: Aquarium Conservation Partnership
ACSC: Aquatic Collections Sustainability Committee
AES: American Elasmobranch Society
ARCS: Annual Report on Conservation and Science
AZA PMC: Association of Zoos and Aquariums Population Management Center
AZA MYM: Association of Zoos and Aquariums Mid-Year Meeting
BPWG: Best Practices Working Group
CCA: Coastal Conservation Association
CEC: Association of Zoos and Aquariums Conservation Education Committee
CITES: Convention on International Trade in Endangered Species
EAZA: European Association of Zoos and Aquariums
EUAC: European Union Aquarium Curators
FFTAG: Freshwater Fish Taxonomic Advisory Group
GSAP: Global Species Action Plan
IUCN CEESP: International Union for the Conservation of Nature, Commission on Environmental, Economic and Social Policy
IUCN SSG: International Union for the Conservation of Nature Shark Specialist Group
IUCN SSG HDWG: International Union for the Conservation of Nature, Shark Specialist Group, Human Dimensions Working Group
IZE: International Zoo Educators
JAZA: Japanese Association of Zoos and Aquariums
MFTAG: Marine Fish Taxonomic Advisory Group
NGO: Non-governmental Organization
NOAA: National Oceanic and Atmospheric Administration
PR: Public Relations
RAW: Regional Aquatics Workshop
RC: Regional Coordinators
SAI: Shark Advocates International

SSC: Species Survival Commission
SSG: Shark Specialist Group
SSP: Species Survival Plan
SSRE: Social Science Research and Evaluation Scientific Advisory Group S&R: SAFE Shark and Ray
TAG: Taxonomic Advisory Group
WAZA: World Association of Zoos and Aquariums
WCS: Wildlife Conservation Society