

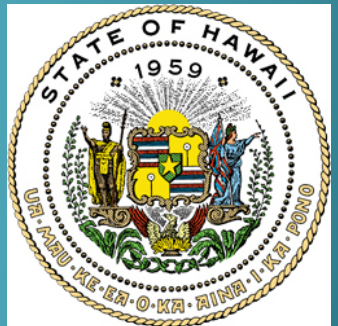
Enhancing Native Species Resilience Through Effective Management of Aquatic Invasive Species



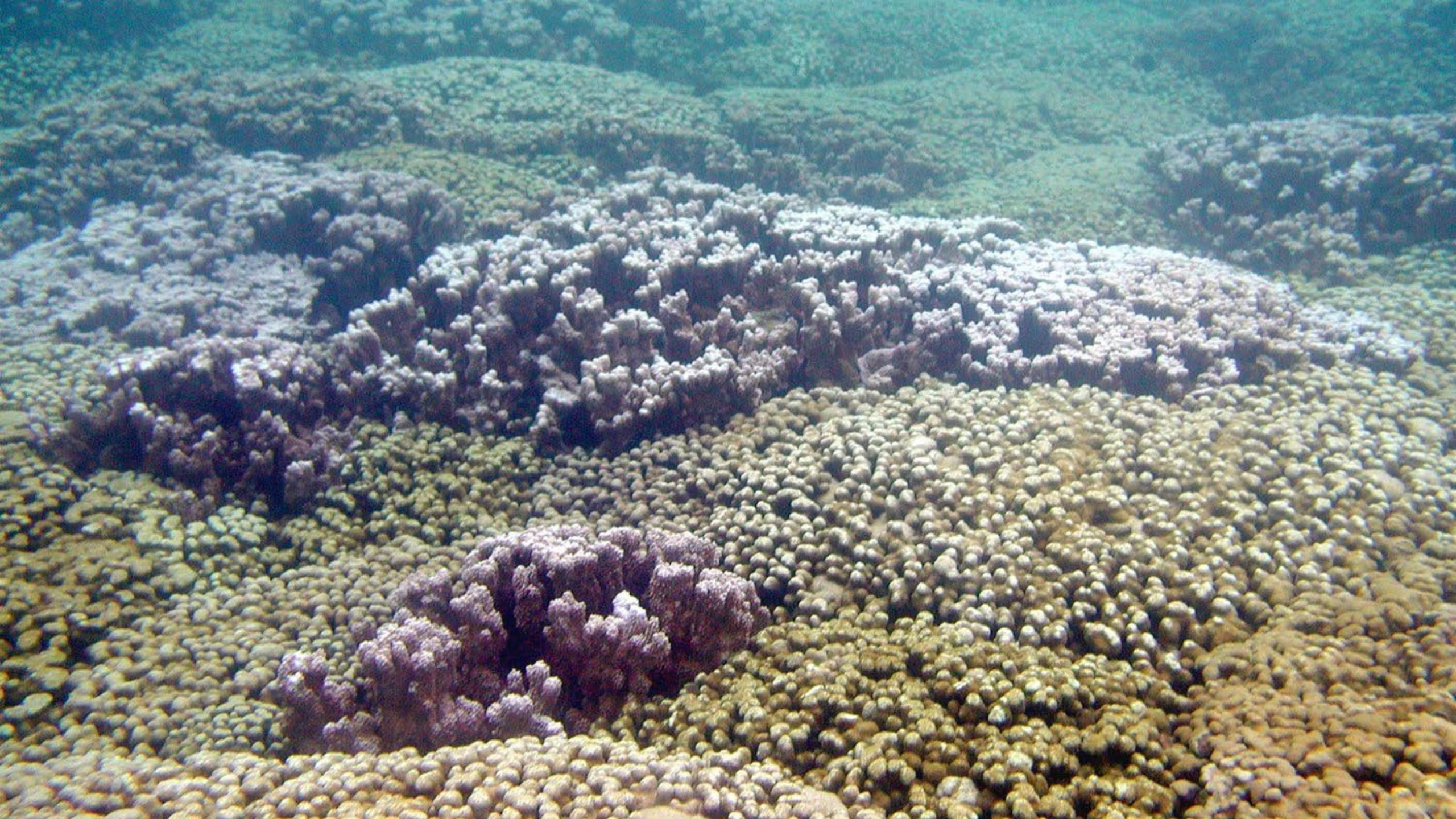
2019 Hawai'i Conservation Conference

Prepared by: Justin Goggins, Former AIS Coordinator

Edited and Presented by: Kimberly Fuller, AIS Biologist III







How We Got Here!

- 17 Person Steering Committee
- 7 Habitat/Species Focus Groups
- Over 40 Agencies, Universities, Non-profits, Industry Groups
- Total – 132 Individual Contributors

2003

State of Hawai'i Aquatic Invasive Species Management Plan

Final Version - September 2003



The Department of Land and Natural Resources,
Division of Aquatic Resources

Prepared through:
Andrea D. Shluker, The Nature Conservancy of Hawai'i



2017

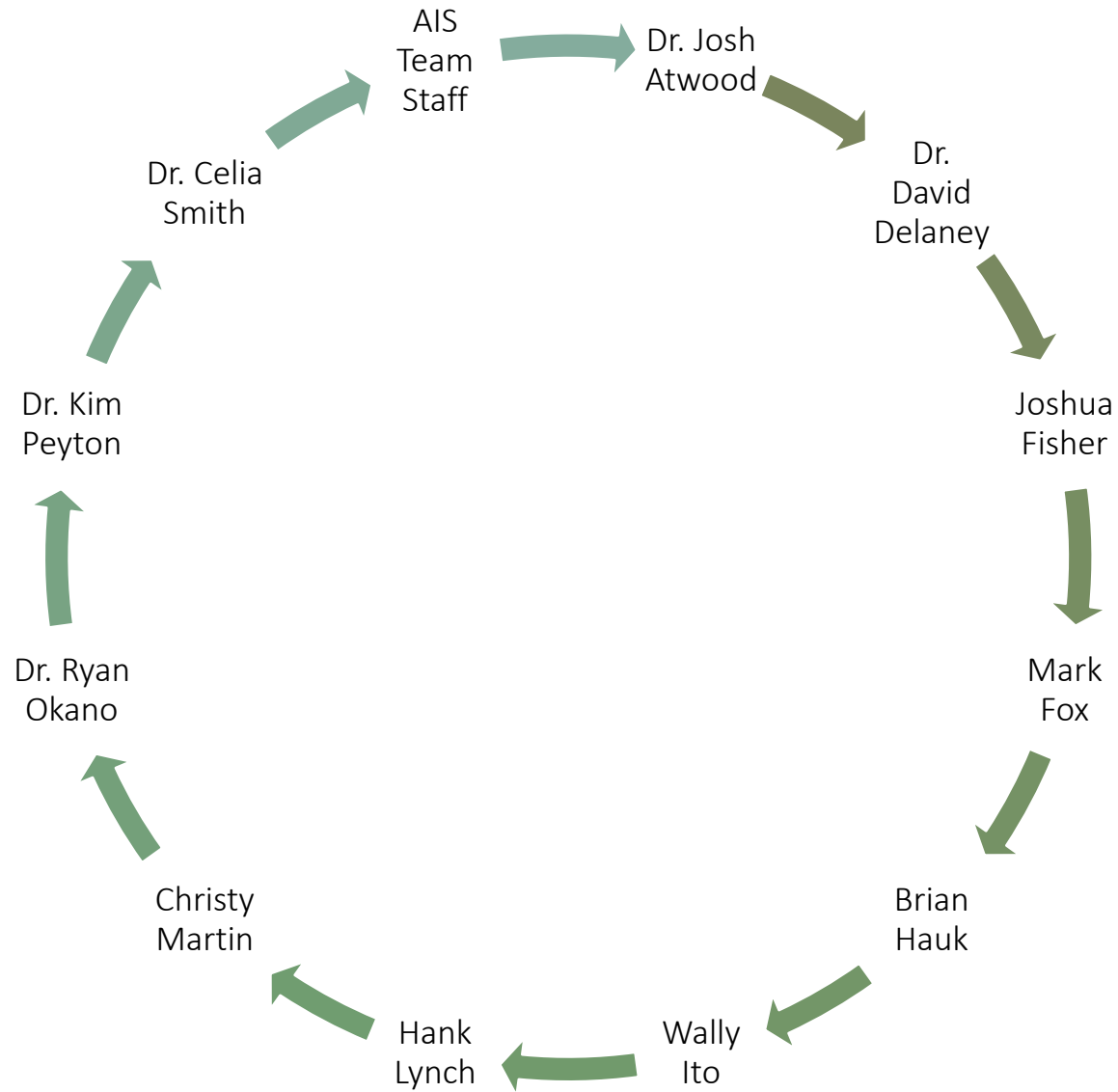


Vision:

- A healthy and sustainable native aquatic ecosystem absent of uncontrolled aquatic invasive species and supported by a collaborative management strategy.

Mission

- To preserve, restore, and protect Hawai'i's native aquatic ecosystems for present and future generations through the effective management of aquatic invasive species.



2018 Strategic Planning Workshop



AQUATIC INVASIVE SPECIES PROGRAM

Strategic Plan 2019 - 2024

Hawai'i State Motto:
"Ua Mau ke Ea o ka 'Āina i ka Pono"
"The life of the land is perpetuated in righteousness"

Justin Goggins & Natalie Dunn
(justin.goggins@hawaii.gov & natalie.muhlen@hawaii.gov)



- Structure of the AIS Program
- Structure of the AIS Management Strategy
- Funding
- Partnerships and Collaboration
- Prioritization of Projects
- Objectives and Actions

Structure of the AIS Team

1 Aquatic Biologist IV, Program Coordinator (vacant)

➤ AIS Field Team Staff:

- 1 Aquatic Biologist III, Field Supervisor
- 4 Fisheries Technicians IV (vacant)
- 1 Marine Resource Specialist
- 1 Habitat Monitoring Technician

➤ Urchin Hatchery Staff:

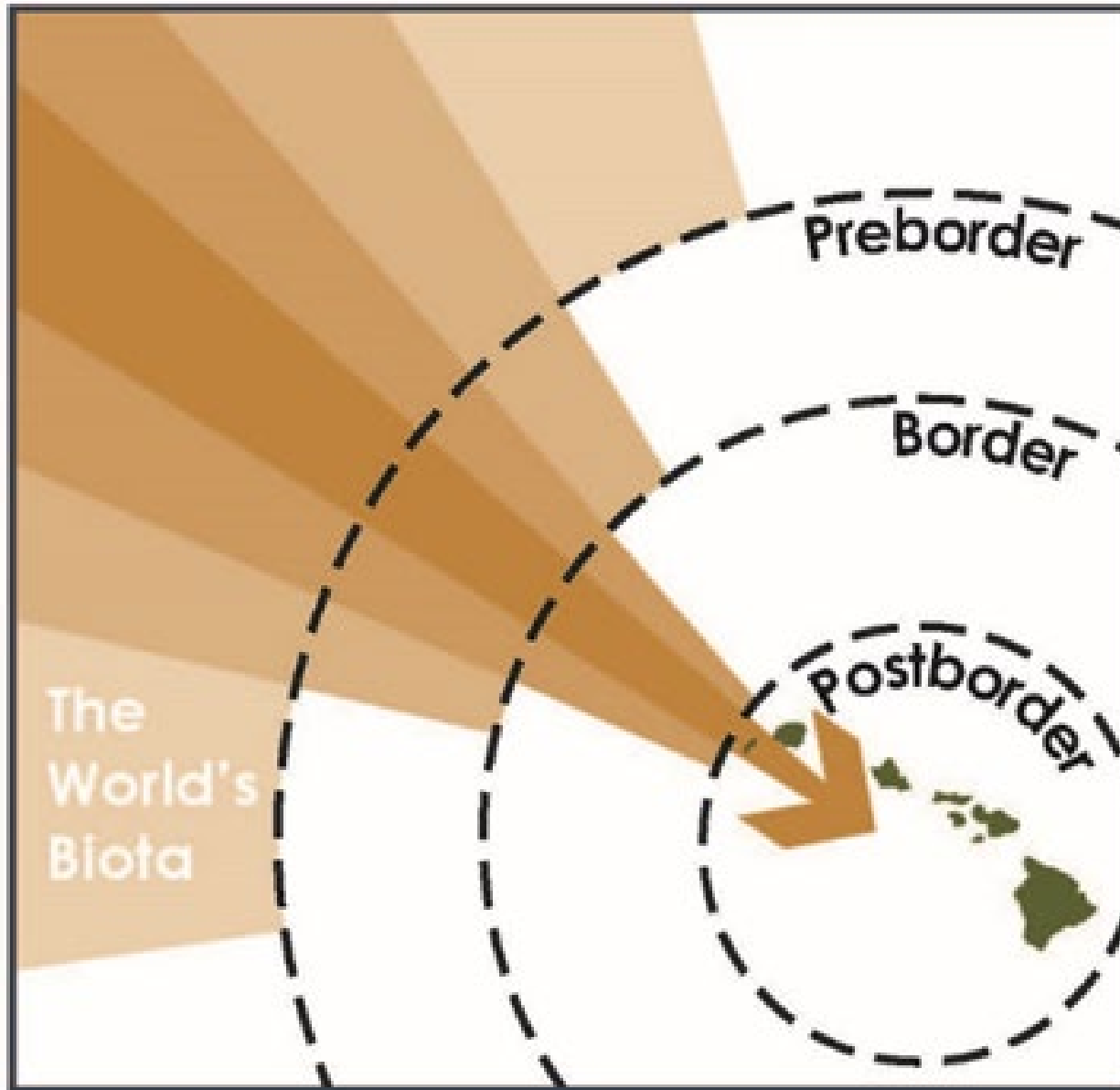
- 1 AIS Biocontrol Specialist (Hatchery Manager)
- 1 Senior Technician
- 3 Hatchery Technicians
- 1 Kupu AmeriCorps Intern

➤ Ballast Water and Biofouling Staff:

- 1 Coordinator
- 1 Legal Fellow
- 1 Kupu AmeriCorps Intern

Re-Org of the Approach Plan

- Pre-Border Protection (Prevention)
- Border Protection (Early Detection & Rapid Response)
- Post-Border Management (Monitoring & Control)
- Community Outreach and Support



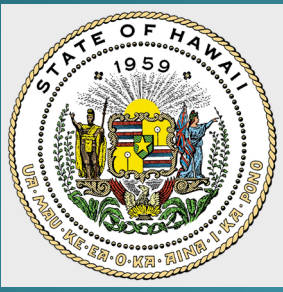


Funding



- State General Funds – Civil Service Salaries
- Cape Flattery Mitigation Trust Funds
 - Kaneohe Bay Reef Restoration Project
 - Sea Urchin Hatchery
- Kapalama Fuel Terminal Expansion in Honolulu Harbor
 - Waikiki Marine Life Conservation District Reef Restoration Project
 - Sea Urchin Hatchery
- Ballast Water & Hull Fouling Program
 - Hawaii Invasive Species Council Grant
 - Fish and Wildlife Services Aquatic Nuisance Species Grant



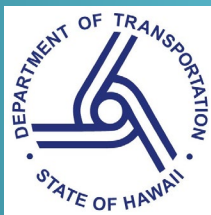


Partnerships and Collaboration



- CGAPS
- EOR
- HDOA
- HDOH
- Hawai'i Department of Planning
- Hawai'i Department of Transportation
- Hawai'i Division of Boating and Ocean Recreation
- HIMB
- HISC

- Kua'aina Ulu 'Auamo
- KISC, Mālama Maunalua
- NOAA
- UH Botany Department
- USFWS
- USGS
- Western Regional Panel on ANS



Pre-Border Prioritization

Pre-Border Prevention				
Objectives	2003 Strategy	Actions	Project Status	Priority Rank

Table 1. Pre-Border, Border, Post-Border, & Outreach Objective and Actions Strategy. Bold font text is previously identified priorities.

Minimize species introductions via ballast water and biofouling	2G 7A-7C	Develop criteria for risk assessment of vessel arrivals using reporting forms and impending online database	In Progress: Working Towards Completion	1
		Develop biofouling regulations and amend ballast water regulations	In Progress: Working Towards Completion	2
		Develop criteria to evaluate effectiveness of in-water cleaning capture systems	Not Started Yet	3
		Develop best management practices for ballast water and biofouling for Hawai'i shipping industry	Ongoing	4
		Conduct In-water Cleaning Pilot Study to inform rule making	Not Started Yet	
		Develop hull husbandry reporting (e.g. protocols, rules, database)	Ongoing	
		Develop pre-border preventative techniques for streams species	Not Started Yet	

Pre-Border Prevention				
Objectives	2003 Strategy	Actions	Project Status	Priority Rank

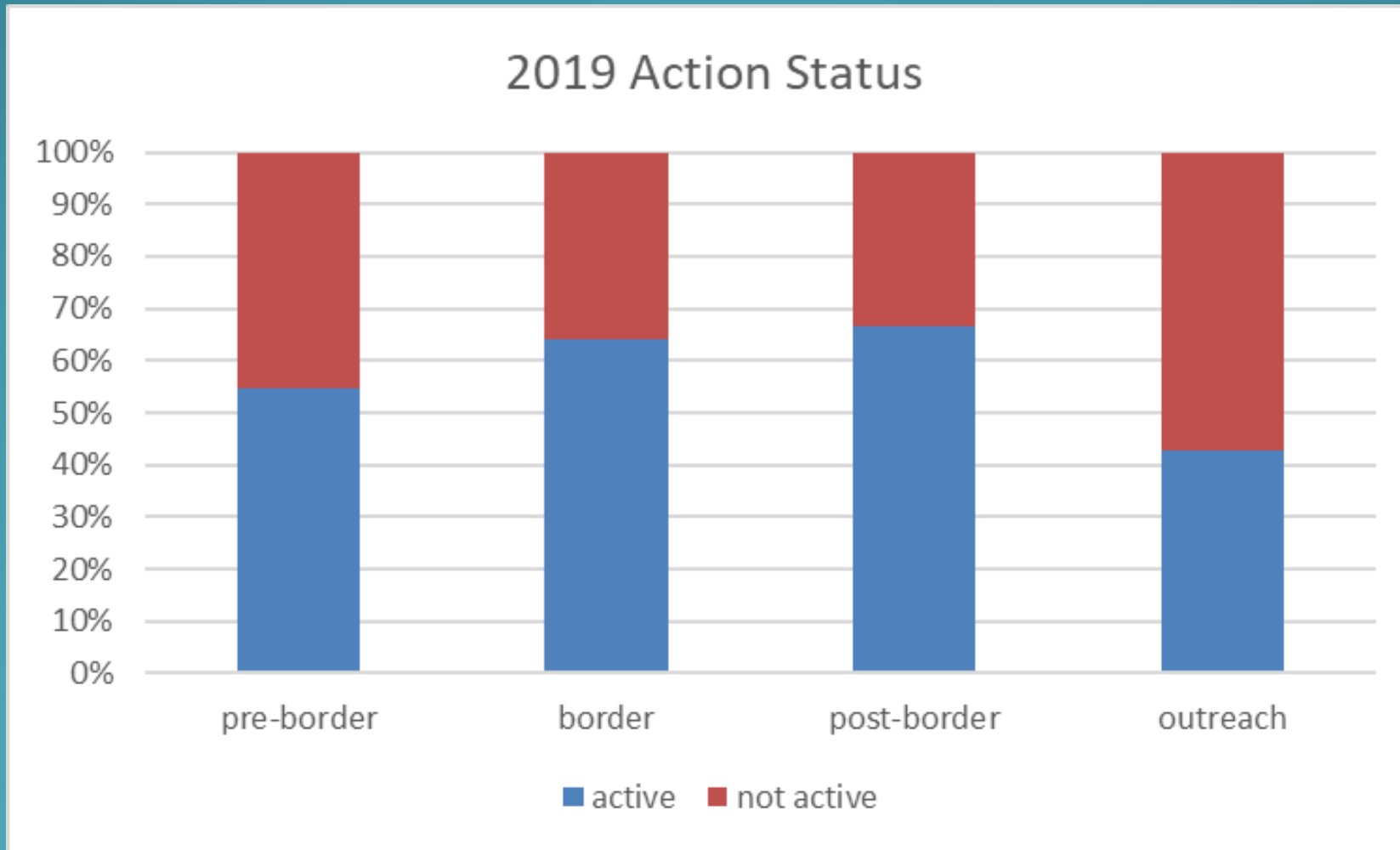
Minimize the introduction of new nonnative species based on the HDOA Species Import Rules	3	Review current HDOA Animal Import Rules to determine if it is working and potential gaps	Ongoing	1
	1	Provide well researched recommendations and testimony to HDOA for Import Applications	Ongoing	2
		Develop basic criteria of high-risk species using risk assessment tools and literature reviews	Not Started Yet	
		Develop a decision tree for Import Permits	Not Started Yet	
Pre-Border Supplementary List		Create a species import database which houses all import applications and Agriculture Board determinations Support HDOA capacity for inspections, outreach & education		1
		Proactively review climate matching areas to determine which species are restricted in other regions		
		Proactively add potentially invasive species to the HDOA prohibited list		
		Research policy actions needed		
		Research all HDOA permits - research, commercial		
		Assess loophole species, quasi-black market (i.e. hobbyists trading among friends, FedEx shipments not DOA related, species transported from one place to another with Hawai'i holding in transit, shipping industry liability)		

Workplan Prioritization

- Pre-Border Objectives:
 - Manage Ballast water and Biofouling
 - HDOA Import Regulations- advise and collaborate
- Border Objectives:
 - Early Detection monitoring for new species
 - Rapid Response to AIS threats
- Post-Border Objectives:
 - Active management and control of AIS
- Outreach
 - Increase awareness of AIS issues in the State of Hawai'i

2003 vs 2019 AIS Plan





- **ALS team will have to further prioritize to feasible actionable items (capacity)**



Mahalo, Questions?

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