

Cindy Freitas  
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May 19, 2020

State of Hawaii  
Department of Land  
and Natural Resources  
P.O. 621  
Honolulu, HI 96809  
[blnr.testimony@hawaii.gov](mailto:blnr.testimony@hawaii.gov)

RE: TESTIMONY FOR

May 22, 2020

9:00a.m.

Online via Zoom, Live on you Tube

FORESTRY AND WILDLIFE

Agenda Item; DIVISION OF AQUATIC RESOURCES

F 1. and F 2.

Aloha,

My name is Cindy Freitas and I'm Native Hawaiian, descended of the native inhabitants of Hawai'i prior to 1778 and born and raised in Hawai'i.

I am also a practitioner who still practice the cultural traditional customary practices that was instill in me by my grandparents at a young age from mauka (MOUNTAIN TO SEA) to makai in many areas.

Item F1. Testimony

Board of Land and Natural Resources (thereafter DLNR) should INCREASE FINDS & REVOKE POACHERS Commercial Marine License's for the following reasons;

1. In Larkin and Degner, 2001, there has been an estimated value of \$200-\$300 million per year in marine aquarium trade. The global trade in coral has increased by 500% over the last 10 years, with over one million live corals and 1.87 million of live rock traded in 2002 by Bruckner, 2003. In addition an estimated 20-24 million reef fishes are traded annually, representing 14,50 species in 50 families (Balboa, 2002, Wabnitz et al., 2003)

There is 50-60% of the marine aquarium fishes each year (Wood, 2001)

There is also about 30% of the total global trade in reef fishes exported from five locations Brazil, the Maldives, HAWAII, Sri Lanka, and Vietnam.

Therefore the Hawaii Administrative Rules 13-60.4-4, 13-60.4-7, 13-74-20 and 3-74-14 states the violations and contour to DLNR is such a small price to pay.

The report by Sherry L. Larkin & Roert. Degner, 2001 "Aquarium Sciences and Conservation" that these violators Tyson Terazono, Kacie Terazono and Wayne Newman should have there license revoke for a period of years and and increase the fines

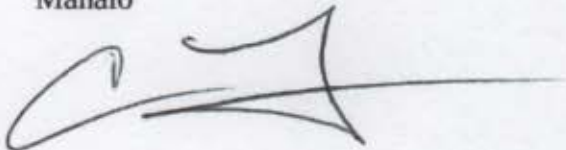
Agenda Item F 2.

I REJECT this Agenda Item F.2, for the following reasons;

1. Human activity is commonly identified as a major contributor to the observed global deterioration of coral reefs, ecosystem health, with loss of live coral cover, declining species diversity and the abundance of species that exist within a region, is another important variable.
2. Many coral reef species are harvested domestically and internationally to supply a growing international demand for seafood, aquarium pets, live food fish, construction materials, jewelry, pharmaceuticals, traditional medicines and other products. Collection is occurring at unsustainable levels, and overwhelming vesting may lead to reductions in the abundance and biomass of target species, shifts in species composition and large-scale ecosystem shifts including population explosion of non-target species or the replacement thriving coral-dominated systems with low-productivity algal reefs.
3. It is my belief as a cultural practitioner to continue my practice as well as saving the environment from irreparable harm.

Therefore agenda items F 1 should be rejected and I Cindy Freitas reserved the right to a contested case if the Board decision is not in favor of my request.

Mahalo

A handwritten signature in black ink, appearing to be 'Cindy Freitas', with a long horizontal line extending to the right.

Cindy Freitas

**From:** Bianca Isaki  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Agenda Item F.1 & F.2 Testimony  
**Date:** Wednesday, May 20, 2020 8:30:07 AM

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Aloha Chair Case and Board Members,

I'm submitting this testimony on agenda items F.1 and F.2 on behalf of KAHEA: The Hawaiian-Environmental Alliance.

Under Item F.1, please increase fines and revoke commercial marine licenses for poachers of aquarium fish. The Division of Aquatic Resources is recommending fines of approx. \$37,000 per person, however, this is extremely low, given that the law allows upwards of \$1000 per illegally taken fish, in addition to the fines and penalties for their other offenses. The total penalty proposed could – and should – well exceed \$550,000. Their licenses should also be revoked to the extent of the Board's enforcement powers. These would be appropriate deterrence measures.

Under Item F.2, please reject the proposed EIS for aquarium fishing. The EIS fails to propose and analyze any meaningful mitigation or alternatives that would reduce the impacts and fails to adequately incorporate input of Native Hawaiian practitioners, experts, community members, and consulted parties.

Mahalo for considering our testimony.

Bianca Isaki, Secretary

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Bianca Isaki, Ph.D., Esq.  
KAHEA: The Hawaiian-Environmental Alliance  
P.O. Box 37368  
Honolulu, Hawai'i 96837  
808.927.5606

**From:** Arthur Mori  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] EIS re opening renewed aquarium trade collections and commercial licenses  
**Date:** Monday, May 18, 2020 8:10:27 PM

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My name is Val Mori and I am a Hawaiian resident and Waikiki Aquarium volunteer. I am very much opposed to both agenda items. Our reefs are already under pressure from the effects of climate change and pollution. There is no need for an aquarium trade. Many of these fishes are shipped off island and I am certain a large number die in transit. Surely aquarium lovers can use freshwater fishes. They are just as colorful and can be bred. Our reef fishes cannot be replaced. Please stop this harmful business!

ITEM F1 & F-2  
(PUBLIC  
TESTIMONY)

**From:** Topher Dean  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] F. 1 & F. 2 Aquarium Trade  
**Date:** Monday, May 18, 2020 11:54:05 PM

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Dear BLNR representatives,

F. 2. I've been a resident of North Kohala since 1996. I'm an avid surfer and love to snorkel. I have seen the decline of the reefs over the decades. A couple of months ago, my Nieces were visiting me and they were snorkeling. Of course they were thrilled and thought it was beautiful. I didn't have the heart to tell them how sad it is. Then my Son, who has worked for the DAR counting reef fish and measuring coral decline, saw a school of yellow tang. There were about a dozen. We pointed it out to my Nieces and my Son said something that broke my heart, "I heard schools of tang like this were common." That is so sad. Twenty years ago, snorkeling in this exact same spot, Mahukona, there were schools of yellow tang, a hundred fish or more. There were huge balls of brilliant yellow fish swirling around. Not just one school. there were always two or three schools. There was never a time when I didn't see several large schools of tang and here's my Son beset with melancholy, knowing that he's missed out on one of nature's spectacular experiences. It's just so tragic and why, so someone can make a buck, so a man in Iowa can look at one lonely yellow tang in a tiny prison, from the comfort of his living room couch? What right does anyone have to take these fish? They don't belong to any individual, they belong to all of us, you, me, my Son and the man in Iowa who will have to buy a ticket to Hawaii to see them. These fish belong to Earth. They have a right to exist. Maybe scientists can estimate the bare minimum of fish to prevent extinction, but what about the balance of life on the reef and what about depriving me of my right to witness the beauty of this amazing planet?

There are many stressors on our reefs: The climate crisis, chemical pollution, sewage, overfishing, tourism, coastal development, plastic trash and nets, the last thing these fish need is people scooping them up in nets. These stressors are getting worse and worse. Instead of needlessly decimating the reefs for the luxury of filling aquariums, we should be doing everything in our power to protect them. I don't want to live in a world where the sight of a few yellow tang is amazing, I want to live in a world where the ocean is swirling with hundreds of yellow tang. I miss them and the other fish too. It's empty out there and it's so sad, that I can no longer go snorkeling, it's just too depressing.

F. 1. Protection of our reefs is creating laws and enforcing those laws. Perhaps your empathy lies in the person who's just trying to make an "honest" living, selling our reef fish. Well, what about Hawaii's number one source of revenue, tourism? By letting

the aquarium trade continue, you're impacting thousands of businesses owners who depend on tourism. What happens when the tourists go home and say the snorkeling sucks in Hawaii, there's no fish or coral? If your heart goes out to people who are just trying to support their family, think of the thousands of local families who depend on the beauty of Hawaii's natural wonders. Why impact those thousands of local families, so a few people can make a buck? Aquarium fish traffickers can find another line of work. Anyone caught violating the aquarium ban should have their boat seized and all their equipment taken as well as suffer a severe fine.

I would like to testify in person if I may.

Topher Dean

Home: 808-889-5862

Cell: 808-339-0482

POB 493

Hawi, HI 96719

Please take the time to see my efforts to clean the Kohala Coastline:

<https://www.youtube.com/watch?v=sOghCZh8los&t=2s>

<https://www.facebook.com/groups/2065480060191671/>

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Fight with aloha,

Topher

**From:** Mike Nakachi  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Items F1 & F2 On Agenda  
**Date:** Thursday, May 21, 2020 6:47:51 AM

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Would like to Testify on both of these items on your agenda tomorrow on F1 & F2. Mahalo for your time and consideration, Mike

Mike Nakachi  
Moana Ohana  
PO Box 4454  
Kailua Kona, HI  
96745  
cell 808-640-3871



ITEM F-2

**HOUSE OF REPRESENTATIVES**

STATE OF HAWAII  
STATE CAPITOL  
HONOLULU, HAWAII 96813

March 19, 2019

Suzanne D. Case, Chairperson  
Stanley H. Roehrig, Hawai'i Member  
James A. Gomes, Maui Member  
Thomas Oi, Kaua'i Member

Samuel "Olu" Gon III, O'ahu Member  
Christopher Yuen, At-Large Member  
Keith "Keone" Downing, At-Large Member

Re: Opposition to Agenda Item F.2. *Determination of Whether the Final Environmental Impact Statement (FEIS) Complies with Applicable Law and Adequately Discloses the Environmental Impacts of Proposed Issuance of Commercial Aquarium Permits, Commercial Marine Licenses, and West Hawai'i Aquarium Permits for the West Hawai'i Regional Fishery Management Area*

Aloha Chair Case and members of the Board,

As an elected official who has taken an oath to uphold the state constitution, I have a duty to protect public trust resources. With that kuleana in mind, I beseech you to recognize the gaping holes that this Environmental Impact Statement fails to recognize.

This unabashed commercialism is destroying our reefs, our ocean, and our marine wildlife. People all over the world are pressing their faces against glass prisons to look at fish that belong on our reefs. We are leaving our sea life floundering on the brink of extinction.

Allowing the aquarium trade to profit so highly with so little oversight is an enormous corporate giveaway of a public trust resource. It would be a disgrace if the BLNR accepts this flawed FEIS, especially when the industry has not clearly demonstrated necessity nor public benefit of allowing them to utilize this public trust resource. Allow the fish a chance to return to their rightful population density.

Mahalo,

Representative Tina Wildberger  
House District 11 - South Maui  
Kīhei · Wailea · Mākena

**Office of Representative Tina Wildberger**

*Proudly serving the 11<sup>th</sup> House District*

415 S. Beretania St. Honolulu, HI 96813, Room 327

Phone: 808.586.8525 | Fax: 808.586.8529 | email: repwildberger@capitol.hawaii.gov

**From:** Wai'ala Ahn  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] REJECT the Final Environmental Impact Statement (EIS) to reopen West Hawaii to the aquarium trade  
**Date:** Monday, May 18, 2020 9:52:41 AM

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Aloha,

My name is Wai'ala and i am a kanaka maoli residing on the West side of Hawai'i island asking you to REJECT the EIS that would open West Hawaii to aquarium collectors - the EIS is flawed in multiple ways and doesn't adequately address a range of issues including but not limited too

- Environmental consequences for unlimited collection
- Cultural and socioeconomic consequences of unlimited aquarium collection
- Adequately incorporate input of Native Hawaiian practitioners, experts, community members, and consulted parties
- Propose and analyze any meaningful mitigation or alternatives that would reduce the impacts

Or hold aquarium poachers fully accountable for their detrimental actions to West Hawai'i's ecosystems and the proper stewardship or management of this vital island resource for current or future generations.

Mahalo for your time and consideration on this important matter.

Wai'ala Ahn

**From:** Holly Algood  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Stop taking our fish  
**Date:** Tuesday, May 19, 2020 7:09:11 PM

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Please vote to Not let others take fish for aquarium where most die anyway. Let's keep our treasures here.

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**With aloha,  
Holly Algood,** RB 22414



**808-557-0354** Cell  
**808-796-3300** Office



[www.algoodhi.com](http://www.algoodhi.com)  
55-3410 Akoni Pule Highway, Building 3  
PO 190694, Hawi, HI 96719

**From:** Anne Allison  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] F.2 Reject EIS  
**Date:** Sunday, May 17, 2020 7:06:21 PM

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The EIS is flawed! They are called reef fish for a reason. If you don't have reef fish, then there will be no healthy reefs and even less tourist!!!! The fish are part of the ecosystem and should not be sold off for peanuts to special interests!!!!!! Please consider real science/biology and ecosystems.

As a resident of Maui I am fortunate to snorkel daily in coastal waters. The amount and variety of fish has drastically been reduced over the last 6 years even here due to environmental pressures!!!!!!

Aloha,

Anne Allison

**From:** Greg Asner  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Testimony submitted to BLNR for 5/22/2020 meeting regarding F.2 Aquarium FEIS  
**Date:** Monday, May 18, 2020 5:18:32 PM  
**Attachments:** [GDCS Review of FEIS \(18May2020\).pdf](#)

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Dear Chair Case and Board:

My team and I wish to submit the following scientific review of the Final EIS provided by the Pet Industry Joint Advisory Council (agenda item F.2 for the 5/22/2020 meeting). In addition, I request your time in providing a 3-minute verbal testimony to succinctly summarize the content of our review.

Very respectfully,  
Greg Asner

**Greg Asner**  
**Director**



# Analysis of the Final Environmental Impact Statement by the Pet Industry Joint Advisory Council

Gregory P. Asner PhD, Shawna A. Foo PhD, Roberta E. Martin PhD, and Rachel R. Carlson

ASU Center for Global Discovery and Conservation Science  
Hilo, Hawai'i

In this response, we specifically focus on sections of the Final Environmental Impact Statement by the Pet Industry Joint Advisory Council, hereafter the FEIS: *Section 4 – Affected Environment* and *Section 5 – Environmental Consequences*. We believe that the FEIS has not adequately covered the relevant topics related to these sections, blatantly ignoring public comments including our professional review dated 3 January 2020, and omitting key facts and data required for an objective review of the impacts of aquarium fish collection. The decision to allow aquarium collection is not a contest of the most discontented, but should be based on sound science, which is lacking in the FEIS.

## I. Environmental costs are not accurately or objectively characterized

The FEIS has not accurately outlined the environmental consequences of aquarium collection. Explicitly, they have not adequately covered the impacts of climate change on Hawaiian reefs and the key role of herbivores in coral reef resilience. Additionally, they have not addressed direct impacts of current climate change on aquarium fish species. Continual impacts from climate change as well as local stressors have negatively affected reefs, causing major regime shifts from coral to algal turf-dominated systems (Ateweberhan et al., 2013; Graham et al., 2013; Hoegh-Guldberg et al., 2017; Chung et al 2019). Herbivores are critically important for resisting these regime shifts (Graham et al., 2015), and scientific data show appropriate herbivore management maintains coral reef resiliency through frequent bleaching events (Chung et al., 2019). Hawai'i has suffered multiple bleaching events in the past decade, and the U.S. federal government and international organizations predict more frequent and severe bleaching events in the future. Therefore, retaining strong populations of herbivores on Hawaii's reefs must become a central priority to maintain reef condition and associated economic and cultural benefits over the next several decades.

The FEIS omits critically important information on which aquarium fish are herbivorous, thereby demonstrating bias. Each species on the white list targeted by the aquarium fishery has a different and important role in maintaining Hawai'i's coral reef ecosystem. The FEIS briefly mentions the importance of herbivores but then dismisses the number of aquarium fish species that represent herbivorous species (Page 117, FEIS). This is a substantial oversight, as herbivorous fish, such as many of the *Acanthurus* species, are targeted by the aquarium industry. Herbivores are the critical maintainers of coral-algal dynamics (Heenan and Williams, 2013; Smith et al., 2016) and are key in promoting reef calcifiers (e.g. Scleractinians and crustose calcifying algae) over fleshy macroalgae (Mumby et al., 2006, Hughes et al., 2007; Topor et al., 2019). This, in turn, is paramount for reef recovery after bleaching events (Graham et al., 2015), especially important for Hawai'i which is still recovering from the 2014-2015 and 2019 bleaching events.

Using the 40 white list aquarium species provided in the FEIS, we indicate which are herbivores, classified using data from Heenan et al. (2016). We also indicate which species comprise the top 10 aquarium fish and percentage of total catch (as indicated on page 99 of the FEIS; **Table 1**). Herbivorous fish can be categorized into various groups depending on their feeding preferences such as grazers, detritivores, and browsers, also indicated in **Table 1**. A total of 11 of 40 aquarium fish species are herbivores, but most importantly, 9 of 10 of the top collected aquarium fish species are herbivores representing an 97.7% of total aquarium catch of all fishes collected in 2017 (DAR 2019).

**Table 1. An excerpt from the white list of aquarium species indicating which of the original 40 species are herbivores, what type of herbivore they are, and whether they are within the top ten most caught aquarium species.**

Common Name	Scientific Name	Type of herbivore	Top 10 aquarium fish?	Percentage of total catch
Orangespine Unicornfish	<i>Naso lituratus</i>	Browser	Yes	1.9
Black Surgeonfish	<i>Ctenochaetus hawaiiensis</i>	Detritivore	Yes	1.2
Kole	<i>Ctenochaetus strigosus</i>	Detritivore	Yes	9.5
Yellow Tang	<i>Zebrasoma flavescens</i>	Grazer	Yes	81.6
Achilles Tang	<i>Acanthurus achilles</i>	Grazer	Yes	1.7
Goldrim Tang	<i>Acanthurus nigricans</i>	Grazer	Yes	0.4
Potter's Angelfish	<i>Centropyge potteri</i>	Grazer	Yes	0.7
Orangeband Surgeonfish	<i>Acanthurus olivaceus</i>	Grazer	Yes	0.4
Eyestripe Surgeonfish	<i>Acanthurus dussumieri</i>	Grazer	No	NA
Brown Surgeonfish	<i>Acanthurus nigrofasciatus</i>	Grazer	Yes	0.3
Fisher's Angelfish	<i>Centropyge fisheri</i>	Grazer	No	NA

The important role of aquarium fish as herbivores as well as their role in reef recovery from bleaching was recognised by a majority of the comments received by the DEIS. Furthermore, our response to the DEIS provided a detailed explanation of the importance of herbivore fish biomass levels. In response, the FEIS states that DAR (2019a) reported that herbivore biomass has not changed since 2003. Note that this is only 8 sites and is not at all representative of the entire west coast of Hawai'i Island. This is not enough of a justification to ignore the role of herbivores as an important aspect of aquarium fish impacts, especially when 97.7% of aquarium fish targeted and caught are herbivores. Preserving and increasing herbivore biomass, and their key interactions with reefs, is what is needed to ensure reefs can recover from continual heat wave events that are projected to occur with greater frequency (van Hooijdonk et al., 2016; Hughes et al., 2017).

Furthermore, the FEIS only discusses impacts of climate change on coral cover. Heatwaves will negatively affect fish both directly and indirectly. Healthy coral cover is linked with greater fish abundance (Jones et al., 2004; Komyakova et al., 2013), where deleterious effects on corals likely have cascading impacts on reef fish via habitat alteration (Komyakova et al., 2013). The FEIS fails to acknowledge the impact of warming on fish themselves, where fish are likely to experience physiological stress during heat wave events and that their ability to recover following a heat wave depends on levels of human disturbance (Magel et al., 2020). Elevated water temperature also negatively impacts coral reef fish reproduction (Donelson et al., 2010) where we can expect to see much lower recruitment rates with ongoing climate change. Enhanced protection, not reduced protection or the status quo, are necessary to help these critical fish survive increasing stressors.

## II. Problems with fish population trends and reporting

In response to the DEIS, we specifically asked the applicant to present both the WHAP and CREP datasets equally to allow a visualisation of population trends over the length of the survey years. To understand fish population trends, the FEIS must consider recruitment, growth, and mortality rates, which are all absent from the FEIS. Furthermore, assessing fish population dynamics is only achieved using long-term data. Proper resource management requires continuous and repeated observations to allow assessment because influences of various biotic and abiotic factors vary year to year (Brown and Guy 2007). Nonetheless, we understand that detailed information on all these factors is not necessarily available for each white list species, and therefore we asked the FEIS to "present both datasets similarly to understand if the same trends in fish populations seen at the WHAP long-term monitoring sites also agree with the island-wide CREP surveys," i.e. provide an estimation of annual changes in fish populations. We made this suggestion multiple times in our response.

Despite our clear and reasonable, scientifically-based request, the FEIS only presents 2016 CREP data. Furthermore, for the WHAP data, the FEIS presents 2012/2013 data and 2017/2018 data to estimate populations for the white list species. It is not clear why those years were chosen. Furthermore, these data were from eight sites only (Table 4-5, page 76 FEIS), and are not representative of the spatial extent of West Hawai'i. Table 5-4 (page 101 FEIS) shows the change in density between 1999/2000 and 2017/2018. The FEIS not only ignores annual trends, but also fails to display any measures of variance or confidence intervals to allow proper scientific assessment of the data by others. The authors of the FEIS are not transparent with how the 2017/2018 WHAP numbers were calculated. In fact, to demonstrate that aquarium fishing had “no impact” on fish biomass, data earlier than 2017/2018 (before the aquarium moratorium was in place) should have been used. How can the applicant justify using these two years of data when the increase in abundance shown for almost all aquarium species in Table 5-4 could well be due to the aquarium moratorium?

We received the response that the applicant only had 2016 CREP data. This is not true. All CREP data are publicly available and the authors cite the source where they could have obtained the full, publicly available data (CREP, 2018 page 149 of the FEIS). In prior comments, we advocated for analyzing annual trends and contrasts between CREP and WHAP surveys because CREP surveys show declines in key aquarium species and smaller overall changes in fish abundance, which directly contrasts with results shown for the WHAP data. We have included these here (**Table 2**).

**Table 2. Change in fish abundance of the top 10 collected species based on CREP data.** Increases are shown highlighted in green and decreases are highlighted in red.

Common Name	Mean Density		Overall % Change in Density
	2010	2016	
Yellow Tang	32.1	40.8	+27.1
Goldring Surgeonfish	40.4	51.9	+28.5
Orangespine Unicornfish	4.4	3.8	-13.6
Achilles Tang	2.1	2.3	+9.5
Black Surgeonfish	4.5	3.4	-24.4
Potter's Angelfish	5.2	6.6	+26.9
Ornate Wrasse	4.7	3.6	-23.4
Goldrim Surgeonfish	3.4	2.7	-20.6
Orangeband Surgeonfish	4.5	5.4	+20.0
Brown Surgeonfish	29.9	50.4	+68.6

The FEIS appears to select data that supports a highly biased finding, and misuses statistics, vacillating between using statistical significance to support their messaging in some cases and then dismissing statistical significance in other instances. In one critically important example, the FEIS cites multiple times an excerpt from Gove et al. (2019) that should not be stated as a fact. Specifically, the FEIS uses a comment from Gove et al. (2019) to state that herbivore biomass increased more in open areas than in FRAs (Page 22, 117, 128, 142, 143 of the FEIS). However, this was not a statistically significant finding (interview of J. Gove, NOAA, *pers. comm.* 2020, Gove et al. 2019). We highlighted this error in our response to the DEIS, but the FEIS ignored this and in fact, the applicant increased the number of mentions of this statistically insignificant finding. Most importantly, if we examine the fish indicators from Gove et al. (2019), specifically Total Fish Abundance, Total Fish Biomass, Mean Adult Fish Length, and Juvenile Yellow Tang, each indicator had significant increases that were greater in FRAs compared to Open Areas from 2003 – 2017. This directly contradicts what was stated in the DEIS to support their statement that aquarium fishing does not impact fish abundance. The data from Gove et al. (2019) strongly contradict the argument that aquarium fish collection had no impact on the fish community.

Another instance where the FEIS uses an example to support then contradict themselves is in the estimation of fish populations in the FEIS. Specifically:

“To facilitate analysis in this FEIS, estimated population size for each White List Species for the island of Hawai’i was calculated using CREP data by converting survey counts to abundance per unit area, and then multiplying by the estimated area of hardbottom habitat in <30 meters of water (16,840 Ha).” (Page 81, FEIS)

This is a highly inaccurate way to estimate fish populations, and assumes that fish equally inhabit all hardbottom habitat area across West Hawai’i. Extrapolating based on hardbottom area ignores basic fish ecology and is a highly non-scientific method of estimating island-wide populations. Fish show highly specific spatial distributions. For example, substantial differences occur between reef fish composition and abundances on patch reefs, where on average they are ~50 % different to each other (Sale et al., 1994). Species diversity of coral reef fishes is significantly different between exposed and semi-exposed habitats, where water depth and wave exposure affect the spatial distribution of many reef fish (Nanami et al., 2005). The assumption that the average of surveys from one year can be multiplied across the entire habitat a fish could occur in ignores a huge wealth of literature dedicated to determining spatial distributions of fish. This has also likely resulted in incorrect baselines and overestimations of fish populations in the FEIS. The FEIS then goes on to use this as a justification for the low counts of specific aquarium species:

“... the WHAP focuses on the WHRFMA and does not have full spatial coverage of the island of Hawai’i. In addition, it only estimates population size at depths from 30-60 feet and therefore does not adequately survey shallow- and deep-water species (or life stages of any species) that spend time outside the 30-60-foot depth range...” (Appendix B, FEIS)

“Most of the Longfin Anthias population occurs below the 98-foot depth surveyed by the CREP and the 60-foot depth surveyed by the WHAP, and therefore the species is not observable by the methods of either survey. As such, data are not available to produce a reliable WHRFMA or island-wide population estimate.” (Page 64, FEIS)

“Although the most recent DAR report (2019a) suggests there should be concern for the sustained abundance of Achilles Tang in the WHRFMA, the report concedes that WHAP transects are not located in prime habitat for adult Achilles Tang (i.e., high energy shallower surge zones), and therefore the bulk of the Achilles Tang population is not adequately surveyed by WHAP monitoring (DAR 2019a).” (Page 108, FEIS)

On the one hand, the FEIS claims that fish equally inhabit all the hardbottom habitat, but on the other hand, rare species “are not observable” because they occur outside of the survey area. Therefore, population estimates given in the FEIS alternate between inaccurate and biased, and the resulting catch estimates provided cannot be trusted.

The FEIS provides no statistical analysis of population growth compared to fish life span, number of years until sexual maturity against which the annual proposed catch can be measured, representing a true estimation of whether take is sustainable or not. The impact of catch on life history stage, resulting impact on population growth, is not discussed in the FEIS and was brought up by several of the public comments but then ignored by the applicant.

In summary, the estimates of fish populations are based on flawed estimates, and therefore the percentages of aquarium catch presented are not accurate. Long-term data exist for the majority of aquarium fish species yet no actual population modelling was done, which would allow a true estimation of the impacts of aquarium fishing.

### III. Inadequate coverage of relevant literature with biased selection of specific findings

The FEIS fails to adequately cover relevant scientific literature, especially Hawai'i specific examples, thereby ignoring the impacts of aquarium collection on the system. We base the examples we discuss here on the main justifications of the applicant for allowing aquarium collection.

#### IIIa. Biased selection of specific findings and ignoring negative impacts of aquarium fishing

One of the most troubling and subjective examples of cherry picking in the FEIS is its reference to Tissot and Hallacher (2003) seven times. While the applicant uses this reference to support a claim that aquarium fishing does not damage coral, they fail to mention the primary finding of study:

"Seven of the 10 aquarium species surveyed were significantly reduced by collecting. The abundance of aquarium fish at collection sites ranged from 38% lower (*Chaetodon multicinctus*) to 75% lower (*C. quadrimaculatus*) than that at control sites. In contrast, only two of the nonaquarium species displayed a significant collection effect."

This shows that the authors of the FEIS were aware of research that shows the negative impact of aquarium fishing, but chose to ignore it, bias-selecting results from the study to support aquarium fishing.

#### IIIb. Reporting incorrect information about fish and harmful generalized comments

"In addition, herbivores collected by the aquarium fishery typically consist of the smaller size classes which are the least effective sizes for cropping algae." (Page ii, FEIS)

"Commercial aquarium collection targets juvenile fish leaving behind the adult broodstock." (Page 134, FEIS)

In aquatic systems, body size and individual trophic level are tightly linked (Jennings et al., 2001; Barnes et al., 2008), where fishing degrades the variation in size structure in coral reef fish (Robinson et al., 2017). Smaller fishes are important dietary resources for predatory species. Furthermore, despite small body sizes, grazers can have disproportionately large negative impacts on plant and algal biomass (Silliman et al., 2013), where smaller herbivores can occur in higher densities, having disproportionately higher impacts on algae in comparison to larger, less abundant herbivores (Ng and Micheli, 2020). Therefore, targeting only small fish is not a justification for allowing aquarium collection.

#### IIIc. Inadequate coverage of aquarium fish species

In Section 4.4 page 35 of the FEIS where each aquarium fish species is discussed, the FEIS fails to mention the ecological role of each fish, anything about its feeding behaviour and what it is important in controlling, e.g. turf algae. Categorising each of the fish into their role as herbivores, mobile invertivores, piscivores etc, should have been done so the reader can understand how removal of that fish would impact the ecosystem as a whole.

Furthermore, the FEIS mentions spawning seasons for some fish but not others. It also does not indicate the size and length until sexual maturity, growth or mortality rates. Beyond this, barely any data was available for some aquarium fish species such as *Pseudanthias hawaiiensis*, *Cirrhilabrus jordani*, *Acanthurus dussumieri*. There is clearly a lack of knowledge for specific fish, so the true impacts of aquarium collection cannot be ascertained without knowing more about the species.

### IIId. Reliance on one manual to justify collection rates

“While specific research into sustainable levels of collection has not been conducted for the 40 White List Species, Ochavillo and Hodgson (2006) suggest collection of between 5% and 25% is sustainable for various reef species in the Philippines that are similar to those on the White List (e.g., tang, wrasse, butterflyfish, angelfish, triggerfish). For 37 of the 40 White List Species, the average annual collection under the Pre-Aquarium Collection Ban Alternative would represent less than 1% of the estimated island-wide population, with the remaining three species averaging less than 5% (Table 5-11).” (Page 123, FEIS)

Determining sustainable catch rates is not a straightforward process and involves a deep understanding and long-term record of population size, recruitment, mortality and growth. Other methods using size-structure abundance data and a more data-limited approach, rather than catch-per-unit methods, have been developed, but still vary on a species-by-species basis (Jerald et al., 2018). This recent method was used to assess deep-water snapper sustainability in the Hawaiian Islands and represents a more closely related and regionally relevant publication than that used in the FEIS. Successful management and rebuilding of depleted fish populations has been achieved at local scales but requires solutions tailored to the local context (Duarte et al., 2020). Thus, using a manual that is based on species in the Philippines is not the best way to determine whether aquarium collection catch rate is sustainable, especially as this rate will be specific for each species.

### IIIf. Erroneously focused on macroalgae

“One study found there were no increases in the abundance of macroalgae where the abundance of herbivores was reduced by aquarium collecting.” (Page ii, FEIS)

This excerpt is one of many that displays the unfamiliarity of the FEIS authors with benthic habitat components in West Hawai‘i, specifically the role of macroalgae in relation to turf algae. Macroalgae, which represents larger algal types such as kelp, are rare on Hawaiian reefs and represents a minimal benthic component of reefs in West Hawai‘i. On the other hand, turf algae are mats of smaller algae less than 2 cm high, representing the dominant component on Hawaiian reefs (> 50 % benthic cover) and one that aquarium fish species are important in controlling (Jouffray et al., 2016; Williams et al., 2019).

Turf algae is not even mentioned in the FEIS where turf algae are fast growing and responsible for suffocating corals and preventing reefs from recovering after bleaching. The contrast between turf algae and macroalgae was also brought up within the public comments, yet its importance was still ignored.

### IIIIf. Inadequate characterization of population connectivity

Numerous comments on the DEIS note its inadequate treatment of larval connectivity in assessing the impacts of the aquarium trade on fish populations. The FEIS does little to address these comments, claiming that:

“The EIS recognizes and acknowledges larval connectivity around the Island of Hawaii, which is why it is felt that the island-wide population estimates based on CREP data are the best metric when measuring population impacts.” (Page 1730 in response to “For the Fishes”)

The use of island-wide population estimates to evaluate impact is only appropriate if larval connectivity around the island is absolute, which is not the case. In reality, numerous publications indicate only minor connectivity between East and West Hawaii (Christie et al. 2010; Lobel 2011; Vaz et al. 2013), and within these regions, ephemeral ocean features concentrate larvae in some areas more than others (Wren and Kobayashi 2016). The FEIS does not define subpopulations relevant to Open Areas and these areas’ sources and sinks, which is the most appropriate basis for assessing population impacts. While these

populations are difficult to define, they are likely to be much smaller than island-wide populations and therefore the FEIS' estimate is ecologically unsupported.

#### IV. Conclusions

The FEIS is highly biased in favor of aquarium collection in a number of ways:

- The FEIS has ignored the impacts of aquarium fishing on the important role of herbivores in the maintenance of reef health.
- The monitoring data have not been represented correctly; multiplying a fish survey by total reef area is not an accurate estimation of fish populations.
- The FEIS incorrectly or insufficiently applies statistical methods to interpret long-term fish data.
- The FEIS does not include a proper literature review, instead selecting a few papers and results that support their viewpoints and ignoring numerous findings that contradict the purported low impact of aquarium collection.

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**From:** Becca Barnes  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Reject the Hawai'i AQ EIS  
**Date:** Tuesday, May 19, 2020 1:49:14 PM

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Please reject the Hawai'i AQ EIS to keep the natural beauty safe for generations to come. I often think about the Plume Trade, hunting wild birds harvesting their feathers, in Florida in 1909. Over 95% of the Great White Egret's were killed.

Think how just 100 years later, we would have so many more beautiful wild birds in Florida. Please keep the fish in the reefs they belong to keep the coral healthy. 100 years from now, what will it look like if you don't?

--



**Becca Barnes**

Content Writer | Marketing

Philippians 4:6



barnescopy@gmail.com



**From:** Patricia Boland  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Agenda item F.2 testimony  
**Date:** Sunday, May 17, 2020 3:37:48 PM

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I am a Big Island resident.

Please reject the EIS. The EIS IS flawed, relying on insufficient, inadequate, fault and improper data.

It fails to accurately analyze the consequence of unlimited aquarium collection of the White List species.

I love to snorkel and see all of the beautiful fish here. And many, if not most tourists come here to do the same.

Please protect our waters from an EIS that does not incorporate input from experts, our Native Hawaiian practitioners, community members and consulted parties.

Mrs. Patricia Boland

Paauiilo, Hawaii

Sent from Patty's iPhone

**From:** Nicole Busto  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Agenda Item F.2 Testimony  
**Date:** Tuesday, May 19, 2020 8:29:48 PM

---

Dear BLNR,

I ask you, as a resident of Maui, please do not open up Hawaii to aquarium collectors.

I cannot imagine how anyone would consider it ok to take these fish from their natural habitat, to be sold and bought to live in tanks.

This is not right and this harvesting of ocean wildlife should be banned.

I appreciate your time and consideration.

Sincerely,  
Nicole Busto

Maui Nutritional Therapy  
Nicole Busto NTP, CGP  
79 Akea Place  
Kula, HI 96790  
808-463-7783

**From:** Patricia Cadiz  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] West Hawai'i Aquarium permitting  
**Date:** Sunday, May 17, 2020 1:43:02 PM

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Please reject the EIS for aquarium fish collection. I can't fathom how the decimation of reef life can be justifiable. The EIS seems flawed and one sided.

I have spent the last 25 years actively working to preserve and restore beaches in Hawaii. We would not have beach loss if we still had vibrant, healthy reef eco systems. Hawai'i's Sand beaches are sourced from the reef. Protecting the reef and the entire reef eco system is directly related to the health of our beaches.

This is not addressed in to EIS. For this reason and many others I implore you to reject this EIS.

With gratitude,

Patricia Cadiz

Maui, HI

Sent from my iPhone

**From:** Ru carley  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Reject the EIS  
**Date:** Tuesday, May 19, 2020 12:15:19 PM

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I am a Hawaii resident and because I copied these points, I agree with them.

- ~ The EIS is wholly flawed-- relying on insufficient, faulty, inadequate and improper data and assumptions;
- ~ The EIS fails to accurately analyze the environmental consequences of unlimited aquarium collection of the White List species (to the species themselves, and their coral reef homes);
- ~ The EIS fails to accurately analyze the cultural and socioeconomic consequences of unlimited aquarium collection in West Hawaii
- ~ The EIS fails to propose and analyze any meaningful mitigation or alternatives that would reduce the impacts;
- ~ The EIS fails to adequately incorporate input of Native Hawaiian practitioners, experts, community members, and consulted parties.

Do not pass this!

Sent from my iPhone

**From:** Mahesh Cleveland  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Request to Provide Oral Testimony - May 22, 2020 BLNR Meeting  
**Date:** Thursday, May 21, 2020 8:12:58 AM

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Aloha:

I wish to provide oral testimony on agenda item F.2 at the Board meeting tomorrow, May 22.

Name: Mahesh Cleveland

Phone: (808) 599-2436

Email: [mcleveland@earthjustice.org](mailto:mcleveland@earthjustice.org)

Computer identification name: HI-6D888S2

Agenda item: F.2

Mahalo.

---

Mahesh Cleveland  
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He ali'i ka 'aina, he kauwa ke kanaka.  
*The land is a chief, humanity its servant.*



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**From:** ALAN COHEN  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Reject EIS for Aquarium Fish Collection  
**Date:** Sunday, May 17, 2020 12:54:36 PM

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As a resident of Maui, I urge the DLNR to reject the EIS report on aquarium fish collection. As an avid snorkeller, i have personally seen the impact on the local fish populations on the Islands. Please reject this report.

Mahalo, Al Cohen

**From:** Joanie Collins  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Reef fish  
**Date:** Wednesday, May 20, 2020 9:00:23 AM

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Aloha -

To whom it may concern:

I have swam in the waters of Hawaii island, where I live, for over 30 years now, and I have seen the fish populations dwindle. Especially after the tsunami in 2011, there was a lot of consternation over our fish, people were out there counting, keeping track of the numbers. Recently the coral has begun to come back, and with that, the fish. It is still nowhere near where it used to be, however.

I strongly oppose the collecting of fish for aquariums!!

These islands should be a global treasure, and our responsibility is to protect them.

Mahalo

Joanie Collins

--

Aloha and Mahalo!

Joanie Collins

Cell:805.331.0916

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**From:** Robert Culbertson  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] AGENDA ITEM F.2 TESTIMONY (FINAL COPY)  
**Date:** Tuesday, May 19, 2020 4:44:12 PM

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Aloha members of the Board!

By all rights you should be troubled by numerous errors and inferences from several aspects of the Final Environmental Impact Statement and this trade generally. I call your attention to the following concerns and urge you to conclude that this document fails to address the Department and the public's requested analysis, and furthermore, fails more basic tests for intellectual rigor and honesty.

### **Garbage in, garbage out:**

As others will attest, much of the data is out of date and geographically irrelevant. But cherry picking data is no big surprise. The *use of it* to 'logically' exclude and dismiss other major elements such as those contained in the obligated Cultural Impact Statement *is* however a troubling and peculiar trick of this product. Please don't buy it!

I note that some of the data based on collection reports is quite limited (sometimes as few as two samples). Again no surprise, since under-reporting and non compliance is taken as a given by the author(s). Yet, that same data has been used and extrapolated to present findings to support their conservative conclusions. All the while, no disclosures of the collectors or their original

documents are provided making any verification impossible!

The report also claims to have employed 'the best available science'. But nowhere is an intellectually rigorous 'peer reviewed' study produced. (Those that *do* exist such as Dr. Greg Asner's recent and relevant work are *not* represented!)

### **Is PIJAC trying to 'Hijack' the EIS process?**

Many people have and will likely speak about this highly irregular process!

Questions being raised are:

How is that an industry trade group (not based here) is supplanting the regular applicant identification requirements? Specifically, who are the as yet unidentified select collectors being covered for here? Are they employees? Has there ever been an environmental review document built upon such anonymity? Does the pet industry association trade group bear any responsibility for these collectors and their actions? Is it trying to set a precedent with this process to be able to negotiate terms for permits or further agency concessions in secrecy? The public doesn't know. Yet this process is supposed to drive future state policy?

I hope not!

Public trust has already been broken by many missteps over several administrations in this area. Are you really

willing to shatter it further?

## **Who benefits?**

PIJAC would have you believe that a suite of benefits both direct and indirect to the State of Hawaii and its residents justifies the carve out of exclusive privileges for just 14 (and now 10?) collectors. The retail prices for highly prized Hawaiian ornamental fish as evidenced by the table of values presented in the recent poaching investigation provides a window on the lucrative profits driving collectors to cut all corners and keep other players out of their lucrative syndicate. Meanwhile, the enforcement agencies are loathe to commit scant resources to the type of actions necessary to effect credible deterrence.

A taxpayer must ask, what is the cost borne of this industry IF truly effective regulation were to take place? Do tax receipts and permit fees cover such costs now? I think we can agree it does not. And indeed, very little economic 'ripple effect' benefits the larger community here. Almost 80% of the revenues generated by the trade are realized off our island; mostly on the mainland. So the opposite is true. The loss of a public resource to private profiteering from one that is shared among our residents and visitors via tourism has been for decades and continues to be rife with irreconcilable conflicts. These socio-economic costs are simply not calculable and therefore have been disingenuously treated and summarily dismissed as insignificant in the document.

What becomes clear now is that the merits of their case through the EIS process are so insufficient that they are simply betting on your willingness to compromise the law as against the public interest in a last ditch *bargain* for unfounded legitimacy.

Please consider in light of the stated mission of the Department of Land and Natural Resources and the bedrock principles reflected in the 'Hierarchy of Uses' doctrine, the message of prioritization being given here. Please reject this 'offer in compromise'.

Rob Culbertson,  
Waimea  
Member Environmental Caucus  
of the Democratic Party of Hawaii



Environmental Caucus  
Democratic Party of Hawai'i

**From:** Jenn Dant  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Agenda Item F.2 Testimony  
**Date:** Tuesday, May 19, 2020 7:31:55 AM

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Aloha,

I am a Hawaii resident, and live in Kailua Kona on the Big Island. I work on the water and have worked on the water for the last 15 year, which I know isn't much, but the company I work for has been viewing Hawaii's reefs and corals for the last 50 years and thus have watched its decline. The corals and our reef fish have a symbiotic relationship and need our help and protection. The corals need their fish colony's to have a chance at combating the rest of the stressors. You have an opportunity to help. Please REJECT THE EIS. The EIS is wholly flawed relying on insufficient, faulty, inadequate and improper data and assumptions.

Mahalo for your consideration,

--

Jennifer Dant  
(808) 345-2467

**From:** Manifest Health  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Agenda Item F.2 Testimony  
**Date:** Tuesday, May 19, 2020 8:45:17 AM

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Aloha,

I am a Hawai'i resident and I urge you to protect our amazing sea life by rejecting this EIS. We should be protecting, not squandering our natural resources at this time. How can UNLIMITED access to outsiders of ANY our Hawaiian resources ever be a good thing? Please reject this EIS and find a proper solution. Fishing to feed your family is one thing, but this aquarium trade has got to be highly regulated or prohibited.

Mahalo,  
Dr Jill Dietmeyer  
Pearl City and previous resident of Kailua-Kona.

**From:** Michael Domeier  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Testimony for BOARD OF LAND AND NATURAL RESOURCES  
**Date:** Wednesday, May 20, 2020 6:18:34 PM

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I would like to give verbal testimony at the Board of Land and Natural Resources meeting on Friday, May 21st. The agenda item I want to speak about is the EIS for the Aquarium Trade Fishery on the Big Island. My name and phone number are below. My computer name is MSI.

Aloha,  
Michael

~~~~~

Michael L. Domeier, Ph.D.  
 President  
 Marine Conservation Science Institute  
 72-1137 Makalei Drive  
 Kailua-Kona, HI 96740  
 (808) 464-0075  
[www.MarineCSl.org](http://www.MarineCSl.org)

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**From:** Michael Domeier  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Testimony for BOARD OF LAND AND NATURAL RESOURCES  
**Date:** Wednesday, May 20, 2020 6:18:34 PM

---

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Aloha,  
Michael

~~~~~

Michael L. Domeier, Ph.D.  
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**From:** Krista Joan  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Reject FEIS for Issuance of West Hawaii Aquarium Permits Please  
**Date:** Tuesday, May 19, 2020 4:56:46 PM

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Aloha,

Mahalo for your work on behalf of Hawaii County.

There is something fishy about a pet industry group drafting permit guidelines. I've been following West Hawaii fish aquarium conflicts as they've circulated through the news. My interest was piqued when the Pet Industry Joint Advisory Council dropped their applicants' FEIS in the middle of an unprecedented national lockdown. I used some time in quarantine to read with fresh eyes their entire FEIS. I am honestly baffled by the entire concept that the findings of this survey should speak on behalf of the people and ecosystems of West Hawaii. I encourage this prestigious board to reject the FEIS for the following reasons:

1. The fox shouldn't be regulating the hen house. The cat shouldn't be guarding the goldfish. A Seattle-based pet industry/lobbyist group shouldn't be designing permitting systems for West Hawaii aquarium fishers.
2. West Hawaii generates more income for more people with aquatic species alive and well on the reef than 10 individuals exporting dwindling resources overseas. The report notes Hawaii's reefs worth 380\$ million annually and West Hawaii aquatic fisheries generating 1.5\$ million annually.
3. The longstanding conflicts between Native Hawaiian cultural practitioners and aquarium fishers must be addressed. Its not OK to list hundreds of pages of selected Hawaiian cultural practices and ask for more oral histories provided by key community kupuna only to ignore their wishes and cherry pick history. The good faith intentions of those seeking permits to give back to the ocean and to abide by Hawaii's biological seasons is not included in any of the applicants' Suggested Alternatives. Native Hawaiian concerns deserve better than to be noted and ignored.
4. Fish mortality rates are more important than half a page. Many citizens and scientists in the previous comment period note reports that thousands of aquatic critters die in transit and drives the harvest of more fish. Kind of like in American slavery where hunters would steal extra African people knowing many of them would die in transit. This FEIS says there aren't enough studies to really know how many fish die in transit and makes zero effort to track or obtain mortality rates. The public and our officials deserve this simple information to make a fair judgement about permits.
5. "Not driving the decline" does not justify a permit. Deflecting and dodging blame about a bevy of complex ocean issues contributing to species decline is not a solution. Not permitting local fisheries contributing to the decline is a "low hanging fruit" towards rectifying a plethora of human activities that will need to be altered for future ecological survival.
6. Tropical fish farming could be encouraged. Other aquatic industries dependent on dwindling wild harvest are thriving as marine farms. West Hawai'i is becoming a hub for sustainable fish farms that stimulate the local economy. Not permitting the modern practice of live harvest in West Hawai'i could encourage aquarium fishers to create farmed fishing techniques that could become sustainable world resources like sea horses, abalone, tilapia, shrimp, and kelp.
7. I support research specific to West Hawaii aimed at developing a complete understanding of the complexity of marine relationships along the Kona coast. Because a vibrant reef is so valuable to our community, it is vital the DLNR remain on the forefront of understanding ocean health issues facing West Hawai'i. What is an official estimate of pre-modern indigenous fish populations? What factors are driving

fish population decline? How can the negative human impacts on local reefs be quantified? How can fishing and tourist businesses be sustained given the ocean's changing ecology and uncertain future health? What can local businesses do to give back to the health of the ocean?

Mahalo for your time and consideration. Please reject this near-sighted, biased FEIS that does not serve the majority of West Hawaii or protect an uncertain future.

Power to the people,

**Krista Joan Donaldson**

[www.kristajohan.com](http://www.kristajohan.com)

[@kristajohan](#)

557-9085

sustAINAbility = earth based culture

zero waste \* grow food \* writer \* public speaker

**From:** Bob  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Agenda Item F.2 Testimony  
**Date:** Monday, May 18, 2020 7:35:20 PM

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I'm a Hawai'i county resident and I am asking the BLNR to **REJECT the EIS!**

My family is from Miloli'i and we have witnessed firsthand the decimation of the reefs in and around Miloli'i. IMHO no one who's not a cultural practitioner from Miloli'i should be able to harvest reef fish in a 20 mile arc from the church in Miloli'i.

This EIS fails to adequately incorporate input of Native Hawaiian practitioners, experts, community members, and consulted parties.

The data is insufficient, faulty, inadequate and improper data and assumptions.

The EIS fails to accurately analyze the environmental consequences of unlimited aquarium collection of the White List species (to the species themselves, and their coral reef homes)

The EIS fails to accurately analyze the cultural and socioeconomic consequences of unlimited aquarium collection in West Hawaii.

Aloha,

Bob Douglas  
[danhieaux@yahoo.com](mailto:danhieaux@yahoo.com)  
[Instagram.com/danhieux](https://www.instagram.com/danhieux)  
808 333-0402 text only please, hearing impaired.

**From:** charlie@sharks.org  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Agenda Item F.2 Testimony  
**Date:** Tuesday, May 19, 2020 9:46:05 PM  
**Attachments:** [chekhdmmmahcqiip.png](#)  
[charlie.vcf](#)

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I, Charlie Fasano, request to participate in the meeting via Zoom application.

Charlie Fasano

[Charlie@Sharks.org](mailto:Charlie@Sharks.org)

808.319.5176

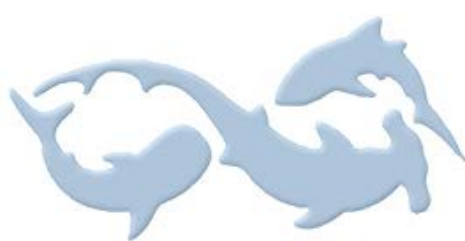
F.2 Testimony

I am following the instructions from below:

**LIVE TESTIMONY OPPORTUNITY:** Want to speak directly to the decision-makers? Anyone wishing to present live testimony, please make this request when submitting your written testimony; provide your full name, email, phone number, and Agenda Item Number (F.1 and/or F.2) and whether you would like to participate via phone or video link. BLNR will send you a confirmation with additional instructions and the Zoom meeting link. **Deadline: 24 hours prior to meeting** These and other details can also be found in the agenda [HERE](#). Call BLNR staff with technical questions: 808-587-0404.

I look forward to participating in this important topic.

Aloha nui loa:



## ***SHARK RESEARCH INSTITUTE***

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**From:** John Fernley  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Aquarium EIS  
**Date:** Tuesday, May 19, 2020 3:40:59 PM

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Plse accept the Big Island's EIS which has proven that the fishery is sustainable thru an exhaustive and terribly expensive process.

Science must prevail over emotional rhetoric from animal rights groups.

If science is put on the back burner and is rejected, I fear for everyone.

Randy Fernley

Sent from my iPhone

**From:** georgie fong  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Hawaii "s fishes  
**Date:** Sunday, May 17, 2020 12:58:19 PM

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I lived on the Big Island. Please REJECT THE EIS, the proposal to open the aquarium trade to "Harvest" our tropical fishes to be 'Imprisoned" in a fish tank.

Our tropical fishes are "Essential" for the HEALTH of our coral reef. Our coral fishes are the STEWARD of their Ecosystem.!!! When I used to be a visitors to Hawaii, snorkeling to view and swim with the fishes was the HIGHLIGHT of my visit to Hawaii. When I went back to Maui , ten years ago, to go swimming and snorkeling, I noticed a "Massive" decrease in POPULATION. Population decrease will definitely happened if HARVESTING for the aquarium trade is made legal. Please protect our fishes, they are important source of income for businesses in the "Tourism" industry !!!

mahalo  
Georgie, MS, ND

**From:** sheadon freitas  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] EIS  
**Date:** Sunday, May 17, 2020 10:16:08 PM

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Aloha,

I am a Hawaii county resident for 21 years and I am urging that you folks please reject the EIS.

If you truly care about Hawai'i's flora and fauna you would see that this EIS would tear our ecosystem apart.

Please truly dig deep and think about the impact it will have on Hawai'i.

I highly advise creating stricter laws and fines on those who illegally poach. Please revoke poachers commercial marine license to further assist our ecosystems to grow and try to flourish.

They are heavily being impacted by the human species without even trying. Imagine what will happen if we allow the human species to thoughtfully remove species for profit, the imbalance of the ecosystem will surely show a downfall. This downfall is 100% preventable with your folks realization and revocation of the EIS.

Mahalo,

Shedon Freitas  
A Concerned Native Hawaiian Student

**From:** Cy Gabourie  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Agenda Item F.2 Testimony  
**Date:** Tuesday, May 19, 2020 12:51:01 PM

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Aloha,

I am a West Maui resident and am writing to ask you to reject the EIS.

Aquarium trade is an antiquated practice, it is robbing our natural beauty from our island waters. These waters fuel our tourism trade and our local fishing economy. If something can't be bred in captivity, it should not be taken from the wild and put into cages. Period. More studies need to be done and our reefs need to be more beef losing with life before a limited cull is even considered. No more profiting off of nature's animals. Thank you for your time.

Mahalo, Cy

**From:** Crystal Lea Gamit  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Agenda Item F.2 Testimony  
**Date:** Monday, May 18, 2020 11:04:07 AM

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Aloha! I am a Hawai'i resident and have resided in Hawai'i my entire life. Our marine life is crucially important to our eco-system so without having better control against those who may not understand or respect it (like poachers) it can be devastating to our future eco-system. This you already know. We as residents learn to know the rules and regulations for fishing, diving, etc. Let it be the same for all aspects in natural resources so life itself can thrive. BLNR we urge you to take control. Increase fines for poachers and suspend CML's for violators and revoke those who exceed violation as they hold responsibility for their actions. Do what is needed to maintain a healthy, natural circle of life. Mahalo!  
Crystal

Sent from my iPhone

**From:** Lorraine Garnier  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Agenda Testimony for Item F.2 /Reject EIS report  
**Date:** Sunday, May 17, 2020 12:57:13 PM

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Aloha,

I am a 40-year resident of Oahu, who was drawn to the islands as a child, primarily because of the clear blue ocean, reef fish and kind people. In my time here, I have focused my free time and studies to ocean life and have advocated strongly for a pollution free environment, plastic pollution, clean water and an end to the collection of reef fish.

As a diver, snorkeler, I have seen the massive decrease of reef fish, especially those species on the White List - here on the Windward side due primarily to collection, 2nd to tourism (sunscreens.) Sunscreen bans in place, we have to look at the biology of Reef fish. Taking them out of the ocean, for someones else's pleasure, makes no sense, but what makes even less sense, is to allow the fish to be taken at all when the populations are so incredibly depleted.

I do not see any collaboration between the experts ad goals to adequately manage the future of these species.  
Collecting needs to end now, please reject the EIS report.

Mahalo for your time and efforts,

*Rain*

*Lorraine Garnier*

*808-375-0248*



**From:** Bill Garoutte  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Agenda Item F.2 Testimony  
**Date:** Monday, May 18, 2020 3:36:05 PM

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Aloha –

As a Big Island resident that cares deeply for our natural environment. I am encouraging you to REJECT the EIS.

As a 10 year resident in the South Kona Miloli'i area, I have personally witnessed the devastating effect that aquarium collecting has had on our coastal waters. I have seen weekly visits by multiple collectors to Papa Bay for months on end resulting in a virtually empty reef. And they still came. Thankfully, the temporary ban was implemented and we could see a slight rebound of fish population – but there is a long way to go to return to natural levels.

Disturbingly, I have learned that several collectors continue to illegally take in these waters during the temporary ban, which suggests that they do not respect the Law and will not follow any new guidelines for controlling the catch.

Our coral reef health depends on a robust population and balance of fish species to keep it healthy and the government is allowing it to be decimated so that a few individuals may profit. If left to their own, the collectors will take until there is no more to take, and our reef and the entire marine food chain will suffer.

Please eliminate the aquarium trade's devastation by extending the ban on aquarium collection.

Mahalo,  
Bill Garoutte

**From:** Jo-Ann Garrigan  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Fish protection on Big Island  
**Date:** Sunday, May 17, 2020 2:24:42 PM

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Protection of fish in the ocean surrounding the Big Island is so important. I swim nearly daily and already I see so few fish. I search for fish. I live on the Big Island. Please please do not allow commercial taking of the colorful fish and creatures surrounding the Big Island for commercial reasons. Our wildlife viewing is already so limited and at risk during these ocean warming times. The reefs the fish are all suffering. The environmental study is flawed. I implore you to think about future generations and current generations in our attempts to encourage our children to see the ocean in its glory we need to bring back its glory and safeguard it whatever is there at this time.

Mahalo nui,  
JoAnn Garrigan

## Analysis of the Final Environmental Impact Statement by the Pet Industry Joint Advisory Council

**Gregory P. Asner PhD, Shawna A. Foo PhD, Roberta E. Martin PhD, and Rachel R. Carlson**

ASU Center for Global Discovery and Conservation Science  
Hilo, Hawai'i

In this response, we specifically focus on sections of the Final Environmental Impact Statement by the Pet Industry Joint Advisory Council, hereafter the FEIS: *Section 4 – Affected Environment* and *Section 5 – Environmental Consequences*. We believe that the FEIS has not adequately covered the relevant topics related to these sections, blatantly ignoring public comments including our professional review dated 3 January 2020, and omitting key facts and data required for an objective review of the impacts of aquarium fish collection. The decision to allow aquarium collection is not a contest of the most discontented, but should be based on sound science, which is lacking in the FEIS.

### I. Environmental costs are not accurately or objectively characterized

The FEIS has not accurately outlined the environmental consequences of aquarium collection. Explicitly, they have not adequately covered the impacts of climate change on Hawaiian reefs and the key role of herbivores in coral reef resilience. Additionally, they have not addressed direct impacts of current climate change on aquarium fish species. Continual impacts from climate change as well as local stressors have negatively affected reefs, causing major regime shifts from coral to algal turf-dominated systems (Ateweberhan et al., 2013; Graham et al., 2013; Hoegh-Guldberg et al., 2017; Chung et al 2019). Herbivores are critically important for resisting these regime shifts (Graham et al., 2015), and scientific data show appropriate herbivore management maintains coral reef resiliency through frequent bleaching events (Chung et al., 2019). Hawai'i has suffered multiple bleaching events in the past decade, and the U.S. federal government and international organizations predict more frequent and severe bleaching events in the future. Therefore, retaining strong populations of herbivores on Hawaii's reefs must become a central priority to maintain reef condition and associated economic and cultural benefits over the next several decades.

The FEIS omits critically important information on which aquarium fish are herbivorous, thereby demonstrating bias. Each species on the white list targeted by the aquarium fishery has a different and important role in maintaining Hawai'i's coral reef ecosystem. The FEIS briefly mentions the importance of herbivores but then dismisses the number of aquarium fish species that represent herbivorous species (Page 117, FEIS). This is a substantial oversight, as herbivorous fish, such as many of the *Acanthurus* species, are targeted by the aquarium industry. Herbivores are the critical maintainers of coral-algal dynamics (Heenan and Williams, 2013; Smith et al., 2016) and are key in promoting reef calcifiers (e.g. Scleractinians and crustose calcifying algae) over fleshy macroalgae (Mumby et al., 2006, Hughes et al., 2007; Topor et al., 2019). This, in turn, is paramount for reef recovery after bleaching events (Graham et al., 2015), especially important for Hawai'i which is still recovering from the 2014-2015 and 2019 bleaching events.

Using the 40 white list aquarium species provided in the FEIS, we indicate which are herbivores, classified using data from Heenan et al. (2016). We also indicate which species comprise the top 10 aquarium fish and percentage of total catch (as indicated on page 99 of the FEIS; **Table 1**). Herbivorous fish can be categorized into various groups depending on their feeding preferences such as grazers, detritivores, and browsers, also indicated in **Table 1**. A total of 11 of 40 aquarium fish species are herbivores, but most importantly, 9 of 10 of the top collected aquarium fish species are herbivores representing an 97.7% of total aquarium catch of all fishes collected in 2017 (DAR 2019).

**Table 1. An excerpt from the white list of aquarium species indicating which of the original 40 species are herbivores, what type of herbivore they are, and whether they are within the top ten most caught aquarium species.**

Common Name	Scientific Name	Type of herbivore	Top 10 aquarium fish?	Percentage of total catch
Orangespine Unicornfish	<i>Naso lituratus</i>	Browser	Yes	1.9
Black Surgeonfish	<i>Ctenochaetus hawaiiensis</i>	Detritivore	Yes	1.2
Kole	<i>Ctenochaetus strigosus</i>	Detritivore	Yes	9.5
Yellow Tang	<i>Zebrasoma flavescens</i>	Grazer	Yes	81.6
Achilles Tang	<i>Acanthurus achilles</i>	Grazer	Yes	1.7
Goldrim Tang	<i>Acanthurus nigricans</i>	Grazer	Yes	0.4
Potter's Angelfish	<i>Centropyge potteri</i>	Grazer	Yes	0.7
Orangeband Surgeonfish	<i>Acanthurus olivaceus</i>	Grazer	Yes	0.4
Eyestripe Surgeonfish	<i>Acanthurus dussumieri</i>	Grazer	No	NA
Brown Surgeonfish	<i>Acanthurus nigrofusus</i>	Grazer	Yes	0.3
Fisher's Angelfish	<i>Centropyge fisheri</i>	Grazer	No	NA

The important role of aquarium fish as herbivores as well as their role in reef recovery from bleaching was recognised by a majority of the comments received by the DEIS. Furthermore, our response to the DEIS provided a detailed explanation of the importance of herbivore fish biomass levels. In response, the FEIS states that DAR (2019a) reported that herbivore biomass has not changed since 2003. Note that this is only 8 sites and is not at all representative of the entire west coast of Hawai'i Island. This is not enough of a justification to ignore the role of herbivores as an important aspect of aquarium fish impacts, especially when 97.7% of aquarium fish targeted and caught are herbivores. Preserving and increasing herbivore biomass, and their key interactions with reefs, is what is needed to ensure reefs can recover from continual heat wave events that are projected to occur with greater frequency (van Hooijdonk et al., 2016; Hughes et al., 2017).

Furthermore, the FEIS only discusses impacts of climate change on coral cover. Heatwaves will negatively affect fish both directly and indirectly. Healthy coral cover is linked with greater fish abundance (Jones et al., 2004; Komyakova et al., 2013), where deleterious effects on corals likely have cascading impacts on reef fish via habitat alteration (Komyakova et al., 2013). The FEIS fails to acknowledge the impact of warming on fish themselves, where fish are likely to experience physiological stress during heat wave events and that their ability to recover following a heat wave depends on levels of human disturbance (Magel et al., 2020). Elevated water temperature also negatively impacts coral reef fish reproduction (Donelson et al., 2010) where we can expect to see much lower recruitment rates with ongoing climate change. Enhanced protection, not reduced protection or the status quo, are necessary to help these critical fish survive increasing stressors.

## II. Problems with fish population trends and reporting

In response to the DEIS, we specifically asked the applicant to present both the WHAP and CREP datasets equally to allow a visualisation of population trends over the length of the survey years. To understand fish population trends, the FEIS must consider recruitment, growth, and mortality rates, which are all absent from the FEIS. Furthermore, assessing fish population dynamics is only achieved using long-term data. Proper resource management requires continuous and repeated observations to allow assessment because influences of various biotic and abiotic factors vary year to year (Brown and Guy 2007). Nonetheless, we understand that detailed information on all these factors is not necessarily available for each white list species, and therefore we asked the FEIS to "present both datasets similarly to understand if the same trends in fish populations seen at the WHAP long-term monitoring sites also agree with the island-wide CREP surveys," i.e. provide an estimation of annual changes in fish populations. We made this suggestion multiple times in our response.

Despite our clear and reasonable, scientifically-based request, the FEIS only presents 2016 CREP data. Furthermore, for the WHAP data, the FEIS presents 2012/2013 data and 2017/2018 data to estimate populations for the white list species. It is not clear why those years were chosen. Furthermore, these data were from eight sites only (Table 4-5, page 76 FEIS), and are not representative of the spatial extent of West Hawai'i. Table 5-4 (page 101 FEIS) shows the change in density between 1999/2000 and 2017/2018. The FEIS not only ignores annual trends, but also fails to display any measures of variance or confidence intervals to allow proper scientific assessment of the data by others. The authors of the FEIS are not transparent with how the 2017/2018 WHAP numbers were calculated. In fact, to demonstrate that aquarium fishing had “no impact” on fish biomass, data earlier than 2017/2018 (before the aquarium moratorium was in place) should have been used. How can the applicant justify using these two years of data when the increase in abundance shown for almost all aquarium species in Table 5-4 could well be due to the aquarium moratorium?

We received the response that the applicant only had 2016 CREP data. This is not true. All CREP data are publicly available and the authors cite the source where they could have obtained the full, publicly available data (CREP, 2018 page 149 of the FEIS). In prior comments, we advocated for analyzing annual trends and contrasts between CREP and WHAP surveys because CREP surveys show declines in key aquarium species and smaller overall changes in fish abundance, which directly contrasts with results shown for the WHAP data. We have included these here (**Table 2**).

**Table 2. Change in fish abundance of the top 10 collected species based on CREP data.** Increases are shown highlighted in green and decreases are highlighted in red.

Common Name	Mean Density		Overall % Change in Density
	2010	2016	
Yellow Tang	32.1	40.8	+27.1
Goldring Surgeonfish	40.4	51.9	+28.5
Orangespine Unicornfish	4.4	3.8	-13.6
Achilles Tang	2.1	2.3	+9.5
Black Surgeonfish	4.5	3.4	-24.4
Potter's Angelfish	5.2	6.6	+26.9
Ornate Wrasse	4.7	3.6	-23.4
Goldrim Surgeonfish	3.4	2.7	-20.6
Orangeband Surgeonfish	4.5	5.4	+20.0
Brown Surgeonfish	29.9	50.4	+68.6

The FEIS appears to select data that supports a highly biased finding, and misuses statistics, vacillating between using statistical significance to support their messaging in some cases and then dismissing statistical significance in other instances. In one critically important example, the FEIS cites multiple times an excerpt from Gove et al. (2019) that should not be stated as a fact. Specifically, the FEIS uses a comment from Gove et al. (2019) to state that herbivore biomass increased more in open areas than in FRAs (Page 22, 117, 128, 142, 143 of the FEIS). However, this was not a statistically significant finding (interview of J. Gove, NOAA, *pers. comm.* 2020, Gove et al. 2019). We highlighted this error in our response to the DEIS, but the FEIS ignored this and in fact, the applicant increased the number of mentions of this statistically insignificant finding. Most importantly, if we examine the fish indicators from Gove et al. (2019), specifically Total Fish Abundance, Total Fish Biomass, Mean Adult Fish Length, and Juvenile Yellow Tang, each indicator had significant increases that were greater in FRAs compared to Open Areas from 2003 – 2017. This directly contradicts what was stated in the DEIS to support their statement that aquarium fishing does not impact fish abundance. The data from Gove et al. (2019) strongly contradict the argument that aquarium fish collection had no impact on the fish community.

Another instance where the FEIS uses an example to support then contradict themselves is in the estimation of fish populations in the FEIS. Specifically:

“To facilitate analysis in this FEIS, estimated population size for each White List Species for the island of Hawai’i was calculated using CREP data by converting survey counts to abundance per unit area, and then multiplying by the estimated area of hardbottom habitat in <30 meters of water (16,840 Ha).” (Page 81, FEIS)

This is a highly inaccurate way to estimate fish populations, and assumes that fish equally inhabit all hardbottom habitat area across West Hawai’i. Extrapolating based on hardbottom area ignores basic fish ecology and is a highly non-scientific method of estimating island-wide populations. Fish show highly specific spatial distributions. For example, substantial differences occur between reef fish composition and abundances on patch reefs, where on average they are ~50 % different to each other (Sale et al., 1994). Species diversity of coral reef fishes is significantly different between exposed and semi-exposed habitats, where water depth and wave exposure affect the spatial distribution of many reef fish (Nanami et al., 2005). The assumption that the average of surveys from one year can be multiplied across the entire habitat a fish could occur in ignores a huge wealth of literature dedicated to determining spatial distributions of fish. This has also likely resulted in incorrect baselines and overestimations of fish populations in the FEIS. The FEIS then goes on to use this as a justification for the low counts of specific aquarium species:

“... the WHAP focuses on the WHRFMA and does not have full spatial coverage of the island of Hawai’i. In addition, it only estimates population size at depths from 30-60 feet and therefore does not adequately survey shallow- and deep-water species (or life stages of any species) that spend time outside the 30-60-foot depth range...” (Appendix B, FEIS)

“Most of the Longfin Anthias population occurs below the 98-foot depth surveyed by the CREP and the 60-foot depth surveyed by the WHAP, and therefore the species is not observable by the methods of either survey. As such, data are not available to produce a reliable WHRFMA or island-wide population estimate.” (Page 64, FEIS)

“Although the most recent DAR report (2019a) suggests there should be concern for the sustained abundance of Achilles Tang in the WHRFMA, the report concedes that WHAP transects are not located in prime habitat for adult Achilles Tang (i.e., high energy shallower surge zones), and therefore the bulk of the Achilles Tang population is not adequately surveyed by WHAP monitoring (DAR 2019a).” (Page 108, FEIS)

On the one hand, the FEIS claims that fish equally inhabit all the hardbottom habitat, but on the other hand, rare species “are not observable” because they occur outside of the survey area. Therefore, population estimates given in the FEIS alternate between inaccurate and biased, and the resulting catch estimates provided cannot be trusted.

The FEIS provides no statistical analysis of population growth compared to fish life span, number of years until sexual maturity against which the annual proposed catch can be measured, representing a true estimation of whether take is sustainable or not. The impact of catch on life history stage, resulting impact on population growth, is not discussed in the FEIS and was brought up by several of the public comments but then ignored by the applicant.

In summary, the estimates of fish populations are based on flawed estimates, and therefore the percentages of aquarium catch presented are not accurate. Long-term data exist for the majority of aquarium fish species yet no actual population modelling was done, which would allow a true estimation of the impacts of aquarium fishing.

### III. Inadequate coverage of relevant literature with biased selection of specific findings

The FEIS fails to adequately cover relevant scientific literature, especially Hawai'i specific examples, thereby ignoring the impacts of aquarium collection on the system. We base the examples we discuss here on the main justifications of the applicant for allowing aquarium collection.

#### IIIa. Biased selection of specific findings and ignoring negative impacts of aquarium fishing

One of the most troubling and subjective examples of cherry picking in the FEIS is its reference to Tissot and Hallacher (2003) seven times. While the applicant uses this reference to support a claim that aquarium fishing does not damage coral, they fail to mention the primary finding of study:

"Seven of the 10 aquarium species surveyed were significantly reduced by collecting. The abundance of aquarium fish at collection sites ranged from 38% lower (*Chaetodon multicinctus*) to 75% lower (*C. quadrimaculatus*) than that at control sites. In contrast, only two of the nonaquarium species displayed a significant collection effect."

This shows that the authors of the FEIS were aware of research that shows the negative impact of aquarium fishing, but chose to ignore it, bias-selecting results from the study to support aquarium fishing.

#### IIIb. Reporting incorrect information about fish and harmful generalized comments

"In addition, herbivores collected by the aquarium fishery typically consist of the smaller size classes which are the least effective sizes for cropping algae." (Page ii, FEIS)

"Commercial aquarium collection targets juvenile fish leaving behind the adult broodstock." (Page 134, FEIS)

In aquatic systems, body size and individual trophic level are tightly linked (Jennings et al., 2001; Barnes et al., 2008), where fishing degrades the variation in size structure in coral reef fish (Robinson et al., 2017). Smaller fishes are important dietary resources for predatory species. Furthermore, despite small body sizes, grazers can have disproportionately large negative impacts on plant and algal biomass (Silliman et al., 2013), where smaller herbivores can occur in higher densities, having disproportionately higher impacts on algae in comparison to larger, less abundant herbivores (Ng and Micheli, 2020). Therefore, targeting only small fish is not a justification for allowing aquarium collection.

#### IIIc. Inadequate coverage of aquarium fish species

In Section 4.4 page 35 of the FEIS where each aquarium fish species is discussed, the FEIS fails to mention the ecological role of each fish, anything about its feeding behaviour and what it is important in controlling, e.g. turf algae. Categorising each of the fish into their role as herbivores, mobile invertivores, piscivores etc, should have been done so the reader can understand how removal of that fish would impact the ecosystem as a whole.

Furthermore, the FEIS mentions spawning seasons for some fish but not others. It also does not indicate the size and length until sexual maturity, growth or mortality rates. Beyond this, barely any data was available for some aquarium fish species such as *Pseudanthias hawaiiensis*, *Cirrhilabrus jordani*, *Acanthurus dussumieri*. There is clearly a lack of knowledge for specific fish, so the true impacts of aquarium collection cannot be ascertained without knowing more about the species.

### IIId. Reliance on one manual to justify collection rates

“While specific research into sustainable levels of collection has not been conducted for the 40 White List Species, Ochavillo and Hodgson (2006) suggest collection of between 5% and 25% is sustainable for various reef species in the Philippines that are similar to those on the White List (e.g., tang, wrasse, butterflyfish, angelfish, triggerfish). For 37 of the 40 White List Species, the average annual collection under the Pre-Aquarium Collection Ban Alternative would represent less than 1% of the estimated island-wide population, with the remaining three species averaging less than 5% (Table 5-11).” (Page 123, FEIS)

Determining sustainable catch rates is not a straightforward process and involves a deep understanding and long-term record of population size, recruitment, mortality and growth. Other methods using size-structure abundance data and a more data-limited approach, rather than catch-per-unit methods, have been developed, but still vary on a species-by-species basis (Jerald et al., 2018). This recent method was used to assess deep-water snapper sustainability in the Hawaiian Islands and represents a more closely related and regionally relevant publication than that used in the FEIS. Successful management and rebuilding of depleted fish populations has been achieved at local scales but requires solutions tailored to the local context (Duarte et al., 2020). Thus, using a manual that is based on species in the Philippines is not the best way to determine whether aquarium collection catch rate is sustainable, especially as this rate will be specific for each species.

### IIIf. Erroneously focused on macroalgae

“One study found there were no increases in the abundance of macroalgae where the abundance of herbivores was reduced by aquarium collecting.” (Page ii, FEIS)

This excerpt is one of many that displays the unfamiliarity of the FEIS authors with benthic habitat components in West Hawai‘i, specifically the role of macroalgae in relation to turf algae. Macroalgae, which represents larger algal types such as kelp, are rare on Hawaiian reefs and represents a minimal benthic component of reefs in West Hawai‘i. On the other hand, turf algae are mats of smaller algae less than 2 cm high, representing the dominant component on Hawaiian reefs (> 50 % benthic cover) and one that aquarium fish species are important in controlling (Jouffray et al., 2016; Williams et al., 2019).

Turf algae is not even mentioned in the FEIS where turf algae are fast growing and responsible for suffocating corals and preventing reefs from recovering after bleaching. The contrast between turf algae and macroalgae was also brought up within the public comments, yet its importance was still ignored.

### IIIIf. Inadequate characterization of population connectivity

Numerous comments on the DEIS note its inadequate treatment of larval connectivity in assessing the impacts of the aquarium trade on fish populations. The FEIS does little to address these comments, claiming that:

“The EIS recognizes and acknowledges larval connectivity around the Island of Hawaii, which is why it is felt that the island-wide population estimates based on CREP data are the best metric when measuring population impacts.” (Page 1730 in response to “For the Fishes”)

The use of island-wide population estimates to evaluate impact is only appropriate if larval connectivity around the island is absolute, which is not the case. In reality, numerous publications indicate only minor connectivity between East and West Hawaii (Christie et al. 2010; Lobel 2011; Vaz et al. 2013), and within these regions, ephemeral ocean features concentrate larvae in some areas more than others (Wren and Kobayashi 2016). The FEIS does not define subpopulations relevant to Open Areas and these areas’ sources and sinks, which is the most appropriate basis for assessing population impacts. While these

populations are difficult to define, they are likely to be much smaller than island-wide populations and therefore the FEIS' estimate is ecologically unsupported.

#### IV. Conclusions

The FEIS is highly biased in favor of aquarium collection in a number of ways:

- The FEIS has ignored the impacts of aquarium fishing on the important role of herbivores in the maintenance of reef health.
- The monitoring data have not been represented correctly; multiplying a fish survey by total reef area is not an accurate estimation of fish populations.
- The FEIS incorrectly or insufficiently applies statistical methods to interpret long-term fish data.
- The FEIS does not include a proper literature review, instead selecting a few papers and results that support their viewpoints and ignoring numerous findings that contradict the purported low impact of aquarium collection.

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May 22, 2020

ITEM F-2

TO: Board of Land and Natural Resources

VIA Email: [BLNR.Testimony@Hawaii.gov](mailto:BLNR.Testimony@Hawaii.gov) and oral testimony

FROM: For the Fishes, Center for Biological Diversity, Moana Ohana, Pono Advocacy

Submitted by: Inga Gibson, Director, Pono Advocacy, [PonoAdvocacy@gmail.com](mailto:PonoAdvocacy@gmail.com);  
808.922.9910, PO Box 372028, Honolulu, HI 96837

**RE: Agenda Item F-1 Enforcement Action against Tyron Terazono, Kacie Terazono, and Wayne Newman for Unlawful Collection of Aquatic Life for Aquarium Purposes within the West Hawai'i Regional Fishery Management Area, Island of Hawai'i.**

Dear Chair Case and Members of the Board:

First, it is important to note that there would be **no enforcement action for consideration by the Board today if not for the cooperation of the community**, specifically, those who have reported dozens of tips regarding suspected illegal aquarium trade activity of the above defendants and others who, coincidentally, are seeking aquarium permits through the EIS in Item F.2. of the May 22 agenda. **The enforcement action on February 20, 2020, only came to fruition due to a tipster providing DOCARE with detailed, on the spot, accounts of suspect activity.**

Therefore, we, the undersigned organizations, representing thousands of our members and marine advocates across the state, urge the Board to institute the following penalties and fines for each of the 3 above-named defendants:

1. The General Administrative Penalty statute (HRS §187A-12.5) allows for a fine of up to **\$1000 per animal taken in violation of the law**. On February 20, 2022, the 3 defendants were cited for taking **550 fish on one trip**. Therefore, we recommend a \$550,000 fine equal to the maximum amount allowed, to be divided between the 3 defendants, in addition to the other fines and penalties relating to illegal gear, lack of required permits and licenses, and collecting in a prohibited area. **The minimum fine per defendant should be \$183,333.00**
2. Immediately **revoke the current Commercial Marine Licenses (CML's) for Tyron Terazono and Kacie Terazono** and prohibit issuance of future CML's for a period of 1 year, the maximum allowed.
3. **Prohibit issuance of a CML to Wayne Newman, for a period of at least 1 year.**
4. **Revoke Dealer privileges for the 3 defendants for a period of 1 year**, as the 3 defendants have profited from the sale of thousands of reef animals, likely captured in violation of numerous laws, as early as the day after their citation was issued on February

20, 2022. They continue to profit from aquarium collection and subsequent sales of reef wildlife through the present.

We request the Board **please also ask the following questions of the 3 defendants:**

1. How many animals have you captured since the citation was issued?
2. How many animals have you shipped since the citation was issued?
3. Where and to whom were these animals shipped to and via what airline/cargo carrier?
4. What specific gear are you using to collect reef wildlife, given you were charged with illegal gear (fine mesh nets)?
5. Specifically, where are the fish you are collecting and selling captured?

### **Background and Enforcement Issues:**

In December of 2018, DLNR partnered with our organizations in asking for the public's help in reported alleged illegal aquarium activity. This resulted in our launching a 24/7 tip-line and \$5000 reward program for information via 808-NO-POACH. The tip-line has generated dozens of reports and DOCARE has been provided voluminous information, including video and photo documentation over the years, and through the present, on illegal aquarium collection activity. However, the enforcement action before the Board today is the **ONLY** action DOCARE has taken in response to all such reports.

DOCARE Staff have acknowledged that it is nearly impossible to enforce DLNR's policy position that one may continue to collect aquatic life for aquarium purposes if not using prohibited gear (fine mesh nets) or in prohibited areas. This position has further crippled DOCARE's ability to enforce existing laws and rules by essentially requiring offenders be caught in the act (as in this case now before the Board) or caught collecting underwater, which DOCARE is not able to enforce due to its lack of resources, staff and the will of DLNR leadership.

In fact, DAR (along with the WH Aquarium Trade EIS applicants and collectors themselves), recognize that poaching will always be an issue as long as there is any "legal" trade and enforcement will always be a challenge given the nature of the activity, self-reporting with no verification of catch, lack of Dealer permit requirements and lack of state or federal oversight of the hundreds of thousands of reef animals that leave Hawaii for the mainland and international aquarium pet trade every year.

### **Past Administrative Penalties Issued by BLNR**

**October 24, 2008 BLNR Hearing (minutes not posted on BLNR website)**

**See:** <http://the.honoluluadvertiser.com/article/2008/Oct/25/ln/hawaii810250340.html>

**"Maui tour boat firm fined \$542K for coral damage**

The state land board yesterday fined a Maui tour boat operator \$542,950.49 for damaging coral reef. The Board of Land and Natural Resources found that Makena Boat Partners killed,

damaged or dislodged 538 individual coral colonies when its Kai Kanani catamaran dropped anchor off the coast of the Maui Prince Hotel last year.

**The \$542,950.49 fine includes \$1,000 for each of the 538 specimens** of coral damaged, as well as \$3,950.49 in administrative costs paid by the state to assess the coral damage.

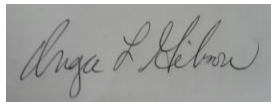
The seven members of the board unanimously approved the fine by voice vote at one of their regular twice-monthly meetings.”

**April 28, 2017: Violation of Hawai‘i Administrative Rules, Section 13-231-51: Business Activities, and Section 13-256-3: Commercial Use Permit or Catamaran Registration Certificate Requirements, Against Ho‘okupu Fish Company, LLC, Mr. Henry K. Pomroy, and Mr. William Akira Gushiken Fujimoto for Engaging in Illegal Commercial Operations on state ocean waters from the Pohoiki Boat Ramp, Hawai‘i Island Without a Commercial Use Permit;**

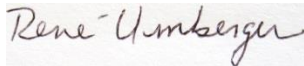
The 3 defendants were charged \$120,000; respectively \$60,000, \$60,000 and \$20,000.00

See: <https://dlnr.hawaii.gov/blog/2019/10/18/nr19-174/>

Sincerely,



Inga Gibson, Pono Advocacy, LLC



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**From:** Janice Glennie  
**To:** [DLNR BLNR Testimony](#)  
**Subject:** [EXTERNAL] Agenda Item F.1 testimony: Flawed EIS, Bad idea  
**Date:** Sunday, May 17, 2020 2:40:56 PM

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Aloha,

I've been a resident of Kailua-Kona for over 40 years. I've seen fish collectors, their raping and pillaging, and their desires to continue create havoc and a waste of time (including having to write testimony and stay on top of issues that should be long gone). .

This industry is completely, utterly out of step with modern environmental science. As I've testified far too many times over the decades: if the fish can't be raised in captivity to keep in captivity, then forget it. Let the industry die - no more resurrections!

Kona's reefs have and are suffering. Climate change alone is decimating them. How in the world can a science-based document like the EIS claim anything other than that? And where could mitigation measures be when, in fact, it's probably impossible to create and implement them?

Please say "NO" to this small, destructive industry. We can find other revenue streams that don't kill the Golden Goose.

Mahalo and sincerely,  
Janice Palma-Glennie

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## TESTIMONY on Agenda item F2 (EIS acceptance) of 5/22/2020 meeting

My name is Bill Graham and I live in North Kohala. I've always been an ocean person and I've lived on the island since 1971. The EIS now before you must examine the environmental consequences that would occur in the future should the collection of aquarium fish be resumed. In that regard it is quite deficient and should be rejected by the Board.

I'll group my comments about its deficiency into three categories:

1. This EIS is a backward looking document. It merely attempts to show that prior years of fish collection by those now seeking permits did not significantly reduce the population levels of their targeted fish species. No substantial evidence is given that fish collection in the future will be constrained by past history. Certainly the permits themselves provide no such constraint. Furthermore there is no evidence given that the overall population levels of the target species will continue at levels seen in the past.

We see the reef habitat currently undergoing massive change due to the coral bleaching of recent years (2015, 2019). More of the same is expected in upcoming years. Scientists have no disagreements in this regard. An acceptable EIS must be a forward looking document that reveals impacts that may be forthcoming if the permits are approved. The EIS should look closely at the evolving state of the reef in coming years and the role of the collected species in helping to maintain live coral colonies. From that basis it can attempt to assess the impacts of reef fish collection.

2. Furthermore, the Final EIS is unacceptable since it has not met the requirements given in HAR 11-200.1-28, the implementation rules. The failure here is in at least two distinct regards:

First, there is a lack of substantive alternatives. This was pointed out by the DLNR director when she issued an EIS preparation notice on 7-26-2018. I also addressed

this lack in my prior comments on the DEIS. The applicant has made no effort to fix this problem.

Second, the final EIS only includes cursory responses to many of the substantive comments which were submitted after the publication of the draft EIS. The standard response in the EIS is "Your comment has been forwarded to the decision makers." Neither meaningful responses nor any resulting modification to the body of the EIS text occurs all too frequently. However, HAR 11-200.1-28 requires that "Comments submitted during the review process have received responses satisfactory to the accepting authority, including properly identifying comments as substantive and responding in a way commensurate to the comment, and have been appropriately incorporated into the final EIS." It is notable that the text of the draft EIS arrives at its summary on page 135. In the final EIS the summary is found on page 138. This is one indication of a total disregard of the "appropriately incorporated into the final EIS" requirement. These failures stem from some of my own substantive comments as well as from those of many others.

3. I also want to draw attention to the highly unusual and perhaps illegal way this application has been structured. The applicant (Pet Industry Joint Advisory Council) is not applying for permits for its own use. It is a third party applying for permits that it seeks to obtain for unnamed beneficiaries. The applicant does not claim to represent the beneficiaries. Is this arrangement acceptable, does it meet the requirements of a proper application which would invoke HRS343?

Public disclosure is compromised, whether the names of the individuals are known to the DLNR or not. Will the board please ask the DLNR staff to make public the substance and intention of any prior agreements reached between the DLNR and the applicant in this regard? It strains credibility to believe that the applicant has taken this bizarre path without some degree of prior consent by the DLNR. Yet the EIS fails to disclose the names of the individuals or the purpose and content of any related agreements that have been made. I and others have

consistently asked for the names of the individuals so as to more meaningfully participate in the EIS process.

Bill Graham, 19 May 2020

**From:** Kayleigh Grant  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Reject the Hawaii AQ EIS  
**Date:** Tuesday, May 19, 2020 2:01:50 PM

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Aloha,

I am writing as an ocean tourism operator in Kona, Hawaii and asking you to please reject the EIS for the aquarium fish trade in Hawaii. We need to protect our natural resources for our visitors of Hawaii which affects our economy as well as for our Keiki and future generations. Please make the best decision for Hawaii by rejecting the EIS by PIJAC.

**Mahalo and Aloha,**

**Kayleigh Grant**  
**Kaimana Ocean Safari**  
**KaimanaOceanSafari@gmail.com**  
**Mobile: (215) 208-5432**  
**IG: @mermaid\_kayleigh**  
**FB: Kayleigh Nicole Grant**

**From:** Surf Lessons Hawaii and HLSI  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Agenda item F.2 TESTIMONY  
**Date:** Tuesday, May 19, 2020 11:50:42 AM

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Aloha My name is Rick Green, I am a Hawaii resident on the Island of Hawaii, a lifeguard, retired US merchant marine, watermen, and local business owner. I am submitting this email as my testimony in regards to Agenda item F.2 on West Hawaii aquarium trade.

I urge you all to **reject** the EIS that has been submitted. After reviewing such document, there are crucial flaws and missing key components within this EIS to which it can not be taken as sound or thorough evidence. The due process on this critical topic at hand has not been completed.

The data is incifietiant. The EIS fails to accurately analyze the environmental consequences of **unlimited** aquarium collection of the White List species (to the species themselves, and their coral reef homes); this in itself will create a domino effect to the detriment of our delicate ecosystem, which is unique only to our islands. There is no meaningful mitigation or alternatives proposed within the EIS, that would reduce the impacts stated above.

The EIS also fails to adequately incorporate input of Native Hawaiian practitioners, experts, community members, and consulted parties. The input of the community, it's leaders and it's native practitioners must be considered and respected as the voice of the people and our rights to protect our natural resources, plants and animals included.

I hope that this brief email testimony shall serve with the same impact as I would be able to provide in person, but as this hearing is scheduled to be held off island in Oahu, I am not physically able to attend but send this email as a testimony in my physical absence.

Thank you for your time,

Capt. Rick Green  
75-5909 Ali'i Drive  
Kailua-Kona, HI. 96740  
808-936-7873

Aloha from Kona and Team HLSI

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**From:** Bryce Groark  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Testimony - Hawaii Aquarium Permits  
**Date:** Tuesday, May 19, 2020 12:51:34 PM

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Aloha,

I have been working in marine conservation as a filmmaker and consultant for more than 20 years in Hawaii. **I fully support banning all forms of aquarium fish collecting, regardless of the method of collection.**

With so many issues plaguing Hawaii reefs, it is so short sighted to consider opening up such a wasteful industry that has such a bleak future - and only creates negative impacts for the community. 14 permits can - and do - a lot of damage.

I'm hoping lawmakers take their kids snorkeling sometime. Not many fish left swimming over our dying, bleached corals - even in West Hawaii. How do we not realize that? How do we ignore that? How do we turn a blind eye and think causing more damage is "sustainable"? How can we even begin to believe an industry who has no external monitoring - only self reporting? Trusting them to offer legitimate information is ridiculous and naive at best.

Also - if somewhere in the realm of 80% of the aquarium catch in Hawaii is yellow tangs, please do some industry research. In the past couple years, the yellow tang has now been successfully bread and commercialized in the aquaculture trade - there is no need to take them from the wild anymore. Not only is this a dying industry already with the onset of aquaculture for these species, the value of the yellow tang has dropped considerably and will continue to drop in the coming years.

What if we protected our systems and gave them a chance to recover - what if we had no take zones - and worked together with the community to achieve this? That is leadership. I urge lawmakers to look at what's happening at Kaupulehu and the groups working there - with a complete no take zone for the next decade. The results of recovery of fish biomass are incredible - after just the first year of leaving the reef system alone.

**Please vote for the community and environment as a whole, not just a small group of individuals. Ban all forms of aquarium collecting - and start working on new ways to bring the gold coast back to West Hawaii.**

Much Aloha,  
Bryce Groark

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[www.brycegroark.com](http://www.brycegroark.com)

**From:** Mary Groode  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Email Subject: Agenda Items: F.2 and F1 Testimony  
**Date:** Tuesday, May 19, 2020 1:52:40 PM

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Aloha to the Board of the Land and Natural Resources of Hawaii,

My name is Mary Groode. I moved to Maui in the 1970's and have been an avid swimmer and snorkeler for over 40 years.

July 15, 2007 the Maui News published an editorial, that I wrote, that spoke to Maui's reefs being under siege from development and lack of management.

**We need to honor our environment as an essential part of our health, as a community, as a resource of recreation and food for future generations and for our economic health as a tourist destination.**

Sadly, the aquarium trade and few restrictions on taking fish off our reefs has left the reefs on Maui pretty bare. As you ponder whether to reject the EIS allowing the aquarium trade to take unlimited fish from Hawaii, I wonder when is the last time you went snorkeling? You may remember reefs thriving with varieties of fish from years ago. It is not that way now. Coral is dead and dying from many causes. Coral reefs need fish, like tang and parrot fish to eat the algae and keep reefs healthy. Fish and coral need each other to survive. The important thing is they need YOU to survive, by protecting them from these commercial tropical fishermen.

I know on Maui, where we outlawed this, poachers are still taking our fish. They were caught at Ahihi Kinau last week, two days in a row, stealing fish. It is one of the last places we have to view what once was common place. ***We need strong expensive fines that will discourage this law breaking activity.*** Please revoke the license of poachers and establish consequences that will keep people from feeling like "they can take the fish to sell because if they get caught it's just a slap on the wrist". I'm quoting a ranger from Ahihi Kinau.

Today I swam at a reef in Wailea, Ulua Beach. I saw one pair of two spot butterflies, one pair of Moorish Idols, one pair of Thread-fin Butterflies, and two Ornate Butterflies. That was about it. There were some goat fish and some common black fish. I swam for over an hour. We desperately need you to protect our precious reefs. There were three spear fishermen today on that reef. There have been spear fishermen at all the reefs since the Covid 19 crisis closed the beaches. I swim six days a week and have verified this at every reef I've visited, except Ahihi Kinau.

We have to have laws that allow local fishermen to fish to eat, but take only mature fish. Limit fish species that are so crucial for the health of the reefs so that they can survive. The ancient Hawaiian's had periods of time where fishing was kapu to give the fish a chance to reproduce. We should consider this as an option today.

If you feel that hearing my voice will help to influence the Board, I will testify via video. If my letter is sufficient testimony, and you have a large response, no need to schedule me.

**Please reject the EIS, which is flawed as many people have already pointed out.** We are counting on you.

With respect,

Mary Groode  
767 Kupulau Drive,  
Kihei, HI. 96753  
808-879-5554  
[dechenmaui@hawaii.rr.com](mailto:dechenmaui@hawaii.rr.com)

**From:** Gregg Gruwell  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Agenda Item F.2 Testimony  
**Date:** Sunday, May 17, 2020 10:38:31 PM

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I started snorkel vacations in Kona in the 80's before moving there in 1999 (now Honolulu). I have over 30 years experience snorkeling Honaunau to Kawaihae.

Up until 2001 reef fish were everywhere. You could walk downtown on Ali'i Drive to the old Kona Hilton and see thousands of Yellow Tang in schools with your naked eye. Those fish are almost entirely gone. Collected.

The reef fish population has been decimated in the last 20 years. I am a retired Naval Officer and, in my estimate, 75% of the fish from Honaunau to Kawaihae are now gone. Collectors continue to push a false narrative that there are plenty of fish. Some fish, Pufferfish and Boxfish, I don't even see anymore.

DLNR has never counted the fish population numbers in West Hawaii and this flawed EIS is essentially saying there are still fish to collect and money to be made.. The EIS fails to accurately analyze the socioeconomic consequences of unlimited aquarium collection in West Hawaii nor does it address the damage done by the combined effects of collection, pollution and climate change! With environmental tourism more important than ever to the West Hawaii economy, what will be done when all the fish are gone and tourists stop coming. The time is now to put a halt to this practice!

Gregg Gruwell  
Honolulu, Hawaii

**From:** ktchndancer@gmail.com  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Agenda item F.2 testimony  
**Date:** Tuesday, May 19, 2020 11:34:20 AM

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I have been a resident of Hawaii for 25 years, and have spent 1000s of hours in the ocean looking at reef fish in Lanikai, Kealakekua Bay, and Honaunau. I have observed a decline in reef fish, which is due to many factors; one important factor is commercial & illegal fish collection. Our reef, and its inhabitants, is not only beautiful but integral to ecosystem balance; there is NO place in Hawaii that should be open to fish collection! I am asking that you reject the flawed EIS & increase the fines so that there will be fish to observe in their natural habitat, not in an aquarium in a Mainland office. Thank you and aloha. Cindy Hartman

Sent from my iPhone

**From:** Fern A Holland  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Agenda Item F.2 Testimony  
**Date:** Monday, May 18, 2020 1:37:02 PM

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Aloha Honorable Board of Land and Natural Resources,

I am an environmental scientist, marine biologist and resident of Hawai'i and I am deeply concerned about the risk aquarium collection poses to our marine environment. Please reject the EIS which is wholly flawed and relying on insufficient, faulty, inadequate and improper data and assumptions.

The EIS fails to accurately analyze the environmental consequences of unlimited aquarium collection of the White List species (to the species themselves, and their coral reef homes).

The EIS fails to accurately analyze the cultural and socioeconomic consequences of unlimited aquarium collection in West Hawai'i.

The EIS fails to propose and analyze any meaningful mitigation or alternatives that would reduce the impacts.

The EIS also fails to adequately incorporate input of Native Hawaiian practitioners, experts, community members, and consulted parties.

Thank you for your consideration!

Fern

**Fern Anuenue Holland BSc.**

Ecologist & Environmental Scientist  
Advocate & Community Organizer  
Ph: (808) 634-6242

**From:** Judith Graham  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Agenda Item F.2 Testimony  
**Date:** Tuesday, May 19, 2020 9:13:23 PM

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I am a longtime Hawaii Island resident and I care about Hawaii's reef fish, as do many here. I believe this EIS submitted by the Pet Industry Joint Advisory Council (PIJAC) is inadequate and misleading, and should be rejected by the Board.

As I said in my draft EIS comment, PIJAC appears not to be eligible as an applicant because the framework of its EIS doesn't meet the statutory requirements of HRS Chapter 343, the governing law. Chapter 343 defines an **applicant** as one who "pursuant to statute, and or rule, officially requests approval for a proposed action." The definition of **action** is, somewhat circularly, "any program or project to be initiated by any agency or applicant."

PIJAC did not describe itself at all in the EIS, but a Google check shows that it is an industry trade group representing wholesalers, retailers, agents, and the like, with, I believe, some individual members. Perhaps it is very large. None of these wholesalers, etc. will "initiate" the aquarium fish collection activities mostly described by the EIS.

Further, the EIS itself defines the **action** variously as: :the collection of aquarium fish pursuant to the issuance of 10 aquarium permits (see project summary); and also the issuance itself (p. 1867); and it even refers to the purpose of the "approving agency's action" (p. 16) as the purpose of the action. In none of these instances is the applicant initiating the action--although preparation of an EIS might free the DLNR to issue permits because Hawaii's courts have found an EIS to be required before the DLNR proceeds.

I came across a solicitation by PIJAC's Aquatics Committee on the Web. It said, "If you are a PIJAC member, consider the connection between ensuring access to live organisms and the success or failure of your enterprise." This refers to a wholesaler's **need** but does not refer to the (false) **need** for the action given in the EIS, which is to "continue aquarium fishers' livelihoods . . . " (p. 21 and elsewhere).

PIJAC's role in the preparation of this EIS is confusing because it has not fairly described itself or its purely commercial purpose. Basically, it is seeking to ensure its supply chain, which is nowhere stated.

Judith Graham

**From:** Steve Kaiser  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] West Hawaii Aquarium Collection  
**Date:** Tuesday, May 19, 2020 5:36:27 PM

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As a fisherman and retired aquarium professional I urge you to accept the EIS and allow for the take of aquarium fish. As past Director at Sea Life Park, Vice President at the Georgia Aquarium and Atlantis Resorts, the display of aquarium fish such as those from Hawaii have contributed greatly to both education and conservation of our oceans. While we would like everyone to experience our waters and marine life personally many have physical and or economic restrictions. As such both public and private aquariums allow for that connection. Aquariums foster that connection and are a leading resource for many of the advances in coral culture.

The science presented in the EIS is clear that impacts are negligible and as one of most studied and researched area clearly the science cannot be questioned. Not accepting the science would put all studies in jeopardy which would be of great concern to all who use the ocean. I'm now a commercial fisherman off the Kona coast. I have seen an increase in the idea that any take of our marine life is wrong and should be stopped. How long will it be that we will see a movement and lawsuits to stop all fishing. My father fished and that's how I found my vocation. And you can say Ive returned to my roots. And fishing is very much a part of our culture. Fishermen provide food and jobs. Aquarium collecting is just another form of fishing. And regardless of what those opposing aquarium fishing may or may not say, to them all fishing should be stopped. Is that were we are heading? I truly hope not and so please accept the EIS, allow fishing no matter what kind. Yes we need to manage and those steps are clearly laid out. Let the science speak and lets go fishing

Aloha and mahalo

Steve Kaiser  
Everything Fish Inc.  
PO Box 190612  
57-1820 Kohala Mtn. Rd.  
Hawi, Hawaii 96719  
Mobile +1808 895-9390

**From:** Kaimi Kaupiko  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Request to give testimony  
**Date:** Monday, May 18, 2020 2:16:31 PM

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Kaimi Kaupiko give public testimony on F2  
our email [kkaupiko@gmail.com](mailto:kkaupiko@gmail.com)  
contact number 937-1318

Wilfred Kaupiko give public testimony on F2  
our email is [kkaupiko@gmail.com](mailto:kkaupiko@gmail.com)  
contact number 896-6272

mahalo,

--

Kaimi N. Kaupiko  
P.O. Box 5148  
Kailua-Kona HI, 96745-5148  
Mobile: (808) 937 - 1310  
[kkaupiko@gmail.com](mailto:kkaupiko@gmail.com)

"We are what we repeat daily." Aristotle's

**From:** Gregory B Keller  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] AGENDA ITEM F.1  
**Date:** Tuesday, May 19, 2020 9:36:57 PM

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I'm a resident of South Kohala, and regularly swim, snorkel, paddle board and canoe along the Puako Reef, from Waikoloa to Kawaihae. Over the past 20 years I have watched the marine life decline, and the reef that supports them bleach.

For the health of the ocean, of our economy, and of our community please increase fines on illegal fish collectors and revoke their Commercial Marine Licenses.

Thank you,

Gregory Keller  
68-1376 S. Pauoa Rd., #i-3  
Kamuela, HI 96743

## **Written Testimony Urging BLNR to Reject the EIS**

RE: Agenda Item F.2 of May 22, 2020 meeting

Determination of Whether the Final Environmental Impact Statement (FEIS) Complies with Applicable Law and Adequately Discloses the Environmental Impacts of Proposed Issuance of Commercial Aquarium Permits, Commercial Marine Licenses, and West Hawai'i Aquarium Permits for the West Hawai'i Regional Fishery Management Area

Aloha to my community leaders and decision-makers,

I am a Big Island resident. I was born here in Kona.

I strongly urge you to protect West Hawaii's reefs and not allow the exploitation of our reefs for aquarium trade based on a faulty EIS.

The applicant's intention to ensure "lawful, responsible, and sustainable commercial collection of various aquarium fish species from nearshore habitats" sounds reasonable, but how those terms are defined would not result in sustainable management of nearshore habitat. The arguments put forth and the data supporting the idea that the Preferred Alternative is sustainable is based on faulty logic and flawed presentation and interpretation of data.

In one example the authors state, "research suggests collection of between 5%-25% is sustainable for various reef species similar to those on the White List." This statistic is repeatedly used to demonstrate how annually harvesting roughly 1% of the island population would clearly be a sustainable harvest rate if 5%-25% is shown to be sustainable by research, right?

However, if you read the paper referenced, Ochavillo and Hodgson (2006), it is clear that these numbers are based on one case study, in one place in the Philippines and the percentage guidelines are the output from a mathematical model based on a specific population with specific population dynamics (including the input of several parameters including reproduction rate, growth rate, and death rate for each species in a certain area). Ochavillo and Hodgson (2006) use a function/model to estimate a theoretical sustainable catch based on life-cycle information for specific species (acknowledging that continued population monitoring for any specific area would need to continue to refine the model projections). There is no implication, by Ochavillo and Hodgson (2006), that the 5%-25% estimates are intended to be broadly used in any other place or time.

Ochavillo and Hodgson (2006) further suggests that any sustainable harvest rate would also include a management plan that has no-take areas and seasonal limitations so that the resource is actually stewarded. It is completely inappropriate to use the 5%-25% take rate from this reference to even suggest what would be considered 'sustainable' in West Hawaii. When added to the fact that the percentage of take is based on Hawaii Island population numbers and no attempt is made to quantify how this would parse out to a percent of West Hawaii populations given that all the aquarium take would be in this area; I believe that the arguments put forth by

the applicant are highly misleading. This misrepresentation of data is unacceptable and demonstrates a complete lack of understanding as to what sustainable harvest actually entails.

Population and ecosystem dynamics play out over the time frame of decades and our selection and removal of certain species does impact what populations and ecosystems look like in the future. Commercial aquarium harvest of our reefs is an extreme stress on our precious and irreplaceable reef ecosystems that are already vulnerable and struggling to adapt to water temperature changes and pollution from human activities.

While the livelihoods of a few aquarium permit holders is valuable, their needs should not be valued so highly over the needs of the many. The needs of aquarium permit holders would damage the opportunities for subsistence, livelihoods, and enjoyment of many many others and the opportunity costs and negative impacts from the aquarium harvest grows through time as our reefs degrade and collapse from too much change too fast. We are already in a crisis for the future of our reefs. Now it is time to steward our reefs and help them survive the global climate transformation, not stress them into collapse.

I want to continue to go out and snorkel and enjoy the unique reef environment. I want my friends to be able to catch their dinner and feed their families. I want my friends and family to be able to enjoy the sites and flavors of the reefs. And, I want the next generation to have these opportunities too. The value that I, and my community, place on these reef populations has not been adequately accounted for in the evaluation of this EIS.

Please reject the EIS Preferred Alternative which has misrepresented critical information related to sustainable take and has not adequately quantified the value that me and my community place on the resources in question.

Mahalo,  
Pulelehua Kimball

**From:** Paul Knoll  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Hearing 5/20/20  
**Date:** Tuesday, May 19, 2020 3:04:13 PM

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Aloha:

I am writing to provide feedback for the hearing on the pet industry's request for 14 permits to fish the West Hawaii reefs for the aquarium industry.

As an avid ocean explorer, I have marveled at the response the ocean has displayed with less human interference during the current COVID19 matter. There appears to be a slight uptick in variety and numbers of fish, but I certainly don't have data to support this observation.

Unfortunately, my observations also point to significantly depleted or dead coral zones, overall reduction in fish population compared to the time when I first visited the Big Island 6 years ago, and an increase in pollution. Now is not the time to take fish for pet purposes: We need our reefs to recover to the levels of decades ago, not months ago.

The practice of taking native fish from the West Hawaii's reefs is simply not sustainable at this time. These fish are needed as part of the ocean's recovery to the decades of over fishing we have allowed. Each variety of fish has an interdependence on all the others and with the coral and plants. Please allow this natural and symbiotic relationship to expand in a healthy way. Now is not the time to impede this expansion.

If we continue to deplete the ocean of her resources, we will soon have no ocean as we know it, and this certainly means no human life as we know it. Please watch or re-watch the movie "Mission Blue" to hear from one of our country's most respected ocean scientist about the current state of our oceans.

Do not allow the financial needs of the pet industry outweigh the health and environmental needs of our blue ocean and all of the sacred creatures and plants that reside within her.

Please protect our West Hawaii reefs, fish, and plants. Say 'no' to the pet industry.

Thank you for your consideration.

Paul Knoll  
 Captain Cook, HI

Paul W. Knoll  
 Co-Founder  
 To Live For, LLC  
[https://urldefense.com/v3/\\_http://www.tolivefor.org\\_::!!LIYSdFfckKA!jVasRaIQFudWj\\_wHQCcPI4hV1--RYTdYKt7cqOh3U2vaPEIdWo5wVbTGgfU1wnATeQe6ppE\\$](https://urldefense.com/v3/_http://www.tolivefor.org_::!!LIYSdFfckKA!jVasRaIQFudWj_wHQCcPI4hV1--RYTdYKt7cqOh3U2vaPEIdWo5wVbTGgfU1wnATeQe6ppE$)

**From:** Amy Harrison  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Please Reject the EIS  
**Date:** Tuesday, May 19, 2020 8:29:02 AM

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Aloha,

I am an Oahu resident, working here as a marine biology for UH Manoa. I do not think the EIS can be trusted and believe that it requires more research and more community input before even being considered. The aquarium trade is not only unnecessary, but it strips our beautiful reefs of their inhabitants. It encourages poachers and illegal behaviors. Many animals die in the process of being collected and held in captivity, therefore it is also very wasteful.

Please reject the EIS.

Mahalo,

Amy Knowles

**From:** mak221@aol.com  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] REJECT THE FISH COLLECTORS" EIS  
**Date:** Sunday, May 17, 2020 2:29:38 PM

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Aloha BLNR:

My name is Mark Koppel. I live in Ninole.

Mahalo

I submit the following testimony:

- ~ The EIS is wholly flawed-- relying on insufficient, faulty, inadequate and improper data and assumptions;
- ~ The EIS fails to accurately analyze the environmental consequences of unlimited aquarium collection of the White List species (to the species themselves, and their coral reef homes);
- ~ The EIS fails to accurately analyze the cultural and socioeconomic consequences of unlimited aquarium collection in West Hawaii
- ~ The EIS fails to propose and analyze any meaningful mitigation or alternatives that would reduce the impacts;
- ~ The EIS fails to adequately incorporate input of Native Hawaiian practitioners, experts, community members, and consulted parties.

**From:** Sunny Seal-LaPlante  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Agenda Item F2  
**Date:** Monday, May 18, 2020 12:54:17 PM

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This is my thoughts about the EIS. The EIS fails to accurately analyze the environmental consequences of unlimited aquarium collection of the White List species (to the species themselves, and their coral reef homes); Look at the whole picture, Keahou used to be known as the gold coast because of the yellow tang. What a decrease there has been for someone to line their pockets with most of the fish collected dying. Sincerely, Sunny LaPlante

**From:** Ellen Lubrano  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Reject this  
**Date:** Monday, May 18, 2020 9:16:47 PM

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Why would this even be an issue here in our beautiful environment, please know and protect our islands and environment. aloha, Ellen

## ITEM F-2

**From:** Lynch, James M.  
**To:** [DLNR.BLNR.Testimony](#)  
**Cc:** [Sakoda, David](#); [Neilson, Brian J](#)  
**Subject:** [EXTERNAL] Re: Live testimony link  
**Date:** Tuesday, May 19, 2020 12:31:16 PM

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To clarify we wish to provide verbal testimony and respond to blnr questions of the applicant. This is item F.2 on the agenda. My name is Jim Lynch on behalf of pijac. Phone 425.463.8396.

----- Original Message -----

**From:** "Lynch, James M." <jim.lynch@klgates.com>  
**Date:** Tue, May 19, 2020 3:23 PM -0700  
**To:** blnr.testimony@hawaii.gov  
**CC:** David Sakoda <david.sakoda@hawaii.gov>, "Neilson, Brian J" <brian.j.neilson@hawaii.gov>  
**Subject:** Live testimony link

Please send me a zoom link for the applicant, pijac, to address blnr concereng the Hawaii aquarium feis. My phone number is 425.463.8396. please let me know if you need anything further

This electronic message contains information from the law firm of K&L Gates LLP. The contents may be privileged and confidential and are intended for the use of the intended addressee(s) only. If you are not an intended addressee, note that any disclosure, copying, distribution, or use of the contents of this message is prohibited. If you have received this e-mail in error, please contact me at [jim.lynch@klgates.com](mailto:jim.lynch@klgates.com).

**From:** Karen Martinez  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] No AQUARIUM TRADE  
**Date:** Tuesday, May 19, 2020 10:55:42 AM

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NO AQUARIUM TRADE ...

STOP IT ALL. IT IS NOT NATURAL, NORMAL. IT'S ABOUT GREED. NO JUSTIFICATION FOR THIS KIND OF ACTIVITY. STOP IT NOW.

KAREN MARTINEZ  
Big Island registered voter

**From:** pah  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] agenda item F.2  
**Date:** Tuesday, May 19, 2020 2:30:07 PM

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Aloha, Hoping that your families have all been well during this changing times. I am a Hawai'i resident writing today to reject the EIS to reopen west Hawai'i to the aquarium trade. In this time of COVID 19 the oceans are reviving themselves. The earth is recharging. The humans are trying to figure out what part they actually play in the scheme of this global ecosystem. I would imagine the BLNR would be working to see how to help repair and nourish the ocean life that is now thriving. It is disheartening to hear that the BLNR agenda item F.2 would include conversation on an illegitimate and negligent EIS for stealing life from the ocean to be placed in Aquariums? I know the department cares for the ocean life and the wonders that it shares with humans. Yet, a EIS process must be made valuable and not produced from a consumer capitalistic perspective. Try look the ocean and see it is thriving. Try see the value in the Hawaiian traditions that can work with the wellbeing and preservation of the ocean. BLNR needs to take EIS seriously, ones that accurately give analyze to why environmental protection is in place and the things that must be priority. Hawaiian practitioners should be the one to create the table that the BLNR sits at to make choices to co create a better world for all life.

Thanks for taking the time to read my testimony. I urge BLNR to reject the EIS and stop this theft and captivity of ocean life. Blessings, Pannelopi McKenzie

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Blessed be your day and all that you do!

**From:** Steven Mendez  
**To:** [DLNR.BLNR.Testimony](#)  
**Cc:** [sheyannemendez](#); [Anne Rexach](#)  
**Subject:** [EXTERNAL] Agenda Item F.2 Testimony  
**Date:** Tuesday, May 19, 2020 3:03:32 PM

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Hello Board of Land and Natural Resources

My name is Steven Mendez. I am a fourth generation resident of Hawaii. I live on Hawaii island with my mother and daughter. I have read material related to actions your team is directly involved with. I would like my recommendations considered.

Your consideration is greatly appreciated.

Recommendations Agenda Item F.2 Testimony

- ~ The EIS must accurately analyze the environmental consequences of unlimited aquarium collection of the White List species (to the species themselves, and their coral reef homes);
- ~ The EIS shall accurately analyze the cultural and socioeconomic consequences of unlimited aquarium collection in West Hawaii
- ~ The EIS must propose and analyze any meaningful mitigation or alternatives that would reduce the impacts;
- ~ The EIS should adequately incorporate input of Native Hawaiian practitioners, experts, community members, and consulted parties

Steven Mendez

**From:** Jennifer Mitchell  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] REJECT the EIS  
**Date:** Tuesday, May 19, 2020 1:14:54 PM

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Aloha,

BLNR- Please Reject the aquarium trade EIS. Increase fines and revoke poachers commercial marine license. Fish are best looked at in their natural habitat in person while diving or through a camera or video. Leave the fish in the ocean.

Sent from my iPhone

**From:** Melody Moore  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL]  
**Date:** Tuesday, May 19, 2020 8:12:27 PM

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Please do not allow the aquarium trade here. It is so inappropriate for a few people to profit off sending our fish elsewhere.

Thank you  
Melody Moore

**From:** Mike Moran  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Agenda Item F.2 Testimony  
**Date:** Tuesday, May 19, 2020 2:57:43 PM

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Aloha,

My name is Mike Moran a resident and registered voter in South Maui with long term concerns about the aquarium fish business in Hawaii. I am testifying to ask you to reject this EIS for a number of reasons. A decade ago I participated in a public meeting on Maui with Laura Thielen then Chair of DLNR, way before she became a state legislator. Many of us left that meeting expecting real progress to help preserve this valued resource in Hawaii. Yet we never experience true consistent progress. It seems to be an extensive series proposed actions while the fish depart year after year. This is about the natural environment- those NATURAL RESOURCES. This document fails to truly address the environmental consequences of unlimited aquarium collection. The fish are leaving and the coral reef system continuously deteriorates.

Meanwhile enough with the carrots and bring on the sticks, Strongly punish the violators with substantial fines. No more "cost of doing business " fines. Time for "put them out of business" fines.

Mahalo,

Mike Moran  
Kihei

**From:** Karima Morgan  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Agenda Item F.2 Testimony  
**Date:** Monday, May 18, 2020 11:18:44 AM

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I am a Hawaii resident and ask BLNR to **REJECT** the Environmental Impact Statement related to the aquarium fish trade in West Hawaii.

There seem to be many flaws in this report:

Improper analysis of the environmental consequences of unlimited aquarium collection of the White List species and their coral environment.

Inadequate attention to the alternatives to mitigate damage.

Insufficient inclusion of Native Hawaiian practitioners and experts.

Mahalo for your careful consideration of these issues.

Karima Katharyn Morgan  
Kihei

**From:** Karima Morgan  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Agenda Item F.1 Testimony  
**Date:** Monday, May 18, 2020 11:27:39 AM

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I am a resident of Hawaii and ask BLNR to **Increase Fines and revoke poachers licenses** related to collections of fishes from Hawaii waters for aquarium trade.

Given recent news from late February of a violation of poaching 550 reef fish in an illegal area and an inadequate fine and no removal of commercial marine license, I implore you to take this opportunity to make stronger conditions for those who violate existing laws about fish collection. Our fish and reefs are under assault on so many fronts that it is NOW time to make every effort to preserve and sustain this valuable resource.

Mahalo for your deep consideration of this important issue.

Kathaeryn Karima Morgan  
Kihei

**From:** Gail  
**To:** [DLNR.BLNR.Testimony](#)  
**Cc:** [Gail Morris](#)  
**Subject:** [EXTERNAL] Agenda Item F.2 Reject the EIS.  
**Date:** Sunday, May 17, 2020 9:06:31 PM

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Dear BLNR,

I am a long time homeowner in Puako, Hawaii. Since my first snorkel in 1972 to my most recent snorkel there a few weeks ago, there has been a dramatic decline in the fish population along the Puako reef and other South Kohala reefs.

While there are various reasons for this decline, aquarium and commercial collecting has had a huge impact on our schools of reef fish.

When the commercial collecting ban went into effect a few years ago, I noticed for example, that the yellow tang started returning and now we have some fairly large school that inhabit certain areas of the long Puako reef. We now have juvenile Moorish Idols growing into adulthood and also there has been an increase in the day octopus who had almost disappeared from Puako. Do not allow aquarium or commercial collecting again. It is too soon, the fish population has barely had time to recover from the damage done to the South Kohala area. Beach 69 was a paradise with clear water and hundreds of different fish, even seahorses and manta rays came there, up until about ten years ago. I have seen net collectors there and all down the Puako reef. However nobody is here to stop them and evidently it is difficult for officers to look inside of large coolers are other means of transporting fish. I believe that I have even seen turtle poachers at night with large coolers in the back of their pick up trucks at the beach access, but nobody will ever come down to check it out. But I digress. This has occurred when it was illegal to collect aquarium fish. If you open it up again, it will be a disaster for the reef.

Please reject the EIS. It is flawed, and there is no reason to open up our area again to the aquarium trade. Unlimited collection (because there are not enough people to enforce the limits) is still occurring and if you make it legal, we are going to see an area as barren as the one at A Bay. We need to allow the natural fish population to thrive and we need to allow the coral to grow.

Agenda F.1 please stop illegal poaching along our Kohala coast and fine the offenders heavily and figure out a way to look inside of their coolers. Fine them, stop them.

Thank you,

Mary G Morris  
Puako

**From:** Jonathan Nahakuelua  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Reject West Hawaii Aquarium Reef Trade  
**Date:** Tuesday, May 19, 2020 10:26:49 PM

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Aloha Sirs and Madams!

My name is Jonathan Nahakuelua and I am a resident of Holualoa Hawaii and I am formally writing to your institution to ask that you not allow any reef fish on the west coast of Hawai'i Island for the aquarium trade. I am an avid surfer here and since the moratorium has been in effect I have seen a clear increase in the amount of fish and health in our coral reefs; I haven't seen it this healthy since I was a young child. I feel that allowing fish to be harvested for aquariums is an exploitation of Hawaii's unique and fragile ecosystem. To me, this would be the same if you were to allow bird traders to catch and sell our native birds to be sold in pet stores and kept in cages (please don't do that either). Please reject the EIS that comes before you. Please be a champion for our reef fish.

Thank you!



Jonathan Nahakuelua  
Science Teacher  
Kealakehe Intermediate School  
74-5062 Onipa'a St,  
Kailua-Kona HI 96740  
Phone: 808-313-3000  
Fax: 808-327-4315

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**From:** West Hawaii Aquarium Fishery  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Web Form: Support for West Hawaii Aquarium Fishery  
**Date:** Tuesday, May 19, 2020 1:02:32 PM

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This survey was submitted at 11:01:28pm GMT on 05/19/2020

Aloha Mr. Sakoda,

My name is Julie Nelson and I am a resident of Kailua Kona, Hawaii.

I support DLNR's adoption of the Final Environmental Impact Statement analyzing Issuance of 10 Commercial Aquarium Permits for the West Hawai'i Regional Fishery Management Area (WHRFMA).

1. I believe that it fully analyzes the potential impacts the 10 West Hawaii aquarium fishers may have on the environment under each of the proposed alternatives.
2. The FEIS proposes measures to avoid and minimize already insignificant impacts on fish species and the environment in the WHRFMA.
3. The West Hawaii aquarium fishery is one of the best managed fisheries in the State of Hawaii, and in fact the world.
4. The West Hawaii Fishery Management Area was developed with significant input from all parties, including the environmental community as well as Native Hawaiians.
5. The proposed action is an overall reduction in take over the pre-ban alternative.
6. I request that additional applicants, should there be any, conduct another EIS and CIA to measure additional impact beyond the 10 permits in the Proposed Action, further ensuring the sustainability while complying with the Supreme Court ruling.
7. Reducing landed catch via approving only the 10 permits proposed is a practical approach to address "no limits".
8. By issuing 10 permits, the fishermen can easily self-police as they know who is permitted to legally fish.
9. The limitation on the number of permits also assists DOCARE/enforcement as they will easily know who is legally allowed to fish by the limited number of boats which are registered. This will make fishery management practical for law enforcement.

I can be reached at [leenelson.ipcs@gmail.com](mailto:leenelson.ipcs@gmail.com)

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**From:** Koohan Paik-Mander  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Agenda item F-2 testimony - REJECT THE EIS  
**Date:** Sunday, May 17, 2020 10:43:43 PM

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Aloha,

I grew up in the biodiverse western Pacific during the 1960s and 1970s. That means I know intimately what a healthy reef looks like. Since moving to Hawaii in 1993 -- first Kauai and now Hawaii Island -- I have never seen any marine ecosystem that comes anywhere near the volume and diversity of the reef life that I grew up with. Coral bleaching from climate change has been a profound problem, but the aquarium trade has been equally devastating, foreclosing the possibility for Hawaii's reefs to ever find health again, if it this unconscious industry is allowed to continue. To decriminalize the aquarium trade and expect our important reef systems to continue to thrive, is tantamount to encouraging tourism in the middle of the COVID-19 pandemic and expecting everything to just go back to "business as usual" at Waikiki and elsewhere. It just doesn't work that way. Nature bats last.

Planet Earth is in a state of shock due to humanity's dominant economic system that is predicated on endless consumption of Mother Earth's resources. We cannot continue to plunder until there is nothing left. Every individual specimen of every individual species is valuable to restoring our damaged reefs. We must concentrate on restoration, not degradation. The aquarium trade degrades our marine ecosystems.

Please REJECT THE EIS. The EIS fails to accurately and holistically analyze the environmental consequences of unlimited aquarium collection of the White List species to the species themselves, to the condition of the marine ecosystems, and to the wellbeing of humanity in general, which depends on a healthy reef to thrive. And if economics is your concern, in the end, the economy does get impacted with messing too much with Mother Nature. Just look where we are now -- we have already cascaded into a multi-systems breakdown: natural systems, economic systems, healthcare systems, etc. etc. etc.

The planet, humanity, and marine ecosystems are more important than profits.  
Koohan Paik-Mander  
Honokaa

**From:** Maxx Phillips  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Request to participate in BLNR May 22, 2020 meeting  
**Date:** Wednesday, May 20, 2020 2:07:24 PM

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Aloha,

I would like to provide video testimony regarding Agenda Item F.2 at the Friday BLNR meeting.

My name is Maxx Phillips, email is [Mphillips@biologicaldiversity.org](mailto:Mphillips@biologicaldiversity.org), cell is (808)284-0007.

Mahalo,

Maxx Phillips, Esq.  
Hawaii Director  
Center *for* Biological Diversity  
1188 Bishop Street, Suite 2412  
Honolulu, Hawaii 96813  
(808) 284-0007  
[www.biologicaldiversity.org](http://www.biologicaldiversity.org)

**From:** Andrew plack  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Aquarium EIS  
**Date:** Sunday, May 17, 2020 11:54:18 AM

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Aloha and good day,

I am writing on behalf of the keaukaha community and our association. We have been trying for decades to protect our reefs and ecology for the residents, fishermen and tourists. The single objective for all 3 is a healthy and robust Aquatic environment full of fish.

To realize that, we all must agree upon what is sustainable and healthy interaction with the ocean and what is not.

Killing aquatic life and not eating it is abhorrent to literally every Fisherman I've interacted with living in keaukaha my whole life. The aquarium industry kills every fish they catch. They die soon, they die along the way, they die in a tank in Ohio. It is a habit that only a few benefit from and the detriment is substantial.

After reviewing the EIS we find that it is an incomplete and inadequate instrument to safe guard our fish population.

It is easy to see that a few bad actors are substantially hurting our ocean resource.

Please consider all our experience in this. I've lived and fished for 50 years and we all see the huge drop off in fish numbers and size. Why on earth would we strain them further with such an poor practice such as aquarium collection for profit.

We oppose the EIS and it's findings. We dive these waters and we can see the problem. It's not academic. It's plain to see.

The life of the land may only be perpetuated through correct action.

Thank you and,  
Aloha

Andrew black

**From:** Robert Raimo  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] reject the EIS aquarium trade  
**Date:** Sunday, May 17, 2020 1:20:50 PM

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i am really against the aquarium business. It benefits so few people and so many tourists, which is the islands main business, so enjoy seeing the fish. i don't think it should be allowed anywhere on the islands.

Please reject the EIS and see what you can do about getting it completely banned on all the islands. we don't need it, and we don't want it.

Robert Raimo  
220 Kamakoi Loop  
Kihei HI

## ITEM F-2

**From:** Kris R.  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Agenda Item F-2  
**Date:** Tuesday, May 19, 2020 6:58:43 AM

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Aloha and Good Morning. My name is Kristin Ramsey and I am a Hawaii resident owing in Kaneohe. I am writing you today to encourage you to keep West Hawaii closed to the capture of aquarium fish. Our fish belong in the ocean please! Our fish do not belong in aquariums. Please save our wonderful resources so the Keiki are raised with malama and can be stewards of the Earth as they age.

If you do open West Hawaii to harvesting fish for aquariums, please reevaluate your dine structure. I implore you to raise the fine to its maximum of 1000\$/fish as a swift deterrent to illegal harvest.

Better yet, say NO. Please, jeep our fish in the ocean!

Mahalo, Kristin Ramsey

**From:** Shannon Rudolph  
**Subject:** [EXTERNAL] Vote NO on Agenda item F2  
**Date:** Tuesday, May 19, 2020 8:33:45 AM

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Aloha!

Please vote NO & do not accept flawed E.I.S. on the aquarium collection issue.

Hawai'i's fish belong in Hawai'i. The aquarium trade is an exploitive, dying, dinosaur industry stealing treasure from 'the public commons'. Virtual aquariums are all the rage & a million times more ecologically friendly.

Protect Hawai'i - vote no on this E.I.S.

Mahalo, Shannon Rudolph - Holualoa  
37 year Hawai'i resident

--

How wonderful it is that nobody need wait a single moment before starting to improve the world. ~ Anne Frank

Hawai'i Register to Vote!  
<http://olvr.hawaii.gov/>

**From:** Dominique Shelton  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] reject the EIN  
**Date:** Monday, May 18, 2020 1:47:57 PM

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The EIN is flawed. They are called reef fish for a reason. If you don't have fish, then there will be no healthy reefs. We know how key reefs are for the island eco. Not to mention for the tourist trade. Please consider the very real damage this is creating. That is very hard to mitigate if at all!! Please consider real science/biology and eco systems.

I lived on Maui from '93 to '06. I have recently returned to live and was SHOCKED at the depletion of the fish population!!! I swim regularly and am constantly saddened by what has happened. PLEASE please stop this.

Aloha,

--

Dominique Shelton

**From:** Dominique Shelton  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Reject the EIS  
**Date:** Monday, May 18, 2020 1:27:01 PM

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Dear BLNR,

I'm requesting the rejection of the EIS. Please increase the fines for the illegal poaching and damage to one of our states most important resources! The licenses of these criminals should be revoked, not just a slap on the wrist.

Reef fish are a key and integral part of the ecology. Please protect them. Please be Pono.

--

Dominique Shelton

**From:** Dominique Shelton  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] increase fines and revoke poachers licenses  
**Date:** Monday, May 18, 2020 1:57:28 PM

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BLNR

Please revoke the licenses of any one who has poached and increase their fines. This would help curtail the poaching and depletion in the fish trade. The EIS is flawed.

Reef fish are one of our most important resources not only to the island ecology but to the tourist trade as well.

Please consider the short term financial gain in relationship to the long term benefits for the reefs and the island ecology There's no comparison. Please protect our natural resources! They are very hard if not impossible to replace.

Please be Pono.

Aloha,

--

Dominique Shelton

**From:** Rachel Silverman  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Reject Final EIS for aquarium trade  
**Date:** Monday, May 18, 2020 2:17:35 PM

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Aloha DLNR

Please reject the final EIS regarding fish collection in West Hawaii and continue the moratorium. The coral reef ecosystem needs to remain intact in order to remain healthy, it is under too much stress from human activities already and it doesn't need added stress from fish collection. The majority of our economy comes from tourism, tourists come to this island to see our beautiful marine life. The capture and export of these fish for the financial benefit of so few contradicts our need to protect our marine ecosystems.

Thank you for considering my point of view.

Mahalo

Rachel Silverman

Kailua Kona resident

Sent from my iPhone

**From:** TKS Productions  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Agenda Item F.2- testimony  
**Date:** Tuesday, May 19, 2020 12:10:37 PM

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Aloha Board and Natural Resources,

My name is Tifani Stegehuis, I am a Hawai'i born and raised resident on the Island of Hawaii- West Hawaii. I am a local business owner, certified lifeguard & watermen, and community advocate. I am submitting this email as my testimony in regards to Agenda item F.2 on West Hawaii waters aquarium trade.

I am urging you all to **reject** the EIS that has been submitted. After reviewing such document, there are crucial flaws and missing key components within this EIS to which it can not be taken as sound or thorough evidence. In my strong opinion, the due process on this critical topic at hand has not been completed for this EIS. Here is why:

The data presented is incifietiant. The EIS fails to accurately analyze the environmental consequences of **unlimited** aquarium collection of the "White List" species (to the species themselves, and their coral reef homes); This in itself will create a negative domino effect to the detriment of our delicate ecosystem, which is unique only to our islands, and more so our waters of West Hawai'i Island. There are no meaningful mitigation or alternatives proposed within the EIS, that would reduce the impacts stated above, rendering it incomplete and insufficient.

Another critical point to note is that the authors of this EIS also fail to adequately incorporate input of Native Hawaiian practitioners, experts, community members, and consulted parties. The input of the community, it's leaders and it's native practitioners must be considered and respected as the voice of the people and our rights to protect our natural resources, plants and animals included.

As appointed members of the Board of Land and Natural Resources, it is your responsibility- *"to manage, administer, and exercising control over public lands, water resources, ocean waters, navigable streams, coastal areas (except commercial harbors), minerals, and all interests therein"* as quoted from- [dlnr.hawaii.gov/about-dlnr](http://dlnr.hawaii.gov/about-dlnr) website. I urge you all to please, do so with utmost care and as thoroughly as possible to insure our natural resources are protected and preserved for future generations and NOT for the immediate gratification or greed of those seeking to exploit, belittle or diminish such resources.

I hope that this brief email testimony shall serve with the same impact as I would be able to provide in person, but as this hearing is scheduled to be held off island in Oahu, I am not physically able to attend but send this email as a testimony in my physical absence.

Thank you for your time,

Tifani Stegehuis  
75-5909 Ali'i Drive  
Kailua-Kona, HI. 96740  
808-498-5575

Aloha from Kona,  
Tifani Stegehuis

TKS Productions

ITEM F-2

**From:** Claud Sutcliffe  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Reef Fish  
**Date:** Tuesday, May 19, 2020 11:16:30 AM

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Please help protect our reef fish: reject this flawed EIS to open up our reefs for commercial exploitation!

Mahalo!

Claud Sutcliffe, PhD

Sent from my iPhone

**From:** Tlaloc Tokuda  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Agenda Item F.2 Testimony  
**Date:** Sunday, May 17, 2020 5:39:58 PM

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Dear BLNR,

I'm a resident of Kona and love the foreshores of Kona. I love snorkling and watching the abundant and diverse flora and fauna. Please reject the EIS because it's totally flawed. It relies on insufficient, faulty, improper data and should be rejected outright. The EIS fails to incorporate Native Hawaiian practitioners, experts and community members. There is nothing sustainable about this EIS please reject the EIS. Thank you,

Tlaloc Tokuda

73-4599 Kukui St

Kailua Kona 96740

Hawaii

**From:** Topher Dean  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] F. 1 & F. 2 Aquarium Trade  
**Date:** Monday, May 18, 2020 11:54:05 PM

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Dear BLNR representatives,

F. 2. I've been a resident of North Kohala since 1996. I'm an avid surfer and love to snorkel. I have seen the decline of the reefs over the decades. A couple of months ago, my Nieces were visiting me and they were snorkeling. Of course they were thrilled and thought it was beautiful. I didn't have the heart to tell them how sad it is. Then my Son, who has worked for the DAR counting reef fish and measuring coral decline, saw a school of yellow tang. There were about a dozen. We pointed it out to my Nieces and my Son said something that broke my heart, "I heard schools of tang like this were common." That is so sad. Twenty years ago, snorkeling in this exact same spot, Mahukona, there were schools of yellow tang, a hundred fish or more. There were huge balls of brilliant yellow fish swirling around. Not just one school. there were always two or three schools. There was never a time when I didn't see several large schools of tang and here's my Son beset with melancholy, knowing that he's missed out on one of nature's spectacular experiences. It's just so tragic and why, so someone can make a buck, so a man in Iowa can look at one lonely yellow tang in a tiny prison, from the comfort of his living room couch? What right does anyone have to take these fish? They don't belong to any individual, they belong to all of us, you, me, my Son and the man in Iowa who will have to buy a ticket to Hawaii to see them. These fish belong to Earth. They have a right to exist. Maybe scientists can estimate the bare minimum of fish to prevent extinction, but what about the balance of life on the reef and what about depriving me of my right to witness the beauty of this amazing planet?

There are many stressors on our reefs: The climate crisis, chemical pollution, sewage, overfishing, tourism, coastal development, plastic trash and nets, the last thing these fish need is people scooping them up in nets. These stressors are getting worse and worse. Instead of needlessly decimating the reefs for the luxury of filling aquariums, we should be doing everything in our power to protect them. I don't want to live in a world where the sight of a few yellow tang is amazing, I want to live in a world where the ocean is swirling with hundreds of yellow tang. I miss them and the other fish too. It's empty out there and it's so sad, that I can no longer go snorkeling, it's just too depressing.

F. 1. Protection of our reefs is creating laws and enforcing those laws. Perhaps your empathy lies in the person who's just trying to make an "honest" living, selling our reef fish. Well, what about Hawaii's number one source of revenue, tourism? By letting

the aquarium trade continue, you're impacting thousands of businesses owners who depend on tourism. What happens when the tourists go home and say the snorkeling sucks in Hawaii, there's no fish or coral? If your heart goes out to people who are just trying to support their family, think of the thousands of local families who depend on the beauty of Hawaii's natural wonders. Why impact those thousands of local families, so a few people can make a buck? Aquarium fish traffickers can find another line of work. Anyone caught violating the aquarium ban should have their boat seized and all their equipment taken as well as suffer a severe fine.

I would like to testify in person if I may.

Topher Dean

Home: 808-889-5862

Cell: 808-339-0482

POB 493

Hawi, HI 96719

Please take the time to see my efforts to clean the Kohala Coastline:

<https://www.youtube.com/watch?v=sOghCZh8los&t=2s>

<https://www.facebook.com/groups/2065480060191671/>

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Fight with aloha,

Topher

**From:** Claire Trester  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] F.2 Testimony  
**Date:** Sunday, May 17, 2020 1:27:47 PM

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Aloha,

I ask you to REJECT THE EIS.

I'm a resident of the Big Island, I have made North Kohala my home for 36 years.

I'm a distance swimmer, my swim spots include the Kohala Coast from Kukio to Kapaa Park. Over the decades I have seen what Aquirum collectors, climate change, and Ocean acidification has done to our fragile reef system.

It's truly unconscionable to even consider to reopen up West Hawaii to the AQ trade. How can you as public officials square the taking for profit of our reef fish off our vulnerable reefs for a handful of Reef Rapers. The fish on our reefs are Hawaii's State Treasure to be protected and enjoyed by all who live here and visit.

The EIS fails to accurately analyze the long term consequences of unlimited Aquarium Collectors not only the taking of our fish, but damage done to the reef as its result.

The EIS fails to analyze Cultural and socioeconomic consequences of unlimited Aquarium Collection in West Hawaii.

The EIS fails to adequately incorporate the input of Native Hawaiian Practitioners, experts, and community members.

Data and assumptions made in the EIS are both faulty and inadequate.

As gatekeepers of our Aina, you have the Kuleana to REJECT THE EIS.

Malama Pono

Claire Trester

In support of Hawaii's low impact, valuable, eco-friendly, sustainable aquarium fishery.

## **The Battle Over Hawaii's Oceans, The Aquarium Fishery**

May 19, 2020

By Ron Tubbs

[Hawaii's aquarium fishery](#) is an important part of a [100-billion dollar a year pet industry](#). This fishery has the potential to sustainably provide millions of much needed revenue to the State of Hawaii. This is what the State of Hawaii needs, [a stable valuable industry](#). For too long Hawaii has allowed other businesses to take a back seat to a vulnerable tourist industry which has a high carbon footprint.

With the Covid-19 emergency, and many people including aquarium hobbyists stuck at home, the [pet industry has skyrocketed](#). With the loss of fish imports coming from overseas, Hawaii has seen a [surge in sales and demand](#) for aquarium fish! Only Oahu fishermen, fishing with their Commercial Marine Licensed (CML) 2 inch net, have been able to supply some fish to the U.S. in an incredibly high demand market. Managing sustainability and utilizing this renewable resource wisely benefits all.

The wholesale cost of an individual fish ranges from \$5 dollars to \$450 dollars, with [one successful Hawaii aquaculture bred deep water aquarium fish fetching as much as \\$24,000 dollars each](#). Marine fish are the most renewable natural resource in Hawaii because they are the most efficient breeders on the planet, producing [1 to 5 million fry, per year, per pair](#). Survival of approximately 1-3% of the millions of fry, create fish populations of [10,000 to 50,000 fish from just one pair](#), who will reach the adult breeding stage within months. Sustainability is easily reached.

The potential value of this renewable, sustainable fishery is exponential. Divers sell reef fish at divers' prices to local wholesalers. Then wholesalers double the price to pet stores. The airlines in effect double the fish prices again for the freight cost. This provides important substantial income to essential airlines. Then, retailers worldwide double the price again to customers. So, it is not just catch value, but the global revenue to airlines, local dive shops, tourist aquariums, boat dealers, repair shops, pet stores, aquarium manufacturers, pumps manufacturers, fish food makers, filters, public aquariums worldwide, many jobs, gas suppliers, etc. that all benefit from the aquarium fishery. One million in fish catch value provides much need income to many industries.

Also, several public and commercial marine aquariums for tourism in Hawaii rely on the fishery too (eg. Oceanarium, Sea Life Park, Waikiki Aquarium, Waikaloa, and Disney resort). Moreover, **the potential for increasing production and output of the States already valuable marine [aquaculture](#) business is also dependent on aquarium fishermen.**



Hospital Aquariums Calm the Sick Children

photo by Ron Tubbs

The HEPA requirement all began on Friday October 27<sup>th</sup> 2017. The lower court handed down a ruling that implements the Supreme Court Ruling made in September regarding Hawaii's Aquarium Fishery. The ruling actively applied HEPA, Hawaii environmental laws, to the aquarium fishery. The fishery has now completed its full environmental review with the results stating what we already knew. The fishery is sustainable!

The Supreme Court Ruling had far reaching impact and will surely affect all ocean permits issued by DLNR. [Currently there is a new lawsuit asking that DLNR require aquarium fish CMLs \(Commercial Marine Licenses\), to also have HEPA studies.](#) All DLNR permits may now be legally forced to comply with HEPA requirements, whereas before the permits were all thought to be exempt. **What is going to happen when Eating Fisheries or tourist group permits require HEPA environmental reviews? Are they too only going to be limited to a few permits? The decisions the Land Board makes regarding the Aquarium Fishery HEPA, will have far-reaching implications. Limiting the aquarium fish permits to only a few, with no new permits being issued, will result in the end of a sustainable resource for the state.** Why shut down a sustainable valuable industry to please a few, because of user conflict; those who oppose the fishery are out of business right now.

Friday May 22<sup>nd</sup> 2020 the land board meets to review the [2,400 page environmental review](#) of the West Hawaii fishery. This review is based on a much lower conservative 25% [maximum sustainable yield](#). Actual yields could be as high as 30-35% and still be sustainable according to

some experts. Even though this lower conservative HEPA 25% maximum sustainable yield rate is used, still most fish species taken by our Aquarium Fishery showed a lower burden of only a 1% or less population take! A few fish species with higher takes, already have laws in effect protecting them as per the DLNR the Land Board Rules Packages of 2014. FRA areas and other previously done laws also ensure sustainability.

[Fish base](#) website, which rate fish species vulnerability rates, indicates low vulnerability for all fish species taken by the proven sustainable aquarium fishery. None of these fishes are at risk of extinction.

Considered one of the most successfully managed and sustainable fisheries in the world, West Hawaii fishery still had its small mesh net and commercial permits revoked. The fishery has always welcomed further ecological protections and more studies, as they have always shown what we already know; The fishery, without a doubt, is sustainable. Yet this means little to a fishery whose shut down was not based in fact or science, but on legalities and forced to pay daunting legal fees. It hardly seems fair that pseudo-science and testimony from conflicting user group individuals resulted in the shutdown of such a valuable and such a well-studied fishery. Justice was not served; science was not considered.



Public Aquarium's Educate Visitors on Ecosystems and Provide a Protective Ark for Many Fish Species Waikiki Aquarium Exhibit photo by Ron Tubbs

For many years DLNR successfully managed the fishery; many new laws were implemented to regulate the fishery. FRA (Fish Management Areas) were created in Kona to separate the user groups and allow fish to repopulate. Over 1,600 fish counts were done and fish populations are on the increase with millions more fish on the reefs. 2014 and 2015 saw two sets of laws introduced by DLNR and the fishery to create further regulations, despite already being sustainable; these are now laws. FRA, bag limits, gear restrictions, banned species, and many more laws ensure sustainability. How will other fisheries respond to working with governments to introduce laws if they still get shut down anyway?

The state has issued aquarium permits for over 60 years. Yes, fish count data and catch reports up to 2017 show no major recent fish catch increases or declines in fish. Instead fish counts were increasing for the 2017 fishery.

Imagine, tourists coming to Hawaii and visiting our public aquariums, but there are no Hawaiian fish to be seen there. This may happen. The opposition to the fishery, comes mainly from Rene Umberger and Snorkel Bob who's businesses have user conflict issues with the fishery. The small vocal tourist group prefers to keep fish out of aquariums and have fish viewing conducted solely through their dive businesses. The fishery no longer exists on Maui, and had only a handful of divers 8 years ago, but it is blamed for fish population declines on the island. They claimed that the fishery has unlimited "take," but there are many laws [Hawaii's laws for the fishery](#) which prove that to be untrue.

For years, special interest groups have used the guise of "ecology," to attack the Hawaii Aquarium Fishery by promoting the fallacy that there is a lack of Hawaii tropical fish and aquarium fishermen have no restrictions. Anti-aquarium fish advocates refuse to listen to science, instead not budging on the stand that the fishery needs to be totally shut down. They use untruths because 20 years of scientific studies conducted by the state's ocean researchers show [fish population increasing](#), which does **not** back up their claims. Laws affecting ecological concerns must be based in science, or they will undermine the meaning and importance of real ecological issues.

Last year Hawaii's [leading marine scientists](#) came out in Support of the fishery not the user groups.

According to the state regulatory agency DLNR's [17 year study](#) of the fishery, fish counts for the major species collected were up by millions. The 20 years of Kona fish count research was headed by DLNR marine biologist, Bill Walsh, Ph.D., who worked with his team of marine biologists to count fish and review years of fish reports and studies. These studies showed that Hawaii's small [aquarium fishery was sustainable](#), and had a low impact on Hawaii's oceans. DLNR has opposed closure of the fishery basing their decision on years of catch report data and fish counts.

The already sustainable aquarium fishery became even more regulated and sustainable when, the Hawaii Tropical Fish Association met with DLNR scientists to create new laws to ensure the sustainability of the Hawaii's aquarium fishery. These additional laws took the form of the Oahu and Kona aquarium collecting [rules packages](#) and went into effect in 2014 and 2015. These new

rules created enhanced restrictions on diver's gear, species restrictions, size limitations, and quantities (bag limits) of fish that could be collected. To further prevent ocean user conflict, numerous areas statewide remain open to tourists but closed to aquarium fishermen.

DLNR employees have stated that if they fail to manage the fishery effectively then they have not done their jobs. Clearly the results of the 20 years studied and the incredible [fish population](#) increases have shown DLNR has done its job! Many news laws have been enacted, and constant monitoring of fishery statewide has been done. DLNR has been very effective at active management. Many fishermen believe too many laws have been enacted. To claim that DLNR is in collusion with any fishery is ludicrous. Hawaii's aquarium fishery management has been touted worldwide as an exemplar.

Upon legal review, the Supreme Court ruling seems to violate not only the law of the United Nations in which oceans are deemed the common heritage of all men, and that no individual group should lay claim to own, but it also violates the United States Constitution, and the Hawaii State Constitution, both of which state that oceans belong to the public. Governing agencies are there to manage the oceans not to eliminate user groups. To eliminate any user group is unconstitutional. To restrict access to or eliminate any user group over another without the science to back-up the decision, particularly one in which many Hawaiians work, is clearly a violation to the State of Hawaii Constitution, and puts the state at legal risk. We were told by lawyers that we could legally sue DLNR for removing our permits, but unlike our opposition we have morals and ethics, especially regarding facts and truth.

Hawaii's beautiful fish seen in aquariums around the world, allow education about sustainable ecosystems to occur, and encourage tourists to come to Hawaii. If tourist-based user conflict groups succeed in closing the fishery, no one will be able to learn about Hawaii's tropical fish in aquariums. Now that, will be a big loss, to the fishermen, state business, and airlines and even to tourism.

People will soon have to resort to diving or snorkeling to see Hawaii's fish, which in the minds of tourist business opposed to the fishery, will benefit them. Those who do, will line the pockets of the main proponents of an aquarium fish closure ~ a few radical snorkeling and dive shop owners who have led this unsubstantiated, biased attack on Hawaii's sustainable aquarium fishery who are also responsible for hundreds of tourist drowning deaths and major ecological coral impacts. Ignoring the scientific evidence with which to measure their ecological concerns, they are primarily concerned with their bottom line, not ecology, and have sold the majority of legislators, eco-groups, and the public a bill of goods which will have negative impacts on tourism and our economy.

Hawaii's small, but important [aquarium fishery](#) faces and unsure future.

**We can only hope those who are making very important life changing decisions educate themselves about the issue and make the right decision.**

**Tina Owens executive director of the LOST FISH Coalition, Member West Hawaii Fisheries Council says:**

*A great deal of the “sky is falling” news you’ve heard about the reef recently is just plain not true.*

*Try giving credit to the thousands of volunteer hours given by your neighbors to the West Hawaii Fisheries Council to get the gains you are now free to enjoy. (done with the help of Aquarium Fishermen on the council who agreed to the laws)*

*Lost Fish Coalition, through the venue of the West Hawaii Fisheries Council, has been working with many stakeholders to get a reasonable settlement to the long-standing problem of the aquarium industry harvest. In almost 16 years, we have accomplished the following management actions:*

- *We have 55-plus miles of coastline where reef fish cannot be taken. These areas allow the fish to grow large enough to be very successful breeders. These areas — Fish Replenishment Areas — are the nurseries for the reef fish to spread out to the rest of the reefs.*

*Thanks to these measures, West Hawaii has more fish than most every other widely accessed reef in the state, especially the beautiful ornamentals that give tourists and residents so much delight. If someone says that nothing has been done in West Hawaii, they are either lying, unaware or are being duped by someone else’s lies about the situation. There are a few “outsiders,” by which I mean people who don’t live here, who have decided that West Hawaii doesn’t know what it’s doing. This group, headed by Maui resident Robert Wintner, and Wintner’s frontman Rene Umberger, decided it was going to be the ones to get aquarium collecting banned, to make themselves the “rescuers of the reef.”*

*Clearly if the goal is to get rid of the industry and management prevents that goal being reached, then discrediting the benefits and successes of management would seem the only way left to go. And so they have taken that path.*

*They have held community meetings and displayed a lot of false or twisted data, quoting from papers outdated by more than 15 years, and “re-interpreting” data from scientific papers. They have been telling people that “there are no fish left,” which is patently untrue. I once had a woman tell me with great passion and assurance that there are no fish left anywhere in West Hawaii. I asked her why she thought that, and she replied that everyone knew it. I asked if she swam in the ocean. No. Did she dive? No. Did she know anything about the management strategies in place? No. She had, however, just come from an “information session” in which she heard these things from Wintner’s frontman Rene Umberger.*

*Which brings me back to the wide-screen TV. The TV runs a 90-minute loop of undisturbed, natural activity of fish on the reef. Apparently, the footage was filmed on West Hawaii reefs. The article states: “Wintner praised the videos. ‘It shows what abundance looks like,’ Wintner said.” At least he got that right.*

**~ Tina Owens, executive director of the LOST FISH Coalition, Member West Hawaii Fisheries Council and resident of Kailua-Kona.**

See for yourself News links:

<http://www.hawaiinewsnow.com/story/26454840/videos-show-tropical-fish-swarming-states->

reefs

<http://www.reef2rainforest.com/2014/08/29/biblical-spawning-event-on-hawaiian-reefs/>



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THE HUMANE SOCIETY  
OF THE UNITED STATES

***Via Email***

**Date:** May 21, 2020

**To:** Chair Case and the Board of Land and Natural Resources (BLNR)

**From:** For the Fishes, Center for Biological Diversity, The Humane Society of the United States, Moana 'Ohana, The Kaupiko 'Ohana from Miloli'i, and Kai Palaoa

**Re:** Meeting of the Board of Land and Natural Resources, on May 22, 2020, at 9:00 am; **Item F.2.** Determination of Whether the Final Environmental Impact Statement (FEIS) Complies with Applicable Law and Adequately Discloses the Environmental Impacts of Proposed Issuance of Commercial Aquarium Permits, Commercial Marine Licenses, and West Hawai'i Aquarium Permits for the West Hawai'i Regional Fishery Management Area

As conservation and animal protection organizations, Native Hawaiian subsistence fishers and cultural practitioners, and individuals with strong interests in preserving the State of Hawai'i's natural resources and protecting its delicate coral reefs, **we strongly urge you to reject** the Pet Industry Joint Advisory Council's (PIJAC's, or "Applicant's") Final Environmental Impact Statement (EIS) purporting to analyze the environmental impacts of commercial aquarium fish collection by 10 permittees in the West Hawai'i Regional Fishery Management Area (WHRFMA).<sup>1</sup>

The EIS fails to meet all of the criteria for acceptance as defined in HRS 343-2 by failing to fulfill the definition of an environmental impact statement, failing to adequately describe identifiable environmental impacts, and failing to satisfactorily respond to comments received during the review.

The EIS fails to fulfill the definition of "environmental impact statement" in a number of ways, which include, but are not limited to a failure to disclose the environmental effects of the proposed

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<sup>1</sup> Office of Environmental Quality and Control, The Environmental Notice at 4 (Apr. 23, 2020), [http://oeqc2.doh.hawaii.gov/The\\_Environmental\\_Notice/2020-04-23-TEN.pdf](http://oeqc2.doh.hawaii.gov/The_Environmental_Notice/2020-04-23-TEN.pdf); PIJAC, Final Environmental Impact Statement for the Issuance of Commercial Aquarium Permits for the West Hawaii Regional Fishery Management Area (2020), [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2020-04-23-HA-FEIS-Hawaii-Island-Commercial-Aquarium-Permits.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2020-04-23-HA-FEIS-Hawaii-Island-Commercial-Aquarium-Permits.pdf).

action, as well as the effects on the economic and social welfare, and the cultural practices of the community and State; a failure to propose measures to minimize adverse effects; and, a failure to propose adequate alternatives.

The EIS's failure to satisfy the acceptance criteria are primarily the result of its fatally flawed conclusion that the proposed action would cause no significant adverse effects and the resultant insufficient disclosures and descriptions of the direct and cumulative impacts of the action in the affected area(s). This grave error was reflected in every meaningful aspect of the document including the main requirement to adequately disclose and describe the identifiable environmental impacts.

These insufficiencies resulted in improper evaluations of HEPA significance criteria and prevent the BLNR from considering fully the environmental factors involved in the proposed action.

Therefore, the EIS must be rejected because it is required to "fully declare the environmental implications of the proposed action and discuss all relevant and feasible consequences of the action," but fails to do so.<sup>2</sup> As described further below, documentation of significant impacts is included in several figures contained within the EIS, however they are not declared.

The EIS must be rejected because it is required to propose mitigation measures "to avoid, minimize, rectify, or reduce impact, including provision for compensation for losses of cultural, community, historical, archaeological, fish and wildlife resources . . .," and to include "mitigation measures to reduce significant, unavoidable, adverse impacts to insignificant levels, and the basis for considering these levels acceptable," but fails to do so.<sup>3</sup>

The EIS must be rejected because it is required to consider alternatives that "could attain the objectives of the action. . . while minimizing some or all of the adverse environmental effects, costs, and risks," but it fails to do so.<sup>4</sup>

The EIS must be rejected because it is required to "satisfactorily respond to comments," but fails to do so.<sup>5</sup> Having entered into this process in good faith, we believe that had the comments we submitted during the consultation and public review phase been taken seriously, the insufficiencies would have been addressed.

The end result is an EIS that is as deeply flawed and entirely inadequate under the Hawai'i Environmental Policy Act (HEPA, Haw. Rev. Chapter 343) and its implementing regulations, as it was in its first form as a Draft Environmental Assessment. The EIS still fails to address these and other notable flaws that we outlined in our prior comments:

- The EIS fails to analyze the impacts of collection over time (i.e. the expanded 5-year scope of the analysis, beyond one year, is still inadequate);

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<sup>2</sup> HAR 11-200-16

<sup>3</sup> HAR 11-200-17 (m)

<sup>4</sup> HAR 11-200-17 (f)

<sup>5</sup> HAR 11-200-23

- The EIS fails to accurately analyze the environmental consequences (i.e. direct, indirect, and cumulative impacts) of unlimited collection of aquatic life to biological, cultural, and socioeconomic resources in the WHRFMA;
- The EIS fails to accurately analyze the environmental consequences (i.e. direct, indirect, and cumulative impacts) of unlimited collection of aquatic life to biological, cultural, and socioeconomic resources in East Hawai'i and other parts of the State that may be connected via larval dispersal patterns;
- The EIS fails to accurately analyze the cumulative impacts of commercial collection along with recreational collection;
- The EIS fails to accurately analyze impacts on cultural resources;
- The EIS fails to accurately analyze the alternatives presented;
- The EIS fails to accurately analyze the impacts of collection practices harmful to corals;
- The EIS relies on inaccurate, misleading, and incomplete data;
- The EIS fails to propose and analyze mitigation measures; and
- The EIS fails to adequately incorporate input of Native Hawaiian cultural practitioners, experts, affected citizens and consulted parties.

The Applicant's Preferred Alternative does not ensure that commercial aquarium fish collection is lawful, responsible, and sustainable for any of the White List fish species from nearshore habitats in the WHRFMA nor for any species taken elsewhere in the state where collection is allowed under the current geographic scope of the aquarium permits. The EIS's continued conclusion that the aquarium fishery in the WHRFMA has "no significant impact" on targeted reef fish species, coral reefs, and the human communities that rely on them is unsupportable. The EIS fails to accurately evaluate the true direct, indirect, cumulative, short-term and long-term effects of the Preferred Alternative and fails to propose any proper mitigation.

### **Failure to Adequately Disclose Environmental Effects**

At the foundation of every determination made in the EIS is the flawed assertion that "... the annual collection of [the White List] species would be less than 2% of the island-wide population [on Hawai'i Island]," and that "commercial aquarium collection likely has minimal impacts on populations in general."<sup>6</sup> This generalized and extremely broad focus results in an EIS that grossly miscalculates and underreports the potential effects and environmental consequences of the proposed action in the WHRFMA Open Areas which is where aquarium collecting would actually occur (i.e. the project sites). The FEIS attempts to justify the generalizing with several statements, including:

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<sup>6</sup> EIS at ii

*“Permitted commercial aquarium fishing has been a part of the socioeconomic, cultural, physical, and biological resources for decades and is considered a part of the baseline condition of the affected environment;” and,*

*“The evaluation includes past use and potential impacts by the commercial aquarium fishery because it has been a part of the baseline condition of these resources since the late 1940s.”<sup>7</sup>*

These positions are akin to an EIS for large scale land development in a conservation district stating that buildings near and far have been a part of Hawai’i’s landscape for hundreds of years and so the proposed project will have no significant impacts because buildings are part of the background environment.

This is a ridiculous position that would result in a complete failure to accurately evaluate the direct, indirect and cumulative impacts of the proposed action – as it does here. This generalization minimizes the impacts of aquarium collecting and leads to the erroneous conclusion of no significant impact.

HEPA requires that “agencies shall consider the sum of effects on the quality of the environment and shall evaluate the overall and cumulative effects of an action.”<sup>8</sup> Furthermore, the Agency must consider “both primary and secondary” consequences, “and the cumulative as well as short-term and long-term effects of an action.”<sup>9</sup> Notably, “cumulative impact” is defined as the impact resulting from “the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions,” and “[c]umulative impacts can result from individually minor but collectively significant actions taking place over a period of time.”<sup>10</sup>

The EIS concludes that “no significant adverse direct or indirect biological resource impacts are anticipated under any of the five alternatives under consideration. Significant cumulative impacts are anticipated; however, commercial aquarium collection is a less than significant factor in the cumulative impact.”<sup>11</sup> As detailed throughout this document, these statements are patently and demonstrably false.

#### Failure to Disclose Direct Impacts

The direct impacts of aquarium collection occur when a permittee captures fish on a reef. Depending on the abundance of that species on that reef, the impact of that one action may be small or large. For species that naturally occur in low numbers, such as Tinker’s Butterflyfish, Flame Wrasse, Hawaiian Longfin Anthias, and Psychedelic Wrasse, one collector can remove the entire population of a species in one day. Such a direct impact was not disclosed or described.

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<sup>7</sup> EIS at 17 and 23

<sup>8</sup> HAR § 11-200-12.

<sup>9</sup> HAR. § 11-200-12.

<sup>10</sup> HAR. § 11-200-2.

<sup>11</sup> EIS at 138

For species that naturally occur in higher numbers, the impact, whether small or large, of that one day of collection by a single collector will combine with the impacts of additional days, and/or additional collectors, and/or the impacts from other areas or other types of removal, and accumulate over time. This cumulative impact was not disclosed or described.

#### Failure to Disclose Indirect Impacts

Collecting pressure also contributes to indirect impacts. These indirect impacts may manifest as reduced abundance of targeted species elsewhere in the WHRFMA, including Open Areas, FRAs MPAs, in East Hawai'i, or elsewhere in the state. These indirect impacts may be driven by heavy collection pressure combined with low levels of recruitment, larval connectivity and dispersal patterns that are impacted by fish abundance in the Open Areas, heavy collecting on boundary areas, or other action. These indirect impacts were not adequately disclosed or described in the EIS.

An example of indirect impacts may be found in the DAR and WHAP data documenting yellow tang population trends in the WHRFMA (Fig. 1). In 2003 collection pressure increased rapidly, nearly doubling the annual average of the prior 10 years by 2006 when it peaked at 382,921.<sup>12</sup> Collection pressure remained high in the following years, and its impact was reflected in yellow tang abundance that rapidly declined not just the Open Areas, but in the FRAs and MPAs, as well (Fig. 1).

Other indirect impacts result when the effects of collection pressure interact with the reproductive strategies of targeted species. Hawai'i's ocean currents carry and disperse fish larvae to coral reefs, both near and far. Most fishes on Hawai'i's reefs are the result of other fishes upstream of that reef.<sup>13</sup> The currents and conditions that control larval connectivity and dispersal processes are complex. The larvae of some species are able to travel between islands, while others do so to a lesser extent. For example, in one study, some yellow tang larvae on Hawai'i Island travelled on ocean currents for 15 km before settling on a reef while others traveled 184 km.<sup>14</sup>

Recent research into two species of small bodied surgeonfishes, including kole which is heavily targeted by the aquarium trade, has determined that populations of these fishes are genetically distinct on each of the main Hawaiian Islands. This means that, for at least these two species, there is little genetic mixing between islands, and once species are depleted on any given island, there is no other source for population replenishment. Further, connectivity and dispersal studies on the island scale for certain species have identified important spawning source areas that are essential for maintaining populations on other reefs across the island.

Regardless of whether larval connectivity exists mainly intra-island or extends inter-island, reduced populations of reef fishes in their source areas will seriously impact reef fish abundance in their downstream, sink reefs, and thus the entire island.<sup>15</sup> The EIS fails to account for this critically important and highly significant indirect impact. The precautionary approach requires the determination of source areas for the 40 White List species on Hawai'i Island and the establishment

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<sup>12</sup> Williams et al. (2009); DLNR catch reports

<sup>13</sup> Noland (1978); Christie et al. (2010); Coleman (2019).

<sup>14</sup> Christie (2010).

<sup>15</sup> Coleman (2019).

of protections for those populations to ensure local species survival, which was not provided in the EIS.

#### Failure to Disclose Cumulative Impacts

As described above, one day of collection by a single collector will combine with the impacts of additional days, and/or additional collectors, and/or the impacts from other areas or other types of removal, and accumulate over time.

The cumulative impacts of the action are readily apparent, undeniably substantial, and significant according to numerous studies and papers, and even including the EIS, though they are not disclosed as such in the statement.<sup>16</sup> For example, the EIS includes some information that is less generalized and more specific to the affected area. The WHRFMA Open Areas in various tables, such as 5-4 and 5-8, present population trend data and disclose abundance levels of the White List species in each of the three management areas, Open, FRA and MPA.<sup>17</sup> The data presented in those figures are the population trends for each of the White List species. Determination of the impact of collection is a simple matter of comparing the population density (i.e. abundance) in the Open areas with that in the closed areas. Strikingly, that disclosure is ignored entirely for all species showing significant impacts and is only briefly mentioned for species showing little to no impact.<sup>18, 19</sup> Otherwise, the discussion of the data presented in those tables is focused on the positive impact of the *absence* of aquarium collection in the FRAs rather than on the negative impact of the *presence* of aquarium collection in the Open Areas.<sup>20</sup>

In another example, the yellow tang population trend data from the tables mentioned above are plotted on a graph where the impact of aquarium collecting becomes visually apparent in the gaps between the red and blue lines representing the protected areas, and the green one representing the Open Areas (Fig. 1).

In the Open Areas, **aquarium collecting has depleted the natural abundance of yellow tangs by 60%**, on average, every year since at least 1999 when DAR and the West Hawai'i Aquarium Project (WHAP) began their extensive surveys in the WHRFMA (Fig. 1).<sup>21</sup> However, inexplicably, the EIS fails to disclose and discuss this major impact.

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<sup>16</sup> Tissot and Hallacher (2003); Walsh et al. (2010); Walsh et al. (2015); Williams et al. (2009).

<sup>17</sup> EIS at 101, 111

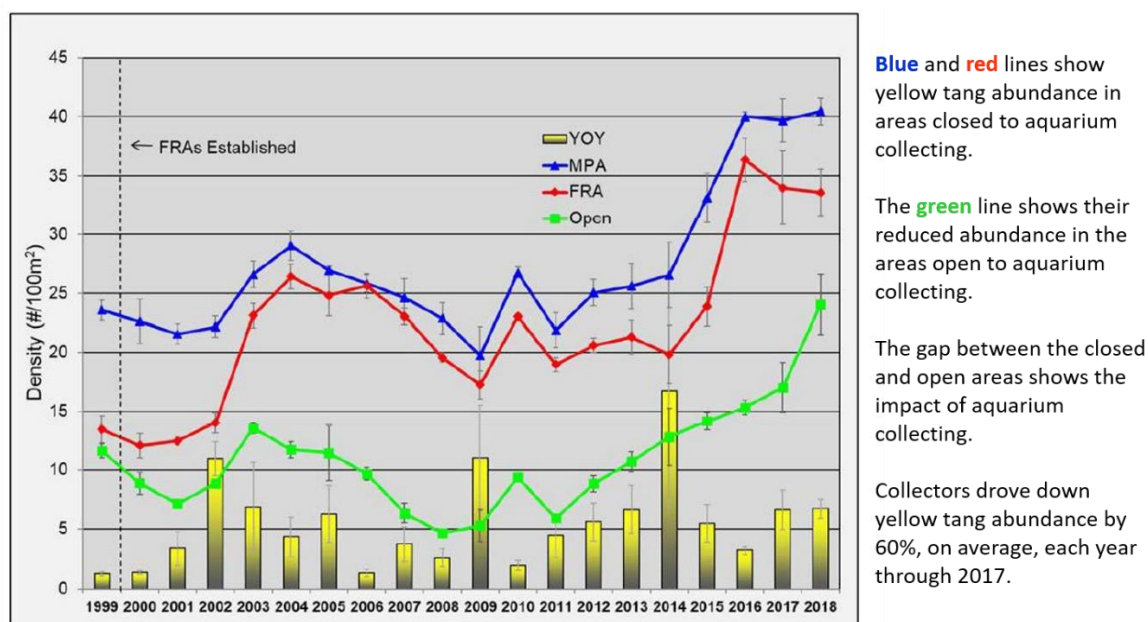
<sup>18</sup> Note: the data in the figures do not show the true impact of aquarium collecting because Open Area abundance is inflated by the inclusion of 2018 data, when no legal aquarium collection occurred and Open Area populations surged.

<sup>19</sup> EIS at 105, 106, 127, 128

<sup>20</sup> EIS at 100, 110

<sup>21</sup> EIS at 101, 103, 111

**Fig. 1: Adapted from DAR data which shows the population trend (density) over time in the MPA, FRA, and Open Areas, as well as the annual yellow tang recruits (YOY) which are not included in the trend line data.<sup>22</sup>**



Further evidence of the impact is found in the significant increases in yellow tang abundance that have occurred in affected areas once aquarium collecting pressure has been removed. This has happened twice since 1999 when the WHRFMA was established. The first time happened within the newly established FRAs where within 4 years of protection, yellow tang abundance increased to levels similar to those in the MPAs. Between 1999 and 2007 yellow tang abundance increased by 72% in the FRAs, remained stable at the MPAs and *declined* by 45% in the Open Areas (Figure 1). It was precisely because of this substantial increase that the FRAs were deemed significant in their ability to restore fish populations that had been heavily depleted by aquarium collecting, such as yellow tangs and kole.<sup>23</sup>

The second increase in yellow tang abundance occurred after the November 2017 court order that invalidated the aquarium permits pending HEPA review, when yellow tang abundance in the areas newly closed to aquarium collecting experienced the greatest population surge ever documented (Fig. 1).

The EIS also insufficiently considers the cumulative impact of aquarium collecting on the coral reef ecosystem, especially as it relates to climate change. Algae eating fish, known as herbivores, are critically important to the very survival of Hawai'i's coral reefs, but their abundance and biomass is at critically low levels on many reefs in the WHRFMA.<sup>24</sup>

<sup>22</sup> EIS at 103

<sup>23</sup> Williams et al. (2009).

<sup>24</sup> Asner (2020).

Food fishing and aquarium collecting have reduced the herbivore biomass in West Hawai'i by approximately 70%, with commercial aquarium collecting accounting for 27% of the total.<sup>25</sup> 97% of the fish taken by the aquarium trade in West Hawai'i are herbivores.<sup>26</sup> Therefore, the contribution of aquarium collecting to declining herbivore biomass is significant and, as such, requires a thorough and accurate evaluation under HEPA, which it does not receive in the EIS.

#### Failure to Adequately Analyze Long-Term Impacts

The EIS unlawfully limits its analyses to the time period of five years, and thus, fails to accurately consider the impacts of one-year collection permits cumulatively with other "past, present, and reasonably foreseeable actions" "over a period of time." The reasoning behind this 5-year period is that it coincides with a legally required report to the legislature, the Findings and Recommendations of Effectiveness of the West Hawai'i Regional Fishery Management Area (WHRFMA), which is produced every five years and which, notably, primarily documents the effectiveness of the *absence* of aquarium collecting to restore depleted populations of targeted species in the Fish Replenishment Areas (FRAs) closed to aquarium collecting since Dec. 31, 1999.<sup>27</sup>

The EIS notes that each permit lasts only one year, and therefore a new HEPA analysis would need to be completed on an annual basis. However, the relatively short time period of the activity itself does not nullify HEPA's clear requirement for considering the long-term effects of that activity.<sup>28</sup> Stating that the Agency can simply reevaluate the consequences of a year-long permit *after* that year is up entirely contradicts HEPA's mandate to evaluate the potential consequences of an action *before* the Agency authorizes the action.

Additionally, long-term studies by DAR in West Hawai'i have documented severe depletion and localized extirpation of once heavily-targeted butterflyfish species and described other aquarium targeted species as "routinely seen in the 1970's, now very rare."<sup>29</sup> Species such as yellow tangs and other surgeonfishes are very long-lived, with lifespans measuring decades. A 5-year analysis period is far too short, because they may not reproduce until they are at least 5 years old.

#### **Reliance on Flawed and Inadequate Science and Data**

As previously mentioned, fundamental errors in the EIS's impact analysis resulted in patently false findings of no significant impacts and improper evaluations of HEPA significance criteria. Those errors include, but are not limited to, the use of an improper baseline, the minimization of potential collection rates under the proposed alternatives, and the improper use of an expanded area to which the EIS incorrectly asserts the direct impacts would apply. A properly conducted EIS would have focused on impacts to the area(s) where the subject activity is to take place. This EIS is fundamentally flawed in that it fails to do so. In addition, the EIS ignores the true evidence of

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<sup>25</sup> Walsh et al. (2020)

<sup>26</sup> EIS at 99

<sup>27</sup> EIS at 83

<sup>28</sup> EIS at 17

<sup>29</sup> Williams & Walsh (2008)

impacts, including the most important one: the magnitude of depletion to targeted species in the areas from which they are taken as determined by a comparison to the baseline.

The use of an improper baseline:

The EIS identifies the project location as the WHRFMA but then uses the geographic scope of the entire island to measure the impacts of aquarium collecting under the proposed alternatives, which is a major flaw.

A proper baseline reflects pre-project environmental conditions, and is spatially relevant. Here, a proper baseline is found in the conservation districts and managed areas within the WHRFMA, collectively referred to as Marine Protected Areas (MPAs), where aquarium collecting has been prohibited for nearly 30 years. The WHRFMA MPAs have served as baselines in numerous reports and papers that seek to document the effects of aquarium collecting on targeted fish populations in West Hawai'i by measuring the magnitude of depletion to targeted species in the areas from which they are taken.

Rather than using the MPAs as a baseline, areas that are free from direct impacts of aquarium collecting, and comparing them to the Open Areas where direct impacts are found, the EIS uses catch as a percentage of population to determine impacts. While this method can be used to describe impacts, it is less accurate and inappropriate for determining impacts under HEPA. The problems with this method include the use of catch numbers that are self-reported, never validated, and under-reported, as well as the failure to identify the true rate of the impact, because the population may be inflated by natural occurrences that occurred in protected areas, as well.

More importantly, the EIS employs the method erroneously by using catch as a percentage of *island-wide* populations to measure population impacts instead of properly using catch as a percentage of *Open Area* populations. The EIS defends the use of island-wide populations by claiming “[they] are the best metric when measuring population impacts” because of “larval connectivity around the Island of Hawai'i.” <sup>30</sup>

Importantly, larval connectivity between coral reefs serves to highlight areas where indirect and cumulative impacts of the Applicant's actions may manifest, because the effects occur “later in time [and] farther removed in distance”. <sup>31</sup> Larval sources in Open Areas depleted by aquarium collecting will disperse reduced fish larvae which eventually settle downstream on sink reefs which may be miles away from source areas. For yellow tangs, most of which are taken when they are less than 2 years old, these effects won't manifest until years after take has occurred because yellow tangs don't mature until they are 4 to 7 years old.

The use of island-wide populations to measure direct impacts from the proposed activity in the WHRFMA Open Areas is absurd and cannot be justified with larval connectivity. When using catch as a percentage of population to measure direct impacts, the Open Area populations, at the depths

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<sup>30</sup> EIS at 1716, 1731

<sup>31</sup> HAR 11-200-2

where the trade operates and where the fish are taken, must be used, as they are when DLNR uses this method to describe these impacts in grant reports to NOAA (Fig. 2).

**Fig. 2. Population estimates and % of population taken by aquarium collectors of 'White List' species. 'E' indicates an endemic species, Catch is the average annual aquarium catch over FY '06-'10, and Population is an estimate of total numbers of fish in collected Open Areas of hard bottom from 30'-60' depths. Catch as % of Population is the % of the species' population in collected open areas taken annually by aquarium collectors.** <sup>32</sup>

Scientific Name		Catch	30'-60' Population	Catch as % of Population
<i>Acanthurus achilles</i>		8,477	10,655	79.56%
<i>Zembrasoma flavescens</i>		324,211	536,842	60.39%
<i>Ctenochaetus hawaiiensis</i>		3,926	8,524	46.06%
<i>Acanthurus nigricans</i>	E	794	2,951	26.91%
<i>Naso lituratus</i>		5,972	55,405	10.78%
<i>Anampses chrysocephalus</i>	E	229	2,623	8.73%
<i>Forcipiger flavissimus</i>		2,643	33,604	7.87%
<i>Macropharyngodon geoffroy</i>		170	2,623	6.48%
<i>Chaetodon quadrimaculatus</i>		982	16,556	5.93%
<i>Coris gaimard</i>		678	11,802	5.74%
<i>Acanthurus olivaceus</i>		1,039	25,080	4.14%
<i>Chaetodon miliaris</i>		228	5,573	4.09%
<i>Ostracion meleagris</i>		112	3,606	3.11%
<i>Ctenochaetus strigosus</i>		36,244	1,841,492	1.97%
<i>Pseudojuloides cerasinus</i>		175	10,327	1.69%
<i>Gomphosus varius</i>		512	55,733	0.92%

When used properly, as in this case, catch as a percentage of population shows that aquarium collecting has a substantial and significant impact on targeted species. For example, from 2006 – 2014, catch as a percentage of population for yellow tang ranged from 60% to 17% and for Achilles Tang from 80% to 33%.<sup>33 34</sup> Factoring catch-underreporting would increase the apparent impact even further.

Additionally, though the EIS claims otherwise, these impacts did not result from legally permitted activities, but rather from illegally issued permits. The actions under those permits have never been properly reviewed, which underscores the urgent need for proper review now.

While it may be expedient to convert decades of indirect and cumulative impacts into the baseline condition of the affected environment, erasing them in such a way prevents their proper disclosure, and prevents a proper and acceptable evaluation under HEPA. Even a casual observer can see how this serves to minimize and dilute the impacts that are otherwise evident in numerous studies and reports on the impacts of aquarium collecting in the WHRFMA.

<sup>32</sup> Walsh et al. (2013).

<sup>33</sup> Walsh et al. (2013).

<sup>34</sup> EIS at 76

### Inaccurate Projected Levels of Catch

The EIS inaccurately determines the level of impact by comparing the projected annual average catch of the White List Species by “10 aquarium fishers” to the island-wide populations of those species, per Tables 5-11 and 5-14.<sup>35</sup> As described above, using island-wide populations to determine levels of impact of aquarium collection in the WHRFMA Open Areas is an apples to oranges faulty comparison.

Equally faulty is the reference throughout the EIS to “the 10 fishers” where it is used to describe past and potential future aquarium catch and values that would occur under the alternatives. Per the EIS “the 10 commercial fishers who are part of this proposed action **made up 2 to 8** of the WHRFMA fishers in any given year from 2000 – 2017.”<sup>36</sup>

Though DLNR knew the identities of the “14 fishers” during the DEIS comment period, and therefore was able to provide a breakdown of the actual number of collectors represented each year, they have been unable to do so for this EIS, claiming they don’t know the identities of the 10 fishers. Nonetheless, the range of “2 to 8” in any given year is highly problematic for determining the level of impact of the proposed action (even if this flawed methodology were sufficient for doing so, which as we explain here, it certainly is not), because the past and future average and maximum rates of collection and impacts are grossly underestimated. For comparison, the actual number of collectors represented in any given year when there were 14 fishers was 7.6, on average, though the EIS referred to them as “the 14”.<sup>37</sup>

Projected levels of catch are also inaccurate because they fail to factor the outer limits of what the permits allow. For example, yellow tangs historically have accounted for 82% of reported catch in the WHRFMA. According to the EIS, the maximum annual yellow tang reported catch by some, not all, of those 10 individuals was 130,152.<sup>38</sup> However, this number is meaningless and serves no evaluation purpose because 130,152 does not represent the outer limits of what the permits allow and doesn’t even represent the outer limits of what the collectors might take.

It has been reported that commercial aquarium collectors in the WHRFMA work capturing fish just 3 days a week.<sup>39</sup> There is nothing preventing them from increasing their catch, for example, via increasing the number of hours and/or days they collect, or via new equipment or technology, in response to perceived scarcity from, for example, impacts to habitat from storms and climate change, or, in order to meet the high demand for aquarium reef fish and their increasing market value.

The absence of take limits means that consumer demand, rather than sound conservation policy based on environmental review, will continue as the factor determining the abundance of these and

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<sup>35</sup> EIS at 119 and 139.

<sup>36</sup> EIS at 23.

<sup>37</sup> EIS at 2172 and 2234

<sup>38</sup> EIS at 122

<sup>39</sup> Stevenson et al. (2011).

other important reef fishes. Consumer demand has driven the annual capture of at least 271,430 yellow tangs, on average, in the Open Areas since 2000, with one year topping out at 386,767.<sup>40</sup> It has resulted in yellow tang Open Area abundance that has been depleted by 60%, on average, compared to the natural abundance that occurs in the baseline MPAs.

Even during the financial downturn of 2007/2008, consumer demand for Hawai'i's yellow tang remained high, with at least 568,000 yellow tangs sold in just those two years, alone. This documented, sustained, consumer demand provides a strong incentive for "the 10" to increase their take well beyond their prior average and maximum take of yellow tangs.

### **Failure to propose mitigation and to consider reasonable alternatives**

The erroneous conclusion that the action causes no significant adverse effects causes the EIS to fail to meet a number of requirements for acceptance, including the proposal and consideration of mitigation and reasonable alternatives. None of the proposed alternatives meet the requirements to attain the objectives of the action "while minimizing some or all of the adverse environmental effects, costs, and risks."<sup>41</sup> The No Action alternative achieves the latter, and more, but the significant beneficial impact is not disclosed and, as noted in the EIS, it fails to attain the objectives of the action.<sup>42</sup>

The Achilles Tang and Preferred alternatives both set a daily bag limit at 5 per person, per day, which fails to minimize any adverse effects. The outer limit would allow the 10 collectors to take a total of 50 Achilles Tang each day, and 18,250 over 365 days. This would exceed the 2017-2018 30' – 60' Open Area Population of 13,796 by 4,454 fish.<sup>43</sup> This so-called "limit" could literally lead to the complete collapse of Achilles Tangs in the Open Areas.

Low levels of Achilles Tang recruitment over the past 11 years have been insufficient to compensate for the existing levels of harvest.<sup>44</sup> This serves as an example of how critically important the science of larval dispersal and connectivity is for the future of Hawai'i's fish. Is the low recruitment due to severely depleted Achilles Tang source areas? In any case, this is an argument for essential mitigation to protect this important species with a complete prohibition on aquarium trade take of Achilles Tang.

Examples of alternatives that would meet the requirement to minimize the impacts to targeted species:

Place-based Management Alternative #1: This alternative would include total take limits for areas within the Open Areas, such as reporting sub-zones, bays, reefs, stretches of coastline no longer than .5 mile, etc. aimed at restoring and maintaining natural abundance in each area, as determined by nearby MPAs or FRAs and as approved by community members and other stakeholders.

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<sup>40</sup> EIS at 122

<sup>41</sup> HAR 11-200-17 (f)

<sup>42</sup> EIS at 98

<sup>43</sup> EIS at 76

<sup>44</sup> Walsh et al. (2020).

Place-based Management Alternative #2: This alternative would expand the areas closed to the aquarium trade by adding new or expanding existing FRAs so that the total area closed to the aquarium trade (FRA + MPA) in the WHRFMA is at least 80%.

Place-based Management + Marine Life Care Standards Alternative #3: This alternative would expand the areas closed to the aquarium trade to at least 60% and would require better treatment of marine life under the care of trade members by specifically prohibiting trade practices that violate Hawai'i's misdemeanor animal cruelty law. Alternate practices such as these would be prescribed and required: slow decompression to prevent barotrauma instead of fizzing/swim bladder puncture; layered thicker shipping bags lined with paper instead of fin/spine clipping; more/enough shipping water to facilitate a maximum of 24 hours withholding of food before fish are placed in bags and boxed for shipping instead of starvation for 3+ days – all aimed at reducing stress to captured marine life, increasing their captive lifespans, and thus reducing consumer demand.

### **Populations are not sustained in the absence of take limits that are designed to do so**

The EIS repeatedly refers to the concept of “unlimited collection” as an “extreme possibility” that is “speculative and not reasonably foreseeable.”<sup>45</sup> It asserts that collection would be limited under the Preferred Alternative which limits the number of aquarium permits to be issued to 10. However, permit limits are not take limits. Without take limits that are tied to precise locations where the take occurs, nothing prevents one, five, or ten permit holders, from collecting all of the individuals among the 40 White List species from any reef where they dwell. And further, nothing prevents those collectors from taking the same action on reef after reef in the WHRFMA, with the very real potential to permanently deplete, to the point of collapse, the natural abundance of targeted reef fish species in areas along the coastline.

This possibility is neither speculative, nor unforeseeable. As described below, unlimited aquarium collection has already significantly contributed to the collapse of yellow tang abundance in at least one large area in Hawai'i, on O'ahu's leeward coastline.

Without any proposed or implemented limits on take levels, consumer demand becomes the driving force in determining the abundance of this important reef fish for Hawai'i's threatened coral reef ecosystems and the tens of thousands of Hawai'i Island residents who depend upon them. When consumer demand is allowed to determine levels of take, disaster can strike at any time, especially in today's world with climate change, and its projected increasing frequency of hurricanes and coral bleaching, barreling down upon us.

Hawai'i has already experienced, and is still suffering from, the impacts of overzealous commercial aquarium collection following a natural disaster. A white paper by DAR and UH researchers documents the devastating impacts of unleashed and unlimited commercial aquarium collecting on

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<sup>45</sup> EIS at 337, 339, 1719, ...

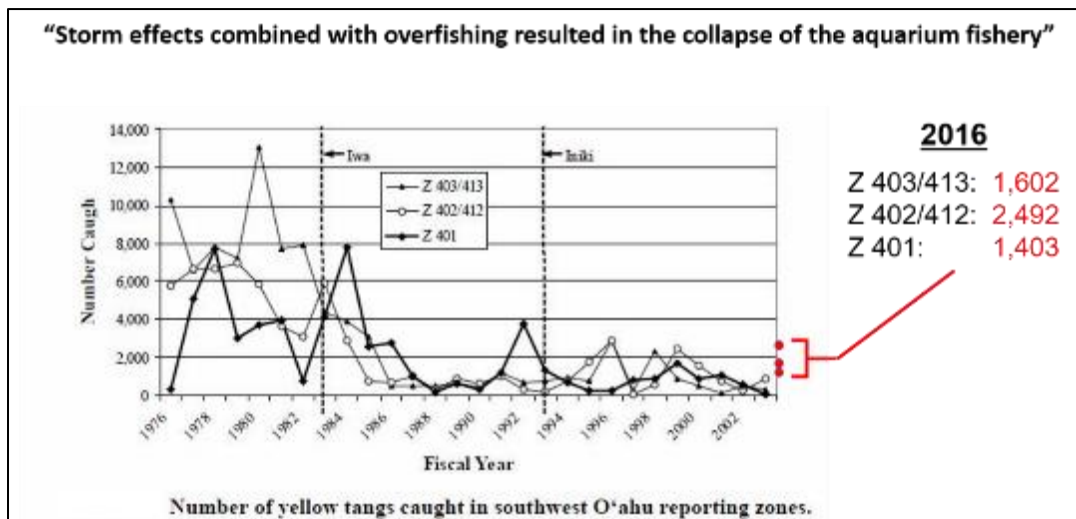
vulnerable yellow tang populations, and their subsequent collapse after Hurricane Iwa, which to this day, have not recovered.

The paper documents that *“In the weeks following the storm, . . . many fish had migrated to areas that escaped major damage. . . With the loss of collecting habitat, collectors concentrated their efforts in those sites still economically utilizable. . .”* ***“The net result was that storm effects combined with overfishing resulted in the collapse of the aquarium fishery along [the leeward] portion of the O’ahu coastline.”***<sup>46</sup>

Prior to 1983, aquarium collectors reported taking upwards of 23,000 yellow tangs a year in those areas. Within three years of Hurricane Iwa, reported catch had dropped by more than 90%. Since 1986 reported yellow tang catch in that area has ranged from 2,000 – 6,000 per year (Fig. 3 and 4).

With no oversight from DLNR in the ensuing years, constant collection pressure, driven by consumer demand, has prevented any former abundance from returning to O’ahu’s leeward coast, because aquarium collecting takes juvenile fish that are years from maturity. A sufficient number left on the reefs would have contributed to the repopulation of the yellow tangs that were at least four times more abundant four decades ago, before commercial aquarium collecting nearly wiped them out completely.

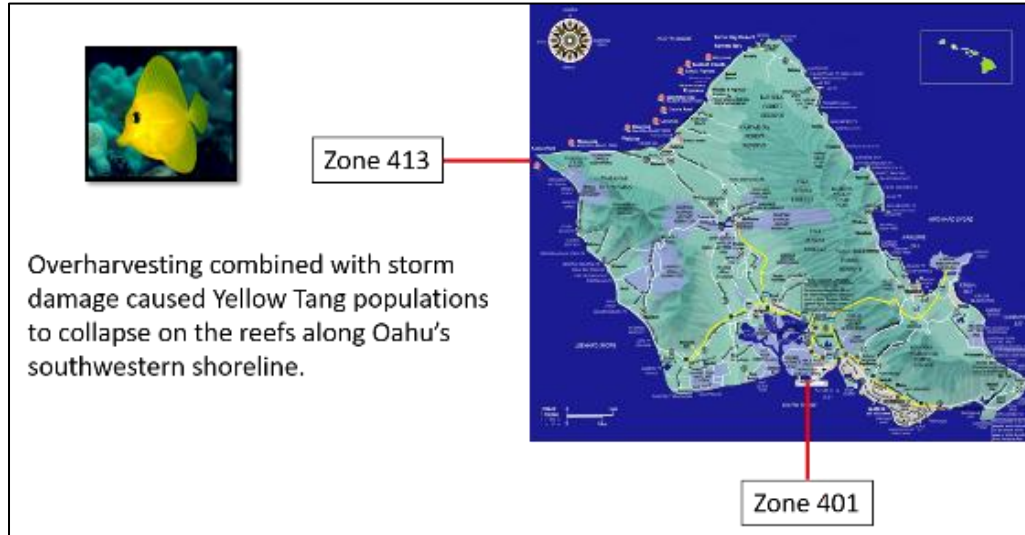
**Fig. 3. Catch reports document the collapse of yellow tang populations along O’ahu’s SW coastline.**<sup>47</sup>



<sup>46</sup> Walsh et al. 2004

<sup>47</sup> Walsh et al. (2004).

**Fig. 4. Map of area encompassed within aquarium catch reporting zones 401 - 413.<sup>48</sup>**



### **Failure to Adequately Analyze Cultural Impacts**

The EIS wrongly claims that “White List Species are not anticipated to significantly decline under the Preferred Alternative. Therefore, it is not anticipated that a significant impact on cultural resources would occur as a result of the Preferred Alternative.” This follows the conclusion in the CIA that “cultural impacts would occur if issuance of Aquarium Permits under an alternative would cause a significant decline in the population of a White List Species considered to be a cultural resource, either directly through the collection of fish or indirectly through habitat impacts.”

As described above the EIS fails to accurately analyze the environmental consequences of unlimited collection of aquatic life. Additionally, as described earlier, the EIS does contain evidence of significant impacts to White List species, however that information is not disclosed or discussed. This results in a failure to identify cultural impacts and to propose proper mitigation to limit such impacts.

### **Applicants Failure to Respond to DLNR Comments and Questions**

DLNR asked the applicant a number of critical questions and requested additional information on both the DEA and DEIS, including, but not limited to the below. BLNR must reject the EIS given none of these questions/comments were addressed by the applicants:

- Why the applicant did not discuss allowable catch or catch limits;
- If the applicant would be responsible for further HEPA analysis where current population or species data was lacking, or if new information became available raising additional concerns;

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<sup>48</sup> Walsh et al. (2004).

- Why current catch data and methods from East Hawai'i were not discussed, including what species and sizes are currently being captured using non-fine mesh nets;
- Why the applicant did not identify long term and cumulative impacts;
- That the applicant had no scientific data or basis for the reduction in Achilles Tang from 10 to 5 per day, given their populations are declining and this reduction may not be enough to protect the population;
- Why the applicant did not propose any self-regulation or additional permit conditions;
- Why the applicant did not propose any measures to ensure compliance with existing laws or rules, or to aid in enforcement given current challenges;
- Why the applicant failed to discuss mortality, injury, bycatch; and the overall health of the animals in the supply chain, and why they failed to propose any procedures to minimize loss

### **Failure to Address Enforcement and Compliance Concerns:**

The challenges with enforcement from a resource, practical, and logistical perspective are substantial. As noted above the EIS fails to include any suggestions on how to increase compliance, accountability, transparency, or cooperation with DOCARE or other law enforcement. As noted by DLNR in its DEIS comments, "enforcement and compliance needs and challenges are key factors in the effectiveness of fisheries management, and should be analyzed as a part of the [EIS]." <sup>49</sup> This issue is made especially relevant as enforcement action against 2 of the original 14 aquarium collectors represented by the Applicant will be considered by BLNR on the same day as the instant matter.

Notably, the current poaching case before the Board, which, to our knowledge is the first case ever charged and brought before the Board, was solely a result of community members reporting alleged violations. The charge did not come from any investigation by DOCARE-DLNR but through the efforts of tipsters, concerned about our marine resources. Community members have been documenting and reporting violations for decades without any action by DOCARE. It was only through recent efforts and direct action by community organizations that the current case is even before the Board and ultimately the Courts. In addition, among the original 14 aquarium collectors seeking permits:

- 3 have been reported to DOCARE for their involvement in an alleged fraudulent reporting scheme, likely spanning years;
- 1 was convicted of terroristic threatening after assaulting one of the signatories;
- 1 was convicted of AQ poaching approximately 20 years ago, and has since been photographed and reported doing so again;
- Several have been reported to DOCARE with photo and video documentation showing coral damage from their boat anchors/chains, collecting gear, and practices;

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<sup>49</sup> EIS at 341

- All who ship fish to U.S. mainland aquarium pet trade wholesalers and retailers are allegedly violating the Federal Lacey Act by not providing required shipping documentation;
- 1 has violated Hawai'i County zoning laws by illegally operating a warehouse in a residential neighborhood where he holds and packs fish for transport off-island.

### **Conclusion:**

For the reasons explained above, as well as those found in our prior comments on the DEIS, the EIS remains patently insufficient in its analysis of the impacts of commercial aquarium collection permits.

A serious overhaul of aquarium fish permitting in Hawai'i is needed.

Because currently there are not restrictions on the number of collection permits or the amount of take per species under a fine mesh net (i.e. aquarium) permit or commercial marine license, the impact that collection may have on target species must be evaluated before issuing permits. As such, each aquarium collection permit or commercial marine license issued for aquarium collecting must show the total allowable catch, per species and ideally per area (reporting sub-zone or smaller) that permit holders must follow to prevent depleted populations of target species. Take limits per species and per area should be calculated in conjunction with input from all stakeholders and based on the stock assessment for each target species in the specific areas where they will be allowed to be taken under a permit.

The legislature has decreed it the "policy of the State" that DNLR and other agencies must "[c]onserve natural resources . . . by preserving or augmenting natural resources, and by safeguarding the State's unique natural environmental characteristics . . ." <sup>50</sup> The Agency must also "[e]ncourage management practices which conserve . . . all natural resources," and encourage all individuals "to fulfill the responsibility as trustees of the environment for the present and succeeding generations." <sup>51</sup> In enacting HEPA, the State legislature found "that the quality of humanity's environment is critical to humanity's well-being, [and] that humanity's activities have broad and profound effects upon the interrelations of all components of the environment . . ." <sup>52</sup> The Agency simply cannot meet these mandates by continuing to allow unlimited aquarium collection, in light of the serious environmental consequences of those permits.

Respectfully submitted,



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808.283.7225

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<sup>50</sup> Haw. Rev. Stat. § 344-3(1).

<sup>51</sup> Haw. Rev. Stat. § 344-4(2)(A), (10)(A).

<sup>52</sup> Haw. Rev. Stat. § 343-1.



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**From:** Judy Volquardsen  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Agenda Item F.2 testimony  
**Date:** Tuesday, May 19, 2020 6:34:16 PM

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My name is Judy Volquardsen. I am a Hawaii resident from the Big Island. I am writing to ask you to reject the Aquarium Trade EIS. Over the years I have observed the decrease in White list species. This EIS does not appropriately address the environmental consequences of aquarium collection of White List species. Our coral reefs are struggling enough without continuing to reduce the numbers of these important species. In addition it does not adequately address mitigation to reduce impact. Thank you for your consideration.

**From:** Karie Smart  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Agenda Item F.2 Testimony  
**Date:** Tuesday, May 19, 2020 4:33:52 PM

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My name is Karie Wakat, and I am a resident of Kailua Kona.

I am asking that BLNR reject the EIS.

As a scuba diver whose been diving the Kona waters for over 20 years I can honestly testify that since the aquarium fishing moratorium was enacted, I have seen a marked improvement in our reef fish numbers, and overall health of the reef.

Our ocean and reefs are stressed. We need our fishes to keep our reefs healthy. Reject the EIS, and be the change we need to ensure our reef fishes for generations to come.

Please stop sending our endemic fish to starve to death in some aquarium on the mainland.

Thank you.  
Karie Wakat  
73-1556 Heneli Place  
Kailua Kona HI 96740  
Phone 808.825.8174

**From:** kanani wall  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] WHI Fish Collection FEIS decisions  
**Date:** Tuesday, May 19, 2020 2:50:47 AM

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Aloha,

Please consider ending the fish collecting in West Hawai'i. COVID19 is teaching us a lot. Our oceans are responding because our impact on them has gone down. I've seen monk seals in areas they haven't visited. I've seen Kona crabs in tide pools! The dolphin runs in the water and air flights along and over our coast have stopped and the 'aina is responding. Our hope in research can't keep up with the response.

The FEIS created by the Pet Industry Joint Council gets confusing. The CIA is full of rich information. Story after story of our connection to the fish and their care. This is a delicate link. In the 4.2 Cultural Resources section on page 30 in the second to the last paragraph, the second sentence shares that "the link between Native Hawaiian culture and native species has not been lost and continues to be practiced in belief systems as well as in traditional practices such as..." and in the following paragraph references Kaho'olawe where we've lost just about everything and have had to take losses just to begin to learn about the island. That fragile link will take lifetimes to recover from. Have we put the Paku'iku'i in the same place as Kaho'olawe? In 4.2.1 Cultural Aspects of the Commercial Aquarium fishery it shares out how brilliant we were as sustainable care takers learning the seasons and understanding conservation and the work towards creating a management plan like it. Yet, in the fourth sentence on page 31 states that, "Commercial aquarium fish collection is not a part of Native Hawaiian Culture;". If I interpret this, they are saying WHFC is working on a Hawaiian like system but not the commercial aquarium fish collectors. How do we get to ecologically sustainable species? By not taking too many, that's all? If within the FEIS they can document fish on the white list (Page 35, Section 4.4.1) as indigenous, endemic and invasive, that is proof that fish collectors are tied to culture, it's tied to the people, tied to the 'aina, to the mo'olelo, to the things they take out of the ocean for profit without the culturally significant ideology of aku/mai, the give/take, a'o, the teaching/learning, he wa'a he moku; he ali'i ka 'aina he kaua ke kanaka. What I've learned from the report is that those fish who's dollar value is lower, may live longer and in larger quantity in both open and closed areas. Here's a suggestion: How about only collecting the invasive fish for 5 years? Let's study that and see how that effects the population of all the other species? How about not touching endemic fish? There's no turning back once they are gone.

In the mitigation sections, I implore you stare at the Paku'iku'i and ask them if there are any significant impacts? In the analogy of COVID19, we are playing with economy and health. We are an island, a sustainable island as we were in wa kahiko. We must choose wisely. Does our money keep us alive or does the 'aina keep us alive? Should we preserve our money or our 'aina? How much should we pay to see our fish in zoo's? We create laws to protect but it's actually individuals who follow the laws that protect. Drinking and driving, speeding, taxes are all examples of laws we all should follow, not just 10 that can have adjusted rules. It takes our community and education, the CIA is a great place to start. Please don't give privileged to some for socioeconomic advantage. That's not teaching conservation or sustainability. It's giving/taking privilege for a few without asking. Don't do that to Hawai'i again.

Please vote against the fish collection bill. Maybe get an advocate for the fish to write a report, then take the vote after seeing it from both sides. We owe it to Hawai'i to own our

'aina. We need to give back. Our ecosystem is different, our ecology different, we are unique and worth far more than what documents value us as. Everybody wants some before it's gone.. I just don't know if its money, fish, our lifestyle, preservation or our connections to 'aina we're after.

Don't do it. We'll stand with you. We'll swim with you and the fish will still be there for a hundred generations for your great, great, great, great + grandchildren to see.

Aloha,  
kanani wall  
Kona

**From:** DeborahWallace  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] F.2  
**Date:** Sunday, May 17, 2020 11:44:25 AM

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Please reject the EIS. Aquarium fishing is harmful to our reefs and is of damage rather than benefit to our local community. The only ones who benefit from this is the few people who are taking our fish to sell for their own profit.

Thank you  
Deborah Wallace

Sent from my iPad



**To: BLNR.TESTIMONY@HAWAII .GOV**

**Agenda F.2 Testimony**

FROM: Sierra Club, Hawai'i Island Group of behalf of Hawaii Chapter  
PO Box 1137, Hilo, Hawai'i 96721  
Contact: Deborah J Ward, Chair, cordylinacolor@gmail.com

Testimony before BLNR on **FINAL Environmental Impact Statement for Issuance of Commercial Aquarium Permits for the West Hawai'i Regional Fishery Management Area**

**Aloha Director Case and Board Members,**

This testimony is presented on behalf of the twenty-seven thousand members and supporters of the Sierra Club that reside in the Hawaiian Islands.

We strongly urge the Board to reject this FEIS, based on basic failure to identify affected parties, fundamental omissions of critical analyses, multiple inaccuracies, misrepresentations, and failure to address constitutionally protected rights of our residents.

Sierra Club concurs and uphold DLNR's mission to "Enhance, protect, conserve and manage Hawai'i's unique and limited natural, cultural, and historic resources held in public trust for current and future generations of the people of Hawai'i nei, and its visitors, in partnership with others from the public and private sectors." <https://dlnr.hawaii.gov>

The legislature has decreed it the "policy of the State" that DNLN and other agencies must "[c]onserve natural resources . . . by preserving or augmenting natural resources, and by safeguarding the State's unique natural environmental characteristics . . ." <sup>1</sup> The Agency must also "[e]ncourage management practices which conserve . . . all natural resources," and encourage all individuals "to fulfill the

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<sup>1</sup> Haw. Rev. Stat. § 344-3(1).

responsibility as trustees of the environment for the present and succeeding generations.”<sup>2</sup> In enacting HEPA, the State legislature found “that the quality of humanity’s environment is critical to humanity’s well-being, [and] that humanity’s activities have broad and profound effects upon the interrelations of all components of the environment.”

The applicant is not a fisher but a continent-based pet trade industry group called Pet Industry Joint Advisory Council located in Alexandria, Virginia. They have no expressed ties or direct knowledge about Hawaii. According to their website, [pijac.org/who-we-are](http://pijac.org/who-we-are). The first mission is to “promote animal well-being and responsible pet ownership.” The applicant failed to consult with citizen groups and communities who are affected, failed to consult with Sierra Club, despite earlier engagement and requests to be informed, and dismissed the significant input provided by those with whom it did consult. The FEIS did not address our specific issues and concerns raised in the earlier environmental assessments, nor did it appropriately disclose adverse effects to the unique biological and cultural resources that are part of the public trust the State of Hawaii has the responsibility to protect. The preparer of the FEIS did not answer our substantive questions, and did not provide verifiable data sources for its statements.

We find that this FEIS fails to provide appropriate baseline data from which to analyze the risks posed by cumulative factors, that include unregulated collecting, under-reporting of catch, failure to monitor and take enforcement actions when violations occur. Respondents to the Draft document repeatedly cited lack of support and funding hampering DNLN- DAR’s ability to fulfill its fiduciary responsibility, namely to enhance, protect, conserve, and manage Hawai’i’s unique and limited resources, which are supposed to be held in public trust for the current and future generations of the people of Hawai’i nei, and visitors alike.

The FEIS fails to address changes to habitat from natural and human perturbations historically, and the effect proposed alternative(s) would have on traditional fishing practice and diminishment of our clean and healthful environment. The resources of the ocean and the nearshore waters are a component of the Public Trust held for the benefit of Native Hawaiians and the general public. When the public trust resources are “mined” for the benefit of a few commercial collectors to enhance the pleasure of a few aquarists keeping open ocean animals in a closed and artificial environment, the sustainability of the habitat upon which traditional practitioners depend is altered. The livelihoods of local fishers (and their families) for subsistence is a need that outweighs the needs of the applicant. The FEIS fails to address the significant and eloquently expressed concerns outlined in the Cultural Impact Assessment, and actively dismisses by omission the concerns expressed. This FEIS fails to acknowledge the significant impact of aquarium collecting on lawai’a (fishing) and its effect on Hawaiian traditional culture, contemporary practice and way of life. The CIA concluded that a significant cultural impact would occur if issuance of Aquarium Permits under an alternative would cause a significant decline in the population of a White List Species considered to be a cultural resource, either directly through the collection of fish or indirectly through habitat impacts.

Although the FEIS includes a Cultural Impact Assessment (CIA) as an Appendix, the document itself is essentially dismissive of the cultural impacts to practitioners and their communities. The CIA reveals the modern extractive fishing practices that are so disruptive to subsistence communities such as those at Miloli’i. The CIA reveals intense observations of loss and betrayal of trust, evidenced in virtually every interview. For example,

*Kaupiko family members noted “while aquarium collection is not permitted within Miloli’i Bay, they noted that aquarium collectors often launch their boats and utilize water at the Miloli’i dock to fill their tanks. Ka’imi and Uncle Willy described several instances when they have caught aquarium collectors illegally harvesting fish within the FRA which they reported to DLNR. Uncle Willy stated that for the past ten years and because the State cannot fulfill its duties, the Miloli’i community has been implementing Makai Watch, a community-based watch and outreach program promoted by DLNR. Despite numerous complaints and reports to DLNR about the illegal taking of fish by collectors, Ka’imi and Uncle Willy opined that DLNR has failed in their*

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<sup>2</sup> Haw. Rev. Stat. § 344-4(2)(A), (10)(A).

*responsibility as they do not follow up or issue citations to violators. For these reasons and many others, Uncle Willy feels that the "State cannot take care of our resources." ... "Both Ka'imi and Uncle Willy described changes to peoples' behavior and attitude towards the ocean resources and noted the gradual changes to the ocean environment and decline in fish abundance at Miloli'i. Uncle Willy pointed out that while growing up, they were always taught to mālama and stay in their respective ahupua'a and not to maha'oi (intrude) in other people's places. He stated that today, people fish wherever they can access and take everything they can. " ... "We participated in this process in good faith, hoping for change by sharing our deeply personal, spiritual and cultural histories and concerns with this destructive trade. Instead, we've been slapped in the face—summarized into a one-liner that the trade has no significant cultural impact. The truth is, this industry harms our ability to gather the food we've relied on for generations, and it's time for the state to protect these resources from commercial exploitation," said Kaimi Kaupiko of Miloli'i.*

The FEIS fails to offer appropriate mitigation for these impacts, it lacks regulation to ensure reporting of all collection, sales records and export data. According to Table 4.1, barely 47 percent of former permittees provided required reports, and of the proposed permittees in the Preferred Alternative, only 3 to 11 provided reports during 2000-2017, so how would the DLNR expect to collect meaningful data, if those with permits are historically non-compliant?

Furthermore, it fails to address the cruelty to which the collected animals are exposed. Aquarium fish that survive capture, fin-clipping, swim bladder piercing, starvation and transport often die pre-mature deaths at the hands of aquarists far from salt-water sources only for short-lived personal pleasure of private aquarists.

The FEIS response regarding cumulative impact fails to address the literal meaning of "cumulative". I quote their own words on this: *"The EIS does not state that climate change will not impact these species, in fact, the EIS specifically says that impacts are expected to increase in the future. Furthermore, the EIS does not claim that climate change impacts, when combined with other cumulative impacts and the Preferred Alternative, will be less than significant. The EIS does say the following: "When the full range of impacts to White List Species are considered (e.g., recreational aquarium collection, non-aquarium commercial fishing, recreational fishing, tourism, climate change), there is a significant cumulative impact to some White List Species. However, the Preferred Alternative is not a significant contributor to the cumulative effect upon the environment. Collection under the Preferred Alternative is less than 2% of any population of White List Species. " If every contributor to cumulative impacts takes this position, impacts will never be reduced.*

The economic benefits to a few unidentified industry purveyors could be addressed such that the aquarium industry could invest in aquaculture, to grow and spawn their own supply and make contributions to replenishing the fish removed historically from our waters. Jobs from sustainable aquaculture could replace the income tax revenue once gained by unsustainable aquarium fish collecting from the ocean. Collectors can pursue alternate livelihoods raising aquarium fish in captivity, working in commercial aquariums, fishing for food fish, and running boat and dive tours. The value of the coral reef ecosystem for tourism (snorkeling) appears to be several orders of magnitude greater than the value of the reef- sustaining fish for "esthetically pleasing" aquaria on the continent. In addition, the process of collecting and transporting reef fish for sale on the continent constitutes animal cruelty and a waste of resources (fish die in transport or within a year many die in tanks.) This is detrimental to society in the long term. A preponderance of commenters to the DEIS provided anecdotal experiential evidence of the adverse impact of declining numbers of reef fish on the snorkeling and diving experience of residents, visitors and scientists.

Future serious impacts to the coastal near-shore habitat due to climate change are ignored in this document, and the proposed action alternatives do not address mitigation for the anticipated loss of coastal habitat. The FEIS preferred alternative proposes to exploit a public resource for the economic benefit of an unidentified few, (who have been historically non-compliant with past rules and regulations), at the expense of the subsistence communities, the resident public, the visitors, and the health of the state as a whole. A recent DAR announcement appealed to subsistence and recreational reef fishers to refrain from taking herbivorous fish off the reefs. This tacit recognition of the vital symbiotic service they

perform in this delicate coral reef ecosystem is overdue and yet completely absent in the FEIS. The 'preferred alternative' in the document would allow (with one exception) for unlimited takes by ten unidentified permittees of many of these same important organisms. Any declines whether driven by or contributed to by the trade are simply not justified by the logic and necessity of sustainability.

It is the larger abiding responsibility of DLNR, as specified in the State constitution, to preserve in abundance this resource. We know violations have occurred with operators we know about. You will be examining the implications and embarrassingly minimal fines being recommended today for three of these collectors, including those violators who could presumably be allowed to collect again. Public complaints have been levied and carefully documented for years with no enforcement at all, due to limited staffing, equipment shortages, and absence of administrative support.

We do ask that the Board reject the FEIS for an abundance of failures of form as prescribed by law in HRS 343 and HAR Chapter 11-200.1, brazen omissions of historical impact, and the failure to present more rational alternatives given the certainty of declining reef health. Aquarium collectors undermine the public trust for private gain, harming the animals, the habitat, the host culture, the residents, and visitors. We had expected that the hundreds of substantive comments to the Draft would have given the applicant needed guidance to improve the document, but improvement is not evident and documentation needed for a complete and accurate analysis is absent.

Thank you for the opportunity to comment, and for providing the opportunity for oral testimony, despite the added effort for you and staff. We do hope, especially for neighbor island issues, that you will continue this practice in the future.

Sincerely,

Deborah J Ward, Chair  
Cory Harden, Conservation Chair  
Diane Ware and Rob Culbertson, Co-chairs, Aquarium Collection Issues committee  
Hawaii Island Group and Hawaii Chapter of Sierra Club

**From:** Diane Ware  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Agenda F.2 testimony  
**Date:** Wednesday, May 20, 2020 9:48:33 PM

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Testimony before BLNR on **FINAL Environmental Impact Statement** for **Issuance of Commercial Aquarium Permits for the West Hawai'i Regional Fishery Management Area**

Dear Board Members,

My name is Diane Ware and I am a Sierra Club member on the Big Island active with the Group's Aquarium Collection Issues Committee since 2008. At that time we supported the Hawai'i County Council's successful resolution to the State asking for a ban of aquarium reef fish collection. I have also served as an outings leader for 25 years and in that capacity have lead coastal hikes/camping, kayak and snorkel outings on the West side of Hawaii. I feel we qualify as stakeholders and residents in decision making actions regarding the near shore ecosystem.

I strongly urge the Board to reject the FEIS due to failure to identify proposed permittees benefiting from this action, multiple inaccuracies, misrepresentations, and failure to address constitutionally protected rights of residents and natural/cultural resource protection. Respectfully I note the Board request for testimony focus on applicable laws but find deficiencies in the FEIS's attention to these applicable laws.

Regarding the constitutional protection of natural and cultural resources I will quote an interviewee from the CIA section:

**"The state has a duty to ensure our reefs can feed us for generations to come, not to line the aquarium pet trade's pockets."** said **Ka'imi Kaupiko, who regularly fishes with his family in Miloli'i, the state's last traditional Hawaiian fishing village.** "These collectors are taking food off of our tables, and the state is doing nothing to ensure the industry's practices are sustainable."

Regarding the Open Government Policy of the State:

The FEIS states that community residents and other stakeholders were notified and participated in this process yet Sierra Club and individuals like myself were never invited to participate in the process nor consulting for the DEIS. We had submitted comments for the EA but were not notified when the notice for DEIS came out in August 2018. The notice published did not reach us although the Sierra Club address was included with testimony in May 2018. Another area demonstrating lack of transparency in the FEIS is the failure of PIJAC to reveal the identify of the preferred permittees alluded to in tables 4.2 and 5.2. We the public feel that we should know and be able to comment on this choice. There is also no clear indication of the future process for choosing permittees in the eventual case of permits being revoked or not renewed.

Regarding Hawaii Statute on Cruelty to Animals HRS-711-1109:

The trade violates this statute and looks the other way, not wanting to regulate just reap profits for the \$200 million dollar pet industry represented by the applicant PIJAC. The FEIS also brags about the "socio-economic benefits" for the State which likely influences executive

branch and DLNR decision making. Specific violations of the statute include mutilation by trimming the fins of some fish for shipment, venting swim bladders to prevent barotrauma, and depriving the fish of necessary sustenance to lessen the risk of ammonia toxicity during shipment. The last two violations normally occur at warehouses on the island that seem to not be monitored but are mentioned in the regulations governing permits (188-31). The FEIS applicant exempts itself from accounting for any consequences of fish treatment after leaving the ocean on the basis that this is out of the scope of the document. Yet the barotrauma usually occurs before leaving the boat and if not done can lead to death as in the case of the 500+ tangs found dead in trash cans at the harbor. The FEIS in section 5.4.2 claims mortality is rare or minimal from reef to retailer relying on scant documentation, one study from the Philippines that reported 10% mortality. At that rate with say 300,000/yr collected that would be 30,000 fishes. The applicant may think that insignificant but it is unnecessary "waste" as reported by numerous commenters who report bags of dead fish and unnecessary suffering. In my research of pet stores I found this from Pet Spruce retailer regarding the reef to aquarist experience:

"New arrivals have a much greater chance of not eating hand fed foods for 2 reasons. First, many of the fish have not been properly fed from the time they were caught until the aquarist puts them in their tank. The collectors normally don't feed what they catch because it will make the fish poop in the shipping bag. Poop in the shipping bag equals ammonia in the water, which means less O<sub>2</sub> in the bag and burnt fins and gills. For the most part, sick fish don't eat. Also, many aquarists don't offer the fish the food that they normally eat. It should be mentioned here that many problems in hobby (and other) marine aquariums are the end result of poor capture and shipping procedures. By the time a fish arrives in your LFS's display tank, it has gone through a lot of hands and been in a number of shipping bags. Normally, the collector catches the fish, takes it to a shipper, who puts it in a bag and ships it to a trans-shipper or wholesaler, who puts it in his system, then re-bags it and ships it to your LFS."

Then there is this example of reef to retailer experience from National Geographic's reporting ("Inside the Murky World of the Aquarium Trade") of USFWS under cover Operation Rock Bottom in Florida:

"On this particular day, she was preparing 60 yellow tangs—hand-caught with nets from a reef off Hawaii's Big Island, flown from Kona to Los Angeles, Los Angeles to Miami, quarantined for five days at her shop, and then packed in plastic bags and boxes—to be flown by Aeroflot to Moscow, where they'd be sold in fish stores. Concerns about the over collection of many fish species arise from the fact that the aquarium trade is largely untraceable."

Thank you for the opportunity to comment and to give oral testimony which I would like to do. My phone number below.

Diane Ware  
808-967-8642  
P. O. Box 698  
99-7815 Kapoha

Volcano HI 96785

**From:** aerie waters  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] f.1 testimony  
**Date:** Monday, May 18, 2020 9:46:25 AM

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To all who should be concerned!!

The life of the reef is not for profit... it is not for sale... it belongs to everyone... and the profit of the few, is a theft from the residents of this state. Stop it!! Will your children and grandchildren celebrate how rich someone got or will they say... why did you allow it to get this far...

so few fish left.. I've been here for 42 years, and watched the demise of the reef life. Stop it now.

Aerie Waters

- ~ The EIS is wholly flawed-- relying on insufficient, faulty, inadequate and improper data and assumptions;
- ~ The EIS fails to accurately analyze the environmental consequences of unlimited aquarium collection of the White List species (to the species themselves, and their coral reef homes);
- ~ The EIS fails to accurately analyze the cultural and socioeconomic consequences of unlimited aquarium collection in West Hawaii
- ~ The EIS fails to propose and analyze any meaningful mitigation or alternatives that would reduce the impacts;
- ~ The EIS fails to adequately incorporate input of Native Hawaiian practitioners, experts, community members, and consulted parties.

**From:** West Hawaii Aquarium Fishery  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Web Form: Support for West Hawaii Aquarium Fishery  
**Date:** Monday, May 18, 2020 8:02:07 AM

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This survey was submitted at 6:01:02pm GMT on 05/18/2020

Aloha Mr. Sakoda,

My name is James Lovell and I am a resident of Kailua Kona, Hawaii.

I support DLNR's adoption of the Final Environmental Impact Statement analyzing Issuance of 10 Commercial Aquarium Permits for the West Hawai'i Regional Fishery Management Area (WHRFMA).

1. I believe that it fully analyzes the potential impacts the 10 West Hawaii aquarium fishers may have on the environment under each of the proposed alternatives.
2. The FEIS proposes measures to avoid and minimize already insignificant impacts on fish species and the environment in the WHRFMA.
3. The West Hawaii aquarium fishery is one of the best managed fisheries in the State of Hawaii, and in fact the world.
4. The West Hawaii Fishery Management Area was developed with significant input from all parties, including the environmental community as well as Native Hawaiians.
5. The proposed action is an overall reduction in take over the pre-ban alternative.
6. I request that additional applicants, should there be any, conduct another EIS and CIA to measure additional impact beyond the 10 permits in the Proposed Action, further ensuring the sustainability while complying with the Supreme Court ruling.
7. Reducing landed catch via approving only the 10 permits proposed is a practical approach to address "no limits".
8. By issuing 10 permits, the fishermen can easily self-police as they know who is permitted to legally fish.
9. The limitation on the number of permits also assists DOCARE/enforcement as they will easily know who is legally allowed to fish by the limited number of boats which are registered. This will make fishery management practical for law enforcement.

I can be reached at [jim@jtltiming.com](mailto:jim@jtltiming.com)

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**From:** Jordan Westerholm  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Agenda Item F.2 Testimony  
**Date:** Sunday, May 17, 2020 5:36:00 PM

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Hello,

I'm a Big Island resident, and I care about the cultural and ecological integrity of reef environments surrounding the coasts of our beautiful home. The aquarium trade has a huge negative impact on these environments that's kept far to quiet for my taste, and it's important to me that West Hawaii is not reopened to this long-held assault on Hawaii's rare and precious native aquatic species. I am urging any and all people with the power to reject the Environmental Impact Statement to please do so, as it is to my knowledge an inadequate assessment of the impacts that the aquarium trade has on our natural heritage.

There are so many ways in which capital interests are allowed to continue exploiting the Hawaiian people, the Hawaiian culture, and the Hawaiian natural heritage. I'm only Kama'aina, but I stand behind this beautiful aina and its waters that so many unique creatures call home—please make my voice heard in the upcoming proceedings, and REJECT the Final EIS.

From my heart,

Jordan

**From:** linda willaby  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Agenda Item F.2 testimony  
**Date:** Monday, May 18, 2020 4:35:54 PM

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To Whom it May Concern,

I have been a Big Island resident for the past 12 years. I snorkel in the ocean almost every day and I have seen a huge decline in the number of reef fish in just the time that I have been here.

I think it is time to stop all aquarium fish collecting. It is not sustainable and the health of our coral reefs depends on reef fish.

**Please REJECT the Environmental Impact Statement**

There is no verification of the numbers of fish caught or methods used.

The practice of catching reef fish for aquariums is not healthy for the reefs and has dire environmental consequences

There are other industries that rely on a healthy reef system and the fish life on the reef such as dive and snorkel boat operators.

The entire tourism industry will suffer if there are no reef fish in Hawaiian waters.

**You will only have yourselves to blame when the last yellow tang disappears from Hawaiian waters. Caught and shipped away so some fat cat mainlander can have a pretty fish in his aquarium.**

Entire species of reef fish should not be sacrificed so a few people can get rich at the expense of all the rest of us who appreciate living sea creatures in our waters.

.  
Yours truly,

*Linda Willaby*

**From:** William Wilson  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Reject the EIS  
**Date:** Monday, May 18, 2020 6:24:41 PM

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ear BLNR,

When so many species are threatened by over fishing, pollution and climate change it makes no sense to allow Hawaii's fish and coral to be harvested for the pet trade. Most of the fish captured will not live long in captivity. They belong on the reef in Hawaii. Please reject the EIS.

Bill Wilson

**From:** Robert Wintner  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Please reject PIJAC's commercial appeal disguised as "environmental."  
**Date:** Tuesday, May 19, 2020 9:08:25 AM

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Aloha BLNR members,

I, Robert Wintner, am a Hawaii resident with direct experience on aquarium extraction and its devastating consequence to Hawaii reefs for many years. Full disclosure: I also have direct experience with DLNR "policy" and personnel for the same period—since Governor Lingle's Chief of Staff Linda Smith, an aquarium-trade wholesale distributor, cried out, "Those fish must be culled," to card carrying aquarium collector William Aila, Abercrombie's DLNR Director, working in the best interests of the aquarium trade.

Now comes an "ENVIRONMENTAL" impact statement from a Washington, D.C. commercial pet-trade lobbyist.

Can you see the conflict here? Current DLNR policy on aquarium-trade extraction is the exact same as policy for The Nature Conservancy, and so is the executive director of both agencies. She wrote that policy years ago at TNC and still claims: "It's sustainable." It's not sustainable. It's what the aquarium trade and other commercial interests can get away with on no meaningful enforcement.

Neither DLNR nor The Nature Conservancy—or their common director—has ever defined sustainability. Sustainability has been understood as an acceptable level of destruction, in this case, destruction of reef species and habitat. Aquarium collectors get away with thuggish contempt for reef welfare in the name of "livelihood," as they dive for dollars, at the expense of Hawaii reef communities, both above and below the surface.

Reject this shameful exploitation of a Hawaii Public Trust. If you take heart at the kuleana upon you, protect Hawaii reefs from this plunder.

OF NOTE: I own Snorkel Bob's across Hawaii, representing greater payroll than aquarium trade gross revenue in Hawaii—UNLESS they're not reporting their catch! That's poaching, tried and true in aq quarters and long known. Former DAR Chief Dan Polhemus said: "We know that actual catch is two to five times greater than reported catch."

This environmental impact statement is not environmental but a scofflaw subterfuge to undermine the spirit and intent of the Hawaii Supreme Court. At the lower court rulings, both the Circuit Court and the Intermediate Court of Appeals, DLNR Director Suzanne Case said, "It's been litigated!" We have a Supreme Court ruling clearly aimed at ending this destructive trade. It's been litigated, with injunctive relief that DLNR skirted with yet more subterfuge. Please reject this illegal, bogus tirade from the Pet Industry Joint Advisory Council. It is not environmental or cultural.

**From:** DENNIS YAMAGUCHI  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Testimony FEIS West Hawaii Aquarium Permits  
**Date:** Tuesday, May 19, 2020 7:39:00 AM

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Board of Land and Natural Resource Members,

I believe the Final Environmental Impact Statement (FEIS) fully addresses the concerns about commercial aquarium fish collection and allows for the lawful, responsible, and sustainable commercial collection of various fish species from nearshore habitats of the West Hawai'i Regional Fishery Management Area (WHRFMA).

The Department of Land and Natural Resources' (DLNR) issuance of 10 Aquarium Permits for the WHRFMA, would insure the continued livelihoods of the Big Island commercial aquarium fishers in compliance with all applicable laws, rules, and regulations pertaining to the industry.

Please accept the Final Environmental Impact Statement. Thank you.

Dennis T Yamaguchi

**From:** James Zampathas  
**To:** [DLNR.BLNR.Testimony](#)  
**Cc:** [James Zampathas](#)  
**Subject:** [EXTERNAL] REJECT the West Hawaii aquarium trade EIS  
**Date:** Sunday, May 17, 2020 8:12:53 PM

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In the interest of our dwindling coral reefs and animals. The Aquarium trade is an assault on many native species and habitats.

From testimonies the EIS has been found to be terribly flawed. An analysis shows it relying on insufficient, faulty, inadequate and improper data and assumptions; that fails to accurately analyze the environmental consequences of unlimited aquarium collection of the White List species (to the species themselves, and their coral reef homes).

**Please reject the EIS justifying the aquarium trade in West Hawaii, because it does have no positive impact on the habitat,  
but can cause incredible damage to the coral and its inhabitants.**

James Zampathas  
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808-960-8741  
P.O. Box 6703  
Kamuela, Hawaii, 96743

**From:** Bill Garoutte  
**To:** [DLNR.BLNR.Testimony](#)  
**Subject:** [EXTERNAL] Agenda Item F.2 Testimony  
**Date:** Monday, May 18, 2020 3:36:05 PM

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Aloha –

As a Big Island resident that cares deeply for our natural environment. I am encouraging you to REJECT the EIS.

As a 10 year resident in the South Kona Miloli'i area, I have personally witnessed the devastating effect that aquarium collecting has had on our coastal waters. I have seen weekly visits by multiple collectors to Papa Bay for months on end resulting in a virtually empty reef. And they still came. Thankfully, the temporary ban was implemented and we could see a slight rebound of fish population – but there is a long way to go to return to natural levels.

Disturbingly, I have learned that several collectors continue to illegally take in these waters during the temporary ban, which suggests that they do not respect the Law and will not follow any new guidelines for controlling the catch.

Our coral reef health depends on a robust population and balance of fish species to keep it healthy and the government is allowing it to be decimated so that a few individuals may profit. If left to their own, the collectors will take until there is no more to take, and our reef and the entire marine food chain will suffer.

Please eliminate the aquarium trade's devastation by extending the ban on aquarium collection.

Mahalo,  
Bill Garoutte