



With the latest public hearings on proposed rules to regulate the Hawaii Aquarium Fishery having taken place on Dec 5 2012 and new hearings being scheduled for 29<sup>th</sup> Jan 2013 already, it might be the right time to look back and summarize the developments.

It all started with the request to protect and manage Hawaii's marine resources with the campaign aimed specifically at one user group- the aquarium industry. The reasoning behind the attempts to ban the aquarium fishery focused on sustainability and conservation of vulnerable marine resources. However, over time the mask fell off and arguments changed. It became obvious that this a fight between different groups to dominate resource use – a turf war. The main players are the marine tourism industry, especially the dive industry, lead by Robert Wintner (better know as Snorkel Bob), activists like Rene Umberger, plus increasingly the Humane Society and the Hawaiian native community vs. the aquarium industry/fishery, DLNR/DAR as resource managers and the WHFC as platform for negotiations- being interested in finding compromises and solutions for all stakeholders.

I would like to emphasize that all their questions are valid and one cannot express enough concerns when it comes to resource use, especially of so vulnerable ones like coral reefs. Resource users, including all of the above (and not just the aquarium fishery) should be continuously challenged to ensure they act responsibly and sustainably.

However, those expressing concerns over the sustainability of an uncontrolled aquarium fishery now oppose suggested rules to regulate and manage this fishery and are suing those managing the resources for not doing their job.

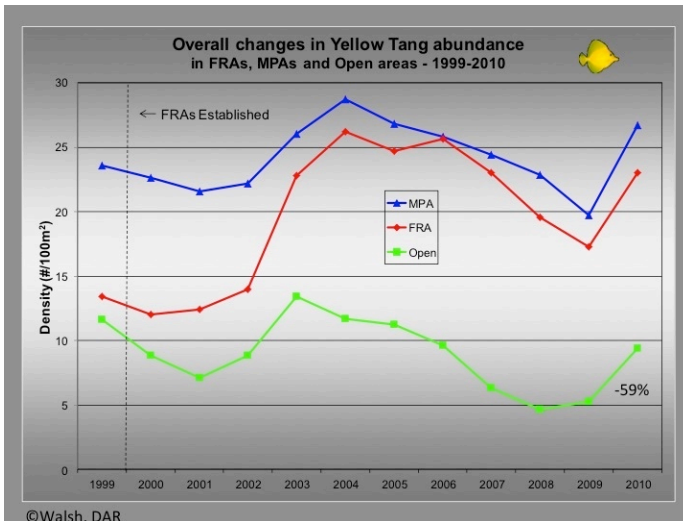
So let's take a more general look on the sustainability of reef fisheries, including the aquarium fishery and if it can be managed effectively.

Any human resource use, including fishery, but not restricted to it, has an impact on the ecosystem, habitat and the wildlife associated with it; it would be naive to deny that. However, does it stop humans to use resources? No! What we can ask from intelligent creatures like humans is that they use resources wisely so they remain for future generations. This is what management has to ensure.

Most of reef fisheries are conducted in territories of developing nations, thus management is often poor and underdeveloped.

However, Hawaii (beside Australia) is in the lucky position to have research as well as management in place, continuously monitoring for results.

The report '*Long-Term Monitoring of Coral Reefs of the Main Hawaiian Islands*' (DAR, 2010) indicates that:



„The FRAs were ‘effective’ (increases in FRAs relative to long-term MPAs) for eight of the top 10 collected species with three being statistically significant. With only a single exception the FRAs were highly effective in increasing the abundance of Yellow Tang along the West Hawai‘i coastline.”

FRAs are the Fish Replenishment Areas established as management tool by DAR in 1998. These areas are closed to aquarium collection, but not to other uses. FRAs together with existing ‘no aquarium fishery zones’ (e.g. FMAs/MLCDs) constitute 35.2% of WHI Coastline.

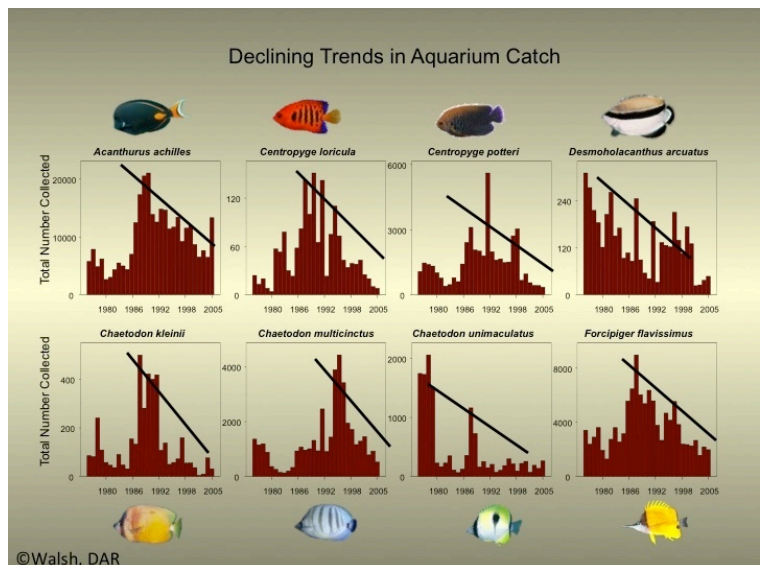
Is that enough? Ecosystems, habitats and populations change over time via natural fluctuation, but also in response to changing resource use and impacts. As such a good management needs to respond to changes and be adaptive.

DAR also stated in the same study: „Based on a comparison of catch and estimated population abundance in the 30’- 60’ depth range, aquarium collecting is having the largest impacts on Achilles and yellow tang. Achilles tang has had low levels of recruitment over the past decade and substantial numbers of larger fish (i.e. ‘breeders’) are taken for human consumption. Yellow tang has generally recruited reliably but aquarium take has risen dramatically to currently unsustainable levels.”

Therefore DAR proposed new rules to be added to the existing set of regulation: „Concerns over continued expansion of the aquarium fishery and harvesting effects in the open areas has prompted DAR and the West Hawai‘i Fisheries Council (WHFC) to develop a ‘white list’ of 40 species which can be taken by aquarium fishers. All other species are off limits.”

For Yellow & Goldring Tangs a size range limit was introduced, plus (including for Achilles Tangs) the number of fish allowed to be taken by one collector at one day is limited.

I want to add here that the subsistence fishing on Achilles is not restricted in the same way, but potentially has a significant impact on the recruitment of the species and thus population size.



Additionally to the required aquarium permit and the commercial marine license, both recreational and commercial collectors would need a West Hawai‘i Aquarium Permit to collect aquarium fish in the WHRFMA. DAR hopes: „this permit will help to educate aquarium collectors about the rules governing aquarium collecting in West Hawaii, as well as facilitating enforcement actions as collectors cannot claim they “did not know” what the rules were. Hopefully at some time in the near future the permit will also form the basis of a limited entry West Hawai‘i aquarium fishery.”

In most cases a resource is not affected by one form of usage only and that is also the case in Hawaii. Coral Reefs in Hawaii as elsewhere face many direct threats like pollution and sedimentation from run-offs of settlements (in Kona the hotel/tourism industry’s impact shouldn’t be underestimated), dive tourism, industrial and subsistence fishery as well as the aquarium fishery. This is besides the global threats like global warming and ocean acidification. A management of a resource therefore needs to consider all resource users. In this respect it is especially interesting to note that most of the opposition to the rules package was related to a prohibition of SCUBA spearfishing.

Rationale by DAR: „Spearfishing on SCUBA is banned in most other regions in the Pacific because the potential for over exploitation using this fishing method is so high particularly at night when fish are extremely vulnerable. There have been a number of examples (e.g., American Samoa) where relatively few fishers using this technology have led to the rapid declines of local populations of species that are economically, culturally and ecologically valuable (e.g., parrotfish).”



Clearly there is huge opposition by the native Hawaiian community, who on the other hand got drawn into the aquarium fishery debate and is supportive of a total ban of the aquarium fishery. Traditional Polynesian rights regulate resource access and guarantee the right to subsistence fishing. However, it is not only the native Hawaiians fishing and population on Hawaii as in other places of the world, has increased significantly.

Not all Hawaiians adhere to Polynesian traditional rules. The impact on targeted species (e.g. Parrotfish, Goatfish, Achilles Tang) can be significant and thus needs to be managed, same as aquarium fishery needs to be regulated. For the resource there is no difference if the fish taken is killed and eaten or brought alive to an aquarium with the chance to survive there and educate

somebody far from the sea on marine species and coral reefs. The fish is taken from its natural population and if too many are taken, the population will decrease. So if opponents of the aquarium fishery are concerned about the status of coral reefs and its fish population, they should support **all** proposed management rules.

But since 2010 the tone changed, to focus not only on the sustainability of the fishery, but rather the whole trade and hobby – questioning animal welfare and ethics related to a wildlife trade.

Again, clearly a valid question, but not related to aquarium fishery, but rather to animal rights and animal welfare regulation. I would be supportive of improved animal welfare regulation including marine fish, but clearly not of a ban of a resource use that can be managed.

### **What would be the implications of a ban of the Hawaiian aquarium fishery?**

To the hobby in Europe it would mainly mean saying goodbye to Yellow tangs, Flame Hawkfish, Achilles Tang, Gold-ring Surgeonfish, etc. and clearly to those species that are endemic to Hawaii like Russet Angelfish and many more (over 20% of Hawaiian reef fishes are endemic). But it would probably also cut off the main source for Flame angels that are collected in Kiribati, but exported via Honolulu into the rest of the world.



To other management bodies in the rest of the world where reef, and especially aquarium fisheries, are widely not regulated at all, it might send the wrong message: that managing such resource use is not worth the effort.

Dr. William Walsh (picture) of DAR says:

„ Fundamentally these bills are defeatist and potentially destructive, essentially institutionalizing the idea that fisheries here in Hawaii cannot be sustainably managed.”

Clearly the wrong message to transport.

### **Is it likely that the aquarium fishery is closed?**

Well, what I faced when attending a public hearing and testimony process in Kona in 2011 as well as in my exchange with opponents was a very emotional and heated debate between resource users, especially from the antagonists' side. There were not many proven facts brought to the table, apart from by DAR.

However, constant dripping wears away the stone and the number of bills filed (18 in 2012), and public hearings scheduled, tells that this could be a strategy of the opponents and it might work at one day, when the authorities are tired of the discussion. We also need to consider that not only West Hawaii is concerned,



but all counties in the state of Hawaii. Combined input from several counties might change statewide legislation over time.

It just happened when legislative session opened on 16<sup>th</sup> Jan 2013 that 12 bills related to the aquarium fishery in Hawaii have been introduced. Two of them are scheduled for public hearing on 29<sup>th</sup> Jan 2013.

With several freshman legislators it remains to be seen how influential the campaigns of the anti-aquarium movement are.

### **So what to do about it?**

Well, following the debate and acknowledging that this is not so far away and will have effects on the aquarium trade and hobby as a whole is a first step. More importantly, support to the Hawaiian aquarium industry should be given – anybody, including non US residents, can give testimony (written statements by email are accepted).

The hobby will also need to think more about animal welfare and ethics and how we can voluntarily increase/set standards in this area by defining best practices. In general it will not do us any harm if we all contribute more publicly to education and knowledge on coral reefs and their fauna. This is often the mandate of public aquaria and their educational role, but there are many hobbyists that collect knowledge on reef species. We need to share it more openly with the public, science and other stakeholders.

It will help aquarium fisheries worldwide, if we not only care for our own personal aquaria, but safeguard coral reefs as a natural resource and actively engage in reef conservation by requesting and supporting a sustainable aquarium trade where more than just price determines our purchases. In this way we can all 'vote' for what the hobby should stand for.

To read in more detail about the proposed rules, existing management and what opponents have to say, please follow the links in the chronology.

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### **Chronology (Summary<sup>1</sup>)**

- Commercial collectors working Hawaiian waters for at least 50 yrs. In 1953 Act 154 established permit for use of small mesh nets.
- Aquarium collecting was a controversial issue as early as 1973 when a short-lived moratorium was instituted. At this time collectors were required to file monthly catch reports on a dedicated form. (<http://www.pacfish.org/wpapers/aquarium.html>)
- Since ca. 1989 there have been numerous conflicts between marine ornamental collectors and other user groups such as subsistence/recreational fishermen, and the marine tourism/dive industry.
- In 1998 LOST FISH presented a petition with nearly 4,000 signatures for a total ban on aquarium fishing in West Hawai'i to the state Legislature. The following year, two pertinent bills were introduced by West Hawai'i legislators—one to ban aquarium fishing from Kawaihae to Miloli'i (i.e., most of the coast), and one to establish a West Hawai'i Regional Fishery Management Area along the entire coast. <http://www.ecotippingpoints.org/our-stories/indepth/usa-hawaii-fisheries-council-community-participation.html>
- Hawai'i legislature passed Act 306 in 1998, which called for the development of a West Hawai'i Regional Fishery Management Area plan that designated 30% of the coastline as "Fish Replenishment Areas" where collection of marine aquarium fish is prohibited. The RFAs were developed by consulting the different user groups and considering the needs of all stakeholders. [http://hawaii.gov/dlnr/dar/pdf/WHI\\_HAR\\_13-60.4\\_Background.pdf](http://hawaii.gov/dlnr/dar/pdf/WHI_HAR_13-60.4_Background.pdf)
- In 1998 the West Hawaii Fisheries Council (WHFC) was set up to facilitate negotiations between user groups and develop solutions.
- Since 2009 2 council members in Maui work on tightened regulation on animal welfare related to marine aquarium fish and regulation of the Maui aquarium fishery. <http://www.mauinews.com/page/content.detail/id/526193/Bill-would-regulate-aquarium-fish-harvest.html>

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<sup>1</sup> This list is not exhaustive.

- 29.01.2010 **West Hawaii Today**: Report about the detection of 610 dead Yellow tangs and Butterfly fishes found in the dumpster at Honokohau Small Boat Harbor. „*Tropical Fish dump prompts outrages*“ (by Carolyn Lucas) <http://alohafromthebigisland.blogspot.de/2010/10/tropical-fish-dump-prompts-outrage-more.html>
- 16. Juni 2010 – 2 Bills are passed in county Maui, Bill 1: Animal protection in the marine aquarium trade ; Bill 2: Tightening regulation of the aquarium fishery in Maui  
<http://www.mauinews.com/page/content.detail/id/544112/County-Council-ends-2009-10-term.html>  
[http://www.humanesociety.org/news/news/2010/09/maui\\_reef\\_fish\\_092310.html](http://www.humanesociety.org/news/news/2010/09/maui_reef_fish_092310.html)  
[http://www.huffingtonpost.com/robert-wintner/having-our-oceans-and-eat\\_b\\_644652.html](http://www.huffingtonpost.com/robert-wintner/having-our-oceans-and-eat_b_644652.html)  
[http://www.huffingtonpost.com/robert-wintner/maui-county-council-ordina\\_b\\_674889.html](http://www.huffingtonpost.com/robert-wintner/maui-county-council-ordina_b_674889.html)  
<http://www.mauicounty.gov/documents/24/98/447/Ord%203809.PDF>
- Robert Wintner gets clearer in his intent to ban the marine aquarium trade & hobby  
<http://www.seashepherd.org/commentary-and-editorials/2010/08/22/the-dark-hobby-can-we-stop-the-devastating-impact-of-home-aquaria-on-reefs-worldwide-72>  
<http://www.seashepherd.org/search/newest-first.html?searchphrase=all&searchword=aquarium>
- September 2010 DAR announces development of white list of species allowed for aquarium fishery collection in West Hawaii <http://kona.westhawaii.com/sections/news/local-news/tighter-rules-tropical-fish-collection-eyed.html>
- 15. Juli 2011 West Hawaii Today reports on fish poacher  
<http://kona.westhawaii.com/sections/news/local-news/warrant-issued-alleged-fish-poacher.html>
- 23. September 2011 **West Hawaii Today**: *Fish Collector drops anchor on live coral, not cited* (by Erin Miller) <http://kona.westhawaii.com/sections/news/local-news/fish-collector-drops-anchor-live-coral-not-cited.html>
- 5. October 2011: public hearing in Kona and Hilo on Res 130-11, requesting prohibition of the sale of aquatic life for aquarium purposes  
<http://records.co.hawaii.hi.us/WebLink/0/doc/759951/Page1.aspx>  
<http://records.co.hawaii.hi.us/WebLink/0/doc/759688/Page1.aspx>
- 6. October 2011: **West Hawaii Today** headline „Fish-collecting ban reso passes council“ (**res 130-11**) – with interesting comments from stakeholders  
<http://kona.westhawaii.com/sections/news/local-news/fish-collecting-ban-reso-passes-council.html>
- 11. October: Kona Town Meeting Dr. Walsh (DAR): „Rene (Umberger) & crew were in attendance but most (all?) left just before I gave my talk. I guess a case of ‘don’t confuse us with the facts’. All in all the meeting went well.“  
<https://www.hawaiilife.com/articles/2011/10/kona-town-meeting/>
- 6. November 2011 **West Hawaii Today**: Condition of Honokohau Harbor tops Kona residents' wish List (by Chelsea Jensen). <http://kona.westhawaii.com/sections/news/local-news/condition-honokohau-harbor-tops-kona-residents-wish-list.html-0>
- 29. Dec. 2011 protest at Petco outlet in Maui <http://kona.westhawaii.com/sections/news/state-wire/protesters-call-petco-end-aquarium-trade.html>
- April 2012 Senator INOUE drafts a bill to the congress to require a permit to import or export any coral reef wildlife for ornamental use, and for other purposes, called Coral Reef Wildlife International Trade and Conservation Act of 2012. The bill was not yet introduced to congress in 2012.
- 24. October, 2012 citizens and conservation groups took legal action to require DLNR to protect Hawaii’s reefs and coastal areas from unlimited collection of fish and other wildlife for the aquarium trade. The complaint seeks a court order to force the state to comply with the Hawai’i Environmental Policy Act’s requirement to examine aquarium collection’s effects on the environment before issuing collection permits.  
[http://earthjustice.org/our\\_work/cases/2012/protecting-hawai-i-s-reef-ecosystems-from-the-aquarium-trade](http://earthjustice.org/our_work/cases/2012/protecting-hawai-i-s-reef-ecosystems-from-the-aquarium-trade)

- 5th Dec, 2012 public hearings in Oahu and Hawaii on proposed rules to regulate the aquarium fishery. <http://hawaii.gov/dlnr/meetings/NR12-147a.pdf>  
[http://hawaii.gov/dlnr/dar/rules/drafts/Oahu\\_Aq\\_Rules\\_dr.pdf](http://hawaii.gov/dlnr/dar/rules/drafts/Oahu_Aq_Rules_dr.pdf)  
[http://hawaii.gov/dlnr/dar/pdf/WHI\\_Rules\\_Summary\\_2012.pdf](http://hawaii.gov/dlnr/dar/pdf/WHI_Rules_Summary_2012.pdf)
- 16-24 Jan, 2013 12 bills related to the aquarium fishery were introduced for the new legislative session. At least 5 of the following bills would effectively kill the fishery, either by imposing an outright ban or by putting restrictions on the industry that it could not hope to comply with.  
SB 374: [http://www.capitol.hawaii.gov/measure\\_indiv.aspx?billtype=SB&billnumber=374&year=2013](http://www.capitol.hawaii.gov/measure_indiv.aspx?billtype=SB&billnumber=374&year=2013)  
SB 677: [http://www.capitol.hawaii.gov/measure\\_indiv.aspx?billtype=SB&billnumber=677&year=2013](http://www.capitol.hawaii.gov/measure_indiv.aspx?billtype=SB&billnumber=677&year=2013)  
HB 108: [http://www.capitol.hawaii.gov/measure\\_indiv.aspx?billtype=HB&billnumber=108&year=2013](http://www.capitol.hawaii.gov/measure_indiv.aspx?billtype=HB&billnumber=108&year=2013)  
SB 673: [http://www.capitol.hawaii.gov/measure\\_indiv.aspx?billtype=SB&billnumber=673](http://www.capitol.hawaii.gov/measure_indiv.aspx?billtype=SB&billnumber=673)  
SB 676: [http://www.capitol.hawaii.gov/measure\\_indiv.aspx?billtype=SB&billnumber=676&year=2013](http://www.capitol.hawaii.gov/measure_indiv.aspx?billtype=SB&billnumber=676&year=2013)  
SB 931: [http://www.capitol.hawaii.gov/measure\\_indiv.aspx?billtype=SB&billnumber=931&year=2013](http://www.capitol.hawaii.gov/measure_indiv.aspx?billtype=SB&billnumber=931&year=2013)  
SB 378: [http://www.capitol.hawaii.gov/measure\\_indiv.aspx?billtype=SB&billnumber=378&year=2013](http://www.capitol.hawaii.gov/measure_indiv.aspx?billtype=SB&billnumber=378&year=2013)  
HB 359: [http://www.capitol.hawaii.gov/measure\\_indiv.aspx?billtype=HB&billnumber=359&year=2013](http://www.capitol.hawaii.gov/measure_indiv.aspx?billtype=HB&billnumber=359&year=2013)  
HB 989: [http://www.capitol.hawaii.gov/measure\\_indiv.aspx?billtype=HB&billnumber=989&year=2013](http://www.capitol.hawaii.gov/measure_indiv.aspx?billtype=HB&billnumber=989&year=2013)  
HB 185: [http://www.capitol.hawaii.gov/measure\\_indiv.aspx?billtype=HB&billnumber=185&year=2013](http://www.capitol.hawaii.gov/measure_indiv.aspx?billtype=HB&billnumber=185&year=2013)
- Of the 12 introduced bills, two are scheduled for public hearing on 29<sup>th</sup> Jan, 2013.  
SB 26: [http://www.capitol.hawaii.gov/measure\\_indiv.aspx?billtype=SB&billnumber=26&year=2013](http://www.capitol.hawaii.gov/measure_indiv.aspx?billtype=SB&billnumber=26&year=2013)  
SB 27: [http://www.capitol.hawaii.gov/measure\\_indiv.aspx?billtype=SB&billnumber=27&year=2013](http://www.capitol.hawaii.gov/measure_indiv.aspx?billtype=SB&billnumber=27&year=2013)

**view of the opponents:**

[http://www.humanesociety.org/news/news/2010/07/reef\\_trade\\_legislation\\_071310.html](http://www.humanesociety.org/news/news/2010/07/reef_trade_legislation_071310.html)

[http://www.humanesociety.org/news/magazines/2011/01-02/trouble\\_in\\_paradise.html#id=album-75&num=content-1459](http://www.humanesociety.org/news/magazines/2011/01-02/trouble_in_paradise.html#id=album-75&num=content-1459)

[http://www.humanesociety.org/news/news/2012/04/five\\_ways\\_you\\_can\\_protect\\_coral\\_reefs.html](http://www.humanesociety.org/news/news/2012/04/five_ways_you_can_protect_coral_reefs.html)

[http://www.forthefishes.org/Home\\_Page.html](http://www.forthefishes.org/Home_Page.html)

<http://earthjustice.org/slideshows/ourwork/species-targeted-by-the-aquarium-trade#/sites/default/files/aq-Kona-Collector-700.jpg>

[http://earthjustice.org/our\\_work/cases/2012/protecting-hawai-i-s-reef-ecosystems-from-the-aquarium-trade](http://earthjustice.org/our_work/cases/2012/protecting-hawai-i-s-reef-ecosystems-from-the-aquarium-trade)

**also see DAR reports on the effectiveness of the management and related studies:**

[http://hawaii.gov/dlnr/dar/pubs/ar\\_hrs188F5v2.pdf](http://hawaii.gov/dlnr/dar/pubs/ar_hrs188F5v2.pdf)

[http://www.academia.edu/214832/Impacts\\_of\\_a\\_Hawaiian\\_marine\\_protected\\_area\\_network\\_on\\_the\\_abundance\\_and\\_fishery\\_sustainability\\_of\\_the\\_yellow\\_tang\\_Zebrasoma\\_flavescens](http://www.academia.edu/214832/Impacts_of_a_Hawaiian_marine_protected_area_network_on_the_abundance_and_fishery_sustainability_of_the_yellow_tang_Zebrasoma_flavescens)

[http://hawaii.gov/dlnr/dar/document\\_library.html](http://hawaii.gov/dlnr/dar/document_library.html)