

Aloha,

My name is Nicolas Vanderzyl, and I am a Marine Science student at UH-Hilo. I am basing my research on coral health, conservation, and rehabilitation. It is widely known that coral reefs have been facing a mass bleaching event, with mass mortality being feared. While most imagine corals as just a colorful rock, it is actually so much more. Corals are basically anemones that have formed a symbiotic relationship with plankton. Coral bleaching is caused when the coral is stressed, and it evicts the phytoplankton. Without the plankton, the coral polyp eventually starves. Many factors have been noted to cause coral bleaching such as temperature, pH, human waste, and more recently Oxybenzone.

In an ecological aspect, Coral reefs are the rainforest of the ocean, a source of biodiversity that is truly unimaginable. Coral reefs serve as the base of the marine ecosystem, and if lost, a complete collapse of the ecosystem will become inevitable. Coral reefs are known as breeding grounds for many species, and provide safe havens for juveniles to reach sexual maturity. A loss of this sanctuary would be detrimental to 1000's of fish species alone, which in return will affect the fishing and aquarium industry. Due to their symbiotic relationship with phytoplankton, they also produce most of the world's oxygen, something we all know and love. Coral reefs also serve as barriers, protecting coast from swells that would cause devastating erosion otherwise.

In an economic standpoint, coral reefs are a key to Hawai'i's tourism industry. Millions of nature lovers from all over the world are drawn to the archipelago to see Earth's most biodiverse ecosystem. This in return, brings millions of dollars into our local economy, and provides countless jobs to residence. If lost, Hawai'i would be losing one of the biggest international draw factors, as well as put 1000's out of employment.

If one has read the kumulipo, notice that the first creature to be created was the coral polyp, in which the rest of the ocean was built upon. Without a western perspective, the kananka maoli recognized that corals are the base of the marine ecosystem, and gave them the respect that they deserve.

Oxybenzone, a popular chemical in sunscreen, has been proven to affect coral health, leaching the polyps of their nutrients, causing them to bleach. While more research is being performed to gain a better understanding, the simple notion of the negative effects of oxybenzone should be merit enough to begin to tackle the problem. Oxybenzone does not only effect corals, but all marine organism, our shores, and our economy. Why would one continue to support the usage of a chemical can trickle down and effect the State of Hawaii in so many ways. While sunscreens with oxybenzone are convenient and cheap, many alternatives are available, including sunscreens with naturally occurring minerals and UV blocking shirts.

I, Nicolas Vanderzyl, humbly request that you support bill SB 1150 SSCR 131, to not only to protect coral reefs, but all marine ecosystems, our economy, and to provide healthy reefs for many generations to come.

Nicolas Vanderzyl
B.S. Marine Science

Support of Bill SB1150

Aloha,

I wish to provide testimony in support of Bill SB1150. I am a PADI Scuba Instructor here in Hawaii and have been teaching scuba around the world for 7 years. I have spent over 1,200 hours underwater experiencing firsthand the negative impacts humans have on our reefs. I am an active advocate for our reef being as I am also a high school science teacher who teaches our future adults how to care for their environment.

In my years of diving throughout the world, I have seen a dramatic change from year to year. I watched as a 1000+ year old brain coral the size of a Volkswagen Beetle die because one irresponsible scuba diver decided they wanted to touch the coral. I watched as death began on the coral in the shape of a handprint. I consider it my responsibility to ensure that we protect our underwater ecosystems.

Every time you watch a person enter the ocean, take a look at what happens in the water as it touches their skin. You will see a "rainbow" from the sunscreen oils slowly spread away from the person. This oil layer blocks sunlight needed to sustain life on the reef. This layer is preventing the coral's symbiotic partner from producing the nutrients it needs to survive. Coral reefs are not just important for providing tourism, but they protect our islands, they provide us food, and they provide us with research necessary to improve our health care systems. Without these reefs, our ocean ecosystems will collapse. Unfortunately, this means many island communities will be unable to feed themselves.

I worked for a company called Tropical Seas in Florida that makes Reef Safe sunscreens. It is no more expensive than sunscreens you buy in stores. This company has created a number of products that will not harm our ocean ecosystems. You can visit them at <http://www.tropicalseas.com/>.

Being a conservative, I am not a fan of unnecessary regulations. However, I consider regulations that protect our ecosystems such as this bill to be of necessity. Please consider my testimony and the testimony of others like me who have firsthand experience in the underwater world. We see the negative impacts. We know what will happen if we do not do something now. Let's start with Hawaii and pave the way for others do follow suit.

Mahalo for your consideration,

Rebecca D'Haem

From: mailinglist@capitol.hawaii.gov
To: JDLTestimony
Cc:
Subject: *Submitted testimony for SB1150 on Mar 2, 2017 09:30AM*
Date: Wednesday, March 1, 2017 8:09:04 PM

SB1150

Submitted on: 3/1/2017

Testimony for JDL on Mar 2, 2017 09:30AM in Conference Room 016

Submitted By	Organization	Testifier Position	Present at Hearing
natalie	Individual	Support	No

Comments:

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Purpose: Testimony in support of measured titled: RELATING TO PRESERVING CORAL REEFS (SB1150 SD1)
Submitted by: Lindsey Kramer
Contact:

Date: March 1, 2017

Aloha,

Thank you for the opportunity to testify in support of the proposed bill, SB1150 SD1: RELATING TO PRESERVING CORAL REEFS, which would prevent the use of products containing oxybenzone during beach and ocean activities.

I am testifying on my own behalf, and have worked in the field of coral reef ecology for the past 12 years. I am currently the Hawai'i Island Coordinator for the Eyes of the Reef Network, an organization that offers free public trainings on coral reef health and ecology to our community, and also serves as a reporting network for members to document coral reef threats including coral disease, coral bleaching, and marine invasive species.

Scientists and coral reef managers at two important international conferences held in Honolulu in 2016, (the International Coral Reef Symposium and the IUCN World Conservation Congress) agreed that oxybenzone-containing personal products have a negative impact on corals, and recommended an elimination of use of these products in areas with coral reefs.

Many witnessed the massive and devastating coral bleaching event that occurred in West Hawai'i in 2015. This thermal stress and resulting coral bleaching event was historically unprecedented, and resulted in the loss of approximately half of the live coral in West Hawai'i, according to DLNR/DAR Kona monitoring surveys. Coral serves as the foundation of a healthy coral reef ecosystem. Structure created by living coral promotes the settlement of larval fish and provides habitat for juvenile and adult fish, both of which help sustain our nearshore fisheries. The massive loss of live coral in 2015 should be a cause for great concern from state legislature, and a catalyst to support this and other conservation efforts.

Due to the recently documented toxic effects of oxybenzone on larval corals, as well as the association of oxybenzone with increased bleaching severity, I believe that this bill is a step in the right direction towards helping promote the recovery of our corals, particularly following the recent mass mortality event. Many of our heavily visited beaches on Hawai'i Island have extensive coral assemblages nearshore, and these reefs in particular would benefit from reduced toxicity in surface waters.

I strongly support the proposed bill, and hope that you will consider the importance of maintaining healthy coral reef ecosystems in our state.

Thank you for your time and consideration.

Aloha,
Lindsey Kramer

From: mailinglist@capitol.hawaii.gov
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SB1150

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Submitted By	Organization	Testifier Position	Present at Hearing
Jeff Bagshaw	Individual	Comments Only	No

Comments: Hawaii's coral reefs are the foundations of oceanic food chains here in the islands for hundreds of species. Our reefs have been the basis for the "refrigerator" for eons in Hawaiian culture, they help moderate wave sets and even enhance surfing sites. In modern times, they have become a vital draw for the tourism industry. But they are under threat from multiple sources: climate change which brings ocean acidification and excessive sea water temperatures, sedimentation from development run-off, land-based pollution from fertilizers and pesticides, over-fishing, and finally, toxic organic compounds found in cosmetic and sunscreen products. I spend four to eight hours each day in full sun five days per week, doing person-to-person education urging people to not use products containing the family of compounds related to oxybenzone. On a good day, I might reach roughly 20% of the visitors/residents coming to the site where I work. Of those, a hand-full may chose to not use these products, but I cannot sell a substitute so while many people are sympathetic, they usually choose to continue their activities and use the products they brought with them that day. They are willing to do the right thing, the next time, but tens of thousands going into the oceans around our state each day, the damage continues to mount. Education and promoting "choice" is clearly not the answer. I support any effort or bill the state legislature can put forward to change consumer behavior, to prevent the use of these compounds at our beaches or in our waters. An outright ban is best, but this bill is a step in the right direction. You will receive testimony threatening spiraling cases of skin cancer if these products are prohibited in any way. Yet even fair-skinned people in Hawaii avoided skin cancer before the creation of these compounds. Zinc and titanium sunblocks have worked for generations, and they are working for me now. I have a history of skin cancer in my family, and I visit my dermatologist annually. She assures me I am protecting myself well with sun-clothing and mineral sunblocks. I can work in the sun, go in the ocean and not poison the reefs. Please do not be swayed by industry lobbyists predicting doomsday health scenarios. Looks at the history of cigarette manufacturers making claims in their advertising that their products actually helped people with multiple ailments. Remember they made and created studies claiming that people would become obese if they quit smoking, and many still believe this myth today. Industry chemists may claim there is not enough data, but how can we gamble and wait years to gather more data? There are multiple

studies against these compounds. If you are concerned about economic impacts, remember that all the major companies already sell mineral sunblock products. They need simply change their marketing lines. And don't forget the economic impacts to local fishermen who rely on their ocean catches to help feed their families. Economic impacts from dying reefs hit them just as it does to the tourism industry. In Sept/Oct of 2015 we lost a heart-breaking 30-50% of our reefs in eight weeks due to ocean temperatures reaching 88 degrees. I have personally seen reef diversity and species density plunge at many major dive sites on Maui. While sunscreen products did not cause this crisis, they directly weakened reefs prior to the event. We may never know if reefs could have withstood the crisis better if this one human-induced factor, sunscreen products, could have been removed in advance. We can't change climate problems overnight, but this is one thing we can change quickly, and we need to act quickly, before the next El Nino year. We must raise the health of our reefs so they may withstand other pressures. Skin cancer is a concern but there are alternatives that have worked for generations. I support this bill and any actions our legislature can make to protect our reefs from these toxic formulations. This is for our future. Locations in Mexico, Australia, the Mediterranean and the Caribbean have already banned these products. Can't we we follow the examples of these "third-world" sites? Please be brave. I am when I speak with over 100 people each day on this issue, but I can't do it alone. Hawaii must lead the nation in taking these products off the shelves and off our reefs. Jeff Bagshaw Makawao, HI

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SB1150

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Iris Ekmanis	Individual	Support	No

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SB1150

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Submitted By	Organization	Testifier Position	Present at Hearing
Aubrie	Mermaid of Ho'okipa	Comments Only	No

Comments: Oxybenzone is killing our coral reefs, causing devastating damage to our local fisherman communities and threatening my our tourism industry. I have documented severe tumor growths on Hawaiian green sea turtles, collected bleached coral specimens and collected research findings conducted in the U.S. Virgin Islands and Hawa'ii Nei, which report that oxybenzone in particular causes DMA mutation in humans and at the larval stage of coral reef growth, consequently decimating any chance of serving. We MUST ban this and all other sunscreen chemicals from Hawaii, immediately. Tourists have already reached out to me about their concerns for our governments lack of policy on these issues. A mother and daughter from Australia were devastated at the sight of our sea turtles. Oxybenzone is a threat to our economy and environment, and our personal health of current and future generations.

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Submitted By	Organization	Testifier Position	Present at Hearing
amanda wilson	Individual	Comments Only	No

Comments: I am SO impressed and happy to see this bill here in Hawaii!! I am a science teacher at Kihei Charter School, and I have met more than one scientist who has confirmed that oxybenzone and avobenzone are not only terrible for the reef and may be responsible for wrasse in Kapalua Bay becoming overwhelmingly female, but they are also deleterious to the human body as well. They are able to penetrate our lovely dermal barrier. Our skin hasn't evolved to know to keep these things out (yet)! Please, please stop everyone from harming themselves and our gorgeous ocean as soon as possible. It's important.

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