

# HB450 HD1

RELATING TO CORAL.

Requires UH to conduct a study on the effects of sunscreen on Hawaii's coral reefs and report to the Legislature. Appropriates funds. (HB450 HD1)



# UNIVERSITY OF HAWAII SYSTEM

## Legislative Testimony

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Testimony Presented Before the  
Senate Committees on Higher Education, Agriculture & Environment,  
and Water & Land

Tuesday, March 21, 2017 at 1:50 p.m.

By

Dr. Ruth D. Gates, Director  
Hawai'i Institute of Marine Biology  
School of Ocean and Earth Science and Technology  
University of Hawai'i at Mānoa

### HB 450 HD1 – RELATING TO CORAL

Chairs Kahele, Gabbard and Rhoads, Vice Chairs Kidani and Riviere, and members of the committees:

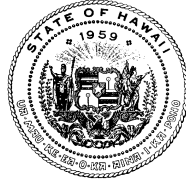
In my role as Director of the Hawai'i Institute of Marine Biology, I am presenting testimony in strong support of HB 450 HD1 on behalf of the University of Hawai'i, provided that its passage does not replace or adversely impact priorities as indicated in our Board of Regents Approved Biennium Budget. This measure allocates resources for the University of Hawai'i to examine the impacts of sunscreen products on corals.

I am a marine scientist who has studied the health of coral reefs for the past 25 years and Hawaiian reefs for the past 13 year, and I am the current President of the International Society for Reef Studies. My graduate students, post-doctoral researchers and I have conducted numerous studies on the influence of water quality on coral health. There is no doubt that coral communities in Hawai'i have been and continue to be exposed to increasing impacts from human use and that in some places they are degrading as a result. Work from other parts of the world has highlighted the detrimental impact of chemicals in sunscreen products on coral health and reproduction. No studies to date have explored their impact on Hawaiian corals however some Hawaiian reefs see heavy tourist traffic (e.g. Hanauma Bay and Waikīkī), and measurable concentrations of sunscreen chemical, a scenario that creates context for a detailed examination of the impact of sunscreen chemicals on the health of Hawai'i corals.

The bill will allocate resources to the University of Hawai'i to conduct a study and report on the effects of sunscreen used by ocean users on the coral reefs located in Hawai'i waters and, if any are found, make recommendations for mitigating these impacts. The University of Hawai'i has experts who are appropriately trained in coral reef biology and analytical chemistry to conduct such a study. The compartmentalization of tourist traffic on Oahu makes the comparison of concentrations of sunscreen chemicals like oxybenzones in heavily trafficked versus rarely visited coral reef areas tractable and measurable. Facilities in the School of Earth, Ocean and Earth Science (SOEST), University of Hawai'i at Mānoa, possess world class capacity to expose corals to these measured concentrations of sunscreen chemicals in the laboratory and the experts to assess their impact on coral health, growth, reproductive output and on their offspring. The results from such studies will create information that can guide management actions to mitigate or minimize impacts of sunscreen products on corals and develop best practices for products and ocean use in Hawai'i waters.

Thank you for the opportunity to present testimony in support of the important HB 450 HD1.

DAVID Y. IGE  
GOVERNOR OF HAWAII



VIRGINIA PRESSLER, M.D.  
DIRECTOR OF HEALTH

**STATE OF HAWAII**  
**DEPARTMENT OF HEALTH**  
P. O. Box 3378  
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WRITTEN TESTIMONY  
ONLY

**Testimony in SUPPORT of H.B. 450, HD1**

**RELATING TO CORAL**

SENATOR KAIALI'I KAHELE, CHAIR  
SENATE COMMITTEE ON HIGHER EDUCATION

SENATOR MIKE GABBARD, CHAIR  
SENATE COMMITTEE ON AGRICULTURE AND ENVIRONMENT

SENATOR KARL RHOADS, CHAIR  
SENATE COMMITTEE ON WATER AND LAND

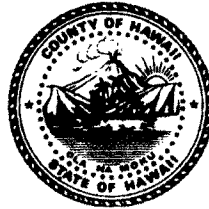
Hearing Date: March 21, 2017  
Time: 1:50 P.M.

Room Number: 414

- 1 **Fiscal Implications:** Money shall be appropriated to the University of Hawaii
- 2 **Department Testimony:** H. B.450, HD1 asks the University of Hawaii to conduct a study of
- 3 the environmental effects of sunscreen use on the coral reefs. We support this initiative as long
- 4 as it does not replace priorities requested in the Executive Budget. We defer to the University of
- 5 Hawaii about conducting such a study.
- 6 Research by local and national coral experts has shown that levels of oxybenzone from
- 7 sunscreens in the marine environment are high enough to pose deleterious effects on coral.
- 8 Additionally, sunscreens containing zinc oxide and titanium dioxide nanoparticles wash off skin
- 9 into the aquatic environment with unknown effects to the tropical marine ecosystem.
- 10 We support local research on the impact of chemicals in sunscreen on the coral reefs.
- 11 Additionally, DOH supports development of effective public education and outreach efforts to

- 1 inform Hawaii beachgoers about steps that they can take to reduce the use of sunscreen
- 2 containing oxybenzone while enjoying our beaches in Hawaii.
- 3 Thank you for the opportunity to testify on this important measure.
- 4 **Offered Amendments:** None.

Harry Kim  
Mayor



Wil Okabe  
Managing Director

Barbara J. Kossow  
Deputy Managing Director

County of Hawai'i  
Office of the Mayor

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March 17, 2017

Senator Kaiali'i Kahele, Chair  
Committee on Higher Education  
Hawai'i State Capitol  
Honolulu, HI 96813

Senator Mike Gabbard, Chair  
Committee on Agriculture & Environment  
Hawai'i State Capitol  
Honolulu, HI 96813

Senator Karl Rhoads, Chair  
Committee on Water & Land  
Hawai'i State Capitol  
Honolulu, HI 96813

Dear Chair Kahele, Chair Gabbard, Chair Rhoads, and Committee members:

**RE: HB 450, HD 1  
Relating to Coral**

If there is a scientific consensus that sunscreen containing oxybenzone is harmful to the environment, and that it is worse than the alternative sunscreen products available, I would urge the Legislature to ban the sale of products containing oxybenzone in Hawaii. It would not eliminate the problem entirely (tourists might still bring product in) but I would think that the use of the chemical in Hawaii would be dramatically reduced.

The Department of Health's earlier testimony on a Senate bill did not assert that a scientific consensus exists, although its testimony was labeled as being in favor of restricting use. If that could be positively clarified, I would urge the Legislature to use HB 450 as an appropriate vehicle to forcefully address the problem. If, on the other hand, the consensus does not yet exist, then providing for a study that could generate appropriate science is worthy of your approval.

Respectfully submitted,

A handwritten signature in black ink that reads "Harry Kim".

Harry Kim  
Mayor



**TO:** Honorable Chairs Kahele, Gabbard, and Rhoads, Vice-Chairs Kidani, Riviere, and Gabbard, and Higher Education, Agriculture and Environment, and Water and Land Committee Members, 3-21-17, 1:50 p.m.

**SUBMITTED BY:** Keith Dane, Hawaii Policy Advisor, State Affairs, Humane Society of the United States, [kdane@humanesociety.org](mailto:kdane@humanesociety.org), Tel: 301-312-1489; and Teresa M. Telecky, Ph.D., Director, Wildlife Department, Humane Society International, [ttelecky@hsi.org](mailto:ttelecky@hsi.org), Tel: 301-258-1430

**RE: SUPPORT for HB 450 HD1, Relating to Coral**

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The Humane Society of the United States (HSUS) and Humane Society International (HSI), support HB 450 HD1 which would, if enacted, appropriate funds and require the University of Hawaii (UH) to conduct a study on the effects of sunscreen on Hawaii's coral reefs and report to the Legislature. We thank the Committees for addressing this important matter that affects Hawaii's nearshore coral reefs.

Numerous studies have shown that oxybenzone in the marine environment can be harmful to coral reefs and marine life (Kim et al. 2014, Kim and Choi 2014, Tsui et al. 2014, Downs et al. 2015). These studies clearly indicate that oxybenzone poses a risk to fishes, through endocrine disruption and reproduction performance, for example, and to hard corals through bleaching. These threats are heightened in marine recreational areas frequented by beach goers, swimmers, snorkelers and divers whose sunscreen washes off when they enter the water.

It has been estimated that 4,000 –14,000 tons of sunscreen enters coral reef areas around the world annually (U.S. National Park Service, Downs, et al. 2015). Surveys around Hawaii's coral reefs found oxybenzone levels at concentrations 12 times higher than the level at which it impacts juvenile coral (Downs et al. 2015). To better ascertain the prevalence of sunscreen chemicals in Hawaii's coral reef ecosystems and understand their effects, in-depth, Hawaii focused studies are urgently needed.

The unprecedented coral bleaching events of 2014 and 2015 had devastating effects on Hawaii's corals. A 2016 report by The Nature Conservancy found 32 – 90% of bleached coral colonies died in some West Hawaii areas. Though oxybenzone may be just one of many stressors impacting Hawaii's coral reefs, the inevitability of future ocean warming

events and subsequent coral bleaching makes it imperative to reduce the stressors to corals and increase their potential to recover and survive.

HSUS and HSI sincerely thank the Committees for taking up this important matter. ***We urge the Committees to pass HB 450 HD1*** which will shed more light on sunscreen and oxybenzone pollution and its effects on Hawaii's coral reefs and wildlife.

Thank you for this opportunity to provide testimony.

**From:** [Rene Umberger | For the Fishes](#)  
**To:** [HRE Testimony](#)  
**Subject:** SUPPORT HB 450 HD1, Mar 21  
**Date:** Monday, March 20, 2017 5:20:02 AM  
**Attachments:** [image006.png](#)

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Aloha Chairs, Vice-chairs and Committee members,

For the Fishes is in support of HB 450 HD1 which would require UH to study the effects of sunscreen on Hawaii's coral reefs. Several studies have shown that sunscreens are harmful to corals and wildlife. We need to know the extent to which Hawaii's reefs are impacted by chemical pollution from personal care products. A report documenting true reef-safe alternatives that protect people from harmful sunlight would also be very beneficial.

Thank you for this opportunity.

**Rene Umberger**  
Executive Director  
808.875.8759 cell: 808.283.7225

For the Fishes  
PO Box 1894, Kihei, HI, 96753  
[FortheFishes.org](http://FortheFishes.org) and on [Facebook](#)





**From:** mailinglist@capitol.hawaii.gov  
**Sent:** Monday, March 20, 2017 2:36 PM  
**To:** HRE Testimony  
**Cc:** yogamango@gmail.com  
**Subject:** \*Submitted testimony for HB450 on Mar 21, 2017 13:50PM\*

**HB450**

Submitted on: 3/20/2017

Testimony for HRE/AEN/WTL on Mar 21, 2017 13:50PM in Conference Room 414

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Jingwoan Chang	Individual	Support	No

Comments:

Please note that testimony submitted less than 24 hours prior to the hearing, improperly identified, or directed to the incorrect office, may not be posted online or distributed to the committee prior to the convening of the public hearing.

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**From:** mailinglist@capitol.hawaii.gov  
**Sent:** Monday, March 20, 2017 12:36 PM  
**To:** HRE Testimony  
**Cc:** tbohl8@yahoo.com  
**Subject:** Submitted testimony for HB450 on Mar 21, 2017 13:50PM

**HB450**

Submitted on: 3/20/2017

Testimony for HRE/AEN/WTL on Mar 21, 2017 13:50PM in Conference Room 414

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Ted Bohlen	Individual	Support	No

Comments: Please pass this bill and amend it to appropriate significant funds to UH research into the effects of oxybenzone sunscreens and cosmetics on our precious coral reefs. Our economy and island survival depend on coral reef health at a time of increasing stress on the reefs, so study of this issue is critical! Mahalo!

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**From:** mailinglist@capitol.hawaii.gov  
**Sent:** Sunday, March 19, 2017 8:56 AM  
**To:** HRE Testimony  
**Cc:** terry8845@gmail.com  
**Subject:** Submitted testimony for HB450 on Mar 21, 2017 13:50PM

**HB450**

Submitted on: 3/19/2017

Testimony for HRE/AEN/WTL on Mar 21, 2017 13:50PM in Conference Room 414

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Terry Schroeder	Individual	Support	No

Comments: I support this bill to investigate HB450 to investigate if sunscreens are affecting the coral reefs. The EWG's studies show that Oxybezone is a hormone disruptor for humans and may be toxic to coral reefs. Please go to their website to review their findings. <http://www.ewg.org/sunscreen/report/the-trouble-with-sunscreen-chemicals/> Mahalo for your consideration on this matter. Terry Schroeder Lahaina, HI

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**From:** mailinglist@capitol.hawaii.gov  
**Sent:** Friday, March 17, 2017 3:45 PM  
**To:** HRE Testimony  
**Cc:** mjellings@hawaii.rr.com  
**Subject:** \*Submitted testimony for HB450 on Mar 21, 2017 13:50PM\*

**HB450**

Submitted on: 3/17/2017

Testimony for HRE/AEN/WTL on Mar 21, 2017 13:50PM in Conference Room 414

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Carl M Jellings Sr	Individual	Support	No

Comments:

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**From:** mailinglist@capitol.hawaii.gov  
**Sent:** Thursday, March 16, 2017 9:53 PM  
**To:** HRE Testimony  
**Cc:** mkhan@hawaiiintel.net  
**Subject:** \*Submitted testimony for HB450 on Mar 21, 2017 13:50PM\*

**HB450**

Submitted on: 3/16/2017

Testimony for HRE/AEN/WTL on Mar 21, 2017 13:50PM in Conference Room 414

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Leimomi Khan	Individual	Support	No

Comments:

Please note that testimony submitted less than 24 hours prior to the hearing, improperly identified, or directed to the incorrect office, may not be posted online or distributed to the committee prior to the convening of the public hearing.

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**From:** [Patrick Coan](#)  
**To:** [HRE Testimony](#)  
**Subject:** Hb450  
**Date:** Monday, March 20, 2017 1:33:24 PM

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Of course this needs to be studied further.  
We need to protect our coastal and economic future.  
What is the value of our reefs?

Sent from my iPhone

**From:** [Coconut Girl Wireless](#)  
**To:** [HRE Testimony](#)  
**Subject:** Testimony for HB450  
**Date:** Monday, March 20, 2017 1:25:58 PM

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**HB450**

Submitted on: 3/20/2017

Testimony for HRE/AEN/WTL [on Mar 21, 2017 13:50PM](#) in Conference Room  
414

Please pass HB450 and appropriate significant funds to UH / research scientists to study the effects that oxybenzone (and other hormone disruptors) in chemical sunscreens and cosmetics have on Hawaii's coral reefs and sea life. Our local economy and the health on the residents is dependent on coral reef health and it's a shame we are ignoring this critical situation. Mahalo!

Wil McClaren  
Ban Toxic Sunscreens Hawaii  
Sent from my iPad

Council Chair  
Mike White

Vice-Chair  
Robert Carroll

Presiding Officer Pro Tempore  
Stacy Crivello

Councilmembers  
Alika Atay  
Elle Cochran  
Don S. Guzman  
Riki Hokama  
Kelly T. King  
Yuki Lei K. Sugimura



Director of Council Services  
Sandy K. Baz

## COUNTY COUNCIL

COUNTY OF MAUI  
200 S. HIGH STREET  
WAILUKU, MAUI, HAWAII 96793  
[www.MauiCounty.us](http://www.MauiCounty.us)

March 20, 2017

TO: **The Honorable Kaiali'i Kahele, Chair**  
Senate Committee on Higher Education  
**The Honorable Mike Gabbard, Chair**  
Senate Committee on agriculture and Environment  
**The Honorable Karl Rhoads, Chair**  
Senate Committee on Water and Land

FROM: Robert Carroll  
Council Member

DATE: March 20, 2017

SUBJECT: **TESTIMONY IN SUPPORT OF HB450 HD1, RELATING TO CORAL**

Thank you for the opportunity to testify as an individual in **support** of this important measure. The purpose of this measure requires University of Hawai'i (UH) to conduct a study on the effects of sunscreen on Hawaii's coral reefs. Appropriates funds.

I strongly **support** this measure for the following reasons:

1. While destructive fishing, pollution and development all pose threats to the coral reef, other studies have revealed that sunscreen is a serious danger to the health of coral. The ingredient, *oxybenzone* that is used in sunscreen leaches the coral of its nutrients. By using "reef friendly" sunscreen made with natural mineral ingredients are a possible alternative.
2. Our own local economies here in Hawaii also depend on the tourism that coral reefs attract. We have seen the impact to our coral reefs here in Maui. From Olowalu through Lahaina where tourism is very concentrated our coral reefs are at risk.
3. This measure will allow the UH to conduct a study of the effects of sunscreen used by swimmers and ocean users on the reefs located in **Hawai'i waters**. The sum appropriated shall be expended by the University of Hawai'i for the purpose of this act, including specific dates a preliminary report along with a final report shall be submitted.



March 20, 2017

Page 2

4. The final report shall include the results from such study will create information that can guide management action to mitigate or minimize impacts and help develop best practices for products and ocean use in Hawaii waters.

For the foregoing reasons, I strongly **support** this measure.  
Mahalo for allowing me this opportunity to testify,

Robert Carroll, Vice Chair  
Maui County Council

RC:dna