

MAR 12 2021

SENATE RESOLUTION

URGING THE DEPARTMENT OF LAND AND NATURAL RESOURCES TO EXAMINE
AND CONSIDER REEF INSURANCE TO SUPPORT NATURE-BASED
SOLUTIONS TO PROTECT HAWAII'S COASTLINES AND COASTAL
INFRASTRUCTURE FROM NATURAL DISASTERS.

1 WHEREAS, the State has environmental resources such as
2 coral reefs, wetlands, forests, and other natural infrastructure
3 that, if healthy, effectively managed, and functioning, can help
4 mitigate the risks and related loss and damage from the effects
5 of climate change and natural disasters; and
6

7 WHEREAS, Hawaii's coastal areas and infrastructure are
8 facing exposure to climate change-related risks and disaster
9 events, including exposure to storms, high wave events, sea
10 level rise, and flooding; and
11

12 WHEREAS, climate scientists and other local and global
13 experts predict an increase in severity and frequency in such
14 events; and
15

16 WHEREAS, a study by a team from the United States
17 Geological Survey, The Nature Conservancy, and University of
18 California at Santa Cruz estimates that Hawaii's coral reefs
19 protect \$836,000,000 worth of coastal infrastructure from
20 flooding annually; and
21

22 WHEREAS, in addition to coastal protection, Hawaii's
23 nearshore coral reefs provide residents with income from fishing
24 estimated at \$13,400,000 annually, of which \$10,000,000 is
25 non-commercial catch; and
26

27 WHEREAS, Hawaii's coral reefs also provide reef-related
28 tourism estimated at \$1,230,000,000 annually; and



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1 WHEREAS, Hawaii's coral reefs also provide food security,
2 recreational opportunities, and a cultural connection to the
3 State; and

4
5 WHEREAS, over ten million visitors traveled to Hawaii in
6 2019 to experience the beauty of the State's beaches, reefs,
7 oceans, and other natural resources, and in doing so,
8 contributed nearly \$17,000,000,000 to the State's economy; and

9
10 WHEREAS, the health and sustainability of the State's
11 communities and economy are closely intertwined with the health
12 of the State's coral reefs and coastal ecosystems; and

13
14 WHEREAS, the health and function of Hawaii's coral reefs
15 are threatened by global stressors related to climate change,
16 including sea level rise, coral bleaching, and acidification;
17 and by local stressors from land-based sources of pollution,
18 unsustainable fishing practices, and invasive species; and

19
20 WHEREAS, live coral cover has declined by as much as forty
21 percent, and reef fish abundance has declined by up to ninety
22 percent in some areas; and

23
24 WHEREAS, Hawaii has experienced three coral bleaching
25 events in the past five years, including the first statewide
26 mass bleaching event in 2015; and

27
28 WHEREAS, coastal risks are expected to increase in the
29 future from the effects of climate change, including an increase
30 in the number and severity of hurricanes, higher levels of
31 rainfall in fewer storm events, increasing sea surface
32 temperatures, and increased ocean acidification that negatively
33 impacts coral reefs, lobsters, oysters, and other calcifying
34 organisms; and



1 WHEREAS, global losses due to natural catastrophes and
2 tropical hurricanes have been increasing in recent decades, and
3 these storms impact national and local economic productivity,
4 threaten water and food security, increase diseases, damage
5 critical public infrastructure, and impede basic services; and
6

7 WHEREAS, the exposure of communities and coastal assets to
8 flooding and erosion is also increasing because coastal
9 ecosystems that serve as the first line of defense, such as
10 wetlands and coral reefs, are being lost at alarming rates; and
11

12 WHEREAS, in 2018, the Mexican state government of Quintana
13 Roo partnered with the local hotel owners' association, The
14 Nature Conservancy, and a local marine park to establish a
15 Coastal Zone Management Trust Fund to manage and restore beaches
16 and coral reefs, which was funded in part through local tourism
17 taxes; and
18

19 WHEREAS, in mid-2019, the Coastal Zone Management Trust
20 Fund purchased the world's first reef insurance policy, which
21 will provide funds to quickly restore the coral reef if damaged
22 in a hurricane; and
23

24 WHEREAS, the insurance covers damage to the reef rather
25 than damage to the private property on the coastline, thus
26 insuring nature itself; and
27

28 WHEREAS, in 2020, Mexico's reef insurance policy paid out
29 \$850,000 to repair the reef that was impacted by Hurricane
30 Delta; and
31

32 WHEREAS, The Nature Conservancy completed a feasibility
33 assessment in 2020, finding that reef insurance is ecologically
34 and economically feasible in the State and could help Hawaii
35 repair its reefs after a natural disaster; and
36

37 WHEREAS, the feasibility assessment identified hurricanes,
38 marine heatwaves, and excessive storm runoff as potentially
39 insurable natural disasters; now, therefore,



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1 BE IT RESOLVED by the Senate of the Thirty-first
2 Legislature of the State of Hawaii, Regular Session of 2021,
3 that the Department of Land and Natural Resources is urged to
4 examine and consider reef insurance to support nature-based
5 solutions to protect Hawaii's coastlines and coastal
6 infrastructure from natural disasters; and

7
8 BE IT FURTHER RESOLVED that in its examination, the
9 Department of Land and Natural Resources is requested to work in
10 collaboration with the State Insurance Commissioner and other
11 appropriate state and county agencies, The Nature Conservancy,
12 insurance experts, and other experts and partners to develop a
13 report that includes:

- 14
15 (1) Term sheets for a new Hawaii reef insurance policy for
16 natural disasters;
17
18 (2) Priority sites for insurance;
19
20 (3) Possible buyers and sellers of reef insurance; and
21
22 (4) Recommended funding mechanisms to cover insurance
23 premium costs; and
24

25 BE IT FURTHER RESOLVED that the Department of Land and
26 Natural Resources is requested to identify and propose to the
27 Legislature specific nature-based projects that can help protect
28 the State's coastal infrastructure from inundation, including
29 the use of insurance and other market mechanisms that
30 incentivize public and private investment to protect the health
31 and function of reefs and other coastal systems and to restore
32 them after a natural disaster; and
33

34 BE IT FURTHER RESOLVED that the Department of Land and
35 Natural Resources is requested to submit a report of its
36 findings and recommendations, including any proposed
37 legislation, to the Legislature no later than twenty days prior
38 to the convening of the Regular Session of 2022; and
39

40 BE IT FURTHER RESOLVED that certified copies of this
41 Resolution be transmitted to the Governor, Chairperson of the
42 Board of Land and Natural Resources, Chairs of the Hawaii



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1 Climate Change Mitigation and Adaptation Commission, State
2 Insurance Commissioner, Mayor of the City and County of
3 Honolulu, Mayor of the County of Hawaii, Mayor of the County of
4 Maui, Mayor of the County of Kauai, and Executive Director of
5 The Nature Conservancy Hawaii.

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OFFERED BY:

A handwritten signature in black ink, appearing to be 'Alan', written over a horizontal line.