


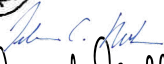
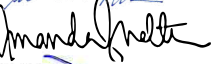





I Mina'trentai Singko Na Liheslaturan Guåhan
BILL STATUS

BILL NO.	SPONSOR	TITLE	DATE INTRODUCED	DATE REFERRED	CMTE REFERRED	PUBLIC HEARING DATE	DATE COMMITTEE REPORT FILED	FISCAL NOTES	NOTES
372-35 (COR)	Régine Biscoe Lee Telena Cruz Nelson Amanda L. Shelton Tina Rose Muña Barnes Sabina Flores Perez Clynton E. Ridgell Joe S. San Agustin Louise B. Muña	AN ACT RELATIVE TO ESTABLISHING A TASK FORCE TO EXPLORE THE FEASIBILITY OF OBTAINING PARAMETRIC INSURANCE FOR THE REEF AND BEACH OF TUMON BAY AND TO FURTHER EXPLORE A PUBLIC-PRIVATE PARTNERSHIP TO EFFECTUATE THE SAME.	6/29/20 11:34 a.m.						

I MINA'TRENTAI SINGKO NA LIHESLATURAN GUÅHAN
2020 (SECOND) Regular Session

Bill No. 372-35 (COR)

Introduced by:

Régine Biscoe Lee 
Telena Cruz Nelson 
Amanda L. Shelton 
Tina Rose Muña Barnes 
Sabina Flores Perez 
Clynton E. Ridgell 
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**AN ACT RELATIVE TO ESTABLISHING A TASK
FORCE TO EXPLORE THE FEASIBILITY OF
OBTAINING PARAMETRIC INSURANCE FOR THE
REEF AND BEACH OF TUMON BAY AND TO FURTHER
EXPLORE A PUBLIC-PRIVATE PARTNERSHIP TO
EFFECTUATE THE SAME.**

1 **BE IT ENACTED BY THE PEOPLE OF GUAM:**

2 **Section 1. Legislative Findings and Intent.** *I Liheslaturan Guåhan*
3 finds that coral reefs provide a wide range of critical ecosystem services
4 including provisioning services such as food, regulating services such as storm
5 protection, economic services such as fishing and tourism, cultural services
6 such as recreational, cultural and spiritual enjoyment, and supporting services
7 such as nutrient cycling and biological diversity. Together, these ecosystem
8 services provide the constituents of environmental and human well-being,
9 including livelihoods, health, safety and security.

10 Coral reefs, which serve as natural breakwaters that provide flood
11 reduction benefits through wave breaking and wave energy attenuation, have

1 experienced significant losses around the world from coastal development,
2 deforestation, sand and coral mining, overfishing and destructive fishing, as
3 well as bleaching events and severe storms, both of which have become more
4 frequent and severe as a result of climate change. The international scientific
5 community, through the Intergovernmental Panel on Climate Change and other
6 international bodies, has expressed grave concern about the current and future
7 condition of coral reefs worldwide, and the loss of ecosystem services they
8 provide.

9 According to the 2018 Guam Coral Reef Resiliency Strategy, Guam's
10 coral reefs likewise face a bevy of threats from both local stressors and the
11 global phenomena of climate change and ocean acidification. No less than one-
12 fifth of the island's reefs have already been lost, while over one quarter of
13 surviving reefs are in danger of imminent decline, as evidenced by downward
14 trends in coral cover, coral recruitment rates, and fish biomass. In fact, both
15 federal and local studies indicate that coral cover on Guam's seaward slopes
16 has decreased by approximately 80% in the last half century, with mean coral
17 cover declining from about 50% in the 1960s to 10% since 2009. Several
18 factors—including population growth, tourism, poor water quality,
19 sedimentation, runoff, recreational activities and increased coastal
20 development—have combined to place great strain on the island's reefs in
21 recent years. While our reefs have experienced degradation in the past, certain
22 chronic local stressors such as sedimentation have threatened the overall health
23 of our reefs, impeding their ability to recover from events like coral bleaching
24 and severe storms.

25 Catastrophic events such as hurricanes, cyclones and typhoons can cause
26 severe damages to reefs, resulting in the loss of anywhere between 17% and
27 60% of live coral cover in a matter of hours. Therefore, in addition to reducing

1 threats to reefs such as by improving water quality, it is critical to prepare to
2 address these types of climate change-exacerbated catastrophes. Specifically,
3 evaluations are currently underway in several countries (as well as multiple
4 jurisdictions within the United States) for the feasibility of obtaining insurance
5 for coral reefs and for building the capacity of governments to respond after a
6 catastrophic event to repair and/or mitigate the damage(s) it caused. Given the
7 growing scientific consensus that climate change is exacerbating extreme
8 weather events (e.g., by increasing the frequency and severity of severe
9 storms), these jurisdictions are looking to new and innovative forms of
10 insurance both to transfer the risk of such events and also to protect their
11 natural assets in the long term.

12 *I Liheslaturan Guåhan* finds that an increasing number of jurisdictions
13 are looking to parametric insurance, which is a form of insurance designed to
14 pay a pre-determined amount of money when a specific condition (or
15 parameter) is met. Parametric insurance has three components: (1) a parameter
16 or threshold condition that will trigger the insurance; (2) a polygon that defines
17 the limits where the parameter should occur; and (3) an amount that will be
18 paid out. In short, an insurance payout is triggered when a selected parameter
19 (e.g., wind speed) surpasses an agreed threshold (e.g., 100 knots) in a specified
20 location (e.g., Tumon Bay).

21 The first jurisdiction in the world to have successfully established a
22 system of parametric insurance to protect its coral reef was the State
23 Government of Quintana Roo, Mexico. With the support of The Nature
24 Conservancy (TNC)—a global environmental organization with expertise in
25 coastal risk and resilience as well as natural infrastructure financing—the
26 government obtained insurance to protect the \$12 billion per year tourism
27 industry that thrives along the beaches of Quintana Roo. The insurance covers

1 over 100 miles of coastline, including several municipalities and their towns,
2 namely, Cancún, Puerto Morelos, Playa del Carmen, Tulum, and Cozumel.
3 Substantiated by both the sound economic valuation of the Mesoamerican Reef
4 and the rigorous scientific evidence of the ecosystem services it provides, the
5 state government, together with local hotel associations and other third parties,
6 established the Quintana Roo Trust for Coastal Zone Management, Social
7 Development and Security. As of 2019, the Trust purchased an insurance
8 policy to cover coral reefs and beaches in the Quintana Roo area against
9 hurricanes above 100 knots (i.e., Category 3+ hurricanes). Under the policy,
10 payouts for severe storms vary according to the registered wind speed of any
11 given storm, with a maximum payout (over a 12-month period) of \$3.8 million.
12 Moreover, payouts will support immediate reef repair efforts, which will be
13 conducted by teams of specially trained and equipped volunteers known as
14 “reef brigades” that will be activated in the wake of any catastrophic event.

15 The Quintana Roo Trust is an example of a successful public-private
16 partnership that demonstrates how jurisdictions can insure coastal reefs that
17 support tourism and provide critical ecosystem services for coastal
18 communities and build the response capacity needed to address damages
19 caused by catastrophic events, while also transferring the financial risk of
20 damages from storms and providing long-term reef management and
21 protection. It is therefore the intent of *I Liheslaturan Guåhan* to establish a task
22 force to explore the feasibility of obtaining parametric insurance for the reef
23 and beach of Tumon Bay, and to further explore a public-private partnership to
24 effectuate the same.

25 **Section 2. Tumon Bay Insurance Task Force.**

26 (a) The Lieutenant Governor of Guam *shall* appoint a Tumon Bay
27 Insurance Task Force consisting of:

1 (1) the Administrator of the Guam Environmental Protection
2 Agency or his/her designee;

3 (2) the Administrator of the Guam Economic Development
4 Authority or his/her designee;

5
6 (3) the Director of the Bureau of Statistics and Plans or his/her
7 designee;

8 (4) the Director of the Department of Agriculture or his/her
9 designee;

10 (5) the President/Chief Executive Officer of the Guam Visitors
11 Bureau or his/her designee;

12 (6) the Executive Director of the University of Guam Sea Grant
13 Program or his/her designee;

14 (7) the Director of the University of Guam Marine Laboratory
15 or his/her designee; and

16 (8) the Commissioner of Banking and Insurance of the
17 Department of Revenue and Taxation or his/her designee.

18 The Lieutenant Governor *shall* also invite members from the private
19 sector to participate in the Tumon Bay Insurance Task Force, consisting
20 of:

21 (9) the Chairperson of the Board of the Guam Chamber of
22 Commerce or his/her designee;

23 (10) the President of the Guam Hotel & Restaurant Association
24 or his/her designee; and

25 (11) the Director of The Nature Conservancy's Pacific Division.

26 (b) The Task Force *shall* be under the direction of the Office of the
27 Lieutenant Governor, who *shall* serve as its Chairperson.

1 (c) The Lieutenant Governor may extend participation in the Task
2 Force to members of the Guam Council on Climate Change Preparedness and
3 Resiliency. The Lieutenant Governor may further extend participation in the
4 Task Force to additional government agencies and private individuals and
5 organizations to assist it in its exploration of the feasibility of obtaining
6 parametric insurance for the reef and beach of Tumon Bay, and the further
7 exploration of a public-private partnership to effectuate the same.

8 (d) The Task Force *shall* produce a feasibility study in the form of a
9 written report that includes, at a minimum, an assessment of the following:

10 (1) Does the natural asset provide valuable ecosystem
11 services—and if so, are they tangible and quantifiable and with
12 economic data?;

13 (2) Is the natural asset at risk from a catastrophic event—and if
14 so, do damages caused by the event diminish its value and services?;

15 (3) Is the risk of the event insurable? Do catastrophe risk
16 modelers have information to estimate its probability?;

17 (4) Is it possible to repair or mitigate the damages to the natural
18 asset, so the services it provides can remain functional or be improved or
19 recovered?;

20 (5) Is the cost of repairing the asset lower than the avoided
21 losses?;

22 (6) Are there stakeholders interested in repairing the damages
23 after an event?;

24 (7) Would those stakeholders be interested in transferring the
25 risk and not bear the cost of repair?;

1 (8) Do those stakeholders have the capacity to pay an insurance
2 premium—and if so, is there an appropriate institutional or financial
3 arrangement that convenes beneficiaries to buy the insurance?;

4 (9) Are those stakeholders legally entitled to buy the insurance
5 for the asset?; and

6 (10) other factors that the Task Force deems reasonably
7 appropriate to consider in its discretion.

8 (e) The Task Force *shall* submit the report identified in subsection (d)
9 of this Section to the Speaker of *I Liheslaturan Guåhan* no later than midnight
10 on December 31, 2020.

11 **Section 3. Effective Date.** This Act *shall* become effective upon
12 enactment.