DAVID Y. IGE GOVERNOR OF HAWAII



STATE OF HAWAII DEPARTMENT OF HEALTH

P. O. Box 3378 Honolulu, HI 96801-3378 doh.testimony@doh.hawaii.gov

Testimony in SUPPORT of HB2486 SD1 RELATING TO THE OFFIE OF PLANNING.

SENATOR DONOVAN M. DELA CRUZ, CHAIR SENATE COMMITTEE ON WAYS AND MEANS

Hearing Date: July 2, 2020 Room Number: Auditorium

- 1 Fiscal Implications: N/A.
- 2 **Department Testimony:** The Department of Health supports HB2486 SD1 as it strengthens
- 3 statewide sustainability coordination within the State's Office of Planning, without taking a
- 4 position on the sufficiency of the appropriation request.
- 5 The Office of Planning is working attentively to plan, prepare for, and coordinate sustainable
- 6 development and climate adaptation for the State of Hawai'i and assist its state and county
- 7 partners, but additional financial resources and staffing are needed to plan for Hawaii's
- 8 sustainable and climate resilient future.
- 9 Updating the roles and responsibilities of the Office of Planning to be consistent with the
- 10 responsibilities and priorities established within the Hawaii State Planning Act affirms Hawaii's
- commitment to sustainability. The addition of a sustainability division to fulfill the demanding
- work of Statewide sustainability planning and coordination is beyond the capacity of one
- individual position.
- 14 The value of a statewise coordinator was recently demonstrated by the COVID-10 pandemic
- response. The Office of Planning is tasked with statewide planning, and has the capability to
- view complex challenges and respond to needs at a comprehensive level, resulting in the
- deployment of the Sustainability Coordinator to assist the Hawai'i Emergency Management

- 1 Agency to provide planning assistance to the disaster recovery efforts of the COVID-19
- 2 pandemic.
- 3 The socioeconomic challenges and catastrophic event brought on from the COVID-19 pandemic
- 4 shows the need for long-term and comprehensive planning for a sustainable and resilient
- 5 recovery for the State of Hawaii. HB2486 SD1 provides a stronger legal framework to focus on
- 6 the planning, coordination, and collaborative implementation of Hawaii's long-term
- 7 sustainability and post-pandmeic recovery.
- 8 Thank you for the opportunity to testify.

9

OFFICE OF PLANNING STATE OF HAWAII

DAVID Y. IGE GOVERNOR

MARY ALICE EVANS
DIRECTOR
OFFICE OF PLANNING

Telephone: (808) 587-2846 Fax: (808) 587-2824

Web: http://planning.hawaii.gov/

235 South Beretania Street, 6th Floor, Honolulu, Hawaii 96813 Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

Statement of MARY ALICE EVANS

Director, Office of Planning before the

SENATE COMMITTEES ON WAYS AND MEANS

Thursday, July 2, 2020 10:10 AM State Capitol, Auditorium

in consideration of HB 2486, HD 2, SD 1 RELATING TO THE OFFICE OF PLANNING.

Chair Dela Cruz, Vice Chair Keith-Agaran, and Members of the Senate Committee:

The Office of Planning <u>supports</u> HB 2486, HD 2, SD 1. This bill seeks to update and reaffirm the role of the Office of Planning to coordinate among state agencies regarding climate change adaptation and sustainability. The measure also establishes a statewide sustainability branch within the Office of Planning.

The Office of Planning notes that previous versions of this bill and other bills referenced a "statewide sustainability division" which was recently changed to a "branch" in the SD 1. The Office of Planning respectfully requests this proposed entity be <u>amended</u> in an SD 2 as a "division."

As a housekeeping measure, the Office of Planning supports and agrees with the Hawai'i State Legislature that §225M-2, Hawai'i Revised Statutes, should be updated to match the sustainability and climate change updates made to the Hawai'i State Planning Act. The Office of Planning appreciates the Hawai'i State Legislature's amendments in 2011, codifying §226-108, the Sustainability Priority Guidelines, and in 2012, codifying §226-109, the Climate Change Adaptation Priority Guidelines, which were added to the Hawai'i State Planning Act as priority guidelines to address areas of statewide concern.

The Office of Planning is working attentively to plan, prepare for, and coordinate sustainable development and climate adaptation for the State of Hawai'i and assist our state and county partners. The state's Sustainability Coordinator position was established via Act 124, SLH 2016 cited as the Supplemental Appropriations Act of 2016, and was filled in June 2017; however the Sustainability Coordinator has not yet received any programmatic budgetary funding or support staffing within the Office of Planning's operating budget to implement the Sustainability Priority Guidelines or guide, encourage, or plan for statewide sustainability initiatives and practices.

The state's Sustainability Coordinator and the Office of Planning issued a public Request for Proposals for "The Revision and Decennial Update of the Hawai'i 2050 Sustainability Plan," on April 20th, 2020. This RFP and contract was issued in order to fulfill the decennial update requirement provided by the Hawai'i State Legislature via Act 146, SLH 2019, directing the Office of Planning to update the Hawai'i 2050 Sustainability Plan with a revised scope to serve as the state's climate and sustainability strategic action plan. The state's Sustainability Coordinator, as this project's manager, has worked incessantly on the procurement and contracting of this important initiative while aligning this plan's update with Hawaii's many sustainability statutory targets, goals, and plans, as well as with Hawaii's long-term recovery and resilience efforts. The revised Hawai'i 2050 Sustainability Plan will provide recommendations to be achieved over these crucial next ten years between 2020-2030 — which the United Nations (U.N.) has aptly named "the Decade of Action" to usher in a decade of ambitious global action to achieve the U.N. Sustainable Development Goals in all of our communities the year 2030.

Two months ago, on April 22nd, the state's Sustainability Coordinator was also deployed to assist the Hawai'i Emergency Management Agency (HI-EMA) to provide planning assistance to the disaster recovery efforts of the COVID-19 pandemic. The state's Sustainability Coordinator continues to assist HI-EMA and the state's Disaster Recovery Coordinator in the planning of Hawaii's long-term recovery and resilience efforts. The socioeconomic challenges brought on by this catastrophic event of the COVID-19 pandemic demonstrates the need for long-term and comprehensive planning for a sustainable and resilient recovery for the State of Hawai'i.

The Office of Planning recognizes that statewide sustainability planning and coordination is demanding work beyond the capacity of one individual position. The Office of Planning would appreciate additional staffing and operating expenses to assist the state's Sustainability Coordinator through the development of a statewide sustainability division to support comprehensive statewide sustainability coordination and implementation of Hawaii's sustainability laws, goals, policies, priorities, and planning throughout government.

Mahalo for the opportunity to testify on this measure.

DAVID Y.IGE Governor

JOSH GREEN
Lieutenant Governor

MIKE MCCARTNEY
Director



LAND USE COMMISSION

Department of Business, Economic Development & Tourism State of Hawai`i

DANIEL ORODENKER Executive Officer

Bert K. Saruwatari
Planner
SCOTT A.K. DERRICKSON AICP
Planner

RILEY K. HAKODA Chief Clerk/Planner

RASMI AGRAHARI Planner

FRED A. TALON
Drafting Technician

Statement of
Daniel E. Orodenker
Executive Officer
State Land Use Commission

Before the Senate Committee on Ways and Means

Thursday July 2, 2020 10:10 AM State Capitol, Auditorium

In consideration of

HB 2486 HD2 SD1 RELATING TO THE OFFICE OF PLANNING

Chair Dela Cruz; Vice Chair Keith-Agaran; and members of the Senate Committee on Ways and Means:

The Land Use Commission strongly <u>supports</u> HB 2486, HD2, SD 1. This bill is a much-needed measure seeking to re-affirm the role of the Office of Planning in coordinating among state agencies regarding climate change adaptation and sustainability. The measure also establishes a statewide sustainability branch in the Office of Planning.

The Office of Planning (OP) is a critical participant in Land Use Commission (LUC) hearings. In almost every petition the LUC looks to OP to provide much needed testimony and evidence regarding the needs of the State as a whole, including public trust resources and duties. OP coordinates and distills comments from each of the various involved State agencies. Coordinated testimony from a reliable and neutral organization is critical in the area of climate change and sustainability. OP is uniquely positioned and is in fact the only agency that can handle this critical role.

For some time, the LUC has been concerned that OP does not have enough capacity to fully respond to these critical issues and to coordinate the response to agencies. The LUC is very much aware of the implications of climate change on the State's public and private infrastructure, its impact on housing and the corrresponding requirement that all future projects take these issues into account. Given that the projects that the LUC is approving right now will

either not be completed or even begun construction for as long as 10 years from their date of approval; information and coordinated planning for climate change and sustainability is key in making decisions today. It is critical that OP develop the capacity and expertise to provide the LUC with information on climate change and sustainability for every LUC docket and at every hearing.

The revised 2050 Sustainability Plan can be effectuated via organizations like the LUC and a comprehensive response can be brought to bear on development proposals. OP is the organization that is uniquely set up statutorily to perform this function. With additional staffing and funds for operating expenses OP and the State Sustainability Coordinator can develop an effective sustainability division to support statewide coordination and assist the LUC in implementing Hawai'i's sustainability goals and priorities throughout the State.

Thank you for the opportunity to testify on this measure.





TESTIMONY BY:

JADE T. BUTAY DIRECTOR

Deputy Directors
LYNN A.S. ARAKI-REGAN
DEREK J. CHOW
ROSS M. HIGASHI
EDWIN H. SNIFFEN

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION

869 PUNCHBOWL STREET HONOLULU, HAWAII 96813-5097

July 2, 2020 10:10 a.m. State Capitol, Auditorium

H.B. 2486, H.D. 2, S.D. 1 RELATING TO THE OFFICE OF PLANNING.

Senate Committee on Ways and Means

The Department of Transportation (DOT) **supports** this bill that updates the role of the Office of Planning (OP) to better coordinate state agencies regarding climate change adaptation and sustainability by establishing a Statewide Sustainability Division envisioned by the OP. It also directs the State Sustainability Coordinator to conduct a study on implementing a "Green New Deal for Hawaii."

The DOT believes this bill meets the needs for long term recovery planning that promotes resiliency in providing the necessary staffing and operating expenses within the OP that supports comprehensive statewide sustainability coordination and implementation of Hawaii's sustainability laws, goals, priorities, and planning throughout government.

Thank you for the opportunity to provide testimony

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU 630 SOUTH BERETANIA STREET HONOLULU, HI 96843 www.boardofwatersupply.com



KIRK CALDWELL, MAYOR

BRYAN P. ANDAYA, Chair KAPUA SPROAT, Vice Chair KAY C. MATSUI RAY C. SOON MAX J. SWORD

ROSS S. SASAMURA, Ex-Officio JADE T. BUTAY, Ex-Officio

ERNEST Y. W. LAU, P.E. Manager and Chief Engineer

ELLEN E. KITAMURA, P.E. Deputy Manager and Chief Engineer

The Honorable Donovan M. Dela Cruz, Chair The Honorable Gilbert S.C. Keith-Agaran, Vice-Chair and Members Senate Committee on Ways and Means Hawaii State Capitol, Room 208 Honolulu, Hawaii 96813

Dear Chair Dela Cruz and Vice-Chair Keith-Agaran and Members:

Subject: House Bill No. 2486, Senate Draft 1: Relating to the Office of Planning

The Honolulu Board of Water Supply (BWS) supports House Bill (HB) 2486, Senate Draft (SD) 1. This bill is to establish a stronger policy framework for Hawaii's sustainability efforts by establishing a statewide sustainability branch within the Office of Planning, incorporating planning duties and responsibilities of the statewide sustainability branch and to ensure long-term planning, coordination, and implementation of Hawaii's sustainability goals and policies.

The socioeconomic challenges and catastrophic event brought on from the COVID-19 pandemic shows the need for long-term and comprehensive planning for a sustainable and resilient recovery for the State of Hawaii.

As the State and county agencies move forward to implement recommendations of the Hawai'i Sea Level Rise Vulnerability and Adaptation Report (Report), there needs to be a coordinated effort between both the State and county agencies regarding climate change and sustainability.

Thank you for your consideration of our testimony in support of HB 2486, SD 1.

Very truly yours,

ERNEST Ý. W. LAU, P.E. Manager and Chief Engineer



COMMITTEE ON WAYS AND MEANS Senator Donovan M. Dela Cruz, Chair Senator Gilbert S.C. Keith-Agaran, Vice Chair

HB2486 HD2 SD1

Updates and reaffirms the role of the office of planning (OP) to coordinate among state agencies regarding climate change adaptation and sustainability. Establishes a statewide sustainability branch within OP. (SD1)

Wednesday July 2, 2020, 10:10 am Auditorium State Capitol 415 South Beretania Street

Chair Dela Cruz, Vice Chair Keith-Agaran, and Members of the Committee on Ways and Means,

The Hawaii Cattlemen's Council <u>supports HB2486 HD2 SD1</u>. The cattle industry relies on a resilient future to continue long-term plans for cattle production, which provide ecosystem services such as invasive species removal, wildfire fuel load reduction, and healthy soils. The Office of Planning is key to coordinating state agencies for move us through this crisis, which is far from over. The socioeconomic challenges and catastrophic event brought on from the COVID-19 pandemic shows the need for long-term and comprehensive planning for a sustainable and resilient recovery for the State of Hawaii. HB2486 HD2 SD1 provides the necessary staffing and operating expenses for the Office of Planning to coordinate Hawaii's goals.

Nicole Galase Hawaii Cattlemen's Council Managing Director











Ponoholo Ranch Limited

P O BOX 700489 KAPOLEI, HI 96709 (808) 306-7769

COMMITTEE ON WAYS AND MEANS Senator Donovan M. Dela Cruz, Chair Senator Gilbert S.C. Keith-Agaran, Vice Chair

DATE: Thursday July 2, 2020

TIME: 10:10 a.m.

PLACE: Conference Room 229

HB 2486 HD2 SD1- RELATING TO THE OFFICE OF PLANNING.

Updates and reaffirms the role of the office of planning (OP) to coordinate among state agencies regarding climate change adaptation and sustainability. Establishes a statewide sustainability division within OP. Makes appropriations for establishment of the sustainability division and positions for the new division. Effective 7/1/2050. (HD2)

Chair Dela Cruz, Vice Chair Keith-Agaran, and Members of the Committee on Ways and Means,

My name is Alan Gottlieb, and I am The Vice President of Ponoholo Ranch, a working cattle ranch on the Big Island of Hawaii. We steward over 10,000 acres of land.

Ponoholo Ranch strongly supports HB 2486 HD2 SD1.

The Hawaii cattle industry relies on a resilient future to continue long-term plans for cattle production, which provide ecosystem services such as invasive species removal, wildfire fuel load reduction, and healthy soils.

The Office of Planning is tasked with statewide planning, and has the capability to view complex challenges and respond to needs at a comprehensive level. Climate change and sustainability are priority issues in the Hawai'i State Planning Act, and the Office of Planning is the appropriate state agency to coordinate sustainability and climate adaptation goals. The Office of Planning is actively working to plan, prepare for, and coordinate sustainable development and climate adaptation for the State of Hawai'i and assist its state and county partners, but additional financial resources and staffing provided by HB 2486, HD 2 are needed to plan for Hawaii's sustainable and climate resilient future.

Thank you for giving us the opportunity to provide testimony in strong support of this measure.



1050 Bishop St. PMB 235 | Honolulu, HI 96813 P: 808-533-1292 | e: info@hawaiifood.com

Executive Officers

Joe Carter, Coca-Cola Bottling of Hawaii, Chair
Charlie Gustafson, Tamura Super Market, Vice Chair
Eddie Asato, The Pint Size Corp., Secretary/Treas.
Lauren Zirbel, HFIA, Executive Director
John Schlif, Rainbow Sales and Marketing, Advisor
Stan Brown, Acosta Sales & Marketing, Advisor
Paul Kosasa, ABC Stores, Advisor
Derek Kurisu, KTA Superstores, Advisor
Beau Oshiro, C&S Wholesale Grocers, Advisor
Toby Taniguchi, KTA Superstores, Advisor

TO:

Committee on Ways and Means Senator Donovan M. Dela Cruz, Chair Senator Gilbert S.C. Keith-Agaran, Vice Chair

FROM: HAWAII FOOD INDUSTRY ASSOCIATION

Lauren Zirbel, Executive Director

DATE: July 2, 2020 TIME: 10:10am PLACE: Auditorium

RE: HB2486 HD1 SD1

Position: Support

The Hawaii Food Industry Association is comprised of two hundred member companies representing retailers, suppliers, producers, and distributors of food and beverage related products in the State of Hawaii.

HFIA is in support of this measure to establish a statewide sustainability division within the office of planning. Having coordinated, consistent, statewide leadership and guidance on sustainability issues is an important step in improving sustainability in Hawaii. We respectfully ask that the measure be revised to change the "statewide sustainability branch" back to the originally proposed "statewide sustainability division."

We know that the Office of Planning is actively working to plan, prepare for, and coordinate sustainable development and climate adaptation for the State of Hawaii and we encourage the legislature to support them with the resources they need to plan for Hawaii's sustainable and climate resilient future.

Collaboration is an extremely important component of achieving long-term sustainability in our state and this measure provides an important legal framework to focus on the planning, coordination, and collaborative implementation of Hawaii's sustainability plans.

We urge you to pass this measure and we thank you for the opportunity to testify.



Testimony in support of HB2486 HD2 SD1

Senate Committee on Ways and Means

Hearing Thursday July 2, 2020, 10:10am

Dear Chair Dela Cruz, Vice Chair Keith-Agaran, and Committee members,

I am writing in strong support of HB2486 HD2 SD1. However please reinstate the originally proposed Statewide Sustainability "Division" not "Branch." Please provide leadership on this most important issue.

Mahalo,

Dr. Lisa Marten

Executive Director HealthyClimateCommunities.org healthyclimate@hawaii.rr.com

<u>HB-2486-SD-1</u> Submitted on: 6/29/2020 3:35:59 PM

Testimony for WAM on 7/2/2020 10:10:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Michael Golojuch Jr	Individual	Support	Yes

Comments:

HB-2486-SD-1

Submitted on: 6/29/2020 5:08:30 PM

Testimony for WAM on 7/2/2020 10:10:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Nicole A Velasco	Individual	Support	No

Comments:

Testifying in my private capacity in **support** of the measure with suggested nonsubstantive amendment to return the language to the originally proposed "statewide sustainability division" as requested by the Office of Planning.

Mahalo!

<u>HB-2486-SD-1</u> Submitted on: 6/30/2020 7:42:22 PM

Testimony for WAM on 7/2/2020 10:10:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Shannon Rudolph	Individual	Support	No

Comments:

SUPPORT! (and supported 20 years ago!)

LATE

From: <u>Layla Kilolu</u>
To: <u>WAM Testimony</u>

 Subject:
 HB 2486 HD 2, SD 1 - TESTIMONY

 Date:
 Wednesday, July 1, 2020 10:22:48 AM

Aloha Legislators,

I am writing in support of HB 2486 HD 2, SD 1 to look at climate change and sustainability on a comprehensive level. As a PhD student in urban planning at UH Manoa, I have had the opportunity to serve as an intern for the City of Honolulu's Office of Climate Change, Sustainability and Resiliency, and I am currently supporting the City's Climate Change Commission. I have also helped facilitate the State's working group on plastic source reduction (Act 254). In my roles, I have observed that lack of coordination among many government departments leads to inefficiency and mixed results. This bill will help streamline and coordinate multiple efforts that are already being done by various departments.

With COVID-19 and climate change, we are at a turning point where more coordination and cooperation is needed among efforts in sustainability, climate change, and disaster risk reduction. Thank you for taking the time to read my testimony.

Respectfully, Layla



Layla M. Kilolu
Research Assistant
Department of Urban and Regional Planning
University of Hawaii at Manoa
808.276.7601 (c)
www.bouncebackability.world



HB-2486-SD-1

Submitted on: 7/1/2020 3:35:59 PM

Testimony for WAM on 7/2/2020 10:10:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing	
Jennifer Azuma Chrupalyk	Individual	Support	No	

Comments:

This doesn't take rocket science or lots of money. Coordinate your cultural practitioners, botanists, historians and agricultural committees and get the plants from local farms/nurseries. Hawaiians want native plant restoration - the botanists know which plants go there. Ag, farms, nurseries are more than happy to provide where can. The only thing holding everybody back, is the state itself - we need the green light and event supplies, that's all.



HB-2486-SD-1

Submitted on: 7/1/2020 9:18:20 PM

Testimony for WAM on 7/2/2020 10:10:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing	
mark jones	Individual	Oppose	No	Ī

Comments:

Aloha...

Climate change is real. I stronly oppose the matter at hand. Only because no where in any of your reports does is discuss the ablity of man changing the clomate. "Geoengineering" is mans attempt at modicying the weather, atmosphere or more so their intervening with climate change.

back in the 60's theree was at the time a secret operation called "operation POPEYE".

it was sort of the earliest public record of man manipulating the wearther.

Operation Popeye (Project Controlled Weather Popeye / Motorpool / Intermediary-Compatriot) was a military cloud-seeding operation carried out by the U.S. Air Force during the Vietnam War in 1967–1972. d274

since then, what have they been doing to, with the weather?

lets visit 2005. Daniel Inouye and

Senate Hearing 109-446.

Prepared Statement of Dr. Thomas P. DeFelice, Past President, Weather Modification Association

I am honored to appear before you today in regards to Senate bill 517, the Weather Modification Research and Technology Transfer Authorization Act of 2005. My name is Dr. Thomas P. DeFelice. My background in weather modification began when I was 15 by reading books on the subject; I had many sessions with WMA forefathers Schaefer & Vonnegutt as an undergrad; my academic and subsequent professional career concentrated on learning the fundamentals of weather modification relevant sciences and its technologies; President of WMA (2000-2002), Chair WMA Public Information Committee (since 2004). I now work as the contractor program manager for two NOAA programs. I am here on my own behalf, expressing my own beliefs. I began this process,

engaged John Leedom, who engaged Senator Hutchison & her staff, and here we are today. https://www.govinfo.gov/content/pkg/CHRG-109shrg28211/html/CHRG-109shrg28211.htm

Moving on.. Geoengineering includes many technologies, "Cloud Seeding". a quick google search will point you in many directions as to what it is how ist being used. The UAE have been doing it for years to make it rain in the dessert.

Cloud Seeding Machines Market Compititors Survey Reports 2020

The worldwide <u>Cloud Seeding Machines Market</u> research report with considered to be an extremely intelligent and deep assessment on the present industrial conditions along with the overall Cloud Seeding Machines market size estimated from 2020 to 2026. The study report also showcases a comprehensive analysis of the leading business programs, Cloud Seeding Machines future market and business-oriented planning etc. The report investigates desirable factors related to the current industrial situations, Cloud Seeding Machines market growth rates, demands, differentiable business-oriented strategies used by the Cloud Seeding Machines market manufacturers with respect to distinct tactics and the futuristic prospects in brief. The detailed overview of Cloud Seeding Machines industry prime vendors and regional evaluation are widely cited in the global Cloud Seeding Machines market report with Forecast period 2020 to 2026.

Furthermore, the study report delivers the Cloud Seeding Machines market competitive landscape and an elementary inspection of the leading industrial players in the world Cloud Seeding Machines market. The report also examines the regional growth of the top competitors performing in the Cloud Seeding Machines market on a regional as well as worldwide scale. The research report on the world Cloud Seeding Machines market is a valuable source of significant information that needed to understand the essential developments in the Cloud Seeding Machines market, fundamental growth trend of each segment and strategical planning of each company to compete in the international environment. https://www.njmmanews.com/cloud-seeding-machines-market-survey-report-2020-2026-north-american-weather-consultants-seeding-operations-atmospheric-research-kyathi-climate-modification-consultannts-llp-2/

another techology is "SRM" Solar Radaiation Management. That involves spraying particals in the atmosphere. you need not be a scientists to understand what goes up must come down.

Using aerosols to reflect sunlight and cool the planet will weaken storm tracks in the temperate latitudes in both hemispheres, an international team of scientists warn. Their modelling suggests that while such solar geoengineering schemes could reduce the severity of winter storms, they would also stagnate weather systems in the summer. This could lead to more intense heat waves, increases in air pollution, and changes in ocean circulation.

Solar geoengineering involves cooling the Earth by reflecting incoming sunlight and is seen by some scientists as a way of mitigating the effects of global warming. One popular strategy involves placing reflective aerosols in the stratosphere – using aircraft, balloons or blimps – to block sunlight.

But the effects of solar geoengineering are unknown. It would not work as simply as cooling the planet and therefore returning Earth's climate to pre-industrial levels. Climate under solar geoengineering would be different, as there would still be marked increases in atmospheric carbon dioxide levels.

In closing I hope you do more research before moving foward on any ckimate change issues with out first dicussing whats going on in our skies. Have you looked up? or looked it up?

Mahalo Mark Jones