

A vibrant tropical beach scene. In the foreground, several palm trees stand on a sandy shore. On the water, there are several small boats and a long wooden pier extending into the turquoise-colored lagoon. In the background, a range of green, forested mountains rises against a bright blue sky with scattered white clouds.

Hawaii

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QUESTION

1. HOW CAN TOURISM BE MAINTAINED AT
A SUSTAINABLE COST TO THE
ENVIRONMENT?

AGENDA

1. Physical geography- Angelica Reyes
2. Climate -Rosa parra Monroy
3. historical geography and settlement- Erica
4. cultural perspectives - Mitzi Izquierdo
5. regional life-Aidreana Quiles
6. Economy- Jimmy
7. 2 sections from our text: unintended consequences (pg. 961), Sustainable future in Hawaii-Sean
8. Journal article: Sunscreen and The Coral Reef

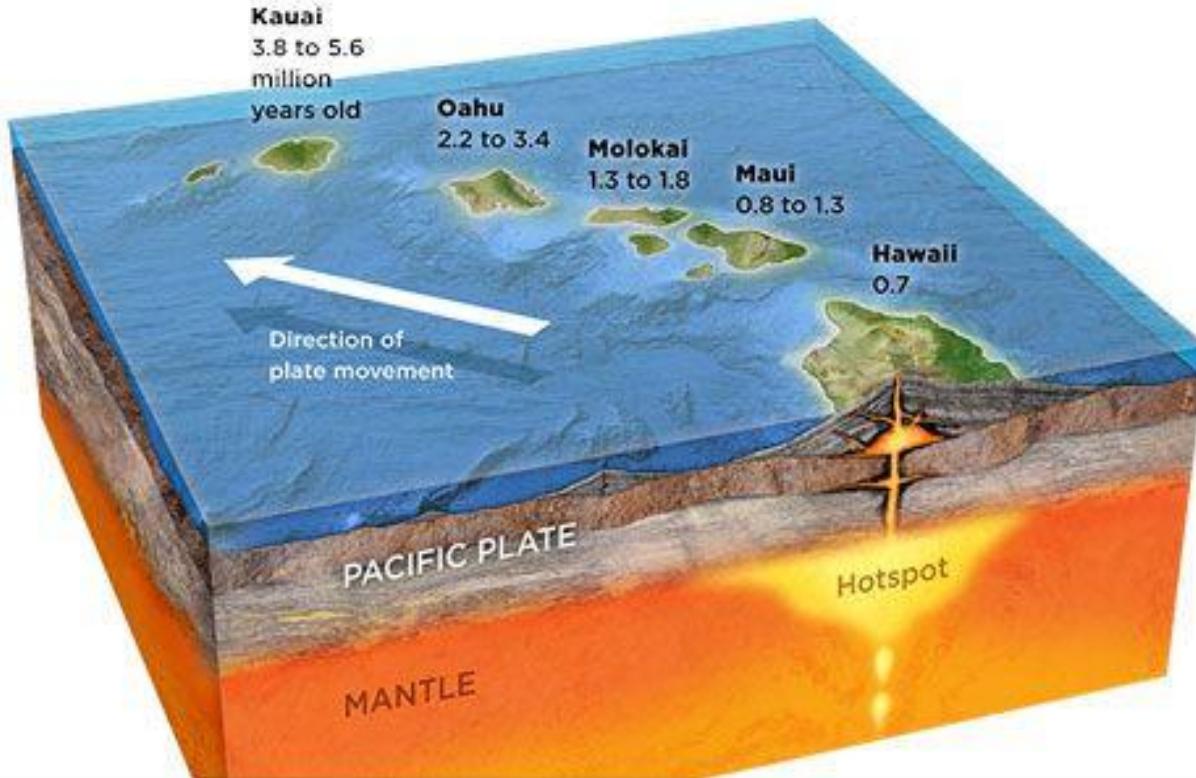
PHYSICAL GEOGRAPHY IN HAWAII

HAWAIIAN ISLANDS

- Hawaii (4,028 square miles)
- Maui (727 square miles)
- Oahu (597 square miles)
- Kauai (552 square miles)
- Molokai (260 square miles)
- Lānai (141 square miles)
- Niihau (72 square miles)
- Kahoolawe (45 square miles)



HOW WERE THEY FORMED?



THE NORTHWESTERN ISLANDS

- The Northwest Islands are the oldest.
- During the past fifty years, the Northwestern Island waters have lost species to overfishing and erosion.
- To prevent further ecosystem losses, in June 2006 the Northwestern Islands were declared a national monument and became the world's largest marine reserve.



KAUAI

- The oldest inhabited island, Kaua'i, has been volcanically inactive in recorded history and has developed lush vegetation.
- Its main attraction is the Waimea Canyon
 - “The Grand Canyon of the Pacific”



NIIHAU

- Known as the Forbidden isle
- The Sinclair-Robinson family purchased the from Kamehameha V in 1864
- Preserving the Hawaiian language and culture by rejecting technology.
- They receive 12 inches a rain annually which leads to some evacuating to Kauai.

OAHU

- Was formed by volcanoes Waianae and Koolau.
- 80% of the state population resides in Oahu.
- Honolulu, the capital of Hawaii, is located in Oahu
- Water issues and Desal water



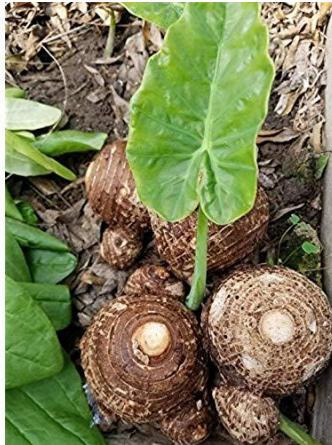
MOLOKAI

- Known as the “friendly isle”
- Native Hawaiians constitute the majority of the population and has few tourist.
- Has the Highest pali (cliffs) in the world.
 - 3 thousand feet.



MAUI

- At one time, the four islands Lānai, Kahoolawe, Molokai, and Maui were one island called Maui Nui.
- It is separated from east and west by a narrow isthmus.
- It faces water shortages because of urban population and competing agriculture.
- Conflict between small traditional taro farmers with sugar and pineapple corporation.



LANAI

- Since 1917, the Dole pineapple plantation has run the island.
- Castle and Cooke purchased 98% of the island.
 - Tried to turn into a tourist resort but failed
- David Murdock Purchased the Castle and Cooke in 1985
 - Built two luxury resorts
- It is for the uber-wealthy



KAHOOOLAWE

- Smallest island
- Was used as a penal colony (1826–1853)
- Also used as bombing practice
- In 1981 it was register as historic place
- Today Natives protect the environmental restoration and manage the land.



HAWAII

- The youngest and largest island
- Has the most climatic regions
- Has 5 volcanoes
 - Kohala
 - Mauna Kea
 - Hualalai
 - Mauna Loa
 - Kilauea
- Kilauea is the most active volcano that it adds on additional 42 acres annually

KILAUEA VOLCANO



2016 shows Kapoho Bay on the island of Hawaii before the Kilauea volcano erupted

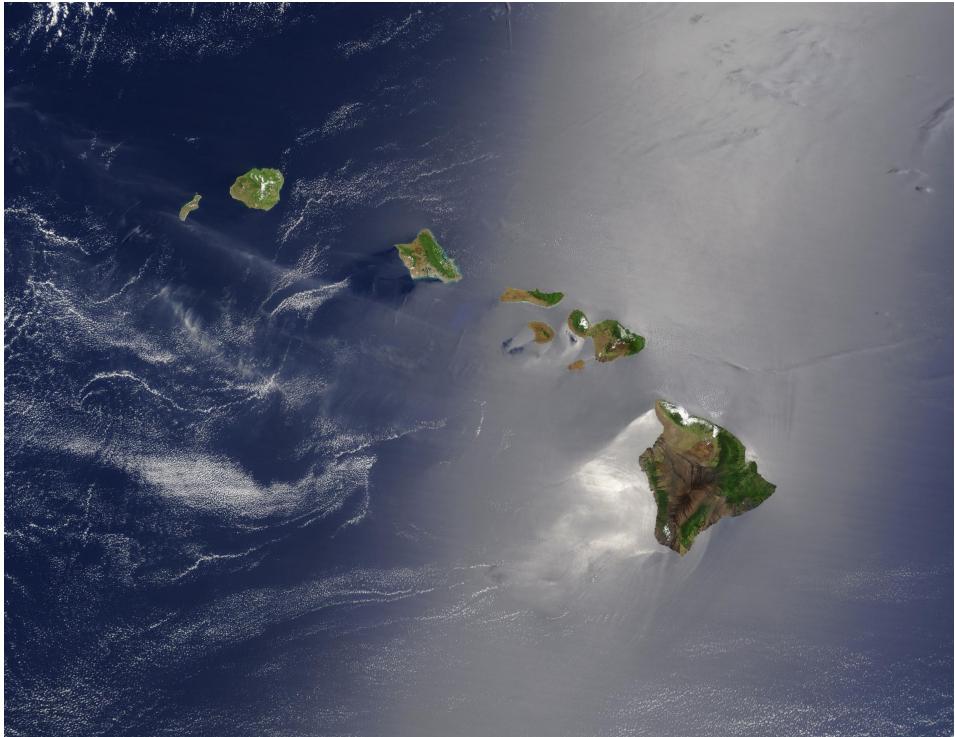


An image taken on June 4, 2018 with lava spilling into the bay.

CLIMATE

TROPICAL CLIMATE OF HAWAII

- The climate is affected by trade winds giving a cooling effect
- There are only two seasons
- Summer is from May to October
- Winter is from November to April
- The warm air temperatures range from 85°F in the Summer to 78°F in the Winter
- In the higher elevations on top of Volcanoes temperatures average 40°F



RAINFALL

- AVERAGE RAINFALL THAT IS 25% ANNUALLY.
- OCTOBER TO MARCH ARE CONSIDERED THE RAIN SEASON
- SINCE THERE IS DISTINCT RAINFALL PATTERNS IT DETERMINES THE LOCATION OF THE MAIN TOURISM ECONOMY



FLOODING IN KAUAI

- IN APRIL 2017, KAUAI HAD RECORD RAINFALL.
- 28 PLUS INCHES OF RAIN IN ABOUT 24 HOURS.
- AS A RESULT, THERE WERE MUDSLIDES
- OVER 500 PEOPLE WERE AIRLIFTED OR TRANSPORTED BY BUS OR BOAT



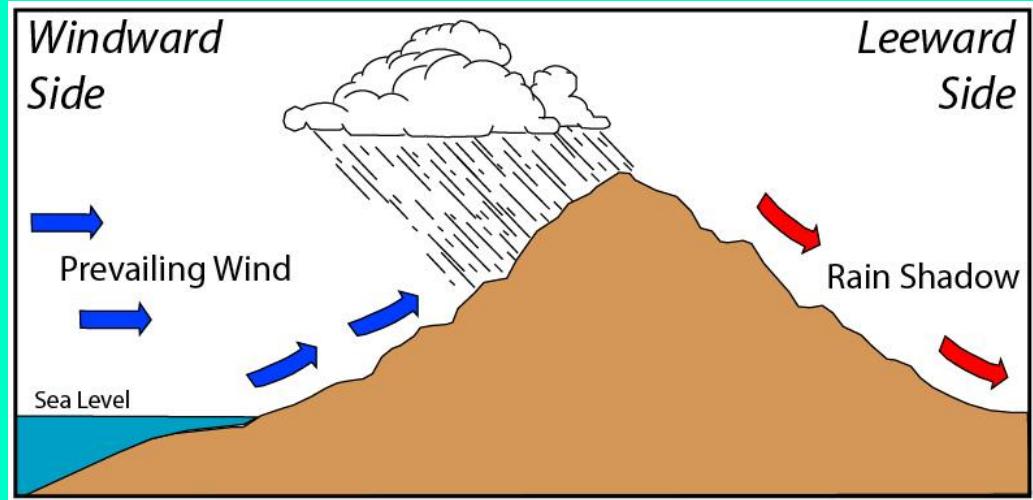
WINDWARD VS. LEEWARD

WINDWARD

- ON THE NORTHEAST SIDE OF THE ISLANDS
- RECEIVES LOTS OF RAINFALL

LEEWARD

- ON THE SOUTHWEST SIDE OF THE ISLANDS
- IT IS PROTECTED FROM RAINFALL AND WIND



WASTE DISPOSAL AND GARBAGE



- Closed Ecosystem
 - Waste remains on the Island or dumped into water
 - The largest garbage collection area is in the warm and cold water convergence zone Northwest of the Hawaiian Islands
 - Trash turns up on the beaches of Hawaii from many areas of surrounding water
-

THE HISTORICAL GEOGRAPHY AND SETTLEMENT OF THE HAWAIIAN ISLANDS

THE FIRST INITIAL

THE POLYNESIANS

- Hawaii was one of the last places to be settled
- During 400 CE Polynesians from Marquesas migrated on canoes
- Traveled more than 3200 km, guided only by the stars.
- Researchers believe that El Nino cycle could have aided the seafarers.
 - El Nino is a weather phenomenon that changes wind pattern and warms the ocean water.

THE TAHITIANS

- Tahitians migrated to the Islands between 900-1000 CE
- The Tahitian settlers brought with them some of their customs
 - Feudal System, or Chiefdom
 - Kapu Code of Conduct
 - Human Sacrifice
 - Temple building
 - Caste System
- Tahitian customs birthed Hawaiian culture, including surfing and the Hula.

EUROPEAN ARRIVAL

it was bound to happen...



- Surprisingly, Spain somehow missed Hawaii
 - Had trading posts set up between Mexico and Manilla, to better trade with China.
- Captain Cook was the first European to stumble across the Islands
- Europeans completely altered the native land and Native population.
 - Sailors brought diseases, including smallpox and measles
 - Led to a significant decrease in the Native population.
- They also brought weapons, which made conflicts between chiefs more deadly.
- They also brought over European political structures, including Monarchy.

KING KAMEHAMEHA I

Hawaii's Unification



- King Kamehameha was the first chief to unify all the Hawaiian Islands and Chiefdoms
 - He was successful with the help of European weapons.
- In 1820, missionaries began arriving in Hawaii attempting to convert the Natives.
- King K established Hawaii as a Christian Monarchy
 - There was an initial clash of cultures
 - Slowly the Natives began to accept and practice Christianity
- European migration still continued , so did western practices.
 - Including western idea of land ownership.
 - This led to a loss in Native land rights, prior to Europeans the land could be used by all.

QUEEN LILIUOKALANI

The last Hawaiian Monarch



- Queen Liliuokalani ruled Hawaii under a constitutional monarchy.
- During her rule, foreigners began making a profit from Hawaiian crops.
 - Sugar
 - Pineapple - Dole
- American colonists were in search of controlling the Island's economy.
- Queen L sought to restore Hawaiian nationalism and Native Hawaiian sovereignty
- Planters who felt threatened, staged a peaceful coup.
 - They deposed her and formed the Republic of Hawaii.
 - The US also opposed this coup at the time.

U.S. ANNEXATION

- In 1898 the US annexed the Hawaiian Islands as a political strategy.
 - They claimed 1.8M acres for US military use, i.e Pearl Harbor
- Hawaii was annexed despite Native Hawaiian opposition.
- In 1900 they claimed the Islands as a territory.
- Native Hawaiians believe that the coup illegally expropriated the land and denied them of land rights.
- Native Hawaiians are still fighting to get National recognition.
 - Comparable to the status of Native Americans.
- Hawaiian state and national government representatives support Hawaiian sovereignty.
- In 1959 Hawaii officially became the 50th State.



CULTURAL PERSPECTIVES IN HAWAII

KAPU SYSTEM

SEPARATE



CAUSED: Spatial segregation

KAPU PRACTICES

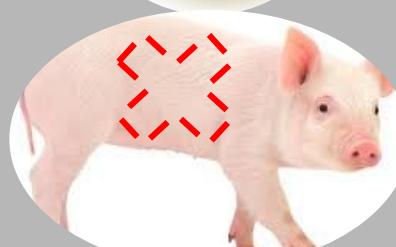
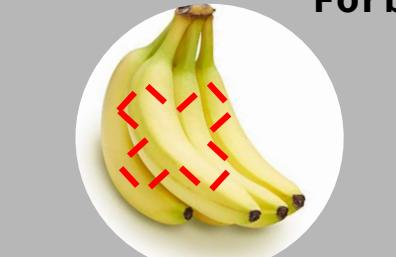
Punishable by DEATH

Proper Etiquette Around Chiefs

NO EYE
CONTACT

DO NOT WEAR
ROYAL COLORS

KEEP HEAD
LOWER



Forbidden Food.... FOR WOMEN



END OF KAPU

Foreigners did not practice KAPU and did not suffer its consequences...



Opens Door for Christianity



Leads to King to CEREMONIOUSLY break the tradition ending KAPU 1819.

KAPU TODAY

- Kapu encompassed tradition in a form of laws and regulations
- Today it is used as a “No Trespassing” sign
- End of traditional Hawaii



HAWAIIAN DIET



Traditionally: Seafood and Local Foods (bananas, taro, breadfruit, yams)

STAPLE FOODS

Fish and Starches



Now: Fatty/Processed foods high in sugar and flour

Birth of Hawaiian Fast Food:
Saimin and Spam

CAUSES

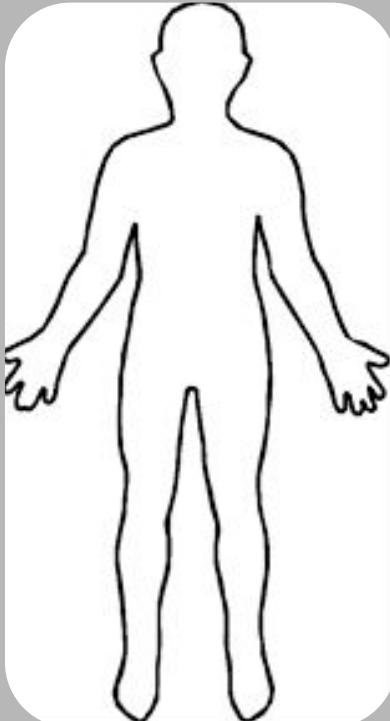
New Diet



Sedentary Lifestyle



Genetic Capability
to store fat



COMPLICATIONS

- **Obesity**
- **Shorter Lifespans**
- **Overall Health**

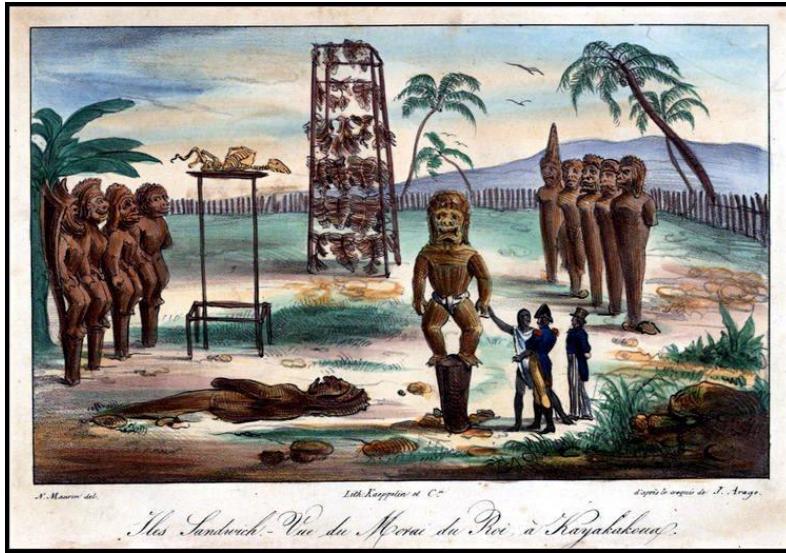
REGIONAL LIFE IN HAWAII

POPULATION

- In 1960 the Hawaiian population was 633,000
- By 2010 the population more than doubled to 1,380,301
- During the sugarcane Era there was a need for laborers, which brought different cultures to Hawaii creating a more diverse population
- Today there are approximately 80,000 pure Hawaiians, but 250,000 claim Hawaiian blood



LANGUAGE, & RELIGION,



Language

- The Hawaiian language (Olelo Hawaii) is one of the oldest living languages in the world
- In 1898 the Hawaiian language was banned to be spoken but still was used in written word
- Third language of Hawaii is Pidgin, which originates from the plantation workers, who came to Hawaii in the 19th century

Religion

- Prior to the 1820's many Hawaiians were pagans until the Christian missionaries came
- Today the religion in Hawaii is very diverse

POVERTY

- Those who identify as Hawaiian are among the poorest, have the worst health statistics (mortality, suicide, disease), high dropout rate, highest unemployment rate, and highest incarceration rate.
- Many are homeless and their land has been taken over by the government but they continue to “squat” on this land.



LAND OWNERSHIP

- Since the arrival of Europeans, native Hawaiians have lost control of their homelands, but till this day they are not recognized for any sovereignty
- In 1848, western missionaries convinced the king to enact **the Great Mahele** that redistributed land
- Land now changed to private ownership, and by 1893 90% of the land was foreign owned



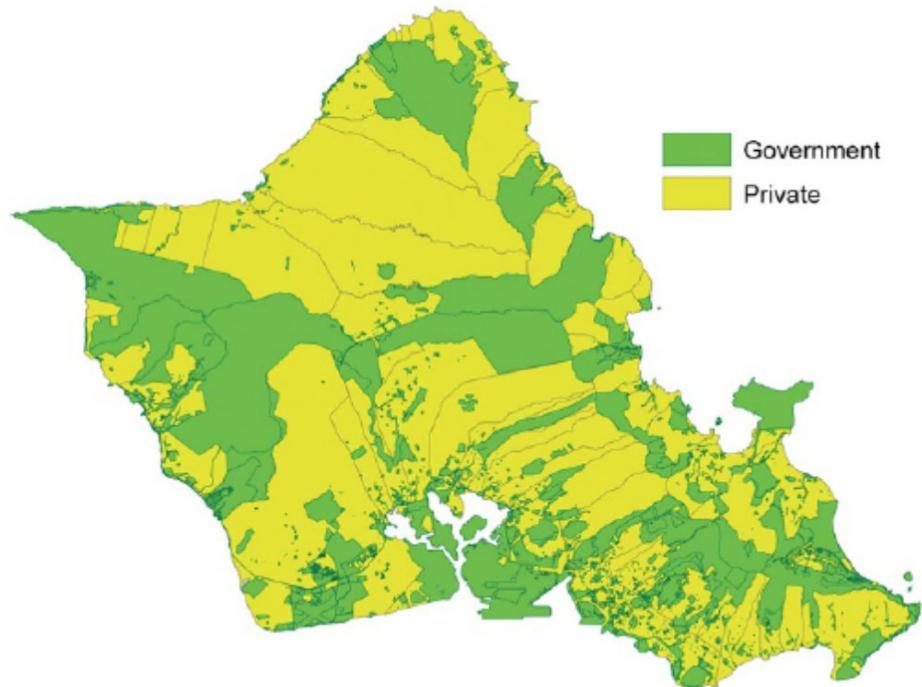
TABLE 20.1. Hawai'i's Major Ethnic Group Populations, Percent Change, 2000–2010

	2000	2010	Percent increase
Asian	41.6	38.6	4.2
White (non-Hispanic)	22.9	24.7	14.4
Native Hawaiian	6.6	5.9	-10
Hispanic	7.2	8.9	37.8
Black	2.8	2.9	3.5
Two or more races	21.4	23.6	10.3

Source: U.S. Census, 2010, at <http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk>

HOMESTEADING

- Hawaiian Homes Commission Act of 1920, aka the Homestead Act
- There has been many controversies with the Homestead act because of racial discrimination and the 50% Hawaiian blood requirement
- **The Big Five:** Land ownership owned by missionary families
 - Castle & Cooke
 - Alexander & Baldwin
 - C. Brewer
 - Amfac
 - Theo H. Davies and Co



ECONOMY

ORIGINAL ECONOMIES

- SANDALWOOD
- WHALING
- RANCHING
- FARMING



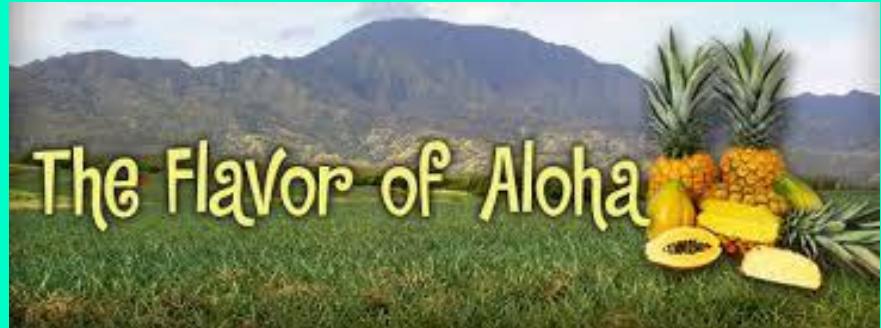
TOURISM



- TOURISM MECCA SINCE THE INTRODUCTION OF COMMERCIAL AIRLINES IN THE 1960S
- TOURISM ACCOUNTS FOR OVER \$10 BILLION OF HAWAII'S ECONOMY AND PROVIDED 32 PERCENT OF SERVICE JOBS IN 2004
- TOURISM AIMED MORE TOWARDS WEALTHY TRAVELERS

EXPORTS

- SUGAR CANE
- PINEAPPLES
- FLOWERS
- BANANAS, GUAVA, OTHER
TROPICAL FRUIT
- COFFEE
- MACADAMIA NUTS



IMPORTS

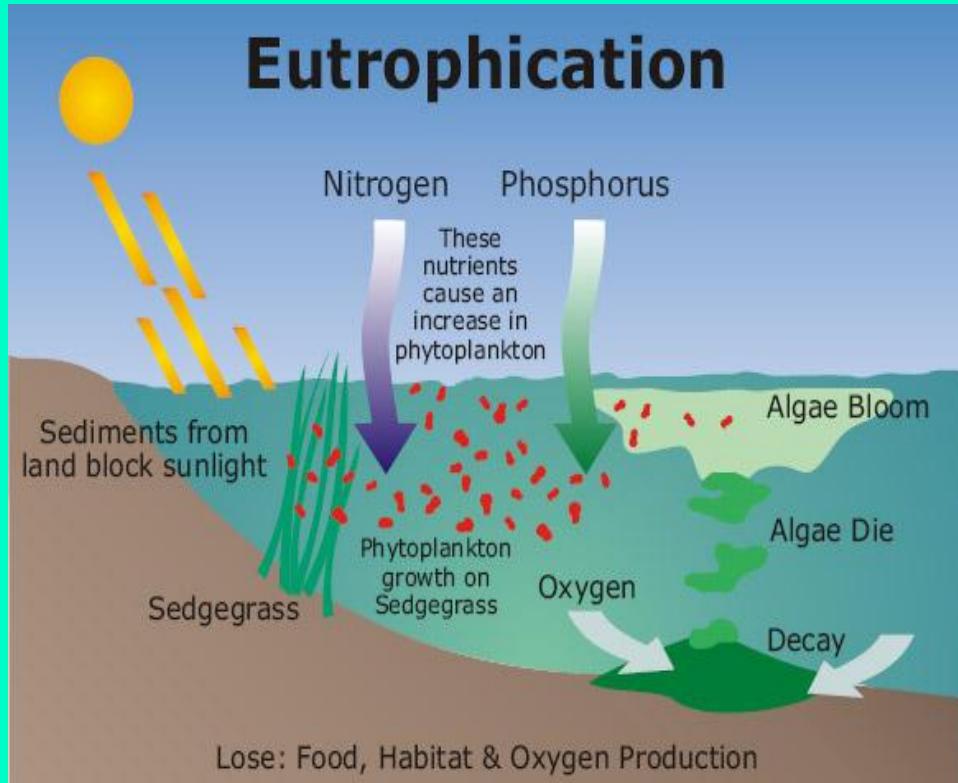


- FOOD
- GASOLINE/PETROLEUM
- SHIPPING PROBLEMS
- THE ISLANDS' ISOLATION FROM OTHER LANDMASSES, THEIR RELIANCE ON IMPORTED FOOD, AND DEPENDENCE ON TOURISM IS UNSUSTAINABLE

UNINTENDED CONSEQUENCES AND SUSTAINABILITY

UNINTENDED CONSEQUENCES

Urban and Agricultural runoff harm waters, marine life and coral reefs



UNINTENDED CONSEQUENCES

FREQUENT BEACH CLOSURES

- HONOLULU CLOSED 52 DAY OUT OF THE YEAR IN 2005
- WAIKIKI BEACH CLOSED FOR 42 DAYS STRAIGHT IN 2006 DUE TO SEWAGE SPILL
- IN 2011 ALL BEACHES ON LEeward SIDE CLOSED TWICE



Sustainable Future

Sierra Club - Lost a lawsuit in 2000 against the Tourism Authority but the case highlighted problems facing Hawaii including limited resources and the strain of increasing tourism

Beach Environmental Awareness Campaign Hawai'i
organization working to educate the community about the impact that marine debris and waste has on the environment

Sustainable Future

Hawaii 2050 Sustainability Task Force Report

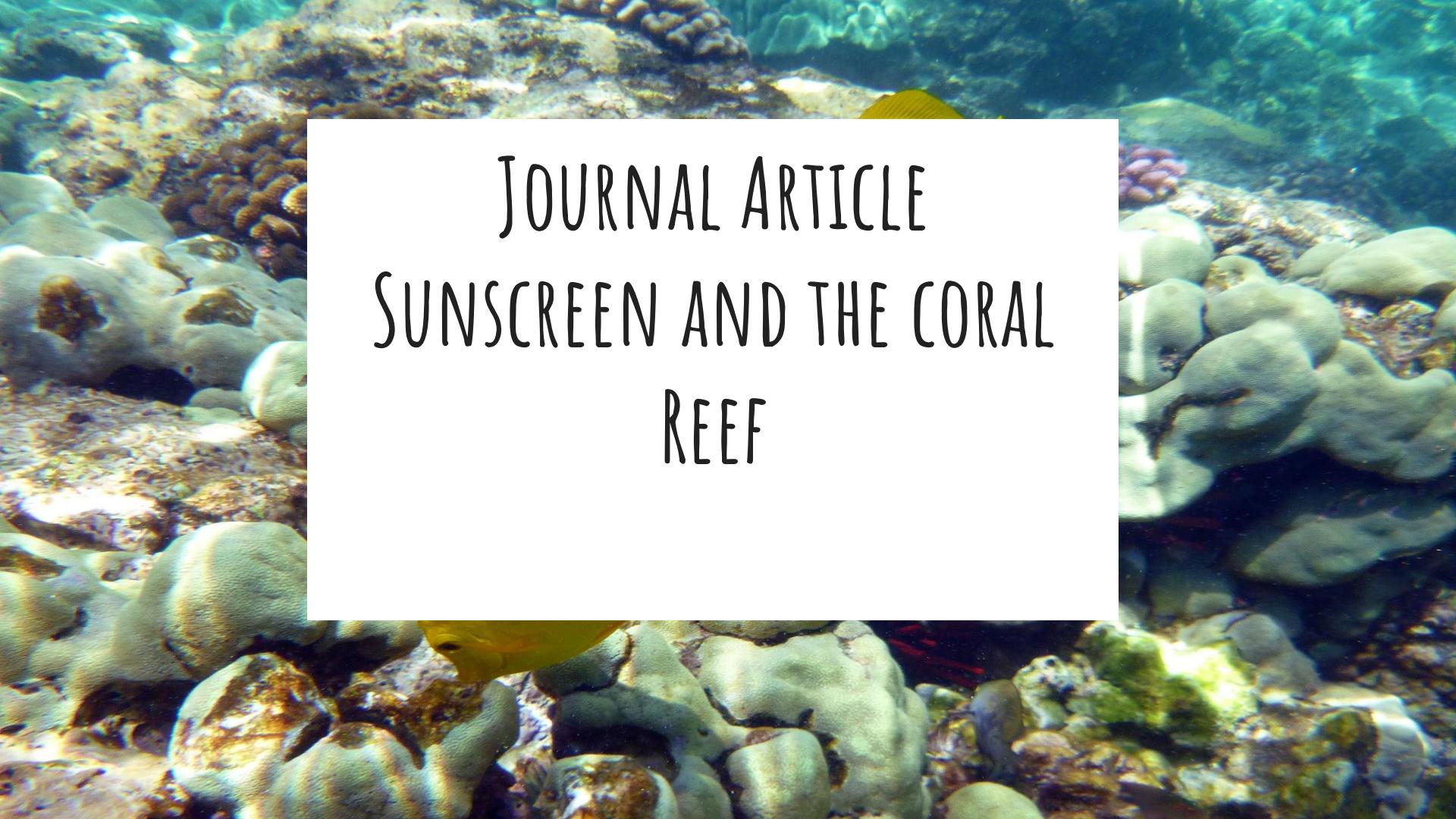
Highlights

- Population Growth
- Limited Land
- Rising Cost of Living
- Environmental Damage
- Energy Dependency

Outlines

- Goals
- Objectives
- Long Term plan





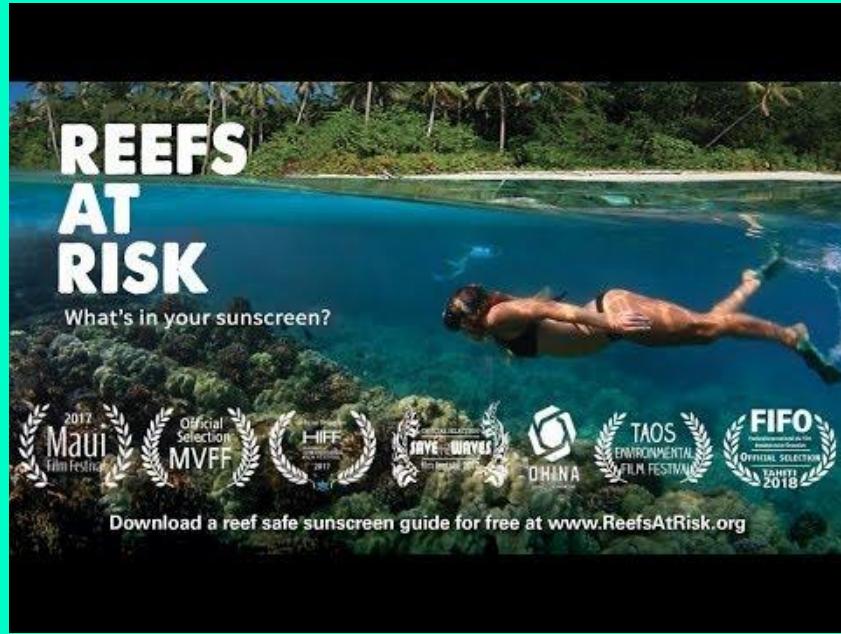
JOURNAL ARTICLE

SUNSCREEN AND THE CORAL REEF

TOXICOPATHOLOGICAL EFFECTS OF SUNSCREEN

- Oxybenzone (Benzophenone-3)
- Environmental Contamination in Hawaii and the U.S. Virgin Islands
- Oxybenzone is a photo-toxicant: adverse effects are exacerbated in the light.
- Bleaches the coral reefs





WHY ARE THE CORAL REEFS IMPORTANT TO OUR ENVIRONMENT?

- contains the most diverse ecosystems on the planet.
- protect coastlines from the damaging effects of wave action and tropical storms
- provide habitats and shelter for many marine organisms.
- Sunscreen with Oxybenzone (benzophenone-3)
- will be ban in Hawaii 2021

REFERENCE PAGE

Toxicopathological Effects of the Sunscreen UV Filter, Oxybenzone (Benzophenone-3), on Coral Planulae and Cultured Primary Cells and Its Environmental Contamination in Hawaii and the U.S. Virgin Islands

file:///C:/Users/Denise/Downloads/Downs2016_Article_ToxicopathologicalEffectsOfThe.pdf

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Countries and their Cultures <https://www.everyculture.com/multi/Ha-La/Hawaiians.html>

Kamilo Beach Image https://www.huffingtonpost.com/entry/kamilo-beach-hawaii-dirtiest-beach-america_us

Sustainable Future- HPOWER <https://www.hawaiianelectric.com>