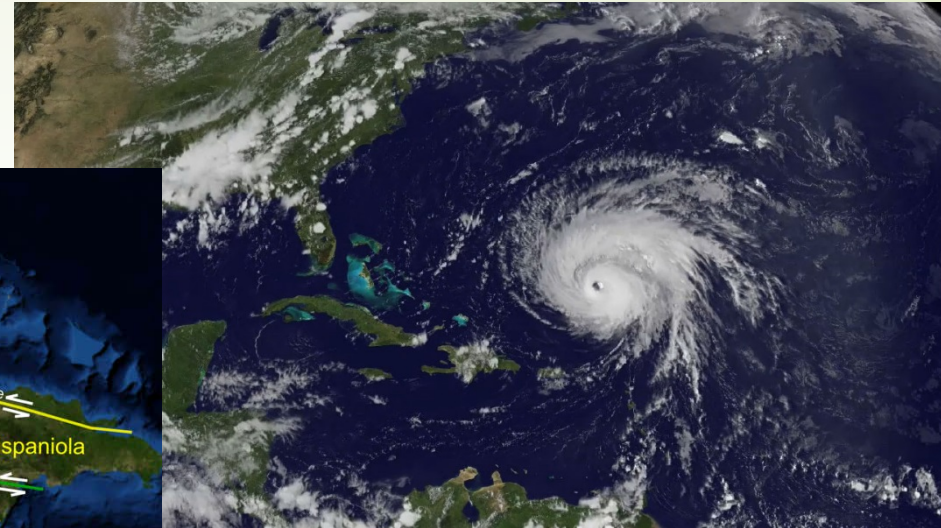


Geography



HAITI

- Located on the Gonave microplate between two fault zones.
- Resides in Hurricane Alley.
- Prone to natural disasters such as earthquakes and hurricanes.

1929 – Environment



HAITI

- 60% of Haiti is forested.
- Ecology is thriving despite a long history of natural disasters.
- Tree canopy and root systems provides an indigenous layer of defense against storm surge, quake damage, and soil erosion.

1954 - Hurricane Hazel



HAITI

- Hazel follows an unusual and devastating path.
- Massive “natural” deforestation occurs as Hazel smashes through Haiti.
- Damage results in a total human, ecological, and socioeconomic environmental disaster.
- Turning point in further deforestation.

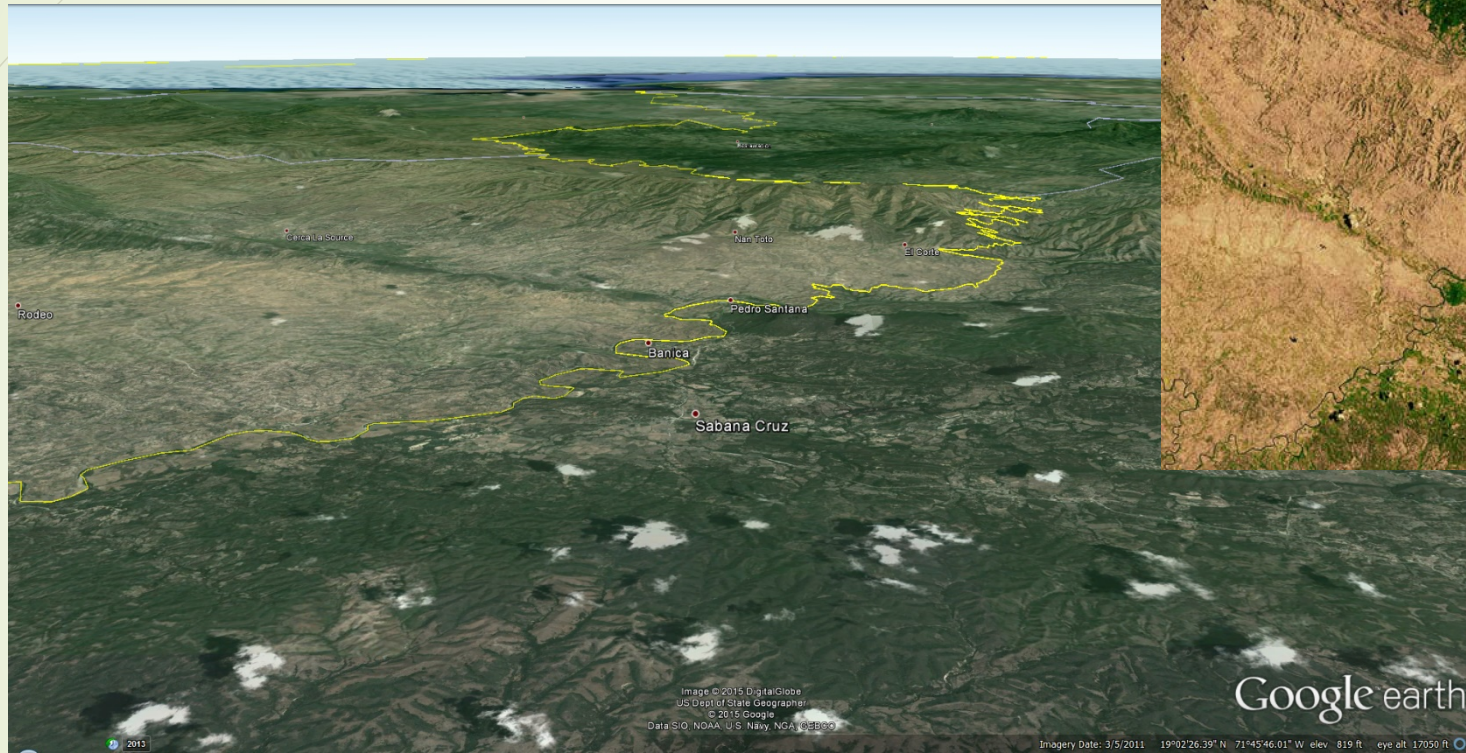
1954 - Charcoal Industry



HAITI

- Charcoal becomes the primary fuel of Haiti for cooking and heating.
- Massive countrywide deforestation campaign begins.
- Trees are removed at a rate that is far higher than is sustainable.

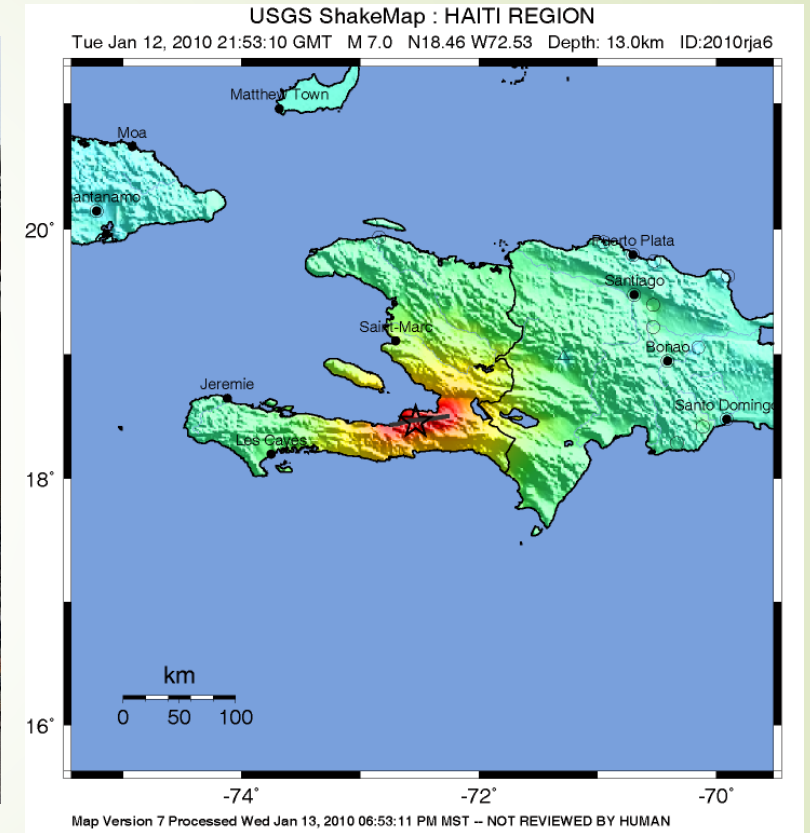
Turn of Century - Deforestation



HAITI

- Over 98% of Haiti is deforested.
- Border with the Dominican Republic is clearly defined.
- Eroded soil magnifies impacts of earthquakes.
- Lack of tree cover makes Haiti vulnerable to increased storm surge damage during hurricanes.

2010 – 7.0 Earthquake



HAITI

- Earthquake claims hundreds of thousands of lives.
- Weakened eroded soil contributes to intensified destruction of terrain.
- 5th deadliest earthquake in recorded history.

(Hypothetical)

20?? – Category 5 Storm



HAITI

- “Katrina level” storm following same path as Hazel creates total destruction.
- Wind and rain encounter little resistance; massive storm surge damage ensues.
- Poorly constructed housing is completely destroyed.
- Eroded soil creates highly intensified mud and debris slides.
- Record number of people are killed or never located.

Now and the Future?

- Haiti is extremely vulnerable to magnified natural disasters due to lack of tree cover and soil erosion.
- Environment is proceeding through an unnatural desertification process.
- Flooding and droughts now common in Haiti.
- Lack of clean water creates environment for outbreak of diseases.
- Soil erosion greatly diminishes agricultural output.
- Indigenous plant & wildlife populations fall in record numbers, failing to adapt to the altered terrain.
- Haiti may eventually become uninhabitable by humans as common natural disasters systematically destroy Haiti's altered environment.



HAITI

Solutions?

- Remove everyone from Haiti and let the environment naturally “recycle” itself, as per the lessons learned from Mangrove Islands & Krakatau. (Not Realistic)
- Move Haiti away from charcoal based fuel consumption, build solar & wind micro power grids throughout the country. (Socioeconomic Issues)
- Halt all deforestation and plant indigenous trees with a goal of at least 60% canopy cover. (Reforestation efforts already exist in Haiti)
- Employ soil counter erosion techniques to coastlines, deploy wave breakers along key areas of the coastline. (Expensive Massive Project)
- Patrol the country to identify dangerous terrain issues caused by deforestation, take appropriate action to avoid potential disasters. (Dangerous Massive Project)
- Conduct country wide educational efforts to show the impacts that deforestation is having on the environment that they live in. (Cultural Issues)

HAITI

Outcome?

- Haiti is a very poor country and many of its people are dependent on foreign aid for basic survival. Massive changes to infrastructure will have to come from outside funding and will likely cost in the billions of dollars. It appears that significant changes to Haiti's infrastructure is not likely to happen anytime soon. Low tech "green" solutions such as solar cookers offer a possible alternative to cooking with charcoal, but cultural issues will impact the success of this changeover.
- Natural disasters like earthquakes & hurricanes will continue to pound away at Haiti and further the degradation of its terrain.
- Climate change potentially further complicates Haiti's situation. If global temperatures continue to rise accompanied by a rise in worldwide sea levels, it creates the potential for hurricanes to reach new heights of strength. Katrina style category 5 hurricanes may eventually become the norm, and it is unlikely that Haiti could survive a direct hit from that powerful of a storm, following on Hazel's 1954 path, in its current soil eroded and deforested state.
- Haiti's survival is in question due to the environmental disaster created by its inhabitants. Global climate change potentially may impact this environment even further and could possibly push Haiti past an environmental threshold that it can not recover from.



HAITI