

# WATER

WE DOING TO OUR

# PLANET?



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# Table of contents

◦ introduction .....	1
◦ what is black carbon? .....	2
◦ why should we care? .....	3
◦ how can you help? .....	4
◦ how do we secure safe drinking water?... ..	5
◦ how does climate change get in the way? .....	6
◦ what will happen to our drinking water? .....	7
◦ what causes land loss? .....	8
◦ who does land loss affect? .....	9
◦ what happens if we don't solve climate change? .....	10
◦ tying it all together .....	11
◦ works cited .....	12

## INTRODUCTION



Climate change is real! There are many issues that we need prevent/fix or what we call home will be at the bottom of the ocean. Our overall theme is water. Melting glaciers leads to land loss which leads to no access to clean drinking water. We will be explaining what effects/how climate change has on our earth. It is important to address these issues because humans and other living organisms will be extinct. We want people to be educated on climate change and want to help!



# WHAT IS BLACK CARBON?



◦ Air borne particles generated by: brick kilns, diesel exhaust, & burning of biomass



◦ Accelerates melting of glaciers & snow in Himalayas

◦ Greenhouse effect that is  $\frac{2}{3}$  of that of carbon dioxide ( $CO_2$ )

◦ Warming effect 300x stronger as  $CO_2$

◦ Raises air temperature

◦ Absorbs light & heats air

◦ Decreasing surface reflection area & air temperature increase  $\Rightarrow$  increased glacier melting

◦ Increasing absorption of solar radiation by decreasing glacier's surface albedo (ability to reflect sunlight)

# WHY SHOULD WE CARE?

## Impact (Globally)

◦ Damage ecosystems

◦ Harm ecosystem services (food & water)

◦ Sea levels rising  $\Rightarrow$  destroy coastal cities

◦ Countries at low sea level (ex. Switzerland)

could also be at risk of complete destruction



## Impact in South Asia

◦ By 2050:

◦ 81% of population may experience water scarcity

◦ Living standards of 50% of people may lower

◦ Impact Himalayan tourism

Consequences will only get worse unless greater efforts are made SOON.







◦ Regional cooperation is **PERTINENT**

◦ Full implementation of black carbon policies in South Asia ⇒ reducing deposition in region by almost 25%.

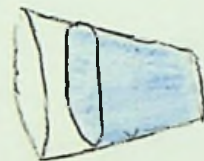
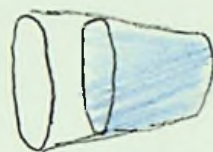
⇒ Increase in health of both humans & animals

- Phasing out diesel engine
- Increase electric cars
- Incentiving the switch from biomass or coal to liquefied petroleum gas
- Eventually to solar
- ⇒ Reduce greenhouse gas
- Countries need to adopt clean development mechanism & clean energy resources



What is required to secure potable drinking water?

Drinking water is not as prevalent as one would think; there are many factors that make water unsafe to consume depending on the source. It can be unsafe due to human pollution, the source itself being toxic, or the wrong type of water entirely (like saltwater) and in order to purify it you'll need specific technology or spend a lot of time boiling it to remove impurities. Less than 1% of water on this planet is able to be consumed, and of that less than 1% most third world countries don't have access to for those reasons. And this will apply to more of us as freshwater becomes more and more scarce.



HOW CAN YOU HELP?



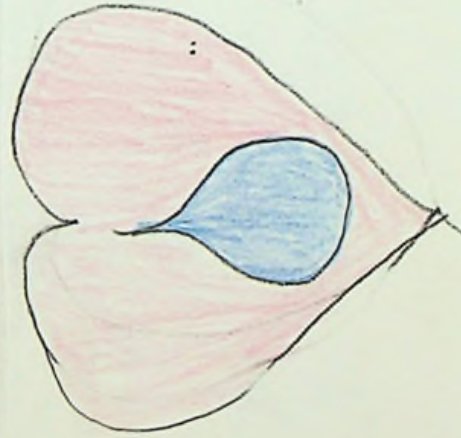
How does climate change get in the way of securing potable water?

Climate change affects the amount of freshwater we can consume. A good portion of the water we can consume does come from underground, but also surface water. And surface water becomes irregular and inconsistent in terms of its availability due to precipitation. With climate change severely impacting the weather, stirring up more extremes like hurricanes and droughts, this water supply will also be severely impacted to a point where we cannot rely on it.



What will happen to drinking water at the current rate of climate change?

At our current rate, drinking water will be substantially more difficult to access globally over the next decade. It will be harder for communities to thrive and those that are not as wealthy may face being wiped out entirely. However, it is possible to slow the rate at which we use water: make sure to run dishwashers at full capacity, take shorter showers, and do not use hoses to clear driveways of leaves. Becoming more efficient with our water usage will allow us to make it all count. And of course, cutting down on carbon emissions or things like crypto currency like NFTs and etherium will slow the rate at which the weather changes.

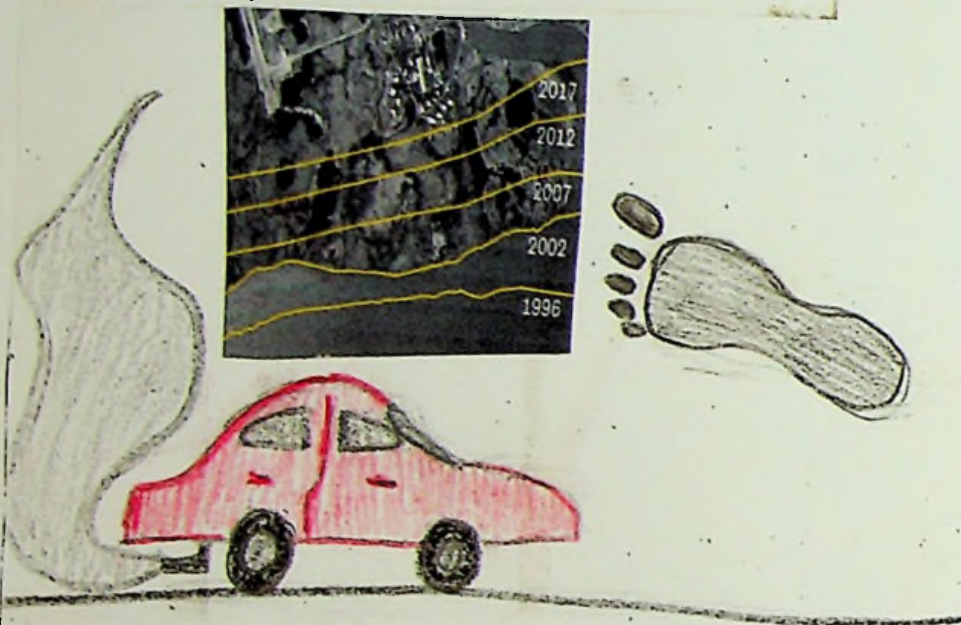




## WHAT CAUSES LAND LOSS?

Human Activities like:

- Burning Fossil Fuel (coal, oil, etc.)
- Land Clearing for homes, agriculture, buildings, stores, etc.
- Transportation (cars, trains, Planes, bus, etc.)
- Human Footprint



How?

Human activity causes the increase of greenhouse gases changing the atmospheric greenhouse. Which is causing climate extremes like intense storms, wildfire, ice shrinkage, extreme heat, that is affecting some regions. Weather is becoming dryer or wetter causing agricultural issues. Human activity is the main source of climate change.

## Who Does Land loss effect?

EVERY LIVING ORGANISMS ON EARTH!!!

- Human dally living
  - o Agriculture issues---no food-
  - o Loss of homes—homelessness
  - o Human Extinction
- Habitats
  - o Animals lose their homes--- lack of food
  - slow to no reproduction---extinction.



Due to rise in sea level and other weather events like cyclones and hurricanes Bengal Tigers habitat is only 1.5 million(km<sup>2</sup>) which only represented 7% of the "historical range" (Sharif A.Mukul). Bengal Tigers are facing extinction there are between 83-130 tigers in Bangladesh. This is an example of how one specie is affected by climate change. This is happening all over the world to many and won't stop till we do something about it!

Human land degradation like erosions there won't be enough agriculture to feed 7 billion people daily which will lead to people starving to death. When humans clear land for new homes deforestation spreads diseases like Malaria and Dengue fever. This could lead to human extinction.





## WHAT WILL HAPPEN IF WE DON'T SOLVE CLIMATE CHANGE?

No Animals



No Clean Water



Extinction

No Land



No Food



No Humans



Due to climate change increase in extreme weather events will lead to no clean water or food. Animal habitats will be ruined causing organisms to go into extinction. Since the sea levels are rising there will no longer be land generations from now nothing but open water.

# Tying it all together

Hopefully you are now aware just how big of a concern glacial melting really is. It can cause:

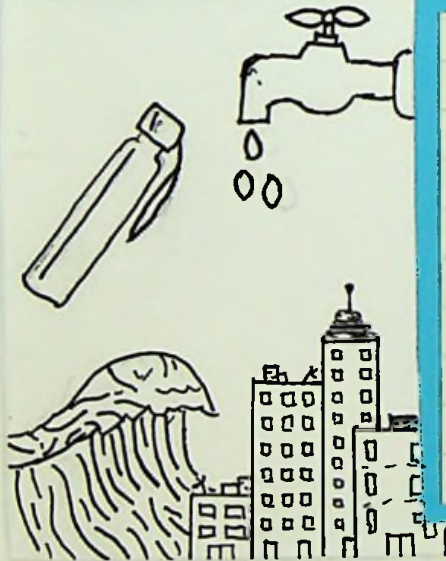
- Land loss, which heavily impacts all aspects of our ecosystem
- Water scarcity, which lowers the standard of living for many and can wipe out communities



The question in your mind may be, "Okay but what can I do

about it?" Here are some ways:

- Take shorter showers
- Run dishwashers at full capacity
- Researchers at the World Bank suggest switching to solar power and utilizing electric cars to slow the rate of glacial melts
- The World Bank also provides research that shows that large scale reforms must be made





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