

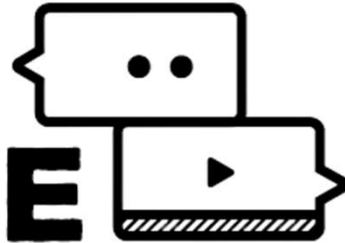


20TH MAY 2020

ENVIRONMENT CRASH COURSE

Brought to you by First Class GP

**ASK ME
ANYTHING**



Q&A

Scan the QR Code

You can ask questions there later.





WEBINAR FLOW

What will be happening

Introduction

Two essay questions:

- Environmental degradation is the biggest threat facing humanity today. Discuss.
- How effective have our efforts been in averting an environmental crisis?

Points

Examples

Short Quiz

Conclusion/Ending Remarks

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INTRODUCTION



FIRST CLASS

HOW TO PARTICIPATE

Do participate in the chat, Q&A

Moderator

Students / Tutors

Bring your paper and pen. Link to Booklet end of
class

Recording available, contact me after class

Technical issue? Be patient.

PRE-QUIZ

Who is the face
of environmental
activism?

A

Greta Thunberg

B

Malala Yousafzai

C

Donald Trump

D

Breta Thungerg

What is hydraulic fracturing?

A

Using pressurised water to fracture seabeds, allowing absorption of CO₂

B

Using pressurised water to break rocks to extract oil

C

Using pressurised air to prevent tsunamis and floods

D

Using pressurised air to fracture stratospheric barriers

Which of the following species is critically endangered?

A

Chinese giant salamander

B

Japanese Giant Hornet

C

Australia hypoxian snake

D

Chinese whale

Is the rate of
deforestation
slowing or
growing?

A

Slowing

B

Growing

How many
animals died
during the 2019-
20 Australia
Bushfire?

A

1.25 billion

B

1.25 million

C

125 thousand

D

12.5 million



Today's Environmental Landscape

**I WANT YOU TO ACT AS IF THE
HOUSE IS ON FIRE, BECAUSE
IT IS.**

Greta Thunberg

**What kind of Env
questions can
you expect?**

QUESTION 1

Environment

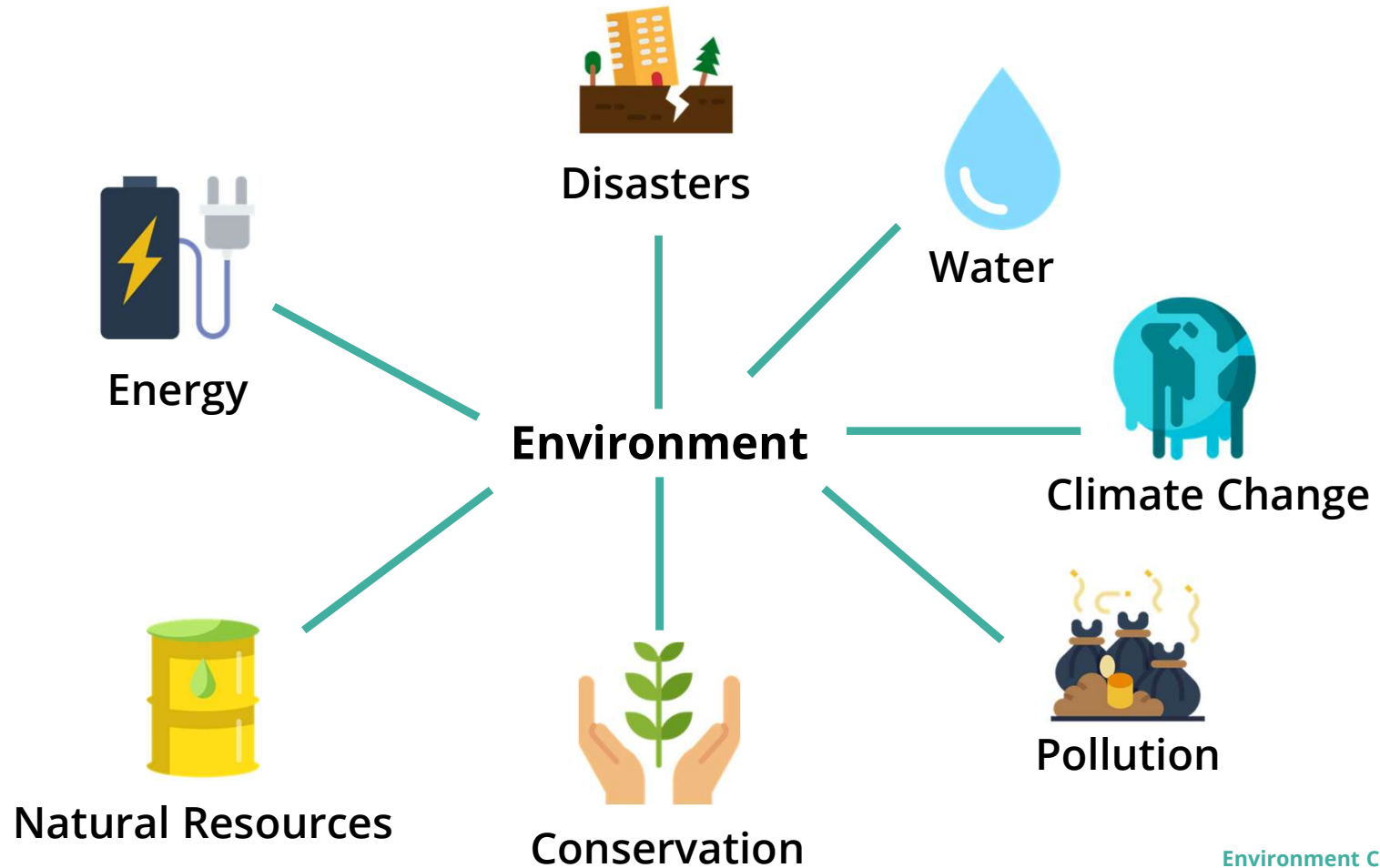
Environmental degradation is the biggest threat facing humanity today.

Discuss.

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Tip 1: the different areas of Environment



Tip 2: Stats, Stats, Stats

QUESTION 1

Environment

Environmental degradation is the biggest threat facing humanity today.

Discuss.

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- There are no signs of abating.
- The economic costs incurred are very high
- Environmental degradation threatens survival.
- There is gross exploitation of natural resources
- Some suffer disproportionately compared to others.
- Environmental degradation is not highly prioritised.
- There is a lack of political will and co-operation
- Misinformation, ignorance and apathy hinders conservation efforts.

POINT 1

There are no signs
of abating.

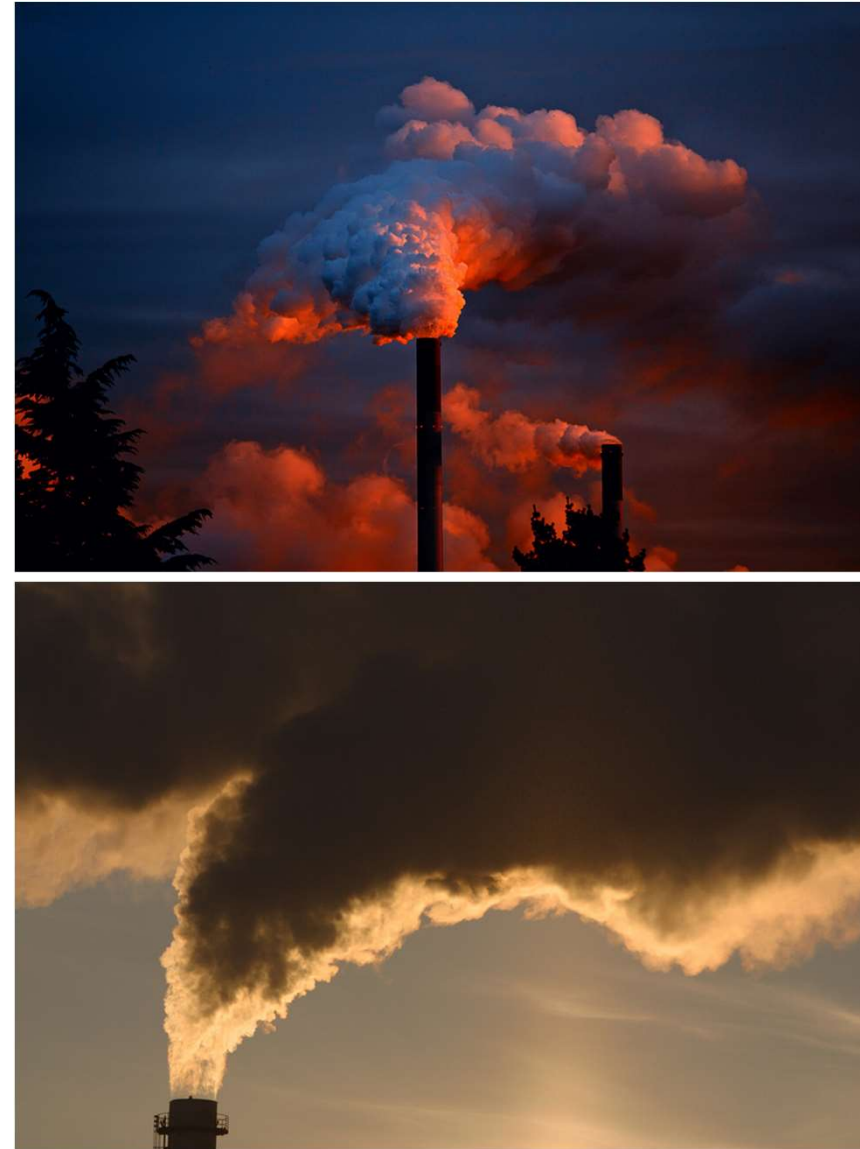
Economic expansion has already
done its damage, and its impacts are
irreversible.



CLIMATE CHANGE

CO2 Concentration

- Since the start of the **Industrial Revolution** in 1750s, global annual mean CO2 concentration has increased steadily.
- For the last 800,000 years, studies of ice cores show that CO2 concentrations stayed between 180 and 290 ppm.
- In 2019, The Mauna Loa Observatory in Hawaii, **detected 415ppm**, the highest ever in a few million years.



EXPLAIN LIKE I'M 5

WHAT IS HYDRAULIC
FRACTURING, AND HOW
DOES IT CONTRIBUTE TO
EARTHQUAKES?

IT IS A WELL STIMULATION TECHNIQUE

Whereby rock is fractured by millions of gallons of water, sand and chemicals at high pressure.

HELPING OIL AND GAS FLOW BETTER

Necessary to achieve adequate flow rates in shale gas and oil wells.

INCREASING PRODUCTION

Of extensively available hydrocarbons and gas, replacing coal, which contributes to global warming

BUT LEADS TO GEOLOGIC FAULTS

As wastewater from the process can shift rocks around at the disposal wells.

RESULTING IN EARTHQUAKES

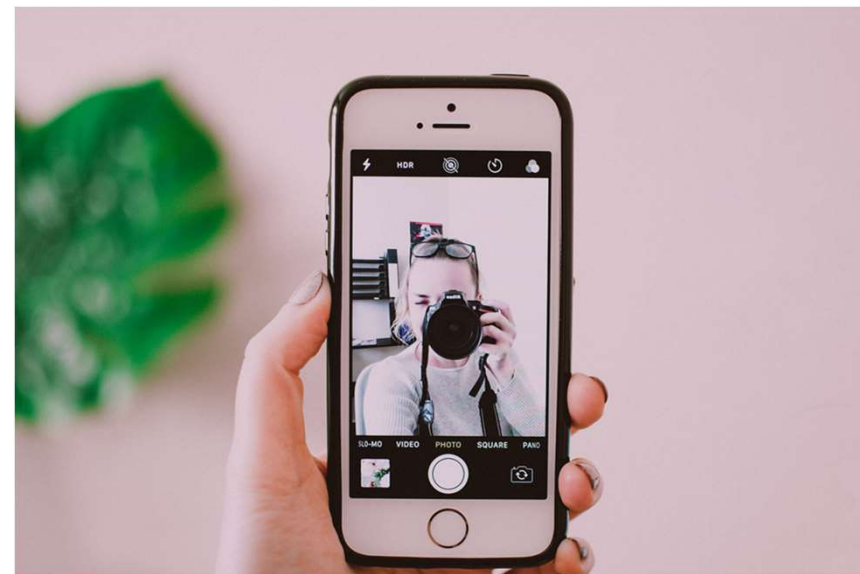
It has been linked to increased earthquakes in Texas and Oklahoma in 2018 and 2019.

POLLUTION

Consumerism

- According to UN-Habitat, **99 percent** of the items we purchase are thrown away within six months.
- Producers make goods **disposable rather than durable** so that consumers must continue to repurchase the good.
- Electronic products can also be engineered to be slower, signalling to users to have it replaced.

• **Apple** was found **throttling performance** of



THERE ARE NO SIGNS OF ABATING

Consumerism

- According to UN-Habitat, **99 percent** of the items we purchase are thrown away within six months.
- Producers make goods **disposable rather than durable** so that consumers must continue to repurchase the good.
- **Apple** was found **throttling performance** of older iPhones, leading to a \$500m settlement.

Climate Change

- CO2 concentration is at its highest ever since a few million years ago at **415ppm**.

Natural Resources/Natural Disasters

- **Hydraulic fracturing** has been linked to geologic faults, leading to **increased occurrences of earthquakes** in parts of America.

POINT 2

Environmental degradation

threatens survival.

Environmental degradation will cause significant problems to humanity and wildlife, which affects our survival

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2019-20 AUSTRALIA BUSHFIRE

Climate Change

Some reports indicate that global warming and climate change could have contributed to the ferocity of the 2019–20 Australia wildfires with **hotter, drier conditions**.

2019 was Australia's driest ever year since 1900 with rainfall 40% lower than average.

At least **33 people** have been killed. About **2,000 homes** have been destroyed, which has forced thousands to seek shelter elsewhere.

Over **1.25 billion animals** have died in the 2019-2020 Australian bushfire season.

CLIMATE CHANGE

Climate Change Refugees, Disease

- Climate change has driven more than **20 million people** from their homes over the last decade.
- Much of the displacement were caused by cyclones, floods and fires Island nations like **Cuba, Dominica and Tuvalu** see on average close to **5 percent** of their people out of their homes in any given year.
- **Zika and dengue** more prevalent at higher temperatures, posing health problems to those living in hotter regions.



POLLUTION



MICROPLASTICS

In 2020, Chinese researchers observed that **microplastics can be found in many places** - salt, water and air. They have also been **found in Arctic ice**, which is the most remote water body.



PHYSIOLOGY

Cost of the health burden caused by transport pollution, which has been linked to lung and heart diseases, strokes and diabetes added up to **US \$1 trillion** in 2015.



PSYCHOLOGY

High levels of air pollution in England and Wales have been linked with **psychotic experiences in teenagers**, such as hearing voices and intense paranoia, according to researchers at King's College London

CLIMATE CHANGE

Food supply is adversely affected.

- Deforestation, loss of grasslands for large-scale agriculture are **degrading life-giving soils that humanity needs to feed** and clothe itself, cutting yields.
- Record **45 million people in southern Africa** facing food crisis due to severe droughts and famine.



WHY IS OUR SUPPLY OF FISH DROPPING?



1

OVERFISHING AND DESTRUCTION OF MARINE HABITAT

Causing populations of tuna and sea turtles to fall

2

JELLYFISH POPULATION INCREASES

As there are fewer tuna and sea turtles to prey on them.

3

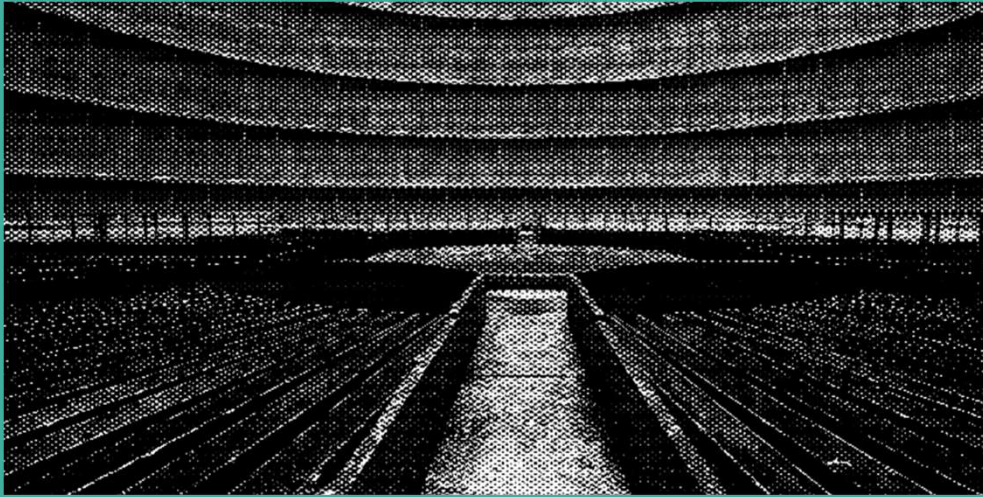
JELLYFISH CONSUME FISH EGGS

Which reduces number of fish offspring.

4

AND COMPETE FOR FOOD WITH FISH

Which reduces the survival rate of the overall population of fish that we eat



CHERNOBYL

1986



FUKUSHIMA

2011

The two nuclear energy disasters rated at seven—**the maximum severity**—on the **International Nuclear Event Scale** are the Chernobyl disaster in 1986 and the 2011 Fukushima disaster.

The **Chernobyl Exclusion Zone** will only be safe in the **year 22,000**.

IT THREATENS SURVIVAL.

Climate Change

- The **2019-20 Australia Bushfire** was attributed to global warming, leading to 33 people and 1.25 billion animals dead.
- **Climate change refugees** from Cuba, Dominica and Tuvalu
- **Zika and dengue** are more prevalent at higher temperatures.

Pollution

- **Microplastics** can be found everywhere.
- Pollution affects **physiology and psychology**.

Food Supply

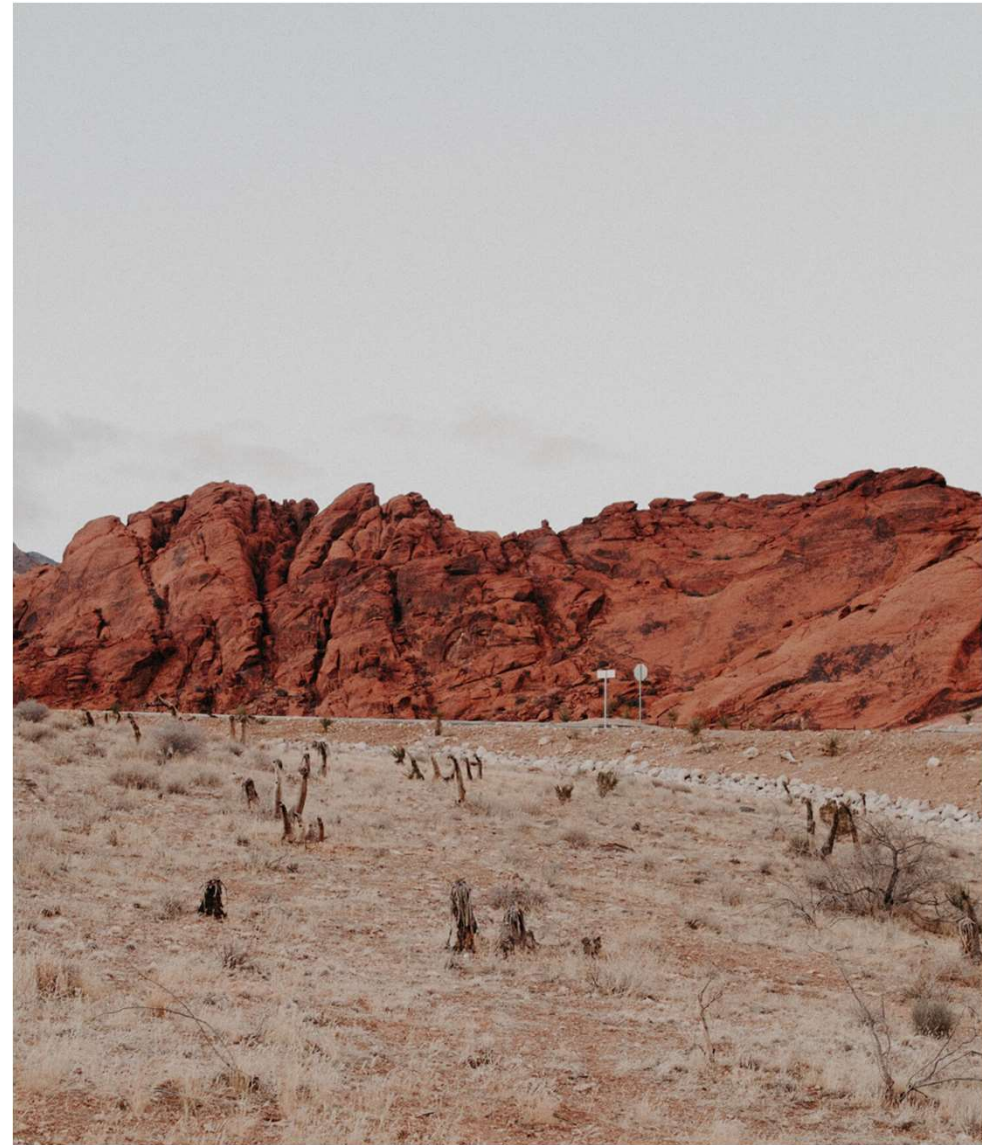
- **45 million people in Southern Africa** facing food crisis due to severe droughts and famine.
- Supply of fish dropping

POINT 3

The economic costs incurred are very high.

Environmental damage can lead to significant costs incurred. Similarly, conservation efforts and eco-friendly measures to counter degradation can be expensive as well.

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NATURAL DISASTERS

Damage to infrastructure and economy.

- Hurricanes have flattened the economies of some Caribbean nations, with **Hurricane Maria** in 2017 costing **Dominica about 225 percent of its GDP**, according to World Bank estimates
- Overall, **weather disasters** in 2017 and 2018 cost the **global economy \$653 billion** - the costliest back-to-back years in history



POLLUTION

Air pollution in India.

- India's losses from air pollution **increased more than four times to US\$560 billion.**
- These losses are contributed by flight disruptions, fewer tourists, lost work hours and missed school days.
- The **intangible costs** may be adding up for an economy grappling with a sharp slowdown.





ROYAL DUTCH SHELL AND OGONILAND

Sustainability is expensive. Exploitation is cheaper.

While more **sustainable oil rigging methods** have **existed** for a long time, the Royal Dutch Shell Company remained oblivious to their presence.

Instead, they chose **low-cost productions** in Ogoniland in Nigeria.

Between 1976 and 1991, over two million barrels of oil polluted Ogoniland in 2,976 separate oil spills.

In at least 10 Ogoni communities, drinking water is contaminated with high levels of hydrocarbons.

UNEP scientists found an **8 cm layer of refined oil**

THE ECONOMIC COSTS INCURRED ARE VERY HIGH.

Natural Disasters

- **Hurricane Maria** in 2017 costed Dominica **225% of its GDP**.
- Weather disasters cost the global economy \$653 billion.

Pollution

- **India's losses** from air pollution increased more than 4 times to **US\$560 billion** due to flight disruptions, fewer tourists, lost work hours and missed school days.

Natural Resources

- **Royal Dutch Shell** forgoing sustainable methods of oil rigging for low-cost exploitation of **Ogoniland**.

POINT 4

There is gross
exploitation of
natural resources.

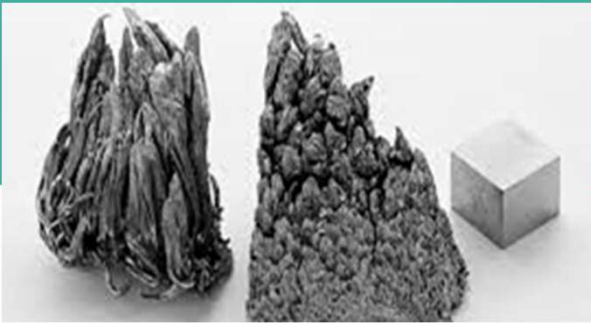
Limited resources are exploited and
become even more scarce.

Environment degradation is
exacerbated as well.

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EXPLOITATION OF NATURAL RESOURCES



RARE EARTH METALS

They are used in many technologies like electronics and military weaponry.

In 2017, China, home to more than 90% of rare earth production, claims that **supplies of metals** like yttrium and lanthanum could be **exhausted within 30 years**.



WOOD

In 2018, humanity destroyed an expanse of tropical forest nearly the size of England.

Pace of the loss is staggering - the equivalent of **30 football fields disappearing every minute of every day**.



SAND

Facing a shortage of sand, countries like US and UAE are **dredging ocean bottoms for sand**, nearly destroying aquatic ecosystems in the process.

It kills organisms, destroys coral reefs and other habitats, and **alters the structure of the water**.

THERE IS GROSS EXPLOITATION OF NATURAL RESOURCES.

Natural Resources

- **Rare earth metals** could be exhausted in 20 years.
- **Exploitation of wood**, pace of loss equivalent to 30 football fields disappearing every minute.
- US and UAE **dredging ocean bottoms for sand**, killing marine organisms.

POINT 5

Some suffer
disproportionately
compared to others.
Despite not contributing significantly,
some bear the brunt of those who do.

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WHY AFRICAN COUNTRIES SUFFER MORE



1

THEY LIE ALONG THE EQUATOR

Making them extremely vulnerable to global warming.

2

AND SOME ARE MIRED IN CONFLICT

Boko Haram insurgency in Nigeria, civil wars in South Sudan, Libya and Somalia.

3

DROUGHTS AND FOOD CONTROL LEAD TO FAMINE

Affecting some 12 million people in Ethiopia, Kenya and Somalia.

4

AND CLIMATE CHANGE REFUGEES

Estimated displacement of as many as 143 million people by 2050.





BLACKS AND HISPANICS BEAR THE BURDEN OF POLLUTION BY WHITES

Whites pollute, blacks and hispanics suffer disproportionately.

Air pollution in the US is **disproportionately caused by white people**, while black and Hispanic people are more likely to suffer its consequences, according to the Proceedings of the National Academy of Sciences in the US.

White people bear the burden of **17% less air pollution** than is generated by their own consumption.

Blacks and Hispanics, on the other hand, experience a “pollution burden.” They face **56% and 63% more exposure**, respectively, than is caused by their consumption.

SOME SUFFER DISPROPORTIONATELY COMPARED TO OTHERS.

Climate Change

- African countries are even more vulnerable to climate change and global warming due to **a confluence of factors.**

Pollution

- White people pollute more but **blacks and Hispanics suffer the brunt of it.**

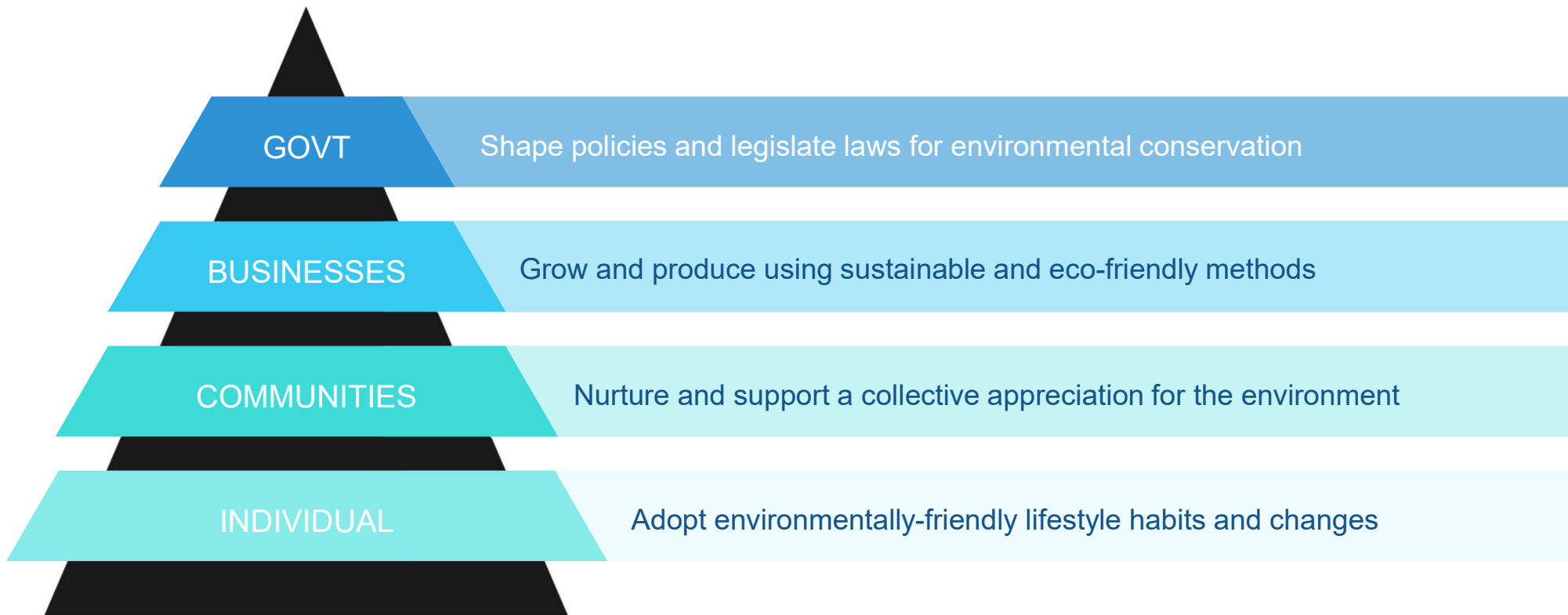
POINT 6

Environmental
degradation is not
highly prioritised.

Hence, it is difficult to get everyone ,
including individuals, firms and
governments involved.



WE ARE ALL IN THIS TOGETHER, RIGHT?



POLLUTION

Zero-waste Movement

- As the name implies, people in this movement generate little to no waste. Laura Singer, founder of Trash is for Tossers, was able to store 4 years of trash generated by her into a mason jar.
- People in the movement buy second-hand goods, use reusable containers and compost food scraps.
- However, much like many eco-friendly initiatives, the zero-waste movement **has not gained significant traction** due to its difficulty.



CLIMATE CHANGE

Young people in Germany care, but "don't do anything".

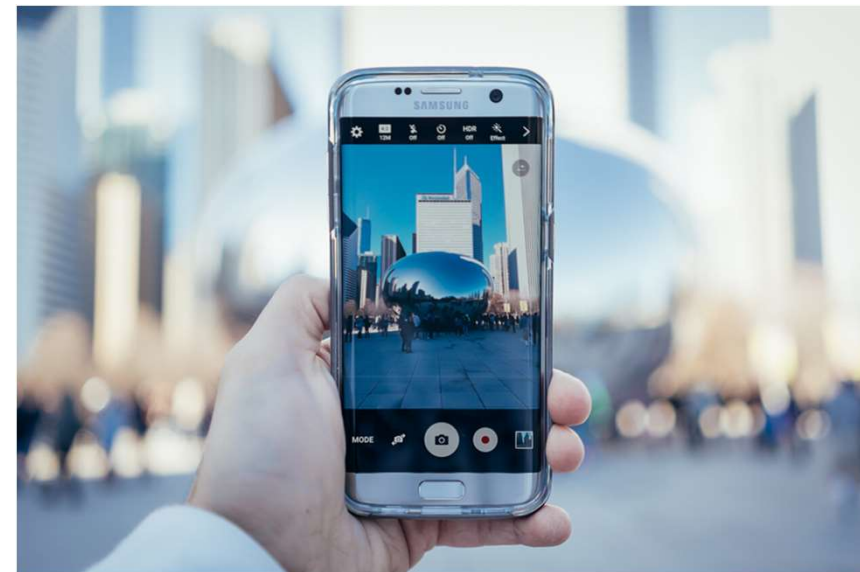
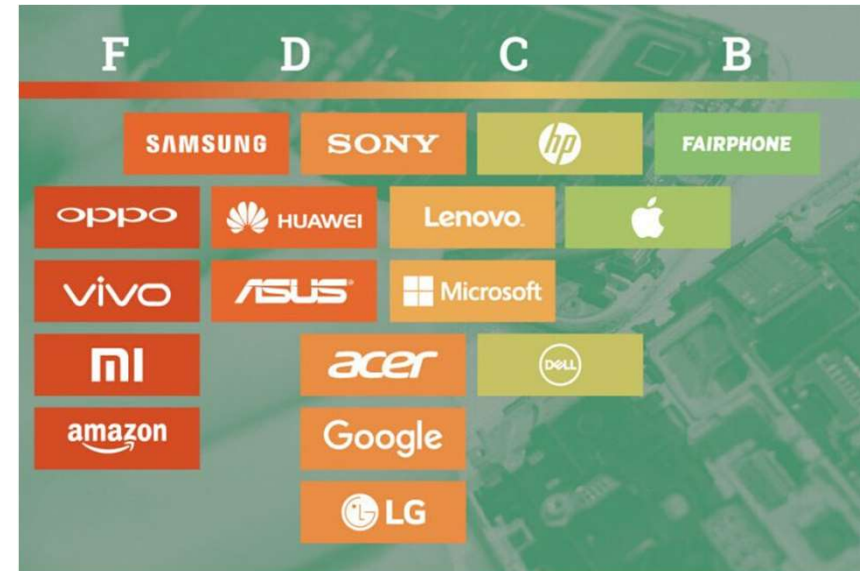
- A 2016 study in Germany found that just 21% of millennials believed that an intact environment and the chance to enjoy nature were important parts of a "good life".
- That was nine percentage points fewer than the already disappointing 30% of the whole population who agreed.
- They're just unwilling to do anything about it, and young people are particularly reluctant to give up branded clothing and electronic



ENERGY

Big tech firms are not eco-friendly

- Greenpace has accused technology firms as the main cause of negative environmental impacts in the world, with some of the biggest such as Samsung Electronics, Amazon and Huawei gaining some of the lowest marks.
- Samsung in particular was graded as a **D-performer in its use of renewable energy**, which accounted for only 1% of its operations unlike Apple's 96%.



CONSERVATION

ASEAN's wildlife market

- Asia remains a source, transit and consumer region in an **illegal wildlife trade** worth in excess of **\$23 billion** a year - **a lucrative trade not worth regulating**.
- In Thailand, a total of 1,521 live animals for sale online on 12 Facebook groups were found in 2016. A follow-up research in 2018 showed that only 10 groups remained – but **total membership had almost doubled** from 106,111 to 203,445.



ENVIRONMENTAL DEGRADATION IS NOT HIGHLY PRIORITISED.

Pollution

- The **Zero-Waste movement** has been criticised for lack of traction, as well as its difficulty to sustain such a lifestyle.

Climate Change

- Millennials are **unwilling to change their lifestyles**, despite knowing about problems of climate change.

Energy

- **Tech companies** such as Samsung have been criticised by Greenpeace for not fuelling their operations with renewable energy.

Conservation

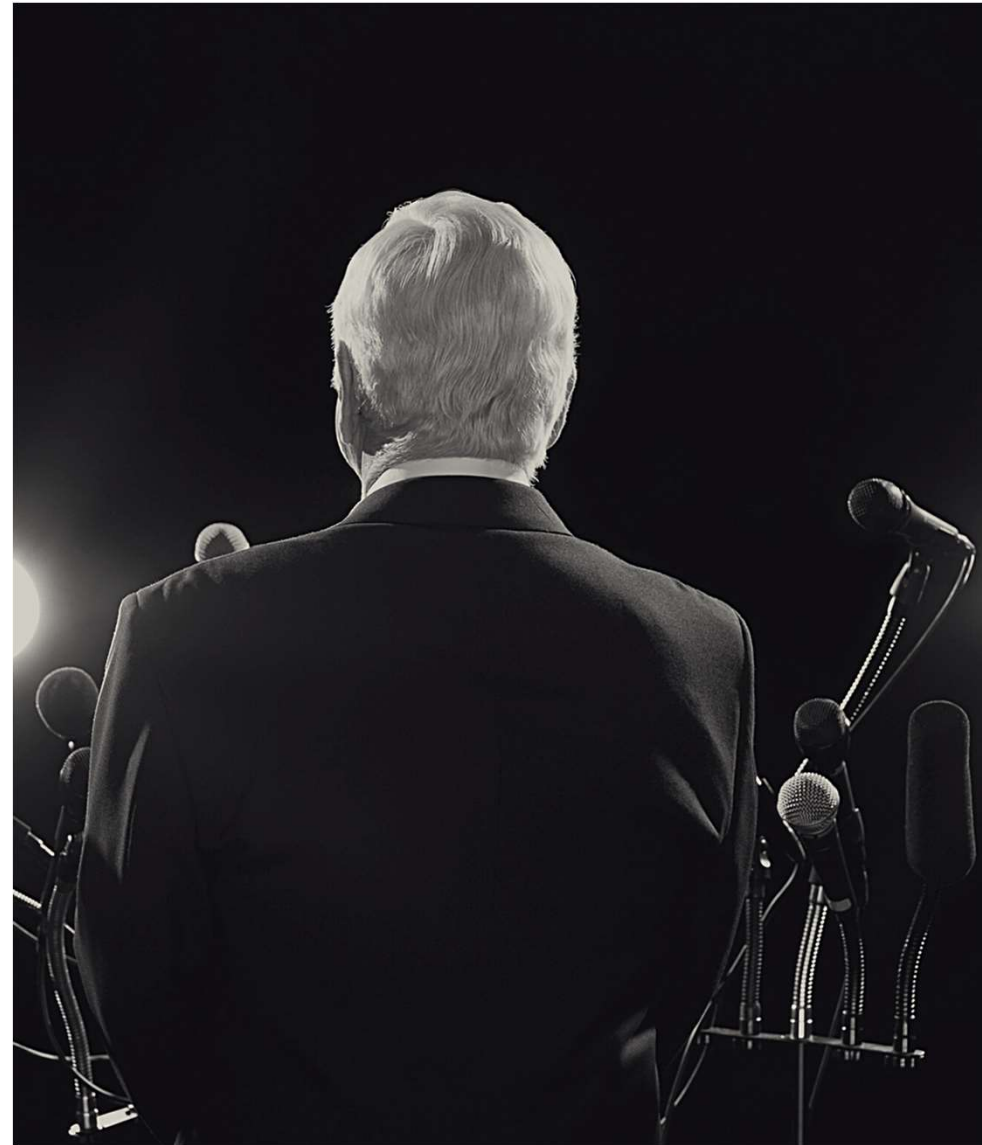
- Governments are unwilling to **regulate illegal wildlife trade** due to its lucrative nature.

POINT 7

There is a lack of political will and co- operation

Political institutions and leaders refuse to pull their weight when it comes to environmental issues.

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LACK OF POLITICAL WILL AND CO-OPERATION



PARIS AGREEMENT

In 2017, US President Donald Trump withdrew from the Paris Agreement on climate change mitigation, claiming that it will **hinder economic priorities**.

This is despite US being the **second highest CO2 emitter** in the world.



FOSSIL FUEL LOBBY

According to InfluenceMap in 2019, the largest five listed oil and gas companies spend nearly \$200m (£153m) a year lobbying to **delay, control or block policies to tackle climate change**.



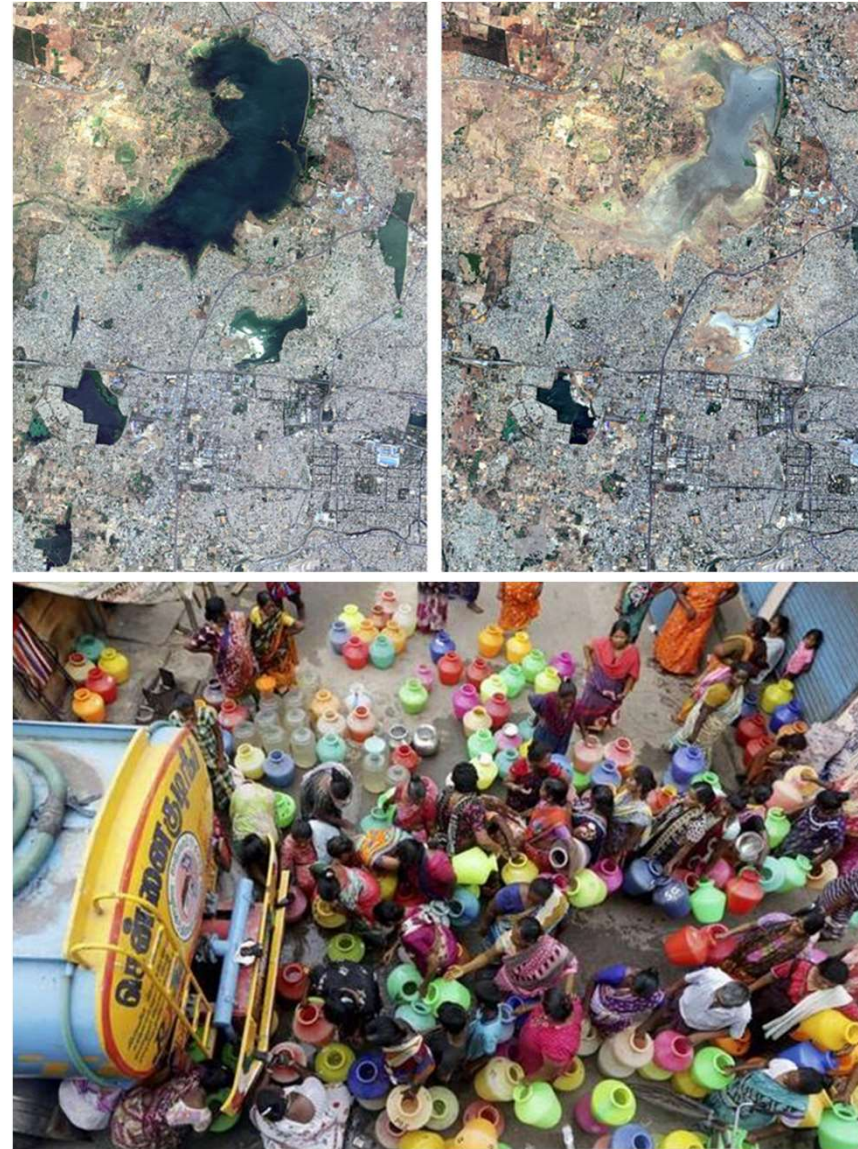
INADEQUATE BABY STEPS

Russia's plan for limiting climate change drew criticism as inadequate and unambitious "baby steps" since Moscow would **allow greenhouse gas emissions to rise from current levels**, which is not in alignment

WATER

Chennai suffers with no water.

- In 2019, Chennai's four main reservoirs that contribute 60% of the city's requirements have shrunk and dried up, and the cracked lake beds have become grazing grounds.
- Grey water recycling, banning constructions over water bodies — these measures were not implemented due to lack of political will.
- The government also failed to monitor rainwater-harvesting structures, which resulted in many of them malfunctioning.



THERE IS A LACK OF POLITICAL WILL AND CO-OPERATION.

Climate Change

- Trump withdrawing from the Paris Agreement, claiming that it will **hinder economic priorities**.
- **Fossil fuel lobbying** to block climate change policies.
- Russia's **unambitious** plans to reduce greenhouse gas emissions.

Water

- Chennai is facing a water crisis due to **lack of regulations and political will**.

POINT 8

Misinformation,
ignorance and apathy
hinders conservation
efforts.

This can manifest in the form of denial.





YOUTUBE ACTIVELY SPREADING CLIMATE MISINFORMATION

Recommending sensationalised videos filled with false information.

YouTube is actively spreading climate misinformation through its **recommendation algorithms**, including titles like "CIA Whistleblower Speaks Out About Climate Engineering Vaccination Dangers and 911."

Misinformation videos account for **20% of the views** of the top 100 related videos for the search term "global

YouTube wants to limit misinformation while **remaining ideologically neutral**. But, in a polarised world, it is impossible.

The choice between neutrality and respect for evidence is becoming unavoidable, and social media platforms **will always choose neutrality, for business**

A photograph of a protest. In the foreground, a large white sign with the text '#EXXONKNEW' in bold black letters is visible. Behind the sign, several people are standing, some looking towards the camera. The background is slightly blurred, showing more people and what appears to be a park or outdoor setting with trees.

#EXXONKNEW

They knew about climate change, but misled the public.

Exxon knew about the threat of climate change decades ago.

But for nearly forty years, the company has more than **\$20 million to think tanks and politicians** to spread **doubt and misinformation** — first on the existence of climate change, then the extent of the problem, and now

In 1992, Exxon joined the Global Climate Coalition, an association of companies from industries linked to fossil fuels.

They vigorously fought potential climate change regulations by **emphasising scientific uncertainty** and **underscoring the negative economic impact** of

MISINFORMATION, IGNORANCE AND APATHY HINDERS CONSERVATION EFFORTS.

Climate Change

- Youtube's algorithms are recommending sensationalised videos **filled with misinformation and falsehoods.**
- ExxonMobil, despite confidently knowing the threats of climate change, continued to **emphasise on its scientific uncertainty** and underscore the **negative economic impacts of climate change policies.**

QUIZ

In 2019, The Mauna Loa Observatory in Hawaii detected _____ ppm of CO₂, the highest ever in a few million years.

A

180

B

290

C

415

D

420

Hydraulic
fracturing has
led to increased
occurrence of
which natural
disaster?

A

Earthquakes

B

Droughts

C

Floods

D

Cyclones

In 2020, where
did Chinese and
US researchers
find microplastics
in?

A

Salt

B

Air

C

Arctic Ice

D

All of the above

Which of the following is not a reason why the supply of fish is dropping?

A

Overfishing and marine
habitat destruction

B

Jellyfish consume fish eggs

C

Fish failed to adapt to
increasing CO₂
concentrations in water

D

Jellyfish population has
increased

Where did Royal Dutch Shell conduct highly exploitative and damaging oil rigging?

A

Brazil

B

Ogoniland

C

Wakaliwood

D

Somaliland

Which of the following is not a reason why African countries suffer more from climate change?

A

These countries lie along the equator.

B

Some are mired in civil wars and insurgencies.

C

Droughts and food control

D

Lack of donations

How much of
Samsung's
operations is
fuelled by
renewable
energy?

A

1%

B

3.5%

C

6.9%

D

10%

How much did
oil and gas
companies
spend lobbying
to delay, control
or block policies
to tackle climate
change?

A

\$200 million

B

\$20 million

C

\$100 million

D

\$10 million

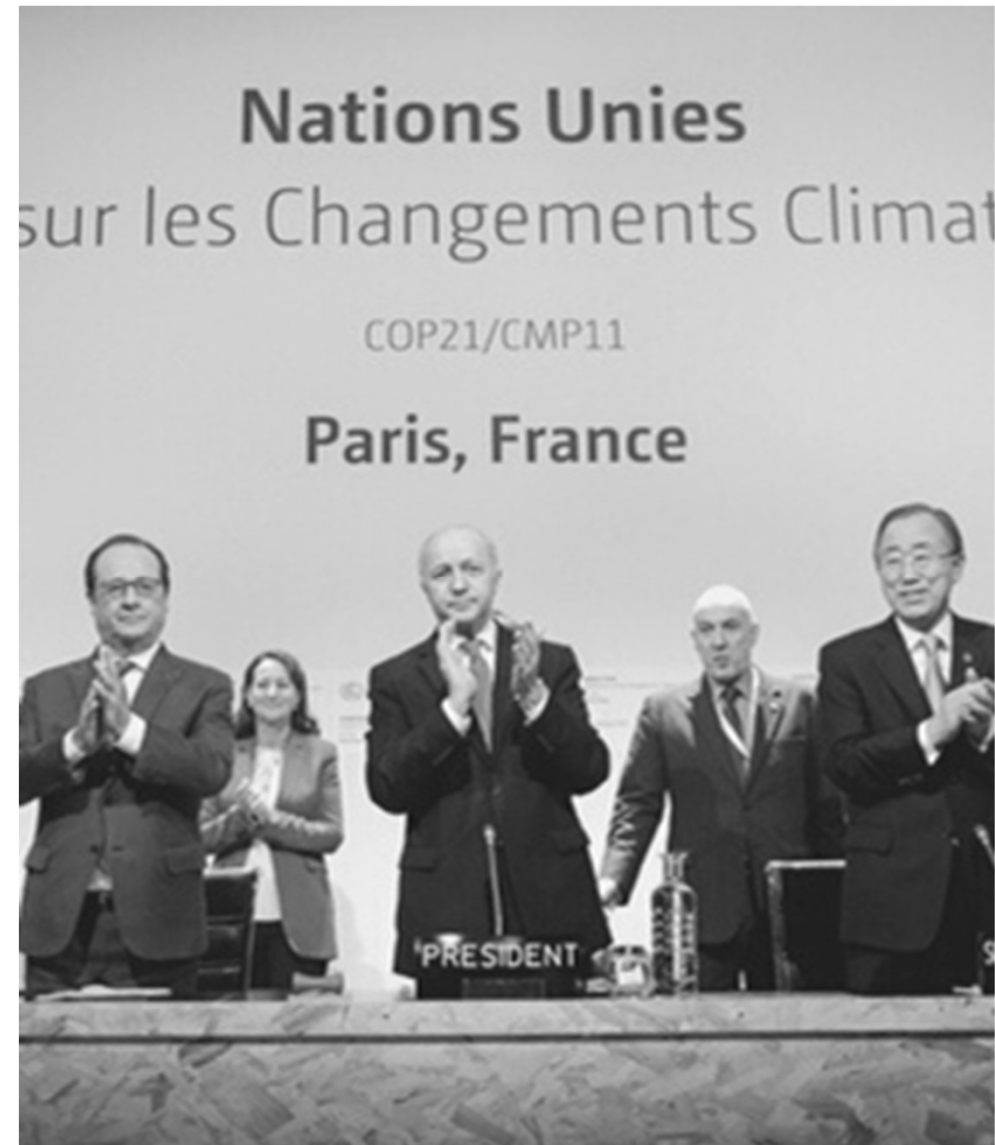
BREAK

QUESTION 2

Environment

How effective
have our efforts
been in averting
an environmental
crisis?

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SUCCESSFUL EFFORTS



FAILED EFFORTS

CLIMATE CHANGE
CONSERVATION
MITIGATING AIR/WATER POLLUTION
PLASTIC POLLUTION
PRESERVING NATURAL RESOURCES
PRESERVING WATER SUPPLY



CLIMATE CHANGE



SUCCESSFUL EFFORTS

In 2019, the global Google searches for Climate Change finally surpassed the searches for Game of Thrones, suggesting a growing awareness for climate change.

Recent developments that led to the rising concerns for the planet include the rallying figure Greta Thunberg, the Climate Strikes across the world and the first Climate Change Town Hall or Climate Change debate, held by CNN and MSNBC where US presidential candidates took audience questions about



FAILED EFFORTS

The 2015 Paris Climate Agreement obliges countries to set targets to limit carbon emissions and to limit global temperature increase by 1.5C above pre-industrial levels. Most countries have set low targets in limiting carbon emission and even then, many countries have been missing the targets set.

As a result, 2019 was the 2nd hottest year on record (at

A photograph of a Kudu antelope standing in a savanna landscape. The antelope has long, spiraling horns and is looking towards the right. The word "CONSERVATION" is overlaid in large, white, sans-serif capital letters across the center of the image. The background consists of green grass and trees, with a bright, sunny atmosphere.

CONSERVATION



SUCCESSFUL EFFORTS

The Chinese government opened a provincial protection zone covering nearly 87 square km along the Yangtze river (where the construction of any production facilities is strictly prohibited) for the endangered Yangtze finless porpoise.

The latest research in 2018 showed the population of the porpoise has remained roughly constant since 2012.



FAILED EFFORTS

The Chinese Giant Salamanders is one of the largest salamanders and one of the largest amphibians in the world. It is a Chinese delicacy that can fetch \$1500 each on the dinner table.

Nature reserves have been established throughout China for the conservation of the Chinese giant salamander. However, the regulations are not enforced. They have been poached over the years and are now critically endangered.



MITIGATING AIR/WATER POLLUTION

A close-up photograph of numerous water droplets of varying sizes on a dark, reflective surface, creating a textured, shimmering effect.

SUCCESSFUL EFFORTS

Convention on Long-Range Transboundary Air Pollution (CLRTAP) was first signed to address the problem of acid rain caused largely by sulphur dioxide. It has since expanded to cover different air pollutants such as nitrogen oxides and particulate matter. Since 1990, the levels of SO₂ and particulate matter have dropped by 40% in US and 80% in Europe. The convention has prevented 600,000

premature deaths annually in Europe.

A wide-angle photograph of a dense city skyline, likely Jakarta, shrouded in thick, grey smog or haze, with buildings appearing as silhouettes against the polluted sky.

FAILED EFFORTS

In the 2019 World Air Quality Report, Jakarta and Hanoi have overtaken air pollution levels in Beijing, the world's most suffocating capital just a few years ago. In the report, air pollution worsened in every country in Southeast Asia between 2018 and 2019—with the exception of Thailand. In Jakarta, due to increased traffic and forest fires, the PM_{2.5} levels have increased by 66% over the past two years. PM_{2.5} is linked to lung cancer, stroke and heart diseases.



The River Thames was once declared biologically dead - so polluted that it could not support life.

However, the government cleaned up the river by prohibiting industries from dumping effluents into the river, Proper sewage systems and treatment plants have also been built.

It is now a thriving ecosystem, where you can see seals.



Countless efforts have been undertaken to clean up the Ganges River in India. The Indian government has also allotted \$3b to limit its pollution.

However, the infrastructure remains poor as untreated sewage is discharged into the rivers. Industrial effluent releases toxic chemicals into the river. Ashes and semi-cremated bodies are released into the river.

Today the Ganges is responsible for cholera and diarrhoea which is the leading cause of deaths among Indian children.

A large, dense pile of various plastic waste items, including bottles, containers, and debris, filling the frame. The text "PLASTIC POLLUTION" is overlaid in white, bold, sans-serif capital letters across the center of the image. The background is a monochromatic, sepia-toned photograph of the waste pile.

PLASTIC POLLUTION



The Akshar Forum School in India is addressing plastic waste by making its collection a condition of free attendance.

Every week, pupils must bring up to 20 items of plastic.

They stuff plastic bags inside bottles to make "eco bricks", used to construct new school buildings, toilet buildings or pathways.



Only 55 countries restrict the retail distribution of manufacturing, production and imports of plastic bags. The rest include loopholes that could fail to curb overall plastic pollution.

China bans plastic bag imports and mandates that retailers charge consumers for plastic shopping bags, but does not explicitly restrict their production or exportation.

A photograph of a forest landscape. In the foreground, there is a large pile of cut logs, some of which are covered in moss. The logs are scattered across a forest floor. In the background, there is a dense forest of tall evergreen trees. The scene is misty or foggy, with a soft, diffused light. The text "PRESERVING NATURAL RESOURCES" is overlaid in the center of the image in a large, white, sans-serif font.

PRESERVING NATURAL RESOURCES



SUCCESSFUL EFFORTS

The Great Green Wall Project was launched in 2007 to halt the expansion of the Sahara.

It supports communities working towards sustainable management and use of forests, rangelands and other natural resources.

As of 2019, 15% of the wall is complete with significant gains made in Nigeria, Senegal and Ethiopia. Nigeria has restored 12 million acres of degraded land and Ethiopia has reclaimed 37



FAILED EFFORTS

Many scientists and environmentalists blame the deforestation spike on Brazil President Jair Bolsonaro's aggressive policies to support mining and ranching and to dismantle environmental protections.

Development, most of it illegal, destroyed more than 9700 square kilometers of Brazilian Amazon rainforest in 2018 - an increase of 30% from 2017 and the highest rate of deforestation since 2007-08.



SUCCESSFUL EFFORTS

The FAO found that the world's forest area decreased from 31.6 percent of the global land area to 30.6 percent between 1990 and 2015, but that the pace of loss has slowed in recent years.

Data from FAO has shown that, although alarming, globally deforestation is slowing because of sustainable forest management practices and reforestation efforts.



FAILED EFFORTS

For every pound of shrimp (prawns) caught, another six pounds of other species such as turtles and sharks are discarded.

Currently 2% of the world's oceans are marine protected areas (MPAs). But only half of it, 1%, is declared as no-take zones where fishing is prohibited.

In 2018, the United Nations (UN) revealed that one-third of global marine fish stocks are now fished at unsustainable levels and have reached 'overfished' status, threatening our food security.

A close-up photograph of a person's hands splashing water. The water is captured in mid-air, creating a dynamic and energetic scene with many droplets and bubbles. The background is dark, making the bright water and the person's skin stand out. The text "PRESERVING WATER" is overlaid in the center in a white, sans-serif font.

PRESERVING WATER



SUCCESSFUL EFFORTS

Singapore's Smart Shower Programme conducted a trial on 500 households.

It indicated that households can save about 5 litres of water per person per day while taking their showers, when provided with real-time information on consumption coupled with optimal goal setting.

This can potentially help households save approximately 3% of their monthly water usage.



FAILED EFFORTS

A groundwater conservation scheme that cost the Indian government millions of rupees was touted as a solution to Maharashtra's water problems.

It has been implemented in 16,522 villages. Yet, the scheme does not seem to have had much of an impact as many of these villages are already facing severe water shortage with little rain.

The situation is only expected to worsen as the hot summer months approach.

QUIZ

In 2019, the
global Google
searches for
Climate Change
finally surpassed
the searches for
_____?

A

Brooklyn 99

B

Game of Thrones

C

Youtube

D

Facebook

After
constructing a
provincial
protection zone,
which animal's
population has
remained
constant since?

A

Yangtze finless porpoise

B

Chinese giant salamander

C

Chinese giant prawn

D

Japanese giant hornet

Which river is still polluted due to industrial affluent and is causing cholera?

A

River Thames

B

Yellow River

C

Thanges River

D

Ganges River

What does the Akshar Forum School do with the plastic waste they have collected?

A

Incinerate them

B

Make "eco-bricks" by stuffing bottles with plastic bags

C

Make "eco-bricks" by hypercompacting the plastics

D

Use them to make art

When did The
Great Green
Wall in Africa
commence?

A

2007

B

2008

C

2017

D

\$2018

What
percentage of the
world's oceans
are no-take
zones where
fishing is
prohibited?

A

10%

B

20%

C

1%

D

2%

What is the
Singapore
water-
conservation
HDB project
called?

A

Smart Water Programme

B

Smart Bath Programme

C

Smart Shower Programme

D

Smart Saving Programme

A scenic view of a snow-capped mountain peak, likely Mount Everest, with a forested valley below. The sky is filled with soft, white clouds. The text "THAT'S THE END OF THE CRASH COURSE!" is overlaid in large, white, sans-serif capital letters.

THAT'S THE END OF
THE CRASH
COURSE!



SIGN UP FOR OUR
EDUCATION CRASH
COURSE!

A scenic view of a mountain range with pine trees and a clear sky. The mountains are rugged and covered in green vegetation. The sky is a clear, pale blue. The text "ENROL IN OUR CLASSES!" is overlaid in the center in a white, sans-serif font.

ENROL IN OUR
CLASSES!

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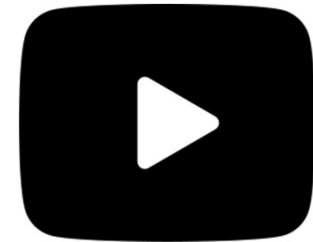
INSTAGRAM

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FACEBOOK

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YOUTUBE

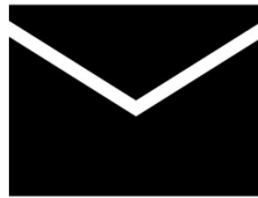
First Class GP and English

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