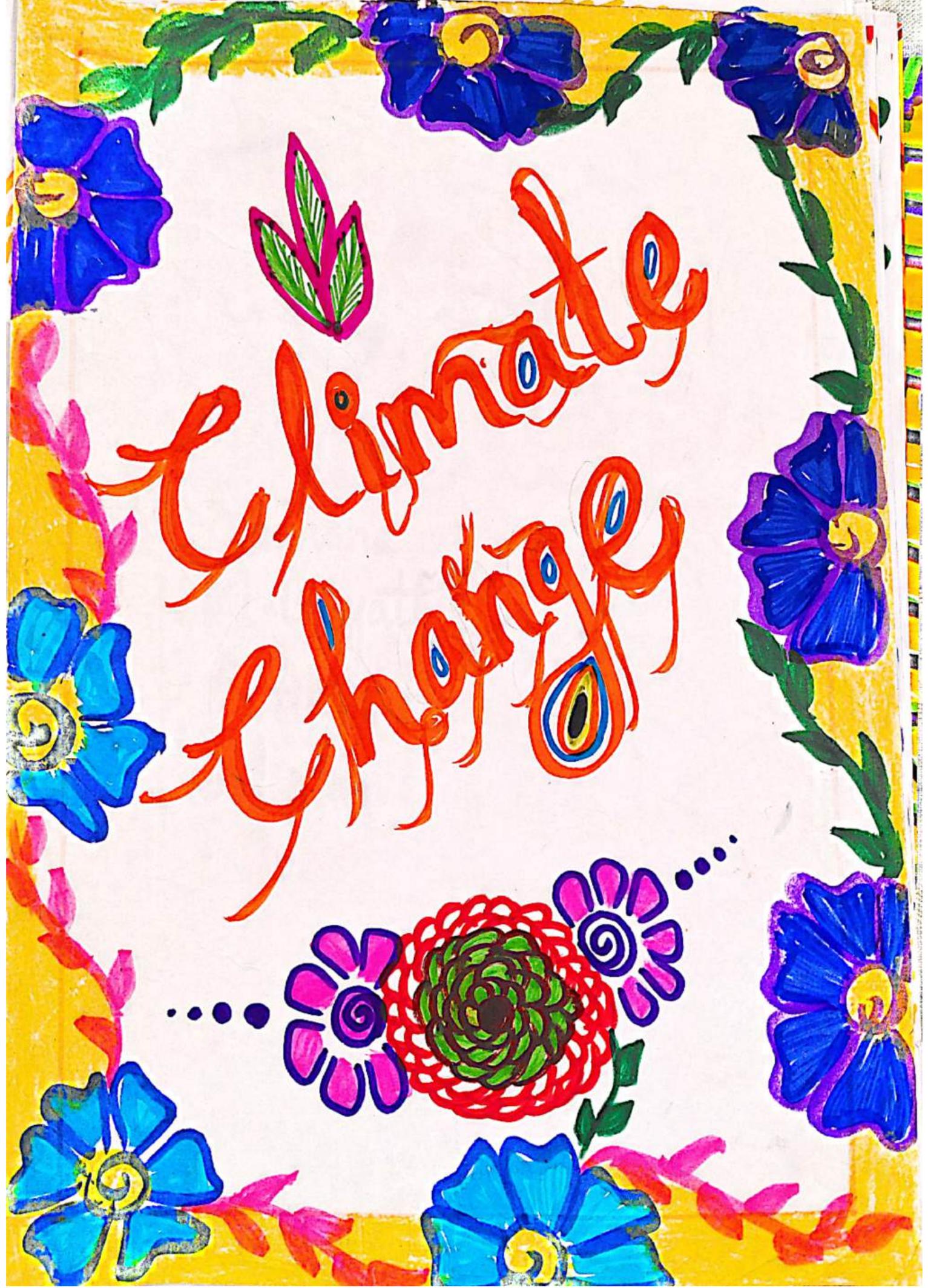


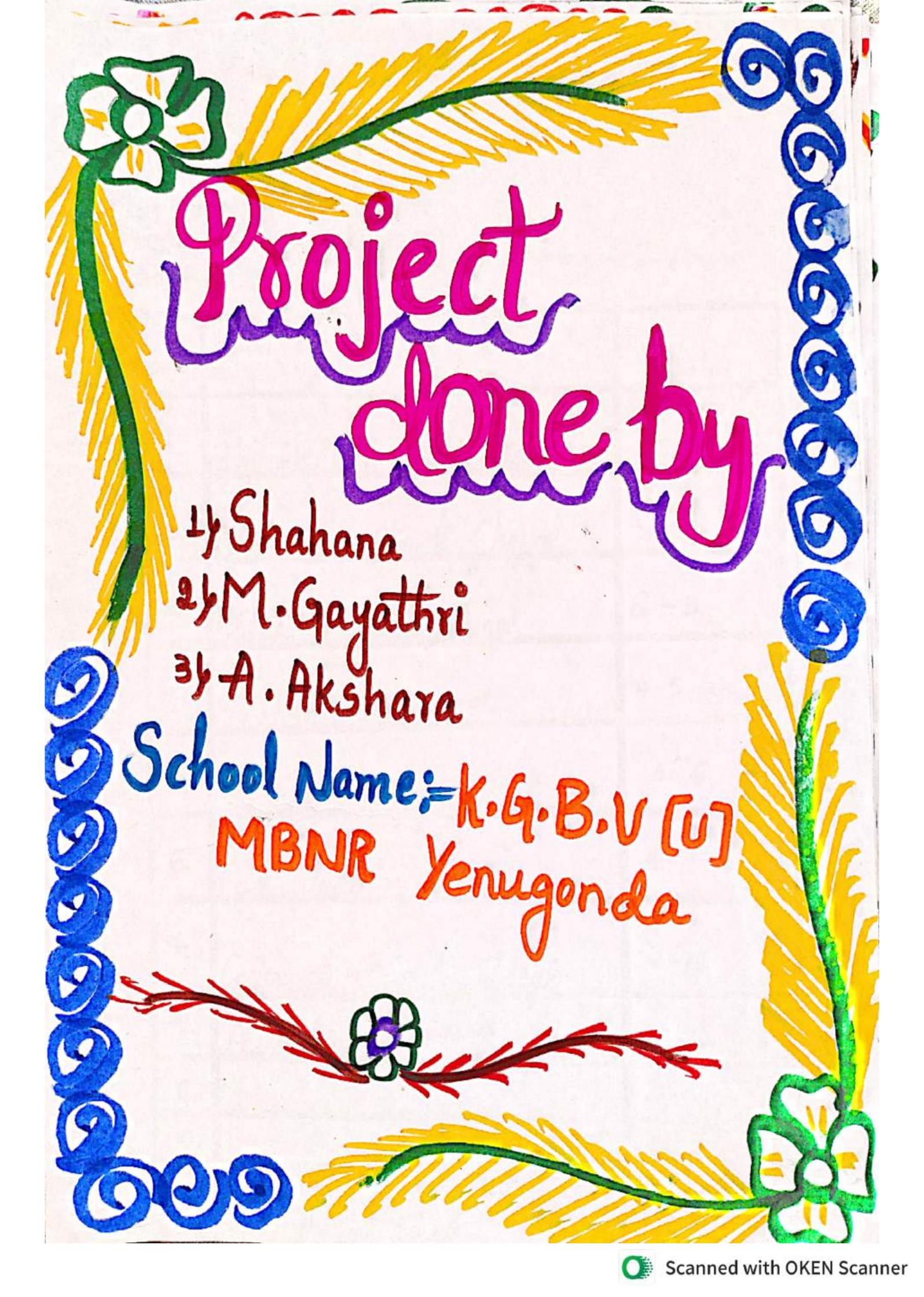
Compassionate Citizenship Programme

COMPASSIONATE CITIZENSHIP

PROGRAMME

Climate
Change





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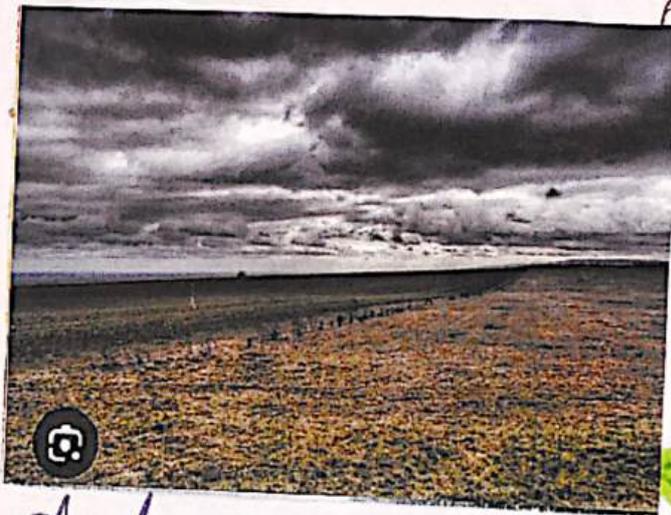
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INTRODUCTION OF CLIMATE CHANGE

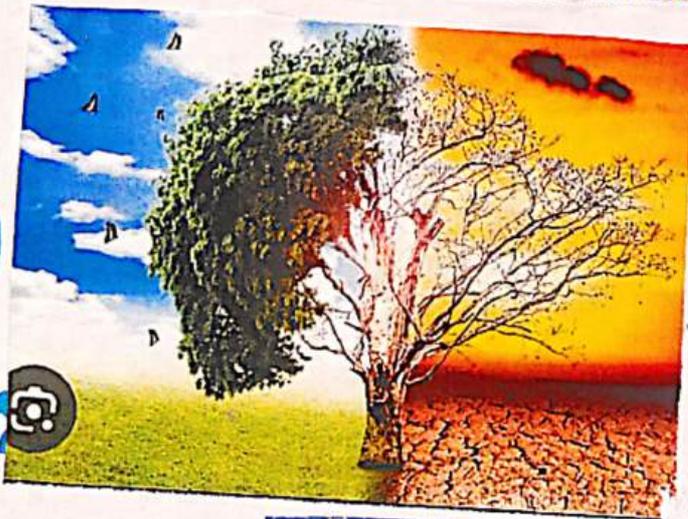
Climate change refers to a statistical distribution of weather patterns when such change lasts for a significant period of time, typically decades to centuries. Natural internal processes or external factors and continuous changes in the composition in the atmosphere and land lead to climate change.



Cloudy Day



Heat Wave



Weather Changes



Sunny Day

Day

Sub topic:

COMPONENTS OF CLIMATE CHANGE

Variations in Earth's orbit lead to differences in solar radiation received by Earth, which in turn leads to different seasons and at different places on Earth can affect the global climate. Changes in Ocean heat circulation patterns create a strong impact on the climate.

There are five components of Earth's climate system. They are atmosphere, hydrosphere, cryosphere, lithosphere and biosphere. Climate change means a change in any or all of these components.

Climate is description of the average atmospheric conditions for specific areas over a long period of time. Climatic descriptions are based on decades of atmospheric data and finding the averages of these data. Climate descriptions tell us what conditions are going to prevail at a given time of the year, but not on specific days.

∴ Effects of Climate Change ∴

The position of glaciers is the major sign of climate change. The mass of the glaciers is determined by the snow input and the melting output. Over the years because of the rise in the global warming (or) temperature these sizes have started to shrink, which is leading to the escalation of sea levels. The ice on the arctic ocean is melting rapidly, which is another proof of climate change.

Effects
causing
dangerous
problems



Climate change has effected agriculture on a large scale. Further, it has negatively effected the production of the crop in the low altitude countries. The increase in temperature has lead to the set of flowering and fruiting, which in turn as effected the life cycles of animals that or

dependent on them.

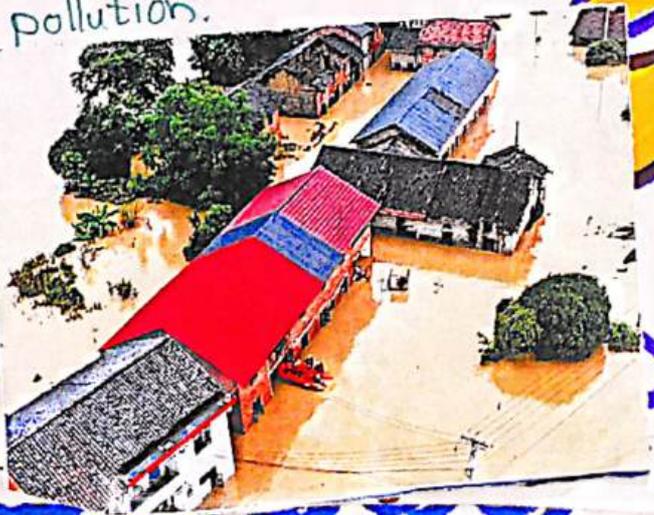
Climate has impacted human health.

A change in temperature has disturbed the natural ecosystem. Over the years, a change in precipitation and temperature has increased the amount of water-borne and food-borne diseases, viral diseases, and diseases transmitted through insects.

Extreme weather events have caused a range of direct and indirect health effects from mental disorders to infectious diseases.

Poor air quality has already affected public health like heart diseases, respiratory diseases, allergies and many other health issues related to air pollution.

floods
due to climate
change



Research Methodology of Climate change

Climate change research employs a multidisciplinary, mixed-methods approach, combining quantitative modeling, empirical data analysis, and qualitative assessments to understand past, present, and future climate impacts. Key methods include General Circulation models (GCMs), Satellite remote sensing, Statistical analysis of trends, and vulnerability assessments to guide adaptation.



Started to
Save our Planet

Other Sources:

Volcanic Eruption:



This is considered as one of the important factors in effecting the Earth's climate especially those volcanoes, which emit sulphur dioxide in large quantities into the stratosphere they absorb the radiation from the sun and create a layer of sulphuric acid. Other than volcanoes, the movement tectonic plates and Earth's orbit effect the global and local patterns of the climate.

Solar Energy:

Sun is the predominant source of energy in put to the Earth. Variation in solar intensity have impacted the climate on a large scale.

Green house effect:

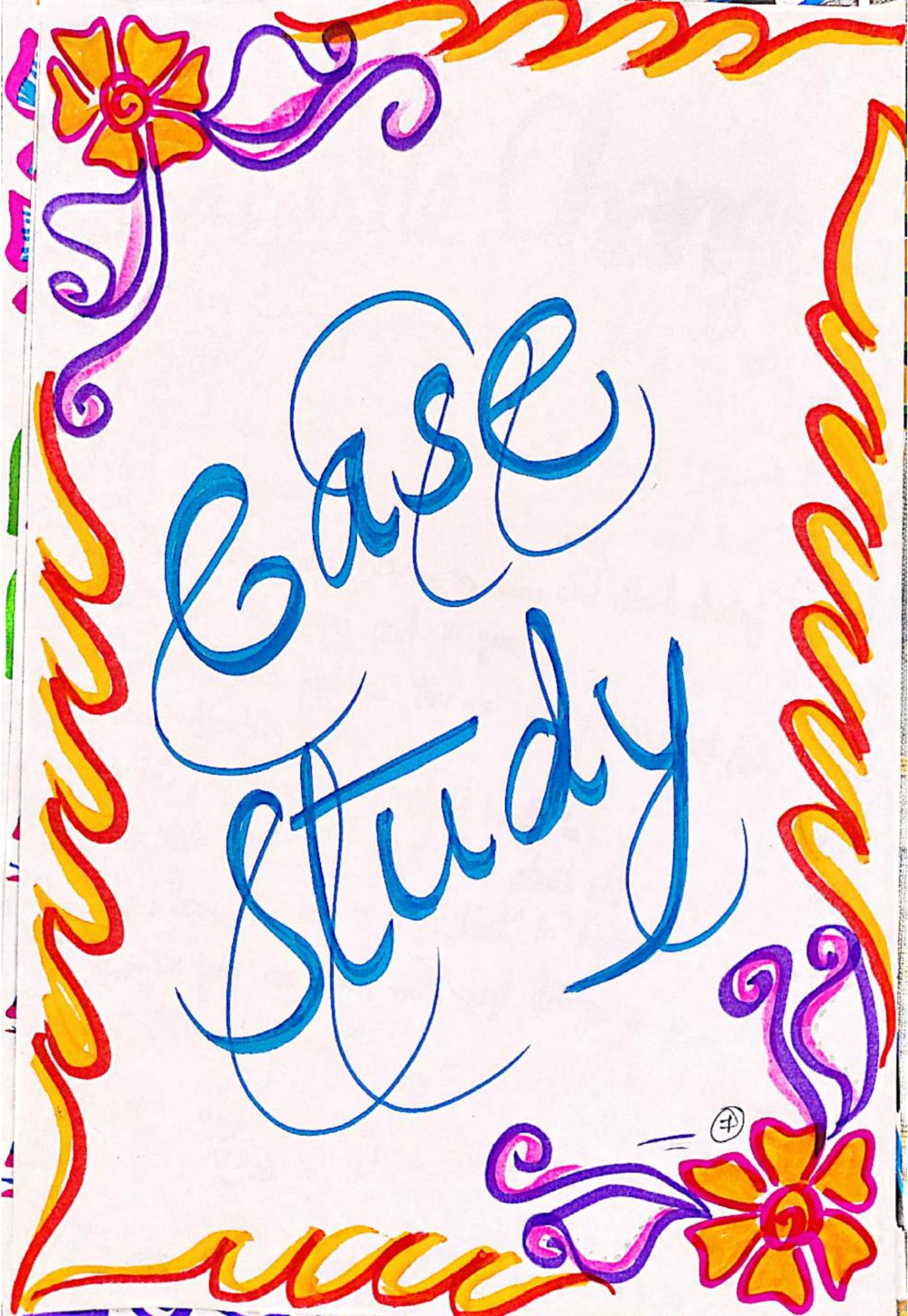
The green house effect is a natural process where atmospheric gases (Water vapour, CO_2 , methane, nitrous oxide) trap infrared radiation from the sun, warming Earth to a habitable average of 15°C rather than -18°C . Human activities like burning fossil fuels and deforestation have intensified this effect, causing excessive heat retention and global warming.

Deforestation:

Deforestation (and social disruptions, by releasing stored carbon and reducing carbon absorption. It leads to massive biodiversity loss through habitat destruction, triggers soil erosion and floods, disrupts global water cycles, and threatens the livelihood of indigenous communities.



Case Study



Climate Change

1Q:- There is any increase in heat during last 5 or 10 years?

2Q:- What new problems they are facing now in their works? - Is it affecting their earnings and health?

3Q:- Is there any increase in rains and floods during the last 5 years and 10 years?

4Q:- What new problems they are facing because of rains and floods?

5Q:- Do you know what "Cloud burst" is?

6Q:- When did you first hear about it?

7Q:- Where there any "cloud burst" in Hyderabad?

8Q:- Do you use fans, AC's and fridges 30 years back?

9Q:- What do you think are reasons for climate change?

10Q:- Is there any way to stop climate change?

Reasons for Climate Change

Human Activities: Human have directly influenced the climate. The alteration in the composition of the atmosphere is considered the most important human-influenced due to human activities such as the burning of fossil fuels like coal and petroleum products in industries, motorized vehicles, electric power plant and homes heated with gas or oil, the burning of wood as fuel and clearing of forested land or agricultural purposes.

The rapid of industrialization and urbanization has increased the global atmospheric concentration of carbon dioxide has increased to 393.69 parts per million. This has caused a major impact on the availability of fresh water.

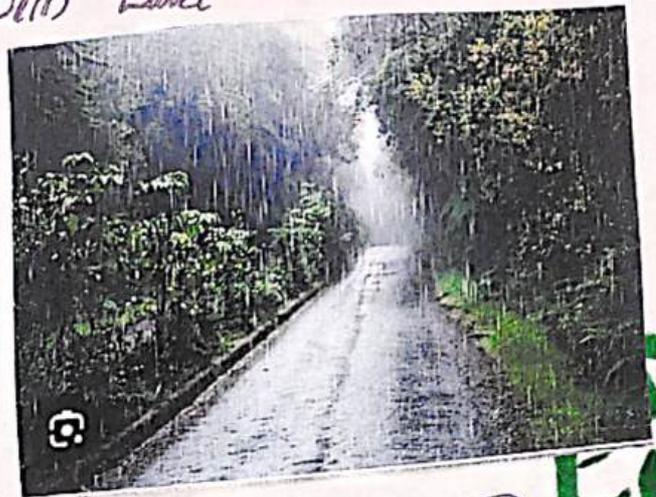
acidification of ocean water, production of food, flooding of Coastal areas, and increased number of water-borne diseases associated with extreme weather events.



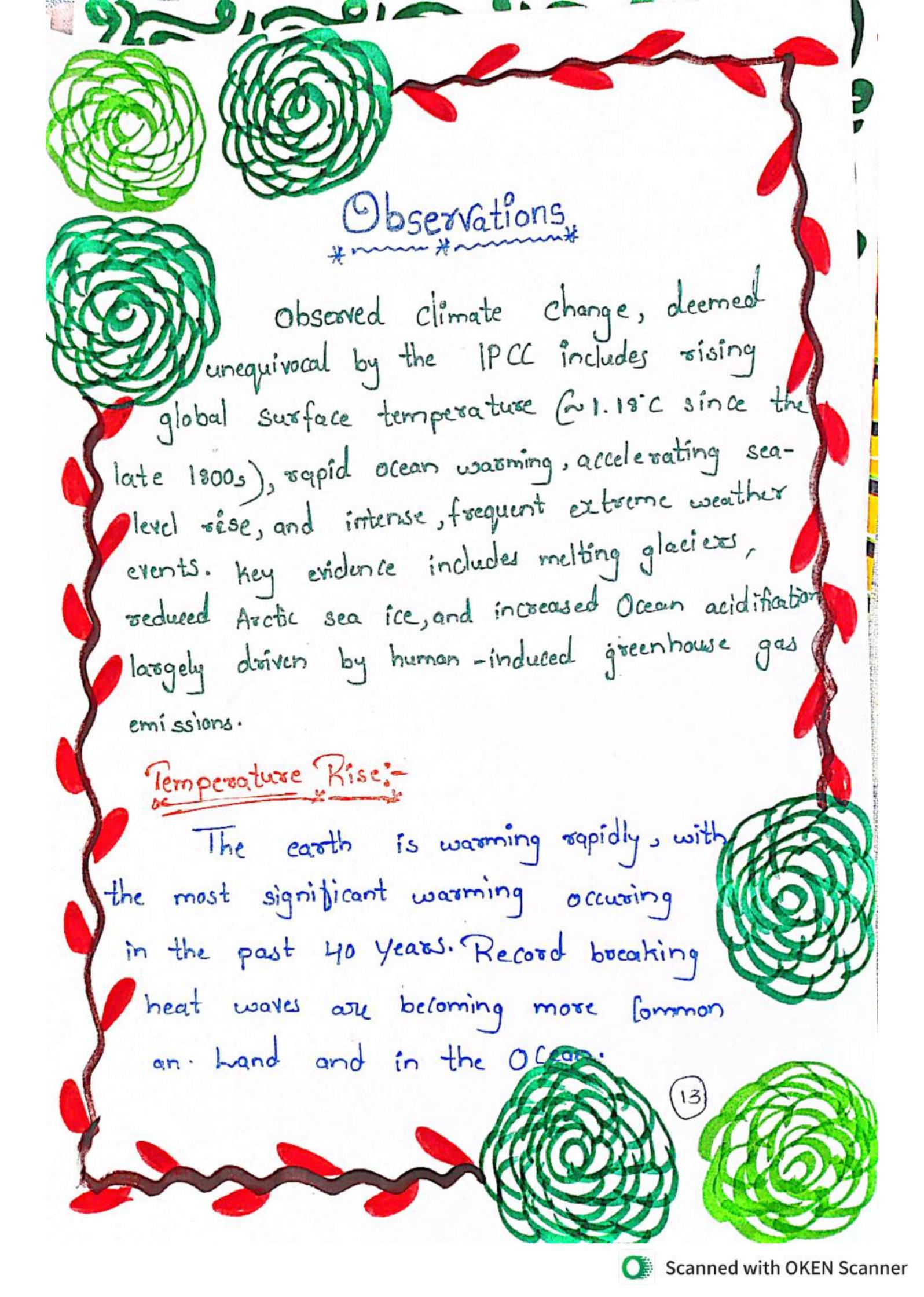
Volcanic Eruption with Lava

Excessive

Rains



12



Observations

Observed climate change, deemed unequivocal by the IPCC includes rising global surface temperature ($\approx 1.18^\circ\text{C}$ since the late 1800s), rapid ocean warming, accelerating sea-level rise, and intense, frequent extreme weather events. Key evidence includes melting glaciers, reduced Arctic sea ice, and increased Ocean acidification largely driven by human-induced greenhouse gas emissions.

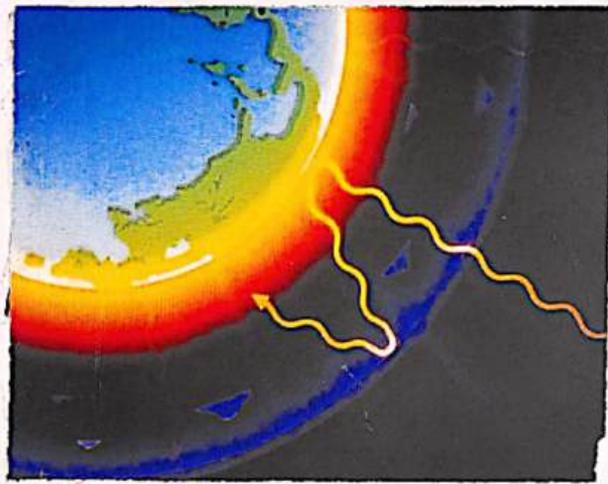
Temperature Rise:-

The earth is warming rapidly, with the most significant warming occurring in the past 40 years. Record breaking heat waves are becoming more common on land and in the Ocean.

Ecological Changes :-

Rising temperature are causing shifts in plant and animal life cycles, with species moving towards cooler areas and spring flowering occurring earlier.

Green House effect also causing Ozone Layer

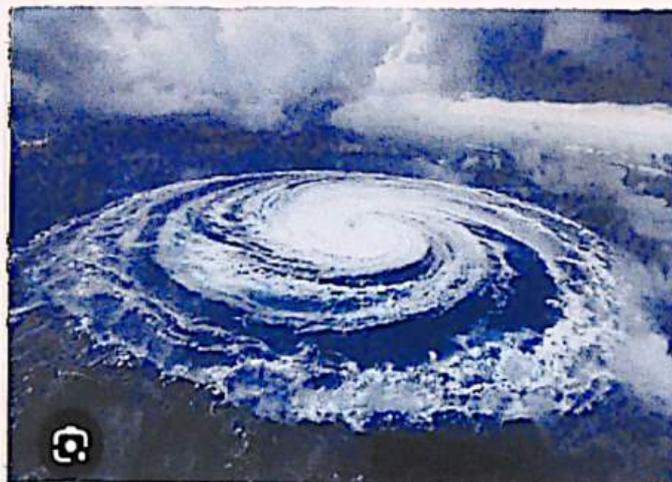


Windy
Danger

Prevention of climate change

To combat climate change many organizations are working towards ecological sustainability in order to reduce the emissions of green house gases. We, as individuals also need to take the responsibility of lessening the impact on the climate by modifying our transportation modes, energy consumption eating habits and waste utilization.

Cyclones
in
Oceans



Summary.....

Even though we might feel that our lifestyle is a small factor that is causing changes in the climate but the choices that we make in our day-to-day life can play a major role in slowing down the change.

Our tiny carbon foot prints can affect the big picture of climate change. So, let us all make efforts in small ways to have a greener Earth...

Let's stop cutting trees and making our Earth cry..

Let's make our Earth stay always Happy & Greenery.

Conclusion.....

The interview we taken from the persons interacted with us very goodly, interestingly and knowing about the new disaster about "Cloud Burst" they were very shock about this....

They gave good answers and somebody became emotional about the past days....

They also recognised about our climatic changes keenly & told that it's very excellent idea for our future.... (16)



Thankyou

