

THE EMERGENCY BRAKE



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IIT Bombay

P2 Project

Cli-fi Graphic Novel

Graphic Novel on the Future of Humanity -
A Dystopian Fiction based on Climate Change

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01.Introduction

Introduction



Climate change is a topic avoided by people for so long, even today when we are literally in front of it we seem to ignore it and say 'climate is always changing'. Why? But it is much worse than we think.

Climate change is slow and is not equally affecting people around the globe so it became easy to believe that it isn't happening, or it's just a fairy tale. But it is true and it's not just the increase in temperature or rising sea level. These things are just the surface of possible terror. We, human beings first destroyed our natural habitat and then ignoring its consequences for decades until it becomes the cause of our ruin and our future generations. The anxiety of this terror is affecting now, even in the life of a teenager.

Why are we ignoring everything about the future generation while we are being busy living our life to the fullest and they are fighting hard for the home planet while we are destroying it. Why do they have to clean up the mess we made? And if we are still gonna keep a blind eye towards it, the price we will have pay might be even beyond own imagination.

Climate Disasters are happening everyday.

Climate change might not be affecting everyone equally but Climate Disasters are happening every day and they call for immediate climate action around the globe. These are few that happened in the past few years.



Kerala floods- 2018 and 2019

One of the major disasters that happened in my home town killing 483 people and leaving many missing. The devastating monsoon in Kerala causing 37% excess rainfall in just two-and-a-half months, which usually happens in four months of monsoon in the past. The harsh monsoon also caused landslides causing many deaths.

Environmentalists say deforestation to be responsible for that and the natural safeguards against floods have disappeared because of rampant urbanisation and construction of infrastructure.



Amazon fires 2019

Deforestation causing a devastating heating impact on the local climate. Higher temperatures cause a higher intensity of drought during the dry season. Increasing temperatures and drought are already changing the plant structure of the Amazon becoming more sensitive to fires and already drier areas can cause remaining trees to die. Now, rainforests become nothing more than low diversity and low carbon ecosystems with a fraction of their current social, ecological and climatic value. A 3°C and 4°C of more warming will be a tipping point for the Amazon. If that happens, most part of the rainforest may shift to state with much poorer capacity to store carbon and support wildlife, and we have already crossed 1°C warming posing a threat to all wildlife existence and rainforest.



East Africa drought

A 18 months-long drought caused by El Niño and higher temperature. The Horn of Africa region is still suffering a further drought due to the effects caused by La Niña and the Indian Ocean weather pattern. Millions of people facing acute food and water shortages and basic need for survival.



Heatwave in India and Pakistan

Extreme heatwaves are lasting longer than before and happening more often as the global average temperature climbs. One of the deadliest heat waves in 2015 killed more than 3,700 people in India and Pakistan. In 2017 both countries were gripped again by scorching heat waves, with temperatures soaring to 53.5C.



Hurricane Irma

An unprecedented succession of powerful hurricanes causing flooding and strong winds that destroyed homes and crops in the Dominican Republic, Haiti, in September 2017. Hurricane Irma, the strongest observed terms of maximum sustained winds, caused widespread and catastrophic damage.

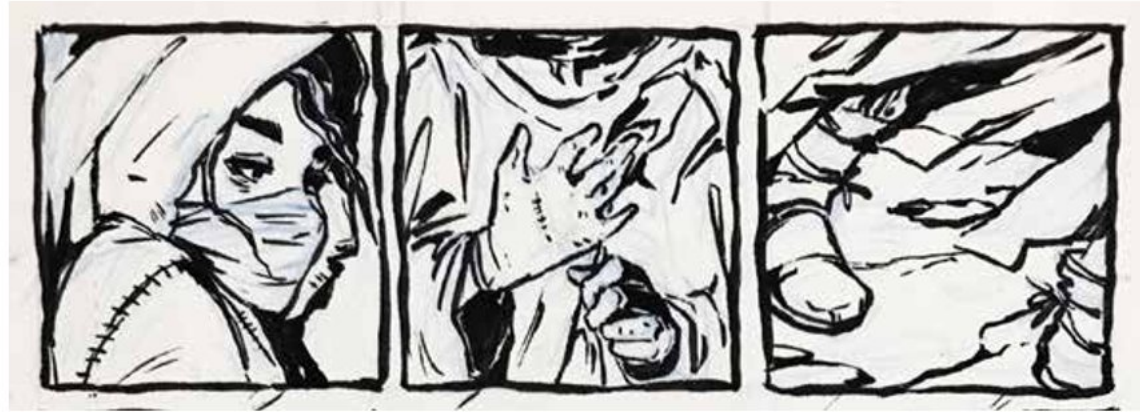


The disproportionate impact on the world's poorest people

Disasters and climate change affect all countries, all people, rich and poor but when it comes to issues of justice, people living in poverty will be affected by most risk despite being the least responsible crisis. Lose of home, property, basic food and needs and thus increasing poverty. People in poor countries are five times more likely to be displaced by extreme weather than rich countries.

So, As humans, what are we gonna do when we are facing the end right in front of us? Will we accept the fate for what we did or we make sacrifices for the future? Because you can't gain anything without sacrificing something.

Here, in my project, I want to tell people the extent of destruction we are creating and about millions of people that might not be able to live their dream using a story through the eyes of a teenage girl.



02. Climate-Fiction and Graphic novel.

What is Cli- fi?

Cli- fi or climate fiction is a literary tool explicitly focused on climate change or global warming. Cli-fi originated from the idea of Sci-fi and has exploded over the last decade. It is assumed to have a positive ecopolitical influence on the readers by enabling them to imagine potential climate futures and thus making them understand the gravity and urgency of climate change.

It is believed that novels, short stories, poems, drama or children's stories might help to get a deeper climate consciousness among the readers and thereby commit to more progressive environmental policies and politics.



The Influence of Climate Fiction (Cli-fi): An Empirical Survey of Readers.- by Matthew Schneider-Mayerson

Environmental Humanities (2018)

This particular paper was chosen to understand will, how and why Climate fiction or Cli- fi work?

Climate fiction explicitly focuses on climate. It is assumed to have a positive influence as it enables readers to imagine potential climate futures and making them understand the gravity and urgency of climate change.

Writing Realistic Future and creating an emotional response.

It doesn't always have to be an apocalyptic future to be terrifying.

A slow loss of basic survival tools, basic needs, food and water. A gradual decline of ecological conditions or quality of life can be rendered sensible through a futuristic science fiction novel. So a climate fiction helps readers overcome the usual abstract high-level construals of a distant future.

Including familiar experiences or feelings such as depression, anxiety, loss, grief or regret related to climate change provides the readers with a strong sense of impact in an imaginable scale. It may also include environmental injustices like risk distribution, vulnerability, race, class, gender, nationality or other factors. The principal focus should be about cultivating an empathetic awareness of climate injustice.

Inference

This research on Cli- fi readers suggest that Cli-fi literature is quite effective in compelling readers to imagine a potential future and understand the fragility of human society and our ecosystem. Effective narrative techniques and strategies influence different groups of people with attention to the role of psychological, social, cultural and political factors.

The Graphic Novel as Advanced Literacy Tool - by David Seelow

Excelsior College & Rensselaer Polytechnic Institute, NY, USA. (2010)

This particular paper was chosen to understand how comic books or graphic novels was as an effective medium of literacy and for spreading awareness among children.

Inference

The graphic novel has emerged from its roots in comics to become a full-fledged literary genre. Graphic novels motivate reluctant readers, engage in powerful social issues, and present rich opportunities for multiple literacies.

The blend of text and image addresses different learning styles and helps prepare students for the increasing prevailing form of multimedia learning required by today's visual age.

The graphic novel begs for close reading of this kind, and a close reading combined with keen observation of artistic detail and the structural elements of a story.



03. Graphic novels, Fictions and Films.

Existing graphic novels and Comics

This graphic novel deals with a lot of facts related to climate change thread into his own life story. It is the collection of everything you need to know about climate change, where it started from and where is it leading to, the actions and the causes.

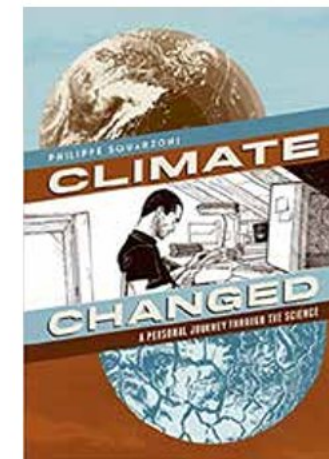
Climate Changed- A personal journey through science-Graphic Novel -Philippe Squarzoni

Publisher: Harry N. Abrams; 1st Edition edition (April 8, 2014)

The book is Squarzoni's process as he learns about climate science and politics. He also includes in personal moments with his life partner, his travels, his pets and his favourite movies.

He describes and represents everything from atmospheric science to the Intergovernmental Panel on Climate Change, and also from climate disasters to renewable energies by combining in his reflection and ruminations about it all.

Without taking sides, Squarzoni explains his interest in political discourse. But he's neither an environmentalist or a scientist or a policy advocate.



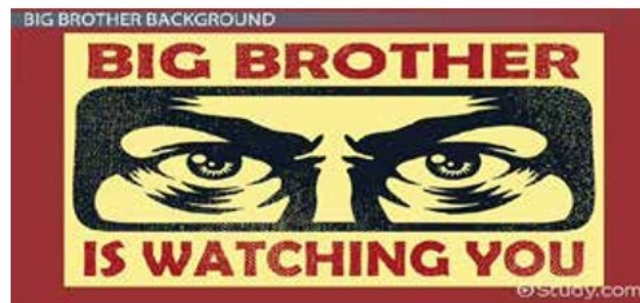
Fiction, novels and other non-fiction books.

Both of the novels deal with the one with power and the weak. The corrupting nature of power that takes away basic human freedom and force control over the others. Both represent the fight for freedom, resistance and rebellion.

1984 - George Orwell

Publisher: Harvill Secker- 8 June 1949

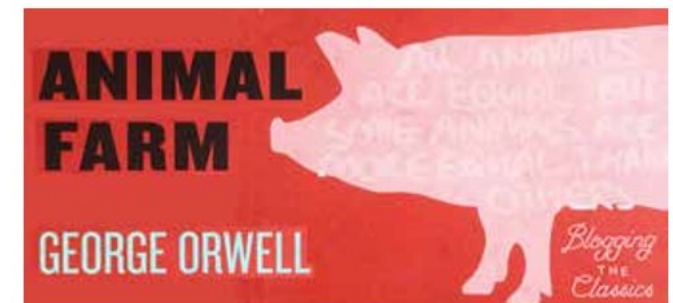
Dystopian fiction in which the protagonist, Winston Smith fights with oppression in Oceania. A place where human actions are ever-watchful by Big Brother. But going against the ban on individuality, Winston starts to express his thoughts through a diary and also pursues a relationship with Julia. This criminal action brings Winston into the eye of the opposition, who then must reform the rebel. In this book, George Orwell introduces a life without freedom.



Animal Farm - George Orwell

Publisher: Harcourt, Brace and Company - 17 August 1945

A story told through animals from the allegory of the events of the Russian Revolution of 1917. It represents the concepts of freedom, resistance or rebellion and the corrupting nature of power.



Fiction, novels and other non-fiction books.

Both of these non-fictions was to understand the scary reality of our future. Possible outcomes of climate change and its extent of destruction.

The uninhabitable earth- David Wallace -wells

Penguin Random house- 2019

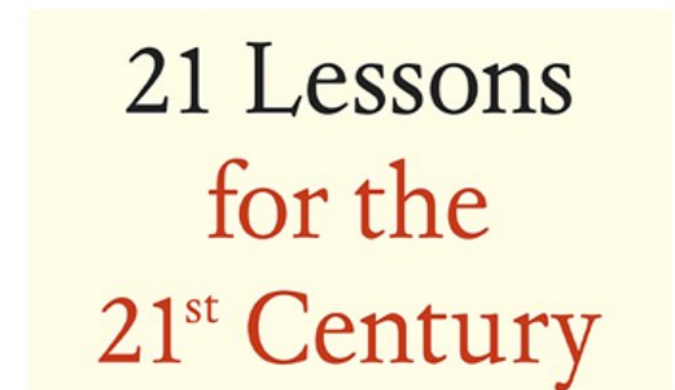
It's a Non-Fiction that provides with the details of climate change which is both terrifying and gives a bit of hope for the future. It explains in detail all the possible effects of climate change and its horrors and calls for urgency.



21 lessons for 21st Century- Yuval Noah Harari

Jonathan Cape- Penguin Random house -2018

A Non-Fiction that takes us through a thrilling journey of today's urgent issues. It talks about how to protect ourselves from the upcoming nuclear war, ecological cataclysm, technological disruption. And what can be done about the epidemic of fake news?



Films

Interstellar- Christopher Nolan

Dystopian Cli- fi Fiction film about Earth's future. A global crop blight and second Dust Bowl are slowly making the planet uninhabitable. A brilliant NASA physicist is working to save mankind to find the planets which could be mankind's new home.



The day after tomorrow - Roland Emmerich

Dystopian Cli- fi fiction - A Paleoclimatologist Jack Hall he finds out that a huge ice sheet has severed off triggering a massive climate shift that will affect world population. It shows the major effects of climate change and weather-related disaster leading people to migrate to warmer places in the south. Jack tries to rescue his son and his friend stuck in New York.



Films

These films mainly focus on climate change where humans had to become inhabitable or unable to sustain this much human population. These films deal with the Hierarchy of human class and power over the other as a part of survival and fight against overpopulation and lack of resources due to climate change. It tells the story of survival and protecting the loved ones.

What happened to Monday - Tommy Wirkola

Dystopian fiction movie - Overpopulation and insufficient resources led to the new rule of one child per family. If disobeyed, it will lead to execution and severe punishments. The story of septuplets. Seven sisters named after each day of the week sharing one identity to survive leading to the disappearance of one of their own.



Snowpiercer- Bong Joon-ho

Dystopian Cli- fi fiction film Based on the French graphic novel "La Transperceneige". It begins in the extremely not-too-distant future as mankind launches a final attempt to halt the spread of global warming once and for all but backfires to cause extension of all life forms except the few that survives in a moving train.

The concept of the story is about the basics of managing the balance of ecosystem- The food chain. If over conception happens, starvation happens and cause death till the top of the food chain. Consider the ecosystem as the train. Humans in it are the only living organisms and food chain is the class hierarchy.





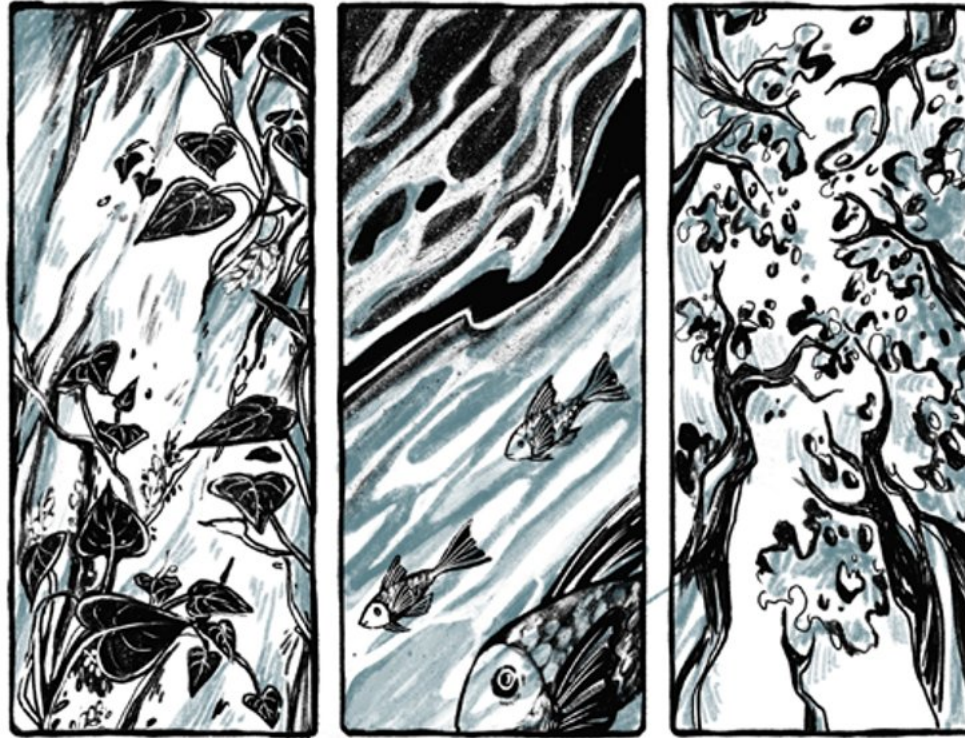
04. Inference

Inference

Even though climate change is something known to everyone. But most ignore the fact that it is happening right now. The reason behind it is most people are not being affected by it directly and with no proper awareness about it. Cli-fi, fictions, novels, comics or graphic novels act as a great literary tool to create awareness among people.

Writing realistic fiction by showing probable future and including familiar experiences or feelings such as depression, anxiety, loss, grief or regret related to climate change is an effective way of making them understand the gravity and urgency of climate change. Moreover, Graphic novels can be an effective awareness tool for children and teenagers and as well can be enjoyed by adults.





05. Making of 'The Emergency brake'

About the title- 'The emergency brake'

The story is about a near-future where Climate change had cause migration, food and resource shortage humanity is being forced to decide for the survival of our planet and future of humanity. This harsh decision comes with sacrifices of millions which literary put an end to the calamity being faced. Which literary mean pulling the emergency brake to get out of a situation. And thus the name 'The emergency brake'.



Creating the Story

My idea was to write a realistic fiction of a near-future through the eyes of a teenage girl. Being a survivor of a traumatic flood and losing all she had in her life including her brother. It includes all the emotions caused by a disaster. Loss, pain, grief, depression, reduction in basic human needs. More than that, the story tells about the sacrifice one has to make for all the fault humans did and ignored in the past which leads to injustice, with the one with power and money with those who are less fortunate.

The protagonist is a girl of early teens who is a survivor of a climate disaster living in a flood relief camp waiting for a result that changes her life. The story includes a prologue and three chapters.

Prologue includes her visit to the grave and arrival of the result.

Chapter 1: Her train journey where she meets a strange small boy and receiving an unexpected gift from her father which takes her back to both happy and traumatic memories.

Chapter 2: Them arriving at the final stop leading to a dreamy journey with everything beautiful earth has offered to lead to an unexpected disappearance of the small boy.

Chapter 3: Walks up and realise she is still on the train and tries to escape as she hears the voices. The reality of sacrifices humankind made to survive and to recover the earth's condition but only a few will get to live it.

There are lots of dystopian Cli-fi fiction that focus on survival and the one who survives. So my attempt was to tell a story about the one who doesn't survive as she was chosen as a sacrifice.

Character design

Girl with no name

The protagonist is a girl of age 14. Survivor of a flood and lives in a flood relief camp. Introverted and silent with a great love for her family.



Few action sketches



Decisions behind the making.

Why Graphic novel?

I have been always interested in making comics and graphic novels. Last semester I worked on an illustrated book as a medium to tell a story about dementia. When I was writing the story based on climate change I felt like I should make a graphic novel as it has more potential for details and asks for close observation which might lack in an illustrated book and the story was well fitted for a graphic novel.

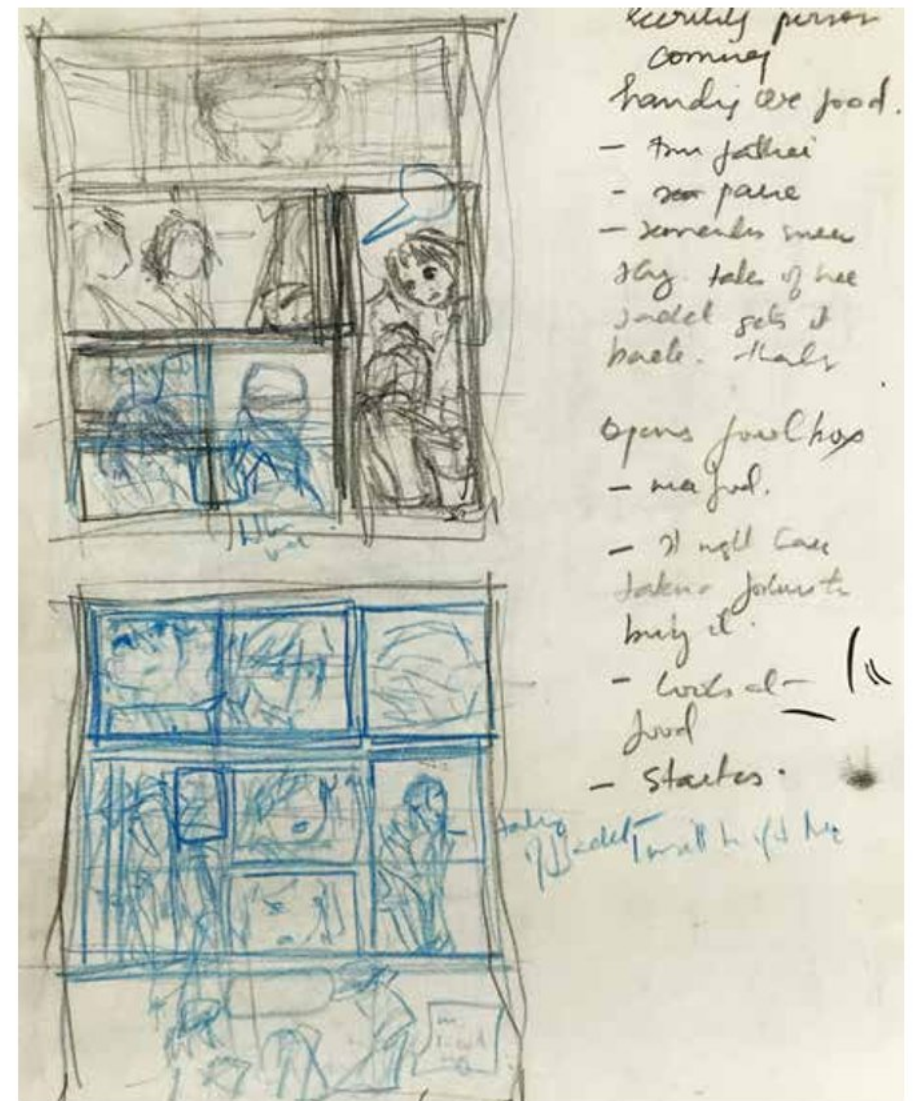
Style selection?

Style is mainly influenced by Japanese Manga but improvised to create my own style. I used a digital inking style using black and white with a pale blue pencil line for more detailing. I chose this composition as I'm more comfortable with black and white than with colours and also for the theme of the story, I thought it might be more apt to use monochromatic than colours.

Character Decisions

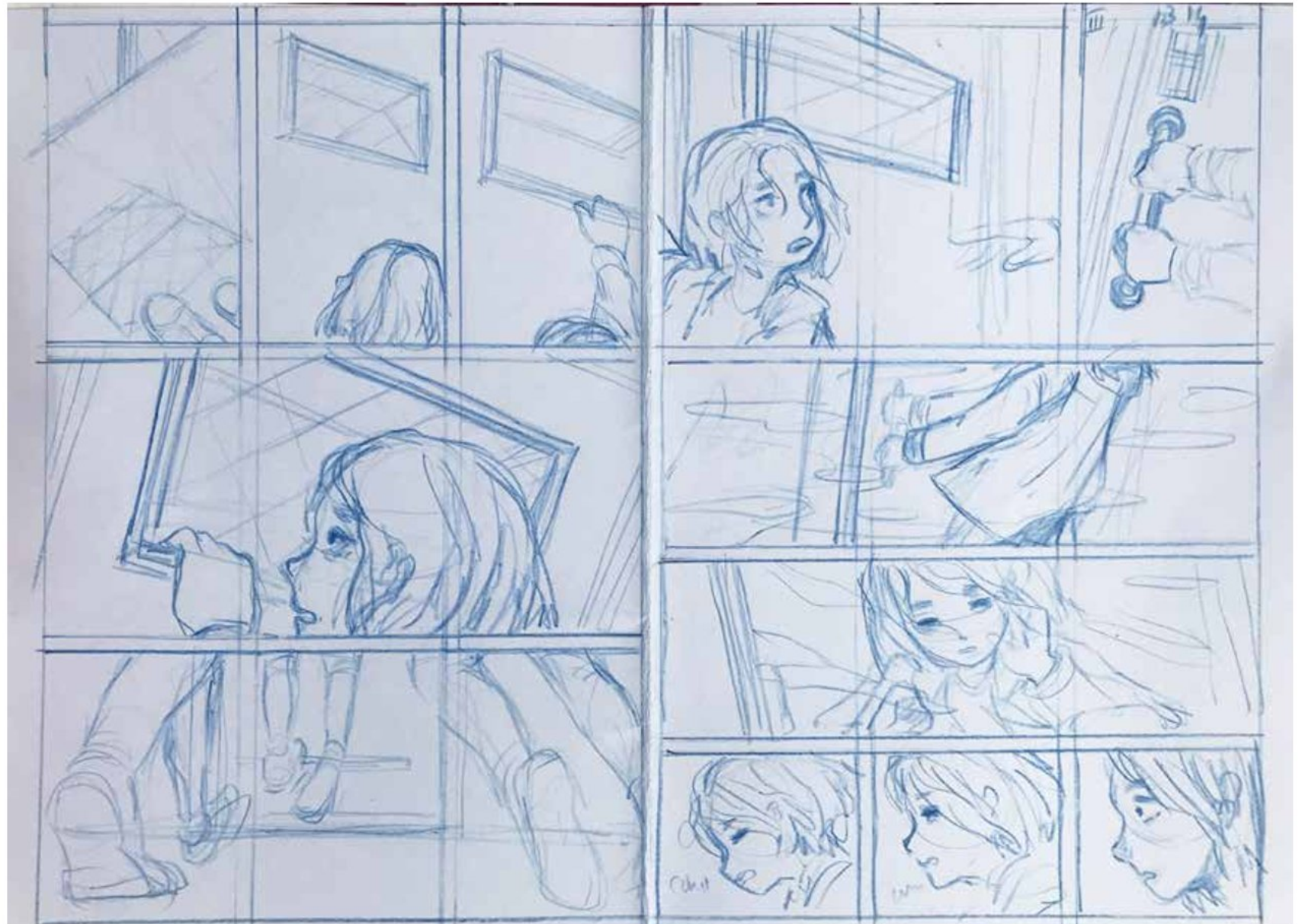
It was my intention not to add any context or a particular location where the story is happening or the nativity of the character because I never wanted to pinpoint a particular region while I wanted it to be treated as a situation that can happen anywhere as it's a global issue.

Behind the scenes



The mess before it all began

Behind the scenes



Behind the scenes





Few Final Sheets





Conclusion

The whole reason behind me doing this project was this feeling of responsibility and fear of the future that we have created. More I learned about it, more scared I became. I got concerned over the fact that why the majority ignore it and are pushing the limits. The idea of probable future terrified me also gave me a sense of awareness to act on it. So this project is made with a hope that it will evoke some response from the readers and make at least a small action to fight climate change because 'No one is too small to make a difference'.

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