

**ECOLOGICAL RIFT AND  
TRANSFORMATIVE ENVIRONMENTALISM:  
A COMPARATIVE ANALYSIS OF GHOSH  
AND ROBINSON'S CLIMATE FICTION**

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# **Ecological Rift and Transformative Environmentalism: A Comparative Analysis of Gosh and Robinson's Climate Fiction**

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Candidate of **Master of Philosophy** at the National University of Modern Languages do hereby declare that the thesis **Ecological Rift and Transformative Environmentalism: A Comparative Analysis of Ghosh and Robinson's Climate Fiction** submitted by me in partial fulfillment of MPhil degree, is my original work, and has not been submitted or published earlier. I also solemnly declare that it shall not, in future, be submitted by me for obtaining any other degree from this or any other university or institution.

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## ABSTRACT

### **Title: Ecological Rift and Transformative Environmentalism: A Comparative Analysis of Ghosh and Robinson's Climate Fiction**

In this study, I have analysed “The Living Mountain”, *Jungle Nama* and *The Ministry for the Future* to explore the type of ecological rifts, ecological plurality and the ethical relationship between human and non-human entities in two different cultural contexts i.e., South Asian and Western climate fiction. This is a qualitative research that analyses the text using comparative analysis to meet the research objectives. In this study, I have employed two theoretical lenses from environmental discourse i.e., ecological rift given by Foster et al. and transformative environmentalism given by Otto. The findings of the research reveal that ecological rifts depicted in both South Asian and Western cli-fi are created due to the paradox of wealth that views public resources as free gifts, but the representation of these rifts, in the selected cli-fi texts, has profound differences due to socio-cultural differences between the two regions. In terms of interconnectedness between human and non-human entities for transformative environmentalism, Ghosh emphasizes the traditional episteme of the indigenous population and the spiritual side of nature while dismantling colonial motives. On the other hand, Robinson emphasizes a technological and economic paradigm shift for transformative environmentalism. Overall, this comparative study explores the particularities of South Asian and Western climate fiction for ecological plurality.

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## DEDICATION

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# CHAPTER 1

## INTRODUCTION

The ecological balance of the earth has been unprecedentedly disturbed by anthropogenic activities, causing environmental challenges for both the natural world and human societies. Due to climate and environmental crises, hundreds and thousands of humans and non-human entities are affected every year which makes environmental crises one of the pressing issues of the twenty-first century. With the increase in the devastating effects of climate change such as global warming, ice cap melting, increasing sea levels, extreme weather, and biodiversity loss, the stability of ecosystems, food security, water resources, and human health are all seriously threatened. Hence, the urgency to mitigate climate change through sustainable practices, policy interventions, and public involvement is now widely recognized to be necessary. For instance, global initiatives like the Paris Agreement, which has been endorsed by almost all nations of the world, are being made to keep the average global temperature “well below 2 degrees Celsius” (Akaev and Davydova 588). At the individual, societal, and systemic levels, these goals call for widespread knowledge, behavioral adjustments, and revolutionary activities. In this study, I have carried out a comparative analysis of selected works of climate fiction (cli-fi) by Amitav Ghosh and Kim Stanley Robinson to explore ecological rifts and transformative environmentalism. The cli-fi texts selected for the comparative analysis are “The Living Mountain” (2021) and *Jungle Nama* (2022) by Ghosh and *The Ministry for the Future* (2020) by Robinson. To analyse the rifts in the selected cli-fi, I have employed John Bellemy Foster, Brett Clark and Richard York’s concept of ‘Ecological Rift’ and to analyse the ethical relationship between human and non-human entities, I have employed Eric C. Otto’s concept of ‘Transformative Environmentalism’. The aim of this study is to explore South Asian cli-fi along with Western cli-fi for ecological plurality and to examine the ways the selected writers represent their society’s ethical and ecological relationship with human and non-human entities.

In the midst of global environmental catastrophe, literature and art have emerged as potent platforms to raise awareness, and stimulate critical debates about environmental issues (Leavy). People are increasingly turning to various kinds of

artistic expressions such as literature to highlight the implications of climate change on the natural world as well as human civilizations. Literature, especially climate fiction (cli-fi) in this regard, attempts to address the critical environmental issues instigated by human activities and the capitalist mindset, and has received much critical attention in the last decade. Cli-fi authors use their literary works to spread awareness of the problem, provide potential solutions and motivate readers to take action (Rong 21).

Cli-fi is a form of fiction literature that features a changed or changing environment as its major plot and theme, and draws on realism and supernatural to illustrate environmental issues such as climate change and global warming and speculates possible futures that could be influenced by these ecological changes. The objective of the cli-fi genre is to develop a narrative that shows human concern for the environment; thus, the contemporary cli-fi writers aim to merge the life of their fictional characters with the environment to demonstrate the causes and effects of environmental deterioration and degradation. They reconnoiter climate change themes in their novels — the stories frequently weave factual truths into imaginative storytelling — offering a framework for thinking about the problems and potential remedies related to climate change.

Having said that, most of the climate and environmental literature is dominated by American writings (Nixon) making it depoliticized and linear. By stating this, I am not rejecting the contribution of Western cli-fi writers to the environmental discourse; rather, I argue that it is just one possible narrative out of many. The present climate crisis is mainly seen as an effect of capitalism, overlooking other major anthropogenic activities such as empire and imperialism (Ghosh 87) “that has not received adequate scrutiny” (Hartnett 139). Climate change is a global issue; it must be contested from different spaces—transgeographical— to connect the dots. Since every place has a different culture, history, and geography, the social practices and beliefs of the inhabitants also vary. These social practices are particular to the place; thus, they are very important for understanding the socio-political realities which in turn shape the present and future realities of a certain place.

In light of the above discussion, I argue that not all of the Western climate content works in the South Asian context. The former being the colonizer and the latter colonized have different socio-political and cultural realities. In order to

understand climate change as a global problem, we need to take all kinds of narratives into account. I, through this study, explore the ecological plurality demonstrated by the South Asian and Western cli-fi writers in the selected cli-fi texts. In doing so, I argue that along with Western cli-fi, South Asian cli-fi greatly contributes to the global environmental literature. One part of my thesis challenges the Western narrative for not being sufficient to cater to South Asian environmental realities and future imageries. What I mean by this is that South Asian climate fiction offers decolonization of environmental politics through completely dissimilar socio climatic and cultural imageries, to those that dominate mainstream Western imaginations of climate prospects, in which issues of land and climate justice, loss and damage, extractive political economies, and the racialized and gendered violence of capitalism are central. In other words, South Asian fiction not only challenges the dominant Western narrative and restrictive ways of imagining the past and future but also offers plurality in the environmental narrative. Furthermore, this research explores the type of rifts portrayed in the selected cli-fi that is required to address the environmental deterioration taking place globally using the concept of ‘ecological rift’.

The term “ecological rift” was coined by environmental sociologists John Bellamy Foster, Brett Clark, and Richard York in *The Ecological Rift: Capitalism’s War on the Earth* (2010). The concept of “Ecological Rift” is the expanded form of Marx’s idea of the metabolic rift which began as primitive accumulation; wherein industrial capitalism thrived on the resources of the periphery which had a deeper impact on ecological interaction. On a broader level, Karl Marx’s idea of metabolic rift explains the disconnection between human and non-human entities, which is majorly caused by capitalist production methods. The disruption can be seen in natural processes which are essential for ecological sustainability. The critical work of Ghosh and Robinson’s climate fiction highlights the sacredness of nature and the consequences of human activities merely for profit and progress that lead to environmental degradation. This concept emphasizes the ecological consequences of the ways humans extract, use, and dispose off natural resources within a capitalist economic system. In light of that, Foster et al. trace the history of the ecological crisis back to the empire. Capitalist production thus disturbs the metabolic interaction between man and Earth. Thus, the source of our ecological crisis lies in the paradox of wealth in a capitalist society. In the process of wealth accumulation, a huge ecological

divide is driven between human beings and nature, undermining the conditions of sustainable existence. The eco-crisis has become more complicated and branched with globalization and global market ideologies. This statement refers to the complex interplay between environmental issues and the processes associated with globalization and global market ideologies. As globalization involves the expansion of capital, the demand for raw materials and resources has also increased which leads to the overexploitation of natural resources and environmental degradation. Furthermore, globalization has led to intricate and extended supply chains, where products are manufactured with components sourced from various parts of the world. This complexity increases the environmental footprint of products, as they traverse long distances, contributing to carbon emissions and other environmental impacts. Thus, the environmental impacts are not confined to the location where goods are consumed but can affect distant regions, creating a more complex and widespread eco-crisis. Additionally, globalization can adversely affect indigenous communities and their relationship with the environment. The extraction of resources for global markets often encroaches upon indigenous lands, leading to loss of biodiversity, disruption of traditional practices, and environmental injustice. Also, the benefits and costs of globalization are not evenly distributed. While certain regions may experience economic growth, others may bear the brunt of environmental degradation and ecological imbalances. This inequality adds another layer of complexity to the eco-crisis. In summary, the eco-crisis is compounded and branched with globalization and global market ideologies due to increased resource consumption, transboundary pollution, supply chain complexity, impact on indigenous communities, inequality in environmental impact, and the financialization of nature. Understanding and addressing these interconnections is crucial for developing comprehensive and effective strategies to mitigate the environmental challenges associated with a globalized economy. Thus, the idea of the metabolic rift was further elaborated as 'ecological rift' by Foster, Clark, and York inclining it towards ecology and ecosystem.

Different cultures view and frame ecological crises differently. Therefore, using Eric C. Otto's concept of 'transformative environmentalism', I examine how the selected South Asian and Western writers represent their society's ecological relationship with the living and non-living world. Transformative environmentalism

comprises several environment-related movements that offer theories about the ideological origins and solutions to environmental degradation. It interprets environmental problems in terms of problems of modern scientific, industrial, and predominately capitalistic transactions with the earth. Therefore, the ethical relationship between humans and the environment must be restored by promoting environment-sensitive behavior.

This study aims to explore the theme of climate change in the Western and South Asian cli-fi, which is why the representative cli-fi works by Ghosh and Robinson are selected for this research. I have selected two cli-fi texts by Amitav Ghosh i.e. “The Living Mountain” (2022) and *Jungle Nama* (2021) alongside one novel by Robinson i.e. *The Ministry for the Future* (2020) for the following key considerations. Firstly, the comparatively shorter length of Ghosh's cli-fi texts facilitates a more focused and comprehensive analysis within the research framework, which ensures a thorough examination of pertinent theme. Secondly, the inclusion of two cli-fi texts of Ghosh provides an invaluable opportunity to engage with diverse cultural perspectives, which are significant to navigate beyond the depoliticized and linear Western climate fiction narratives. Since this research is not concerned with the form or genre, different genres having representative content on cli-fi have been selected for this research.

### **1.1.1 Amitav Ghosh’s “The Living Mountain” and *Jungle Nama***

Amitav Ghosh is an Indian writer who writes fiction and non-fiction in English language. His writings consist of the colonial history of the East, political struggle, violence, migration, travel, diaspora, memory, indigeneity, and more recently, he has started writing climate fiction too. In his latest short story “The Living Mountain” (2022), Ghosh narrates a story about the dream of Maansi, the narrator. This story is about Mahaparbat i.e., the great Mountain, its indigenous tribes that consider it the “most alive” mountain (7), and the “Anthropoi—strangers” (14) who systematically abuse the Mountain, leading to an ecological collapse in the form of land sliding, earthquakes, and floods in the Valley. The narrator Maansi dreams about warring tribes who are enslaved by the Anthropoi. The strangers try to scale a mountain, Mahaparbat, which due to its sacredness was unscaled by locals. However, the strangers with the help of some tribesmen ascend the mountain and exploit it, consequently, destabilizing the mountain. With every ascending step, the adversity

becomes more violent; nonetheless, the tribesmen and Anthropoi don't stop. This story is a simple yet powerful reiteration of the history of extractive industrialization that has disturbed the stable ecological settings.

The *Jungle Nama* (2021) also written by Ghosh revolves around the legend of Bon Bibi from Sundarban and is an allegory of the climate crisis. It tells the story of a forest goddess Bon Bibi, greedy man Dhona, evil spirit Dokkhin Rai and a poor village boy Dukhey. The allegorical tale brings to light how human greed for material wealth causes environmental destruction. This ecological misadventure crosses the limits of exploitation and brings instability to the community. This is an apt representation of the current climate crisis and portrays the themes of greed for power and wealth.

### **1.1.2 Kim Stanley Robinson's *The Ministry for the Future***

Kim Stanley Robinson is an American cli-fi writer who has published twenty-two novels and numerous short stories. His work shows the worst ecological catastrophes, yet ends on a positive note. He writes on environmental, social, and political themes and features heroes who find solutions to different environmental problems. *The Ministry for the Future* (2020) is a near future cli-fi about Mary Murphy and Frank May who seek immediate actions to address the climate crisis. In the novel, Robinson represents the crisis prevalent in the near future due to ecological misadventures and offers multiple perspectives and solutions that could help deal with the environmental crises. His ideas are fascinating such as the concept of 'The Ministry for the Future' that works for future generations, on their behalf. In this novel, Robinson offers an urgency of the crisis, making the readers conscious of the environment and environmental issues and calling for action.

I have analyzed the theme of climate change within South Asia and Western cli-fi, which is why the representative cli-fi works of Ghosh and Robinson are selected for this research. Also, I have not restricted the analysis to specific genres or forms; rather, I have included a wide variety of literary genres with relevant cli-fi content for a thorough examination of how the topics related to climate change are approached in the chosen works.

## 1.2 Thesis Statement

Ghosh in “The Living Mountain” and *Jungle Nama* and Robinson in *The Ministry for the Future* shed light on the critical environmental issues instigated by human activities and the capitalist mindset and provide material to study the ecological rifts and relationship between human and non-human entities for transformative environmentalism.

## 1.3 Research Objectives

This comparative analysis is carried out:

1. To examine the ecological rifts depicted by Ghosh and Robinson in their selected cli-fi texts
2. To explore the ecological plurality portrayed by South Asian and Western cli-fi writers in their cli-fi narrative
3. To compare the ways these selected cli-fi texts address ecological rifts and their possible involvement in transformative environmentalism

## 1.4 Research Questions

1. What kind of ecological rifts are highlighted by Ghosh and Robinson in the selected cli-fi?
2. How do the South Asian and Western cli-fi writers depict ecological plurality through their works?
3. How do the selected cli-fi texts address the issue of ecological rift and its impact on the environment?
4. What role does cli-fi play towards transformative environmentalism?

## 1.5 Research Methodology

### 1.5.1 Research Approach

A qualitative research approach is employed to analyze the selected cli-fi texts to answer the research questions. This research approach provides an extensive and comprehensive description of the problem under study (Macdonald et al. 9) that has limited existing research. Thus, it offers an in-depth understanding of the research problem as it is an “interpretive inquiry in which researcher makes an interpretation of what they see, hear, and understand” (Creswell 176).



A key component of this qualitative research is a deliberate selection of research material that “best help[s] the researcher understand the problem and the research question.” (178). In addition to answering the research questions, this approach promotes a greater understanding of situations, contexts, events, and phenomena which is important for the analysis of the selected texts because my research questions are associated with human experience, “that are difficult to answer with figures” (Cleland 61). Moreover, this inquiry-based qualitative research investigates an issue pertaining to society or humanity with the objective of presenting a comprehensive picture of the issue (Creswell 15).

### **1.5.2 Research Method**

In this qualitative research, I have employed comparative textual analysis method because this qualitative technique assists me in identifying the similarities and differences between South Asian and Western climate fiction based on cultural, social and regional entities (Given). Textual analysis method provides an opportunity for an in-depth study of the selected texts and helps in the interpretative inquiry for a better understanding of these texts and the issues therein, as this method allows “a close encounter with the work itself” (Belsey 160). Since “there is no such thing as ‘pure’ reading, ... extra-textual knowledge” (163) is significant for this research because it helps me to interpret the selected text in its cultural, social, and historical context and to uncover the underlying beliefs, structures, and patterns that established the text's meaning other than its surface meaning. Furthermore, it enables a systematic analysis of the selected novels, allows cross-cultural exploration, identifies patterns and trends, provides context, assesses theoretical frameworks, enriches interpretation, and advances knowledge in the field of climate fiction.

This research has been carried out in the following manner. First of all, I selected the climate fiction texts on the basis of the authors, context, setting, and theme. Secondly, I have done an in-depth reading of the primary texts to carry out textual analysis. I have analyzed each selected climate fiction text individually within the parameters of the theoretical framework to identify the ecological rift, shifts, and transformative practices in order to understand the multiple layers of the issue. Besides reading the primary texts, I have also read secondary texts such as essays, relevant scholarly articles, interviews, writers' websites, and reviews, etc. on the selected primary texts to build and substantiate my argument and analysis. Thirdly, I

have compared the primary texts based on the frame of reference i.e. theme and research questions to draw attention to the similarities and differences between the texts and explain how the texts should be interpreted and assessed. Lastly, I have drawn conclusions and discussed what the selected cli-fi texts reveal and how they answer the research question.

### **1.6 Significance of the Study**

The climate discourse is mostly dominated by the Western perspective wherein Western writers offer a linear and depoliticized narrative. This study is significant because it investigates radically different climate politics for the plurality of climate discourse. Furthermore, this study explores a sub-genre—cli-fi, which is relatively new and has received less critical attention. It explores cli-fi as an emerging subgenre both in the West and in South Asia that can operate as a transformative force; hence, it will be useful to scholars, students, and teachers working in the fields of literary studies, ecocriticism, and environmentalism. Also, it will be a valuable addition to the growing ecocritical canon and will open more doors for future research.

### **1.7 Delimitation of the Study**

The study is delimited to two authors' selected works and “The Living Mountain” and *Jungle Nama* by Amitav Ghosh and *The Ministry of Future* by Stanley Robinson for comparative analysis. This means the study focuses on Western and South Asian climate fiction written within the past 3 years, excluding other regions and time spans. Next, it covers a variety of literary genres such as novels and short stories, but does not analyze non-literary literature such as scientific and journal articles. The main focus of this research is a thematic analysis that employs two lenses ‘Ecological Rift’ and ‘Transformative environmentalism’ as a theoretical framework to investigate the research problem.

### **1.8 Limitations of the Study**

Due to constraints of time and length of the MPhil project, the study has the following limitations. First of all, it draws from a limited literature that concentrates on particular climate fiction by Amitav Ghosh and Kim Stanley Robinson; thus, the findings might not be generalized outside the Western and South Asian cli-fi literature. Next, the researcher's point of view may affect how the cli-fi works are

interpreted as the research is qualitative in nature and allows subjectivity in interpretation that plays a vital role in shaping meaning (Willig 275).

### **1.9 Organization of the Study**

This study is organized into five distinct chapters. The first chapter is the introduction that provides background to the study and establishes the thesis statement and research questions that are the primary goal of the research. It is followed by the methodology significance, delimitation, and limitations of the study that discuss the scope, focus, and constraints of this research. The second chapter is devoted to literature review. In this chapter, I analyze the relevant research critically and find the research gap. Through this, I outline the need for the present study. The next chapter is the theoretical framework. It discusses the selected framework that guides the analysis and interpretation of the text. The next chapter is the analysis. In this chapter, I analyze the selected texts using the selected methodology and theoretical framework. In the fifth and final chapter, conclusion, I conclude the research based on the analysis by addressing all research questions of this study. On the basis of the conclusion, I suggest recommendations for potential areas for future research.

## CHAPTER 2

### LITERATURE REVIEW

In this chapter, I review the contemporary work of ecocritical scholarship, discuss how previous studies of ecocriticism and literary studies portray environmental issues, and how have these issues been dealt with in the literature so far. It also offers insights into the transformative role of climate fiction and provides theoretical insights for this study. Furthermore, I also discuss the critical aspects of Ghosh and Robinson's work to highlight the transgeographical ecological standpoints that provide insightful 'grounds of comparison' for this comparative study. Lastly, I have discussed the research gap.

#### 2.1 Ecocriticism and Role of Climate Fiction in Environmentalism

The large-scale devastation caused to ecology by capitalism, globalization and imperialism is the most catastrophic dilemma of the 21<sup>st</sup> century which is depicted in different genres of literature. The environmental issues are represented in fiction not as facts, but as an experience. Thus, fiction has the ability and potential to combine the socio-temporal, political, historical and anthropological aspects of life with necessary elements of ethos and pathos and portray them as an experience better than any ecological reports can. Thus, it can help achieve environmental justice in society. The various characters be them scientists, teachers, students, or general public irrespective of their socio-economic conditions are impacted by climate change. In this regard, Greg Gerrard's definition of ecocriticism may help us understand the philosophy behind ecocriticism.

Ecocriticism is closely related to environmentally oriented developments in philosophy and political theory. Developing the insights of earlier critical movements, ecofeminists, social ecologists and environmental justice advocates seek a synthesis of environmental and social concerns. ... As ecocritics seek to offer a truly transformative discourse, enabling us to analyze and criticize the world in which we live, attention is increasingly given to the broad range of cultural processes and products in which, and through which, the complex negotiations of nature and culture take place. ... Indeed, the widest definition of the subject of ecocriticism is the study of the relationship

of the human and the non-human, throughout human cultural history and entailing critical analysis of the term 'human' itself. (Garrard 4-5)

In the past, ecocriticism was mainly interested in Romantic poetry, wilderness narrative and nature writing; however, it has now shifted its lens towards a more general cultural ecocriticism that gives attention to studies of popular scientific writing, fiction, film, TV, art, architecture and other cultural articles such as theme parks, zoos and shopping malls etc., catering to almost every aspect of human life. Garrard further adds that among literature and ecology/science, literature comes first as it gives intuition and ecology/science appears later to validate the existing intuitions. If, at any time, these two develop a rift, intuition mostly wins because the scientific efforts to alleviate complications "are seen as part of the 'problem'" (Garrard 23). Another issue that eco-fiction deals with is the logic of domination which can be androcentric dualism or anthropogenic philosophy. Both of them have dualities such as gender (man/woman), human/non-human, culture/nature etc. wherein one is assumed superior over the other. These are challenged by ecocriticism; ecofeminism, and biocentrism etc.

In "Ecocriticism and Eighteenth-Century English Studies," Erin Drew and John Sitter examine the connection between ecocriticism and the eighteenth-century English literature. Drew and Sitter explore the work of Lawrence Buell and William Cronon using two crucial concepts of ecocriticism which are "environmental consciousness" (227) and the biotic community. They claim that the reading of eighteenth-century literature from an ecocritical perspective is very significant because it offers powerful knowledge about the perceptions of people and depiction of nature in that specific era. In addition, their work suggests that the eighteenth-century literature has a key role in the advent and advancement of romantic and idyllic practices, which plays a critical role in determining our current social understanding of nature. To sum up, Drew and Sitter argue that for a healthy relationship between human and non-human entities, and for sustainable development, historical roots of the current ecological issues must be explored. According to them, the study of eighteenth-century English literature is an apt resource for that purpose.

In "World-Economy, World-Ecology, World Literature," Michael Niblett argues that literary studies must engage with the theories of the world economy and world ecology, which offer a more complete understanding of the environmental and

economic crises we face today. Niblett examines the works of David Harvey and Jason W. Moore and suggests that capitalism's expansion has created an unsustainable relationship between human societies and the natural world. According to Niblett, literary studies can contribute to the analysis of this dissociation by exploring how works of literature reflect and critique the world economy and world ecology. He also suggests that literary studies can help to articulate alternative visions of human relationships with nature and with each other. In simple words, Niblett argues that the study of world literature “provides a good starting point for comparative analysis” (28) and can play a vital role in addressing the global environmental crisis which are exacerbated by insensitive human economic activities.

*Local Natures, Global Responsibilities: Ecocritical Perspectives on the New English Literatures* is a collection of essays that explore the relationship between ecology and literature in the context of contemporary English-language writing from around the world. Grimm et al. examine a versatile range of literary genres such as poetry, fantasy, speculative fiction etc. from different ecocritical theoretical approaches and argue that the upsurge of universal ecological complications that include global warming, deforestation, and climate change etc. necessitate the shift of the research paradigm towards a more ecocentric outlook. They contest this narrative from two standpoints. Firstly, they examine the local environments that are depicted in the literature and highlight the distinct ecological problems faced by specific communities and regions. Secondly, they explore the effects of globalization on nature and natural resources. They explore the effects of excessive environmental extractions such as oil mining in Nigeria and the loss of rainforests in Brazil. In conclusion, the book claims that through literature we build an understanding of the environmental issues that enable us to endorse workable associations between humans and non-human entities.

The article "Narratives and the Ethics and Politics of Environmentalism: The Transformative Power of Stories" written by Arran Gare explores the role and potential of stories and narratives in promoting a sustainable environment. According to him, stories play a significant role in shaping the perception of the masses. For instance, the anthropocentric narratives put more emphasis on human intellect, declaring human superior over nature which in turn has a huge role in destroying the environment for material gains. While stories can make people act in an undesirable

way, they can also make people act responsibly, for which he proposes the inclusion of transformative narratives for sustainable living. The transformative narratives offer insights into multiple understandings of environmental problems by challenging the dominant anthropocentric narratives. He, furthermore, stresses the moral, social, cultural and political consequences and considerations of the stories because these will impact the lives of people and environment and will also impact on the future policy making processes. Hence, he puts forth a suggestion that the narratives should take into account the unique and versatile experiences of the communities of different regions, so that the narratives are all-encompassing and democratic which will inspire us to take necessary actions for a more sustainable and desirable future.

John Blair Gamber explores the representations of waste and contamination in US ethnic literatures, specifically in works by African-American, Native American, and Asian American authors. In his book *Positive Pollutions and Cultural Toxins*, John Blair Gamber contests the dominant ideology of human superiority and associates the toxic ecological problems with social and cultural coercive practices. In the US ethnic literature, he explores that metaphors such as waste and contamination are associated with human identity and are not totally separate from human civilization. Consequently, this challenges the dominant environmental narrative that parts and excludes the overlapping of race, class and gender in environmental issues. His work provides a great opportunity to decode the cultural, social and political aspects of environmentalism.

A thorough investigation of the connection between American literature and the environment may be found in Hubert Zapf and Timo Müller's "Ecology in American Literature." From the colonial era to the present, the article explores the evolution of ecological philosophy and literary expression, examining how authors have reacted to the natural environment and human-nature relationships in various historical and cultural situations. According to the authors, literature can help raise society's understanding of environmental issues and encourage ecological responsibility. Ecology is not just a scientific or political concern; it is also a cultural and artistic one. In his analysis of the writings of many authors, including Thoreau, Whitman, Melville, Hawthorne, Dickinson, Twain, Faulkner, Hemingway, and others, he demonstrates how they reflect, challenge, and modify the preeminent paradigms of nature and society in their respective eras.

In an academic study, “Literary Identification as Transformative Feminist Pedagogy”, T. Christine Jespersen discusses how reading literature may help women become more feminist and promote social change. The author claims that literary identification, or the act of empathizing with fictitious people and events, has the power to subvert established beliefs and encourage critical thinking and action. In order to demonstrate how literary identification may support various forms of feminist pedagogy, such as self-reflection, discussion, cooperation, and activism, they use examples from a variety of literary works and genres, such as novels, short stories, poetry, and memoirs. They also talk about the potential drawbacks and dangers of literary identification, like how it could reinforce stereotypes, reduce differences to their core components, or stifle dissent. The article's conclusion makes recommendations for various instructional techniques and methods that can increase the transformative effect of literary identification in schools and outside school.

Ursula K. Heise examines the difficulties and possibilities of ecocriticism in a worldwide context in her paper “Globality, Difference, and the International Turn in Ecocriticism”. Heise contends that in order to adequately address concerns of globalisation, migration, and environmental justice, ecocriticism must interact with the diversity of cultural and environmental viewpoints present throughout the world. Heise suggests an eco-cosmopolitanism framework, which blends ecological consciousness with cosmopolitan sensitivities and can encourage intercultural communication and cooperation on environmental issues. Heise also analyses several instances of literary and creative works to demonstrate the potential of globality “as a function of human relations” (637).

Studies suggest that speculative fiction has the potential to promote the environmentalism. In book review of "Green Speculations: Science Fiction and Transformative Environmentalism," Sophie Lavin examines the work of Otto and argues that speculative fiction is a potential tool to create harmony in the world. It provides different future imageries that allows us to predict the sustainable ways of living and motivates the readers to create environment sensitive behavior. Furthermore, science fiction offers alternative ways of governance, economic activities and cultural interactions that will prioritize the sustainable goals of development. Lavin also explores the possible drawbacks of science fiction as a medium for increasing environmental consciousness, including its propensity to



concentrate technological rather than systemic reform. She proposes that the readers and writers of speculative fiction should be mindful of these restraints and strive to create diverse, liberal, and collaborative narratives that will mitigate the problems of climate change, global warming and loss of biodiversity. From the analysis of articles, it can be seen that climate fiction plays a significant role in mitigating environmental issues.

## **2.2. Portrayal of Ecological Crisis in Climate Fiction**

During the past decade, cli-fi has become more popular. Cli-fi is not a new thing, but it has a name now which was coined by journalist Dan Bloom in 2011. The nineteenth century novels such as *The Purchase of the North Pole*, *Paris in the 20th Century*, and the twentieth century novels such as *On the Beach*, *The Wind from Nowhere* and *The Drowned World* and the twenty-first century novels such as *Anchor Point*, *We Are Unprepared*, *Odds Against Tomorrow*, *New York 2140*, *Flight Behaviour*, *The Hungry Tide* are all cli-fi novels that discuss climate change in terms of various factors causing the crisis and how the crisis can be mitigated (Bloom).

In her work "Exploring the Metabolic Rift: An Eco-Marxist Reading of Sam Shepard's *The God of Hell*" Amal Ibrahim Kamel outlines how the play "The God of Hell" can be interpreted from an eco-Marxist approach. The play, according to the author, focuses on the idea of the "metabolic rift" that has resulted from capitalist industrialization. Kamel investigates how the behavior of characters contributes to the metabolic rift in the play. She also analyses how the play criticizes the power structures in society and ultimately declares that "The God of Hell" can be viewed as a message of urgency for people to understand how important it is to re-establish a connection with nature and to reject the forces of capitalism that support inequality.

A study conducted by Muhammad Manzur Alam, titled "Ecological Rifts as Disaster in Indra Sinha's *Animal's People*" explores the manner in which Indra Sinha's book *Animal's People* portrays the social and environmental repercussions of industrial pollution in modern-day India. According to Alam, the book presents a strong critique of multinational businesses' environmentally hazardous practices as well as the involvement of legislative and regulatory bodies in the continuation of these exploitative tactics. The suffering of underprivileged groups, who were the primary victims of the environmental disaster, is also highlighted in the article. Alam concentrates particularly on the persona of Animal, a young boy who has suffered

physical and mental aberrations as a result of exposure to harmful chemicals. The book highlights the profound inequality at the root of environmental catastrophes and institutional inability to safeguard society's most defenseless citizens through the experiences of *Animal*. The main argument of this article is that *Animal's People* is a compelling piece of eco-fiction that emphasizes the pressing need to resolve the ecological and social rifts driven by unregulated industrial development.

"Eco-material Rifts in South Asian Anglophone Fiction" is another article by Muhammad Manzur Alam that examines the representation of ecological crises in contemporary South Asian Anglophone literature. According to Alam, many of South Asian Anglophone books and stories depict a variety of environmental issues, such as the depletion of natural resources and the effects of industrial expansion on local towns. The article focuses on several important texts, such as *The Hungry Tide* by Amitav Ghosh and *The God of Small Things* by Arundhati Roy, and demonstrates how they interact with the idea of the "eco-material rift," or the division that is brought about between human societies and the natural world by unsustainable modes of production and consumption. The author also examines how these literary works attack neoliberal economic principles—a political and economic philosophy that favors free market capitalism and minimal government intervention in the economy—, and the contribution of multinational businesses to the escalation of environmental disasters. The neoliberal economic principles have the potential to result in heightened income inequality, social disparities, and environmental degradation. It is a market-driven approach that might overlook social welfare concerns and neglect addressing issues related to economic justice and sustainability. Overall, the article argues the point that South Asian Anglophone literature offers a significant perspective on the environmental crisis prevalent worldwide and highlights the urgent need for more environmentally friendly methods of development in the region.

Another article titled "An Eco-Marxist Reading of Paolo Bacigalupi's *The Windup Girl*" probes into the ecological and social problems in Paolo Bacigalupi's science fiction *The Windup Girl*. The novel, in the author's opinion, provides a critique of capitalism and its detrimental impact on the environment and disadvantaged populations. The novel illustrates the adverse consequences of uncontrolled capitalism by envisioning a dystopian future in which bioengineering has resulted in extensive ecological devastation and the rise of large multinational

corporations. The article also examines how the narrative portrays the struggles of the working class and the marginalized, including genetically altered "new people," who are employed as workforce and commodities. Eco-Marxist theory is employed by the author to examine the ways in which the novel presents a critique of the capitalist system and its effects on the environment and social justice. *The Windup Girl*, as stated in the article's conclusion, is an influential work of eco-fiction that delivers an effective criticism of the detrimental impacts of unregulated capitalism and a plea for more ethical and sustainable methods of growth and development.

The environmental issues have been raised in gothic literature too which can be analysed using the ecogothic theory. This theory offers a perspective for researchers to scrutinize how gothic literature engages with ecological matters. Through the analysis of gothic landscapes, monstrous depictions of nature, haunted environments, and the intricate dynamics between humans and the environment, ecogothic theory enriches our understanding of how literature reflects and responds to environmental concerns and the challenges posed by human activities on the planet. "Haunting Memories and Haunted Landscapes: Reading the EcoGothic in Apichatpong's *Cemetery of Splendour* and Pitchaya's *Bangkok Wakes to Rain*" is an article that explores the representation of ecological and social issues in two contemporary fiction work set in Thailand. According to Chaipanit Pimpawan, the novels examine the environmental and social effects of modernization and urbanization by employing the conventions of the gothic genre. The article examines how the novels represent landscapes and settings that have cultural and historical significance but are also in jeopardy from forces of advancement and development. He further evaluates how the novels produce a feeling of dread and terror surrounding the destruction of these landscapes using eco-gothic theory. The article also examines how these memories and histories appear in the novels, as well as how their destruction affects both individual and societal identities. He further claims that these books provide an effective analysis of the adverse implications of modernization and urbanization and emphasize the need for environmentally conscious methods of development that take into account the cultural and environmental importance of regional landscapes and communities.

In the article "Green Speculations: Science Fiction and Transformative Environmentalism", David Mazel explores the role of speculative fiction in promoting

transformative environmentalism, which offers fresh perspectives on sustainable futures while challenging prevailing narratives. According to Mazel, speculative fiction offers an exceptional opportunity to imagine and analyze the societal, political, and ecological implications of environmental problems like climate change and biodiversity loss. Moreover, speculative stories can make readers reevaluate their preconceptions of the world and consider alternative methods to interact with it. He also emphasizes how speculative fiction has the ability to address the moral and political aspects of environmentalism. He further adds that science fiction can assist us in developing new models of economic, social, and governmental organization that put social equity and sustainability before anything else. Mazel also discusses the limitations of speculative fiction as a tool for advancing environmental awareness, including its propensity to rely on technocentric solutions and its capacity to validate prevailing cultural norms. He advises science fiction writers and readers to be mindful of these constraints and work to develop inclusive, democratic, and collaborative narratives. To sum up, Mazel asserts that by presenting fresh perspectives on sustainable futures and upending conventional narratives, speculative fiction has the potential to advance transformative environmentalism. Now, it is the obligation of speculative fiction authors and readers to utilize the most of this opportunity to create narratives that stimulate actions for a more just and sustainable world.

### **2.3 Critical Aspects of Ghosh's Work**

Ghosh's writing has been lauded for its major contribution to contemporary Indian English literature. Amitav Ghosh, unquestionably, is one of today's most noteworthy writers and essayists. Ghosh, a novelist with a remarkable sense of history, situates his stories characters within the broad unpredictable arc of humanity's fate and actions. He is interested in violence perpetuated in the past, territorial disputes, and governance that have changed lives, from colonial to the time of partition. Ghosh is a phenomenal narrator, but he also has complex topics for readers (Hawley ix). In *The Great Derangement*, Ghosh argues that the traditional narratives or the prominent forms of storytelling are inadequate to comprehend and respond to the climate crisis. Therefore, he urges to have a transformative shift in the literature i.e. to incorporate the narratives and voices of the marginalized.

Some researchers state that several writings of Ghosh are based on ecology, culture and identity. In "Home is Where the Oracella are: Toward a New Paradigm of

Transcultural Ecocritical Engagement in Amitav Ghosh's *The Hungry Tide*”, the researcher sets the case for a new method of ecocritical analysis that considers the transcultural complexities of modern literature. Through a transcultural ecocritical perspective, the researcher examines how Amitav Ghosh's *The Hungry Tide* challenges conventional notions of home and belonging through its depiction of the Sundarbans region of India and Bangladesh. She contends that *The Hungry Tide* presents a fresh approach to ecocriticism that acknowledges the value of transcultural and international viewpoints in the investigation of literature and the natural world (Kaur).

Some researchers argue about the form of novel whether it can help educate people about ecological crisis. Rachel Hodges Rochester in her thesis titled “Postcolonial Cli-Fi: Advocacy and the Novel Form in the Anthropocene” examines the ability and restrictions of South Asian novels to stimulate action in response to ecological issues through postcolonial theory, environmental humanities, and digital humanities. Her findings suggest that novels are well equipped for environmental education while altering some conventions of the form to fully utilize the novel’s potential. She elaborates that Amitav Ghosh’s *The Hungry Tide* offers solutions to the environmental problems that are mentioned within the novel and illustrates useful sustainable imaginaries for interplanetary (Mars)colonization (Rochester).

Apart from the form of the genre, Ghosh’s novels have been studied ecocritically. Sheba Elsa Jose in her article “Man, Nature and the World: An Ecocritical Interpretation of Amitav Ghosh’s *The Hungry Tide*” states that Ghosh, instead of writing in an Anthropocene style, focuses on ecocentrism giving more importance to non-human nature than humans. This is a distinct approach which is mostly found in South Asian literature.

Sayantani Sengupta in “An Ecofeminist Reading of Amitav Ghosh's *Jungle Nama*”, focuses on the ecofeminist aspects of the story. She states that in Indian society women have been associated with nature as saviours who can save the environment from further mistreatment. This notion is mostly projected in folktales and legends. As an example, Sengupta points out that in *Jungle Nama* it is the female deity, the guardian spirit of the forests, Bon Bibi who saves the young boy and sets an example for natural order. Sengupta also highlights that acceptance of all genders,

religions etc. is much easier with women in power just like Bon Bibi is respected and revered by people from different beliefs and religions.

In “Tale of Jungle Nama: Drawing the Lines between Needs and Wants”, the researcher argues that man’s irrational desires make him snatch everything from nature and destroy the land. Human beings are dependent on mother nature, but that does not mean humans can cross the limits to the extent of destruction. He argues that, through the legend of Bon Bibi, men should be able to differentiate the difference between need and desire, so that along with humans, nature flourishes too (Banerjee).

According to the writers, there is an inevitable connection between the concept of motherhood and the phenomenon of mother nature. In "Motherhood and Mother Nature: A Study of Myth and Magic through Amitav Ghosh's and Wayetu Moore's Selected Works" the researchers, Kanmani CS Arumugam and Marie Josephine Aruna, have focused on exploring how motherhood and mother nature are portrayed in a juxtaposition to one another in order to understand the deeper meaning that dominates the two entities. One of the most significant features of the literature of Ghosh and Moore is that they both utilize and draw from the concepts of myth and magic in order to illuminate the connection that exists between nature and motherhood. In their analysis of *The Hungry Tide*, the authors argue that myth and magic are central to the human experience as they signify humanity's overall experience. Furthermore, the researchers highlight in their essay that mothers play a cardinal role in human societies. It is argued that the concept of maternal figure is of vital importance in the world as it showcases the relationship between the natural world and humanity. The researchers suggest that the mother figure or the concept of maternity acts as a conduit between the natural world and humanity, which focuses on the qualities of empathy and compassion, concerning the human connection with the surrounding environment. In their analysis of Wayetu Moore's *She Would Be King*, the researchers again explore the interconnections that exist between motherhood and mother nature via the use of the concepts of myth and magic in order to bring to light the influence of the concepts of motherhood and the natural world on one another. Three main characters in this particular novel indicate the interconnectedness of all living beings in the universe. In their research, the researchers explore and examine the usage of imagery and language to create the essence of the qualities of the sublime and magical nature of the magic and myth, mother and mother nature. The researchers

argue that the writers ask questions to create a sense of wonder and reverence for the natural environment. Just as many cultures around the world place reverence on the figure of the mother, in the same way, the writers of the novels in question situate the idea that mother nature is such a maternal figure that many place the same respect towards it as they direct towards the mother. In the end, the authors showcase the importance of nature through their use of the concepts of motherhood and mother nature. They depict that the sacred connection that humans share with the maternal figure is similar to the sacred connection with mother nature, as they both provide, nourish and love. This interconnectedness of motherhood and mother nature depicts the human condition. In conclusion, it can be said that both the writers draw on myth and magic to create a powerful narrative that shows a dichotomy and depicts fears, desires and thoughts that allow us to think and comment about our relationship with the natural environment.

From the literature, it can be observed that Amitav Ghosh's literary work gives a unique perspective on environmental issues i.e. ecological plurality. One of the distinctive features of Ghosh's work is the inclusion of cultural, and spiritual dimensions in his environmental narratives. He portrays women as deities and saviors of nature. He draws on South Asian traditions, folklore, and spirituality to depict nature as an integral part of human identity i.e. ecocentric and societal structures. Furthermore, Ghosh engages with the concept of the Anthropocene as a threat to the environment and non-human entities. His works underscore how human greed and actions, particularly driven by capitalist mindsets, have led to ecological crises, disrupting the delicate balance of ecosystems.

## **2.4 Critical Aspects of Kim Stanley Robinson's Work**

Kim Stanley Robinson's work consists of ecological, social, and political themes. In the article, "Ecocriticism, Genre, and Climate Change: Reading the Utopian Vision of Kim Stanley Robinson's Science in the Capital Trilogy", the researcher argues that Robinson's writing combines aspects of political, idealistic, and environmental fiction to develop an entirely novel category which she refers as ecopolitical utopian fiction. Through this genre, Robinson is able to explore the relationship between science, politics, and the environment and to present a positive outlook for a time when climate change will be successfully handled. Robinson's

work, according to the researcher, is a significant addition to the literature on climate change and a useful resource for planning and pursuing a sustainable future (Putra).

The Western cli-fi novels mostly have an apocalyptic situation which is overcome by science and technology. In an article “Optimism in the Face of Catastrophe: Kim Stanley Robinson's *The Ministry for the Future*”, Steven Shaviro reviews that the novel gives the best climate scenario with the amalgamation of catastrophe and mitigation of the problem. Although not all environmental issues are resolved, yet it didn't allow the collapse of the planet, thus offering affirmative tone that a better world is still attainable due to technology and resources.

Similarly, in “Climate Change and Ecological Economics in Kim Stanley Robinson's *Forty Signs of Rain, New York 2140*, and *The Ministry for the Future*”, the researcher explains the devastating effects of climate change and proposes that the advanced technology, state-sponsored intervention and combined efforts of people will solve climate issues (Almaz).

In addition, some researchers have tried to differentiate between good and bad environmental practices in a society. In “Mapping the Contours of the Future: An Ecosophical Explication of the Elements of Good and Bad Anthropocene in Kim Stanley Robinson's *The Ministry for the Future*”, the researcher looks for examples of good and bad Anthropocene for an ecosophical understanding. He argues that this differentiation is important to create a healthy bond between nature and human race, meaning the practices which are harmful must be discontinued because the bad Anthropocene has created inequality in society along with damaging the ecosystem. This, however, can be mitigated by ecosophical approach and proposes to have alternative ecological, political and social policies (Patra). In addition, another researcher argues about the relation of financialization and climate change in *New York 2140*. The researcher, after analyzing the novel, concludes that the dominance of finance has aggravated the situation of our ecosystem (Ortiz).

While some researchers suggest pragmatic changes in policies, there are some people who consider climate change crisis can never be solved. In an interview Robinson spoke against capitalism and claimed that it has not only destroyed the environment or nature, but has severely destroyed humans too. In order to cope with that, one needs to shift the lenses to ecosophical post-capitalism. What he meant by



this is that “too late” is actually an apocalyptic hyperbole (Robinson, Interview with Kim Stanley Robinson: Poetry is for Thoughts, Novels for Stories).

In the article titled "Climate Crisis and the Reconfiguration of Contemporary Romance in *The Ministry for the Future*" Anderson Soares Gomes looks into how the novel of Kim Stanley Robinson talks about the intersection of love and the environment. According to Gomes, the traditional romance narrative is reconfigured by *The Ministry for the Future*. The purpose is to emphasize the need for collective action to address the climate crisis. Gomes starts off by explaining how happiness and individual love are portrayed as the ultimate goal of human existence in the romance genre. According to Gomes, this individualistic focus on happiness and love isn't sufficient in the face of the climate crisis. Alternately, he argues that there is a need to prioritize collective effort as well as a sense of shared responsibility for the planet. He then refers to *The Ministry for the Future* which needs to reflect on this need for collaborative action. Various romantic relationships are featured in the novel. However, these relationships are linked to major issues of global politics and climate change. In his opinion, this considers a shift towards a sense of love for earth and for the members of a global community from individualistic love. Moreover, he says that the novel's structure reflects its emphasis on collective action as portrayed in *The Ministry for the Future* that holds meetings and conferences that provide an opportunity to bring together individuals and organizations from different parts of the world to address the climate crisis.

In "The Realism of Speculative Fiction: Planetary Polyphony and Scale in Kim Stanley Robinson's *The Ministry for the future*", Pierre-Louis Patoine explores how Kim Stanley's novel recalls orthodox concepts of realism in literature. Patoine debates that the discussion of planetary polyphony and scale paves the way for the formation of a unique type of realism that is appropriate to highlight and discuss contemporary environmental and political issues. According to Patoine, planetary polyphony can be defined as the way in which the various outlooks and points of view converge to create a state of global interconnectedness. Although the experiences are unique and distinct, they help to see the overall state of the whole planet. The novel portrays the same through each one of its intricately written characters from around the globe, which represent their individual experiences and views. The contrasting life accounts of these characters give a complicated yet clear insight into the current state

of the planet. Patoine says that the sense of realism created by this nuanced image of the world reflects not just the complicity of our world but also various mindsets and narratives that shape its image. In addition to this, the use of scale in the novel is vital to the concept of realism. By taking on a planetary perspective, *The Ministry for the Future* focuses on how the driving systems of our world interconnect and affect each other. This discussion has made it simple and clear to understand the pressing and complicated contemporary world problems such as financial inequality, global warming and climate change in a way that represents their global impact. Patoine proposes that Robinson's perspective on realism in the novel comprehensively explains the interrelation of global systems and various points of view that shape different perspectives. Through this, he effectively highlights present-day political and environmental issues.

The review of Robinson's literature offers yet another perspective in the environmental discourse, adding to the ecological plurality. As he is known for his meticulous research and commitment to scientific accuracy in his work, his novels often employ a speculative realist approach, grounding the narrative in scientific principles while projecting plausible future scenarios. His narrative takes a global perspective, emphasizing the interconnectedness of ecosystems and the shared responsibility of humanity.

With the growing planetary consciousness, environmental literature needs to be politicized and contested from and across different spaces. In her book *Ecoambiguity*, Karen Laura Thornber promotes "a deeper planetary consciousness enhanced by comparative ecocritical scholarship" (30). It is critical to think about creative representations of environmental degradation in terms of "intercultural thematic and conceptual networks" (30) in addition to national literature because of the prevalence of environmental issues and the interdependence of all life. Therefore, it is important to envision a transnational and trans-genre approach to ecocriticism with the goal of highlighting the connections between environmental degradation activities and ideals from social and cultural traditions that transcend geopolitical boundaries. Thus, a comparative study helps develop a comparative ecocritical approach to the contemporary environmental narratives of the selected South Asian and Western climate fiction with a focus on 'ecological rift' and 'transformative environmentalism'.

## 2.5 Research Gap

Climate fiction has been broadly studied in the past in various settings. The focus of the climate fiction keeps on shifting from one ecological aspect to the other. The previous researches mainly focused on ecological writings for cultural understanding of the environment where they argued about human dominance. Moreover, few other researchers argue that climate fiction texts challenge human anthropogenic activities. While I was reviewing the literature, I found that most of the research was based on Western climate writings and was carried out by Western researchers. Their focus is on Eco Marxism, dystopian cli-fi, effects of technology and modernization on human civilization from a Western perspective. Also, there are some researches which have been carried out in the South Asian Cli-fi. In the South Asian writing context, the previous researches argue about the suitability of novel for environmental awareness, culture and identity, relationship between nature and women and differentiation between good and bad environmental practices with a single narrative. However, there is lack of research that contests for plural environmental narratives. Since environmental crisis is a global dilemma, it needs to be contested from different spaces such as Global North and Global South for ecological plurality. Also, the selected cli-fi texts have not been studied for ecological rifts and transformative environmentalism. For that, researchers need to examine the ecological rifts that are highlighted in the South Asian and Western Cli-fi. Along with that, in the age of global environmental crisis, there is a need to explore transformative environmentalism in cli-fi to make people aware and conscious for protecting the environment. My research fills this gap by doing an ecocritical analysis of Western and South Asian cli-fi texts to examine the environmental rifts as well as exploring the role of cli-fi in transformative environmentalism which to the best of my knowledge has not been studied yet.

## CHAPTER 3

### THEORETICAL FRAMEWORK

This chapter presents a comprehensive outline of the theoretical framework employed in the present study. It explains the perspectives through which this study examines the complex relationship between South Asian and Western climate fiction both in terms of similarities and differences. The employed theoretical lenses make it possible to grasp the parallels, distinctions, and linkages between the two cultural contexts in a nuanced manner, illuminating the various ways these narratives address ecological issues in South Asian and western contexts.

This research draws on John Bellamy Foster, Richard York, and Brett Clark's concept of 'ecological rift' and Eric C. Otto's 'Transformative Environmentalism' to scrutinize the issue of environmental rifts in Ghosh and Robinson's selected cli-fi and the contribution of selected climate fiction towards transformative environmentalism.

#### 3.1 Ecological Rift

The concept of ecological rifts has become a significant lens to examine the growing rifts in human relationship with nature in the midst of expanding environmental problems and the pressing need for sustainability. I use the concept of ecological rift to examine different types of environmental degradation portrayed in the selected climate fiction. Fundamentally, this concept opposes the existing worldview about nature — which sees nature as an unlimited supply of resources — and provides a critical viewpoint that highlights the underlying environmental issues prevalent in the world.

The concept of ecological rift given by Foster, Clark, and York is a development of Marx's concept of 'metabolic rift'. I use the term "ecological rift" instead of metabolic rift because the eco-crises have now become more complicated and branched with wealth accumulation and global market ideologies as explained by the theorists. The concept of 'metabolic rift' was developed during the times when food and fibers from the periphery were transported miles away to the center, depriving the land of essential nutrients, which in traditional farming were returned to the soil. The capital and great affluence of Western powers were built by abusing the natural wealth and ecological resources of the periphery, creating a disbalance in society and the overall world. This is the reason that Justus Von Liebig declared

British high farming no less than a “robbery system” (179). According to Karl Marx, the process that started with primitive accumulation has now unfathomable environmental and global insinuations. It has not only alienated nature but human beings too, thus creating a rift in the environment as well as human beings. Similarly, Foster et al. claim that the foundation of environmental catastrophe lies in the “paradox of wealth” in an industrial and capitalist society, which broadens individual riches at the expense of public wealth, including the wealth of nature. In the process, a huge ecological divide is driven between human beings and nature, undermining the conditions of sustainable existence that are irreparable within a capitalist system.

### **3.1.1 The Paradox of Wealth**

With the emergence of neoclassical economics in the late 19<sup>th</sup> to early 20<sup>th</sup> century, the concept of value and wealth was lost, impacting the broader ecological and social perspectives of wealth. A number of identified sustainable capitalists who are proponents of economic liberalism claim that the unrestricted expansion of wealth and the protection of the environment are not incompatible. Their primary argument lies in the system that can continue to grow by developing a new "sustainable capitalism," (53) which uses the market's effectiveness to benefit nature as well as its reproduction. However, Foster et al. argue that this vision is like another innovative way to generate more money from global environmental devastation. In such systems, wealth is given more importance than non-human entities which are perceived as “free gifts” (Foster et al. 53). In so doing, the destruction of nature caused by the economic system is made imperceptible. Therefore, it is important to understand the connection between wealth accumulation and environmental destruction to highlight the environmental issues. In this study, I explore the selected cli-fi to study the types of ecological rifts that are created due to wealth accumulation employing the paradox of wealth. For a better understanding of private wealth, one needs to be knowledgeable about the Lauderdale Paradox.

The Lauderdale Paradox asserts that there is an inverse relationship between public wealth and private wealth, such that a gain in the latter frequently tends to decrease the former, resulting in scarcity (54). To have value in commerce and to increase personal wealth, something must be scarce. The same idea was contested by Karl Marx in *Capital*. Marx asserts that under capitalism, nature is rapaciously exploited for the purpose of exchange value, detaching the use value of environmental

resources. He constantly mentions sustainability as a necessary component for any future society, along with the responsibility to preserve the planet for future generations (qtd. in Foster et al. 433-436). Foster et al. argue that Lauderdale's paradox is now even more important than it was when it was first proposed in the early nineteenth century because of the current prominent global realities such as water scarcity, air pollution, hunger, global warming, climate change, and depleting energy resources. The Lauderdale Paradox has highlighted scarcity as a valuable characteristic of capitalism and abundance as a greater threat to capitalism. By using the concept of the Lauderdale Paradox, I highlight the inverse relationship between public wealth and private wealth that leads to ecological rifts and unsustainable living portrayed in the selected cli-fi.

### **3.1.2 Ecological Debt**

The capitalist development activities pollute the atmosphere, destroy non-human nature, introduce toxins and new weapons, dump perilous waste in the periphery, and harm biodiversity. By economic and nature's exhaustion, the center becomes rich and the periphery enters into ethos of dearth because the former freely deposits industrial waste in the global commons in the form of greenhouse gases, causing environmental destruction. Over time, these capitalist and imperialist interventions alter the ecologies and thus create rifts. The ecological rifts, in this case, takes place through the control and commodification of land and human labour (subaltern and indigenous) which can be utilized to comprehend the climate injustices that impact people disproportionately. Consequently, capitalist or imperialist nations owe huge 'ecological debt to poorer countries' (439).

### **3.1.3 Rifts and Shifts**

According to leading economies, climate change is a technical problem; thus, it will be dealt with technologies such as agrofuels, nuclear energy, and genetically engineered carbon-eating trees etc. Now a question arises here. How feasible is this for the developing countries? These claims are made without considering the social and economic power relations. Thus, the stated techno-solutions are less useful in the long run, creating "additional ecological rifts" (Foster et al. 84). As a result, the problem remains the same and only the nature of the rift shifts to another rift. The selected climate fiction portrays rifts and shifts in the lives of humans and the

environment which helps the researcher to analyze the ways in which the Western and South Asian climate fiction addresses the ecological rifts.

The survival of human life depends on nature because humans have metabolic interaction with their ecosystem. These metabolic interactions between human and non-human nature influence both natural and social history” (Foster et al.73). Thus, environmental issues are becoming more interconnected. As environmental degradation increases, the development and intensity of the social metabolic system of capital cause rifts in natural cycles and processes, prompting a series of shifts on the side of the capital (Foster et al. 74-76).

The environmental crisis has started affecting the current generation and people have come to the conclusion that climate change is real. Foster et al. name this awareness the “planetary moment of truth” where we have witnessed climate change, global pollution, global hunger etc. at a large scale. I use this concept to analyze how South Asian and Western climate fiction address ecological rifts socially when they confront the reality of ecological limits.

The ecological rift has increased to a level that it has almost crossed the tipping point; for example, the pace at which the Arctic ice is melting would lead to an “ice-free Arctic” (152) soon as suggested by the statistical data provided by Foster et al. Thus, there is a “planetary emergency,” (152) that will have deep consequences. But who has been affected the most by it? They argue that the future generation will be most affected by climate change (151). The only solid solution is to adopt completely different pathways in the coming decades. Otherwise, it will be too late for one-third of the world’s animal and plant species as well as most of our human species (152). These revolutionary changes need to be ecological as well as social (153). In this regard, Speth highlights that “everyone” steps outside the system (capitalist) and takes part in the deeper environmental narrative (159). It requires a complete departure from capitalism(anti-capitalism) and a shift to a socialist ecology.

### **3.2 Transformative Environmentalism**

The current environmental conditions ignited the ecological debt movement that contests the refurbishment and revitalization of nature on a global basis. Stopping the destruction caused by ecological imperialism is seen as the only solution to this global problem, but science alone seems to be incompetent to combat environmental

problems (Austin and Macauley). Therefore, there is a need to understand the relationship between humans and nonhumans through transformative environmentalism. Utilizing the rhetorical techniques of environmental fiction and foundational concepts of environmentalism, I investigate the ways climate fiction promotes environment-sensitive behavior by centering its argument on the ethical relationship between human and non-human entities and human embeddedness in nature.

Eric C. Otto in his book *Green Speculations* explores the evolution of environmental literature as an important contributor to transformational environmental movements and literary studies. According to him, this further enables [us] to understand “environmental degradation and its origins” by centering arguments around the theory of ‘Transformative Environmentalism’. He explains it as a future movement that can employ fiction revolving around the environment to actualize an ethical relationship between humans and non-humans, consequently reversing the ongoing ecological systems (21) and promoting the “profound sense of intergenerational responsibility” (41). He argues that by using the foundational ecological philosophies we would be able to develop an ethical relationship with the environment, discarding the binaries such as nature and culture, man and woman etc. in environmental discourse.

The foundational philosophies of environmentalism help the researcher to understand the interconnected of human and non-human entities. The narrative representations of environmental challenges and different schools of environmental philosophy such as deep ecology, ecofeminism (cultural feminism, divine feminism), and eco-socialism can be used by environmental movements as instructional tools to spread awareness (5) and promote environmental consciousness.

Ecology is a subversive field that believes humans are embedded in nature. It views the earliest men's separation from nature as an illuminating "ideological trend" that breaks humanity's connection to the natural world. In other words, it sheds light on the critical environmental issues stemming from human activities and the capitalist mindset, thereby contributing material for the examination of ecological rifts and the complex relationship between human and non-human entities. Moreover, it critiques anthropocentrism, technocentric patriarchy, and growth-centered capitalism (5) as a major cause of human dissociation from nature. Ecofeminism is an account of



freedom from patriarchal domination — the subjugation of women and nature — saving ecosystems (99). Lastly, eco-socialism exposes the links between capitalism, colonialism, and environmental crisis. It “assures social justice and maintains ecological integrity” (101) as suggested by Foster et al. This theory elucidates how literature can inspire a paradigm shift in our understanding of ecological relationships, urging a collective reconsideration of prevailing environmental narratives.

In conclusion, ecological rift and transformative environmentalism emerge as a crucial theoretical framework for the analysis of climate fiction. Through a meticulous examination of the selected literary works of Ghosh and Robinson, the profound implications of human activities and capitalist ideologies on the environment can be explored. Ecological rift is a foundational premise for understanding the rifts in the delicate relationship between human and non-human entities. Concurrently, transformative environmentalism as a theoretical tool provides a compelling vision for fostering sustainable living, leading toward a potential path for transformative change.

## CHAPTER 4

### DYNAMICS OF ECOLOGICAL RIFTS

In this chapter, I have analyzed the selected works of Ghosh and Robinson to inspect how they portray ecological rifts in their climate fiction. By comparing these two authors' work, I uncover the human interaction with their environment and its consequences on the ecosystem.

#### 4.1 Ecological Rifts Between Humans and Non-Human Entities

The lens of ecological rift helps us analyze the widening gap between humans and the natural world in “The Living Mountain”, *Jungle Nama* and *The Ministry for the Future*. Foster et al. argue that the prominent worldview about nature as a limitless supply of resources is the reason that the planet is facing environmental problems today. Considering nature as an unlimited source, human beings are extracting the essential nutrients substantially from the natural sites, making nature unstable and volatile which creates ecological rifts. Hence, it is safe to blame humans and the anthropogenic activities responsible for the rifts. As long as humans abuse natural resources, and pollute the environment, there will be negative consequences in the form of climate change, natural disasters, habitat loss, and loss of biodiversity that will pose serious threats to human survival.

The short story "The Living Mountain" offers an allegorical portrayal of the implications of environmental disintegration and the demise of traditional knowledge about the environment. In the folklore-like story, Ghosh addresses the lasting consequences of imperialism and the Anthropocene epoch. He highlights how they have perpetuated an entrenched Western perspective that promotes economic exploitation and the commercialization of nature. Moreover, this cautionary tale deals with climate change, the abuse of humans and nature, and the effects of commercialization that are a result of the capitalistic and materialistic approach of humans.

In “The Living Mountain”, different kinds of ecological rifts disrupt the fragile ecosystem. Ghosh skilfully depicts a world marked by rifts that influence human lives as well as the ecology they dwell in by drawing on the rich fabric of nature's intricate patterns. The ecological rifts include rifts between humans and non-humans and rifts among people. Among all the rifts, the most imperative of them are the rifts between

humans and the Mountain, which take many different forms. The extractive practices of humans have affected the Mountain's sensitive ecosystem, exposing the ecological disturbances and imbalances caused by human activities.

In the story, the harmony between the Valley people and nature is disturbed by the 'Anthropoi' i.e., outsiders whose mission to accumulate Mountain riches creates catastrophic ecological rifts. On their first entry, "the Great Mountain began to shake and heave; avalanches came roaring down its slopes and rifts opened up in the Valley" (12-13) which frightens the Valley people because they have never seen this side of Mahaparbat. The 'Adepts' i.e., skilled dancers who communicate with the Mountain decode the message of the Mountain as the beginning of the "Cycle of the Tribulation" (13). From these quotes, it is evident that the time of the Anthropocene is, indeed, a time of great trouble. The invasion by the 'Anthropoi' is certainly a metaphor for the imperialistic aspirations of Anglo-American colonizers. Their desire to exploit the "great riches – minerals, metals and the like" (14) of the Mountain reflects the extractive practices of the Anthropoi who see the Mountain as a site of capital accumulation. The manipulation of the Mountain results in "a series of devastating landslides and avalanches [that] had swept through [the] Valley, killing vast numbers of ... fellow villagers." (24). It is evident from these excerpts that landslides and avalanches, which are a consequence of the overexploitation of mountain resources, affect the ecosystem and food webs. As the land and trees are washed away from the Valley due to ecological disasters, the source of food and the natural flood management by trees is also completely damaged. The 'Mountain' which is seen by the Valley people as their guardian and supporter has become a supporter of the ecological disasters. The 'Mountain' protected the Valley people till they revered the Mountain and respected its boundaries. However, this healthy bond between Valley people and the 'Mountain' breaks when the 'Anthropoi' exploit the 'Mountain', forcing it to react. Moreover, the death of the Valley people also supports the claim of Foster et al. that indigenous populations who have less access to resources are more vulnerable to ecological disasters despite their negligible contribution to environmental crises (438). Unlike Anthropoi, Valley people don't have the capacity or resources to deal with the climate liabilities which makes the issue structurally unjust, making the Valley people suffer the most. Craig Robinson asserts that the Global North utilized a large portion of the Global South's natural

resources for economic gain without enabling the South to profit from these resources. Instead, their economic activities made the Global South suffer from their waste products and carbon emissions. The same thing happens to the Valley people i.e. they are paying the price of Anthropoi's environmental crimes i.e., ecological debt.

In addition, the exploitative practice is carried out with the capitalist mindset that public resources are infinite and are sites of private ownership (Foster et al. 66). Anthropoi ridicule the Valley people for their belief that their Mountain is “the most alive” (7) and call them “credulous and benighted people” for not utilizing the mountain's riches. They argue that they have “unmatched wisdom” (14) which they can utilize to extract anything from the mountain. Through the rationale of wisdom, Ghosh points out the propagation of the Western philosophy of Anthropocene where humans are at the center while the non-human entities are at the periphery. At this point, we see that both the people of the Valley and the Mountain are categorized as ‘others’ by the Anthropoi and are positioned at the periphery; consequently, creating a rift between the center (humans/Anthropoi) and the periphery (nature/indigenous people).

In addition, there are several other instances of human and non-human nature rifts that are aggravated by wealth accumulation. The ascend shows the advancement of Anthropoi in anthropogenic activities and material success at the expense of public wealth as suggested by Foster et al. With every step up the mountain, “strange crevasses were opening up everywhere, that each step was setting off a mudslide, some of which were sweeping even the Anthropoi away” (25). This reflects that the effects of climate change get intense when humans cross the limits of sustainability. Initially, only the Valley people suffered from climate change, but later Anthropoi are also impacted by climate change. This suggests that climate change is a global issue that impacts all people irrespective of race, gender, nationality, etc.

Overall, the analysis of “The Living Mountain” reveals that ecological rifts have been driven between human and non-human entities due to capital accumulation and unsustainable living practices that are propagated by anthropocentrism (Western philosophy), colonization, and imperialism. It also reflects that public wealth i.e., the riches of the Mahaparbat are converted to private wealth i.e. paradox of wealth argued by Foster et al. which created rifts in the ecosystem and devastated the ecological

balance. It also reflects the inverse relationship between public and private wealth i.e., Lauderdale paradox which proposes that an increase in private wealth results decline in public wealth.

Correspondingly, in the *Jungle Nama*, Ghosh depicts different rifts that are driven by the greed and desire of humans. Through this narrative, he portrays that greed for profit and materialistic desires dissociate humans from nature and create rifts in society. Therefore, it is crucial to differentiate between need and desire and to maintain a balance between nature and culture.

In environmental discourse, need and desire are critical concepts that shape human interaction with the natural world. While need involves basic necessities of life such as fresh water, air, shelter etc., desire is related to the wishes and wants of humans for material possession that leads to overconsumption, waste generation, and resource depletion that are detrimental to the environment. Ghosh, through the character of Dhona, explains the difference between need and desire.

So it was for Dhona, renowned as the Rich One;  
sadly his wealth had not brought him satisfaction.  
He had prospered in trade, with Mona, his brother,  
Dhona, on the other hand, always wanted more;  
not for him a life of quiet contentment ashore  
All you need do, is be content with what you've got;  
to be always craving more, is a demon's lot. (5)

These lines reflect that the avaricious wealthy man Dhona is never satisfied with his riches; he strives to gather more wealth. As stated earlier, the concepts of need and desire are critical to comprehend the human and non-human interactions in society as they influence human actions and decisions, which greatly impacts the ecological balance of the planet. This also conveys that endless desires are linked with demonic qualities that force individuals to chase material possessions and capital, ignoring the consequences of such actions on the environment. Moreover, the uncontrolled desires of Dhona lead to the exploitation of the forest and his poor cousin Dhukey:

There's much to be had there, I'll take all I can see;  
honey, wax and timber, and all of it for free!

.....

Let's try to collect the richest hoard of our lives.

Instead of taking one ship, let's go with seven.

We should seize all we can and come home brim-laden.' (6)

These lines reflect that Dhona views the forest as a “free gift” (Foster et al. 137) or source of wealth accumulation in the form of honey, timber and wax. Furthermore, his desire to gather the “richest hoard” and extract as many goods as possible from the forest is yet again the reiteration of the anthropogenic practices that view natural resources as limitless. This leads to the overexploitation of natural resources, leading to imbalance in the ecosystem. Furthermore, the expression “brim-laden” illustrates capitalist motives that fulfil short-term material gains, and disregards the long-lasting impacts of such large-scale extraction on the environment. Such an approach of over-extraction of resources contributes to ecological rifts, which disengage and isolate humans from their environment. This view defies the fact that natural resources are finite and sustainable practices are important to maintain the ecological balance.

In an economic setting, marginalized individuals often find themselves forced by economic conditions to pursue employment opportunities that may be identified as exploitative or lack alignment with principles of sustainable livelihood. They are exploited by the capitalists to gather material wealth from manipulative practices that damage the environment and affect the relationship between humans and nature too.

‘I know a boy who’ll get the job done.

Remember that cousin of ours, the poor, sad one?

He’ll take any job, he cannot afford to choose;

at no cost to speak of, I’ll put him to good use. (8-9)

From this excerpt, it is apparent that Dhona, in pursuit of his evil and avaricious desires, exploits his financially vulnerable cousin Dhukey to gain material wealth. He does not see Dhukey as an equal human being (other), rather sees him as

cheap and easy labour to obtain the exchange values. Dhona's insistence on "get[ting] the job done" and putting Dhukey to "good use" suggests the selfish nature of Dhona and his lack of concern for the well-being of his fellow humans who are underprivileged. Dhona is extremely selfish and greedy due to which he does not care about the damage his greedy actions have on the environment. This difference in material possessions and wealth accumulation not only creates a gap among humans but also distances humans from nature. Furthermore, the exploitation of the laborers contributes to ecological rifts as it encourages short-term goals over long-term sustainable practices.

Related to economic progress is another concept called ecological responsibility which refers to the ethical and environmental obligations of an individual. Ghosh poses two ethical questions regarding the conflict between economic progress and ecological responsibility. Firstly, "Where does it say that it's wrong to be venturesome?", and secondly, "Is it greedy to want to add to your income?" (7). It is seen that, unlike Mona, Dhona desires wealth more, and he justifies his extractive actions by saying that all the forest's produce will go to waste if people don't benefit from it. Generally, economics is part of human life which means it is not fundamentally erroneous. However, it is morally, ethically, and environmentally wrong when the addition of wealth is the cause of the environmental problems. Hence, it is important to set a limit to use the of natural resources. To answer Dhona's question, the desire to add more capital is known as greed. Hence, we can say that Ghosh skilfully raises this question to highlight the wrong and unsustainable environmental practices.

While Ghosh focuses on regional accounts to portray the rifts created in the indigenous cultures, Robinson, in *The Ministry for the Future*, employs a global environmental account to depict the ecological rifts across the globe. This story accentuates the effects of climate change that is induced by anthropogenic activities and its impacts on the natural world. Frank May, an American aid worker and survivor of the Indian heat wave compares the sun to the "atomic bomb" (1) as climate change has intensified the global temperature to a level that humans and the environment have drifted apart. The comparison of the sun to an atomic bomb is significant to understand the context. Sun and atomic bomb both release energy, but they have two different contexts. The sun is a natural star that releases energy through

fusion reactions and is constructive in nature (carries out photosynthesis, drives weather patterns and many more) while the atomic bomb is man-made and destructive in nature. This comparison is a sign of extreme change in weather and climate patterns. The sun which once sustained lives on Earth has now become the reason for their demise. This change in the weather pattern and its impact on human is an indicator of the rift between humans and the sun (nature). In the novel, a “wet bulb temperature [ $T_{wb}$ ] of 35” (35) degrees Celsius becomes the cause of many deaths. According to National Weather Service,  $T_{wb}$  “is the temperature indicated by a moistened thermometer bulb exposed to the airflow” (*Temperatures - Dry Bulb/Wet Bulb/Dew Point*). The wet bulb temperature causes hyperthermia; a condition wherein the human body cannot control the body temperature and it rises up rapidly. The body’s cooling mechanism fails and heat stroke occurs. This phenomenon is portrayed in the novel.

The heat was beyond what the human body can stand. Hyperthermia, that’s just a word. The reality is different. You can’t breathe. Sweating doesn’t work. You’re being roasted, like meat in an oven, and you can feel that. Eventually a lot of them went down to the local lake, but its water was like bath temperature, and not ... safe to drink. So that’s where a lot of them died. (64)

The excerpt portrays the unfathomable effects of climate change that have impacted human lives immensely. Frank says that hyperthermia is a scary condition one can have because you can’t even breathe or risk coughing or talking for fear of overheating (12). Water, air, objects, almost everything bounces back heat like a “barbeque” (12). The natural quality of air, water, and other things is lost which makes air unbreathable and water undrinkable although they are available. People are unable to meet basic survival needs due to the heat wave and “everyone was dead.” (12). How did this all happen? How did humans reach such an intense level of degradation? Who is responsible for climate change and ecological rifts? United Nations (UN) claims that carbon emissions have increased the greenhouse gas effect on Earth which has altered the natural qualities of all biotic organisms and abiotic things (“Climate Change: Annual Greenhouse Gas Index”). As Marx suggested, economic gains become a problem when “its influence has exhausted [natural resources] and... devastated its natural qualities” (85).



The main concern of scientists today is carbon emissions which, according to them, contribute 66% to the heating imbalance (“Climate Change: Annual Greenhouse Gas Index”). In the novel, Robinson points out that humans burn “40 gigatons of fossil carbon per year” which is a huge number to create ecological rifts. If humans burn “500 more gigatons of fossil carbon” in the coming years, the average temperature of the earth will be “over 2 degrees Celsius higher than it was when the industrial revolution began” which will be followed by the annihilation of bioregions of the globe (28). The increase in the global average temperature has adverse effects on the whole ecological system including both human and non-human entities. Yet, nature and less privileged humans are greatly impacted by it. Frank, being the lone survivor of the heatwave, has experienced the effects of climate change and ecological rifts. He points out that some affluent people are responsible for the ecological rifts.

People had caused the heat wave, and not all people— the prosperous nations, sure, the old empires, sure; they all deserved to be punished. ... who had worked all their lives to deny climate change, to keep burning carbon, to keep wrecking biomes, to keep driving other species extinct. That evil work had been their lives’ project, and while pursuing that project they had prospered and lived in luxury. They wrecked the world happily, thinking they were supermen, laughing at the weak, crushing them underfoot. (62-63)

It is evident from the quotation that people especially from the wealthy nations and empires are responsible for the global ecological rifts because they all prospered at the expense of the environment and nature, destroying the habitat of different species. The ironic thing is that rich nations and wealthy people deny the effects of climate change because they haven’t experienced it themselves directly. Even if they are hit by any climate calamity, they have a fair number of resources to deal with it. Hence, they keep on burning carbon to sustain their luxurious lifestyles, undermining the suffering of people caused by climate change. This brings us to another important aspect of environmental discourse i.e., climate injustice that is related to ecological debt.

In the novel, Robinson depicts that the number of people who died in “Indian heatwave” exceeds the casualties of World War I (22) even though India has negligible carbon emissions as compared to the developed nations (Foster et al. 438).

Also, when the heat wave hits Arizona and the southern states of the USA, the death ratio is comparatively less than the Indian heat wave tragedy. Through this, Robinson points out the climate injustices prevalent in the world where developing countries are paying the price i.e., ecological debt (439) of the developed nations' carbon emissions in the form of extreme weather conditions and many other deadly ecological disruptions. Middlemiss argues that people from lower backgrounds and ethnic minorities have a higher probability of being impacted by climate change (155). Robinson loosely links the Indian heat wave to colonial times and questions about climate accountability. For instance, Mary and Badim while talking about the heat wave situation in India says:

“[Mary] “It’s funny how England never seemed to pay too much of a price for its crimes.”

[Badim] “No one does. You pay for being the victim, not the criminal.” (31)

This conversation reflects that colonial practices are indeed responsible for the disruption of colonized landscapes and resources. The effects of climate change that the former colonies face today are in fact an upshot of colonial extractions. Now, the question is, did the British Empire pay the reparation? Do they owe any ecological debt to the countries they colonized? For environmental justice, the British as well as other wealthier nations who prospered by burning carbon do owe the ecological debt. Nevertheless, the victims are paying the price in the form of climate change as said by Badim. Shashi Tharoor, a well-known Indian politician, diplomat, and author, firmly believes that the British Empire is responsible for climate change in India as they unlawfully exported raw and finished goods from India to the Empire pushing India towards unending social and climate issues. He endorses the idea of reparations from Britain. Their colonial practices were horrendous; thus, Britain owes reparation to India on the grounds of moral principle (OxfordUnion). Additionally, in June 2020, the United Nations (UN) Human Rights Chief Michelle Bachelet directly called out the former colonial nations to confront their colonial legacy of exploitation, forced labor, cultural erasure and amend it through reparations (Reporter). However, this isn't the case, and India and other former colonies despite being the victims are paying the price for the global carbon emissions.

In addition to showing the state of affairs in India, Robinson also shows the sufferings of the people in the USA due to intense heatwaves, but mostly in the southern states such as Mississippi, Alabama, Georgia, and Florida. Robinson portrays that in the USA they handle the first heat wave easily because being the superpower they have resources such as good infrastructure and electricity to run air conditioners to prevent hyperthermia. However, another intense heatwave hits creating “wet bulb 38s, [which results being] seriously fatal” (324). Thus, the demand for electricity increases immensely and the power failure exposes millions to the heatwave. Even after this heatwave, the unaffected people do not care and remain indifferent to the catastrophe.

It was the South where it had happened. It was mostly poor people, in particular poor people of color. It couldn't happen in the North. It couldn't happen to prosperous white people. And so on. ... This was yet another manifestation of racism and contempt for the South, yes, but also of a universal cognitive disability, in that people had a very hard time imagining that catastrophe could happen to them, until it did (324).

This excerpt discusses the heat wave in the southern states of the USA where people are poor and marginalized based on their race “in particular poor people of color”. It is evident that climate injustice is prevalent in the USA too where the marginalized and vulnerable communities are exposed to calamities not the elites in the North. The wealthy and rich white people from Northern states have “universal cognitive disability” which refers to the lack of urgency in addressing the ecological rifts until the consequences become irreparable or they themselves are severely affected by it.

Another form of ecological rift is water scarcity which is an example of the Lauderdale Paradox. This refers to the idea that an increase in private wealth results from a decrease in natural resources. Foster et al. argue that the Lauderdale Paradox can be used to explain ecological rifts particularly when unsustainable economic activities are dominant in the world. One such example is portrayed in the novel when Mary visits San Francisco and witnesses water scarcity, droughts, flash floods, and wildfires.

Water had always been the weak link, and now climate change was making it worse. The entire state was now plumbed for water, they moved it around as

needed; but when droughts came, there was not much to move. And droughts were coming more and more frequently. Also occasional deluges. Either too little or too much was the new pattern, alternating without warning, with droughts predominating. The upshot would be more forest fires, then more flash floods, and always the threat of the entire state going as dry as the Mojave desert. (172)

This excerpt highlights ecological rifts due to the scarcity of water resources. The passage suggests that although water is required for every living being's survival, humans prioritize their survival only. They interrupt the natural flow of water as per their needs, which has disturbed the water cycle and has led to droughts and unexpected weather patterns. The variability in weather patterns is potentially responsible for altered hydrologic cycles and creates challenges for ecosystems and living beings that depend on water. Furthermore, droughts increase dryness which increases the risk of wildfires. The wildfires release carbon into the air and disturb the air quality. Other than droughts, humans are facing unexpected heavy rainfalls that lead to flash floods.

The consequences are troublesome like other ecological rifts: flash floods cause soil erosion that distorts natural landscapes which means that the living beings dependent on land will lose their habitat and many will die in flash floods. Thus, flash floods are a huge risk to ecosystems and societies across the world (Yin et al. 2). Mary predicts that San Francisco would become as deserted and dry as the Mojave desert which is extremely dry and has very unpredictable weather patterns. Similarly, climate change has unpredictable patterns; hence, no one can predict the climate patterns which further widens the rifts between human and non-human entities.

While one part of the USA is under a severe dry spell, the other part is facing prolonged and continuous rainfall as recounted by Frank when he describes Los Angeles submerged in rainwater. As we know, climate change can impact the precipitation. In higher temperatures, in the case of global warming, oceans get warmer than normal. The intense precipitation results in heavy rains that could severely impact human life and infrastructure, especially the most susceptible people in society (Chaubey et al. 1).

Hard rain, in LA, for hour after hour? It was like Noah's flood! And it looked like it could go on for forty days and forty nights too, why not? So, ten million people stranded on all the high points left sticking out, and no food to speak of. Rain pounding down for hour after hour. Lots of little boats but nothing big, and nothing organized. (258)

This passage portrays the vulnerability of humans in the face of catastrophe who are not well prepared for it. The impacts of large-scale rain in urban settings are disastrous because in urban spaces there are more people. In this particular rain in Los Angeles (LA), ten million people, which is a big number, are stranded in the streets in little boats without any access to food. By comparing the LA rain with Noah's flood, Robinson wants to emphasize the magnitude of the catastrophic consequences of climate change. Although Noah was prepared for the flood by building the Ark, humans despite knowing the consequences of climate change are not taking actions that may bring doom to humanity one day just like the people who didn't believe Noah then.

In addition, another alarming ecological rift that Robinson has portrayed in his novel is the melting glaciers and rising sea levels. Undoubtedly, the increase in ice melting adds to the rising sea levels, which will possibly increase the chances of coastal storms. In the novel, the Arctic and Antarctica are warming up rapidly, thus the glaciers are melting faster than ever. The water from the glaciers enters the ocean and seas and raises the sea level. Other than rising sea levels, another big concern around glacial melting is permafrost carbon which is stronger and more dangerous than carbon dioxide.

Arctic permafrost contained as much stored methane as all the Earth's cattle would create and emit over six centuries, and this giant burp, if released, would almost certainly push Earth over an irreversible tipping point into jungle planet mode, completely ice-free; at which point sea level would be 110 meters higher than at present, with global average temperatures at least 5 or 6 degrees Celsius higher and probably more, rendering great stretches of the Earth uninhabitable by humans. At that point civilization would be over. (137)

It is evident from the passage that massive amounts of carbon dioxide can be catastrophic, but the potential release of methane from the permafrost can be

apocalyptic (Brand et al. 496). One “burp” of methane gas released from the exposed soil below the permafrost could trigger an amplifying greenhouse effect that will increase global warming and bring devastating environmental changes that the previous habitable conditions cannot be retrieved. Thus, in this cli-fi, Robinson predicts that many parts of the world will be uninhabitable for humans due to extreme weather, drought, and related issues. It suggests that such irreversible changes and uninhabitable circumstances could lead to the collapse of human civilization.

#### **4.1.1 Ecological Rifts Among Humans**

In addition to rifts between humans and non-human entities, the rifts among humans are also critical for understanding the overall concept of ecological rift. There are differences among people in terms of their environmental beliefs and values which are valuable to analyze the ecological rifts. The knowledge about the presence of such rifts offers ways to bridge the gap between humans and non-human entities. These differences provide social and political dynamics that highlight how different cultures influence environmental politics and decisions.

In “The Living Mountain” the bond between nature and humans is harmonious so is the bond among the Valley people. These people are content with their lives. Although they have small “fight[s] with their neighbors” (9) occasionally for food, this rift between humans is not intense and is reparable. Contrastingly, the rift between the Anthropoi and Valley people is huge and has been driven because of the Anthropoi’s “terrifying illusions of omnipotence” (16). They consider themselves superior and the villagers inferior. Thus, their treatment and behavior made the villagers “accept that the Anthropoi were not like [them], that they were a different species of being” (16). Distancing themselves from the indigenous population makes the Anthropoi merciless and emotionless to others’ feelings. This enables them to put their economic and political interests ahead of the welfare of the local population. Thus, the social differences between the Anthropoi and indigenous people are translated into social inequalities. For instance, “under the Kraani’s watchful eyes, [Valley people] toiled in the fields to produce the materials they needed for the assault” (17). The Kraani exploited the Valley people for cheap labor i.e., to extract the mountain riches while the Kraani and Anthropoi occupy the top hierarchy and enjoy the mountain riches. This means people in power have easy access to natural resources; thus, they overconsume the natural resources that can be understood as the

paradox of wealth. On the other hand, underprivileged people are disproportionately exposed to hazardous living conditions and are forced to perform extractive activities. The paradox of wealth has driven rifts between the Valley people and the Anthropoi by alienating them from each other.

In addition, Anthropoi are “armed with terrible weapons” (13) and are “skilled in the art of war” (14). Historically, war tactics have played a critical role in colonization projects, as they allowed the empire to seize and control the land that they wanted to colonize. To establish control, colonizers frequently used the army as their main tool. Moreover, it is also used to suppress resistance where the outnumbered local population pursues to regain their land and authority. Along with that, the colonial authority took advantage of the differences between the Valley tribes to break their unity.

It was decided that we would fight, and so we did, all of us, men and women, young and old. We fought valiantly, but our efforts were unavailing – some of our villages were defeated in battle, some were tricked into attacking their neighbours, and others were reduced to quiescence with drugs that sent them into dream-like trances. (15)

It is evident from this excerpt that the Valley people resisted the rule of the Anthropoi, but the Anthropoi use the “divide and rule” tactic to highlight their differences, pitting various groups against each other. Hence, using war tactics and the divide-and-rule strategy, Anthropoi successfully controlled the indigenous people and land which further widened the gap between the Valley people and Anthropoi.

This rift among humans intensifies when the Valley people like Anthropoi begin to ascend the mountain for its riches. Now that everyone is part of the race, the situation is exacerbated among humans.

Some villages [were] attacking others, in the hope of turning them into drones and drudges; other villages were torn apart, with neighbours killing each other, in the hope of getting ahead. A great orgy of bloodletting filled our Valley, bringing slaughter and destruction on a scale far beyond that which the Anthropoi had inflicted on us in the past. (21)

These lines depict that the competition to accumulate private wealth reaches a point where people start killing each other and destroying the Valleys. The economic and

social injustices are the reason that people get involved in criminal activities or violence to gain wealth. This undermines the ethical relationship among humans.

In “The Living Mountain”, the rift is driven between Valley people and Anthropoi, and among Valley people for the Mountain riches whereas in *The Ministry for the Future*, the major rift among people is between the ‘Children of Kali’ and all elites/companies/politicians who burn carbon and fossil fuels for their comfort and luxurious life, destroying the planet.

Children of Kali is a secretive black-wing agency in India that uses extremely violent methods to carry out coordinated attacks on the imminent actors in the fossil fuel industry and high-emission infrastructure. Children of Kali can be equated with ecoterrorists because they both have the same purpose i.e., to stop environmental degradation by punishing the people, organizations, governments, and institutions responsible for damaging the environment. In the novel, when Frank meets the Children of Kali, they give him a responsibility to communicate their message to the world. The only woman member of the Children of Kali says, “You can tell them that they must change their ways. If they don’t, we will kill them. That’s what they need to know.” (46). This quotation reflects that the secret agency is desperate to avenge the death of the people who died in the heat wave. They serve as a symbol of desperation for the slow progress in ecological improvement work. That is why they want people, organizations, and governments to change their ways of living and minimize carbon emissions. The rift between the Children of Kali and those involved in carbon emissions intensifies when the destructive practices are continued. For instance:

Then rebels from our area began fighting the government and troops moved into town, and people were being killed right on the street. Even some kids from the school my children went to. And one day our clinic was blown up.  
(48)

This reflects that the government has failed to address the climate issues and people are furious and vengeful about the death of innocent people. This attitude creates rifts between the people and the government and yet again many people are killed even the school-going children who are innocent. The demolition of the clinic portrays that the rift among people has widened greatly, disturbing the environment and social setup.



Another rift shown in the novel is the caste system that is also developed by the bourgeoisies for their private gains. The narrator says that the caste system is a remnant also very associated with BJP, who along with selling our country to global financial predators also demonized so many ethnicities, and told so many Indians that they weren't really Indian. (119)

From the quotation, it is evident that corrupt governments create tension among people for their personal gain, labelling the tag of 'other' to the struggling class while they themselves trade their country for profit. The phrase 'international financial predator' depicts the voracious nature of multinational companies that exploit local resources and labor for their economic growth. The exploitation recedes the natural resources, but their income and profit increase exponentially which depicts how the Lauderdale paradox operates in capitalist society. Thus, we can say that private wealth and nature have an inverse relationship i.e., an increase in private wealth decreases the resources as explained by Foster et al. in the Lauderdale paradox which leads to ecological rifts.

Moreover, Frank kidnaps Mary to make the ministry act faster to address the climate issues. He says that humans are in a "mass extinction event", so Mary has to change her angle from the "bourgeois values" if she really wants to work for future generations (93). This refers to the fact that the planet is facing a climate emergency and the Ministry has to take prompt action keeping aside the values of the capitalist system. He commands Mary to identify "the worst criminals in the extinction event and [go] after them" and assassinate them (93). This portrays that the division among humans, those who are perceived as criminals and those who see themselves as saviours, has expanded. The perceived saviours resort to quick solutions through violence which portrays that people are not united and undermine the need for systemic change, which aggravates rifts among people.

Due to global climate change, "hundred million people were out there wandering the Earth or confined in camps, displaced from their homes" (265). They become climate refugees and suffer endlessly. Refugees from "everywhere" such as the Middle East and South Asia are compelled to leave their countries; "[n]o one would leave home if they didn't have to" (314). They face many challenges. The potential host countries, for instance in the novel Swiss government, are "often only

marginally helpful to [refugees], or even unfriendly, ...[and] actively hostile” (500) making their lives miserable. They are considered “less than human... being treated like animals” (134) and their dignity is challenged which creates rifts among people.

I suppose at that point we were on a kind of suicide mission. None of us cared at that point. I will never forget that feeling, of lashing out irregardless, of not caring whether I lived or died, of just wanting to maximize damage whatever way I could. If I got killed doing it that was fine, as long as there was damage. I wanted the world to suffer like we had. (135)

The quotation illustrates the despair of the climate refugees whose patience is being tested time and again which makes them “mad”. Being climate refugees, they have already endured too much and the never-ending formalities of the immigration process reflect the perceived inability of the system to address the ecological rifts. The sense of hopelessness and no regard for their own life shows the emotional and psychological impacts of ecological rifts on humans.

#### **4.2 Shifts as Solutions or Another Rift?**

Different cultures have unique ways of addressing their environmental problems because the problems need cultural and contextual episteme to find an efficient solution. Without the required cultural knowledge, the proposed solution can be hampered by societal and financial constraints. The advocates of economic liberalism who view climate change as a technical problem propose technical fixes as a complete solution to climate change. Notwithstanding, Foster et al. argue that these technical solutions are not solutions but a transition in the nature of the rift. This means that the problem continues to exist and only the nature of the problem changes. In the selected cli-fi texts, the prominent shifts are ideological as well as technological shifts.

In “The Living Mountain”, the ideological shifts are prominent that contribute to ecological rifts. The Valley people live in harmony with nature according to their traditions and ancestral knowledge. However, the Anthropoi who regard indigenous knowledge as irrational and problematic bring many ideological as well as cultural changes in the Valley. These shifts bring rifts in the society. The Mountain which is revered by the Valley people as a living being is now seen as an object of accumulating private wealth. We see a gradual shift in the ideology of the Valley

people because “the lives of the Anthropoi seemed infinitely more exciting than [their] own wretched existences, down in the Valley” (18). They gradually start believing that their beliefs are nonsensical and reckless.

Our attitude towards the mountain began to change – our reverence slowly shifted away from the mountain and attached itself instead, to the spectacle of the climb. Gradually, as the spectacle took the place that the mountain had once occupied in our hearts, we burned with the desire to ascend those slopes ourselves. (18-19)

The quotation depicts a shift in the ecological perception of the Valley people over time. The ecological significance of the Mountain as a nature’s miracle is replaced by its riches which make the valley people revolt against the Anthropoi, and “the [power] balance began to shift” (20). They get into the race they weren’t allowed to take part in before to obtain the riches. Instead of bringing prosperity, this shift in ideology destroys the relationship between Valley people and the Mountain resulting in landslides, snow melting, avalanches, etc. To fix the disasters created by the ideological shift, Anthropoi urge Valley people to change their way of climb: “you must stop climbing in the old, bad way. You must learn to tread lightly, like us” (29). Here, it is important to differentiate between the ‘climb’ and the ‘way of the climb’ to figure out the root cause of environmental destruction. The destruction is caused by the climb i.e., anthropogenic activity, not just by the pace or style of the climb. So, the root cause is the anthropogenic activity, climb, in the narrative. In fact, in the face of such grave environmental problems, the pace matters the least. The fix proposed by the Anthropoi thus is a failed attempt to address the environmental issue.

Although climate change is a global environmental problem, the idea of universal knowledge won’t cater to the local dynamics completely. Therefore, indigenous episteme must be considered while addressing the issues.

After much searching we finally chanced upon an old woman who had once been an Adept, ... once she hit her stride, a strange, miraculous thing happened: we could feel the Mountain reverberating under our feet as though in answer to the dance. (34)

It is evident from the quote that the Valley people’s way of living and their beliefs and values are in fact aligned with the environment. It challenges the Western

episteme based on the decolonial ecological construct. The presence of Adept and the Mountain's response to her dance depict that the bond between humans and nature can be restored. Overall, we can see a transformative shift in the attitude and values of the people that helps reconnect nature and humans in a harmonious way.

In the *Jungle Nama*, it is depicted that Dokkhin Rai—a shapeshifter non-human entity—is the embodiment of human greed and represents human tendency to disrupt the ecological balance. He manipulates humans and disregards nature, leading to the reckless exploitation of jungle resources. It can be related to different forms of capitalist activities that disrupt human and non-human relations.

This realm was once under the sway of Dokkhin Rai;  
 a mighty spirit feared by all under the sky.  
 He preyed on humans, in a tiger avatar;  
 whomever he wanted he'd take for his shikar.  
 Under his rule all beings shivered in terror;  
 day after day, they looked heavenwards in prayer (2)

This excerpt depicts Dokkhin Rai's voracious reign over the forest and humans which reflects his lust for power and jungle resources. The appearance of Dokkhin Rai as in "tiger avatar" illustrates the danger, mystery and wrath it can bring to humanity. Although iconic and beautiful it is, its very essence is to prey on humans and prioritize its own needs. This bears resemblance to predatory capitalism where the influential humans prioritize their own interests over the well-being of others like the "mighty spirit" Dokkhin Rai. He is dreaded by "all beings" as he would take anyone "he want[s]" including both human and non-human entities. Therefore, it is important to address greed to restore human relations and ecological balance.

In the *Jungle Nama*, the power shifts from Dokkhin Rai to Bon Bibi who takes control of the jungle and Sundarban in order to bring balance to the environment and maintain the ecological equilibrium. This shift in power brings stability to the Sundarban. Women have the innate quality to bring balance into the nature which makes everyone's life comfortable (Langley 13). In this narrative, Bon Bibi, being the guardian of the forest, sets a consumption limit on jungle resources which ensures that the jungle is not exploited. She warns Dokkhin Rai to be "within [his] bounds and

never transgress” and not to “seek excess” (39). It implies that individuals should use the resources cautiously. The wisdom of Bon Bibi transforms Dokkhin Rai as we see a profound change in his attitude.

Thanks to you, Bon Bibi,’ he said, falling before her, ’  
I’ve learnt restraint, with the magic of meter.  
With word-count and rhyme, I will master my needs,  
my desires I shall check, and repent for my misdeeds.’(39)

The excerpt depicts that the power shift has transformed the attitude and behavior of Dokkhin Rai who attributes this change to Bon Bibi and the “magic of meter”. Just like rhyming words and a balanced number of words make a stable meter, having a check on needs reflects the willingness of Dokkhin Rai to embrace discipline and control his manipulative actions. Another possible explanation is that the Bengali verse meter called *dwipodipayer* is used to write *Jungle Nama* which could be a magical indigenous episteme to solve the environmental issues. The phrase “repent for [his] deeds” indicates the acknowledgment of his past actions and seeking accountability for them. This shows the potential shift in the beliefs of greedy humans which is an imperative transformative shift.

In addition, Bon Bibi is also considered the goddess of justice who seeks to address the environmental debt and advocate for fair treatment of all those who are disproportionately affected by extractive practices. For instance, Dhona leaves Dukhey behind in the forest as part of his deal with Dokkhin Rai. He is totally helpless in the forest and Bon Bibi comes to his rescue and she says: “You’ll ride the rivers, with the pomp of a raja; with Dokkhin Rai’s wealth, you’ll soon have your own durbar.” (45). This reflects the disparities in the distribution of environmental resources and wealth that have been addressed by Bon Bibi. Bon Bibi decides to redistribute the wealth of Dhona equally so that Dukkhy fulfils his needs too.

In the selected literary texts of Ghosh, solutions i.e., shifts are derived from the cultural and indigenous episteme, whereas Robinson's selected work illustrates shifts that are rooted in technological advancements, also known as “technological fixes” (Foster et al. 81). These technological fixes do not resolve the problems, rather they give short term fixes that give rise to further rifts in the environment. For instance, one technological fix in the energy sector is switching from one source of

energy (fossil fuels) to another like nuclear energy and agrofuels totally ignoring their side effects.

In *The Ministry of the Future*, the purpose of the Ministry is to mitigate global inequalities, unsustainability, and climate-related issues for which they have introduced “carboni” i.e., carbon currency “to decarbonize civilization and to get in a sustainable balance with the biosphere, humanity’s one and only support system.” (340). Most of the carbon is “drawn down by reforestation, biochar, agroforestry, kelp bed and other seaweed growth, regenerative agriculture, reduced and improved ranching, direct CO<sub>2</sub> capture from the air, and so on” (415). Hence, many nations of the world shift from fossil fuel burning to other renewable clean energy sources such as solar energy. It started in India, where “electrical power companies were nationalized...shutting down coal-fired power plants and building wind and solar plants” (24). The increasing demand for electric power and receding fossil fuels have forced India to incorporate solar energy to meet the energy demand. It is a viable solution for India as many locations in India are suitable for solar energy generation (Khan and Rathi). Geographically, India is a perfect location for solar energy which is reflected in the passage.

So much sun! It’s power, right? We can use solar power to pull water right out of the air, hydrogen out of the water, grow the plants that provide for bioplastics and biofuels for whatever still needs liquid fuel, use hydrogen to power turbines. Sun also helps grow forests that draw down carbon, and fuel the biochar burners, and provide the wood for building. We are a fully recycling solar powerhouse. A green power. Other countries don’t have our advantages in sunlight, and minerals, and people, especially people. And ideas. (132)

This passage depicts a significant shift in energy production and resource utilization that could be a potential solution to climate change and other related issues. Since the geographical location of India is ideal for solar energy, it can be utilized as a main energy source—a transition away from fossil fuels—which is a significant solution to curb carbon emissions and combat climate change. Moreover, the passage highlights efficient environment-friendly resource management such as the extraction of hydrogen from water, growing of forest, using “bioplastics and biofuels” and “recycling” that can potentially reduce the carbon footprints. This aligns with the

goal of mitigating climate change and addressing ecological rifts. Furthermore, the unknown narrator mentions the advantage of their “people” and “ideas” which reflects the innovative and creative thinking of local people who are inclined towards a culturally grounded knowledge-based economy, where the ideas of the local people play a dynamic role in shaping sustainable practices.

In Antarctica, scientists also shift away from fossil fuels who “in the old days... burned a lot of fuel to get the showerhead’s water hot. Now solar panels helped to power the heaters.” (245). Similarly, the new Arabian government and other petro-nations also claim that they have fully transitioned to solar power, and have denied selling their “oil reserves for burning”, hence, deserve “compensation in the form of the CCCB’s newly created carbon coins” (317-18). A question arises here. Is it feasible for all nations to switch to solar infrastructure? Since “critical infrastructure needs funding” (53), the developing non-petro nations are unable to switch to solar energy and thus continue burning fossil fuels as they import oil from the developed petro-nations “at a big discount” (321). Furthermore, the developing petro-nations also continue burning “their own oil assets, and sold to their fellow developing nations-without-petro at even bigger discounts.” (321). For developing nations both petro and non-petro the transition is difficult and challenging because they heavily rely on oil for revenue generation. Furthermore, selling oil at discounted prices to non-petro-developing nations implies the economic strategy of these nations to generate revenue, which complicates the transition further. Hence, it is safe to say that this shift is feasible for developed nations that have assets and can afford the new infrastructure. However, the problem is for developing nations that have inadequate funds and infrastructure to switch to solar power. “Despite all the sudden shifts, carbon was still being burned (322) which means this type of geoengineering is not workable for all nations.

Another interesting aspect to analyse is the motive behind the transition. Almost all the nations are drawing down the carbon emissions, because they “were paid for, or rather rewarded beyond the expense of doing them, in carbon coins, ... the carbon coins were like dollars created by the sequestering of carbon” (415). Consequently, both burning carbon and transitioning to solar energy are done for economic gains, not for the environment entirely. It means “Money still ruled, fire

sales still sold carbon. The bubble that was bursting might still be the biosphere itself.” (322).

The next techno-fix is geoengineering on the northern horizon of the ocean using yellow dye to prevent the oceans from warming up. So, “geoengineering isn’t always just a fantasy” (115), it does fix the environmental issues for some time with some side effects. Likewise, the geoengineering in the ocean is a “scientific-technological fix” (Foster et al. 33) that changed just the nature of the rift and created other problems.

Yellow water didn’t allow sunlight to penetrate it, and even bounced some sunlight back into space. Relatively small quantities of dye could color a large area of ocean. Both the artificial and natural dyes they were using broke down over a summer season, and could be renewed or not the following year. Petroleum-based dyes were cheap to manufacture, and only mildly carcinogenic; natural dyes, made of oak and mulberry bark, were non-petroleum-based, and only a little bit poisonous. (476)

This passage reflects a scientific-technological fix that doesn’t completely fix the problem but changes the nature of the rift as argued by Foster et al. It introduces “petroleum dyes” and “natural dyes” to colour the ocean which blocks sunlight penetration into the water, and prevents it from warming up. This intervention is a techno-fix that addresses the issue of warming of the ocean, but it also introduces harmful aspects of the technofixes which are “carcinogenic” and “poisonous”—side effects of the dyes—which may prove harmful to marine life. Hence, it can be said that the techno-fixes don’t “do anything to solve the bigger problem... it wasn’t meant to do that! It was a fix!” (115).

It is now safe to say that *The Ministry for the Future*, is a climate fiction that contests the issue of the climate from a scientific perspective. The ecological rifts such as global warming, flash floods, droughts, wildfires, and heat waves are explained through scientific terminology; therefore, it offers scientific-technological fixes as the solutions to the ecological rifts. Nevertheless, these solutions “are proposed as if completely removed from the world as it operates, without any sense of the social and economic relations of power...[that] create additional ecological rifts



(Foster et al. 84). Thus, the proposed solutions are quick fixes that do not give long term solutions.

In conclusion, both Ghosh and Robinson's climate fiction depict ecological rifts that are prevalent in the world. The work of Ghosh focuses on nature and humans equally and is culturally grounded in India whereas Robinson's work is more focused on scientific data and contests for the whole planet. Ghosh's work represents that human and non-human entities are interconnected and are essential for sustainable living, whereas Robinson's work revolves around economy and technological fixes. In Ghosh's work colonization and greed for wealth causes the ecological rift, whereas in Robinson's work capitalism, neoliberalism and economic disparity create rifts in the environment. In both Ghosh and Robinson's work, the people who are most affected by ecological rift and climate change are the ones who are poor and marginalized.

## CHAPTER 5

### TRANSFORMATIVE ENVIRONMENTALISM: A PARADIGM SHIFT

In this chapter, I have employed transformative environmentalism framework to explore the various ways in which the selected climate fiction of Ghosh and Robinson promotes environmental consciousness. This helps the researcher to understand the role of cli-fi in promoting ethical connections between humans and non-human entities, thereby encouraging environmentally conscious behaviour and offering alternative models of thinking.

#### 5.1 Human Embeddedness in Nature

Everything present on earth is interconnected be it plants, animals, humans, or any other natural resources; hence, the association between these entities is vital for sustainability and transformative environmentalism. Historically, the relationship between humans and non-humans has been unsteady. At first, humans were in sync with nature as they considered nature an essential part of their lives. This means that nature and humans are interdependent i.e., “human embeddedness in nature” (Otto 43) and are equally important for sustainable living. Contrastingly, from industrial times onward, humans dissociated themselves from nature which led to numerous environmental problems. In order to retrieve harmony, we need to understand the symbiotic relationship between humans and non-human entities.

In “The Living Mountain”, the people of the Valley live in harmony with the Mountain, Mahaparbat, because their values and beliefs are centered around nature. The Valley people depict human embeddedness in nature and believe in reciprocity as reflected in Maansi’s narration:

... all of us who lived in the Valley revered that mountain: our ancestors had told us that of all the world’s mountains ours was the most alive; that it would protect us, and look after us – but only on condition that we told stories about it, and sang about it, and danced for it – but always from a distance. ... we knew in our hearts that our mountain was a living being that cared for us; we saw proof of this every day, all around us, in the form of a tree that grew along the streams that descended from its slopes. (7-8)

It is evident from the passage that the Valley people religiously follow their knowledge and traditions. The reverence for the Elderpeople and glorification of the sacred mountain are the testimony of the ethics of the indigenous people and their relationship with the human and non-human entities of the ecosystem. It is also important to note that in the indigenous land, there is no culture/nature binary. Nature and humans work as a unit. Furthermore, this reflects the ethics of sustainable living in the mountains which the Valley people have mastered because of the ancestral knowledge passed down to them. Here, the stories and songs represent ancestral knowledge that enhances the understanding of values related to ecological diversity and offers an inclusive approach which is an important aspect of transformative environmentalism.

The personification of the Mountain as a living being in the narrative is also significant as it brings forth emotional connection, spiritual connection, and interconnectedness of humans and non-human entities. By addressing Mahaparbat as “most alive mountain” (7) “speaking to them” (10), the author gives it emotions and feelings just like human beings to equate the position and status of humans and the Mountain. Furthermore, the Mountain “speaks” to the Adepts i.e., skilled dancers only “through the soles of their feet” (10). It reflects the indigenous spiritual perspective towards nature where nature is considered as a deity. The Valley people chant prayers and make offerings to the mountain to make it happy. Many indigenous cultures such as Africans and Indians practice nature worship and have spiritual connections with nature which keep a healthy bond between humans and nature. One such example is Parvati from Vedic texts who is the goddess of Mountains also known as the Daughter of Himalayas (Fratti and Sansoni 95-96) and worshipped by Hindus and Buddhists. Due to such religious affiliation with the nature, individuals worship nature which prevents it from exploitation.

Notwithstanding, over the past centuries, human development and progress have taken place at a higher rate while degrading the environment and ecosystems. With the increase in population demographics, humans have progressed in science and technology to sustain themselves efficiently. From the mid-sixteenth century onwards, anthropocentrism became the center of human ideology and men’s consciousness dissociated itself from nature. Otto argues that Plumwood’s *Illusion of Disembeddedness* (24) gives us a philosophical ground for understanding the growing

gap between humans and nature that has caused various environmental issues. This notion is powered by the cultural illusion and anthropocentric worldviews that declares human superior to other species. The Anthropoi cash the idea of human supremacy and power i.e., war to propagate Western ideology and extractive practices.

“They were not many in number but they had very powerful weapons and were skilled in the art of war... The savants of the Anthropoi were unmatched in their wisdom, and they had decided that since we were not making use of the Mountain’s riches, they were fully justified in seizing them...” (14)

The invasion and the encroachment of the Anthropoi, demonstrated in these lines, serve as a metaphor for Western European colonialism. They use coercion to take control over the indigenous land and indigenous people so that they could use the mountain riches and export them to the center i.e., Europe (Cymene Howe and Dominic Boyer 131). For instance, the sentry says that the Valley people have to let the Anthropoi “conquer the Great Mountain ... else they will kill us or enslave us” (15). Although the Valley people fight to stop the Anthropoi, they couldn’t succeed as the Anthropoi had advanced weapons. After the defeat, the Anthropoi “subjugated” the Valley people, “ruled” (15) over them, and forced them to extract the resources from the Mountain. Thus, the anthropocentric mindset dissociates humans from nature, exploiting the natural resources as well as the indigenous population by labelling them “credulous and benighted” (14) who need to be civilized—the justification of their colonization and imperial motives. Here, it is important to highlight that Anthropoi have created several binaries i.e. human/nature, culture/nature, etc., making the former entities of the binaries privileged over the latter one i.e. human and culture are superior to nature.

Similarly, in the *Jungle Nama*, the bond between humans and non-human entities is crucial to uphold the natural balance in Sundarbans. The species both human and non-humans are interconnected, thus they all are equally important to sustain the ecosystem.

Thus did Bon Bibi create a dispensation,  
that brought peace to the beings of the Sundarban;  
every creature had a place, every want was met,

all needs were balanced, like the lines of a couplet (4)

This quotation illustrates the human embeddedness in nature through the actions of Bon Bibi who maintains a balance in Sundarban. Bon Bibi is the symbol of peace and guardian of the natural world who creates a system that recognizes the intricate association between Dokkhin Rai i.e., a non-human entity and the people of Sundarban. In this established system, every specie has a role that defines the overall functioning and balance of the ecosystem. The needs of the species are accommodated accordingly which reflects the provision and sufficiency of the system. Ghosh compares "the lines of a couplet" as a metaphor to illustrate that the many needs and roles of organisms in the Sundarban are interconnected and tunefully aligned, much as how the lines of a couplet in a poem complement and balance each other. We can say that the excerpt illustrates human embeddedness in nature where every entity is given a place and purpose and their needs are met in a balanced manner. To acknowledge that humans are part of nature is the initial step towards a sustainable environment (Otto 25). In addition, to sustain the system, Bon Bibi sets a "boundry" (3) and "drew a line, to mark a just separation between the forest, and ...human" (4). The line of separation affirms the necessity of keeping separate spaces for both human and non-human entities for coexistence. Furthermore, this premeditated division acknowledges the common space and obligations of both people and nature in the symbiotic relationship which is a major component of transformative environmentalism.

There are numerous instances in *The Ministry for the Future* that depict human embeddedness in nature. While Ghosh uses raw nature such as mountains and forests in his narrative to depict human embeddedness in nature, Robinson uses the scientific aspects of nature such as climate, ozone, sea levels etc. to portray the interconnectedness of human and non-human entities.

Every place has a unique landscape and geography, and so is the climate. The climate patterns are greatly influenced by geography; consequently, it impacts various elements of humans' lives such as agriculture, transport, tourism, and overall way of living. In such a scenario, indigenous knowledge plays a pivotal role in managing the resources that are influenced by local climate patterns. Therefore, people align their activities in accordance with indigenous knowledge that has been conveyed across successive generations for peaceful coexistence of humans and nature. In the novel,

Robinson portrays that the changes in the environment affect human activities which illustrates humans and non-human entities are interconnected. For instance, while talking about lowering the temperature they discuss its benefits in regions like Siberia. “If their rivers don’t freeze, Siberia has no roads for nine months of the year.” (32). This depicts the adaptability of human activities in Siberia according to the natural cycle of freezing rivers. In many parts of Siberia, frozen rivers are essential transportation routes that are functional in winter and people transport most of the goods in winter. It implies the resilience, resourcefulness, and deep cultural wisdom of Siberian people who have integrated their lives with the natural world. This is a great example of transformative environmentalism as the Siberian people have incorporated their traditional knowledge into contemporary practice i.e., find sustainable ways to meet human needs while protecting nature.

In addition, the ozone layer is a substantial part of the stratosphere that maintains a stable habitable temperature of the earth and shields living organisms from harmful ultraviolet rays. If the ozone layer is damaged, it will greatly affect life on Earth as portrayed by Robinson: “And all over the world people pointed out that the ozone layer would get hurt, which would be bad for everyone.” (37). This quotation portrays a global perspective on ozone layer depletion that doesn’t only harm the ozone layer but is potentially harmful to the whole of humanity. It surpasses individual benefits and focuses on the collective well-being of humanity and the planet which is yet another significant factor that contributes to transformative environmentalism. Hence, it is important to acknowledge the interconnectedness of humans and non-human entities for transformative environmentalism.

Overall, the goal of transformative environmentalism is to develop a more sustainable and harmonious relationship with the environment. It is only possible through major changes in human attitudes, behaviours, and societal institutions. Putting environmental issues first in decision-making entails reevaluating societal norms, regulations, and practices from an ethical perspective. These changes can be seen in the novel too.

Also these changes mean end of caste’s worst impacts, they claim. Dalits now involved, women always half of every panchayat, an old Indian law now applied for real. Now there are farm tenure rights, full ownership of one’s work, its surplus value. Women and all castes equal, Hindu and Muslim, Sikh

and Jain and Christian, all together... Communist organic farmers just the tip of the iceberg. (131)

This excerpt portrays environmental ethics that prioritize long-term goals over immediate advantages. It reflects transformative changes in society by addressing the inequalities and gender discrimination. Inclusive of Dalits and women, it inspires the stakeholders, regardless of their religion, to actively participate in and engage in the process of transformation. Next, Robinson points out the farm tenure rights and ownership which reflect the transformative approach of the community to follow the economic model that prioritizes indigenous communities and encourages fair distribution of benefits that contribute to sustainability.

## **5.2 Ecofeminism as a Transformative Force**

Dualism has existed in civilizations for centuries which is intrinsically hierarchal and supports the domination of one being over the other. In the environmental discourse, we come across nature/culture dualism where, most of the time, culture (man) is superior to nature (woman). Men being on the top of the environmental hierarchy is associated with culture and women being the nurturers are associated with nature. In doing so, both nature and women are subjugated in human civilization. Vandana Shiva, an Indian environmental activist, argues that the degradation of biodiversity and the plight of women are inextricably linked (164). Therefore, women and nature should be considered equal to men and culture respectively as by 'othering' nature and women, the earth is destroyed at the hands of culture and civilization.

In "The Living Mountain", women have a special status because of "their own personal and local experiences, through collective histories, and/or through Earth-based spiritual traditions" (Otto 76). Hence, they are admired for mediating between human and non-human entities. In the Valley, there is no discrimination on the basis of gender; hence, both genders work together and pay tribute to the Mountain by disseminating its stories, chanting songs, and dancing which are led by the Adepts. The dance is important in the indigenous culture to show gratitude and love to the Mountain. Maansi says:

Our dances were always led by women, and the most skilled of them were known as Adepts; sometimes, when dancing they would go into a trance, and

afterwards they would tell us that they had felt the mountain speaking to them, through the soles of their feet. Oh, how we envied our Adepts! (9-10)

In the indigenous land, women are respected for being the mediators between humans and the Mountain. Women and nature are both important for survival because they both provide nourishment to others. Thus, women have established a strong bond with nature—praised by the Valley people—balancing human-nature interactions. Langley argues that the divine feminine, when nurturing the other with love and wisdom, “creates a place of peace and support” (12). Another important aspect that is highlighted in the narrative is the communication between Adepts and the Mountain which is possible “using not our brains but the soles of our feet” (27). This is a socially situated knowledge that defies the Eurocentric knowledge which claims that “their ideas are universal — unlike the false local beliefs” which are “ignorant” (26). This knowledge dates back to the time when men and women were treated equally; when men were not civilized but equal (Langley 10). In Eurocentric or Western accounts, women and nature are pushed to the periphery and men being cultured beings are positioned in the center. In the name of modernism and universalism, the European legacy transmuted gender relations globally. For instance, in “The Living Mountain”, “wisdom had always resided with the women” (19). Seeing that as a threat,

The first thing the Kraani did was to dismiss all our old Elderpeople and appoint new ones, whom they chose themselves. In the past, amongst our Elders, there had been women as well as men, but no more. The new ones were all men... Next they imprisoned our Adepts, and forbade all our ceremonies and songs, stories and dances. They were all worthless...(16)

This excerpt can be analyzed in two ways: first, in terms of injustice, and second, in terms of the misogyny inherent in imperialist motives that use “social, political, and economic power to subordinate women” (Otto 74). The Kraani reject the indigenous narratives, giving them no credibility, and considering the indigenous knowledge “worthless” because of which the Elderpeople are unable to assert their knowledge as before. Furthermore, they exclude women from the leadership and made a council of males only to proliferate their androcentric episteme. In this way, they created binaries in the Mountain community. These binaries preferred men over women which illustrates that women are not worthy to hold such positions. The misogyny is



amplified further and women are excluded from the society. The Adepts are imprisoned, depriving them of their agency. In doing so, they erase the local knowledge and introduce their so-called universalism. Notwithstanding, their knowledge does not help them to address the ecological crises and they consult the Elderpeople of the Valley to mitigate the environmental degradation. This is a grave irony as the Anthropoi once forbade indigenous ceremonies because they said that these exploit the environment. Now the same Anthropoi want to retrieve the indigenous knowledge and women to save the environment from collapse. Once again, Ghosh dismantles the anthropogenic mindset by restoring the agency of women. When the “old woman who had once been an Adept” starts dancing, the mountain responds by “reverberating under [their] feet” (34). Like the “Anthropocene exposes the fallacy of human exceptionalism” (Johns-Putra 26), this spectacle makes the Anthropoi realize the fallacy in their logic of domination.

“The Mountain is alive! We can feel its heartbeat under our feet. This means we must look after the poor, dear Mountain; we must tend to it; we must care for it.’ At this the Adept ceased her whirling and came to a stop, her eyes blazing with anger. ‘How dare you?’ she cried. ‘How dare you speak of the Mountain as though you were its masters, and it were your plaything, your child? Have you understood nothing of what it has been trying to teach you? Nothing at all?’” (35)

This excerpt portrays that, in practical terms, nature can sustain itself without humans, but humans need nature to sustain themselves as nature is the provider of resources (Löbner 73). However, the Anthropoi fail to understand this simple law of nature and consider themselves to be the caretakers and sustainers of the nature and environment. Upon hearing the comments of the Anthropoi who present themselves as masters, the Adept gets agitated and questions their sanity. Even though the calamity is huge, the Anthropoi have not learned a lesson. Hence, we can say that Ghosh uses this narrative to challenge the superiority of men in the nature/culture hierarchy and portrays that nature and women are vital for sustainable living.

In the *Jungle Nama*, cultural and divine ecofeminism is prominent in which nature and women are associated with each other as maternal and nurturing figures who provide care and resources. The female figures, Bon Bibi and Dukhey’s mother are projected as the saviours of nature and human lives. Irrespective of their religion,

the people of Sundarban worship Bon Bibi, “Lady of the forest” (45) because she saves the forest and humans from exploitation. Dukhey and his mother address Bon Bibi as “Ma” (17) which means mother. Much like a mother, Bon Bibi is an example of divine feminism, a “compassionate” entity who “nurtures”, “guides”, and protects (Langley 11) nature as well as marginalized people living in Sundarban. Her protector role portrays the basic nature of a mother who protects her family from any maltreatment. Furthermore, like a mother figure, Bon Bibi ensures the equal distribution of resources to nurture and sustain the human and non-human entities of Sundarban. She is empathetic and helps those in need. When Dukhey is in trouble and trapped in the forest, we see that the two prominent figures who help him and save him from Dokkhin Rai are his mother and Bon Bibi. No matter how much women are subjugated, they are still powerful. In many indigenous cultures women are considered the source of wisdom and guidance. Their divine qualities can save the environment from the destruction that humans have perpetrated on themselves through their divine wisdom disseminated orally (Langley 17). Similarly, Dukhey’s mother is described as a sage character who guides Dukhey to “call on Bon Bibi” when in trouble (45). The specific verses chanted to call Bon Bibi passes from mother to Dukhey orally as argued by Langley. “Though old and frail, Dukhey’s mother had more wisdom/than can be found in many a revered ashram.” (13). This quotation reflects that no matter how old and marginalized women are, the “wisdom” and traditional knowledge they possess are invaluable for sustainable living. Also, in the contemporary world, it is essential to “retain the sacred wisdom” that we own (Langley 17) like the meter used by people of Sundarban must be retained by people in their memory. Moreover, the knowledge of the mother is compared to that of a “revered ashram” which illustrates that wisdom related to life and nature, found in women can be an inspiration to guide the people like a guru in an ashram. Although women are mostly ignored and overlooked, their intrinsic nature, perspectives, and experiences bring people together and promote peace and justice in the world. In a way, this challenges the stereotypes associated with women by “revaluing matriarchal principles” (Otto 79): portraying the traditional knowledge of women as an invaluable asset in sustainable practices.

Notwithstanding, Crenshaw, an intersectional feminist, argues that multiple forms of inequalities operate together and victimise women (1242). In *The Ministry*

*for the Future*, there are certain instances where women and nature are doubly marginalized which challenges the patriarchal systems of environmental destruction. Crenshaw argues that women face discrimination in multiple ways; it is not just the gender. For instance, in the novel, Mary faces discrimination not only due to her gender but due to her profession and race as well. Even though she is the head of the Ministry, she is not aware of all the things happening under her supervision. When she gets to know about Badim's secret wing, she shows her disappointment in the system that subjugates her, keeping her ignorant about the secret wing. She says, "I'm naïve, is it? An innocent stateswoman in the world of Realpolitik?" (106). This excerpt depicts gender stereotypes and assumptions that undermine women in society which eventually makes women question their worth. She assumes that her appointment as a "stateswoman" was because of her naivety. This suggests that gender expectations in a stereotypical setting declare women as less politically understanding and are deemed unsuitable for politics. Her innocence in the "world of Realpolitik" depicts that the practical dynamics of politics are beyond the capability of women.

Women have been involved in conciliation and have years of practice dealing with domestic issues, yet they don't receive the respect they deserve (Otto 78). Mary is trying to mitigate the environmental issues through different means. She tries to convince the influential banks to "cause inflation" (199) so that economic activities will slow down. This is a "quick solution to the carbon problem" (199), but the banks dismiss her idea and continue with "price stability" (200). In Brussels, Mary meets the representatives of the European Central Bank who have an indifferent attitude towards Mary and her idea of inflation.

Their attitude toward Mary was dismissive in the extreme. For one, she headed an agency with no financial power and little legal leverage...And as an Irish woman she was doubly damned, more for being Irish than for being a woman (199)

This excerpt shows the trivializing behavior of men towards women. The "dismissive" can be perceived as a reflection of larger societal standards that frequently marginalize or underestimate women in leadership positions. Furthermore, this passage also highlights intersectional feminism i.e., how Mary's gender and Irish identity become a source of double discrimination. Ecofeminism takes into account

the ways women are subjugated and the ways this intersectionality might exacerbate marginalization and discrimination. Through such instances, Robinson challenges gender discrimination and stereotypes.

Apart from solving environmental issues, women play a leading role in healing human beings. For instance, Frank, who is suffering from post-traumatic stress disorder (PTSD) due to a deadly heat wave in India is getting treatment from a female therapist—a compassionate woman. “A nice middle-aged woman, intelligent and experienced, calm and attentive. Sympathetic.” (63). The adjectives that are used to describe the therapist such as “nice”, “intelligent”, “experienced”, “calm”, and “sympathetic” project her agency as a professional who knows the needs of her clients and caters to those accordingly. It also portrays power dynamics where she is “intelligent and experienced” which means she is an expert in her field and trains Frank to deal with his PTSD. “Calm” and “sympathetic” are qualities that are associated with women and nature in cultural ecofeminism which values nurturing and interconnectedness of species. These qualities of the therapist can be seen as female/feminine strengths that can be transformative for fostering ethical relationships among humans as well as non-human nature.

Another potential solution proposed by Dick, personnel from the Ministry for the Future, to deal with environmental problems is a shadow government created with AI. Dick presents it as a possible workable plan B if the present system breaks. He hints towards a “different hegemony” (322) and says:

Earth citizen, commons member, world citizen. One Planet. Mother Earth. All these terms used by people who are coming to think of themselves as part of a planetary civilization. Main sense of patriotism now directed to the planet itself. Matriotism, Dick jokes. (332)

This excerpt depicts the planetary realization of the interconnectedness of humans and nature. Although people may use different names such as “world citizen” “earth citizen” etc. for the interconnectedness, the essence is the same—both humans as well as nature are interconnected and interdependent. It is important to understand the play on words when Dick says that now “Matriotism” is the new “patriotism”. What does it mean? Patriotism is a frequently used word, usually referring to loyalty to the fatherland or state, while matriotism is a rarely used word that refers to the same

loyalty and love towards Mother Earth. When Dick says that patriotism is directed to the planet, he refers to the transition from patriarchy—power and control—to matriarchy i.e., care and nourishment. Matriarchy is all-encompassing and nourishes everyone; thus, it is transformative in nature. It can also be inferred that patriarchy has failed the planet, and matriarchy seems to be the hope of saving the planet from further destruction. Having said that, the sentence ends with “Dick jokes” which reflects his non-serious attitude towards patriotism and the mistrust of matriarchy that is challenged by the feminist doctrine. Related to this analysis is another passage in the novel that heavily relies on women to resolve the planetary issues.

We make a new religion! Some kind of Earth religion, everyone family, universal brotherhood.” “Universal sisterhood,” Mary said. “An Earth mother religion.” “Exactly,” Tatiana said, and laughed. “As it should be, right? (35)

This excerpt reflects ecofeminist values and principles. The idea of making an “earth religion” inclusive of men and women encompasses an “Earth mother religion”. The universal sisterhood implies that the patriarchal system that segregates women and nature from the center to the periphery needs to be addressed. It challenges the patriarchal system and values, and contests for gender equity and recognition of women in environmental transformation. Next, the idea of an earth mother religion depicts the maternal nature of earth—a nurturing and life-giving entity—for a harmonious relationship with nature. So, the transition to the new religion is a transformative change that is inclusive of all genders and emphasizes collective responsibility and collaborative actions to address the environmental crisis taking place globally.

One common thing in Ghosh and Robinson’s cli-fi is that the main characters or the protagonists are female figures who play a significant role in environmental discourse. The Adepts in “The Living Mountain” possess the indigenous knowledge and wisdom that help them grounded in nature. They are the mediator between nature and culture. In *Jungle Nama*, Bon Bibi is shown as the female deity who keeps a balance between human and non-human nature. She emphasizes human interconnectedness with nature and stresses maintaining an ethical relationship with non-human entities. Lastly, in the *Ministry for the Future*, the leading figure, Mary works for the future generations which represents the vital role she plays in resolving environmental crises. Her compassionate nature allows her to listen and understand

diverse perspectives of people and to work collaboratively across different fields which aligns with the goal of transformative environmentalism. Hence, we can say that all female characters in the selected cli-fi are saviours. For instance, Adepts save the Valley from further ecological destruction by reconnecting the ethical bond with nature, Bon Bibi saves the forest from destruction by setting limits, and Mary saves the whole planet from further destruction. Overall, these female characters represent the importance of women in saving environmental spaces from destruction.

### **5.3 Ecosocialism as a New Paradigm for Social Justice**

Ecosocialism is an interdisciplinary philosophy i.e., sociology and environmentalism that “assures social justice and maintains ecological integrity” (Otto 101). In ecosocialism, environmental justice is vital because it recognizes the inequalities and injustices indigenous and marginalized communities face during environmental catastrophes. Hence, it seeks to address these inequalities irrespective of class and social status. This is an anti-capitalist philosophy; it tries to shift away from capitalist economic structures and save the environment from ecological destruction and overconsumption by criticizing the capitalist intentions and the “ethics that permit” (Foster et al. 101) exploitation of nature.

In “The Living Mountain”, Anthropoi “intrusions into nonhuman nature” (Otto 104) are responsible for the destruction of the environment because a powerful clan of people commodifies indigenous people and their land. In the narrative, the indigenous people are subjugated and ruled by the Anthropoi.

...the Anthropoi herded us together and told us that from now on we would be ruled by some of their most ferocious soldiers – they called them Kraani, or the ‘Helmeted Ones’. They were to be our guards and overseers, to make sure that we did all the work that had been assigned to us.... under the Kraani’s watchful eyes we [Varvaroi] toiled in the fields to produce the materials they needed for the assault. This was our place, the Kraani told us, this was where we belonged. (15-17)

This passage is reflective of ecosocialism. It depicts the two different hierarchal levels established in the Mountain society; Kraani, and Varvaroi. The Kraani is the top ruling group of people that control over the whole Valley and force laborers to work. They forced laborers to produce material for the assault, this suggests the exploitative

practices of the Anthropocene that are challenged by ecosocialism. Moreover, the division of labor based on the perceived abilities and limitations of certain groups of people are “conditions of production” (Otto 104) that can be used in ecosocialism to advocate for equal distribution of labour and resources. The Anthropoi’s action can be viewed as a portrayal of a system that operates by profit and power to “commodify new pools of labor” (Otto 104), consequently, exploiting both humans and nature at a large scale. The overexploitation of resources thus “leads to increased participation [of environmental proletariats] in democracy which in turn leads to increased social pressures on the economic system” (120) for ecological justice.

Slowly, at the urging of our Eldermen, we began to defy the Kraani, timidly at first, but then with increasing determination. As time went by our confidence grew and the balance began to shift in our direction. We realized that we were many and they were few; we learnt that we could seriously hinder the climbers by downing our tools and refusing to do what was expected of us. (19-20)

This passage illustrates the transition in the behavior of the Varvaroi who initially surrendered their authority to the Kraani. Their gradual resistance and defiance of the control takes place due to their collective efforts which reflects the supremacy of organized resistance against repressive systems. This is a transformative shift as the power began to shift from the Kraani to the Varvaroi which exemplifies the ecosocialist ideas of resisting hierarchical power structures and promoting a fairer allocation of resources and power. Although this passage majorly focuses on social dynamics, it also makes a few allusions to the wider environmental effects of resistance. The labourers' unwillingness to perform their duties interferes with the production process, which can negatively impact the production process and can save the environment from further exploitation. Hence, this instance promotes prudent and long-term resource management that considers the wider ecological impacts of human activities. In order to create a society that is more equitable and environmentally conscious, it represents ecosocialist values that challenge power dynamics, support group decision-making, and support sustainable resource management for transformative environmentalism.

Similarly, the doctrine of ecosocialism is also portrayed in the *Jungle Nama*. The non-human entity Bon Bibi is the embodiment of justice and peace.

With Bon Bibi's blessings, Dukhey was no longer sad;  
 he lived life in contentment, not downcast but glad,  
 grateful forever to his teacher, Bon Bibi;  
 who'd taught him the secret of how to be happy:  
 All you need do, is be content with what you've got;  
 to be always craving more, is a demon's lot.

A world of endless appetite is a world possessed (49-50)

This passage offers a warning and critique of the capitalist system's "endless appetite" for more wealth and profit which is compared to the "demon's lot". This suggests that the relentless pursuit of wealth is dehumanizing and directs people to the destructive path which is harmful to both humans and nature. Furthermore, it also underscores the importance of being happy with what one has which aligns with ecosocialism's notion of sustainability and responsible consumption. Moreover, it is important to analyse the character of Bon Bibi who represents the ecosocialist manifesto. Bon Bibi guides Dhukhey who represents humanity to revere nature and live in harmony with it by not exploiting it. The eternally sad Dukhey is happy after encountering Bon Bibi as she changes his perspective about responsible consumption and equal distribution of resources. It can be said that ecosocialist values can set the standard of responsible consumption (Pinto et al. 122).

In *The Ministry for the Future*, there are many instances of ecosocialism. The novel discusses the economic disparity in the world i.e., the rich countries are getting richer by exploiting the resources and the poor are getting poorer. One way to resolve the economic inequalities, suggested in the novel, is equal distribution of resources.

There was scientifically supported evidence to show that if the Earth's available resources were divided up equally among all eight billion humans, everyone would be fine..... So the upshot of that equal division would be an improvement for all. (54)

This is a powerful portrayal of ecosocialism that advocates for equal distribution of resources which is important for sustainable living. By suggesting equal distribution of resources among eight billion people of the world, the unnamed narrator is implying that this could be used to alleviate the over-consumption patterns of



contemporary society. Also, it depicts a collective approach to ensure the well-being of all individuals of the world. This passage also critiques capitalist ideology and systems that perpetuate social inequalities and ecological crises to accumulate wealth. Overall, this passage highlights the potential benefits of equal distribution of resources, collective action, and sustainability that align with ecosocialist values. This suggests that the transition to such an egalitarian system will be transformative in the long run. Now the question is an egalitarian system really possible in this capitalist world? Robinson tries to answer these questions in the novel:

So, is there energy enough for all? Yes. Is there food enough for all? Yes. Is there housing enough for all? There could be, there is no real problem there. Same for clothing. Is there health care enough for all? Not yet, but there could be; it's a matter of training people and making small technological objects, there is no planetary constraint on that one. Same with education. So all the necessities for a good life are abundant enough that everyone alive could have them. Food, water, shelter, clothing, health care, education. (55)

This passage illustrates that the basic necessities of life such as energy, housing health, and education are adequate for all humans living on this planet if the resources are not overexploited. It does not cater to any luxurious aspect of life but only the fundamental human needs and this can be achieved by distributing the wealth and resources equally. “So the upshot of that equal division would be an improvement for all” (54). This acknowledges that there is no inherent scarcity of resources and that economic disparities are prevalent in the world because of social inequalities when the fundamental resources are owned by the elite. This implies that ecological sustainability is possible if people are trained to share the resources and use them responsibly with innovation. So, the problem with the economic system is:

That a tenth of one percent of the human population owned half humanity's wealth— that was us, yay! That half the human population alive at that moment had no assets except their own potential labor power, which was much weakened by poor health and education, that was definitely too bad. (150)

This passage reflects that a tiny fraction of human population i.e., “a tenth of one percent” owns a disproportionately large amount of common wealth i.e. “half

humanity's wealth". This extreme wealth concentration on one side is a critique of capitalist society where the profit-seeking elites overexploit natural resources and half of the world population struggles for the basic necessities of life. Thus, the people on the other end of the spectrum are left with their "labor power" which is yet again not valuable as their health and education are compromised due to lack of resources and poverty. Even to utilize the complete potential of labour power one needs to have proper education and health.

In conclusion, the analysis of the selected cli-fi texts shows complex interactions between literature, society, and the environment by incorporating themes of transformational environmentalism. Both Amitav Ghosh and Kim Stanley Robinson have portrayed that climate fiction can be a powerful tool for promoting environmental awareness and action. They have used their writing to draw attention to urgent ecological challenges, illustrate the effects of ecological rifts, and suggest possible directions for transformative environmentalism.

The analysis reveals that both authors share the same purpose i.e., to address the ecological issues prevalent in the world through transformative environmentalism. However, they have different approaches. Ghosh's texts illustrate that indigenous knowledge and local beliefs are transformative to promote or retrieve the ethical relationship between human and non-human entities. His narrative involves characters who know the ways to live in harmony with nature while acknowledging the autonomy of non-human entities. Whereas Robinson's text portrays a scientific and technology-driven style to encourage an ethical relationship with the environment. Moreover, his narrative portrays that technology can address ecological problems and have the ability to alter the behavior of people toward nature. In simple words, his narrative is more inclined towards human agency.

## CHAPTER 6

### FINDINGS AND CONCLUSION

This chapter discusses the findings and conclusion of the study. The conclusion is drawn from the comparative analysis of the selected cli-fi wherein I have explored the ecological rifts and transformative environmentalism in the selected South Asian and Western climate fiction. In this qualitative research, I have employed a comparative analysis method and the concept of Ecological Rift by John Bellemey Foster, Brett Clark, and Richard York and Transformative Environmentalism by Eric C. Otto. In light of the research questions and objectives of the study, I have found the following similarities and differences between Ghosh's "The Living Mountain", *Jungle Nama* and Robinson's *The Ministry for the Future* in terms of ecological rifts and transformative environmentalism.

This comparative study began from the research assumption that Western cli-fi is inadequate for the South Asian regional eco realities. As Western cli-fi attempts to provide a universal climate view, it omits, consciously or unconsciously, the peculiarities of the regional realities which is important for understanding climate politics. Hence, it is imperative to analyse South Asian and Western climate fiction for ecological plurality.

My first research question aimed to find out the types of ecological rifts highlighted in Ghosh and Robinson's cli-fi. The findings of this study shows that ecological rifts are present both in Ghosh and Robinson's cli-fi, but the representation of these ecological rifts differ greatly. The ecological rift represented in "The Living Mountain" and *Jungle Nama* is more subtle and complicated as compared to Robinson's *The Ministry for the Future*. The human and non-human bond in Ghosh's work is influenced not just by capitalism but by the historical, cultural, economic, social and political contexts of the region which are represented by Ghosh in the cli-fi texts as the cause of the ecological rift. In "The Living Mountain", the ecological rifts are created after the invasion of Anthropoi who view non-human nature as "free gifts" as suggested by Foster et al. in *The Paradox of Wealth*. The Anthropoi—used as a metaphor for colonizers— control the indigenous Valley and human labour which create rifts among people. Hence, we can say that colonization and the imperialist motives of the colonizers are the original cause of ecological rifts in Ghosh's

narrative. Conversely, Robinson portrayed ecological rift as a result of anthropocentrism and global capitalism only, which he explains as a threat to human life and the stability of non-human nature. The Western cli-fi is focused on “sustainable capitalism” (Foster et al. 53) and owes an ecological debt (439) to developing countries. I reached this conclusion after analyzing the texts using the “paradox of wealth” (Foster et al. 53), which was prominent in both South Asian and Western cli-fi. In both South Asian and Western cli-fi the affluent countries (developed countries), class (Anthropoi) and people (elites) are responsible for the environmental degradation and owe ecological debt. The analysis also uncovered the failure of neoclassical economics in the form of social inequalities, climate injustices, and socio-political corruption.

The second research question was how the South Asian and Western cli-fi depict ecological plurality. Both theoretical lenses i.e., ecological rift and transformative environmentalism were employed to answer this question. The findings suggest that both Ghosh and Robinson contribute to ecological plurality through the setting of the narrative, the diversity of economic systems, and the multiple principles and values that the characters have towards nature. In “The Living Mountain”, Ghosh portrays indigeneity through “warring tribes”, “Adepts”, “Anthropoi”, “Varvaroi”, “Mahaparbat” etc. giving it a historical touch through environmental colonialism. Furthermore, in the *Jungle Nama*, he contests extractive politics through spirituality and evil/good discourse and adds a cultural distinction to the narrative. Both of these cli-fi texts of Ghosh have a natural setting i.e., Mahaparbat, the Valley and Sundarban forest which are revered by the indigenous people. This reveals the environmental values and South Asian environmental imagination i.e., human embeddedness in nature. Contrastingly, *The Ministry for the Future* is set in the near future and focuses on future actions and solutions for global environmental issues. Robinson covers environmental situations like the heatwave in India, rain in Los Angeles, drought and floods in California, and glacial melting in the Arctic region which reveals his attempt to give a global climate narrative, a very typical approach of Euro-American writers. Also, the narrative is more focused on technology and scientific interventions, which are equated with environmental values. Lastly, the plurality is also revealed through different characters who share different views about their interaction with nature and the climate crisis.

The third research question was about the ways the selected cli-fi texts address ecological rifts and their impact on the environment. To answer this question, I have analyzed the texts using the concept of “rifts and shifts” (Foster et al. 73). In “The Living Mountain”, the valley people retrieve their songs and tradition of dance to reconnect their bond with Mahaparbat. This suggests that in Ghosh’s cli-fi text, indigenous episteme and treating nature as an equal being is shown as a transformative and viable solution to the climate crisis. Notwithstanding, in *The Ministry for the Future*, the ecological crisis is addressed through technological, scientific, and economic intervention without any change in the environmental attitude of humans. Although the ecological rifts get addressed for the time being, but they give rise to “additional ecological rifts” (84). It reveals that along with scientific intervention, a radical change in behavior is vital to address the rifts; otherwise, the rifts may reemerge in a different form.

The last and final research question of this study was about the role of cli-fi in transformative environmentalism which I answered through Eric C. Otto’s concept of transformative environmentalism. The results of the study suggest that Ghosh’s cli-fi work for transformative environmentalism is more radical and visionary as compared to Robinson’s cli-fi. In Ghosh’s climate fiction, transformation is employed as a method to reinvent human and non-human interaction using indigenous ontologies, oral traditions, and radical change in behavior. It gives equal rights to all beings including women and non-human entities and believes in ecological limits and equal distribution of ecological resources like in the *Jungle Nama*. On the other hand, in Robinson’s narrative, transformative environmentalism is a method of reshaping human-nature relationships that is based on scientific reason, and technological advancement, without any radical change in behavior. Although Robinson’s climate fiction is visionary, but seems less practical as it addresses the ecological issues from an economic system.

To conclude, Ghosh and Robinson both contest ecological issues in their climate fiction and propose solutions to prevent further degradation of the environment. The paradox of wealth is common in both South Asian and Western cli-fi, which means capitalism and neoliberal economics are responsible for the ecological crises. Their work is representative of their cultural values and historical understanding of the region; hence, they have profound particularities in terms of their

understanding and portrayal of the issues. Moreover, this study offers plural environmental narratives that can create new cross-connections to address the global environmental issues instigated by capitalism. Also, it can be argued that cli-fi fiction plays a vital role developing ethical relationship between human and non-human entities through understanding the foundational concepts of ecology depicted in climate fiction. This highlights an unbiased and equitable approach to human interaction with nature and the need for sustainability.

This study has contributed to the ecocritical canon by providing a comparative perspective on global environmental problems, employing ecological rift and transformative environmentalism as theoretical approach. Furthermore, it filled the research gap by offering a comparative viewpoint i.e., South Asian versus Western cli-fi that emphasizes the significance of cultural context and narrative form in producing plural environmental narratives. Moreover, it has also refuted some of the generalizations and presumptions of the Western cli-fi that depict a linear representation of environmental issues and dominate mainstream environmental scholarship. Furthermore, this study also contributes to Pakistani society. As Pakistan is one of the countries severely affected by climate change, this study can help the country to better understand climate change, raise awareness and inspire individuals to take action.

## **6.1 Recommendations**

On the basis of the findings of this study, the following recommendations are made for future researches. Future researchers can carry out comparative analysis on climate fiction from other regions having different cultural contexts and environmental problems to have a dialogue across different regions of the world to address global ecological issues. For the South Asian context, an additional theoretical framework that deals with indigeneity and historicity can be added to fully understand the connection between past and present that shapes human actions.

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