CHAPTER TWO

Climate Change and the Portrayal of Transformation in Select Fictions

In this chapter, a critical lens has been employed to magnify certain South Asian fictions that highlight the complex dynamics of transformation within the larger context of changing climate conditions. The process of transformation encompasses alterations at various levels including personal, ecological, cultural, institutional and social. Literary works enhance our perception of climate change, as it offers a portrayal of how forthcoming generations may either successfully or unsuccessfully adapt to these challenges posed by climatic shifts. Particularly, while considering change in climate conditions, it becomes crucial to prioritise discursive domains that enable us to engage practically with the present and future transformations. In addition, literary texts present ethical inquiries that encompass not only the magnitude of humanity's influence on the earth but also the choices made regarding which individuals are helped to survive or being renounced within a world gradually transformed by the effects of changing climate. To properly understand this phenomenon, one must inquire into its scientific details as well as its cultural implications. Hence, this chapter turns to a select assortment of South Asian novels and analyses them "as an intervention in the predominantly scientific and techno-managerial engagement with anthropogenic climate change" (Mehnert 4). Authors of contemporary fiction challenge the notion that discourses on risk scenarios are solely the purview of scientific inquiry. The novels under consideration explore the manifestation of risk and its impact on society and culture thereby presenting a unique and inventive means of communicating this pressing issue.

Climate change and other forms of global changes are gaining more and more focus, and with them, the idea of transformation arising from ecological crises. The capacity to adapt to such crises encompasses both the social and cultural factors essential to allow adaptation and the capability to mobilise them. The term "adaptation" refers to both the decision-making activities required to administer changes and a collection of measures taken to retain the capability to respond to present or future change. Within the context of adaptation strategies implemented in response to climate change, Sarah Park et al. (2012) describe transformation to be "a discrete process that fundamentally (but not necessarily irreversibly) results in change in the biophysical, social, or economic components of a system from one form, function or location (state) to

another, thereby enhancing the capacity for desired values to be achieved given perceived or real changes in the present or future environment" (119). In accordance with the above definition of transformation, the primary emphasis of this chapter revolves around the changes taking place within the biophysical environment, which impacts diverse aspects of both human and nonhuman existence. The term 'transformation' used in this chapter denotes a marked change in the environmental conditions along with the change in human perspectives from a previous state characteristic of mutual benefit to a disruptive force that is addressed in select South Asian fictions. Apart from this fundamental understanding of the term, the idea of transformation has also been used to portray the growing awareness of the need for massive and substantial change in the functioning of society, culture and politics to adapt to the challenging circumstances presented by the phenomenon of climate crisis. This phenomenon of incremental or gradual alterations in the environmental conditions leads to subsequent changes in the functioning of the natural world affecting its biodiversity, species interactions and ecosystem dynamics. Both deliberate and unintended choices and acts can have transformative effects.[1] However, transformation adaptation tactics necessitate deliberate choice and decision-making. In the pursuit of achieving desired goals, the process of adaptive transformation is often employed. For instance, in the context of climate disaster mitigation, national authorities have been known to adopt authoritarian policies as a means of addressing the consequential losses. These policies, characterised by a stringent control mechanisms, are implemented with the aim of affectively managing the adverse impacts of climate-induced events. Nevertheless, it is important to acknowledge that such transformations can yield both favourable and unfavourable consequences. While considering the changes caused by the climatic shift, Karen O'Brien and Linda Sygna (2013) define transformation as a "complex process that entails changes at the personal, cultural, organizational, institutional and systems levels" (16). Major climatic shifts, coupled with various other alterations in the environment, are playing a significant role in instigating transformative shifts within the earth system. These shifts encompass modifications in the extent of ice coverage, fluctuations in sea levels, transformations in ecosystems, redistribution of different species, and the occurrence of catastrophic events. The significance of adaptation as a crucial strategy in addressing climate change is widely acknowledged. However, recent studies have shed light on the growing necessity of pursuing transformational adaptation in certain regions.

In this study, the concept of transformation, as depicted in selected novels, encompasses not only the theme of alterations to the environment initiated by human activities but also other socio-cultural dimensions of transformation arising from catastrophic events. These above mentioned ideas open up interesting possibilities for research into how to view substantial and fundamental transformation in response to pressing global concerns. In an even more interrelated world, climate change, in conjunction with other global challenges such as uneven management of resources, water and food security, and increased consumerism, is posing serious threats to human well-being. Mark Whitehead (2014) comments, "[G]eographical perspectives on processes of environmental change are not only important because they supplement historical accounts of ecological transformation. They also have the potential to transform our understanding of the consequences of environmental change" (7). Modern societies are distinguished by the fact that they have adopted progressively counterproductive modes of interacting with the biophysical environment. The mounting evidence supporting human-caused global warming has far-reaching implications for our ability to make sense of the past climate patterns and plan for the planet's future. The complexities of anthropogenic activities leading to changing climate patterns are not simply a subject of environmental factors; rather, they are, in the first place and mainly, a question of culture, economy and society. The creative works of the authors reveal a profound understanding of the crisis at hand, exhibiting that it is no longer a distant concept but rather a tangible reality. Through the trials and tribulations experienced by the fictional characters in their texts, the authors effectively emphasise the ongoing struggle faced by individuals in a society constantly confronted with the transformations caused by the climate crisis. The novels selected for this study illustrate how anthropogenic activities are contributing to climate change, which in turn is causing significant transformations in the ecological conditions, culture, society, economy and politics of various nations. The vestiges of unfavourable circumstances brought on by climate change can be traced in each of the novels as they portray how the lives of humans are irreversibly altered as a result of environmental degradation.

Before discussing the textual moments of human struggle as represented by the authors, it is necessary to shed light on the issue that there are more to environmental issues than just human influences including but not limited to loss of biodiversity, land surface changes, climate change, availability and quality of water and many others. According to Karen O'Brien (2010):

> They are manifestations of modernity, symptoms of dominant patterns of development, outcomes of social relations, and products of short-sighted visions, which are closely linked to beliefs, values, and world-views. Consequently, a deeper understanding of the role of human beings and their social, cultural, political, and economic relations is needed to foster the large-scale transformations in human attitudes, behaviours, and systems necessary to respond to what scientists consider to be an 'overstepping of planetary boundary conditions' in a complex, interconnected Earth system. (542)

She suggests that there is a need for an atypical discussion on global environmental change that incorporates varied viewpoints conforming to deep insights into the process causing global transformation and expands on the human dimensions beyond the constraints of categorising human factors as 'social' or 'non-social' within the earth system's framework for environmental issues and the dominant scientific rhetoric. Climate change necessitates acknowledging multiple viewpoints on human-environment relationships, alternate economic pathways, new political paradigms, shifting power configurations and various ways of looking toward the future. The urgency of the matter has led to the crucial consideration that fiction about climate change has a beneficial eco-political influence since it helps readers imagine possible climate futures and advocates for convincing those readers of the pressure and immediacy of climate change. Antonia Mehnert (2016) observes that fictions on climate concerns provide "insight into the ethical and social ramifications of this unparalleled environmental crisis, reflects on current political conditions that impede action on climate change, explores how risk materializes and affects society, and finally plays an active part in shaping our conception of climate change" (4). Understanding this unusual phenomenon requires situating it within a wider context of narratives and discourses, which as well necessitates an awareness of the cultural and social domains through which climate issues are pushed to the frontline. Hence, great value of fictions about climate change rests in its ability to convey engaging tales, not only about the threat of climatic breakdown but also about chances to rebuild social and cultural frameworks in order to prevent disasters at its source. As the devastating impacts continue to disproportionately affect the nations of the global South, it becomes plausible to anticipate that signs of the Anthropocene will be discernible with insight and heightened awareness within the corpus of South Asian

Literature. Prior to delving into post-millennium novels, the focus here is on exploring this corpus to retrieve literary treasure which reflects upon the gradual unfolding of contemporary concerns. Romesh Gunesekera's 1994 novel *Reef* exhibits a foresight that is ahead of its time on the outcomes of affected climate patterns that were then accorded scant attention.

The Sri Lankan literary archive has been largely shaped by the socio-political issues of the country, particularly the civil war, ethnic tensions, and nationalist discourse. As a result, the themes and motifs explored in Sri Lankan novels have been heavily influenced by these factors. However, instead of using fiction as a mere record of political troubles, Gunesekera's *Reef* employs ecological factors influencing Sri Lankan society and culture. In doing so, Gunesekera provides a necessary re-evaluation of the dominant tendencies in Sri Lankan literature in English. Ranjan Salgado, one of the central characters in the novel, is a marine biologist of Sinhalese descent. His research focuses on the hastening of coral erosion and reef bleaching in Sri Lanka, which was then called Ceylon. Through his scientific investigations, he gathers a significant amount of information that supports a conservation drive undertaken by the government. Salgado reluctantly decides to undertake the government-sponsored project to collect information on the "disappearing" coral reefs of the island (Gunesekera 48). His research includes polyps, the extremely delicate small organisms that build and inhabit corals. The survival of polyps is highly dependent on the stability of their immediate environment. Even minor alterations in this environment can have fatal consequences for these organisms (Gunesekera 48). The destruction of polyps may result in the parallel destruction of reefs. Salgado's hypothesis asserts: "[I]f the structure is destroyed, the sea will rush in. The sand will go. The beach will disappear" (Gunesekera 48). A gradual reduction in the self-renewing ability of the polyps can result in the collapse of the entire structure, ultimately creating a possibility for the encroachment of surging seawater to the coastal area. The phenomenon called coral bleaching happens as a result of fluctuations in marine water temperature or higher water salinity levels, leading to detrimental outcomes for the photosynthetic organisms like algae that provide nourishment and vitality for the polyps. This, in turn, leads to a transformation in the pigment of their limestone shells and ultimately culminates in the destruction of entire reefs. As rightly pointed out by Salgado, the documentation of minor-scale bleaching through various surveys can be traced back to the 1880s (Gunesekera 47). The onset of the initial widespread occurrence of mass coral bleaching events on a large scale can be traced back to the early 1980s, characterised

by the whitening of coral reefs over a period of a few weeks (Hoegh-Guldberg 395). Salgado's anticipatory reflections indicate that he possesses an early understanding of an impending catalyst for the extensive degradation of coral reefs, which he predicts will manifest nearly a decade and a half prior to becoming a reality. In the end, his predictions have culminated in becoming reality. In his novel, Gunesekera seems to have portrayed Salgado as a forerunner in the investigation of the idea of mass coral erosion, an occurrence that had already gained considerable attention by the time the author commenced writing the novel. Through his conjectures, Salgado offers a cautionary glimpse into the potentially bleak future that awaits Sri Lanka. With the help of his astute observations which seem to possess an almost prophetic value, the author presents readers with a possibility of the island being engulfed by the forceful surge of the approaching ocean. This vision materialised in the year 2004 when on 26th of December the Indian Ocean Tsunami ravaged the shores of the island. Moreover, the effects of catastrophic consequences were more severe in regions that had undergone coral bleaching, extraction or mining (Lavery 92). Another protagonist of the novel Triton's initial encounter with the sea is fraught with similar apprehensions. He harbours a palpable fear of the sea and its power to cause harm, which is indicated by his belief that "the sea would be the end of us all" (Gunesekera 60). The imagery of the waves encroaching ever closer serves to heighten the sense of impending doom and underscores the character's sense of vulnerability when confronted with the immense and capricious forces of the natural world: "During those two nights we spent on tour I felt the sea getting closer; each wave just a grain of sand closer to washing the life out of us" (Gunesekera 60). In the midst of escalating temperatures, Triton reminisces about the idyllic ecological splendour of the island during his childhood days, he revelled in the experience of breathing "pure, deathless air" (Gunesekera 33). He later missed the tank or the reservoir which was "a sea made safe by human imagination, a vast expanse of water that ensured the health of our bodies and our minds and soothed our graceless lives" (33). He expresses a sense of melancholy upon realising that the urban landscape has been stripped of its once comforting water bodies: "The city lacked such water" (33). The residence belonging to Salgado lacked any discernible water body, save for instances of rain. Triton's statement reflects an acute awareness of the unpredictable nature of weather patterns and the gradual increase in temperature when he says, "But even the rain quickly ran off; within an hour the place would be baking" (33). In their collaborative effort to construct a small pond or a tin tank, Triton and Salgado experienced a

complete failure, leading Triton to express regret for their "more refined archaeological past" (32). The unsuccessful outcome of their undertaking implies that the engineering of resources by humans in an environment where people have gradually developed apathy towards the ecological system leads to complete failure. The observed decline in the condition of water bodies suggests an underlying and often overlooked process of transformation that gradually erodes the natural splendour of the place.

In the novel, Salgado's elderly cook Lucy-*amma* has lived through multiple cycles of ecological transformation of the island and has thus been witness to the gradual alterations in the environment: "The place where she had been born had turned from village to jungle and back to village, time and again, over her seventy-odd years. The whole country had been turned from jungle to paradise to jungle again" (Gunesekera 15). The author indicates that a reconfiguration of temporal and spatial spheres is always underway in order to restore equilibrium between the nonhuman and the human world. Similarly, this text highlights a significant shift in Triton's perspective about the happenings around him, initiated by Salgado's discussion on the historical aspect of geological transformation. Through Salgado's lecture, Triton gains exposure to a more significant historical narrative than the one he is familiar with:

> You could say Africa, the whole of the rest of the world, was part of us. It was all once one place: Gondwanaland. The great land-mass in the age of innocence. But then the earth was corrupted and the sea flooded in. The land was divided. Bits broke and drifted away and we were left with this spoiled paradise of *yakkhas* – demons – and the history of mankind spoken on stone. That is why we in this country, despite the monsoon, love water. It is a symbol of regeneration reflecting the time when all evil, all the dissonance of birth, was swept away in divine rain leaving the gods to spawn a new world. That was the real flood; Noah's is just an echo. The kings who built the great tanks maybe were remembering that cleansing flood, just as we do. (Gunesekera 84)

Salgado's observation in this speech posits that the process of transformation has been underway since the inception of earth's evolutionary period. While the catastrophic consequences of floods are undeniable, it is equally important to acknowledge the transformative power they possess, as

they have the ability to both destroy and rejuvenate any landscape. Salgado's speech also helps in kindling Triton's knowledge about the colonial past which is evident in his reflection:

> [T]he whole of our world come to life when he spoke: the great tanks, the sea, the forests, the stars […] His words conjured up adventurers from India north and south, the Portuguese, the Dutch and the British, each with their flotillas of disturbed hope and manic wander-lust. They had come full of the promise of cinnamon, pepper, clove, and found a refuge in this jungle of demons and vast quiet waters. (Gunesekera 85)

The excerpt shows that the novel elicits a temporal displacement that encompasses a broad spectrum of colonial history, while simultaneously incorporating a recurring, cyclical progression of natural transformation. Set during the backdrop of the civil-war, Gunesekerea in this novel directs the reader's attention towards the more gradual and obvious forms of violence, such as the lingering effects of colonial exploitation and the gradual degradation of the environment.

In *Reef*, Gunesekera subtly explores the ecological and political concerns that arise from the launch of the Mahaweli Dam Project. The novel highlights how the autocratic ideologies and political narratives that are employed to justify the project divert attention from actual environmental emergencies such as coral erosion and sea-level rise, while perpetuating the hegemonic policies of the neo-colonial government. The novel is characterised by a deep-seated consciousness of the ecological predicament dealing with Sri Lankan reefs, which are presently damaged as its inland forests. The discontinuation of government funding for Salgado's coastal project coincides with the launch of the irrigation initiative: "a nationwide concern for *inland* seas grew as politicians invoked the spurious visions of ancient kings. All our engineers, trained in London and New England, suddenly saw great advantages in reviving the traditional skills of irrigation" (Gunesekera 119). As the government makes necessary preparations for "the inauguration of the era of the Mahaweli Scheme" (Gunesekera 120-121), an immense transformation in inland irrigation, unparalleled for centuries, leading to the redirection of the largest river in the region, Salgado's project on the coast monitoring coral reef bleaching "passed its zenith" (119) and it appeared that he failed to duly notify the governing authorities regarding

probable dire ecological consequences associated with this irrigation-based project: “siltation and increased salinity, destruction of habitats in a biologically rich region, and a disastrous reduction of the great river’s watershed to 8 percent of its former capacity, leaving the entire region vulnerable to floods and erosion” (Deckard 44). In the concluding sections of the novel, Salgado, exiled in England, ultimately renounces the nationalist myth that conflates the idea of ecological transformation and technocratic advancement. Instead, he realises: “The urge to build, to transform nature, to make something out of nothing is universal. But to conserve, to protect, to care for the past is something we have to learn” (Gunesekera 178). His thoughts are indicative of a need for conservation and protection that should adhere to a constructive transformation regardless of its obscure process of manifestation.

The novel offers a commentary on the tendency of people to exploit natural resources without regard for eventual consequences. In the course of Triton’s maturation, it is observed that he acquires knowledge at an early stage that “nature takes her course unless you work hard: things go out of control” (Gunesekera 51). In the light of this knowledge, the author portrays the ocean’s insatiable hunger for land, which will ultimately result in the “land turning into sea” (84). This theme is woven throughout the narrative, with numerous indications of sea level rise scattered throughout the text. The early signs of the phenomenon of increasing sea levels have been conveyed through the “report in the newspaper about the encroaching sea” (86). Salgado’s concern over the deteriorating state of the island’s coastal environment instilled a sense of unease within him. This prompted him to dream about making a sea sanctuary along the entire coast, free from any human interference, in order to preserve the “real refuge” from further degradation. Salgado is quite ahead of his time, as his observations show that throughout history, there has been evidence to suggest that human intervention in natural processes has often resulted in negative consequences: “the trouble is all these people. People who want to live just for today. Let tomorrow take care of itself, as if nothing ever matters but their own moment of passion” (Gunesekera 162). The Anthropocene is marked by this significant trait of human agency prevailing over natural processes. In instances where circumstances get beyond human control, the natural world inevitably asserts its power, leading to the destruction of all man-made structures. Gunesekera’s novel has already shown how climate crises have drawn attention of the writers to articulate the concerns of their countries. Other authors have also used this opportunity to offer multidimensional writings because this crisis is not limited to a particular region.

Understanding the interconnection of the world in the Anthropocene requires an ever-increasing emphasis on perceiving environmental aspects as not insignificant but crucial. The more recent novel *Latitudes of Longing* (2018) by Shubhangi Swarup describes- "an interconnected web of agentic actors that each operate on different levels of influence. The novel depicts the nonorganic nonhuman forces as immanent planetary agents who ultimately shape and dictate life on earth" (Rahn 246-247). The influence of these "agentic actors" is visible throughout the novel deliberately shaping the lives of the protagonists and their experiences in a transforming world. The novel's themes are heavily influenced by geological actors such as the Andaman Island's archipelago that both shapes and is changed by colonialism, the fault lines that determine the lives of its characters, and the elements of water, snow, and caverns. Swarup's novel is not only about natural elements like water or snow but also is an ensemble of several geographical places that encompass various geological domains. The varied topography of the Indian sub-continent, from islands to hills to plains to valleys to snow-capped mountain ranges, is the major feature of the novel. These regions are connected to one another by a single subduction zone, which is the area where the continental plates split apart. Naturally, the diverse geological domains present in the novel are inherently influenced by a multitude of climatic phenomena. In the early part of the novel, the Andaman Islands are devastated by an unprecedented earthquake though "all it really took was a minute. One minute, for the ocean bed to collapse and rise like a phoenix" (Swarup 85). The ocean sank lower as the land pressed down on it, only to erupt with double the force when it was released. It is not often that a planet's entire essence is jolted by a struggle on its crust, the shell of its existence. Since seismograph was first invented, the 1954 earthquake has been ranked as the second largest. The fault line showed up for the longest time ever seen. Researchers linked the catastrophe to numerous further earthquakes, tsunamis and tremors felt as far away as Siberia. The survivors are stuck in that one minute of absolute darkness. The risk ultimately led to a lack of imagination as people became fixated on the visual spectacle of alarming transformation:

> The ones who survived are forever trapped in that minute, one of sheer blankness. It isn't presence of mind that has betrayed them. Nor is it a loss of memory. It is a failure of imagination. No one could have imagined that the solid ground that held the islands, the ocean, the reefs, the forests, the rivers, would be ripped apart in less than a minute.

> Centuries of wilderness and civilization would crumble into clouds of dust, as vulnerable as an anthill in the path of a possessed elephant. (Swarup 85)

The "blankness" of imagination can be attributed to the human limitation in envisioning the profound transformations that nonhuman forces exert on geological formations, ultimately leading to the creation of new patterns of elemental composition. As a result of the earthquake the sea pounded against rocks in some places and cliffs crashed into the ocean. There were reports of rattling windows in locations as far away as the Persian Gulf. When Indonesian volcanoes began spewing smoke, the farmers who were working the slopes were compelled to kneel and pray. However, the author assumes that the extraordinary transformation mentioned here may not be duly recognised as real by subsequent generations who have not practically encountered the phenomenon. The profound impact of climatic events on the environment is so prominent that future generations will inherit a planet where the intimate connection between humanity and the natural world may appear implausible to them. Ecological transformation raises important questions about the sustainability of our current practices and the ability of future generations to forge a meaningful relationship with the environment: "Children born in the aftermath would dismiss their parents' stories and ancestral myths as tall tales born from the imagination of fools – the same fools who built a lighthouse in one and a half metres of water and went fishing on dry land. The gap between generations would turn into a gulf between people who inhabited different maps" (Swarup 86). This excerpt implies that future generations will find it inconceivable that their predecessors, hailing from different regions, were as foolish as to disregard the signs of nature, and that they became unable to anticipate the imminent perils resulting from the transformations occurring within the natural world.

In the event when unnoticed climatic shifts manifest as a severe catastrophe, geographical boundaries and spatial distance hold little significance. Swarup's protagonists, Girija Prasad and his wife residing in Calcutta, a long way from the Andaman Islands, felt the tremors of the quake as well. The government of the Andaman Islands was obliged to start an adaptive transformational drive by constructing a brand-new road over the skeleton of the former one due to the extensive damage to the road that spiralled up from the harbour onto the hilly terrain. Farmers were forced to evacuate their paddy fields because seawater intruded where even the

highest tides could not before the earthquake. Most of the island's authoritative colonial constructions and ambitious imperial structures had been mocked by the earthquake. The Goodenough Bungalow, where Girija Prasad lived, managed to survive by tilting in order to line up with the axis of the earth. The author tries to portray that the course of a river and the tides of an ocean can alter the fates of entire species, not just civilisations: "In the Andaman Sea, each island is a person and each person an island. Tremors and quakes are common, eager to exact their inch of land and pound of flesh. Everything here, including the sea, belongs to the ocean, and will be claimed in due course" (Swarup 98). While the human settlements are under threats of annihilation as colonial agencies emerge and go, the enduring existence of the island's wildlife and vegetation surpasses that of every human settlement. During the course of the novel, the human capacity for action is shown to be severely constrained in the face of natural disasters.

Girija Prasad and Chanda Devi, navigate an incredibly illuminating experience when they are on the islands and in the mountains around the sea, an ecology that is the product of geological occurrences that unfolded several million years back. The novel's profound sense of environmental and geological aesthetic emphasis is rooted in the subduction effect during the tsunami that strikes the Andaman coast, mobilising the intrinsic geological connectivity. Gaana Jayagopalan (2021) asserts that the novel's "Islands" section is the "epicentre of the novel and the other sections can be read as their seismic waves" (170). The novel's main emphasis includes the complex interaction between people and catastrophic occurrences, as they are linked across both temporal and geographical dimensions. The narrative's greatest strength is that it employs the novel form to narrate the interconnectivity among various life-forms spanning fault lines while adeptly situating loosely interwoven stories bearing the traces of the Anthropocene. Jayagopalan further argues that fiction as a medium "enables this movement by locating different disasters as connected by their geographies – a tsunami in Andaman, a political insurgency in Myanmar, an earthquake in Nepal, and the no man's land in the Karakoram range" (Jayagopalan 171). Reading the novel is like witnessing individual catastrophe stumbling through a seamless space-time continuum, which connects the historical past and the prospective events with the present. The novel by Swarup highlights the role of earth's precarity in establishing emotional geographies that span across time and space, allowing for a more nuanced literary approach to the Anthropocene.[2]

The protagonists are living in a world that is under the process of transformation. Girija Prasad and Chanda Devi have gradually become fully aware that the world they inhabit is not a static environment; rather, it is one that is continually moving and exquisitely webbed, both literally and figuratively. After reaching the Andaman Islands, Girija Prasad learnt- "no island is an island either. It is part of a greater geological pattern that connects all the lands and oceans of the world" (Swarup 10). His confidence in this knowledge was supported by the discovery of a thriving specimen of a plant in the Andaman Islands that was earlier seen as a fossilised remain in central Africa and Madagascar. This assumption is the result of his long time research conducted on "an impossible jigsaw", the supercontinent Pangaea, which is the progenitor of all continents: "a single entity that splintered into all the pieces of land that exist – a possible explanation for the plant near his house as the Indian subcontinent broke off from Africa and rammed into Asia" (Swarup 10). This phenomenon of continents drifting apart and their subsequent formation of diverse geographical characteristics have been instrumental in the gradual transformation of environmental patterns. This intricate process has ultimately given rise to a distinctive ecology which has been inherited by both the human and nonhuman species across the globe. In the second section "Faultline", the author describes Burma as a "weeping eye was all that was left of the face, buried under rubble" (Swarup 138). Burma is squeezed between Asia and India. It is drifted north by India, and squeezed defiantly by Asia to the east. The aquiline borders of Burma have been gouged to create insurmountable peaks and gorges. Its surface has deteriorated into a combination of soggy jungle and arid desert. The once-beautiful landscape, including the steep mountains and lush islands, is now reflected as a desolate gloom. From its periphery to its centre, it is crisscrossed by fault lines, the largest of which is the path taken by the powerful Irrawaddy River, which cut through the centre of Burma and ultimately link the country's lowland islands to its highland Himalayan regions. Burma is never going to be able to integrate in with the multitudes that surround it no matter how intense the strain is. Nonhuman forces have left no choice for it but to crumble.

Human's insatiable need for wealth and power has led them throughout history to exploit natural resources for their own benefit as is the example of Burma, which is "blessed with all the precious gemstones and metals of the world, Amber, emeralds, jade, pearls, gold, platinum, even the world's biggest sapphires and rubies" (Swarup 171). It was widely held by the colonisers: "If they lose the mines, they lose the war" (172). The Kachin boy in the narrative remarks that

nature itself makes people indulge in "a fight over resources" (172). This is the reason that the environment has often been manipulated and traded for financial and political gain, as in the novel it happens with the smart Calcutta-based businessman who is offered the contract of the neighbouring forests full of timber of the Andaman Islands to exploit unconditionally. The governing authorities wanted a township in return. But he failed miserably while exporting matchstick from the island. As a part of the Project Kalpavriksha, Rana, the geologist, attempted to plant and grow some saplings in the no-man's land, with the hope of solidifying India's ownership of the territory. However, due to its extreme climate conditions, glaciers are the least suitable environment for plant life. The survival of the saplings was the hope of the entire nation, and even the Prime Minister was showing an unusual amount of interest on the matter because: "Should the experiments succeed, the Indian government will use the UN's guidelines on disputed territories to claim ownership over the glaciers. The first person to cultivate a piece of land can stake claim over it, one of its clauses states" (Swarup 313). Despite Rana's best efforts to safeguard the four saplings, one died, two were in critical condition and only one survived. It does not matter how far the nations go to expand and occupy geographical terrains through political decisions, they are still ill equipped against the forces of nature. Climate change undeniably affects global societies and politics. The inquiry at hand pertains to the manner in which the transformation of the environment takes place. The outcomes of changing climate patterns have been observed to exert a significant amount of stress on the fundamental frameworks that hold our societies together. Humans also nurture aspirations to find opportunities to utilise the resources offered by nature. The process of transformation necessitates the ability to both envisage and implement sustainability conjointly. Lukas Hermwille (2016) claims,

> For this transformation, international governance is required to develop, engrain, and legitimise normative concepts of how to address environmental concerns concurrently with wider social and economic challenges. International governance is required to ensure the participation of all relevant stakeholders; in the case of climate change it is critical that those who are most vulnerable to climate change remain part of negotiations. And international governance is required to ensure reflexivity because the required transformation will necessarily lead to a change in collective as well as individual value and assessment schemes over time. (20)

Lack of reflexivity ultimately results in the failure of the initiatives like the Project Kalpavriksha whereas there remains every possibility of success of the endeavour. Rather than being perceived as an inherent component of the natural transformative process, human agency is increasingly characterised by a distinct inclination towards establishing a profit-driven relationship with the environment. This transformation in perspective reflects a broader societal trend wherein the pursuit of economic gain has come to dominate the human-environment dynamic. Consequently, the novel shows that the core interconnectedness between human activity and the natural world has been supplanted by a paradigm that prioritises financial considerations over ecological harmony.

With all the explorations going on, the earth is constantly changing, with mountains collapsing, islands rising, and continents slowly colliding with one another. All life forms are engaged in a "primal struggle for survival" regardless of their fundamental distinction (Swarup 164). Instead of focusing solely on the history of the people of the subcontinent, Swarup's insight reveals the planet's own inner history; an evolution and struggle to attain present form. This struggle is intensified by human interference as the twenty-first century is marked by massive and unregulated expansion, world conflicts, urbanisation, capitalism, globalisation and self-centred behaviour exhibited by human beings whose pursuit for superficial and transient comfort and careless longings have led to a disregard for the broader natural existence. Such a perspective has paved the way for the materialisation of the era known as the Anthropocene, also referred to as the age dominated by human influence. The Anthropocene epoch is widely understood as the time in human history when humanity's dominance over the rest of the natural world has peaked, a phenomenon enabled by scientific and technological progress and the digital revolution. Human survival and well-being are now directly threatened by the insensitivity shown to ecology. *Latitudes of Longing* tries to focus on the possibility of failure of human imagination to gauge appropriately the underlying process of the environment in absence of a predefined structure of its principles. Girija Prasad often asserts that research investigations come off as ineffective, uninformed, and misguided due to the fact that the principle and working of nature have been beyond the capabilities of scientific knowledge and technology. The ecosystem is always shifting to accommodate the day-to-day struggles for survival, which has

resulted in nature being more evolved and adaptable. Through such a profound comprehension of the environment, we recognise that "one cannot judge the natural world by human laws" (Swarup 64) because it does not follow the rules of science in the same way that the scientists expect it to. In her novel, Swarup focuses a lot of attention on the colonial mindset of the imperialist powers, and one example of this is when she writes that all they desired were "tigers to shoot and the dream of the British Raj would be complete" (Swarup 92). In the Himalayan hill stations, they constructed summerhouses reminiscent of those found in the English countryside. As the dominating attitude of anthropocentrism and individualistic endeavours has been fused with the capitalistic desires to dominate the resources, humans have gradually wandered away from their connection to the natural environment and toward a more personalised one. Colonisation sought to map the globe in order to manipulate, exploit and dominate the non-Western world's natural resources for economic and political advantage, which further exacerbated the already existing strain between humans and their environment. Swarup's work addresses this issue, in which the lush Andaman Island was perfectly in tune with the nature's laws but "the only exceptions to the rule were the British themselves" (Swarup 15). The colonisers' desperation to break the resistance of the natives led them to devise complex methods of torture that "had broken most laws of nature" (15). With this perspective, which seeks to put human desire at the centre of all ecological policies, transactions and activities, we become conscious of the domineering mindset embedded into us and recognise the arrival of the Anthropocene.

The novel depicts a tranquil society living in a snow desert, where the advent of modern technology has brought the use of agricultural machinery to the region. Apo, the eighty-seven years old village patriarch, sees "gigantic machine pillaging his precious crop" (Swarup 261) and he repeatedly calls the machine a "monster" which is ruining his village. He blames the government and technology for his current state of misery. The winnowing machine, a cursed monster, has made the local fruits dusty by "spewing dust for miles, contaminating their souls and fruits alike" (Swarup 262). Ideologies have shifted from an emphasis on living in harmony with nature to those of the modern scientific and technologically enlightened civilisation, which has been largely influenced by western culture. Apo makes a profound observation about the omniscience of nature and the veracity of existence as he remarks: "There is no escaping it. Even if the gods of machines and technology come down to help you. […] Even if India, Pakistan and

China stop fighting over the ice and unite to remain there, the mountains will win" (Swarup 29). On one occasion, Apo described the monsoon season in the Karakoram Mountains to Ghazala, the old Kashmiri widow. The snow desert was home to nomadic people who, along with their livestock, must constantly fight for survival due to the region's extreme and erratic weather: "In Hindustan, the rains are god. Here, they are death" (Swarup 275). Apo recounted that a cloud burst over the peak produced massive rains that flooded the settlement. That night, the villager's homes were destroyed on the eastern side, and everyone fled for their lives. Apo himself got knocked out by a thunderstorm in the wastelands and wound up in the village. He got bruises from the rain since the drops were so voluminous and powerful. Ghazala suspected that a heavy rainstorm would wash away the mud houses of the village. The subduction and geological forces at work on this planet provoke transformation to its geography, which the narrative emphasises together with the fact that it is a dynamic environment for humans. Swarup highlights the unique, ever-evolving nature of the mountains, which are found in a state of transformation that contradict the human tendency to view the natural world as static and everlasting:

> What the human mind perceives as an unvanquished distance is all a matter of height. For the Tibetan plateau is higher than the highest peaks of all other continents, and it is still rising. Or so the nomads, the future human inhabitants of this plateau, believe. The snow desert shows no signs of belonging to this earth. It hovers somewhere above. (Swarup 279)

During an interaction with Rana, a geologist and Girija Prasad's grandson, Apo declares that the "Karakorams are tilting" (297). He even asserts that they are "rising up and pushing the Himalayas down. All the mountains of the world have a new king – Kechu. It is just us humans who refuse to accept it" (297). In his passionate plea, Apo advises both the scientists and the military forces to immediately leave the glaciers, asserting that such a course of action is the sole means by which they can ensure their safety. From the scientist's great yearning to predict nature's law to the orogenic processes of the glacier, Rana has witnessed a remarkable transformation unfold. On the other hand, Apo, whose local knowledge is extensive, observes that the earth's bruises and wounds can never heal so long as human blood seeps into the crevices:

> They can only fester. Your violence and your wars are like gangrene to the earth's flesh. You possess gadgets that can take you to the moon, yet you are blind to the mountains and rivers right in front of you. We have hacked Hindustan into a hundred islands with our borders, mutinies and wars. It is crumbling into the ocean. The Kechu is rising because the Himalayas are sinking. (Swarup 298)

Indifference and ingrained hubris of human beings have rendered them impassive towards observing natural phenomena which are influenced by their activities. The current state of adversity can be attributed to the prolonged apathy for the multilayered interdependence between human and nonhuman. Rana, the scientist, visits the Siachen glaciers not long after the renaming ceremony that acknowledges India's new political stance by renaming the glaciers as the Kshirsagar Glacial Complex. The previous name, Siachen, is deemed insufficiently patriotic by the government to warrant spending more than half of the nation's defence budget on it, an amount more than that used for national healthcare. After unprecedented natural disasters like avalanches, tectonic upheavals and glacial melting, global pressure rises to demilitarise the region highlighting its political mess.

The novel shows how historical and political conditions, as well as individual actions, can have far-reaching consequences that extend beyond the realm of human imagination. Renaming locations or objects of nature has little to do with the progressive geological changes, as seen by the wide nomenclature linked with naïve patriotic endeavours. Renaming places and redrawing national borders can only affect change on the surface; but the core of the environmental transformation and its mechanism remain unexplored due to human arrogance and ignorance. Swarup, through her novel, imagines the earth as an all-encompassing, powerful entity that can challenge any attempt made by human at establishing static meaning in life, whether it be in the domain of politics (through concepts like nationalism), the sphere of science (through ideas of evolution) or the domain of interpersonal and social relationships. Earthquakes, floods and any other climate disaster have the potential to permanently transform the features of a landscape, destroying the very foundation upon which human societies are built. Therefore, names, meaning systems and the realities that are created by humans are all ephemeral. National borders are points of contention between various geographical spaces. Swarup portrays the no-

man's land as a contested territory claimed by both Pakistan and India. Hills, glaciers and mountains in the Karakoram region, however, always end up having the power to determine, as their ever-shifting topography consistently foils attempts at securing stable territorial boundaries. In the end, the land itself records its own existence, meaning and boundary imposing their meaning on it; rather than countries like India, Pakistan or China: "The invisible political borders are constantly in flux" (Swarup 266). Only by putting aside territorial differences can nations together effectively combat the consequences of changing climate patterns. Detrimental impacts of wars and mutinies extend beyond the destruction of living species, as they also purposefully impact the delicate balance of the natural environment. The unpredictable changes occurring within geological formations are paralleled by a corresponding shift in climate patterns, which are increasingly manifesting in ways that pose significant threats to the planet. Ecological challenges are no longer only local or national ones; they have become planetary ones that, if left unchecked, can lead to the destruction of the earth and our entire civilisation. Swarup's novel meets the need for a centralised, homogenised narrative on ecology, from which we may better understand the issues in the field and try to identify potential solutions.

Not only Shubhangi Swarup, the rich archive of South Asian literature consists of other writers such as Uzma Aslam Khan, who has portrayed similar issues revolving around environmental degradation and climate change. Khan's *Trespassing* (2003) provides insight into the transformation of the natural world of Pakistan. This work is her investigation into the effects of human invasion, dominance and violence on the natural world and the marginalised native communities of Karachi. Khan's narrative portrays the struggles of the indigenous communities due to environmental degradation. The novel's protagonists, Dia, Daanish, and Salaamat, all play witnesses who offer insights about the country's social, political and ecological transformations. From the very outset of the novel, human influence over the nonhuman world is made clear by multinational corporate and industrial influence on native ecosystems and resources. The author's general outlook on the environmental degradation is reflected in the very first pages as the "PROLOGUE: Death" describes a turtle digging its nest:

> The fishing boats dock before the dawn, while the turtle digs her nest. She watches with one eye seaward, the other on the many huts dotting the shore. The nearest is just thirty feet away. She burrows fiercely, kicking up telltale showers of sand, recalling how much

> safer it had been when the coastline belonged to the fishermen. Now the boats sail in like giant moths, and though she wonders at their catch, it is for the visitors from the city, hidden in their huts, that her brow has creased beyond her age. (Khan 1)

The novel's central environmental concern is the collapse of wildlife and nature due to human aggression. It highlights how industrial business interests have encroached onto the land of indigenous Indus valley fishermen, leaving a filthy, wasted and damaged atmosphere: "People talked of how the country was in a state of transition" (Khan 13). The prologue of the novel depicts the gloomy tale of how humans have exceeded their limits in exploiting nature for economic gain: "They say the foreign trawlers have stolen their sea. They trespass. Fish once abundant close to shore are now disappearing even in the deep. And the fishermen's boats cannot go out that far, even for the fish still left to catch" (Khan 2). Salaamat, a young boy quite fifteen, is introduced in the prologue. He is born and raised in the coastal area, where his family has been in the fishing industry for generations. Salaamat, like the turtle, must leave his village to find work in the city; therefore, the two have a common fear of being uprooted from their native places: "But he is afraid, as afraid as the turtle is, of the men in the huts" (Khan 2). One uncle of Salaamat had drowned while trying to fish further out to the sea. The loss of his family prompted them to break with tradition and make a fresh start by moving to the city. The novel highlights the mass migration of people from indigenous lands to urban centres in search of jobs, as the native people's traditional occupation of fishing has been affected by the advent of foreign trawlers to dominate the sea. The theft and destruction of the turtle's eggs by the hut-dwellers, the visitors from the city, is symbolic of a greater trend of plundering and destruction of the natural balance. Salaamat is physically attacked for trying to protect the eggs and dragged to the sea by the hut-dwellers. For Salaamat, this attack represents a larger struggle to prevent city dwellers from exploiting his homeland's delicate nature. In Salaamat's perception, the world is viewed as akin to a fleeting "echo of a fading sea" (121) because of the violence in it. Khan's criticism of governmental and administrative practices on land encroachment in the novel demonstrates her strong concern about environmental degradation and the policies that have failed to improve the situation. The harsh impacts of ecological capitalism are emphasised by the seizure of Salaamat's land and the eviction of the native residents. Salaamat recounts: "There

were fishermen who depended on fish that in turn depended on the mangroves that once flourished in the estuaries. With the fresh water cut off, the trees were withering, and the fish dying. Many of these villagers too had had to leave, and, like Salaamat, bow to those who displaced them" (Khan 359). The displacement of a significant population can be attributed to the anthropogenic transformations of the biophysical environment.

Salaamat's plight highlights the dire poverty of individual migrants and the communities they leave behind as they seek work in the cities, which also contributes to overcrowding in the cities. Ngai Weng Chan (2017) argues:

> Cities are attractive to live in because they have lots of attractions ranging from business opportunities to jobs availability, entertainment, educational opportunities, good healthcare facilities, good transportation, markets, and so on. However, cities also have their fair share of problems in the form of environmental pollution, traffic congestion, poor solid waste management, high costs of living, unemployment, water shortages, inadequate healthcare facilities, lack of skilled labour and so on. […] As urbanization pushes more and more people into the cities, these negative effects will intensify. Furthermore, rapid urbanization and rural-urban as well as transmigration are closely linked to intense poverty of large urban populations living in hazard-prone areas. Almost all cities have slum or squatter areas, areas that landless people build makeshift homes into shanty towns. These are settlements where poverty-stricken, landless and stateless people try to make a living. Not surprisingly, the urbanization process creates a massive urban underclass, mostly in developing countries. (5)

Similar to Chan's view, the novel also accurately portrays the plight of the indigenous people of Sindh province, who have been pushed to the margins due to corporate control and industrial growth, prompting a major exodus to the city of Karachi. Hamid Bhai, the eldest boatman from Mohana village, informs Salaamat about how his people have relied on the river spanning countless years until circumstances compelled them to seek "other means" of sustenance (Khan 401). The condition of the waterbody has deteriorated as the "lake has grown salty. It is stagnant, filthy. Dead are the freshwater fish: kurero, morakho, thelhi. And what are the people to drink?"

(Khan 402). He laments that industrialisation has defiled the sea to the point where people weep now. The novel paints a starkly contrasting picture of the life in the city compared to the peaceful lives of the indigenous people. Urbanisation has been observed to exhibit reflexivity, whereby it contributes to its own heightened risk by means of local and global degradation of the environment. The utilisation of essential resources such as trees for fuel, ground water, as well as the excessive use of ecological resources such as water systems and air as disposal sites for industrial chemical waste and sewage, have resulted in environmental alterations. The reasons behind these transformations include deforestation in and around urban areas, watercourse pollution and sedimentation, depletion of water surfaces leading to saltwater intrusion or sinking of land, and the disappearance of mangrove ecosystems, which has resulted in coastal erosion (Pelling 27). Cityscapes are always under transformation in the name of development which makes people expect a better standard of living. But, the outcomes show a different image, not the one envisioned. In Salaamat's imagination, his native village has always remained "a place that for centuries had thrived as a tranquil fishing village" (Khan 132), whereas, the lack of access to clean air and water, inadequate public services, insufficient ventilation and cramped living quarters, all serve to illustrate the unsustainable nature of the urban built environment. The villages are constantly propelled towards the periphery, and the local populace are coerced into working for outsiders who claim ownership of the city. Salaamat sees around him only "the buses, streets, shops, migrants from other provinces, and now, refugees from Afghanistan" (Khan 132). He is given a small cell littered with used scraps of wood inside the bus-manufacturing shop to stay. When he spray-paints the bus, it releases toxic gases resulting in his eyes becoming reddened and he feels nauseated. In the city, he "smelled no salt in the air, only smoke and gases that made his chest burn" (Khan 126). The toxic smoke infiltrates each and every cell of his body. Through the character of Salaamat, Khan tries to portray the perspective of a displaced migrant toward a nature-loving indigenous community in order to stress the significance of ecological connectedness and a love for the natural world.

Another character from the novel, Daanishwar's experience best exemplifies the quest for environmental protection and preservation. Alternatively called as Daanish, he is a young man hailing from Pakistan and studying in the USA. As the narrative progresses, Daanish also develops a global perspective on the political challenges that impact his country Pakistan. He is a staunch opponent of war because of his realisation that war results in damage of many different

kinds, including the devastation of the environment and the living species that make up the ecosystem. The interaction that Daanish has with his natural surroundings is utilised by the author to examine ecological concerns like environmental transformation and climate change. The ecological disaster caused by human activity on earth is the primary focus of Daanish's journalistic attention. Through the perspective of Daanish, the author guides the readers to understand the current ecological and political situation in Pakistan and the impact environmental issues have on the country's society and economy. Daanish, who despises human tyranny over the natural world, is extremely critical of the United State's control over global resources, especially in developing nations, on the basis of imperialist ideology and industrial capitalism.

Daanish draws a connection between utilisation and the destruction of the environment by America as a result of wars and military expenses:

> Such beauty in a country that consumed thirty percent of the world's energy, emitted a quarter of its carbon dioxide, had the highest expenditure in the world, and committed fifty years of nuclear accidents, due to which the oceans teemed with plutonium, uranium, and God alone knew what other poisons. It had even toyed with conducting nuclear tests on the moon. (Khan 48)

The reasons behind Daanish's anxiety reflect the ways in which developed nations have unleashed and burned carbon to continue amassing riches, and how their audacious attempts to spread western control into space pose serious threats to the world. Khan's critique of the imperialist interference in developing countries to plunder their resources is reflected in the novel. Dia, one of the female protagonists of the novel, informs Daanish: "Last summer, a black rain fell. People said it was because of the bombed oilfields in Iraq. For months, soot covered the world and fell like ink. Ama said the rain destroyed our mulberry trees, but she'd no way of confirming that. We ran short of food for the silkworms" (Khan 342-343). The soot's global coverage is evidence that the war's impacts are not confined to the local area.

As the story progresses, it shows indigenous people are methodically dispossessed, alienated and uprooted in the name of economic growth and prosperity. As a result, social and

political conflicts escalate as uprooted people resort to criminal activity out of desperation as their means of survival deteriorate. At the water office, Daanish learns from a person standing in the queue that:

> Last year three million unlicensed guns were buying in country. The Afghan war ending three years ago, but guns keep coming. The Amreekans were arming and training us to fight the Communists but now we are left to fight ourselves. […] They just left, those Amreekans. They didn't care what they leaving behind (Khan 333).

Growing indifference exhibited by affluent nations towards developing countries, subsequent to their utilisation for political purposes, has resulted in the latter being confronted with unanticipated challenges without adequate support or protection. Antony Millner and Simon Dietz (2015) claim that there are three reasons why the developing nations face a greater difficulty in adapting to climate change. The first factor is geographic location. Many countries on the verge of development are found in the tropics or subtropics, where temperatures tend to be higher than necessary for many economic endeavours. If the temperature continues to rise, the environmental conditions will deteriorate even further. Although temperature is an important factor, the variation in water availability also gives rise to a multitude of additional challenges. In this regard, too, many developing nations are ill-equipped; they may be situated in an area of the world that receives abnormally low or high average rainfall, or that sees a great deal of variability between years. The second factor is sensitivity, which refers to the fact that a large portion of developing countries' production comes from key sectors that are particularly vulnerable to alterations in the climate, such as agriculture. In a broader sense, the notion of sensitivity can be employed to record the observation that a considerable number of individuals in developing nations are presently struggling in the process of eking out an existence on the edge of subsistence. The third factor is an inability to adapt to new circumstances. In many cases, the insufficiency of resources required for adapting to the consequences of climatic shifts is a prevalent issue faced by developing nations. These resources include sufficient funds, effective governance, information and adequate infrastructure. The advent of technologically advanced weaponry has become a menace to the survival and existence of human species, casting a dark shadow over the future. The novel shows that this development not only poses a grave danger to

human life but also inflicts irreparable harm upon the delicate natural environment, pushing it to the brink of destruction. The prospect of restoration and rejuvenation appears increasingly elusive, leaving us grappling with the challenges of preserving our collective survival and safeguarding the fragile ecosystems that sustain us.

Daanish's encounters show the environment's degradation due to human activities, such as generating trash and dust, and the congestion of urban areas as:

> He covered his nose when passing the large patch of land where the neighborhood dumped its trash. Polythene bags hung on tree limbs and telephone wires, plugged open gutters, tumbled along driveways. He turned onto a side street, wanting really to head back to his room. His powerlessness overwhelmed him. How could he even think clearly when his body struggled at the most basic level: for water, electricity, clean streets? What could he begin to do here? And yet, somehow, millions survived. Was it survival or immunity? Was there a difference? (Khan 327)

The condition of the place shows that people have no choice but to live among dust and dirt. Anu, Daanish's mother, also encountered similar trash while she visited the terminus of the street near her house, where her neighbours dumped garbage:

> Plastic bags flapped in the branches of the tree sprouting in the center of the dump. Beneath it was a pit stuffed with rotten food, plastic containers and ash from numerous trash-fires. Waving the flies away, she tossed her bag inside, disturbing the fiery red ants crawling in feces. (Khan 277)

Not only pollution, the growing scarcity of resources in developing countries is reflected in the frequency of references to water shortages and power cuts. Khan has shown the mismanagement of resources and the purposeful acts of profiting by those in power as Daanish observes: "The grass was beginning to scorch in patches. His street badly wanted water. Two lanes away lived a minister, so no loadshedding ever plagued that street […] Danish knew that in amongst the prayers for his dead father were prayers for bijly, and a brand new lot of politicians" (Khan 157).

A discourse between Daanish and his relatives follows about domestic and international politics, focussing on the ways in which foreign involvement affects national policy and the inability of developing countries like Pakistan to meet the basic requirements of their citizens despite having abundant natural resources. His relatives are eager to hear positive things about his life in America, as they know that America offers luxuries and conveniences that they can only imagine having. Daanish's relatives view oil as a "curse" that must be endured by oil-rich countries such as Iraq, Iran, Libya and South Arabia (159). Daanish's uncle comments that most of the people in Saudi Arabia are "beggars" who want financial support from the USA, and that Saudi Arabia's insatiable want for money has made them oblivious of the dangers of recklessly draining the earth of its oil: "The situation has gotten so bad" (Khan 159). In Daanish's reflections, America is a place where in the sky "white clouds drifted", "No haze, no smog. No potholes, beggars, burning litter, kidnappings or dismissed governments" (Khan 48). Based on the author's comparison of the environment of America and Pakistan, it is clear that pollution from both waste and carbon emissions has altered Pakistan's climate. Daanish's visit to the Housing Society Water Office, which is a huge stretch of dirt rather than a building, only serves to accentuate this disparity. As the people struggle to cope with the water crisis, Daanish witnesses an increasingly irate and angry mob shouting and attempting to form a queue in the office to seek confirmation for obtaining a water tank: "The voices rose and a full-blown stampede appeared imminent. And all for water" (Khan 329). Daanish also experiences the region's social, cultural and ecological transformation brought on by capitalism, consumerism, and the need for modernised ways of living: "sweeping boulevards had cropped up with designer boutiques, video shops and ice-cream parlors […] Here too, all people want to do is shop and eat" (Khan 169). While most of the reefs off the coast of Karachi have been destroyed by silt and human waste, Daanish still enjoys visiting a cove several kilometres outside the city. The author makes readers feel empathetic about the degraded natural world, which has suffered from human activity such as deforestation and pollution and, as a result, a cold mechanical world has emerged badly affected by climate change:

> Before daytime storms turned to week-long affairs, before gutters spilled, electricity was cut off, telephone lines burned, cars stalled, and grief afflicted thousands of flood victims, there were crepuscular days lulled by pattering on rooftops, rich smells, bright hues, and a steady, puissant breeze. (Khan 298)

Through these lines, Khan expresses regret over the depletion of the once-thriving society of the Indus Valley, which has been replaced by a barren and "parched" environment, and the disappearance of the abundant natural resources that formerly sustained its inhabitants (97). Syeedun Nisa's (2010) extensive research on the changing climate patterns of India has shaped her opinion on the environmental challenges faced by developing nations due to human initiatives such as deforestation, depletion of ecosystems and soil degradation (54). These activities not only bring about substantial ecological losses but also heighten the susceptibility of the environment to calamities and disrupt the inherent capacity of the ecosystem to recuperate from harm. The novel also depicts the transformation of a nation as a result of the abandonment of indigenous ways of life in favour of commercialised and industrial endeavours that impede natural processes. In *Trespassing*, anthropogenic climate change and environmental degradation are being witnessed by an array of symptoms, including humidity, smoke in the air, insufficient precipitation, noxious fumes, and unprecedented storms. It is a poignant commentary on the transforming ecological and political conditions of Pakistan; transitions that even influence personal domains.

A Little Dust on the Eyes (2014) depicts the intricate and catastrophic complexities of the earth's climatic conditions, ultimately leading to a devastating tsunami in the year 2004. The novel also explores the inherent uncertainty surrounding human existence on a planet that is perpetually under the threat of detrimental transformations. Minoli Salgado's writing about the Boxing Day Tsunami of 2004 adopts a unique combination of creative elements and available factual evidence to present an appealing account of the disaster's enormity. Her subtle way of representing a complex catastrophe does justice to the imaginary representation of the magnitude of the calamity, the extent of human suffering it inflicted, and the immediate impact of loss and grief.[3] The novel effectively portrays the manner in which a woman writer from South Asia tackles present-day issues of devastation and violence that impact the human existence in a nation plagued by conflict, such as Sri Lanka, as well as the country's response to the catastrophic loss brought on by an ecological disaster. In contrast to the predominant literary analysis of this novel, which have focused primarily on Salgado's depiction of the violence and bloodshed regarding the second Marxist JVP uprising in the late 1980s and the subsequent

counter violence perpetrated by paramilitary forces under the tutelage of the Sri Lankan government, the objective of this study is to examine the work through the lens of a climate narrative which diverges from the narrative of civil conflict and brutality that plagued Sri Lankan society for an extended period. Salgado's vivid description of the tsunami and its aftermath in her novel may imply the resurgence of nature in its full force, highlighting the potential for catastrophic events to serve as a reminder of the importance of prioritising environmental concerns. In his analysis of the historical implications of ecological transformation by global warming, Dipesh Chakrabarty (2009) asserts that the climate and surrounding ecosystem may occasionally attain a state of transformation or "a tipping point at which this slow and apparently timeless backdrop for human actions transforms itself with a speed that can only spell disaster for human beings" (205). The novel portrays that deliberate disregard for "human actions" causing transformation in the natural processes may culminate in terrible disasters that shake the very foundation of prevailing belief in human superiority and ability to manipulate environmental functioning for personal benefit. It also presents many indications that illustrate how exploitation of natural resources by humans, deforestation and unplanned developmental activities can significantly alter the ecology, leading to disastrous consequences for humanity. Salgado uses southern Sri Lanka as the setting of the novel to show the gradual transformation of the area due to climate change and major natural disasters. Bill McGuire (2012) suggests that climate change can potentially intensify or even trigger natural calamities such as earthquakes, tsunamis, and volcanic eruptions. Significant fluctuations in the earth's temperature and geological structure prompt an immediate or long-term restructuring of the ecosystem, impacting the livelihoods of numerous individuals and reshaping the trajectory of history by challenging government authorities. Bill McGuire (2012) notes, "[B]efore 26 December 2004, natural disasters were things that happened to other people in lands far away; after that seminal day, we were all suddenly more aware of our fragility, both as individuals and as part of a global society, and of our vulnerability to Nature's heartless and random culling" (vii). McGuire further elaborates "clearly, at a time in Earth history when sea levels are high and certain to climb higher, […] it is useful to know how effective submarine landslides might be at generating tsunamis" (233). Salgado's novel shows that the gradual rise in sea level and formidable nature of the sea-waves render the exotic natural landscape of Sri Lanka, which captivates cosmopolitan tourists, into a wasteland of desolation.

Salgado's narrative points towards the interdependent ecological process and relationship between humans and nature, wherein the native people's livelihoods are adversely affected by the degradation of Sri Lanka's ecosystem. This degradation is attributed to unrestrained political aspirations and profit-oriented economic policies. The novel also portrays how the local government is obsessed with the brutality of the civil war for quite a long time, and the coastal environment has been administered with as little care as its inhabitants, both of which contribute to the severity of the tsunami's effects. The author of the novel emphasises the futility of rationality and the superficiality of the rhetoric of growth and development through the observation made by the protagonist, Savi Rodrigo, who takes note of the increase in houses and other buildings in Sri Lanka, causing a decrease in the number of trees. This observation also validates Savi's statement about the transformation of the landscape as with "fewer trees and larger homes, the landscape seemed sandier and dustier than before" (Salgado 101). In an effort to attract a greater number of tourists, the affluent elites of Sri Lankan society have engaged in the widespread destruction of the country's natural environment, with the aim of constructing luxurious hotels and other structures along the coastline that are capable of accommodating a significant influx of visitors. This shows that the present environmental transformations are primarily attributed to human activities.

In this similar vein, the author tells readers about a moonstone mine located in a village named Kurundupola, and how the mine has shaped the identity of the village. Wind-blown lean-tos and soil pyramids scattered everywhere reveals that this area has "shifted identity" as it's prospering. Local farmers kept the existence of the gems as secret before the speculators arrived and ripped the land to shreds. As they ultimately surrendered, the tenant farmer's lives were negatively impacted by the changes brought about by the disastrous human action: "The mine brought shifts in time and geography, a realignment of relationships and neighbourhood logic" (Salgado 122). A consensus was reached among the villagers to erect a barrier that would demarcate a boundary between their settlement and the mining site. The novel unravels that in the event of catastrophic actions leading to alterations in the ecosystem; human-made barriers prove to be insufficient in protecting both the inhabitants and the place, despite concerted efforts by humans to isolate themselves from the ecological disaster. The ramifications of capitalistic human encroachment on the natural environment are experienced by the poor farmers whose subsistence is heavily reliant on natural resources. The persistent loud noise of booms emanating

from the mine serves to reinforce its ominous presence. Whilst other adjacent villages had primarily encountered the effects of the conflict instigated by the civil war, Kurundupola, situated in proximity to the mine, was struggling with its own demon. During Navin's, an officer for the rehabilitation centre, visit to the village he observes a conspicuous absence of birdsongs in the area, owing to the loud noise emanating from the mining operations. Furthermore, the once lush and fertile agricultural land has been reduced to a desolate and arid expanse. According to Sarah Clement (2021), "Transformation can be sudden, but it often emerges through a long process of incremental steps and a series of interlinked, dynamic, and crooked pathways, and along the way new pathways emerge" (58). This is the reason that some scholars use the terms like "incremental radicalism", "continuous transformational change" or "incremental transformation" for the process of transformation. Clement claims that these transformations are all around us. For instance, Clement highlights the notable shifts observed in the major global economies, commonly referred to as "late stage capitalism" (58), following the end of World War II.[4] These shifts, undoubtedly transformative in nature, have been brought about by a multitude of reform initiatives implemented across various geographical locations. The contemporary era witnesses the gradual occurrence of similar transformation in relation to the environment, mirroring historical precedents that have already occurred "including the shift from largely unregulated industries and rivers so polluted they caught fire, to extensive environmental regulation over several decades" (Clement 58). Inevitably, these regulatory measures fall short in their ability to deal with the myriad of environmental challenges, and the environment remains perpetually susceptible to erosion. In case of practical applications, determining the precise nature of a possible and sustainable change proves to be a difficult task. Furthermore, the absence of metrics capable of assessing the extent of transformation achieved further compounds this difficulty. The concept of incremental transformation, when strategically implemented is often regarded as favourable across various scenarios due to its potential for ease of attainment and subsequent stimulation of bigger transformations.

The primary focus of the Anthropocene revolves around the question of whether the temporal duration required for the implementation of said transformation is excessive. In an era characterised by the alteration of the earth system at the hand of humanity, it becomes apparent that a corresponding transformation of governance systems is imperative. In case of ecological dynamics, an influential phenomenon, as Clement opines, is the ongoing transformation of

ecosystems. This process, though not driven by deliberate human intervention, is gradually altering the fundamental structure and functioning of various ecological systems. Concurrently, there is an observable transformation occurring within "decision context" (59), in which the factors influencing decision-making processes are also undergoing changes. These transformations, while distinct in nature, are interconnected and collectively contribute to the evolving landscape of our natural and societal environments. The most recent comprehensive evaluation of global biodiversity has revealed that the existing objectives for the preservation of biodiversity are unattainable based on current trends. Consequently, it has been determined that after the year 2030, the achievement of these objectives can only be realised through profound and far-reaching transformations. These transformations indicate "fundamental, system-wide reorganisation across technological, economic, and social factors, including paradigms, goals and values" (Clement 59). In light of this evaluation, a worldwide examination of transformative change is currently underway, with the aim of mapping out the trajectory for the realisation of this transformation. However, bringing about major modifications to these systems is an undertaking which requires considerably big effort. In the pursuit of more effective biodiversity conservation, it is necessary to consider modifications to existing institutions that primarily address various environmental issues, such as soil degradation and climatic variations. By strategically harnessing coordination between these endeavours, a balanced strategy can be adopted to simultaneously address multiple problems. In the novel, the observable deterioration of Kurundupola serves as a clear indication that the destruction of an ecosystem yields both immediate and enduring consequences for humanity, rendering the restoration of lost elements a formidable challenge. The present condition of Kurundupola, resulting from the detrimental effects of capitalistic mining operations, may not be entirely reversible. However, it is possible that the intervention of government agencies, through the implementation of incremental transformational strategies, might potentially reduce the extent of its decay. The author's hope seems to rest upon the government of the nation what strategy it adopts to address such problems.

The novel consists of other examples of environmental degradation and climate change. Upon their first trip to Sri Lanka following their marriage, Rob, the English husband of Savi, conducted an investigation into the weather patterns of Sri Lanka with the help of internet images, and ascertained that the weather has become increasingly erratic. According to Rob's

findings, there is evidence to suggest that droughts and torrential rains are occurring during unusual periods throughout the year. The fluctuating weather patterns of the region also have an effect on the agricultural practices of the native populations. Sea-water intrusion in the coastal region renders agricultural land unusable, resulting in inundation. This phenomenon has been acknowledged by Senior Sirisena, a minor character in the novel, who expresses his distress that the new field in his possession would not yield significant returns as "it was too close to the coastal road. The tides were changing and sea water was coming in" (Salgado 143). The observation made by Sirisena pertains to the present rise in sea level consequent to the phenomenon of global warming.

The Sri Lankan metropolis serves as an example of a "risk society", in which those who have survived the tsunami find themselves caught in a state of limbo, oscillating between the grief of their dead loved ones and the struggle to confront their own loss as the potential threat for catastrophic recurrence remains a looming concern. In terms of sociologist Ulrich Beck (1992), the "risk society" is distinguished by a profusion of unanticipated outcomes that hold sway over history and society. The occurrence of the tsunami emphasises that irrespective of a country's integration into the globalised network, the population remains vulnerable to the perils of climate disasters, rendering them into a "risk community" in Sri Lanka. This inherent risk present in modern society ultimately contributes to the formation of a global "risk society". In this regard, there exist ecological hazards that could result in catastrophic devastation of such magnitude that recuperation would prove extremely difficult. Environmental issues are not solely determinants that necessitate contemplation for the purpose of comprehending their causes, but in their roots and outcomes, they are also "social problems, problems of people, their history, their living conditions, their relation to the world and reality, their social, cultural and political situations" (Beck 81). Sri Lanka's ongoing civil conflict reveals how insurgents etched a bloody history and abductors tried to influence the political scenario through unimaginable violence. Meanwhile, the country's elites destroyed the environment in an effort to gain personal benefit. The futility of their missions became apparent as nature indiscriminately reclaimed all, irrespective of class and social standing. Salgado's thoughtful representation of the southern water-bodies reflects upon the real instance of politically motivated murders, thereby infusing the water with potent symbolisms of both memory and violence. The surrounding water became unsuitable for use due to contamination by the bloated corpses that were visibly floating within

its vicinity. Water-bodies are of considerable significance to the livelihoods of coastal communities. However, in Sri Lanka, even the consumption of fish by these communities is hindered by concerns over the prevalence of blood and corpses in the water. The storyline of the novel suggests that the sea has carried dead bodies of people both before and afterwards the tsunami.

The crisis engendered a sense of collective victimhood that transcended geographical boundaries and assumed a global character. During the Christmas celebration, which is largely a public event, there was a noticeable rise in European tourists visiting the island. It was during this time that the tsunami hit. The tragic loss of life of several European tourists sparked an international outcry.[5] A universal language, which eventually gained attention in the Western press, was developed by village chiefs and politicians while negotiating the disbursement of funds. The terrible occurrences depicted in the novel allude to the notion that regional calamities possess global implications due to the interconnected ecological systems that impact the entirety of the planet during our present epoch of anthropogenic climate change. The gigantic waves caused serious damage to Eden's Bay, a hotel that is under the ownership of Renu Rodrigo's (another protagonist of the novel) father. In Peraliya, the southbound train to Matara was ripped from its tracks and flung inland after being hit by three waves in quick succession. The author informs the readers about the demise of more than twelve hundred passengers and crew members, resulting in the most significant railway tragedy on record. Available information about the disaster shows that the train accident was a real event that happened during the tsunami. The amalgamation of factual and fictional elements constitutes a distinctive mode of realistic portrayal of the havoc. Following the occurrence of the tsunami, a multitude of individuals hailing from the coastal regions of Sri Lanka met their untimely demise including Savi and her cousin Romesh (Renu's brother). This catastrophic event brought about the tragic end of numerous hopes, yearnings, and dreams. They were pushed into a vacuum and obliterated across all dimensions, including space and time, making it impossible to reconceive their existence.

Salgado employs the literary technique of utilising the novel's capacity to communicate multifaceted substance and the perspective of characters through a narrative style that is periodically permeable, thereby integrating the tsunami into the broader context of prevailing

national concerns. Renu notices that the "half-houses" or post-tsunami half-constructed houses sponsored by foreign organisations serve as poignant reminders of the devastation wrought upon both public and private hope for constructive development. The disruptive impact of the waves thwarted any hope for the island's progress towards a more advanced and prosperous future. It represents the point in time: "the geography of a specific time. It marks the moment history broke into two inaccessible halves" (Salgado 223). The tsunami can be viewed as both a disruption and a continuation of the unresolved legacy of the civil conflict in the area. The extensive use of tsunami waves as a metaphor serves to illustrate the dynamic process of one prototype being replaced by another, thereby reconfiguring the interplay between nature, politics and history. The very foundation of the nation appears to be fragile due to an inherent diversity of motives and actions that bear the potential to jeopardise the entire framework at any moment. The novel emphasises the fact that the ecological balance of the region has been severely compromised by human actions such as mining and deforestation, which are undertaken to boost economic growth through the promotion of tourism and national development plans. An additional significant impact of the tsunami portrayed in the novel is the devastation of houses situated along the coast. These houses are collective reminders of the terrible loss that was suffered after the tsunami. The penultimate chapters of the novel reflect upon how the political ambitions of those in power to reconstruct the state of ruin after the tsunami have affected the public life of Sri Lankans. The destructive force of the tsunami precipitated a series of transformations in political decision-making. Salgado references "half-houses" which are discernible through the material remnants that currently exist in a state of decay. Such partially constructed homes in the aftermath of the tsunami provide a stark reminder of the challenges faced by the government in achieving a cohesive recovery. These structures built with a hope to accommodate affected people stand exposed as a "scream" on the desolate terrain, evoking a sense of despair and futility. The redevelopment strategy implemented by the national authority aimed to temporarily suppress the shock and distress experienced by thousands of people who were displaced by the tsunami. As elaborated by Naomi Klein (2007), the implementation of "neoliberal" economic doctrines are often initiated through the occurrence of "shocks", that typically manifest as war or armed conflicts, natural disasters, or authoritarian governmental apparatuses. Salgado's portrayal of the post-tsunami governmental initiatives suggests that these policies are unfavourable to the majority or the general public because these initiatives culminate

in the shifting of financial resources and authority to the global corporate elites. Primarily, neo-liberals avail the occasion or moments of "shock" or crisis to enforce measures such as deregulation, privatisation and reductions in public expenditure. The novel features instances of neoliberal restructuring making the coastal road a hub of bustling activity, due to which the previously dominant "silence" is breached by the actions of the corporate world and the forceful proclamation of billboards advertising "redevelopment schemes" (Salgado 222). The process of reconstruction can be characterised as a deliberate effort to dismantle the culture of local people and expropriate their lands.[6] Renu visits the barren "temporary shelters" situated along the coastal road in the aftermath of the calamity. She takes note that every waterside house is adorned with a sparkling plaque bearing the name of the foreign aid organisation responsible for its sponsorship. The tsunami of 2004 is an indisputably globalised calamity, observed worldwide in real-time through electronic media, inciting an exceptional humanitarian reaction. Through the tsunami, contemporary society has witnessed a multifaceted humanitarian crisis, which has resulted in a significant inflow of donor support in its aftermath. However, by the year 2007, the endorsement and the corresponding optimistic outlook had considerably diminished, leading to extensive disillusionment and frustration among the people who had endured the horrific event. Kalinga Tudor Silva (2009) noted that this event is encapsulated by the phrase "third wave", which refers to the widespread disillusionment felt by the victims: "the first two waves being tsunami waves and the third and most devastating of all being the wave of tsunami aid that ended abruptly" (61). This circumstance in Sri Lanka was brought about by a convergence of multiple factors, including the diplomatic pursuits for foreign aid, divergent perspectives between the government and the NGO (national government organisation) on a broad spectrum of matters, and the development of an extensive symptom of dependency among those who receive foreign assistance. The imposition of a regulatory measure by the government to restrict the reconstruction of residential houses within a designated buffer zone in proximity to the coastline has posed a challenge for those affected by the tragedy in establishing permanent dwellings. The significant increase in aid that ensued by the tsunami had the unintended consequence of intensifying rivalry among rehabilitation organisations, exacerbating pre-existing divisions, and augmenting the affected people's dependence on external support. Thus, the implementation of the coastal relocation provision did not result in the construction of permanent houses. Instead, the camps established to relocate the fishermen community off the coast gradually transformed

into slums. This "second tsunami of corporate globalisation" went unnoticed by the general public (Klein 395). The newly created task force perceived it as a prospect to construct "a model nation" that would execute the principles of "disaster capitalism" (Klein 395). The term "half-houses" serves as an indication that a relatively low proportion of the houses damaged by the tsunami have undergone reconstruction. Furthermore, the newly constructed houses have also encountered hurdles due to the unresolved legacy of the civil war and other diplomatic initiatives that have proven to be ineffective. This appears as a reaffirmation of the insubstantial nature of the exaggerated discourse surrounding progress and development after an unprecedented disaster. *A Little Dust on the Eyes* shows that the vivid portrayal of the tsunami serves as more than just a narrative component; rather, it represents the intersection of a diverse range of experiences following a disaster caused by ecological transformation. The wide spectrum of experiences has enabled a multilayered analysis of the text from nuanced perspectives stemming from the consequences of the tsunami in a developing nation. The novel not only depicts climatic conditions, but also delves into matters of present-day global significance, such as the link between contemporary trends of capitalism, natural disaster and survival, as well as inquiries into grief, memory, loss, human agency and the intricate interweaving of political unrest.

In an increasingly globalised world, climate change is only one of many global concerns that threaten people's well-being. Others include population growth, lack of access to healthcare and clear water, frivolous use of resources, wasteful spending and disagreement among nations over balanced policy implementation and necessary action. Our inability to completely comprehend or exert command over a world that is becoming increasingly complicated is a direct result of these extraordinary global crises. The idea of transformation has emerged in response to the growing awareness of the need for massive and substantial change to meet essential requirements posed by climate change. In light of the prevailing global apprehension surrounding climatic shifts, the concept offers significant prospects for increasing the assets and underlining the need for large-scale and extensive cultural, societal, political and economic policy transformation. Better results can be achieved when the concept of transformation is used to encourage original and creative thinking and assist in testing preconceived notions about the nature and attainability of the necessary change. According to Ioan Fazey et al. (2017), the nature of transformation associated with changing climate extends its influence to a myriad of facets. These encompass changes in:

> individuals (e.g. significant changes in their understanding of person-world relationships); institutions (e.g. taking an institution in a fundamentally new direction, with a basic change in character, configuration, structure and outcomes); procedures (e.g. major legal or regulatory reforms that have a significant bearing on society); governance (e.g. alternatives to those based on assumptions of growth); or processes (e.g. the way something is brought about, such as participatory, inclusive, genuinely led by values that recognise fundamental human-environment relations). Transformation is therefore primarily a social process, albeit while also requiring environmental sustainability at its core. (5)

Adaptation to the challenges posed by adverse climate conditions will necessitate a change in perspective, one that involves future ontologies, human consciousness and a wide range of complicated social processes including values, culture, governance, ethics, religion etc. There are greater opportunities for the humanities, arts and social sciences to interact more actively with the reasons behind the crisis. There are also considerable numbers of emerging and possibly innovative or radical themes and concerns that need to be investigated. Fazey et al. assert that the current state of administration, expertise, and awareness creation strategies within society hinders its ability to effectively navigate and comprehend transformative change, especially in areas where such change is most urgently needed. It means that efforts to comprehend and influence preferred forms of transformative change must be greatly scaled up. In this regard, the eradication of social, cultural and ethnic disparity and equity among people of diverse backgrounds is crucial, as it may serve to motivate them to make collective effort to bring about positive transformative changes in people's consciousness as well as adaptive measures. Although, the extent to which it will be possible to make this idea successful remains a subject of contention as exemplified in Arif Anwar's novel. Within this narrative, the central character faces a sense of seclusion amidst an approaching calamity, while others find solace in their collaborative effort to prepare for the imminent confrontation with the perilous event. In the context of an approaching storm, Arif Anwar, in his novel entitled *The Storm* (2018), outlines the eradication of the sharp demarcation between individuals as they prepare themselves to confront the impending catastrophe. The collective actions of the villagers point towards the unifying

force of climate-related catastrophe, prompting them to fight together in a concerted effort to protect their lives and belongings. However, the storyline unravels the ambiguity and uncertainty surrounding the efficacy of this unification. While en route to her hut, Honufa, the protagonist of the novel, observes that during a time when the beach would typically be deserted, it is instead teeming with activity. The entire village people have gathered there, with individuals of all ages and sexes collaborating to make themselves prepared to confront the storm. The author initially conveys an optimistic viewpoint by stating that all necessary contributions are made for the occasion, leading to the eradication of the "bright lines" of difference based on age, sex, and size (Anwar 5). Honufa initially disregards the concerns of the local villagers regarding the storm, but her perception shifts upon receiving information from an older friend that the Boatman has made an appearance. The Boatman's appearance functions as a signal for the villagers that a storm is coming. So, what would be the outcome if a socially marginalised person like Honufa finds herself in a similar situation? Her condition shows that the aforementioned unification does not function in the case of socially marginalised people by not having even one face that does not turn away from her during the crisis. While climate-induced disasters may foster a sense of unity, they also aggravate socio-economic inequality, as rich people are often able to recover faster than their less privileged counterparts. Despite the knowledge that the storm has the ability to wipe out every trace of human existence from the shore, the villagers continue to isolate Honufa. With the exception of Rina, an older woman, she does not find any friendly face among the people of the group making preparations to confront the storm. This is the case of the individuals who are socially marginalised, particularly in developing countries, and are subjected to unimaginable hardships during a calamity owing to insufficient support and resources. Fatma Denton (2002) has argued that women have already borne enormous costs as a result of the impact of globalisation, economic downturns, and environmental deterioration (18). It is anticipated that the precarious condition of women will be further aggravated by the effects of climate change and catastrophe, rendering them even more susceptible to harm. By depicting Honufa's state of seclusion, the novel obliquely alludes to the need of a transformative change within a societal framework in which apathy towards a particular group of people can yield harmful consequences. So, Denton proposes that climate negotiations would benefit from a greater emphasis on a people-centric process, and recognition of the important role of women while implementing sustainable development. In this people-centric process, the experiences of

women belonging to the marginalised group are also significant as they promote adaptability using their traditional knowledge about calamities.

In the novel, the collective movement of people engaging in heightened activities to combat the calamity is indicative of the villagers' response to the anticipation of a disaster. The sight of the entire village rushing in a panic stuns Honufa. Despite the fact that zamindar Rahim offers the poor villagers a safe shelter from the storm in his sturdy house, Honufa's self-esteem prevents her from turning to a man who formerly broke up every relationship with her for the fear of being shunned by the community. Honufa says, "He's a rich landowner. We're a family of poor fishermen. Whatever friendship blossomed between us now feels like a dream. And we all must wake up someday" (Anwar 10). The author emphasises the existence of a prominent demarcation between the affluent and the poor in society through this statement made by Honufa. This significant disparity between the rich and impoverished sections of the society in Bangladesh aggravates the harmful effects of climate change on people, thereby constituting an urgent concern of national importance. The absence of an adequate warning system also leaves economically disadvantaged individuals vulnerable to significant destruction. Rina's statement regarding the safety of Honufa's husband Jamir amidst the storm while aboard a large trawler at sea can be interpreted as an assessment of this condition. It can be inferred from Rina's remark that due to the probable presence of a radio on board the large fishing vessel; Jamir would have likely been provided advanced warning of the approaching storm. However, this is not the case with other poor villagers who are solely dependent on the arrival of a Boatman, whose appearance is as mysterious as their conjectures regarding the impending disaster. A significant number of individuals succumb to perilous situations due to insufficient information, resulting in their failure to take necessary measures to safeguard their lives and belongings. In all of the chapters of the text that are devoted to Honufa's story, the author presents her as being self-assured and capable of enduring the ongoing storm with the help of her previous experience with circumstances that were very similar to this one. But, in the concluding chapter dealing with her narrative, it is revealed that Honufa and Jamir both pass away during the storm, leaving their infant son in the custody of Rina and zamindar Rahim. The demise of these two main characters attests to the uncertainty surrounding the consequences of climate catastrophe.

Throughout the novel, Anwar has recurrently alluded to the occurrence of climate disasters. The author's work highlights the issue of displacement resulting from heat waves, as zamindar Rahim's parents relocate to reside with his elder brother in Lucknow being no longer able to tolerate the high temperature in Calcutta. Rahim is informed by his parents that they are content with the weather in Lucknow and have no plans to return to their ancestral residence, Choudhury Manzil, in Calcutta. Significant changes in climatic conditions lead to the displacement of a large number of people every year, as they seek better refuge from the adverse impacts of the affected areas. At times, this even takes the form of mass exodus across international borders. Zahira, Rahim's wife, opts to relocate to Dhaka due to the deteriorating political and climatic conditions in Calcutta. She believes that the air and water quality of Calcutta impede her ability to conceive and maintain a pregnancy resulting in infertility and "rip off life before it can take root" (Anwar 63). During the Japanese invasion of central Burma in 1942, Lieutenant Ichiro Washi, a character in the novel, also experienced comparable heat waves while in Rangoon. The idiosyncrasies of atmospheric conditions are discernible in the depiction of unusual weather patterns of the region. Despite the season being winter, the gust of wind that blew exhibited minimal coldness, instead the "morning is chillier than the night" (Anwar 114). Ichiro and his Buddhist friend Tadashi encountered the shifting heat of central Burma even in the early morning while making a trip to Bagan, a valley strewn with Buddhist temples. The vast plain along their way reminds Ichiro and Tadashi of a "crucible" broiling yellow-brown in the heat (Anwar 116). The noon temperature is referred to as "monstrous" by them who note the motionless and dried out trees, seemingly ready to burst into flames. Ichiro experiences a sensation as if the heated air burning in his lungs creates respiratory discomfort. Ichiro's story draws attention to the harrowing realities of invasive wars while simultaneously bringing to light the discernible impacts of climate variations during the mid-twentieth century. This observation suggests that the results of climatic shifts may have been overlooked and obscured from historical records due to the ongoing horrors of global warfare.

Along with the obscure historical records of climate change, the increased intensity of suffering during climate calamities due to weak diplomatic relations among nations has also been a topic of interest in recent literary research. The efficacy of a significant proportion of the relief measure is contingent upon the functioning of state machinery. The nations impacted by the issue experience prolonged hardship as a result of inadequate and delayed implementation of

effective measures. Such circumstances require adaptive transformation in governmental policy formation. The novel shows, for instance, how Indian ships were forewarned that tropical storm Nora was developing into a typhoon and heading to the coast of East Pakistan (present Bangladesh). The strained relationship between India and Pakistan, stemming from a complex history of political conflicts, had a significant bearing on the dissemination and reception of such warnings. The relationship was so bad that it was possible that warning about the intensifying typhoon was either not effectively conveyed or disregarded altogether. During the period under consideration, the West Pakistanis held a position of dominance over East Pakistan. Despite the catastrophic impact of the typhoon, which resulted in the death of hundreds of thousands of people and livestock, the relief measures undertaken by the West Pakistanis were characterised by a sluggish and resentful attitude. The delay in the provision of aid to East Pakistan was further complicated by the considerable geographical distance between the region and its counterpart, resulting in the tragic circumstance of corpses being left to decompose under the scorching sun. The Indian government offered assistance by providing aid and support to those affected. However, the offer of aid from India, which was deemed crucial for the nation during that dire situation, was declined by West Pakistanis. In the novel, one of the protagonists named Shahryar conveys to his American girlfriend Val a widely held scholarly belief regarding the aftermath of the typhoon that struck East Pakistan. According to this belief, West Pakistan's neglect of East Pakistan during and after the disaster served as a catalyst for the Bangladesh War of Liberation, which happened five months later. Similarly, Honufa's account of the 1970 storm describes it as an event that triggered rapid acceleration of time, a "spun time", which propelled all entities in its path towards their inevitable future states that are "houses turned to bamboo stubs, boats smashed to kindling, rice paddies drowned and salted; lofty trees made to prostrate into the sand" (Anwar 326). The author's evocative portrayal of the devastation wrought by the climate disaster, including the haunting image of "a grim procession" (326) of floating bloated corpses are indicative of a poignant warning of the future that awaits nations facing similar catastrophes. There exist speculations and possibilities regarding the prospect of deliverance of poor people through the implementation of appropriate measures. Failure to do so, however, may result in a fate akin to that of Honufa and Jamir, as depicted in the novel. In the context of an ever-expanding globalised society, it becomes evident that interconnected ecosystems are subject to serious impacts of distinct anthropogenic transformations and demand constructive changes.

Contrary to the portrayal by Anwar of the vulnerable state of the coastal community of Bangladesh due to lack of technological advancement, Amitav Ghosh's work emphasises the emergence of a new age characterised by capitalism, materialism and the rise of globalisation. In contemporary society, there appears to be a discernible inclination towards progress, whereby swift urban development and industrial growth have emerged as the quintessential standards of growth for nations across the globe. The culture of consumerism and a self-centred materialistic mindset have had a profound impact on human existence, ushering in a period of gradual transformation. The dichotomy between progress and environmental degradation has long been a recurring motif in literature and critical theory. Scientific, industrial and technological growth has come at a great cost to the natural world, creating a dismal future for the planet. The fundamental pillars of the earth's sustenance, the natural resources, are also succumbing to the strain exerted by human civilisation as a whole. In *Gun Island* (2019), Ghosh shows that he is well informed of the critical problem that has arisen because of ecological degradation and the effects of climate change. The author has skilfully interwoven elements of myth, politics, culture, history and imagination to convey the environmental nuances prevailing in a warming world. It provides an insight into how the environmental crisis has led to widespread problems such as global warming and climate change that have subsequently caused suffering and displacement of both human and nonhuman species on a global scale. Throughout the ages, the evolution of life on the planet has been intricately intertwined with the environment in which it exists. The dynamic interaction between living organisms and their surroundings has been a defining factor in the trajectory of biological evolution and adaptation of species.

Throughout the course of human history, the concept of environmental harmony has been a crucial factor in the long term development of the human species. This harmony has allowed for the growth of human societies, enabling them to thrive. But, as Slavoj Žižek (2010) comments, "With the idea of humans as a species" in the Anthropocene, "the universality of humankind falls back into the particularity of an animal species: phenomena like global warming make us aware that, with all the universality of our theoretical and practical activity, we are at a certain basic level just another living species on planet earth" (332). The preservation of our existence is contingent upon specific natural parameters that we habitually overlook without conscious consideration. Žižek further explains the precept of global warming which conveys that: "[T]he freedom of humankind was possible only against the background of stable natural

parameters of life on earth (temperature, the composition of the air, sufficient water and energy supplies, and so on): humans can "do what they like" only insofar as they remain marginal enough so as not to seriously perturb natural preconditions" (332-333). The apparent constraint on the freedom of humans, as executed by the phenomenon of global warming, presents a paradoxical consequence stemming from the unsustainable growth of human liberty and influence. This growth is characterised by our ever-increasing capacity to transform the natural world, eventually contributing in the destabilisation of the fundamental conditions necessary for sustaining life. As opined by Žižek, "Nature" has been transformed into a "socio-historical category", which is not merely a static backdrop to human endeavours, but rather influenced by these activities at its most fundamental level (333). Traditionally, the fundamental dichotomy between human history and nature posits that nature operates in a deterministic manner, merely requiring explanation, while humane history necessitates in-depth comprehension. Even if the overall trajectory of human history appears beyond our control, resembling a fate that contradicts the desires of the majority, it is crucial to recognise that this "fate" emerges from nuanced interplays among numerous collective and individual initiatives. These initiatives are rooted in specific notions of our world. In a nutshell, it can be said that throughout history, we are confronted with the consequences of our own pursuits and passions. Over centuries and extending into the dawn of modernity, there was a gradual and limited expansion in both population density and commercial growth. Since the mid-1800s, with the advent of a global culture focused mainly around industrial growth and technological advancement, there has been a noticeable transformation in the history of humanity. The result of human endeavours on a global scale over the past century has yielded unprecedented consequences, surpassing any anticipation that may have been previously conceived. The advancement of science and technology has enabled humanity to attain unparalleled amounts of development, resulting in a significant improvement in their standards of living. However, it must be acknowledged that the progression of humanity has been accompanied by an unrestricted and reckless approach to urban and industrial growth, which culminated in the tragic exploitation and degradation of ecology. The consequences of these actions have led to a global phenomenon of ecological crisis.

Gun Island serves as an exemplary text for contemplating the notion that anthropogenic activities are not only depleting the planet's natural resources but also contributing to a multitude

of crises. In his novel, Ghosh maintains a critical perspective in presenting mankind's reckless and self-focussed attitude that has contributed to global warming. Through the narrative, he sheds light on the consequences of such actions on the environment. Ghosh draws attention to the impacts of changing weather conditions that are causing significant transformations in the social and ecological spheres of the Sundarbans. From an ecological standpoint, the onset of rising sea level in the Sundarbans has caused a swift transformation of the patterns of land. The islands are continuously being engulfed by the sea, thereby undergoing a process of gradual disappearance that is perceptible to the characters in the novel (Ghosh, *Gun Island* 18). The capricious tides render the unstable embankments along the shore as an unreliable defence against the relentless ebb and flow of the sea. The unpredictable nature of these tides, which can rise to great heights before abruptly receding, poses a constant threat to the stability of the embankments, which are often left vulnerable to erosion and collapse. This unpredictability offers as a potent metaphor for the fragility of people's existence when confronted with the formidable forces of the natural world. The text depicts the enlightening journey of Dinanath, a dealer in rare books and antiquities, as he traverses through different locations such as the Sundarbans, Los Angeles, and Venice. He embarks on a journey from the dense mangrove forests of the Sundarbans, to Los Angeles plagued by raging wildfires, and eventually to the gradually immersing Venice. This narrative trajectory forms a significant aspect of the novel. Ghosh portrays possible consequences of the ecological turmoil that transpired in the Sundarbans and underscores the analogous pattern of ecosystem degradation that has been unfolding globally. Through his experiences, Dinanath gains insight into the harsh realities of a world which is witnessing human and nonhuman displacement and relentless changes. The Sundarbans is deemed unsuitable for agriculture due to the persistent encroachment of saltwater, resulting in the "land's turning salty" (Ghosh, *Gun Island* 60). The issue of water shortage has been highlighted through the observation that during the process of well excavation, "an arsenic-laced brew gushed out of soil", instead of the expected drinkable water (Ghosh, *Gun Island* 49). The inhabitants of the Sundarbans rely predominantly on the acquisition of timber, agriculture, fishing, and honey gathering as their primary means of subsistence. However, they are confronted with the challenges of survival every day, as setting up a livelihood in this region proves complicated due to a multitude of factors such as diminished fish population and legal constraints in using available resources. The place is frequently subjected to the wrath of

catastrophic cyclones that occur every alternate year, causing widespread destruction. The impact of natural disasters on the livelihood of local communities has been a recurring theme in the text. One such instance is the account of Horen, a local fisherman, who recollects the catastrophic effects of cyclones such as Bhola and Aila in 1970 and 2009 respectively.

The author provides a detailed account of the effects of changing climate patterns on society. This narrative highlights how this phenomenon has not only resulted in widespread human suffering and disaster, but has also served as a driving force behind the issue of illegal human migration to urban centres in search of economic opportunities. As a result, the number of impoverished people in these cities continues to rise. The trend of migration has been significantly influenced by environmental changes throughout history. Since prehistoric eras, the populace's geographic dispersion across the globe has been primarily influenced by environmental factors. François Gemenne (2015) opines that the concept of 'environmental migrants' incorporates:

> [A] wide diversity of environmental changes, but also of migration patterns. Among the major environmental disruptions that can induce migration are flash floods, earthquakes, droughts, storms and hurricanes, but also slow-onset changes such as sea-level rise, desertification and deforestation. Large development or conservation projects, such as dams and natural reserves, are sometimes included as well. Many of these disruptions will be aggravated by climate change. They lead to varied forms of migration requiring different policy responses. (169)

Migration from the Sundarbans also shows similar causes as people face environmental disruptions due to the sensitive nature of the archipelago's ecosystem. Owing to their impoverished state, the inhabitants of the Sundarbans are subjected to exploitation by the human trafficking network which is, "the people-moving industry" (Ghosh, *Gun Island* 60). Individuals or groups who fall prey to human traffickers undergo exposure to an array of horrible crimes and ultimately find themselves as refugees in other countries. The novel depicts the journey of two characters Tipu and Rafi, who embarked on a voyage from the Sundarbans to Europe. The duo paid a sum of money to the 'dalals' in Bangladesh and commenced their journey overland,

traversing through India, Pakistan and Iran. However, their journey got disrupted at the Turkish border, where they were separated from each other. The gradual degradation of the natural world and frequent appearance of climate disasters in the Sundarbans have been identified as contributing factors to the migration of Tipu and Rafi to Europe. They sought better standards of living through illegal means, which ultimately resulted in their status as unwanted and despised refugees in Italy. The author attempts to elucidate the grim aspects of human trafficking by drawing on Rafi and Tipu's firsthand accounts as a primary source. David Theo Goldberg (2017) posits:

> As the planet has warmed and environmental events have become more dramatic, the threat to already fragile lived environments has grown exponentially. And while climatologically induced migration is not new (consider Dust Bowl migration westward from Oklahoma in the 1930s), more people are displaced of late by storms, rising sea levels, earthquake induced tsunamis, tornadoes and other weather-related events. In addition, even more have moved as economic life has become challenged, living conditions less amenable, life prospects increasingly in question as a result of climatically impacted ecosystems. (99)

The environment has emerged as a progressively influential factor in the migration of individuals from less affluent regions to more prosperous societies (Goldberg 99; Warner et al. 691). Whilst a significant proportion of the people residing in the Sundarbans are confronted with misery, limited education and dearth of means to earn a livelihood, the young generation, on the other hand, exhibits a distinct inclination towards technological gadgets like smart phones and the internet. Ghosh critically examines the impact of technology, particularly the advent of internet and social media, on the youth of the Sundarbans. He presents the ways in which these technological advancements have brought about a complete transformation in their daily lives. The use of the internet not only enables them to gather knowledge regarding the prospects for better living conditions in foreign nations, but also facilitates building connections with human traffickers. The allure of captivating images and advertisements on social media, particularly posted by those who have already migrated, initiate further process of migration. Tipu says, "The internet is the migrants' magic carpet; it's their conveyor belt" (Ghosh, *Gun Island* 61). The

character of Tipu, in the novel, embodies the attitude of contemporary youth who exhibit a remarkable capacity for mastering technology and a willingness to undertake any challenge in pursuit of their aspirations for a more prosperous living. It can be said that technological advancement has prompted a significant transformation to alter people's way of living both in positive and negative ways.

The novel also raises a significant issue regarding the detrimental impacts of large-scale industrial initiatives, such as the construction of a refinery upstream of the Sundarbans, on the misuse and depletion of natural assets. In the novel, the author incorporates the character of Piya, a cetologist, to express his concern regarding the indiscriminate disappearance of diverse marine species. She claims that the cause of this depletion is attributed to the reckless disposal of toxic pollutants into the oceans. Piya provides an account of the drastic decrease in the populations of crab and fish as "shoals of dead fish drifting up" (Ghosh, *Gun Island* 108). Her assistant discovered a big dead crab and a substantial aggregation of dead crabs were observed on a mud bank. It is a matter of concern that the crabs, which are keystone species of the Sundarbans, are now disappearing and the news regarding their death is alarming. The rising sea level and reduced freshwater flow have led to the intrusion of saltwater further upstream, resulting in the salinisation of certain stretches of water. This situation has rendered these areas unsuitable for the survival of dolphins. Piya's research suggests that the increasing sea level has caused a disruption in the migratory patterns of dolphins, leading them to wander into areas that are extensively engaged for fishing. As a result, many dolphins have fallen victim to fishing nets and collisions with steamers and motorboats. Mounting evidence shows that anthropogenic climate change has exerted significant influence on the behavioural patterns of various animal species. As a result of global warming, there has been a noticeable shift in the habitats of numerous species. The text is abundant in instances that depict the migration of various creatures from one location to another.

In addition, Ghosh further examines the impacts of the global climatic shifts, specifically as it relates to the frequency of wildfires in various parts of the world. The escalation of wildfires due to climate-induced reduction in fuel moisture has been a growing concern in recent times, further highlighting the impact of human-driven climate change (Todd M. Ellis et al. 1545). It is noteworthy that Ghosh's choice to set a wildfire in Los Angeles holds significant relevance to

this issue. Dinanath visits Los Angeles when the forests of the place are engulfed by horrible wildfires, posing serious risk to the avian and animal species, as well as the ecosystem. The flames have resulted in the massive destruction of land extending over a thousand acres and leaving a trail of chaos in its wake. Lisa, an entomologist researched on bark beetles and came up with an even more astonishing fact that "they're these insects that eat up trees from the inside so that when there's dry spell the dead wood is like kindling, just waiting to go up in flames. Bark beetles have been extending their range, as the mountains warm up" (Ghosh, *Gun Island* 109). During the wildfire, Cinta's niece Gisa, "had kept the children home from school because of concerns about the air quality. There was too much smoke in the air, for one, but she also did not want to be separated from them at a time when wildfires were raging just a few miles away" (Ghosh, *Gun Island* 129). Dinanath and Cinta are also depicted as experiencing the effects of the incident: "The wildfires had caused so much disruption that we were soon trapped in bumper-to-bumper traffic" (Ghosh, *Gun Island* 131). The typical setting undergoes a dramatic shift and becomes akin to an expanse resembling an "inferno-like landscape" (Ghosh, *Gun Island* 132). Rising water level in Venice has been observed by Dinanath, who reports a significant portion of the gateway or primary entrance to Cinta's (a well-known Italian historian and Dinanath's friend) apartment is frequently submerged in water: "Of late the floods had become so frequent that the residents had more or less stopped using the front entrance" (Ghosh, *Gun Island* 164-165). The novel's use of diverse geographical locations such as the Sundarbans, Los Angeles, and Venice, effectively portrays the ubiquitous nature of climatic shifts across vast areas of the globe. Ghosh's novel is replete with instances of the unexpected and recurrent manifestations of climate catastrophes, such as storms, hailstorms, floods, cyclones, tornadoes, that are attributed to the fluctuating climate patterns pervading the globe.

Proliferation of materialistic and consumerist mindset in contemporary culture has given rise to the prevalence of carbon emissions, which have a negative effect on the absorption of greenhouse gases. It is happening because "there's more and more carbon dioxide in the atmosphere, and other greenhouse gases too" (Ghosh, *Gun Island* 214). The insatiable human greed and desire for comfort and material gain, at the cost of ethical downplay, has led to a collective state of existence like a "demon", culminating in our powerlessness to reclaim what has already been lost. The novel delves into the crucial inquiry of the psychological disposition

or ideological framework that compels humans to surrender to the ecological apocalypse when everyone is aware of:

> [W]hat must be if the world is to continue to be a liveable place, if our homes are not to be invaded by the sea, or by creatures like the spider. Everybody knows … and yet we are powerless, even the most powerful among us. We go about our daily business through habit, as though we were in the grip of forces that have overwhelmed our will; we see shocking and monstrous thing happening all around us and we avert our eyes; we surrender ourselves willingly to whatever it is that has us in its power. (Ghosh, *Gun Island* 216-217)

The novel's stance on climate change is further emphasised through its depiction of the climatic shifts that occurred during the 17th century, commonly referred to as the "Little Ice Age". The author writes that during this time "temperatures across the globe had dropped sharply, may be because of fluctuations in solar activity, or a spate of volcanic eruptions – or possibly even because of the reforestation of vast tracts of land" (Ghosh, *Gun Island* 122). Certain climatic shifts have even had the power to drastically transform the trajectory of evolution of life. The Little Ice Age has been a period of considerable historical significance, marked by an abundance of instances detailing widespread droughts, volcanic eruptions, famines, seismic activities, wars and epidemics resulting in the deaths of millions. The Little Ice Age, which is an important age of climatic perturbation and transformation, caused widespread devastation and upheaval by overturning the established environmental balance that had persisted for centuries: "everywhere there was talk of apocalypse: the comets that were streaking through the heavens were thought to be portents of the destruction of the universe; even the creatures of the earth were believed to be conveying warnings of catastrophe" (Ghosh, *Gun Island* 122). This period was a pivotal moment in the history of the western world marked by profound social, cultural and economic transformations that ultimately gave rise to the modern era. During this time, there emerged a prevailing belief that it was imperative to exploit the natural world in order to satisfy human desires and promote human welfare. This ethos of resource utilisation and human-centeredness would come to define the dominant worldview of the age, shaping the course of history for centuries to come. According to recent scientific discourse, the Anthropocene is a new epoch

which signifies a fundamental reconfiguration of the interconnection between humanity and the environment, emphasising humans' agency in regulating planetary transformation. This epochal shift seems to have originated in the Little Ice Age and has since gained momentum, with humans increasingly moulding the planet in significant ways. The author suggests that the current climate changes are far more crucial than the perturbations experienced during the Little Ice Age: "What our ancestors experienced is but a pale foreshadowing of what the future holds!" (Ghosh, *Gun Island* 124). This statement implies a concern for the severity of the impending and ongoing climate changes and their potential impact on the environment and society. The author's tone is cautionary, urging readers to recognise the gravity of the situation. Ghosh's reference to the great plague of Italy in 1630 serves as a means to engage readers to envision historical outbreak of fatal diseases and the consequential loss of life on a massive scale. The author provides a deeper exploration for the correlation between climate change and the spread of fatal diseases. This is achieved through an allusion to the historical outbreak of the plague, as well as a depiction of the adverse consequences that arise when weather conditions become hostile to human populations, as exemplified by the events that transpired in Italy: "the skies opened up, deluging the plains of northern Italy – no one had ever seen rain like this before, rain that swept away crops and destroyed harvests. The price of food shot up and hunger stalked the land – and where there is hunger, disease always follows" (Ghosh, *Gun Island* 220). Contemporary research posits that climatic change is poised to exert influence on human health by facilitating the spread of various infectious diseases through eruption and contamination. The outbreak of the Coronavirus pandemic on a global scale has prompted a critical re-evaluation of our connection with the natural world. The widespread death caused by this virus serves as an evocative reminder of the urgent need to reassess and redirect our interactions with the environment. In this novel published in 2019, the author has used the terms like "quarantines" and "curfews" to describe the measures implemented during the Italian plague (Ghosh, *Gun Island* 221). Surprisingly, these terms have now become commonplace in our current time of the Coronavirus outbreak.

Along with the scientific environmental issues, *Gun Island* portrays an array of uncanny occurrences throughout its narrative. Such uncanny occurrences regulate to a great extent transformation of perspectives and cultural practices. In *The Great Derangement* (2016), Ghosh expounds on the notion that the difference between the "probable" and "improbable" event is not

as apparent as commonly believed. As per his elucidation: “Improbable is not the opposite of probable, but rather an inflexion of it, a gradient in a continuum of probability” (*Great Derangement* 21). Yet, the concept of “improbability” has been deemed unsuitable for major works of fiction. The presence of improbability appears to be incongruous within the realm of fashionable pattern that typifies the novel as a literary genre. Ghosh’s literary pursuit involves a quest to harmonise the uncanny with his creative work, as he attempts to discover a means of articulating the implausible concept of climate change. This quest is particularly challenging for authors of fictions, given its inherent improbability. In reality, there exist certain occurrences that defy explanation, commonly referred to as coincidences. Additionally, certain phenomena, such as the crisis of global warming, appear so unthinkable to authors’ perception that they are avoided even in the most imaginative works of fiction. But, in *Gun Island*, Ghosh effectively communicates the concept of the uncanny by utilising a series of unsettling occurrences. The outcome of this approach is a transformative experience. In the novel, Dinanath visits the Sundarbans to see the shrine devoted to goddess Manasa, the revered deity of snakes. Being unaccustomed to the terrain’s muddy soil, he experiences a fall, landing straight in the mire. Due to this accident, an uncanny sensation begins to envelop him, “something fearsome, venomous and overwhelmingly powerful, something that would not allow me to be rid of it” (Ghosh, *Gun Island* 103). This “something” pertains to the recognition and apprehension of the uncanny and the intriguing, serving as a preliminary stage in the awakening to the unusual predicaments. By deftly blending facts and imagination, Ghosh interweaves actual occurrences into his fictional work, thereby imbuing his narrative with a sense of verisimilitude that captivates his readers, all the while infusing the work with a touch of the intriguing and uncanny. Upon being bitten by a cobra, Tipu appears to establish a connection with the nonhuman world. The poison induces a state of stupor in Tipu, a condition “that was not really one of awakeness because he did not seem to be aware of his surroundings” (Ghosh, *Gun Island* 80). The accident is notable for its uncanny functionality, specifically in relation to the words spoken by Tipu in his seizures. These words bear a striking resemblance to a premonition or prophesy, seemingly foretelling future events. In his trance, Tipu sees shadows of many snakes trying to wrap his body from every side. It has been observed that Tipu has unconsciously established a connection with the nonhuman, thereby emphasising the tendencies of humans to disregard this universal association. This tendency results in the subversion of the dominant status of humans over nonhuman.

Tipu also makes a prediction about Piya's favourite dolphin, Rani. During one of his seizures, he tells Rafi to warn Piya about Rani's condition. Piya does not realise until much later that Tipu has already warned her something is amiss with Rani. The story depicts Piya's reception of a distressing alert in her GPS-enabled tracker concerning the location of the dolphin, which surprisingly coincides with Tipu's incoherent rambling on the same. The occurrence of this particular coincidence serves to underscore the manifestation of the uncanny. Tipu's visions serve to strengthen the notion that there exists a mutually beneficial connection between human and nonhuman organisms that coexist in an intricate system that is undergoing a gradual process of transformation. In the final scene of the novel, an additional occurrence of improbable nature unfolds. Tipu meets a mysterious Ethiopian woman while he is on his way to migrate to Italy. The woman positioned herself at the forefront of the Blue Boat full of refugees, extending her arms. As if in response to her gesture, a vortex-like formation materialises amidst the stormy atmosphere, looming over those present in that place and gradually unfurls downwards, casting "a whirling halo above her head" (Ghosh, *Gun Island* 281). The sudden presence of a halo of birds spinning above her and aquatic mammals, such as whales and dolphins forming a *chakra* by congregating around the boat is indicative of her innate connection with the natural world. The event takes an unexpected turn as an inexplicable scene occurs: "the colour of the water around the refugee boat began to change. In a few moments it was filled with a glow, of an unearthly green colour, bright enough that we could see the outlines of the dolphins and whales that were undulating through the water" (Ghosh, *Gun Island* 282). Piya, in her rationalist approach, attempts to justify the "miraculous spectacle" by attributing it to bioluminescence. But, this occurrence can also be interpreted as a form of reclamation, where the Ethiopian woman's reawakened bond with the nonhuman world seeks to assert its rightful place and acknowledgement. This event makes the narrative even further uncanny. In *The Great Derangement*, Ghosh emphasises uncanny occurrences in relation to changing climate that "lies precisely in the fact that in these encounters we recognize something we had turned away from: that is to say, the presence and proximity of non-human interlocutors" (*Great Derangement* 40). Presently, our attention appears to be shifting. The eerie and uncanny occurrences that are persistently encroaching upon us appear to have provoked a realisation, a transformation of perspectives, and a cognizance that humans have never been isolated, that people have always

been encompassed by multiple beings that possess certain attributes that humans had previously believed to be exclusively their own: the faculties of will, cognition and action.

In this context, Ghosh's retrospective contemplation of the legend of Goddess Manasa, coupled with his innovative reinterpretation of it, represents a rekindling of the erstwhile fascination with ancient stories that contain vestiges of contemporary concerns. The underlying ideas explored within the legend are remarkably crucial to the global manifestation of climate change. It is evident from Horen's account that the Gun Merchant's misfortunes in the legend were brought on by his hubris and his belief that he was wealthy and shrewd enough to stay away from paying respect to the powers symbolised by the deity of snakes. The goddess's wrath is depicted as a persistent force that follows the merchant throughout his journey. This presents the existence of other truths and forces beyond human control, like the force of nature, which can easily overpower the hubris of those who believe themselves to be the most powerful species. In his quest to amass a big fortune and collect cowrie shells (which served as a currency throughout the Indian Ocean in ancient times) disregarding ecological concerns, the merchant becomes a symbol of profit-driven financial gain. On the other hand, he experiences multiple calamitous occurrences that bear resemblance to climate-induced disasters, believed to be orchestrated by Manasa Devi. 'Bonduki Sadagar' or the Gun Merchant from eastern India, travelled the world, spanning across various locations such as 'the land of Palm Sugar Candy', 'Land of Kerchieves', 'the Land of Chains' and 'Gun Island'. In the course of the narrative, Dinanath, aided by Cinta, solves the mystery of the legend, only to discover that the locations that appear to be having fantastic names "from a book of marvels" (*Gun Island* 138) are indeed actual places, with historical evidences to substantiate their existence. Through a meticulous analysis of historical and linguistic sources, Dinanath and Cinta reveal that these seemingly imaginary places are in fact rooted in real-world locations. The "land of Sugar Candy", for instance, is found to be a reference to Egypt; at the same time the "land of Kerchieves" is traced back to Turkey, and the "Islands of Chains" is shown to correspond to Sicily. Their findings reveal that the toponyms are historically quite plausible. The allusions to these geographical locations within the legend elicit a sense of familiarity, evoking images of the long route undertaken by the refugees to migrate, including characters like Rafi and Tipu. They start their clandestine journey from India, pass through the Middle East and ultimately find themselves separated at the Turkish border. Thus,

the route taken by the Merchant bears a striking resemblance to the geographical trajectory followed by the migration-seekers.

The Merchant's departure from his native land in eastern India is attributed to the adverse effects of the Little Ice Age, which caused a series of climatic disturbances such as "drought and floods" and having suffered significant losses, he resolves to embark on a journey overseas with the aim to "recoup his fortune" (Ghosh, *Gun Island* 141). The fleeing of the Merchant from his native land bears resemblance to the circumstances faced by Rafi, Tipu, and numerous others who opt to abandon the Sundarbans owing to the inhospitable standard of living that have been exacerbated by the far-reaching consequences of extreme weather events. The Merchant's surrender to the authority of Manasa Devi turns out in his construction of a shrine dedicated to her. Consequently, it is understood that the goddess, in her role as a negotiator, has emerged victorious in the pursuit to reaffirm to mankind the force and agency of animate and inanimate entities that comprise the world. The novel's reinterpretation of the legend does not intend to offer a conventional portrayal of an all-powerful fantastic deity who is worshipped by followers out of dread of punishment for noncompliance. Rather, her role can be construed as that of "a translator – or better still a *portavoce* – as the Italian say, 'a voice-carrier' between two species that had no language in common and no shared means of communication. Without her mediation there could be no relationship between animal and human except hatred and aggression" (Ghosh, *Gun Island* 152-153). As an intermediary, she functions to harmonise the coexistence of both human and nonhuman and safeguards them from the perils of a society built on profit-driven motifs. Manasa Devi attempts to draw the attention of the Merchant and his fellow humans to the supremacy of the natural world. This is achieved through the infliction of various forms of suffering upon the Merchant, caused by natural calamities. The intention of the author is probably to convey that despite being considered the most powerful species on earth, humans are ultimately ruled by the laws of nature. The Venetian Admiral Alessandro di Vigonovo, who was initially tasked with obstructing the Blue Boat's entry and preventing the refugees from reaching Italian shores, changes his decision, thus contravening the commands of the Minister. This event draws a parallel between the change of thoughts and subsequent surrender of the Merchant to the goddess of snakes in the legendary tale. The Admiral defied the expected protocol of being stringent towards the refugees and, instead, took it upon himself to dispatch the Italian Navy for the purpose of rescuing the refugees who were in the Blue Boat. This act was carried out solely

on his own accord. He justified his decision by saying, "What the minister had said, in public, was that only in the event of a miracle would these refugees be allowed into Italy" (Ghosh, *Gun Island* 283-284). He further claims: "what we witnessed today was indeed a miracle" (Ghosh, *Gun Island* 284). By this statement he is actually referring to the event of bioluminescence as discussed above. An unusual ecological phenomenon bears the capability to bring a marked change in political decision-making. The end of the legend bears a striking resemblance to the final scene of the novel. The legend recounts the Merchant's capture by pirates after his departure from Venice. The pirates were en route to the Island of Chains (referred to as Sicily), where they intended to sell the Merchant as a slave. However, a "*miracolo*" or miracle intervened during their journey, resulting in the Merchant's freedom "by the creatures of the sky and sea" (Ghosh, *Gun Island* 247). The final scene of the novel depicts the protagonists and their companions bearing witness to a phenomenon which can be described as a 'miracle', which transfixed them "by this miraculous spectacle: the storm of birds circling above, like a whirling funnel, and the graceful shadows of the leviathans in the glowing green water below" (Ghosh, *Gun Island* 282). Rafi's observation serves to reaffirm the similarity between the two miraculous events: "It's just as it says in the story – the creatures of the sky and sea rising up …" (Ghosh, *Gun Island* 281). The novel culminates in an awakening to the significance of the nonhuman realm, which is demonstrated through a range of signs such as "a storm of living beings" (*Gun Island* 281), the marine creatures and birds encircling the Blue Boat and bioluminescence. In this novel, Ghosh employs a subtle approach to raise awareness about the gradual unfolding of a threatening event such as climate change. Through the process of deciphering the secrets of the legend and facing diverse manifestations of climate disasters, Dinanath attains an "awakening" and gains further insight into the fundamental traits of the Anthropocene and Human/nonhuman connection: "There is an awakening happening around the world – this could be the moment when everything changes …" (Ghosh, *Gun Island* 284). By drawing on an ancient legend that features similar events, Ghosh aims to shed light on the present crisis-ridden scenarios and their impacts upon establishing transformation on cultural and political perspectives.

Ghosh's another novel *The Hungry Tide* (2004) also contains the theme of climate change in an oblique manner and uses it as a means to convey the dangers that arise in a constantly transforming world. The novel serves as a precursor to those works that deal with the difficulties brought about by environmental degradation. Like *Gun Island*, the narrative of this

novel takes place within the islands of the Sundarbans, which is renowned for its vast expanse. The Sundarbans "is an archipelago that hosts the largest estuarine mangrove forest in the world, a unique ecosystem of tidal waterways and islands that is home to a wide variety of plant and animal species, including a large population of tigers" (Prabhu 2). The narrative unfolds in a natural setting where characters from different backgrounds converge: Kanai, a New Delhi-based translator and entrepreneur hailing from New Delhi; Piya, an America-based cetologist of Indian descent; Fokir, a native fisherman. Each of them is confronted with the challenge of a degrading ecosystem and the unpredictable forces of nature that prevail in the region. These three protagonists embark on a shared adventure to assist Piya in her research on Irrawaddy dolphins. Throughout their journey they confront diverse experiences in the ever-changing terrain of the tide country that are constant reminder of their vulnerability to the unpredictable forces of nature and untamed wild creatures:

> A mangrove forest is a universe unto itself, utterly unlike other woodlands or jungles. There are no towering, vine-looped trees, no ferns, no wildflowers, no chattering monkeys or cockatoos. Mangrove leaves are tough and leathery, the branches gnarled and the foliage often impassably dense. Visibility is short and the air still and fetid. At no moment can human beings have any doubt of the terrain's utter hostility to their presence, of its cunning and resourcefulness, of its determination to destroy or expel them. Every year dozens of people perish in the embrace of that dense foliage, killed by tigers, snakes and crocodiles. (Ghosh, *Hungry Tide* 7-8)

Piya is drawn to conduct her research in this location due to its abundant biodiversity and ecological significance. In her analysis of Ghosh's work, Suhasini Vincent (2018) discusses the author's endeavour to depict the erratic behaviour of the place. Specifically, Vincent notes that Ghosh captures the essence of this unique mangrove ecosystem located in the Sundarbans highlighting its tendency to "appear and disappear, merge and submerge, surprise and disrupt human lifestyle" (2). These frequent transformations rampant in the region indirectly indicate the effects of sea level rise. The novel can be analysed as a space where ecological concerns are scrutinised in connection with the hostile natural surroundings of the Sundarbans and its delicate equilibrium of ecology that necessitate preservation in a region of erratic tidal movements.

The dynamic nature of the islands is evident as it undergoes constant transformation, influenced by the oscillation of the tidal currents: “The currents are so powerful as to reshape the islands almost daily – some days the water tears away entire promontories and peninsulas; at other times it throws up new shelves and sandbanks where there were none before” (Ghosh, *Hungry Tide* 7). Ghosh aims to communicate the idea of capriciousness and transformation through the statements of two key characters, namely Kanai and his uncle, Nirmal. Kanai observes how the pathways of the local rivers are dispersed in the Sundarbans creating a terrain where “the boundaries between land and water are always mutating, always unpredictable” (Ghosh, *Hungry Tide* 7). On the other hand, Nirmal writes in his notebook: “here, in the tide country, transformation is the rule of life: rivers stray from week to week, and islands are made and unmade in days” (Ghosh, *Hungry Tide* 224). Malay Kumar Pramanik’s (2014) research on the consequences of rising sea level in the Sundarbans offers his findings stating, “In the last century, the probabilities of flood and bank erosion have accelerated due to increased rate of siltation and erosion of riverbeds” (118). As a result, the constant rise in sea level has currently become a crucial negative impact on “the existence of this fragile ecosystem” (118). This inherent mutability of the Sundarbans poses a significant threat to the local inhabitants and any prospective settlers.

The novel features a primary setting known as Lusibari, a fictitious island in the Sundarbans where a significant part of the narrative takes place. The absence of jetties and docks on Lusibari is noteworthy, as the strong currents and tides surrounding the island make it impossible to set up any durable structure. This implies that the structures built by humans are not well-equipped to withstand the harsh conditions of the area, and that the inhabitants of Lusibari face a constant struggle to survive as “hunger and catastrophe were a way of life” (Ghosh, *Hungry Tide* 79). This issue of hunger is explored in relation to the challenges faced by farmers, whose works are hindered by unfavourable agricultural conditions resulting from soil degradation caused by the presence of salt, as well as the recurrence of climatic events such as floods and storms: “Most families subsisted on a single daily meal. Despite all the labour that had been invested in the embankments, there were still periodic breaches because of floods and storms: each such inundation rendered the land infertile for several years at a time” (Ghosh, *Hungry Tide* 79).

In the novel, there are also other instances of the impact of changing climate conditions. Piya embarks on a perilous journey with Fokir in his boat, in the pursuit of tracing the path of travel of the dolphins. Little did they know that a cyclonic storm was brewing, threatening to disrupt their expedition. Fokir has displayed a keen sense of familiarity with the habitual routes traversed by the dolphins in the surrounding waterscape. However, in this particular instance, it appears that Fokir's awareness is experiencing a momentary lapse, marking the final occasion during their joint pursuit for the dolphins. The alteration of the dolphin's migratory routes suggests a heightened level of environmental awareness of the nonhuman, as they appear to possess knowledge that is not known to humans. The warnings issued by the New Delhi weather office regarding the impending cyclone do not reach Piya and Fokir. Therefore, Fokir fails to guess the reason behind the dolphins' changed behaviour. The storm episode depicted in the novel is a remarkable feature of the work. It is an example of the work's unique narrative style and the vivid portrayal of the events that unfold in the midst of the cyclone. What truly sets this episode apart from many other descriptions of climatic events in the novel is its ability to convey the overwhelming force of natural calamity, which transcends human perspectives as presented throughout the story. The sudden onset of the storm coincides with the tragic loss of Piya's valuable scientific equipment, meticulously gathered research data concerning her investigation, along with Kanai's letter, all of which were snatched away by the storm from Fokir's boat. Simultaneously, within a short distance, Kanai was crossing a minor expanse of river in a separate boat. While in transit, forceful gusts of wind caused Nirmal's notebook to slip from his grasp, drift away and submerge in the water's current. The notebook's content is crucial because it can be interpreted as a narrative of resistance against the dominant historical account of the tragic Morichjhapi Massacre. It is an important document about the collective suffering of a marginalised group of refugees who lacked the means to communicate their painful experiences to those in positions of power. The pitiful account of the torture on the refugees by the government that Nirmal had intended to chronicle for subsequent generations, his expressions of idealism and passionate appeal for compassion, have all been irretrievably lost in the current during the storm. The loss of Nirmal's notebook, Piya's equipment, as well as the shrine of Bon Bibi, together holds significant meaning in this novel, as it indicates the unpredictability about the extent of loss humans suffer and underscores the sense of loss that is central to the novel. The shrine, which was once a source of hope and security for the natives of the Sundarbans, is now

destroyed. In this regard, Gayathri Prabhu (2015) states, "This peeling away of different kinds of human records and histories makes a fascinating parallel movement to that of the main action of the tide taking unquestioned control of the physical world" (12). This statement points towards the complex dynamics of the Sundarbans' islands and mangrove forests that are inextricably linked to the ebb and flow of the tides. The tides' role is of utmost importance in determining the ecological balance and sustainability of this region, shaping and reshaping its unique physical landscape and biodiversity. This is also a visible transformation in an age primarily regulated by human actions and a sense of superiority. Amidst the eye of the storm, Fokir and Piya encounter other life forms that are similarly struggling to survive the storm. They noticed a flock of exhausted white birds that perched too close to them regardless of their presence. Similarly, they saw a tiger emerging from the flooded land and climbing a tree on the remote end of the same place. These encounters highlight the commonality of the struggle for survival between human beings and nonhuman entities. It also suggests that the impact of the storm is indiscriminate, affecting all living beings equally.

The novel functions as an early warning, demonstrating that calamitous weather-related events act as admonitions that were once deemed implausible and thus disregarded. Upon this realisation, Ghosh has incorporated the story chronicling the establishment and decline of Port Canning, a location situated adjacent to the Matla River in the Sundarbans. Similar to numerous other islands in the Sundarbans, the name Canning was also given by an '*Ingrej*', an Englishman named Lord Canning. During that time, a shipping inspector of English origin, named Henry Piddington lived in Calcutta. The storms piqued his curiosity, leading him to study and conduct a thorough analysis in an attempt to comprehend their nature. His fascination with storms was so profound that he coined a new term "cyclone" to describe them. Through the perspective of Kanai, the Matla River is portrayed as a capricious and erratic force of nature, capable of surging beyond its embankments without warning or prior-indication. Lord Canning decided to build a new port, which would be considered as the new capital of Bengal. Following an extensive search for an appropriate site to establish the port, his planners and surveyors eventually stumbled upon a location along the edges of the Matla River: "a little fishing village that overlooked a river so broad and wide that it looked like a highway to the sea" (Ghosh, *Hungry Tide* 284). Upon learning about Viceroy Canning's proposed new port, Mr. Piddington wrote a letter to him, begging the Viceroy to reconsider the matter, citing concerns that warranted

caution: “Given an unfortunate conjunction of winds and tides, even a minor storm would suffice to wash it away; all it would take was a wave stirred up by a cyclone” (Ghosh, *Hungry Tide* 286). A prediction was even made by him– “if the port was built at this location, he said, it would not last more than fifteen years. There would come a day when a great mass of salt water would rise up, in the midst of a cyclone, and drown the whole settlement; on this he would stake his reputation, as a man and as a scientist” (Ghosh, *Hungry Tide* 286). He further elaborated through another letter to planners and surveyors warning them against the impending danger: “[I]t was crazy to build a town so deep in the tide country; the mangroves were Bengal’s defence against the Bay, he said – they served as a barrier against nature’s fury, absorbing the initial onslaught of cyclonic winds, waves and tidal surges” (Ghosh, *Hungry Tide* 286). But, Piddington’s prediction was ignored and not paid due attention. In 1867, a major calamity occurred at Port Canning, which had been ceremoniously named by the Viceroy five years ago. A storm and a wave surge ravaged the port, resulting in leaving merely a ‘bleached skeleton’ of the town (Ghosh, *Hungry Tide* 287). As per Piddington’s prediction, the devastation occurred due to an almost minor storm rather than a formidable *tufaan*. The port’s destruction was not solely attributed to the forceful winds of the storm, but rather to a powerful wave or surge that overtook it. Following the 1867 uprising in Matla, the port was completely abandoned after a period of four years. This particular anecdote serves as a reminder of the self-absorbed and indifferent conduct that precipitates calamitous outcomes. It suggests that the heedlessness towards climatic warnings is a common issue, primarily due to the seemingly implausible nature of the anticipated calamity. Robert Šakić Trogrlić et al. (2022) have found it important that “given accurate, timely and understandable warning information is available and communicated to appropriate users in advance of a disaster, people and institutions are able to respond and take action. A holistic early warning system not only provides warning information but also enables action to be taken based on these warnings” (30). The importance of equipping people with the ability to take pre-emptive measures in response to warning information necessitates the integration of such measures into extended planning and preparedness initiatives. Amidst the global transformation of various natures, the novel anticipates the value of understandable warning information, which makes it a cautionary tale. The author’s visionary approach in crafting the novel appears to foreshadow impending calamities of an uncertain nature that can potentially bring about significant social and human-centred cultural transformations. The

propensity of regions such as the Sundarbans to cyclones and tidal surges is a well-established fact. The manner in which this information is conveyed through the novel may suggest that the occurrence of such disasters is not merely a matter of chance. The Anthropocene epoch has witnessed a persistent pattern of human disregard towards the nonhuman forces, resulting in catastrophic consequences. The current frequency of climatic disasters evokes a prophetic utterance made by Nirmal: "*it will happen again. A storm will come, the waters will rise and the bãdh will succumb, in part or in whole. It is only a matter of time*" (Ghosh, *Hungry Tide* 205). The novel itself portrays the recurrence of storms and floods through allusions to various analogous instances, such as the 1970 cyclone and the surge in Matla in 1867. The penultimate chapters of the novel depict the final cyclone as a localised occurrence. The novel explores the impact of the cyclone on the lives of its characters, particularly Piya and Kanai, who endure it being separated from each other. They provide two distinct perspectives on the cyclone. Kanai and Horen's experiences are contrasted with those of Piya and Fokir. Through these separated pairs, the narrative represents the impact of the cyclone on the characters. As the storm draws near, the palpable sense of reality becomes increasingly apparent, as the nonhuman element such as the cyclone, gradually gains dominance over the rest. In the beginning, Piya was confident enough that they "would be back at Garjontola in a couple of hours – probably before the storm broke" (Ghosh, *Hungry Tide* 369). The combination of forces between the wind and the waves was found to be advantageous while rowing their boat rather than hazardous as the waves and the wind "were pushing the boat in the direction they wanted to go, so it was like having extra pairs of hands to help with the rowing" (Ghosh, *Hungry Tide* 369). The initial generous nature of the wind and waves was short-lived, as they soon took a perilous turn. Piya is depicted as being in a state of powerlessness when confronted with the mighty wind that is compared to a ferocious beast, a "clawed animal" (372), relentlessly attempting to rip apart the boat. As the wind and waves grew more intense, Piya found herself in greater peril:

> [R]owing with her back to the wind. It was oddly disorientating to be hit by waves coming from her blind side; after they had lifted her up there would be a dizzying moment when the boat seemed to hang upon the crest of the watery ridge. Then suddenly she would find herself tobogganing backwards into the wave's trough, clutching at the gunwales to keep her balance. Water came sluicing over the bow with each wave and it felt as if a bucket were being emptied on her back. (Ghosh, *Hungry Tide* 370)

Piya felt “her own agency slipping away” (Kluwick 7). Piya and Fokir find themselves driven by the force of the natural elements. In the beginning, they were seen as having greater power than the natural elements, as shown by their ability to control their pace taking help of the waves and wind. However, this view is later challenged as the natural world becomes more dominant, ultimately leading to the annihilation of human agency. The text implies a shift in power dynamics between humans and nature over time. The above analysis reveals Ghosh’s deliberate exploration of the novel’s potential for representing the improbable elements. In *The Great Derangement* (2016), Ghosh provides an account of the extraordinary difficulty he encountered when writing the final cyclone sequence of *The Hungry Tide*: “In preparation for it, I combed through a great deal of material on catastrophic waves – storm surges as well as tsunamis. In the process, as often happens in writing fiction, the plight of the book’s characters, as they faced the wave, became frighteningly real” (*Great Derangement* 44). This excerpt cited from *The Great Derangement* indicates that Ghosh has adopted an organised method towards exploring the function of the novel in depicting climatic event subsequent to the appearance of *The Hungry Tide*. Through its portrayal of the regional consequences of climatic events, the novel functions as a powerful appeal to global consciousness, urging recognition of the imminent global metamorphosis.

The novel contains several visible allusions to climate change as specific instances within the narrative. It maintains a noteworthy indication of ecological and climate-related apprehensions, which are conveyed in a manner akin to the act of heralding, as revealed by the character Nirmal. Nirmal has observed early indications of deterioration in climate-induced problems and environmental conditions. Nirmal’s visionary statement highlights the early signs of ecological transformation and rising sea levels, indicating impending doom:

> Age teaches you to recognize the signs of death. You do not see them suddenly; you become aware of them very slowly over a period of many, many years. Now it was as if I could see those signs everywhere, not just in myself, but in this place that I had lived in for almost thirty years. The birds were vanishing, the fish were dwindling and from day to day the land was being reclaimed by the sea. What would it take, to submerge the tide

> country? Not much – a minuscule change in the level of the sea would be enough. (Ghosh, *Hungry Tide* 215).

Nirmal's insight regarding the fate of the Sundarbans is noteworthy. Similarly, Piya's research data on aquatic mammal population in the waters of the tide country reinforces Nirmal's speculations. Piya possesses certain knowledge regarding the past existence of abundant marine mammal populations in these waters. During a conversation with Kanai, Piya responds to his query regarding the current status of dolphins by saying, "There seems to have been some sort of drastic change in the habitat, […] Some kind of dramatic deterioration" (Ghosh, *Hungry Tide* 266). As an expert cetologist, she proceeds to provide further details: "When marine mammals begin to disappear from an established habitat it means something's gone very, very wrong" (Ghosh, *Hungry Tide* 266-267). The reality shows that the sea level is, in fact, increasing and the ensuing impacts for the tide country are poised to be catastrophic. In Nirmal and Piya's observations, there are indications of an ecological shift, manifested by the dwindling numbers of birds and fish in the area. These changes act as evidence of a transformation in the ecosystem.

This chapter is an attempt to identify the vestiges of environmental transformation in selected novels. This transformation is both attributable to human activity and natural forces, which have shaped a particular age characterised by its manifold stages of reorganisation. The novels under inquiry unveil instances of transformative occurrences that subtly foreshadow the essential nature of adopting policies by those in positions of authority. Simultaneously, it is argued that the ongoing initiatives undertaken by various governments are in turn instigating consequential changes in the atmosphere and society. Thus, the novels discussed above offer fictional portrayals of climate change that, while not overtly adhering to scientific accuracy, present culturally plausible scenarios. These fictions encompass a diverse array of perspectives and strategies for envisioning a world transformed by environmental crisis like climate change. Fictional literature serves as a reflective medium that echoes the effects of adverse scientific advancements and the complex web of social dynamics heavily influenced by the change in climatic conditions. Indeed, these stories rarely suggest viable countermeasures for the mitigation of the adverse impacts of climate variations, an impasse that the scientific community is likewise struggling with in its endeavours to disseminate knowledge. Instead, these novels'

primary purpose appears to be that of cautionary tales that alert readers about the impending dangers associated with this global phenomenon. These works use such geographical locations as their settings where the gradual transformation of the environment is perceptible. The loss of habitat and an unfavourable environment due to harmful transformations prompt large scale displacement which will be discussed in detail in the next chapter. The authors have shown the universality of this phenomenon, which has unfolded across the planet revealing itself through uncanny climatic events, including but not limited to floods, storms, wildfires, coral bleaching, earthquakes and tsunamis.

Endnotes

[1] Sarah Park et al. (2012) claim that transformative activities are needed to deal with the gradual changes in climate conditions. According to them, 'Adaptation Action Cycles' help shaping our conceptualisation about transformative adaptation as a process linked to action learning. In the field of literature, fictional narratives have the unique ability to explore and depict transformative changes that arise from environmental crises. These imaginary narratives also offer readers a glimpse into the causes underlying catastrophic changes, while also inspiring contemplation on the necessity of adaptive action learning processes.

[2] Jayagopalan (2021) claims that the main concern of the novel *Latitudes of Longing* is to show the "interconnectedness of life across time-spaces" (171). Its strongest appeal is the way it uses the genre of novels to capture the interconnectedness of different kinds of life beyond faultlines, all the while setting the story in the backdrop of the Anthropocene.

[3] See Michael Bourk's article *'A Makara-like Wave Came Crashing': Sri Lankan Narratives of the Boxing Day Tsunami* (2011).

[4] In his work *Geopower: on the States of Nature of Late Capitalism* (2018), Federico Luisetti asserts, "There is no doubt that late capitalism has stubbornly pursued large-scale eco-social devastations through mining and deforestation, soil and ozone depletion, global pollution and ocean acidification, species invasion and extinction and biogenetic hazards, urbanization and pauperization, famine and mass human migrations, which have significant planetary implications" (2).

[5] See analytical report Asian Development Bank (ADB) Institute Research Paper Series No. 71 titled *Post-Tsunami Recovery: Issues and Challenges in Sri Lanka* (Jan. 2006) by Sisira Jayasuriya, Paul Steele and Dushni Weerakoon.

[6] Jason Tatum in *The Shock Doctrine: The Rise of Disaster Capitalism by Naomi Klein* (2009) claims that the term "the shock doctrine" used by Klein denotes a strategy of employing shocks as a means to implement and uphold neoliberal economic policy. This approach involves the deliberate introduction of sudden and disruptive events or circumstances, which serve as catalysts for the implementation of neoliberal reforms. Tatum elaborates three distinct phases of shock presented by Klein: firstly, any severe crisis as a shock allows neoliberal policy to be enforced; secondly, once implemented, this policy create a second shock by transferring resources from the poor to the rich, hence instilling impoverishment in the areas where these policies are thoroughly enforced; thirdly, the imposition of neoliberalism by the state upon people produces a third shock characterised by a spectrum of tactics spanning from the abhorrent acts of torture to murder. This policy, often enforced during climatic disasters, indeed brings transformation to the existing socio-political scenario. This article by Tatum is available at https://onlinelibrary.wiley.com/doi/full/10.1111/j.1467-8330.2008.00666.x.

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