

Material Ecocriticism in Amitav Ghosh's *The Hungry Tide* and *Gun Island*



Fahmida Akter Eva

ID: 203055002

Department of English and Humanities

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Material Ecocriticism in Amitav Ghosh's *The Hungry Tide* and *Gun Island*

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Fahmida Akter Eva

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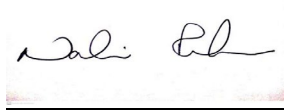
Supervisor:

Nadia Rahman

Summer 2021

Certificate of Approval

I hereby declare that this thesis is the student's own work and effort. All sources of information incorporated here have been duly acknowledged. This thesis has been submitted with my approval.

A handwritten signature in black ink, appearing to read 'Nadia Rahman', is written over a horizontal line. The signature is fluid and cursive.

Nadia Rahman

Assistant Professor

Department of English and Humanities (DEH)

Declaration

This thesis is a presentation of my original research work. Wherever contributions of others are involved, every effort is made to indicate this clearly, with due reference to the literature, and acknowledgement of collaborative research and discussions.

Fahmida

Fahmida Akter Eva

203055002

Department of English and Humanities (DEH)

Dedication

This dissertation paper is dedicated to my parents who always supported me to pursue my MA and gave me the proper guidelines. The other one is my better half who helped me a lot throughout my journey.

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Abstract

Material Ecocriticism is a concept which provides a new way of looking at the interconnectedness of every 'matter' in this world. Every 'matter' has their own agency or stories to tell. *The Hungry Tide* and *Gun Island*, are two novels by Amitav Ghosh, which talks about the human impact in ever worsening climate and environmental conditions. The author weaves the stories with the combination of history, politics, legend, adventure, etc., on a journey to understand the role of humans in preserving the environment. This research argues that human beings' materialism is responsible for the horrors of climate change and environmental degradation. Through using the frameworks of material ecocriticism by Serenella Iovino & Serpil Oppermann, I will look at the two texts to understand the role of materialism in ecological degradation. Furthermore, to understand the role of literature in ecocriticism, I have taken Hubert Zapf. The research aims to understand how Ghosh can be studied in terms of material ecocriticism to depict the role of humans in climate change as well as how eco-critical literatures such as this might play a part in raising awareness, so that the environment as well as everything else in it can be saved while there is still time.

Keywords: Material, Ecocriticism, Environment, Humans.

Introduction

Climate change and environmental degradation are the most pressing aspects of the twenty-first century that have plagued mankind, and as of now, it has yet to show any sign of stopping or slowing down. The only proven way of reducing the harshness of its destructive effects can be through a collective effort by all of humanity. To this effect, environmentally conscious authors, like Amitav Ghosh, have begun fueling the endeavor behind ecocritical literatures, to make the readers and mass people overall, more aware about the potential dangers of an imbalanced environment as well as how to take preventive measures, while there is still time. In every part of the world, economic upward mobility is seen in such high regards that the environment, the very principal element for sustaining life, is sidelined. However, despite the multitude of warnings given by both scientists and ecocritical authors, this incessant march towards destruction of nature is not slowing down. Many studies have been conducted on analyzing the ecocritical works of not only Amitav Ghosh, but other authors from the same genre, in order to identify why these literatures have failed to raise enough awareness about the environment. Most of these works center around the relationships between humans and nature. Existing research and studies on Ghosh have highlighted how the author presented the problem from a human side of things, on how humans have made environmental degradation worsen.

However, there is another way of examining as well as presenting such ecocritical works, which is material ecocriticism. It is a new concept of looking at the interconnectedness of every 'matter' in this world, including humans and nature. The key concept of material ecocriticism is that it takes the material approach and applies it in understanding the relationship between human

and nature. According to this idea, every “matter” in this world has its own agencies or stories to tell. From a single cell bacterium to the largest whales to the tallest mountains are all connected by matter. This newly emerging phenomenon of understanding that the world we inhabit is living and dynamic, despite it being full of mostly inanimate objects. These matters are forces that “hybridize human and non-human matters” (Iovino and Opperman 5) and shape the human experiences. So, in a world that is so dynamic and full of materials and agencies, humans claiming superiority over other beings and thinking of everything else as objects are futile in the grand scheme of things. Finally, material ecocriticism presents the idea that matter and meaning are the two basic components which act as the basic building blocks for our storied world.

Through the adoption of a material approach in ecocritical literature, writers can make the readers feel more connected to the world around them and actually make them feel and understand the problems of destroying the environment in the name of progress. *The Hungry Tide* and *Gun Island*, are two novels by Amitav Ghosh. These are literary fictions written with a touch of history that takes the readers on a journey throughout the world, mostly India and Sunderbans and provides a glimpse into Indian culture and way of life. *The Hungry Tide*, published in 2003, is about a precarious journey into the heart of Sunderbans, the largest mangrove forest and an environmentally perilous region. The narrative moves between past and present and conveys the struggles of the local humans as well as the animals and other beings of the forest due to worsening climate conditions. *Gun Island*, published in 2019, is a much more recent book by the author that is a kind of continuation to the story of *The Hungry Tide*. The author assumes the role of a rare book dealer in the story and represents his journey to Sunderbans in search of a childhood myth. The readers embark on the journey with the protagonist which travels through continents to

represent contemporary problems of climate change such as forced-migration, loss of lives and livelihoods, refugee crisis and many more. The ecological concerns raised through these surrealistic novels, overarches the other themes presented in the books and it is evident that the author intentionally did so. The author blends history with fiction, reality with legends, past with present, emphasizing the effects of climate change and how human action and in-actions alike, are putting the world at the risk of a great derangement. While the contents of the story are presented similar to that of any adventure, these literary fictions are written with the objective of exposing readers to the dangers of environmental issues and the potential dangers associated with it. It is the central idea behind both books. This paper will analyze the two novels of Ghosh, *The Hungry Tide* and *Gun Island*, to see how the author has presented the problem of climate change from a material eco-critical point of view and the role of humans in shaping the environment. The aim of this paper is to see whether the literary approach taken by Ghosh can be matched with that of material ecocriticism and how it fares in depicting reality through texts in order to understand the role of humans in accelerating environmental degradation. The idea is to use ecocriticism to assess whether this new trope of literature is effective at raising eco consciousness or not. Two texts of material ecocriticism, one by Serenella Iovino & Serpil Oppermann and the other by Hubert Zapf will be used as a theoretical framework to see whether Ghosh has presented the novels from an eco-materialistic perspective. Another important element of this research will be to inspect the success of similar eco-materialistic literary works in raising awareness among readers and mass people in general, as a means of fulfillment of literature's duty not only towards ensuring the survival of humankind, but also of this planet as well.

Background of the Research

Amitav Ghosh, India's 54th Jnanpith award winner, is a contemporary author who mainly focuses on ecological concepts and environmental criticisms. Two of his most famous works, *The Hungry Tide* (2004) and *Gun Island* (2019) are stories of deteriorating environmental conditions and the hardships of survival. Ghosh's unique way of storytelling weaves the key ideas using the lives of different characters, their tales related to ecological degradation and how the damages done to the environment affects both human and nature. The author has expressed his views regarding how 'imaginative and cultural failure' (Ghosh) has been the prime force behind this ecological derangement. The existing studies done on Ghosh's novels mostly focus on issues like postcolonial history, climate change, forced migration for both humans and animals, deforestation, loss of lives and livelihoods, border disputes, destructive forces of natural disasters and their aftermath, etc. However, these studies do not share any explanation from a material ecocritical point of view, which is a new method of writing, analyzing and understanding ecological literature. Material ecocriticism shows a connection between humans and every other element present in nature. This paper will focus on analyzing how Ghosh had used material ecocriticism in these novels to present the role of humans in climate change as well as to see the different ways in which eco-materialistic literatures can have an impact on raising environmental consciousness among the readers and saving the world from the impending catastrophe.

Problem Statement

Eco-critical works similar to Ghosh's novels have already been made mainstream by his contemporary authors, which focuses on the environmental aspects of climate change. However,

if we look around us, we can see the rapidly deteriorating climate conditions due to deforestation, industrialization and overall, a distinct neglect for protecting the environment. Literature has always served as an efficient means of transferring thoughts and ideologies among readers. Even before this, contemporary tropes of ecocritical literature have focused on the beauty of nature and how human greed and lack of foresightedness is destroying it. It can be sufficed that such literary works have made little-to-no effect in raising ecoconsciousness. If we look at ecological disasters like the melting ice caps, rising sea levels, greenhouse gas emissions and overall exacerbating climate conditions, the writings on such issues have made little difference. Amitav Ghosh himself has termed this limitation of ecocritical literature as “imaginative failure”, which suggests that the readers often cannot connect to the world that the story is taking them through, and as such, they fail to comprehend the perils of living in an ecologically imbalanced world. Even though many ecocritical works are acclaimed and popular for both their narrative and the awareness they are trying to make, they do not realistically leave a lasting impression on the readers. As such, this paper will examine the approach of material ecocriticism taken by Ghosh to eliminate the limitation of such literature in building environmental awareness among the readers as well as how such literature can influence the readers to become more environmentally conscious.

Research Objective

The objective of this research is to analyze both novels of Ghosh from an eco-materialistic point of view, to see how this alternative literary approach might prove to be more effective in understanding the role of matters and material in the ecological system and from that understanding raising awareness regarding the roles of humans in preserving the environment.

Research Questions

1. How does an eco-materialistic reading of *The Hungry Tide* and *Gun Island* may help to build connections between humans and nature in the two novels?
2. How can eco-material literature such as Amitav Ghosh's two novels help to raise environmental awareness?

Literature Review

Amitav Ghosh's *The Hungry Tide* and *Gun Island* explain the connection between humans and nature, the possible environmental degradation and natural disasters that can be brought about by the continuous neglect we have been showing towards nature. The novels deal with themes like climate change, forced migration, natural disasters, postcolonial diaspora etc. There are different research papers, journal articles as well as a few essays explaining the works of Ghosh from different angles. Some of the elements which existing research focuses on are: interconnectedness between humans and nature, ecocritical viewpoint, border dispute, subaltern lifestyle, forced migration, aquatic language and theme, effects of natural disasters, nature and wildlife conservation program, postcolonial history, carbon-based economy, separation of nature and culture, etc.

One of the key connections between the novels of Ghosh are the depiction of Sunderbans and its role as a central site of both novels, where much of the story takes place. Nandana Dutta focuses on the lives of subalterns living in Sunderbans, which is situated right between the border

of India and Bangladesh. She points out that Ghosh used the nature of the terrain of Sunderbans as an aesthetic effect for the novel. According to Dutta, *The Hungry Tide* is a novel about the settlers of the precarious tide country of Sunderbans, who constantly has to deal with “the government’s wildlife project, with the tides that erase and create land with alarming frequency, with the tigers and spirits who seem to have equally palpable presences, and with outsiders like Nirmal, Nilima, Kanai and Piya who come with alien ideas about improvement or about saving the environment and its endangered species” (35). The dispute shown in the novel goes far beyond a geographical one and takes place between humans and animals, land and water, outsiders and inhabitants and educated and uneducated (36). The combination of location and subalterns that appear together in *The Hungry Tide*, gives rise to a “subaltern geoaesthetic” (40) and which can be seen from the experiences of events such as - the killing of the tiger, the discovery of mysterious Irrawaddy dolphins and the cyclone at the end which results in the death of Fakir. While this article covers an important area of the role of nature in the lives of the subalterns living in Sunderbans, it overlooks the relationship between matter, nature and human lives. It basically takes more of an aesthetic route rather than an anthropological one, although it talks about the various challenges of living in a blessed and cursed place like Sunderbans.

Many of the previous researches on Amitav Ghosh’s works have discussed ecological destruction through cyclones and floods and how they affect lowland areas like Sunderbans. The novels are replete with what Ursula Kluwick has termed as “Anthropocene Water Fiction” (1). The research done by her focuses on the effects of climate change brought about by humans and the use of water as a plot element to convey such changes. According to her, “Anthropocene water fictions challenge some of the limitations of the realist novel that Ghosh identifies.” (2), which is

her way of countering the argument presented by Ghosh about the limitations of serious literary fiction. The paper further explores the depiction of ecological destruction of Sunderbans in both *The Hungry Tide* and *Gun Island* using different scales of representation. The former focuses on two cyclones, one during the 1970 and one at the end of the story and the latter novel focuses on cyclone Aila of 2009. According to Kluick, “the development of Ghosh’s engagement with the flood in his increasingly explicit exploration of climate change. I identify a shift from depictions of cyclones as lived experience to storms and floods as signs of climatic and harbingers of social change” (6). The research argues that the use of floods and aquatic language has become increasingly important as they are used to establish links between different events and settings in both of the novels. The destructive forces of nature and the after effects of a disaster, both on the environment as well as the lives of the inhabitants living there, have been discussed in the article (9). The article shows how Ghosh has used language as an effective tool to take the readers on a journey through Sunderbans and show the horrors of natural disasters, especially of aquatic nature.

Ghosh’s novels also draw attention to the region's colonial past and the contradictory legacy of exploitative environmental practices that have taken place. *The Hungry Tide*, which was published in 2004, acted as a title portraying the calamitous effects of natural disasters, such as the Tsunami that year. Ghosh, who was one of the earliest responding media personalities to the sites of Andaman and Nicobar Islands, which were two of the worst affected Tsunami sites in India, have been very critical about the environmentally blind practices of habitation and development by the postcolonial Indian state (Kaur 125). The choice of Sunderbans as the locale for both *The Hungry Tide* and *Gun Island* is “brilliantly apt” (127), as it is a unique chain of islands which are constantly changing, appearing and disappearing with the ebb and flow of tide. Kaur also

highlights the problem of “ethical ecological commitment versus social justice and human welfare” (129) in his article. According to him, eco-conversation programmes such as “Project Tiger” (129). are ways to win international approval and raise the government’s image as an environmentally conscious one. However, he also mentions how Ghosh has used the diary of Nirmal to depict one little known but bloody chapter in the history of Sunderbans. “Project Tiger”, the brainchild of Indira Gandhi, former prime minister of India, is the prime example showcasing the gap between chalked out plans to conserve the nature and reality of putting them into perspective. Kaur mentions how Ghosh had shown the lamentation of Kusum, a survivor of the Morichjhapi revolt, who wondered about the people how loved animals so much that they were willing to kill humans for them (130). There is further argument that such conservational programs are critical in emphasizing importance of class and economic status, especially in contrast between wealthy western nations and postcolonial states like India. Here, such conservational programs might lead to the destruction of lives and livelihoods of the vulnerable habitants living in such places (129). The article starts off with Ghosh’s use of Sunderbans as a site for the narrative of the story, to a political viewpoint regarding the postcolonial development drives that have proved mostly unsustainable and even harmful for nature as well as the people (133). It moves further towards an ecocritical perspective by pointing out the author’s critical views on nature conservation programs, which were undertaken mostly not to save nature, but as points to brag about in election campaigns.

Another article, by Nupur Pancholi and Sanjit Kumar Mishra, is about how Ghosh has explored the effects left by humans in accelerating the global climate change in his fiction *Gun Island* and non-fiction *The Great Derangement*. The article focused on how exploiting nature and

its resources has led us to a situation of environmental instability and threatened the survival of life on the planet. According to Pancholi & Mishra, “Ghosh contends that the actual problem lies in the separation between Culture and Nature” (1). It is the root cause behind ecological destruction and which is the logical conclusion that both the author and the article arrive at. The anthropocentric viewpoint that everything in this world has been made to cater to human needs, have led us down this path of derangement and destruction. The article talks about how the persuasion of a “good life” (2) dependent on a carbon-based economy, has completely brought about changes like rising temperatures, extreme weather conditions, increasing sea levels, wildfires, cyclones and so forth. Even if all carbon-based activities were to be halted today, some of the consequences are inevitable now and are certain to bring about environmental catastrophe. The authors also explore the eco-consciousness of the characters depicted in *Gun Island*. Cinta, a humanist and a scholar objects when Deen calls global warming a natural phenomenon by questioning: “Do they not come from cars and planes and factories that make whistling kettles and electric toasters and espresso machines? Is all this natural too – that we should need these things that nobody needed a hundred years ago?” (3). The article further explores how global warming and adverse climate conditions have brought about unpredictable changes in the habitats and behaviors, such as the presence of a venomous spider in Cinta’s apartment or erratic movement or beaching of the dolphins (5). The article finishes with how Ghosh had intertwined the effects of climate change in the form of forced migration of both humans and animals alike and points out the errors in the ways human development has ruined the environment and the impending problems that lie in wait for the future.

The centerpiece of these two novels is about how Sunderbans, the largest mangrove forest and a heavily contested political region with its dynamic border and marginal people, have mostly been overlooked by the journalists, writers, environmental activists etc. White explained how Amitav Ghosh has outlined the reason as a lack of knowledge and relatability, and attempted to counter it through his novel (513). Most people take in the Sunderbans from a tourist's point of view, where they take a tour through it and forget about it afterwards. However, the author of the novel himself has claimed that "[P]eople can achieve deep insights through other forms of knowing, through forms of knowing that we wouldn't even recognize. And I think in fact the novel is one of those forms of knowing." (514). Only when severe natural disasters like hurricanes and cyclones ravage our lives, the importance of the mangrove is talked about. Conservational efforts to save the forest from destruction are even less talked about, as it has become a topic of politics and no one really cares about saving the forest or its four million inhabitants. White explores how Ghosh had used the story to depict the bloody incident that took place due to nature conservation programmes in the Sunderbans. However, even Ghosh identifies that "politics and public policy are the realms where environmental decisions are made, and he argues that fiction is the necessary first step that enables responsible decisions (516). While this article focuses on the environmental issues raised by Ghosh, specifically about Sunderbans and how literature and politics have a role to play in saving it, by looking at the problem from a more holistic point of view, we can explain the ongoing environmental crisis and the steps we can take to minimize it.

Another way existing researchers have analyzed Amitav Ghosh's *Gun Island* is from the perspective of Ecocide, which is the study of damages done to the environment and the effects of such, on the lives of humans as well as other species. Gupta explains how Ghosh is critical about

“the irresponsible, irrational and self-centered attitude of the human race that has resulted in the problems of Global warming and Climate change” (117). Ghosh, like other eminent ecocritical writers, weaves a story by using culture, history, fiction and blends them with carefully selected characterization to make the reader feel and connect with the story. The environmental degradation process is not a topic of discussion among the general populace, as the causes behind this such as the rapid urbanization, industrialization, deforestation, etc., are mainly done for the betterment of human economy and culture (121). The article specifies the concern of a consumerist culture raised by Ghosh, that has turned man into a demon who passively accepts his impending ecological destruction, which in the words of the novelist are: “Everybody knows what must be done if the world is to continue to be a livable place, if our homes are not to be invaded by the sea or by creatures like that spider. Everybody knows... and yet we are powerless, even the most powerful among us.” (122). This trend of consumerist culture has led the environment towards an imbalance and catastrophic state and affected the local populace of endangered areas like Sunderbans. Displacement of both humans and animals in Ghosh’s novels is also a point of concern this article raises about (116). Similar to several articles, it also highlights Ghosh’s methodology of telling the story about the errors of the ways human development has taken place, especially in post-colonial India (122). It points out the destruction of nature and the effects of so on the lives of local inhabitants.

Dr. Panchal Dnyaneshwar Anantrao had taken a much different approach and connected the warnings of the novels with real events. According to him, Ghosh had tried to warn us about the ever declining climate conditions and the problems it might bring for the future of life on this planet. In *Gun Island*, the Los Angeles wildfire incident is described vividly to focus on the

damages inflicted upon land, forest, local citizenry as well as the lives of countless animals, which were burnt alive to death in the fire. The grotesque description of the damages of the fire is to depict and paint a clear picture on the reader's mind, so that they can understand the dangers of environmental degradation and take necessary steps to prevent it before it is too late. Anantrao also points out how accurately the author had written about the incident of wildfire in *Gun Island*, “The narration of view looks so familiar with wildfire in California as if he was watching the future” (4502). This new genre of literary criticism is a sort of fulfillment of moral duties shown by ecocritical authors like Ghosh, as the environment is something that we are a part of, and any negative like global warming or climate change and its effects on it, will befall the humankind, sooner or later (4503). While this article takes a follow up approach to Ghosh’s novel, it does so by pointing out the fact how accurately the events of wildfire matched with Ghosh’s *Gun Island*. It was almost as if it was a prediction, not just a fiction.

Lack of consciousness about ecology and nature is one of the key drivers behind the deteriorating climate conditions. According to Dr. M. Sreelatha, Ghosh has brought up several critical issues that are currently obstructing the path towards an ecological conscious future. In her article on the novels of Ghosh, she focused on the “man-nature interaction” (83) presented in his novels as well as the role of recent ecocritical literature. She mentions that, despite climate change being a longstanding issue, “the consciousness for ecology and the crisis of environment has only recently ignited the writers” (83). She further mentions that the author has given a very detailed description of the environment of Sunderbans and written about the relationship between man and nature, the beauty of nature and also the destructive side of it. The article mentions that with destruction, comes the issues of migration, displacement, subaltern lifestyles of the humans living

in areas like Sunderbans, which are already vulnerable from issues like contested borders and natural calamities (84) and adds further miseries in the lives of the people and animals living there. Sreelatha also mentions the conflict of interest between various involved parties as one of the root causes behind this mismanagement and carelessness of Sunderbans in her article as: “Ghosh through *The Hungry Tide* presents important ongoing controversies between governmental agencies, nongovernmental organizations, environmental activists, socialists, human and animal rights protection groups, tribal, tidal inhabitants and urban inhabitants, about the exigency for inculcating fair environmental policies that do not show favour to any one species while crushing another.” (86)

Anthropological view is another angle through which the works of Amitav Ghosh have been analyzed, and which takes more of an environmentalist point of view in explaining the novels. The article by Rahman talks about how Ghosh had written about the ecosystem of Sundarbans and the struggles of not only the human inhabitants of Sunderbans, but the animals as well (10811). Rahman compared the ebb and flow of tide as the divisive force of nature presented in Ghosh’s work as: “The division of the book is based on the most important phenomenon of the Sundarbans, the ebb and the flow. Part one of the book is named the ebb: *bhata* and part two is named the flood: *jawar*” (10812). Rahman also talks about the undeniable facts and imagery that Ghosh has presented in the novel. He mentions the decreasing number of rare dolphins, fishes as well as the decline of tiger population, due to changes in the environment (10813). He mentions how Ghosh had used the diary of Nirmal to discuss the destruction of the mangrove and the subsequent reduction of the defensive mechanism of Sunderbans (10814). The mangrove which is home to the world-famous Royal Bengal Tiger, has seen their numbers dwindle down to critical levels and

as such, conservational movements like Project Tiger had been implemented for ensuring the survival of such rare animals (10815). The article also discusses the negative impact on the local populace of Sunderbans, who are mostly fishermen by nature, and generally do not pose any threat to local wildlife. It also discusses the negative impacts of rising sea levels, shrinking land areas and increased level of pollutants in the waters for aquatic wildlife, such as oracella dolphins (10820). Overall, the article discusses the works of Amitav Ghosh from an eco-conscious point of view, and mainly focuses on the argument of human rights vs animal rights. which is unique in the sense that it focuses on the perils faced by the wildlife of Sunderbans besides the humans living there.

Interpretation of animal imagery as a part of myth and its connection to human treatment are assessed as part of cultural politics, in analysis of Ghosh's works by Nilanjan Chakraborty. In the article, the writer examines various aspects of myth-creation and its historical narratives playing a vital role shaping local culture, which is presented in *The Hungry Tide*. According to Chakraborty, "*The Hungry Tide* depicts the reality of such a cultural system where recorded history, unrecorded human tales, myth and politics- all coalesce to form a narrative" (25). Cultural politics as well its pitfalls as tools of identity creation also emphasize that the construction of history is part of one's own lived experiences, which is susceptible to subjectivity and perspectivization and is also dependent on the narrator. Chakraborty commented that, "Ethnography, politics and lived experiences therefore flow and interpellate into each other in Ghosh", which makes his works unique and appreciable by the readers (27). The author finally explores how ethnic local beliefs in a myth are much more appropriated by the locals and become a part of culture whereas outsiders do not share such views most of the time. He looks into Ghosh's

novel from an epistemological view and how myths work in remote and rural areas like Sunderbans. The article explores human interactions with stories and myth, such as the representation of the events told through Nirmal's diary as well as the legend of Bon Bibi. Myths drawn from natural elements such as a snake, can be interpreted as a symbol, which men might have created to warn and protect themselves against the dangerous aspects of nature, are also part of Chakraborty's analysis of Ghosh.

One of the identifying characteristics about the works of Amitav Ghosh are how the narratives of his novels challenge conventional views in literature about plants, animals, objects, and everything other than humans existing in nature. Justyna Poray-Wybranowska and Tyler Scott Ball have based their research by establishing the relationship between these elements in the works of Ghosh. By recognizing these different plants, animals, objects and overall, elements of nature as 'vital players', the research shows how Ghosh exemplifies the interconnectedness between living creatures and material objects in nature (Wybranowska & Ball 2). He uses every tool at his disposal as a storyteller to weave stories about the past and foretelling about the future concerning nature and environment. As explained by Wybranowska & Ball in their article, "Ghosh's novels foreground the effects the physical environment has on the plot's trajectory, thereby drawing attention to the nonhuman presences that impact the narrative. His treatment of the Sundarbans, in particular, helps bring out these effects" (3) which suggests how Ghosh uses the physical environment to broaden the readers "analytic aperture" (3). Ghosh suggests to overcome imaginative limitation by understanding our entanglements with everything in nature, both animate and inanimate objects (5).

Humans must abandon their anthropocentric attitude and adopt an ecocentric one. Men are protected by their laws, but the environment has no laws or voice of their own to protect and uphold environmental rights. Mishra points out the incident of the Morichjhapi massacre is a clear violation of not only human rights, but also ecological vision as well. He also explains that the idea behind saving the environment from harm has two factors, one from a survivalist perspective and another from an ethical perspective (45). He further notes that the methods Ghosh utilized to make the reader feel connected to not just the humans but also the natural elements like rivers, plants, animals etc., of Sunderbans. Misra explains how Ghosh had used Nirmals diary to tell the recollection of a more ecologically stable Sunderbans of the past. He further remarked that, “In the modern world, nothing has damaged the ecosystem as badly as ‘industrialization’ and ‘development of technology’” (46). The incidents covered in this book are nothing but examples of man’s two-fold attitude towards the environment and themselves, and provides a glimpse into anthropocentric worlds cruelty, where success and well-being is measured by profits rather than a good life for both humans and nature. But politicians and law-makers, who are the most responsible for saving the environment as well as the people are the most greedy ones, who are willing to let businessmen exploit nature just so that they can make a quick penny themselves (47). The ironic part in all this is, for man to survive and to thrive they must abandon their current anthropocentric attitude, and adopt an ecocentric one. As the supreme entity in the hierarchy of intelligence, the obligation of making a balance between man and nature must be done by man himself and without causing damage to either side (48).

While the articles and existing research on *The Hungry Tide* and *Gun Island* cover a lot of aspects of the books, like ecocriticism, ecological vision, consciousness about the environment,

men's dual attitude and many other things, it sidelines a key factor of ecocriticism. The fact that there is an ideology within ecocriticism, that every matter in this world, both animate and inanimate, has its own agency and reason, have not been focused on or discussed in the articles. So, from analysis of existing research on both novels, it can be said that none of these studies cover "Material Ecocriticism", which is a way of analyzing every matter in the environment and the agency of things, processes, narratives and stories. This approach provides a broad-ranging reflection on contemporary human experiences and the connection with everything else on the planet, and also brings forth a more relatable understanding of the nature surrounding us.

Research Methodology

This paper will follow a qualitative method to analyze the eco-materialistic approach taken by Ghosh in *The Hungry Tide* and *Gun Island*. Material Ecocriticism is a way of analyzing every matter in the environment and the agency of things, processes, narratives and stories of those matters. It is an approach which provides a broad-ranging reflection on contemporary human experiences with every other matter on the planet. To explore the use of Material Ecocriticism in literature, Serenella Iovino and Serpil Oppermann will be taken to understand the connection between humans, other matters and climate change. Additionally, Hubert Zapf's discussion on cultural ecology and material ecocriticism will also be taken to understand the application of material turn in ecocritical literature, and their utility in raising environmental awareness.

To understand Ghosh's use of a material approach in depicting climate change and deteriorating climate conditions, the research will use Iovino and Oppermann's theory on material ecocriticism. The paper will be conducted through literary analysis of several incidents, characters, settings presented in Ghosh's novels in connection with the theoretical framework. Furthermore, the research will also examine the literary approach taken by Ghosh to make the readers better attuned with the problems of living in an ecologically imbalanced world, and how literature can raise eco-consciousness as presented in the theory presented by Zapf.

The book *Material Ecocriticism* by Iovino and Opperman is a way of presenting and understanding ecocritical literature. Although materiality is not a new concept in literature for reading and interpretation of a text, the "material turn" (2) in ecocriticism combines science, humanities with art to give emergence to a new paradigm. One of the ways this new introduction of materiality in ecocriticism differs is by breaking down the dichotomous pattern of thinking presented in traditional ecocritical works and providing new ways to analyze relationships between mind and matter, human and nonhuman life, language and reality (2). To further solidify their argument about independent agencies of every matter of this world, the authors quote *New Materialisms*, the work of Diana Coole and Samantha Frost, where they explain how humans have adopted a normative sense of human agency and our interaction with nature. The thought process is that most of these 'inanimate' objects are inert, passive and have no way of expressing their own meaning or performing their agency. This vision of agentic independence and superiority has been the root cause behind the neglect in taking care of nature, as this dichotomous ontology has led humans to believe in a "break it and fix it" mentality that, with the right technologies and tools, we would be able to fix the broken nature reverse all the environmental problems, just as we are

able to fix other broken things (Phillips and Sullivan 446). However, in a world that is full of materials with their own agencies and stories, it is quite impossible for humans to believe that they are in complete control of anything. The authors explained that all agencies are characterized by an important element, which is that they are all material, and the meanings produced by them influence humans and nature alike. The authors have termed this argument as “theory of distributive agencies” where reality emerges from the combination of materials and discursive forces rather than individual players (3). This new materialistic vision takes a different approach based on a collective/distributive model where things, matters and everything along with humans, are considered as full-fledged actors, rather than only objects deriving meaning from the use by a subject, which are humans most of the time. Understanding this principle behind the materiality is important because it gives matters their “agentic power”, which they draw from their discourses in structuring human relationships with materiality. The ongoing nature and agency of matter was existent before the arrival of the Anthropocene and is expected to remain so even long after we are gone (4). The introduction of these material aspects is important in ecocriticism because the new material turn allows the reader to understand that every matter has their own story to tell and just because an object is inanimate, such as the nature, does not mean that they are not active subjects with their own role in this great theater.

Iovino and Opperman further explained the conceptual argument of material ecocriticism in their work as the way how all material phenomena in this world form a vast network of agencies, which can be ‘read’ and interpreted to form stories and narratives. This huge mesh of agencies and narratives consists of not only human but also other other-than-human objects of this world. According to Wheeler, it is a “web teeming with meanings” where humans and nonhumans, matter

and meaning, nature and culture, bios with society are inextricably interwoven and produce a dynamic, living world (Wheeler 270). In order to fully grasp the concept of material ecocriticism and to accurately analyze the world from this point of view, these separate yet interconnected components must be examined “through” one another and not as a compliment or substitute of the other. The key point in this argument is how all materials and beings have the ability to communicate something about themselves to other beings. So, to summarize all these ideas, material ecocriticism is about a distributive vision of agency, one which promotes the vibrant forces hybridizing human and nature relationships and also, the idea that matter has meaning and they weave the story of this dynamic, living world – are all basic principles of material ecocriticism (5).

In order to supplement their argument on material ecocriticism and to establish a link between such an analytical angle and literature, Iovino and Oppermann have referred to the text of Cheryll Glotfelty. According to her, literature is not a separate entity from this material world and nor does it exist above it all in some kind of imaginary dimension. It plays its part in “an immensely complex global system in which energy, matter and ideas interact” (Glotfelty xix). So, material ecocriticism analyzes the interconnectedness of matter and discourse not only as they are represented in literature, but also how they appear in material expression. The author has coined this methodology as “diffractive” in the sense that it not only heeds matter as it appears in text, but also as text itself (6-7).

One of the focuses of this paper will be on how Ghosh uses inanimate objects to produce a similar effect, through which he essentially tells the story of life as well as the struggles of living in an ecologically imbalanced world. This will be analyzed against the concept laid out by Iovino and Opperman, where they have drawn the connection between matter possessing agency and the claim that the true dimension of matter is not static or passive but of a generative becoming. In addition, they have raised questions regarding mankind's frivolous attempt at claiming superiority and independent agency in a world that is hybrid, vibrant and living. This very partial view and vision regarding the world's processes also leads men towards acting impractically and thoughtlessly, which might further affect the biosphere negatively even more in the future.

To further solidify the arguments of material ecocriticism and to draw a line of relevance to it with literature, this paper will also consider the chapter "Cultural Ecology and Material Ecocriticism" from Hubert Zapf's book *Literature as Cultural Ecology*. Zapf has referred to cultural ecology as a "widescreen" version of ecological thought (Zapf 81). According to him, cultural ecology is about the connection between not only culture and nature relationships but also human relationships. It examines the ways in which the functions, structures, evolutionary processes of humankind are interconnected with nature and themselves as well as how art and literature has perceived this connection. The author refers to the deconstructionist argument of Morton, where he proposed that nature should be absorbed into an "ecocritically enriched discourse of deconstruction" within a material philosophy. Other authors like Abrams had presented even more extreme ideas but in the opposite direction like, mankind should forego the concept of culture and civilization and return to a more primordial and "uncivilized" state to order

to avoid ecological apocalypses. Rather, Zapf has provided the argument that the differences between both nature and culture should be dissolved into “a space of undifferentiated fusion” (82).

The conflict between nature and culture is further stimulated with the idea that the emergence of the Anthropocene is central to climate change because even if we go back in time before the arrival of mankind, we would have seen the earth in a relatively dangerous and volatile stage. However, even that precariously balanced state of the environment has been increasingly disturbed with by humans in the name of unrestrained economic-technical expansion. If we set the point of the Anthropocene as reference and compare it to the present, we will see a difference between anthropogenic and non-anthropogenic factors that underlies the statistical trajectories of climate change (83). This is one of the main arguments that unless humans realize their roles in climate change and take up action plans in order to reduce it or reverse it, the situation is bound to worsen day-by-day. This is another key aspect of Zapf's essay, as awareness limited within self or within a small group of people, who are already conscious about the environment, is not going to help in raising awareness about the perils of ecological imbalance or the ways to overcome them. Literature has the means to symbolize the many different aspects of society or the world. Its power of capturing the thought process of great minds as well as imparting those stored knowledge amongst the readers is unparalleled. Social issues raised through literature, as highlighted by Zapf and as also evident from the works of ecocritical writers like Ghosh himself, are only signposts of how literature plays a role in not only storing and redistribution of knowledge, but also in changing and influencing the very ways in which we think and act. Another interesting argument presented by Zapf is the materialistic viewpoint of ecocriticism presented by Iovino and Oppermann, which demonstrates how diverse modes of ecological communication, ranging from film to landscape

art, political speech to toxic discourse, illness narratives to civic resistance, and popular culture to literary art, transfuse material signifiers and energies, which are an integral part of their discursive processes (85). All of these aspects of literature, combined with a connection to material ecocriticism, has been presented in the work of Zapf.

To find the answers of the intended questions of this research, a content analysis method will be used to find the themes, contents, characters, incidents Ghosh has used in both *The Hungry Tide* and *Gun Island* through a material point of view of ecocriticism in order to show the interconnectedness of humans and nature. Both novels, written with a gap of fifteen years between them, share many common connections, most notable of which is the Sunderbans, the largest mangrove forest in the world. This paper will analyze the way Ghosh has chosen to represent several incidents that have taken place previously and are taking place at present time, along with some characters of the stories, to show the material ecocritical approach taken by the author to eliminate the problem of “imaginative failure”, so that the readers can make a more immersive connection with the plot, the environment, the characters and the challenges of living in an ecologically imbalanced and deranged world. Additionally, the role of such eco-materialistic literature will also be examined to see the ways in which it can help in raising environmental awareness among the mass people, that might help in changing the course of not only this world, but of mankind overall.

Literary Analysis

Climate change and deteriorating environment conditions are some of the most pressing issues of the 21st century that plagues humanity. The once calm and hospitable mother nature, which nurtured various forms of plants and animals, has become consistently hostile and unwelcoming with every passing day. The arrival of the Anthropocene, the birth and the flourishing of human beings on Earth, is seen as the biggest potential threat to nature. It is on the premise of such a scenario, where postmodern writers like Amitav Ghosh have risen to the challenge of raising awareness about the human actions that are causing harm to the environment and making life on Earth unsustainable. However, it would not be very presumptuous to say that the current format of ecocritical literature has been mostly unsuccessful in convincing the readers about climate change and the plethora of problems underlying it. At the heart of this problem lies humanity's inability to look beyond the numbers of economic and social welfare, of profit and loss, of technological advancements, and to see the bigger picture about what is making this planet uninhabitable. To quote the very words of the author, climate change is "a crisis of culture, and thus of imagination" (Ghosh). Literature has the means of influencing the readers and through them, the society and mass people in general. If ecocritical authors do not fulfill their duty of raising awareness about climate change and other environmental issues, they will be held liable for their complicity in the destruction of mother nature.

To overcome the limitation of imagination, ecocritical authors like Ghosh have introduced a new trope of ecocritical literature known more commonly as 'material ecocriticism', which gives environmentally critical literatures a 'material turn' or simply put, gives the readers an accurate

depiction of the different agencies of all matters surrounding us, including inanimate objects as well as plants and animals. *The Hungry Tide* and *Gun Island*, both written by Amitav Ghosh with a difference of fifteen years between them, are two similar novels about the environmental issues in today's world and how they affect the lives of both humans as well as plants and animals living in such an ecologically deranged world. Major portions of both novels take place in the Sunderbans, which is situated right in the middle of the borders between India and Bangladesh and which is home to some of the rarest animals in the world, including the currently endangered Royal Bengal Tiger. There are many elements in *The Hungry Tide*, which represents the eco-materialistic ideas the author expressed. Firstly, if we look at the description of Sunderbans, Ghosh has provided an etymological explanation of the origin of the forest's name where 'Sunderbans' refers to 'the beautiful forest' in Bengali (Ghosh 15). He compared the chain of large and small islands of Sunderbans as a piece of clothing of the country itself, "The islands are the trailing threads of India's fabric, the ragged fringe of her sari, the ãchol that follows her, half wetted by the sea. They number in the thousands, these islands. Some are immense and some no larger than sandbars" (14).

The story continues to be told through the perspective of Kanai Dutt, a middle aged wealthy translator from New Delhi, who meets Piyali Roy, a young Indian American marine biologist. The two form a bond over their journey to Sunderbans and Kanai invites her to Lusibari, where he was visiting his Aunt Nilima. His uncle, Nirmal had left him some documents and his diary with recollections of a lot of memories of his past. The diary is of special significance for our study because through it, we can see how Ghosh had used to express agency of a material. Despite being an inanimate object itself, the diary, or rather the stories written in it, are shown as recollections of the protagonist's uncle, Nirmal himself. Throughout the rest of the story, events from the diary are

shown alongside the story of Kanai himself. The diary has its own 'agency' in the sense that it is telling the story of Sunderbans and the different events of the past which it uses to fill up the gaps in the gaps, especially regarding the depicting the changes in the forest. The description of the forest given in the diary of Nirmal highlights the differences between the past and present condition of the forest as well its atmosphere. The author had described the changes due to worsening climate conditions through the diary, "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." (193).

Apart from these comparative changes in the environment due to deteriorating climate conditions, the diary also served as a witness of a bloody history of the forest. Nirmal's recollection tells the story of the Morichjhapi massacre, the forceful eviction project undertaken by the Indian government in 1979 to protect the forest and especially the Royal Bengal Tigers, which led to deaths of hundreds and displacement of over thousands of people. The recount of the horrific incidents by one of the survivor of the incident, Kusum really painted the picture of the brutal disregard for human lives in the name of protecting the forest and animals, "Who are these people, I wondered, who love animals so much that they are willing to kill us for them? Do they know what is being done in their name?" (233).

Ghosh has planted several recollections of past incidents and events such as these through the diary of Nirmal. It was almost as if the diary had acted as a replacement for the character and told his stories through an object. Now, if we analyze these parts of the story with the theoretical framework of material ecocriticism as presented by Serenella Iovino and Serpil Opperman, we can see that Ghosh follows many of the fundamentals of this new literary approach in his work. Firstly, the relationship presented between the protagonist Kanai and his uncle Nirmal's diary exemplifies the use of a materialistic viewpoint to present the problems of climate change through descriptions of the deteriorating climate conditions. Furthermore, it also expresses its own agency through which the readers can assess the recollection of Nirmal in a way as if it was told by himself. The retelling of the past events through the diary also falls in line with the idea presented in *New Materialisms*, the work of Diana Coole and Samantha Frost, which explains that humans have a way of judging inanimate objects as 'inert' and 'passive' (Iovino and Opperman 2). In *The Hungry Tide*, Ghosh had used the diary of Nirmal to have its own agency in the story and in a way which makes Kanai, the protagonist who was disinterested in coming to Sunderbans at first, along with the readers, about not only the past incidents and hardships that befell the forest and its residents, but also the lessons these events carry for future improvements. Furthermore, the incident of Morichjhapi massacre told through the diary serves as an important lesson that is very much relevant today. The Indian government's blatant disregard for human lives only exemplifies their lack of conviction in protecting the environment or its inhabitants. Instead of properly planning and executing the resettlement of the refugees in the forest, they started forceful eviction by shooting, which is a clear violation of any human rights as well as environmental justice.

Another exemplification of material ecocriticism in *The Hungry Tide* is the separation shown between nature and culture. The forest and the rivers had “changed” according to Nilima (Ghosh 28), and afterwards we are given further confirmation when Piya discovers that Coastal Oracella had begun congregating in a certain spot of the river, which was unusual for them. The main reason for this was, the increased salinity in the rivers waters confounded the animals so much that they had mistaken the rivers for seawater (114). Similar to the rift created by climate change in nature, culture was also separated. The inhabitants of the forest, who had been living in the forest for many generations, were separated when forest conservation programmes uprooted them from their homes and forced them to leave a diasporic life. These people were mostly fishermen who had little to no education and were unable to fit in normal society. The forceful relocation of these people had not only hampered their way of life but also the lives of the society to where they were moved to. Also, most of the inhabitants of the forest were simple people who believed in the legend of Bon Bibi, a mysterious entity who they worshipped as a protector of the forest as well as a place to seek refuge. They had built a shrine deep within the forest, at an island called Garjontola, where they had paid their respect and tribute to her. When these people were forcefully evicted from the forest, they were done so both geographically as well as culturally. This is another example of how Ghosh had used an object, in this case, the shrine to Bon Bibi, to symbolize as a protective form of mother nature. So, to summarize the material ecocritical ideas presented by Ghosh in *The Hungry Tide* are: the representation of material agency through the diary of Nirmal and the separation of nature and culture as seen by the behaviour of the dolphins as well as the humans, who have been forcefully evicted from their natural habitats. Ghosh had used materiality to make the readers relate on a deeper level to the struggles of not only the humans, but also with the hardships faced by the forest, the animals and nature herself.

Similar to the narrative, characters and events in *The Hungry Tide, Gun Island*, a novel written fifteen years afterwards, picks up where the author left the journey through Sunderbans. This time, the author takes a more forward approach in his storytelling tactic throughout various uses of materiality. The first and most important is the setting of the story, Sunderbans itself. The mysterious chain of islands that are constantly changing with the ebb and flow of the tide, is shown to be full of interesting characters, animals and natural elements. The description of the forest along with the humans and animals are given in such a way that implies a deep interconnectedness. Similar to the ideology of material ecocriticism, these ‘material mesh’ of networks between human and other objects of the natural world lead to an amalgamation of meaning, properties and process (Iovino and Opperman 1).

The name of the book derives from a legend of an island built by someone called ‘bandooki showdagor’ or gun merchant. In order to shelter himself from the Goddess of snake Manasa, he builds a fortified island to protect himself from any possible attacks from snakes. However, his attempts fail and he finally pays his tribute in the form of building a shrine to the Goddess on that island. The very premise of this legend is based on the division between human agency and material practice. The gun merchant, who had used the resources of Sunderbans to profit for himself, was very reluctant to give something away for the betterment of the forest and nature. The merchant and the Goddess in a sense, symbolizes mankind’s greed and mother nature herself respectively. This also goes in line with the theoretical idea of new materialism by Diana Coole and Samantha Frost, who had expressed that humans have always considered everything other

than themselves as ‘passive, inert, unable to convey and independent expression of meaning’ (2). This dichotomous, shortsighted pattern thinking has led humanity to dig even deeper into their own demise through the exploitation of nature in the name of economic and social development. The author expressed that he had used these symbolism to show the conflict between profit and the world.

Other areas of the novel are also replete with the use of materiality to express Ghosh’s foretelling of impending ecological catastrophes. The novel begins with Deen Dutta’s investigation into the myth of the gun merchant and Manasa Devi, who travels to the deep parts of Sunderbans to uncover the true history behind it. Along his journey, he meets with familiar characters from the earlier novel, Piya Roy, the marine biologist, Nilima Bose, the aunt of the previous protagonist, and Tipu, who was the son of Fokir and was named Tutul in the earlier book. The novel continues when Deen decides to search for the shrine built to Manasa and journey to Sunderbans himself, various events around him start unfolding. Upon finally reaching the island, he understands that the various recollections of this place and the stories surrounding it were at least somewhat true. As they came closer to the island, Horen, who was the boatman taking Deen and Tutul to the island, could not find it first as the rising sea levels had submerged most of the island, “It’s the river that’s moved,” came the answer. ‘When I last saw the place it was still a good way inland. Now it’s at the water’s edge.” (34).

Despite not even directing towards climate change, Ghosh had hinted towards the phenomenon of rising sea levels through this event of Horen, an experienced boatman of

Sunderbans, not being able to find the Gun Island. The problem of rising sea levels as well as melting of polar ice caps gets a subtle nod in this part of the story. Similar to the incident of Horen, thousand other animals and insects of the forest have lost their way home due to rising sea levels and the changes in the terrain of the forest brought about by climate change. This exchange between the human characters and nature can also be explained by Bruno Latour's idea that the world's phenomena are parts of 'conversation' between humans and nature, which work together to 'exchange properties' in indissoluble 'collectives' (Latour 61). The term 'conversation' here refers to how things or 'matter' draw their agentic power from their relationships with humans. This is shown as one of the key causes behind the negligence behind taking care of the environment, as most humans have a propensity to ignore things that they believe they have not interacted with. However, even if a person has not contributed to the destruction of the ecology as much as transportation or electricity generation, it is their duty as well as moral obligation to follow sustainable practices for preserving ecological balance.

Moving further into Ghosh's novel, we see the author's use of matter, such as the snake at the temple of Manasa, as a symbol for depicting nature's push-back against human aggression. When the protagonist of the story, Deen dismissively said that there had to be a snake on the island to protect the 'dhaam' or temple of Manasa, a very rare king cobra appeared right behind him. The snake coiled itself to strike Deen, Tipu had come up with a fishing net to throw on to the snake to stop its progress. The snake had turned and succeeded in biting Tipu above the left elbow and disappeared into the depths of the temple. As the effects of the poison started to take place, Tipu looked into the eyes of Deen and asked "Why'd you bring us here, Pops?" (Ghosh 84).

Although the incident can be thought of as a mere accident which happened by chance, Ghosh had used the snake as more of a symbol in nature's fight against humans. The snake symbolizes nature's defensive mechanism to protect itself from the meddling of humans in nature's affairs. Just like Deen and his party decided to visit the old, derelict temple which was long reclaimed by nature to fulfill his curiosity and the snake had attacked them in defense, the various infractions of human's committed against nature have been symbolized through the snake by Ghosh.

Similar to the snake, Ghosh had also mentioned the rare seawater Oracella dolphins in *Gun Island*. The dolphins, which had normally roamed around the Indian Ocean, became confused day by day as the sea level increased and began rising up to the narrow channels within Sunderbans. Unable to differentiate between the seawater and water of the narrow rivers, the dolphins entered these channels and lost their sense of direction. Furthermore, Piya Roy, the marine biologist, also explained to Deen how the installation of a factory which made a lot of noise and water pollution, had driven the dolphins even more confused. Dolphins are animals which mostly navigate using sound waves. They send out soundwaves which are reflected on the surrounding objects and emitted back to them. Thus they make out the sense and feel of their surroundings. However, the noise pollution from the nearby factory coupled with the rising salinity of water had confused them so much that they had decided to 'beach' themselves (106), which is the human equivalent of committing suicide. This example is a bit different from the one with the snake in the sense because it highlights the destructive effects of human interference in nature such as building a

factory right in the heart of the mangrove forest, and how it confuses animals and destroys their natural habitat, leading to further ecological imbalance. After the arrival of the Anthropocene, millions of plants and animals have gone extinct due to the excessive killing, overharvesting, experimentation by releasing dangerously mutated species to the wild, polluting the environment and by transforming forests and croplands to cities and industrial areas. It can be even attributed to the rising overpopulation problems, especially in many developing countries like China, India, Bangladesh, Pakistan, Brazil, etc., which are rapidly converting natural areas to industrial zones for supporting the larger population. The fact that these infractions against nature are irreversible is of no consequence to the leaders of these countries. This criticism behind this ideology is also done in the concept of material ecocriticism. It argues that humans need to have a ‘critical self reflection’ of themselves and their actions (Iovino and Opperman 9). As explained by Barad, we are not outsiders to this world. We are part of a world which we seemingly dismiss as the other and have no regards to it whatsoever. He argues that “we are part of the world in its ongoing intra-activity” (Barad 184). A similar example is seen later on in the novel, where Deen travels to Venice, where he encounters a brown recluse, a venomous spider whose poison is more potent than a rattlesnake's. He sends the picture of the spider to Piya, who sends it to a friend who is an expert on spiders and he gets back by saying that it was very very uncommon to find these spiders in Europe, let alone in Italy. The increasingly hotter climates have confused the spiders, as they have failed to differentiate between their natural habitats and have migrated towards Europe. Despite seeing the spider for himself, Deen is unable to believe that such a deadly spider might have come up as far up as Venice, as is evident from his disbelief, “An infestation of poisonous spiders?” The very thought made my flesh crawl. ‘In Venice? Surely not?’ (Ghosh 294).

Another event brought up by Ghosh in *Gun Island* was the risks related to global warming, such as wildfires. He depicted the devastating effects of wildfires as well as the lack of human forethought and preparation against such natural calamities through the gruesome description of Los Angeles wildfire. The protagonist, Deen, had gone to attend a conference in Los Angeles where he could see smokey skies, charred forests and hills. He had seen the news on his phone before, but seeing it directly with his own eyes unleashed the true horrific scenes whose descriptions do not do them justice. There were thousands of acres of incinerated land and burnt trees, on top of which birds of prey circled in search of easy prey. Many animals were badly injured and thousands of people were looking scared and helpless, looking for their loved ones and a safe place to go. Another incident of wildfire in *Gun Island* Deen was made aware of was during his conversation with Piya. A entomologist friend of her, named Lisa, was conducting research in the forest of Oregon, where she had found that an insect called bark beetles had eaten up the inside or core of trees. These beetles only lived in warm climates but they started spreading as the temperature had gotten warmer and warmer. Despite her warnings about potential risk of wildfires, no one paid any attention to Lisa's warning. So, when a fire did eventually break out, everyone started blaming her for what happened. The police even questioned her and she started receiving death threats. The people had blamed her for the fires and had thought that she started it just to grab attention. Piya was amazed at how backward thinking and foolish people can be even after failing to recognize the signs or listening to someone who did so, "Can you believe it? It's like we're back in the Dark Ages – women being attacked as witches!" (163). This incident speaks volumes regarding the current situation in most societies where warnings about the impending natural disasters are treated with hostility and rather than lauding the person for his timely understanding and decision to speak up, they are being accused of being correct.

Ghosh had depicted an accurate representation of today's society on how we are determined on proving whether or not someone had committed a crime rather than heeding their warnings about nature while there is still time. Ironically, a similar incident had happened with the author himself. After describing the Oregon and Los Angeles wildfire incidents in *Gun Island*, which was published in 2019, the deadly California wildfire broke out in 2020. Ghosh was surprised when he had heard that the incident told in his story came true but to him, this was to be expected. The rising temperature along with deforestation have increased fire incidents all over the world, even in countries with colder climates. So, this can be another key area where we see Ghosh's environmental criticism being accurate and the warnings given in his stories come to life. The success of eco-materialistic literature is that it enables the readers to feel more connected towards the world, the people and the environment portrayed throughout the story. Unless their thought processes are aligned with the ones living in constant fear of natural disasters like, flood, cyclones, tidal waves, similar to the people living in areas like Sunderbans, they will never feel connected to either the story or the narratives they are trying to portray.

To sum up the findings from both novels *The Hungry Tide* and *Gun Island*, we can see how Ghosh had used matter and other elements of nature such as snakes, rivers, Sunderbans, dolphins, spiders, shrines etc. to portray the effects of climate change and what this means for humankind. The different agencies, stories of these elements in Ghosh's novels truly give them a unique attribute. This vast network of agencies of every matter in the world connects the readers to the world he has built and passes around the message about living in an ecologically deranged world.

One of the core concepts of material ecocriticism, which talks about how the true dimension of matter is dynamic and of generative becoming (Iovino and Opperman 3) has been presented throughout the two novels. The novels also represent the idea of humans' claim of superiority and agentic indepenence in a material world full of meanings and stories and how such superiority complex has led towards disregard for everything, even the nature which is the primary and only source towards a sustainable future. So, to portray the role of humans in shaping the environment, Ghosh has successfully depicted climate change through a material-ecocritical perspective and has shown how the ignorance of different agencies of every matter, has led toward humans' disregard and carelessness about environment and climate change. Even though environmentalist scientists, authors, educators, activists are running campaigns on many fronts to make people aware of the potential dangers of climate change and the alternative ways we can do things to reduce carbon footprint and slowdown environmental degradation. It can be said that Ghosh's choice of using material to portray humans' roles in climate change is fairly accurate and to the point. However, the fact still remains that it is up to the readers on what actions they might take to slow climate change and make it more sustainable for the future generations, which is the primary limiting factor for such ecocritical works.

Ghosh has represented the nature-culture relationship in *The Hungry Tide* and *Gun Island*. Zapf has explained cultural ecology as “extending the meanings of environment” to include interpersonal relationships between humans as well as nature. By analyzing the two novels, we see Ghosh had blended the human-nature interrelationship to provide “a space of undifferentiated fusion” (82).

The main argument presented in this in Zapf's argument is that awareness of climate change and the potential dangers confined within a small group of environmentally conscious individuals is not going to change things for the better. In order to do so, awareness must be raised at the mass level and literature can play a key role in redistributing the ideas about the possible dangers of climate change, as well as in influencing the very ways in which we think and act in a more socially responsible way. So, it can also be determined that Ghosh had successfully used his novels as a tool to raise awareness about the dangers of climate change and the ways to lead a more sustainable and environmentally conscious society. This answers the second research question that similar eco-materialistic literature can help raise environmental awareness and pave the way towards a sustainable future.

Conclusion

Amitav Ghosh's *The Hungry Tide* and *Gun Island* represents one of the biggest challenges faced by humankind of the twenty-first century, climate change. Although it is not a new concept in either science or literature, their presentation style of using material and their interconnected agency with the world of humans, is what makes these two novels unique and memorable. Ghosh has blended every tool at his disposal to create two unique stories that take the readers on a journey through Sunderbans and touches on the stories of many different characters' lives. He also rekindled old myths and symbols to show the ongoing struggle between nature and culture that have taken place for a long time. The blend of fiction with reality, past with present, human actions as well as inactions, have given the novels an edge that is sure to make a lasting impression on the reader. While the narratives of the stories might feel similar to other adventure novels, they have

an inner agenda of talking about the possible dangers of climate change and how humans have played a significant role in this decline. Analyzing the two novels from a material ecocritical viewpoint reveals that Ghosh had used a similar language, tone and narrative similar to the the agentic theory of matter presented by Iovino and Opperman. This is what makes his novels different from other ecocritical literature as the readers are exposed to the harsh reality of what awaits if humans do not rise up to the challenge of climate change right now, while there is still time. The novels signify the connection between literature and its social impacts. The unique tone and use of material ecocriticism work in creating awareness about living in an ecologically endangered world and understanding the need for preserving the environment. The portrayal of Sunderbans and the struggles of its human and natural inhabitants due to deteriorating climate conditions can make the readers feel more concerned about the potential risks of living in an imbalanced environment. This will hopefully motivate them towards making environmentally conscious decisions that will help save not only humans, but the entire planet as well.

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