

**TOWARDS AN INTEGRATIVE LINGUISTIC
ECOSOPHY: AN ANALYSIS OF SELECTED
21ST CENTURY NOVELS**

**BY
AMNA**



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ECOSOPHY: AN ANALYSIS OF SELECTED 21ST
CENTURY NOVELS**

By

AMNA

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FACULTY OF ARTS & HUMANITIES
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Thesis Title: Towards an Integrative Linguistic Ecosophy: An Analysis of Selected 21st Century Novels

Submitted by: Amna

Registration #: 111-MPhil/Eling/S21

Dr. Shehr Bano Zaidi
 Name of Research Supervisor

 Signature of Supervisor

Dr. Farheen Ahmed Hashmi
 Name of Head (GS)

 Signature of Head (GS)

Prof. Dr. Arshad Mahmood
 Name of Dean (FAH)

 Signature of Dean (FAH)

Prof. Dr. Muhammad Safeer Awan
 Name of Pro-Rector (Academics)

 Signature of Pro Rector (Academics)

 Date

AUTHOR'S DECLARATION

I, Amna

Daughter of Muhammad Ayaz

Registration # 111-M. Phil/Eling/S21

Discipline English Linguistics

Candidate of **Master of Philosophy** at the National University of Modern Languages do hereby declare that the thesis **Towards an Integrative Linguistic Ecosophy: An Analysis of Selected 21st Century Novels** submitted by me in partial fulfillment of MPhil degree, is my original work, and has not been submitted or published earlier. I also solemnly declare that it shall not, in future, be submitted by me for obtaining any other degree from this or any other university or institution.

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ABSTRACT

Title: Towards an Integrative Linguistic Ecosophy: An Analysis of Selected 21st Century Novels

This study attempts to formulate an ecosophy by analyzing climate change in the fictive novels from the writers of different countries by following some selected strategies given by Arran Stibbe (2015). These strategies are applied within the theoretical context of The Metaphor Theory (Johnson & Lakoff, 1989) and Social Representation Theory (Rateauet. et al, 2012). Data consist of 4 novels. Two of them are taken from the Global South countries i.e. Pakistan and India and remaining two are from the Global North countries i.e. The United States of America and Australia. All the selected novels get published in 21st century. The focus of this study includes the presence or absence of facticity patterns, use of metaphor and the type of discourses produced. It also includes the effects created by making use of the selected three different strategies. The findings point to the existence of all of the strategies. Most commonly used strategy is ‘facticity patterns’. All of the writers show their main attention on describing the facts with full certainty and clarity. As far as the second strategy of metaphor is concerned, there is very limited use of metaphors. Climate change is compared with horrible things like hell and devil. In order to analyze the ideology and type of discourses produced by the writers, this work undertakes a running ecosophy that goes with the principles of eco-resistance and eco-resilience. The ideologies of the selected works do not align with the selected ecosophy which means the discourses are destructive in nature. In aligned with the main aim to the study, my work formulates a unified ecosophy that “Eco-diversity is actually eco-inclusivity”. All of the novels foreground the causes of climate change i.e. global warming and pollution but they do not go for prescribing a proper solution for it. They just report their observations that are actually happening all over the world and we ourselves are practically experiencing them. The study suggests tracing other strategies in different fictional works.

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DEDICATION

This thesis is wholeheartedly dedicated to my beloved parents and husband for their prayers and being a source of inspiration behind.

CHAPTER 1

INTRODUCTION

In this physical world, man is in constant interaction with his environment. There is an ongoing process of give and take. Man gets many things and in response is supposed to take care of the environment. In tune with the demands of the recent times, academics, along with others have diverted their attention to preserving and sustaining environment for a better and safer earthly life. Ecology is that branch of study that deals with the relationship between living organisms and the physical environment around them. It includes human beings and all other living organisms ranging from bacteria to large species. An ecologist is the person who studies this relationship and interaction of living beings with their physical environment. Ecologists are discovering new and new things such as chemicals and other products from different plants and animals that are useful for human beings. In this way, all the things in the environment are interdependent on each other. So, man, animals, other living organisms, weather, plants and trees form an ecosystem where life exists.

1.1 Climate Change

Global warming is just related with warming up the planet by increasing average temperature. There are number of factors behind it. But climate change is a term broader than global warming. Global warming leads to climate change. Climate change is more linked with amount of carbon emission. This pollution made by carbon emission changes the climatic patterns. The patterns of rain and snow get disturbed that increase the threats of floods and droughts. It affects living beings and nature too that includes weather, oceans, and trees etc. Due to climate change, there is not only excessive rise in temperature but it includes excessive fall in temperature. It composes of both of the extremes. It now exists almost all over the world. Different countries are making different policies, strategies and guidelines in order to tackle it as it is growing rapidly.

Due to the advancement in science and technology, man is more prone to harming and damaging the environment than preserving it and this in turn leads to harming himself. In simple words, he spoils himself. Excessive burning of fossil fuels results in rise in temperature and in turn man faces consequences like global warming, ozone layer depletion, and climate change. Climate change means climate swings in

temperature. Previously these swings were somewhat natural but after 1980s, human activities are the major factor behind the climate change. So, one can say that climate change results when there exist changes in average weather sequences for a long time period. NASA's (2020) definition of climate change states that "it is a broad range of global phenomena created predominantly by burning fossil fuels, which add heat trapping gases to the earth's atmosphere. These phenomena include not only the increased temperature trends described by global warming, but also encompass changes such as sea-level rise, ice mass loss in Greenland, Antarctica, the Arctic and mountain glaciers worldwide; shifts in flower/plant blooming; and extreme weather events".

Climate change is one of the most devastating and disturbing issues of the times all over the world. Both the developed and under developed countries are the part of it. The under-developed and developing countries face more problems than the developed countries because of their economic conditions and poor policies. Climate change not only effects man but all other existing species on the planet Earth even the living beings under water (marine ecosystem). Calvert is of the view that climate change is now entering to our lives in a very real way. He further claims that this issue is not just for scientists or environmentalists and affecting them only but it is influencing the life of each and every person though he is a farmer or country commissioner (August, 2015).

Climate change directs to temperature shifts for relatively longer period of time. Greenhouse gases are certain gases that are present in Earth's atmosphere and absorb infrared radiations from the sun in order to maintain the temperature on Earth. According to a research, greenhouse gases have increased up to 25% over the past 150 years and the major reason behind is industrialization. Fossil fuels are burnt to produce electricity. This process releases largest amount of carbon dioxide in US (Kavuri, 2012). Advanced countries are more responsible for climate change than under developed countries. According to a most recent research, the United States is responsible for 40% and European Union for 29% of the climate breakdown. So, the Global North makes total 92% of excess global carbon emission (Pardikar, 2020). It is expected that global temperature will increase 1-3.5°C by the end of next century. This is a huge rise that has never been seen in past 10,000 years (Watson et al., 1995).

According to one most recent international climate report, average temperature is increasing very rapidly. It states that human activities are the one of the major reasons behind it. They are badly affecting the weather, climate and ultimately ecosystem in

almost every region of the planet Earth. Heat waves, storms, fire, and flood are open and the clear results. Large numbers of species have disappeared due to rise in temperature and climate change as they cannot mold or adapt accordingly. According to this report, if the level of greenhouse gases drops to 60%, then 1.5°C average global temperature will decrease by 2035. Natural disasters in the past few years include intensive rainfall and much damaging flooding. In 2022, one third part of Pakistan is flooded and many of the US societies also face extreme floods. According to IPCC sixth report, due to regular increase in temperature, there are greater chances of melting of glaciers over the mountains that will ultimately result in floods. The report also mentions that an increase in water cycle will retain. It means that both the extremes of wet and dry will rise (Morford, 2023)

Climate change has resulted in intense weather events such as floods and droughts that are more likely and frequent and becoming more and more severe (IPCC). It is reported that drought, flood risks, and other societal damages linked with them are expected to increase further with every degree rise of global warming (IPCC).

1.2 The Global South and the Global North

There is a divide between countries on the basis of economic condition i.e. the Global North and the Global South. The term the Global North is used to refer those countries that are affiliated with OECD (Organization of Economic Corporation and Development) and they are declared as high income economics by World Bank. It includes countries in Western Europe, North America, East Asia and Australia. The term the Global South is used to refer those countries that are classified as upper-middle income, lower-middle income or low-income economies. Those countries are mostly, but not entirely, located in the rest Asia, Africa, Middle East and Latin America (Blicharska et al., 2017). It is noted that the Global South countries contribute less to climate change because they are not much stable as compared to highly developed the Global North but still the South is suffering more. According to a report, US emanate four times more carbon dioxide than China and India and thirty times more than Kenya (Uddin, 2017). It is understood and even proved that both the Global North and the Global South are accountable for climate change but industrialized the Global North is the major reason behind climate change but this fact is still not accepted by their people. They are of the view that the Global South countries are under developed countries and

their public has not enough awareness, technology and resources to overcome it. In this way, the Global South is primary source of climate change.

Industrialized countries are most responsible for making the planet warm. They are accountable for more than one third of the climate change. These countries are called as ‘wealthy polluters’ (Oxfam, 2023). Living standards of people get changed after 1800 that result in climate change. Specially, in the Global North countries, everything gets changed. Countries in the Global North are considered as rich and industrialized countries. According to New York Times analysis, 50 rich countries are responsible for 50% of global carbon emission and rest is emitted by other technologically less advanced 150 countries. India is one of the most populated countries but its per capita emission is less than the global emission average.

According to a survey of 6000 adults having their ages between 20 and 40, 58% of them are of the view that rich or developed countries must help poor or under developed countries in their climate calamities. And 13% of them are not in the favor of this idea. 55% claim that under developed countries are suffering more than the developed countries though developed countries are more responsible for climate change (Webster, 2022).

There is a report that mentions extreme heat in summers, floods and undue rainfall are destructing the work of millions of people in India. Those people are just the victim as they are not even contributing 1% to global warming and suffering the most. There is no support of the government for them and they are left with no choice other than migration (Tripathi and Jani, 2022).

1.3 Official Documents Regarding Climate Change

Every country must have certain plans and policies in order to tackle and overcome the existing issue of climate change. The policies for climate change of the selected countries from the Global North and the Global South are as following:

1.3.1 Pakistan

It is simply true by common observation that Pakistan is facing severe issues related with global warming and then ultimately climate change. In order to either reduce them or to completely get rid of them, it is necessary to work for the solution. The facts show the massive increase in temperature, glaciers melting that result in rise

in the level of water inside river Indus and disturbed sequences of rainfall in the country. Pakistan makes its first National Climate Change Policy (NCCP) in 2012 that talks about “climate resilient development and adaptation”. It means that we have to return quickly to original state by developing and altering ourselves in accordance with the situation required. It is a sort of effort to reduce emission of global gases that are harmful and unpleasant. This policy is updated in 2021 by the prime minister of Pakistan, Mr. Imran Khan. He is in the favor of nature based solutions along with adaptation and mitigation. NCCP 2021 brings about different campaigns that include ‘Ten Billion Tree Tsunami, Urban Forest Project, Clean Green Pakistan Movement, and Protected Areas and National Parks Initiatives’. Along with that, it also tends to increase 15% of the areas covered by plants and trees by 2023.

1.3.2 India

India also faces the adverse effects of climate change. As a reaction to climate change, a movement gets started in India named ‘Change the Climate’ in 2020. The aim of this movement is to tackle the unfavorable effects of climate change and try to reduce them to zero. Climate change is influencing the people as well as the economy. The one who is at the greater risk and loss is the farmer. According to a study conducted in Stanford University, the economy of India is 31% less just because of global warming and climate change. Their crop yield declines by 15 to 17% per every 2% rise in temperature. In order to deal with this major issue and loss, Indian government plans to have 33% of land covered with trees by 2030 that is 24% in 2019. It will help the farmers to reestablish the number and variety of species of plants and trees. Scientists will help farmers in choosing trees’ species and certain other implanting techniques will be introduced to them. It will aid in producing variety of trees like timber wood, fruits and flowers. Chemical free farming will be established that will help to reduce cancer in humans. Soil used for farming and plantation will also be under test.

1.3.3 The United States of America

Climate change is one of the most crucial environmental challenges in America right now. Americans face flooding and excessive heat that fade off the forests and wildlife over there. Keeping it in view, US President Joe Biden and UN General Secretary Antonio Guterres use a phrase “Code Red for Humanity”. They mean to say that humanity is vanished just because of this life threatening problem. As the issue of

climate change is on its peak in America so Intergovernmental Panel (IPCC) gives a clear cut validation that just by decreasing the greenhouse emission will not be enough for the solution of this problem. Something else must be done to control it. So in August 2021, a framework is framed that is named as “Project Drawn down”. This framework provides three suggestions. The first one is to reduce the carbon emission sources and try to bring them to zero. The second one is to support and raise the natural sources. And the last one is to improve and provide equality to all. This framework summarizes itself by saying that one has to take action. Start the struggle from yourself and from today.

1.3.4 Australia

It is verified by different researches that the North is basically responsible for the climate change. Australia is the part of them. Along with that Australia itself faces extreme issues of climate change. In order to tackle them, Australia constantly tries to decrease greenhouse gas emission. International Energy Agency (IEA) reviews Australia in 2018 and the government of Australia sets its goals for sustaining without damaging the environment and different natural resources. Government sets its objective to reduce carbon emission. Government of Australia also passes an act in 2022 that aims to reduce carbon emission by 2030. It also aims for net zero emission by 2050. Australian government works for escalating energy security. Australia also signs a pledge in 2022 named, Global Methane Pledge. It intends to reduce methane emission by 2030.

These all are the official plans made and pledges signed by the countries of both the Global North and Global South that are the part of this research study.

1.4 Ecolinguistics

A new branch in applied linguistics emerged in 1990s called ecolinguistics. Ecolinguistics studies how language is used to destroy and preserve environment. The concept of ecolinguistics is taken from the speech titled, “*New Ways of Meaning: The Challenge to Applied Linguistics*” (Halliday, 1990). In this speech, initiative of extending linguistics to the issues or problems of ecosystem is given. Halliday mentions an example related with ecosystem in this speech that everyone talks about economic growth as good, many and big is better than few and small and much more, but all this good and growth is spoiling the ecosystem.

International Ecolinguistics Association (IEA, 2014) is an organization composed of more than thousand researchers from all over the world. They share their ideas and views related with ecolinguistics on this platform. There are two main purposes of this association. The first aim is to develop certain linguistic theories related with man as a part of ecosystem and the second aim is linked with the other issue related with ecosystem. According to this organization language plays a major role either in destructing or promoting human environment. There are two aims of ecolinguistics. The first one is to show that man is not only the part of this whole ecosystem but is an entity in this ecosystem on which life depends. Man either promotes or demotes this ecosystem. The other is to illustrate the role played by language in this regard. Language tackles main environmental issues present today in the best possible way.

Extension and growth in the field of ecolinguistics is seen in the 21st century. Full-fledged books on ecolinguistics are published like, *Ecolinguistics Reader: Language, Ecology and Environment* (Fill and Muhlhausler, 2006), *Animals Erased: Discourse, Ecology, and Reconnection* (Stibbe, 2012), and *Ecolinguistics: Language, Ecology and the Stories We Live by* (Stibbe, 2015) etc. Along with the publication of certain books in the discipline of Ecolinguistics, a number of researches are also being done in the same field.

Language is an integral part of human life. There are two major uses of language. The first is daily life and other is literary use. In the project underhand, I intend to use literary works in order to trace climate change in them. I have selected two fiction novels from the Global North countries and two fiction novels from the Global South countries as data to conduct this research. The first selected novel from the Global South is a Pakistani novel '*Thinner than Skin*' by Uzma Aslam Khan (2012) and the other is Indian novel '*The Hungry Tide*' by Amitav Ghosh (2005). The first novel selected from the Global North is an American novel '*Flight Behavior*' by Barbra Kingsolver (2012) and the other is an Australian novel '*The Swan Book*' by J. G. Ballard Alexis Wright (2013). In these selected texts, the researcher first of all finds out the element of climate change and then tries to formulate a unified ecosophy out of them in the context of climate change. Pakistan and India are not developed countries. Along with many other major problems, they face the problem of climate change that is badly affecting their economy. I have selected novels from developed and less developed

countries in order to make an ecolinguistic comparison and based on it develop an integrative ecosophy which is relatable to both East and West.

The reason fictive texts are chosen is that language used in fiction appeals to senses more than any other type of writing; the idea and the language are blended making it easier for the reader to grasp the concept. Moreover, many related concepts are drawn upon which again, shows the practicality and relevance of the main concept. Non-fiction data may not always have enough comparative value. I am applying certain strategies and they are best located in fictional works. I have selected novels from different countries for my work in order to have a variety in strategies. There is enough data in this category that can provide better results in this field of research. The above argument is in no way given to deny the importance of using the non-fiction language data.

A point that needs some clarification is that the above novels have been researched from the point of view of ecolinguistics but not in a comparative mode by mentioning the concept of ecosophy. The discourse given in the novels is interpreted from the perspective of ecology. Arran Stibbe (2015), the theorist/ methodologist, whose theory/methodology I use in the current project, gives 8 stories or ways in which ecolinguistic discourse is constructed, in his book *Ecolinguistics: Language, Ecology and The Stories We Live by*, namely: ideology, frame and framing, metaphor, identity, facticity and conviction patterns, erasure, salience, and evaluation.

To consider all these stories, Stibbe follows certain theories back to back and develops his own ecosophy. In the current study, I follow the social representation theory that is given by Rateau et al. (2012). This theory is an expansion of the theory of metaphor given by Johnson and Lakoff. The metaphor theory (1989) states “metaphor structures knowledge; metaphor is central to abstract language; metaphor is grounded in physical experience; metaphor is ideological” (More than cool reason, 1989, p. 320). Stibbe takes this idea of metaphor and social representation theory and gives his 8 strategies.

The term ecophilosophy and ecosophy are interchangeable. Ecosophy is an individual's attitude or behavior to ecolinguistics (Guattari, 1992. pp. 26-27). Predictably, Stibbe has his own ecosophy that is summarized as '[l]iving!'. His ecosophy is focused on the wellbeing of all the species. He gives consideration to all

that includes human beings and the other species. In short, he writes about the preservation of ecosystem. In my research, an ecosophy is generated that is allied with the issue of climate change. The ecosystem around us is very large consisting of both living and non-living beings. The major role here is played by green plants and trees on which all the living beings depend. So one must protect and guard them. There is no existence without them. So the solution of every problem that is linked with climate change that lies in the protection and production of more and more trees.

1.5 Statement of the Problem

Climate change has become a global challenge. It was not all of a sudden that it assumed the proportions that it has today. Unfortunately, not enough attention was paid to it. The whole world is facing the calamity in the form of floods, rise in sea levels, global warming, and extreme weather patterns. The main reason behind climate change is the excessive global carbon emission. According to many studies, the Global North countries are more responsible for carbon emission than the Global South countries (Pardikar, 2020). The Global South countries are also responsible for it due to lack of awareness in public and poor policies but their part is quite less. One of the effective ways of combating this challenge is through literature. There are two ways in which literature can be harnessed to fight this challenge: the special language used in literature which can evoke images and, secondly, the universal appeal of its themes. Despite the important role that world literature can play in this regard, there is little research on it. Keeping the above in mind, the present research study is designed to understand and demonstrate the importance of language in building/destroying the natural environment. Various linguistic strategies are drawn upon to build an eco-friendly analysis of the selected text — drawn from both Global South and Global North countries to give a balanced view of the issue. An integrated ecosophy is extracted from the selected novels to show the importance of using literature to redress world issues.

1.6 Objectives of the Study

Objectives of the current study are as following:

- To locate and analyze the selected strategies in the chosen data.
- To examine the effects created by selected strategies.
- To generate an integrated ecosophy that is applicable on all the selected novels.

1.7 Research Questions

The following questions guide my research endeavor:

1. Which Stibbean ecolinguistic strategies can be traced across the selected novels?
2. What is the effect created by the said strategies in the given text?
3. What possible integrated ecosophy can be generated that is applicable to the selected texts?

1.8 Significance of the Study

The significance of this study is two-fold. It adds to the body of knowledge on both linguistics and raises awareness among people about climate. It aims to sensitize people to the strength of language use and, in the process demonstrate how linguistics can play its role in saving the climate. Previous studies on the selected texts focus on critical discourse analysis, whereas this study undertakes the strategies given by Arran Stibbe that gives uniqueness to this study. No study has been conducted that is focused on integrating an ecosophy by applying these strategies on novels from the writers of different countries. Current study investigates how the issue of climate change is portrayed in different regional works as climate change is global issue.

1.9 Delimitations

I delimit my data to four novels of 21st century, two from the Global South and two from the Global North. I intend to be familiar with the unified ecosophy of the different writers in their works regarding climate change. It is well proven that the North has destroyed and continues to destroy the environment more than the South but it is the east that faces the consequences more. According to a recent research United States is responsible for 40% and European Union for 29% of the climate breakdown. So, the Global North makes total 92% of excess global carbon emission (Pardikar, 2020).

Along with that I also want to mention here that two novels are by native speakers and two by non-native. I intend to explore Stibbean along these lines also.

1.10 Organization of the study

Here is the chapter breakdown of the thesis that is composed of five chapters:

Chapter 1: Introduction

In the first chapter, a full fledge introduction is given. It introduces the whole research and the way in which it is carried out. It explains certain key words, concepts and themes related with the current study. It also gives the significance of study that is the most important thing. Along with that, there are research questions, objectives of the study and delimitations in the first chapter.

Chapter 2: Literature Review

It includes literature review of the current study. The theories, concepts, and past studies that have a link with current study are critically analyzed in the second chapter. Along with that, this chapter introduces the running ecosophy of the current work. This chapter ensures that the gap I have found has not been filled before.

Chapter 3: Research Methodology

Chapter three answers to how this research is conducted. It states the framework of the study and elaborates certain concepts linked with the study. Selected theories, strategies, and research paradigm are the parts of this chapter.

Chapter 4: Data Analysis and Findings

Chapter four is wholly composed of analysis and findings of the selected data by following the selected theory and strategies. It shows all the findings as a result of whole procedure of analysis. This chapter also answers to the research questions that are asked in the first chapter.

Chapter 5: Interpretation and Conclusion

Chapter five interprets the findings and concludes the study by summarizing the key findings. It also provides recommendations for the future researchers.

Now, this study moves to review and discuss the existing literature on the problem. It also mentions the way how the existing literature links and differs from the current study.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter gives some citations from works that could be of direct or indirect relevance to the project underhand. It is divided into certain portions that view the existing literature from various perspectives. It includes ecolinguistic analysis, ecosophical analysis and critical discourse analysis etc.

Ecolinguistics is a newly emerging field. It is a sub-field of sociolinguistics. As sociolinguistics studies social context, so adding ecological context to it, forms ecolinguistics. Ecolinguistics is majorly the study of relationship between language and ecology. It is the study of language that how it plays its role in destruction and preservation of ecosystem. The idea of ecolinguistics is given by Micheal Halliday (1990) in his speech titled *New Ways of Meaning: The Challenge to Applied Linguistics*. This speech is often acknowledged as a stimulus to linguists to consider ecological context of a language seriously. Our thoughts, beliefs, ideologies, and perceptions do effect our treatment with nature that is in turned shaped by language. Those ideologies are produced in the form of destructive and beneficial discourses. Destructive discourses are achieved by making use of the strategies like erasure and marginalization while beneficial discourses are achieved by making use of salience and reminding. It tells whether the discourse is contributing for the preservation or destruction of ecosystem (Stibbe, 2015).

Much work is done in the field of ecolinguistics. It covers many theories and approaches. Most of them are followed by Arran Stibbe in his book *Ecolinguistics: Language, Ecology and The Stories We Live by*. Those approaches and theories include Critical Discourse Analysis (Fairclough, 2003), metaphor theory (Muller, 2008), frame theory (Lakoff and Wehling, 2012), appraisal theory (Martin and White, 2005), fact construction (Potter, 1996), identity theory (Benwell and Stokoe, 2006), eccentric theory about climate change, cognitive theory (Johnson, 1987; Lakoff and Johnson, 1999; Lakoff and Wehling, 2012), Lakoff and Johnson's theory of metaphor, Social Representation Theory (Rateau et al., 2012) and theories of erasure and salience (Van Leeuwen, 2008). All the theories that are mentioned above interpret language in order

to expose stories underlying them. The difference lies in describing them in different terms. Some underlying stories show the mental modal of an individual and some of them are socially accepted.

2.2 Ecolinguistic Studies in Pakistan

Ecolinguistics is newly emerging field. There are number of researchers that are done all over the world having the major topic of ecolinguistics. Same is the case in Pakistan. Various researchers are done in this field particularly in Pakistan. This section contains those researches that have some connection with the current study.

From 2020 to 2022, almost the whole world suffered from Covid-19. There is a research done by Gul et al. (2021) that analyses the language of advertisements related with Covid-19 with ecolinguistic perspective. It takes fifty advertisements from different Pakistani websites and examines lexical choices. It finds out that there are the elements of fear and xenophobia in advertisements.

There is another ecolinguistic study done in Pakistan that examines the concept of climate change in climate reports (Khan & Mustafa, 2023). The study adopts ecolinguistic approach and aims to investigate the role of framing and erasure procedure in building the ideology of a writer while depicting ecological crises. The analyses show that negative message and destructive discourse has more impact on the audience than positive message and beneficial discourse. Use of framing and appraisal patterns produces ambivalent discourse while erasure produces destructive discourse.

There is a belief that English Language Teaching (ELT) helps in raising awareness regarding environment issues. There is an approach in textbooks that they describe the linguistic representation of nature and human-nature relationship. The results show anthropocentric worldview. It means that man is superior to all in this physical world and everything else is for the assisting man (Zahoor et al., 2020).

Another study looks for ecological perspective in English language learning in Pakistan. This study takes a list of words from secondary resources in recent 10 years. The analyses show that the works do not consider ecolinguistics as a separate field. Ecological perspective in English language learning in Pakistan is not as rich as in other countries (Irfan et al., 2021).

Textbooks play key role in building concepts among students. Majeed et al. (2022) explore the textbooks of 9th and 10th grade with ecolinguistic perspective. They use the framework given by Arran Stubbe and select only three categories of erasure, metaphor and adjectives. This study tries to illustrate how these strategies are used to address environmental issues and ideology of the writer behind. So, ecolinguistics provides broader understanding and way to treat ecosystem.

A study carried out by Fatima and Arsalan (2023) analyzes the content of the newspaper *Dawn* in order to recognize the concerns of public. The work selects newspaper of August and September 2023. The outcomes show that the newspapers are full with the content related with politics and economy of Pakistan. They are not concerned with any environmental issue. This confirms the interests of Pakistani government and public.

Advertisements play an important role in conveying any message to public. So the language of advertisements is fascinating and appealing as they must contain some positive message. There is a study that analyzes the language of advertisement related with climate change. It aims to know the type of discourse produced. The results show that the discourse produced is ecologically constructive discourse that highlights the importance of environment (Nasir et al., 2022)

Trees act as air filters by consuming carbon from the environment. There is a campaign of 10 Billion Tree Tsunami in 2014. Imran Khan delivers number of speeches regarding the initiative of planting trees. Ecolinguistic analysis is made on the texts of those speeches from 2014 to 2022 and results show that the lexical choices made by him are quite convincing, appealing, persuasive and influential. This production of positive discourses is a first attempt to undertake climate change.

2.3 Existing Literature on the Selected Data

There have been research studies on my selected data. Certain works have already been done on them. The novels have been analyzed from different angles. This section contains already existing knowledge on the selected novels.

2.3.1 *Thinner than Skin*

The novel, *Thinner than Skin*, has already been searched with certain angles. Ecolinguistics study is already done on this novel that examines the rhetorical

expressions used by the author and her characters in the novel. Appraisal model given by Martin and White (2000) is used in order to conduct this study. This study also considers ecolinguistic model of evaluation (Stibbe, 2015) for theoretical framework. The results show that different words and phrases are used to represent the splendor and magnificence of the Northern areas of Pakistan (Mirza et al., 2022).

A study by Rashid (2018) is based on locating ecolinguistic elements. The role of ideology in making the context of a discourse and image making of the respective country has been studied. The political and socio-cultural context is the point of focus. The current work studies it with a different angle i.e. ecolinguistically. Previously, it has been critically analyzed.

In one another work Wahab et al, (2021) perform interpretative analysis in the context of feminism is done on the novel *Thinner than Skin*. It is usually assumed that the women of the third world countries are male dominated, illiterate and lack awareness in their due rights. This assumption is proven false by analyzing the female characters of the Uzma's novel.

Shah et al. (2021) are also interested in examining *Thinner than Skin* with the point of view of feminism. Their study proves that all the fundamental components of L' ecriture feminine are located in the selected work. It is a French term which means women writing or females' piece of work.

In one another research, Nadeem et al. studied *Thinner than Skim* from Schopenhauer's point of view that states that where there is a depiction of beauty there is an underlying pain too. In this novel, there is the depiction of beauty of northern areas of Pakistan that is shown by the surface meaning. But at the same time anguish must also be taken into account (Nadeem et al., 2023).

2.3.2 *The Hungry Tide*

As far as the Indian novel '*The Hungry Tide*' is concerned, there is a research done that is linked with looking for the word 'water' used either metaphorically or as material word (Anand, 2008)

2.3.3 *Flight Behavior*

Ramadan (2018) while analyzing *Flight Behavior* declares that it is not the duty of a writer to discuss the problems of the public in fictional works. But the writers keep

on discussing environmental issues in their respective works. The writers show their dedication towards environment and society in which they live. Same is the case with Barbra in her novel. She discusses the issue of climate change that is a clash and conflict between man and ecosystem. A writer uses different strategies to convey the message. The current study is linked with the analysis of those strategies that are used to discuss environmental issue i.e. climate change and ideology of the writer.

There is a study that is carried out by Gade on *Flight Behavior* (2012). He is of the view that this novel is a wonderful piece of writing produced by Barbara on climate change. She discusses the possible effects of climate change on monarch butterflies and people's life. In this way, the writer tries to give awareness to the audience through this piece of writing. She is of the view that one must keep on hoping even though if there is nothing left.

2.3.4 *The Swan Book*

A study carried out on *The Swan Book* by Gleeson-White (2016) explains that the land has completely altered by climate change before man recognizes it. Man uses the resources of planet earth for his own benefits and as a result they get damaged. He interprets *The Swan Book* ecolinguistically. According to his view, Wright declares that just because of climate change countries get transformed and people misplace their ancestral stories that are connected with some particular place. Countries lose their landscapes and other beauties. In the last 10 years, environmental scientists are continuously claiming that world is going to be changed due to climate change and now it is the duty of a writer to imagine the new world that is declared by the scientists. They provide a new space to the writers in the literature. Now, the current study tries to find out the strategies used, ideology of the writer and compare it with other works.

Sheridan (2017) analyzes the approaches in the two award winning Australian novels i.e. *The Swan Book* by Alexis Wright (2013) and *The Natural Way of Things* by Charlotte Wood (2015). In both of the novels, the selected issues are so vicious and destructive that they do not look like fables. They seem to be realistic narratives. *The Swan Book* is based on the thrilling issue of climate change and the story of *The Natural Way of Things* is particularly linked with misogyny. The current study is also linked with the ecolinguistic analysis of *The Swan Book*.

2.4 Miscellaneous Studies Informing the Current Study

This portion holds those research studies and articles that are particularly associated with ecolinguistic analysis. Ecolinguistic analysis is done on different kinds of data that include textbooks, fictional works, advertisements, and environmental websites. All the studies are directly or indirectly related with environmental issues principally with climate change. Hence in this way, they are linked with the current study.

If we view the history of ecolinguistics, its attention is more likely on the negative aspects of language that produce destructive discourses. This aspect is described by Worf (1949) and then further explored by Goatly (1996) and Chawla (2001). Grammar plays due role in constructing the meaning and describing the issue. It includes the role played by the separation of actor from recipient and division of time into present, past and future.

If we want to explore the positive side of ecolinguistics, it tries to search for the correct use of certain specific lexical items. Positive discourse is named as imaginative naturalism by Macfarlane (2013) because it holds certain lexical items that are arranged in a way that they produce a positive meaning and it encourages to protect the ecosystem.

Goatly (2000) attempts to interpret '*The Prelude*' by William Wordsworth. He finds out care and respect for the nature in his work. While Goatly conducts his analysis, at the same time James Martin (1999) develops the concept of positive discourse analysis but Goatly does not use this term in his analysis. Positive discourse analysis focuses on the theme of hope and a positive change. It not only analyses patterns of language in a single text but it also analyses certain patterns of language used by some specific group of the writers in their writings.

2.4.1 Textbooks

An ecolinguistic study done on the textbooks by Larouz & Mliless (2018) investigates the textbooks that play a major role in mounting awareness in students. Textbooks do affect the way of perceiving different things. That's why the 19th principle of United States states that environmental issues must be included in the syllabus of environmental education. It inclines students towards the protection of ecosystem. This

particular study explores the degree of euphemism, agency and passive voice in certain selected textbooks. It also investigates that to which level euphemism, agency and passive voice hold the argument of ecolinguistics that pre-assumes that language is either used positively or negatively. The data contain the linguistic structures of euphemism, agency and passive voice in Moroccan high school English language teaching textbooks. It tries to elucidate that the excessive use of these strategies do affect the meaning that is the main reason behind the exploitation of environment. Euphemism, agency and passive voice affect the meaning of language used in environmental narratives. This paper takes the textbooks that are once taught in Moroccan high schools. 14 texts are selected that have the perspective of ecolinguistics. The results show that the selected text focus on teaching English as second language and linguistic structures have a significant influence on the students' knowledge and understanding of environmental issues. Along with that that results also show the excessive use of euphemism in chosen data that is anti-pedagogical. Too much use of euphemism makes the text vague and ambiguous. Agency occurs less frequent in comparison with the occurrence of euphemism. Very much less use of agency shows the lack of meaning that ultimately affects the level of understanding of students. This study concludes that the main purpose behind introducing environmental education to students is to make them aware to the environmental issues and also to make them realize the beautiful relationship between man and nature. Ecolinguistic approach of this study makes it similar with the current study.

2.4.2 Newspapers

Yuniawan et al. (2017) are interested in critical ecolinguistic approach. The term critical ecolinguistics is formed by the combination of two words i.e. ecolinguistics and critical discourse analysis. As the term ecolinguistics itself shows that it is the combination of ecology and linguistics and it gets affected by many other interdisciplinary fields that is actually critical discourse. Briefly, the term critical ecolinguistic approach is defined as 'linguistic aspect of discourse about environment'. This work follows descriptive approach and carries out research on different newspapers (Yuniawan et al., 2017)). This study takes two newspapers for analysis. The first one is *Suara Merdeka Newspaper* and the other one is *Kompas Newspaper*. These two newspapers are investigated by following identification and classification methods. Data collection methods include listening method, literature study and

documentation method. Then data is analyzed in accordance with the research objectives. Both micro and macro structures are taken for analysis. The findings show that there are different lingual units that are used to symbolize ideological, biological and sociological meanings. The results also show that if the interdisciplinary fields of ecolinguistics are developed properly then they can provide enough material for problem solving. So, there should be a balance between formal linguistic studies and critical linguistics.

2.4.3 Advertisements

Ain et al. (2021) aim to conduct linguistic analysis of advertisements. As the marketing companies do their best to make full use of language in their advertisements to convince the audience. This study is qualitative in nature and linguistic analysis of advertisements is done by using linguistic framework given by Arran Stubbe in his book *Ecolinguistics: language, ecology and the stories we live by*. Stubbe gives 8 stories in his book and this study takes four stories to conduct this research i.e. identity, framing, ideology and evaluation. The selected data contain advertisements of five food manufacturing companies. Those advertisements are selected that are related with beverages and dairy products only. Advertisements are 20 in number (4 from each selected company). The advertisements are produced during the year 2019 in Pakistan. This linguistic analysis shows that language of advertisements plays a huge role in making people believe in their product. Each and every word used has an ideology in it to convince the audience and they try their best to persuade the audience. This study and the current study both are linked with the ecolinguistic analysis by making use of the strategies given by Arran Stubbe (2015).

2.4.4 Fictional texts

This section is based on discussing the study that is linked with ecolinguistic analysis of fictional works. Makhdoom & Yaqoob (2019) are interested in discussing current environmental issues that are present all over the world. Due to the increasing number of different environmental issues, people are now more interested in writing and discussing them in a very serious mode and almost equal number of researches are done on those works. This research work is also related with the current environmental situation and the researchers compare works from different countries in order to know how the writers from different places and cultures frame these issues. In this regard,

Arran Stibbe (2015) states that treatment of man with environment including other living beings does effect the link between ecology and language. This treatment is effected by ideology, beliefs, and other philosophies in the mind of man. Here, in this study, the investigators compare the fictional works from the writers of different countries i.e. Pakistan and America and 3 queries are under study. The first one relates with finding out the reason behind mentioning different environmental issues in fictional works. The second one investigates the nature of discourses that are specifically written from ecological point of view in the selected countries. The last query is about the usefulness of this comparison between the countries having different cultures, customs and traditions. In order to answer all these queries, the researcher conducts a qualitative study. The data contain four novels. Two novels are written by Pakistani writers i.e. *Moth Smoke* by Mohsin Hamid (2012) and *Trespassing* by Uzma Aslam Khan (2005) and two are from American writers i.e. *White Noise* by Don DeLillo (1999) and *A Thousand Acres* by Jane Smiley (1991). After reading all of the novels, researchers analyze and illustrate the selected texts from ecological point of view that is commonly known as ecocriticism and toxic discourse. Different writers define the term ecocriticism differently. Glotfelty defines the term as “the study of the relationship between literature and physical environment”. The main purpose of this study is to know how people from different countries symbolize or portray the natural environment and its relationship with mankind in different works of fiction. The results show that selected works from American and Pakistani literature have both similarities and dissimilarities in ecological context. In order to answer the research questions, the overall researchers’ analysis show that in the light of present environmental condition, both Pakistani and American literatures do concentrate on the critical ecological issues existing at present day. They do declare the rapidly increasing environmental issues that are neglected by the societies. Both of the literatures mention and discuss the issues according to their own beliefs, custom and cultural values, and stances. The American works signify the issues of the time during which they are written. Like *White Noise* publishes after the mishap of Bhopal. So, this novel mentions that America is facing environmental issues as a result of these kinds of exposures. Both of the works from American literature show the ecological pollution of the existing period. The major reason behind environmental issues mentioned in Pakistani works is insufficient economic resources as an under developed country. Will power of people also plays a greater role in solving any issue. Unfortunately, public has no will power to overcome

environmental issues though these issues are directly effecting their physical and mental health. So, these types of comparative studies give worldviews of cross-cultural countries. This research is linked with the current study in a way that both the works are related with the environmental issues across different countries and their portrayal in fictional works. Along with that both are linked with ecolinguistic analysis. In this way, this study contributes much to the current study.

2.4.5 Environmental websites

In the research article, Fernández-Vázquez (2021) first of all mentions the most important big thrilling issue of the time i.e. climate change. He mentions the extensive report of Ipsos (2019) in his work that declares that 28 countries between the time period of February 2019 and March 2019 discovered that climate change is the most important environmental issue of the day and this statement is accepted by almost 37% of the population all over the world. This piece of work sorts the web pages particularly related with environmental issues. These pages are taken from 20 countries that are considered to be most responsible for carbon emanation and in turn accountable for climate change. The sole purpose of this study is to inspect how these web pages tackle the issue of climate change in front of the entire world. It includes linguistic and visual analysis that is useful for better understanding. As far as the method of data collection is concerned, the study uses Google Chrome. The websites of 20 most pollutant companies are collected. The list of names of top 20 polluters is given by Climate Accountability Institute in US in 2019. The researchers peruse all the required information related with climate change from those websites and download them in January 2020. Images are also downloaded for visual analysis. 130 images are collected from those websites for analysis. One of the purposes of the study is to compare the selected data with the organizations (non-profit organizations NGOs) that work for the protection of environment. Same procedure is followed to collect the data. 311 images are collected from the websites of NGOs and analyzed according to the postulates of visual grammar theory. The results show that first of all the researchers want to declare that the data on the selected topic is very rare and limited. So it should be increased. The visual analysis illustrates that there is very limited discussion or debate about climate change on the selected webpages. It is mainly for non-western companies than western companies. Those companies that talk about climate change have certain similarities in their discourse and visuals. Most of the webpages just ignore the main

root cause of climate change i.e. economic growth and industrialization. Man plays a passive role in the visuals of companies on their websites while in the visuals of NGOs, man plays an active role (participant). Thus, this research helps companies to make their narratives better. This study is connected with the current study as both are focused on ecolinguistic analysis.

2.4.6 Emergence and growth in the field of ecolinguistics

Ecolinguistics is newly emerging field in linguistics. It is rapidly growing. It is an umbrella term that covers both language and ecology so it can be easily referred as a trans-disciplinary field. Chen, S. (2016) is interested in examining four major things in the studies already existing in the field of ecolinguistics. In order to reach the desired results, the researcher conducts a quantitative study. He takes 76 journals published between the time period of 1991 and 2015 (25 years). The first aspect under observation is what those publications are about. Means to say which major issue or gap is addressed in those selected works. The second aspect is about the time and the place (venue) of publication. The third aspect is majorly about the research topic. Which research topic is addressed in the selected work? The last aspect is about the methodology adopted. Which methodology is adopted in order to conduct the research properly? The major question mark of this research is about the growth of ecolinguistic in particular time period. Three types of sampling techniques suit here. Either to take random works from the selected time period, to take the publications particularly related with academics or the most representative publications of the time. The third strategy of sampling suits here best i.e. the most representative publications. So the researcher takes those representative publications that suit all the parameters and factors of the selected domain. Quantitative analysis is selected because it gives a complete overview of the researches done in the newly emerging interdisciplinary field of ecolinguistics. The data include 76 journals in over 30 languages from 50 countries. Rapid increase in the number of researches related with ecolinguistics is observed as a result of this study. 10 researchers are published in the last decade of 20th century, 12 publications are there between 2001 to 2005 and more than half of the articles (56 out of 76) are published in the recently past 10 years (2006-2015) that shows the real diversification of the field. The most applied theories in those works contain discourse analysis and language learning and teaching. Actually discourse analysis and language learning and teaching are the basics (language in use and how to teach and learn the language use in the

particular context of ecology). The results about the venue show that 95% of the total publications are published in North America and Europe. Numbers of researches in United Kingdom are 21, 20 in United States and 32 in Europe. 25 ecolinguistic works focus on general linguistics and 25 on sociolinguistics. All these results show that numbers of research works in the field of ecolinguistics are on immense increase that shows the increasing interest of the people. This interest is obvious due to increasing environmental issues.

These all studies prove that the field of ecolinguistics is rapidly growing. Numbers of researches are conducted by the researchers from all over the world. These studies show that ecolinguistic analysis of textbooks, newspapers, environmental websites, and fictional works has already been done. These works contribute to the current study. All of the works mention that climate change is most serious and thrilling of the time. It exists all over the world. All of the works have a strong connection with the current study as they are ecolinguistic in nature. Difference lies in the type of selected data, theoretical approach and ecosophical aspect.

2.5 Ecosophy

The concept of ecosophy is given by Naess (1995) for the very first time. Ecosophy is also termed as ‘ecological philosophy’. According to Naess, ecosophy is a set of principles or standards that are to be followed throughout the process of analysis. Arran Stibbe takes this concept and gives his own ecosophy of Living! He highlights the wellbeing of all the living species existing in the ecosystem. It does not mean just the right to live but the right to live well, care and respect, care for the future, and social justice etc. Following this ecosophy, he writes a book named *Ecolinguistics: language, ecology and the stories we live by*. Keeping in view his ecosophy, he states 8 stories namely, *ideologies, framings, metaphors, evaluations, identities, convictions, erasure and salience*.

This portion considers those studies and research articles that have the concept of ecosophy and also have a contribution to the field of ecosophy.

2.5.1 Environmental science discourse

This section is about ecolinguistics analysis of environmental science discourse. Wagma and Umar (2021) in their work majorly discuss ecological awareness that is

demand of the day. The most important role that can be played in this regard is by the type of educational content. It aids in making awareness, developing understanding and building ideologies among students. So in this context, both beneficial discourse and destructive discourse play their due roles. The analysis of a text is based on analyzing certain linguistic patterns from the underlying text. Here, in this study the linguistic patterns are focused that show element of erasure in the selected data. In order to introduce ecology and to create related awareness among students, curriculum organizers introduce environmental studies to the students of secondary and higher education. The major aim is to prepare students to tackle existing environmental problems positively and try to restore the broken and spoiled environment. In this research study, single environmental issue is under discussion i.e. climate change and it is in turn responsible for certain other problems like rising sea level, heat waves and droughts etc. This study also creates an ecosophy that is based on eco-centrism. It means that man is not the center of this world or ecosystem but other living beings also need equal rights and privileges. This work is qualitative in nature and uses one of the strategies i.e. erasure given by Arran Stibbe in his book *Language, ecology and the stories we live by* (2015). It explores environmental science books by executing sampling technique. The books include *Environmental science: Earth as a living planet*, *Environmental science: Towards a sustainable future*, and *Environmental science: Working with the Earth*. Then researcher selects the paragraphs having the elements of erasure. Those paragraphs are 485 in number. After counting the number of paragraphs with the element of erasure, the investigator does purposive sampling in order to have some more particularized data and finalizes 274 paragraphs as final data for analysis. The findings reveal that many ecological entities are erased by human activities and non-human species are backgrounded systematically. This study suggests that there is a dire need salience and reminding that gives the message of protection and safety of natural environment.

As far as the connection of this study with the current work is concerned, they are much interconnected with each other. First of all, it shows ecolinguistic analysis of some selected data and has the concept of creating new practical ecosophy. Very few studies create their own ecosophies and work on it. Many of the existing works take someone else' already created ecosophy and work on it. Along with that this study uses the one of the strategies i.e. erasure given by Arran Stibbe (2015). The current study

also uses some other strategies given by Arran Stibbe. Hence, in this way both the works complement each other.

2.5.2 Linguistic landscaping

Yi, L (2019) in his study discusses theoretical and ecosophical perspective of ecolinguistic landscaping. Linguistic landscaping is basically linked with three fields of linguistics namely; sociolinguistics, translation studies, and semiotics. Linguistic landscaping is actually the language that is present/ used in public and commercial signs in some particular field of knowledge. It includes sign boards, streets' sign board and other public signs that can be generally understood by common public. One can easily adjust ecolinguistics here as it builds relationship between language, man and other existing parameters that are necessary to uphold a life. Along with theoretical aspect, this research study also has ecosophical perspective. Ecosophy is one's understanding about any ecological happening and then its impact on daily life activities. The researcher considers the ecosophy of Haeckel (1995:26). It mentions four elements for a researcher to conduct a linguistic research that has an ecological perspective. Firstly, scholar must cover ecological environment comprehensively. Secondly, he must not be static rather dynamic. He must not be restricted to a single period but must aim to cover different eras. Thirdly, he must not study or observe the existing issue in separation but one must study it in relation with human beings and other corpora. Fourthly, researcher must think of both physical and humanistic environment of linguistic landscape. Another Chinese philosophy is under observation here in this study that talks about the harmony between man and nature (Zhou, 2017). On the basis of this philosophy and after all this discussion, the researcher comes to the view that man and nature are like the two wheels of a vehicle. So, one must care for this never ending relationships between man and man, man with other living species, man with nature, and language and ecology.

This existing work has a relation with the current research as ecolinguistic analysis is the main part of it and it has ecosophical aspect too. It carries out ecolinguistic analysis of the selected data. This study firstly follows the standards set by Haeckel (1995) and then a Chinese ecosophy that addresses the balance between man and nature (Zhou, 2017). The difference lies in the theoretical frameworks as current study uses certain linguistic strategies under Theory of Metaphor and Social Representation Theory and creates its own ecosophy.

2.5.3 Vecosophy

As we all know that language both in written or oral form and images play a vital role in structuring our minds regarding anything existing around us in the environment. Zhdanava et al. (2021) try to reveal the role of both language and images in making minds regarding the rights of non-humans. For doing so, this research is looking for vegan campaigns to interpret. The way of understanding different things plays a major role in making our minds. They do affect our way of thinking and acting. Ecolinguistics helps us in interpreting them as beneficial or destructive. In simple words, veganism is actually a philosophy or a practice of not eating any food related with animals or their products. They are same as we are human beings. They have right to live as we have. As we share our ecosystem with them, in the same way they also share their ecosystem with us. Both humans and non-humans have the same rights of existence. The more we strengthen our bond with non-humans, the more we move towards veganism and ultimately less harm to our environment. So, vegan campaigns are the best examples that show the role of language and images in representing non-humans to humans. In this study, the researchers take 27 posters from vegan campaign named 'Go Vegan World'. Researchers first take permission from the organizer of the campaign and then take the posters from the campaign's website. This campaign intends to teach the rights and roles of animals to mankind. The main purpose of analyzing images here is to know how man wants to depict or portray them. This study also creates an ecosophy that is generated by embedding the both words vegan and ecosophy together and finally called as 'vecosophy'. Vecosophy includes all those basic rights or privileges that are usually demanded by a normal human being like freedom, self-respect, life and equality etc. And the question is for non-humans whether non-humans are provided by them or not by viewing those vegan posters. Results show that four stories given by Arran Stibbe are present in the campaign posters that are salience, conviction, ideology and erasure. Non-humans are classified as salient beings both in material and mental processes. They are observed as the actors, behaviors, doers, and thinkers of the actions. Non-humans are shown as the experiencers. The element of erasure is also noticed in a way that non-humans are backgrounded in some of the images but this factor is much less. The other elements in the analysis of language like individualization, activation, and personalization is also observed. The researchers of the study sum up all the work by stating that none of the posters shows the complete

erasure of non-human from our united ecosphere. They take both language and visuals just because to extract the results from a very comprehensive study and to make it interesting and motivating.

This study has a strong connection with the current study in a way that it holds ecolinguistic analysis done on vegan reports. Then it also applies certain strategies given by Arran Stibbe (2015) on the selected data in order to make the study more comprehensive and inclusive. This work also has an ecosophical touch. It creates an ecosophy named ‘vecosophy’ that gives equal rights and privileges to non-humans. Its ecolinguistic and ecosophical nature gives it a strong link with current study. Its results add a body of knowledge to the current study.

2.5.4 Social norms and beliefs

Man is a social being who cannot live all alone. He needs proper social environment to live in. The top most need of a man as a social being is another man to talk with and then comes many other factors and needs too. And for interaction man needs a language. As language has some relation with man, it has some sort of relation with environment too. This relationship between language and ecology is known as ecolinguistics. This relationship is also affected by the behavior of man with nature that how man treats nature. What are the thoughts, concepts, priorities and beliefs of man about nature and all these things need a language. So, in short all these three things are interlinked and cannot be separated from each other. Stibbe (2015) illustrates this concept as one needs language to describe the nature around him both in a positive or negative way. Every man is different from other in the context of nature in accordance to his wisdom. Five things collectively form wisdom namely, norms, postulates, rules, value priorities and hypotheses. One acts on the basis of these five things and then it is called as one’s ecosophy. For example, there is a text that summarizes that man is responsible for the destruction of nature. After reading that text, man starts caring for the environment according to his own level of wisdom. So, language affects mentality (beliefs). There is a study that takes certain utterances from the youtube channel of Afroz Shah as data. Then by using Arne Naess’s theory, the Nurwahyuni et al. (2022) try to reach his ecosophy. This study is qualitative in nature as the data is examined by taking certain utterances from the selected channel. In order to answer the research questions, researchers follow a process of first downloading the data, then watching and re-watching, selection and deletion, coding, inferring the data and at the end

concluding it. Arne Naess's theory categorizes ecosophy into five categories and results of the study show that the researchers find four of them in the data under observation. The first category is of norms. Norms are the social values (standards) in a literate society both in written or oral form. The data has a norm in the light of Islam that The Prophet Muhammad (SAW) teaches his people to care for the environment for a balanced survival. The second category is of rules. Rules are the guidelines for man to live a peaceful life. The results show the rule that at present time everyone must try to accomplish one goal and that is to acquire neat and clean environment in order to get rid from many environmental problems. The third one is postulate. According to oxford dictionary "a postulate is to suggest and accept that something is true so that it can be used as the basis of theory". The data give the postulate about love that if one loves something then spends time with it. Means to say if you love Nature spend time with it. The fourth category is of value priority announcements. These value priorities tell people what they have to do and as a result what kind of society they will have. Working for the improvement of environment around you is your top most priority or not? The fifth category is of hypotheses and it is not there in the statements of the selected data because everything is well proven. Nothing needs any further proof.

The study that is described above has a linkage with the current work in a way that it has both ecolinguistic and ecosophical aspect. It shows the ecolinguistic analysis of the utterances uttered by Afroz Shah in the videos that he posts on his YouTube channel. The researcher follows Arne Naess theory in which he gives five classes of ecosophy. He finds out four of them and motivates people to create their own ecosophies in order to create a balance between man and nature. This study is quite similar with the current study due to its ecolinguistic nature and ecosophical perspective.

2.5.5 Tri Hita Karana

Astawa et al. (2019) carry out a study that shows the interest in analyzing awig-awig text ecolinguistically. Awig-awig text represents Tenganan Pegringsingan village. It is a customary law of Tenganan Pegringsingan village that has been existing since 11th century. Then after this law, Tri Hata Karana ecosophy is given in Bali. This study looks for the ecosophy of Tri Hata Karana in awig-awig text. It talks about three types of preservations of environment namely; spiritual, social and natural. This research seems to be looking particularly for the relationship of human with all these kinds of

preservations in the selected text. These preservations are the ways to re-establish or renovate the human relationship with God, other human beings and nature (external physical environment) in order to live a prosperous and happy life. Results disclose that awig-awig text has three sorts of evaluations i.e. beneficial (positive), destructive (negative) and ambivalent (in between beneficial and destructive). The beneficial evaluation goes side by side the ecosophy verified in this work whereas, destructive evaluation opposes the considered ecosophy and ambivalent evaluation pertains to both beneficial and destructive evaluations in which beneficial one is to be promoted and destructive one is to be refuted.

The study mentioned above is linked with the current study in a way that both the studies are particularly associated with ecolinguistic analysis. It takes grammar, lexicons, and linguistic patterns with respect to ecology under discussion. The current study works at sentential level and analyses different linguistic patterns. The difference lies in theoretical framework as this work follows evaluation theory (Stibbe, 2015) and appraisal theory (Martin and White, 2005) but the current study uses Social Representation Theory (Rateau et al., 2012) and certain strategies under discourse analysis given by Arran Stibbe (2015). Along with that both the works are related with ecosophy so they are quite similar in nature. The difference lies is that this study only follows an already existing ecosophy but the current study creates its own ecosophy and also goes with the ecosophy of Living! given by Stibbe (2015). The way of analyzing different things and findings of this study give a body of knowledge to current study.

2.6 Research Gap

All of the above mentioned studies and researches prove that much of the work has already been done in the field of ecolinguistics. It is a newly emerging field that is why it catches the attention of most of the researchers. This study is particularly connected with the thrilling issue of climate change. Climate change is a global phenomenon and is not studied in isolation. It is not a regional issue. It has no specific boundaries and restrictions to some particular area. It is a global issue existing all over the world. Man pollutes the environment all over the world and as a result it turns bad on him in the form of climate change. Conferences related with climate change consist of people from all around the world. Policies devised do not pertain to individual countries but take a holistic view.

This work has the element of literature in the form of novels. This paper takes novels as its major data because novels have universal acceptance and holistic view. They are known for their universality. Many researchers and investigators are also interested in working in the field of ecosophy but the current study is quite different from all of them. This study particularly links certain interrelated fields and tries to fill the existing gap. The selected novels can be taken as narratives of the writers from financially different countries. This work holds linguistic perspective too as it investigates the linguistic patterns of the selected works. It also links with the field of ecology as it takes the theme of climate change. Field of ecology and linguistics collectively makes ecolinguistics. This study tries to identify the mental behavior of the writers from financially different countries regarding climate change in their respective works. Along with that, this study also tries to locate a unified ecosophy in all of the chosen novels.

2.7 The Prevalent Ecosophy Used for this Work

This is an ecosophy that is used to enter the research site. After the analysis, an integrated ecosophy of the selected text shall be presented in accordance with one of the research questions. The term ecosophy is the combination of two words i.e. ecology and philosophy. It is a philosophy related with ecology that exists in the mind of an analyst during an ecolinguistic analysis. It describes set of philosophical principles. Analyst has certain concepts and beliefs in his mind against which he analyzes the selected text. That set of beliefs and values are collectively known as ecosophy. There are two existing ecological philosophies eco-resistance (Elton, 1958) and eco-resilience (C.S. Holling, 1973). The current study follows these two philosophies. Eco-resistance means to resist the disturbance that has been created by the existing issue. Try to stop and control the further disturbance. It is an effort to stop increasing the numeric count. Eco-resilience means try to recover the disturbance that has already been done by the prevailing issue. It is the capability of a system to assimilate all the disturbances created in it and the ability to regain the equilibrium. The current study is linked with the issue of climate change. In order to tackle this issue, first of all, try to look for the causes that are responsible for it and try to control them. If you get succeeded in doing so then try to recover the damages made by it. Ecosystem can have high resistance to disturbance. Exposure plays due role in it. Knowledge and understanding of a common man about this issue is very important in this regard. This problem, its causes and consequences

must be known to him. And then he must have motivation to step in a positive way. The simplest and easiest way is to plant a tree. These two principles are taken as the running ecosophy of the current work and they are used to analyze the ideologies of the selected writers in their respective works.

2.8 Theoretical Framework of the Study

The theoretical framework selected for this work includes theory of metaphor and social representation theory. The principles and main concepts of the selected theories are as following:

2.8.1 Theory of Metaphor

Man is capable of using language that makes him different and special from all other living beings. Man uses language for different purposes so language is used accordingly. One of the uses is use of language as metaphor. Metaphor is always produced as a result of some sort of procedure done on the literal meaning of the utterances. It is used to ascribe some particular quality or meaning to some utterance that is totally not related to it. Shortly, metaphor can be defined as “conceptualizing one domain in terms of another” (Ortony, 1993). So, it helps in framing someone’s mental concepts and in turn, it influences how someone acts in the world. Previously, the word metaphor is only considered to be used as poetic expression in which one or more words are taken out of their own conventional (denotative) meaning. Then Lakoff gives his views that it is not the matter of language but it is the matter of thought. Metaphor exists not only in the language system but also in the thought process (Hampe, 2017). It can be easily used in day to day language. Metaphor is central in ordinary everyday language. Lakoff says, “We have found that, on the contrary, that metaphor is pervasive in everyday life, not just in language, but in thought and action. Our ordinary conceptual system, in terms of both we think and act, is fundamentally metaphorical in nature”. ‘Argument is war’ and ‘time is money’ are the metaphors that are usually used in everyday language.

Metaphors are the fundamental part of conceptual system. When comes the subject of ecology or ecolinguistics, it encourages either to protect or to destroy the ecosystem on which the life depends. Lakoff and Johnson’s theory states that metaphors are shared across the minds of multiple people in a culture. So, it is a sort of schemata existing in the minds of certain specific groups. It does affect one’s thinking process

and actions (how one perceives different things in the world and then how one relates them to the other people in the world).

Metaphors are actually concepts that exist inside one's mind and they come out in the form of language (words). These concepts and thoughts are shared across the people of same era and culture. People get affected by the way of perceiving different things and phenomena in particular area or society. When it comes to ecosystem, people also have certain notions. It means whether to protect or destroy it. The related concepts with ecosystem also come out in the form of language. This theory can be practically applied to the current study. This study is particularly linked with the ecosophy of the writers of fictional novels from different countries regarding climate change. The researcher wants to know the concepts, thoughts, and mental behavior of the writers by analyzing use of language in their works.

2.8.2 Social Representation Theory

Social Representation Theory (Rateau et al. 2012) expands the existing idea of metaphors and states that not only metaphors but also a series of ideas, attitudes, perceptions, evaluations and beliefs subsist across the minds of multiple individuals in social groups. Arran Stibbe takes the Lakoff and Johnson's idea of metaphor and expands it in the form of Social Representation Theory. Stibbe adds ideologies, evaluations, identities, convictions, erasures and salience to it.

It is totally impossible for us to look inside one's mind and to try to monitor what are the cognitive structures existing inside. The only thing that is possible is to explore and analyze the linguistic patterns produced or uttered. So, there are three dimensions of Social Representation Theory under consideration here, as following:

- a. Stories (the primary thing that exists in one's mind is the cognitive structures or one can say that the understanding of some happenings).
- b. The stories we live by (those stories and understandings are shared by certain groups of people or those stories are passing from generation to generation).
- c. Linguistic manifestation (certain specific linguistic patterns describe those underlying stories and those linguistic patterns are quite similar across the people of similar cultures). Like take the example of climate change. Climate change is considered to be a threat, bomb, or a problem. Metaphor is a sort of framing that uses some particular, picky, quite discrete and specific words to

point out or mention some specific area of life. This feature of metaphor makes it controlling and vibrant. When metaphors are widely observed and accepted in a group, they become metaphors we live by as it is described by Lakoff and Johnson (1980).

This theory is the expansion of already existing theory of metaphors. Social Representation Theory not only considers thoughts but also adds beliefs, ideas, attitudes, and evaluations across the minds of different people to it. Arran Stibbe shapes them as eight strategies and mentions them in his book *Language, Ecology and the Stories We Live by* (2015). These all strategies are used to portray different concepts, share meaning and pass on the message to the readers. These strategies can be used as both either to destroy or protect the ecosystem. They give a way to monitor the linguistic patterns used by the writer. Same is the thing here in this study. Linguistic patterns are analyzed in order to investigate the mental behavior of the writer behind. Hence, in this way this theory is applicable in the current work.

These two theories help in conceptualizing and tracing the main concepts in the novels regarding climate change. These theories particularly aid in tracking the ecosophies behind the respective works of the selected writers.

After discussing the existing related literature on the problem, now this study goes to state how this research tries to fill the existing gap. It mentions all the procedures and ways to select and analyze the data.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Research Method

This study is qualitative in nature. It studies the Stibbean strategies used in certain fictional works to attain the theme of climate change. Those strategies are given by Arran Stibbe in his book titled *Ecolinguistics: Language, ecology and the stories we live by* (2015). Stibbe gives 8 strategies but this study follows 3 of them namely:

- a. Conviction and facticity patterns
- b. Metaphor
- c. Ideology and discourse

These strategies are analyzed in the light of the theory of metaphor (Lakoff and Johnson, 1986) and social representation theory (Rateau et al., 2012). After locating the above in the text, a unified ecosophy is formulated.

3.2 Research Paradigm

This work follows the research paradigm of interpretivism. Interpretivism is an approach in qualitative study in which an individual makes inquiries of different things and situations around him and develops a subjective meaning out of them. The major focus is on the particular context in which an issue or problem is addressed. The historical view is also under observation (Creswell, 2017, pp. 45-46).

3.3 Sampling

Purposive sampling is done for this study as it is in accordance with the objectives of the study. Purposive sampling is also named as judgmental, selective and subjective sampling (Creswell, 2017). The major aim behind this study is to examine the ecosophy of the writers regarding the issue of climate change from different countries. So in order to explore the ability of literature to depict issues that affect the whole of the mankind, two novels from the Global North (generally known as developed countries) and the remaining two from the Global South (generally known as under-developed countries) are selected. A theme of climate change is foregrounded in all works.

3.4 Sampling design

3.4.1 Cluster sampling

Cluster sampling is the part of this study. Cluster sampling is done when it is impossible to make a list of each and every entity of the population (Babbie, 2015). Then grouping or clustering is done. Entities of same group share one or two similar qualities (mutually homogenous) on the basis of which they are grouped together and have many other dissimilar qualities (internally different). In this study, firstly two clusters of the countries are taken i.e. the Global North and the Global South and then four countries are selected (two from each). America and Australia is selected from the Global North and Pakistan and India is selected from the Global South.

3.5 Selected Works

Four novels are selected for this study. Two of them are taken from the writers of the Global North countries and two from the writers of the Global South countries. The countries from the Global North are America and Australia and countries from the Global South are Pakistan and India. The first selected novel from Global North is American novel '*Flight Behavior*' by Barbra Kingsolver (2012) and other is Australian novel '*The Swan Book*' by J. G. Ballard Alexis Wright (2013). The first selected novel from the Global South is Pakistani novel '*Thinner than Skin*' by Uzma Aslam Khan (2012) and the other is Indian novel '*The Hungry Tide*' by Amitav Ghosh (2005).

It is well proven from the previous studies and researches that the Global North is more responsible for climate change than the Global South. Developed countries are more industrialized than under developed countries that is a major cause behind climate change. According to a recent research United States is responsible for 40% and European Union for 29% of the climate breakdown. So, the Global North makes total 92% of excess global carbon emission (Pardikar, 2020).

The current study is concerned with the mental behavior of different writers towards the most devastating issue of the time i.e. climate change. So the study takes fictional writings from financially different countries in order to integrate a unified ecosophy out of them. All the selected novels have the theme of climate change either as a major theme or minor one. This similarity of the theme builds a clear relationship among them.

The whole practice of data analysis is carried out manually without making use of any tool or software. Firstly, I read all the selected novels thoroughly with the point of view of climate change. Secondly, I trace all the phrases, sentences and paragraphs that follow the theme of climate change. Then all the selected data from the novels is analyzed against the selected strategies. After carrying out this whole process, I analyze and discuss the findings by following the selected theories and keeping in view the aim of the study. The discourses are analyzed against the principles of eco-resistance and eco-resilience in order to know the types of discourses. All this process is carried out in order to attain the ecosophy of the different writers behind their writings.

3.6 Analytic Strategies

Stibbe gives 8 strategies in his book *Language, Ecology and the Stories We Live by* (2015). The 3 selected strategies are explained below:

3.6.1 Facticity Patterns

Conviction is somebody's mindset about any representation or depiction whether it is true or false and certain or uncertain. Facticity patterns contain certain linguistic patterns that appear together in order to show something as true or untrue and certain or uncertain. The research done by Mori (2014) is worth mentioning here. Mori asks people from different countries whether they agree or disagree by the statement that climate change is largely due to different human activities. Results do impact the conviction and facticity level of the readers. Level of conviction and facticity level largely depend on the authenticity of the source. There is a spectrum for conviction and facticity level lying in between two extremes of true and untrue or certain and uncertain.

The book '*Representing reality: discourse, rhetoric and social construction*' by Jonathan Potter (1996) is accepted as mainly the most comprehensive book that is linked with the linguistic devices particularly used for facticity (p. 112). For Potter, facticity is not just limited to one or two words but social psychology and rhetoric combine to form the element of facticity.

Different analysts give different techniques that can be used to create the element of facticity, as following:

- Modals like 'may, must, can, and should' that clarify the credibility of a description (Martin and Rose, 2003: 48).

- The name of an expert or authority and the consensus (anything accepted by majority) (Leeuwen, 2008: 107)
- The use of the words that express the quantity. They include the use of ‘some, all or many’ etc. These quantifiers show the confirmation of actual evidence. (Machin and Mayr 2012: 192)
- Hedges are the words or phrases that are used to express probability or indecisiveness about anything. It includes the phrases like ‘X supposes or X is of the opinion’ (Machin and Mayr 2012: 189)
- Modality (degree to which a speaker or writer is certain about a thing or happening). Modality is on a continuum from high scale (by using modal verbs like might or probably) to low scale (by using the adverb like certain or hedges). (Richardson, 2007: 59) (p. 130).
- The use of word like ‘evidence’ show high facticity (p. 140).
- The use of inverted commas shows low facticity (p. 140).
- The noun phrases like an alarm, an ideology, lies, a propaganda, orthodoxy, a myth, fantasy, an assumption, an ideology, and a loony idea have low facticity keeping their semantic in view (p. 143).
- Use of a group or variety of words having confused connotative or denotative meaning.

In the discipline of ecolinguistics, facticity patterns are mostly used in the text having the theme of climate change.

Different movements use certain vague and abstract words and some positive terms to get the endorsement without giving any concrete evidence. Those terms include ‘common sense’, ‘commitment’, ‘innovative’ and ‘scientific’ etc. (Alexandar, 2008).

3.6.2 Metaphor

The terms metaphor and frame are usually exchanged with one another. Users frequently switch in order to convey the same meaning and concept because both work in the same way. The word metaphor is being used from the times of Aristotle and it is used theoretically while frame or framing is quite current concept that is raised in 1970s and is used in the fields of linguistics, artificial intelligence, and cognitive science (Tannen, 1993).

Stibbe (2015) defines metaphors as “metaphors use a frame from a specific, concrete and imaginable area of life to structure how a clearly distinct area of life is conceptualized (p. 64). Some common examples of metaphors are:

- ‘Nature is a web’
- ‘Climate change is violence’
- ‘Dealing with FMD is a war’ etc.

According to Sam Gluckberg (2001) metaphors are implicit similes and similes are metaphor. Similes and metaphors are considered as the same as both share the same features.

KIM (2019) is also of the view that metaphoricity is gradable, and simile should also be treated as a cline on the continuum of metaphoricity, treating the relation between simile and metaphor not as distinctive but as continuous figures of speech.

In the cognitive science, metaphor is illustrated in a different way (Lakoff and Johnson, 1999). The overall concept of metaphor is divided into two domains i.e. source domain and target domain. Target domain represents the area about which the discussion is going on (the targeted area) and source domain represents the area from which the features are taken. Stibbe mentions the example of ‘love is a journey’ where love is a target domain and journey is a source domain. It means that love has some features of journey so we can use the word journey for love. Many theorists submit that lets take the example of a body that is made up of different frames; same is the case with metaphor. In the same way, different frames combined to form a metaphor. A body has the frames of exercising and ingesting. Metaphor also has the frames of exercising an idea in the mind and then digesting it. These frames are the features of target domain and overall it forms a body that is a source domain (Sullivan, 2013). Source domains are not something like very much imaginative or related with the world of fantasies and vague rather they are quite real, concrete, clear, and precise that can be understood easily (Semino, 2008). Target frame and source frame must be logically linked with each other. Johnson (1983) entitles it as ‘metaphorical reasoning’. The main concept taken from the source domain must meet the target domain. Metaphorical reasoning takes its structure from the source domain and all other subsequent and related constituents from the target domain (p. 67).

Methodology: First of all, investigate the source domain and target domain. Then point out the elements from the source frame for the target frame. And then work for the linguistic patterns that are used metaphorically in the target frame. The main thing regarding ecolinguistic perspective is to know about the nature of the metaphor whether it is beneficial, ambivalent or destructive.

3.6.3 Ideologies and Discourses

Texts are not totally real. There are certain additions and subtractions made by the writers in order make them appealing and fascinating. They may contain the writer's imaginations and thoughts in a particular context. But at the same time, one cannot say that texts are totally imaginative and based on fantasies. Rather they are the shadows of society. Members of the same group, community, or culture have certain specific ways of speaking and writing that define their group. It includes use of some definite vocabulary items and other linguistic patterns that come together to describe their story or view about the world. It largely depends on how one perceives the reality and it in turns shape one's ideology. Ideologies are the set of beliefs about the world (how the world was, is and will be). Ideologies are mental as they exist in mind and shared by a society that means they are social too.

In a discourse analysis, a researcher studies the linguistic patterns and compares them across different texts but in ecolinguistic analysis, researcher has some particular ecosophy and compares the selected text against it whether the text is parallel to it or goes in opposition to it. And then announces the text as beneficial or destructive.

3.6.3.1 Destructive Discourse

Mentioning the concept of Halliday (2001) regarding growth is worth mentioning here. He badly criticizes the description of unrestrained expansion on limited region just because it only results in the collapse of resources and wealth. It is understood that then it will result in the destruction of ecosystem. Same is the case with the language that endorses or encourages growth.

The discourse that convinces audience to do or promote something that is redundant or superfluous to environment is quite destructive in nature (p. 24).

The only way of dealing with the destructive discourses is to raise awareness among people about their damaging effects. Fairclough (1992b) calls it Critical Language Awareness (p. 28).

3.6.3.2 Beneficial Discourses

Those discourses that endorse the ideologies that promote or encourage defending the ecosystem are beneficial in nature. The main reason behind analyzing the beneficial discourses is to make them widespread and known to the people. Goatly (2000) is the first eco-linguist who studies destructive discourse against beneficial discourse. He makes the comparison of the discourse of newspaper (The Times) and romantic poetry by William Wordsworth. The results show that the vocabulary items along with the grammar of poetry represent much finer example and way to survive in this beautiful world than the discourse of the newspaper. There are number of beneficial discourses specifically in poetry like Haiku in Japanese literature that represents the politest relationship between man and nature. So, beneficial discourse is a way of writing or speaking a story that gives a positive message.

Beneficial discourse contains some definite group of words or linguistic patterns like use of grammatical structures, use of pronouns, and pre-suppositions that tells a particular story and gives some message. That story has not the aim of 'to have more' but 'to be more' and it must support the ecosophy of the analyst. Along with that it talks about the wellbeing of the humanity (p.33).

3.6.3.3 Ambivalent Discourse

There are certain discourses related with ecology that are quite positive in nature but still they are problematic. They have some features that go side by side with the ecosophy of the analyst and some go in opposition to it. Those sorts of discourses are known to be ambivalent discourses.

Certain aspects of ambivalent discourses are criticized; they are:

- a. The natural resources like plants, trees, forests, rivers, and animals are represented in the same manner as in the destructive discourses.
- b. They give the small scale solutions to environmental problems that can be simply done on individual level like recycling without decreasing the overall consumption by the society.

- c. Hiding the agencies that are responsible for overall environmental demolition.
(p. 29)

The discourses produced by Zoo are ambivalent in nature as on the one half he highlights the best possible connection with the nature and on the other half he talks about isolating animals from their free and fair ecosystem and should be caged.

Methodology: The first step is to select the particular prototypical texts. Those texts must be the representative of some particular area of life. The next step is to make a thorough and comprehensive linguistic analysis in order to interpret all the linguistic patterns within and across the different languages. Certain linguistic patterns narrate some area of the world when they come together

Discourses are not presented in a single mode. Message can be conveyed in different or multiple modes. Any single of them must not be taken for granted. The next step after making the analysis of linguistic patterns is to sort out the ideologies underneath those linguistic patterns e.g. what is the purpose behind producing that discourse or what is the philosophy within it. No ideology can be said as purely right or purely wrong. The next stage is to relate or compare the sorted stories from the selected discourse with ecosophy and then label them as beneficial, destructive or ambivalent. The discourse is regarded as beneficial when it strongly aligns with the ecosophy. It is destructive when it goes against the postulates of the ecosophy and it is ambivalent when it goes side by side the ecosophy but at the same time has certain diversities too. Finally, beneficial discourse is to be appreciated and encouraged, destructive discourse is to be challenged and defied and ambivalent discourse needs to be improved (p. 35).

The data is analyzed practically in the next chapter of data analysis by following the selected theories and strategies. The whole procedure of data analysis that is discussed in this chapter is also implemented in the upcoming chapter.

CHAPTER: 4

DATA ANALYSIS

This chapter is based on the analysis of the data. Evidences from the selected works are collected having the theme of climate change. Sufficient data is found that have direct or indirect relevance with the work. This concept of climate change is not directly mentioned in the fictive novels. An effort is made to sort out the phrases or sentences having the concept and ideology related with climate change. Those evidences from the novels are taken that appropriately suits the methodology of the current study and help in answering the research questions. The chosen strategies are applied on the data and analysis is made in this part of research. The categories in this chapter are made on the basis of selected strategies that have been mentioned in the previous chapter.

4.1 Facticity Patterns

This section contains all the conviction and facticity patterns that are present in the selected text regarding climate change.

4.1.1 *Thinner than Skin* by Uzma Aslam Khan

The first publication of this novel is in the United States in 2012 by Simon and Schuster publishers. Then it gets published by ILQA publishers in Lahore in 2019. This novel also gets nominated for Man Asian Literary Prize.

In this novel, the writer describes the beauty of Pakistan specially the northern areas. These areas appeal the visitors. This beauty is fading and vanishing due to global warming. Glaciers melt due to excessive rise in temperature. It ultimately results into climate change. The evidences that have the theme of climate change are selected from this novel.

1. “Glaciers in the eastern Himalayas are receding. Some say the Alps will be ice-free by 2100. Greenland’s glaciers are melting so fast they could sink southern California and Bangladesh. But in parts of Pakistan, glaciers could be expanding. It was a possibility Wes and Farhana had come to explore” (*Thinner than Skin*, p. 46).

Melting of glaciers is also one of the symptoms of climate change. Due to extreme rise in temperature, glaciers start melting. Same is the case with the glaciers of

Himalayas that moves back due to average rise in temperature. They melt very rapidly and swiftly. There is possibility that southern California and Bangladesh can be submerged due to glacier melting. Nothing can be said with surety about glaciers and their melting of snow. These selected lines are related with the description of facts. The glaciers start melting. One can say it with surety after viewing the climatic conditions all over the world. Same is the case with eastern Himalayas. Their snow melt and decrease in its volume as a result of global warming and climate change. Use of modal verbs shows less probability and certainty. Some people are of the view that the highest mountain range in Europe i.e. Alps will be free from the glaciers by the end of 21st century. The use of modal verb 'will' shows less certainty. The writer is not totally sure about her saying. In the sentence 'Greenland's glaciers are melting so fast they could sink southern California and Bangladesh', there is also use of modal verb 'could' that means it may or may not be possible. In the sentence 'But in parts of Pakistan, glaciers could be expanding', there is use of modal verb 'could'. It shows that in some parts of Pakistan, it can be possible that glacier will expand but not sure. It may or may not happen.

2. "An hour later, as I watched Farhana trek up the glacier to Lake Saiful Maluk with Wes, I feared her love for me was like Pakistani glacier. It was difficult to say if it was growing or retreating" (*Thinner than Skin*, p. 46).

Nobody can talk about Pakistani glaciers with surety. It is very hard to say either they are increasing in their size or decreasing. If somebody is not sure about someone's love that whether it is increasing or decreasing and then it can easily be compared it with Pakistani glacier. Nobody is sure about them. It is the very fact that one cannot describe growth or decline of Pakistani glaciers. There is no doubt in it. Here the writer does not use any modal verb that shows certainty.

3. "What did she love about them? Glaciers, I mean. They weren't shady and concealed, nothing marshy there, except perhaps the slushy, slippery surface. Unlike her, glaciers were slow moving, sluggish, with bouts of extreme rage. Between stasis and thrust, they rattled and creaked, moaned and bickered, adjusting and readjusting their old, old bones. Like a ghost in the family, and unlike Farhana, they were insistent lingerers" (*Thinner than Skin*, p. 46).

The writer mentions some qualities of glaciers. A character inside the story is asked about the glaciers. The question is about the elements that she likes in the glaciers. She replies quite interestingly by telling their qualities especially giving them some humanistic qualities. Glaciers are little melted and have icy surface. They move very slowly like an inactive and lazy person. They produce rattling and creaking sound. They adjust and readjust themselves due to slippery and icy surface. They are publically open means one can easily see and visit them. The qualities of glaciers that are mentioned here are quite real. One can practically observe these qualities. The writer describes the things quite practically and with certainty by keeping in view global warming behind.

4. "Rejection of the new world? Here in the land to which she "returned," she found glaciers that weathered global gas emission and spurned newness. Except this wasn't true, of course. Global growth and decline were equal indicators of global warming, as she herself liked to remind me, and if glaciers were growing in the Old World, they were also growing in the New. They were growing in Mount Shasta in northern California, for instance, and Farhana was here to compare the rate of growth in the western Himalayas to that of the southern Cascades" (*Thinner than Skin*, p. 47).

Glaciers get exposed to global gas emission that is why they become the victim of global warming. Expansion and reduction of glaciers both are the symbol of global warming. In the past times, glaciers do grow and expand. Same is the case in the present time, they do grow but now they get reduced just because of average rise in temperature. 'Global growth and decline were the equal indicators of global warming'. This is the biggest fact. What is responsible for the climate change today? Global warming. Expansion and reduction of glaciers all over the globe proves global warming that ultimately results in climate change.

5. "To put it bluntly, the jinn was a jealous fiend. His scalding fury caused Malika Parbat's snow to melt with such force it breached the banks of the lake and nearly drowned the poor lovers. Nearly? So, the jinn's wrath melted the snow? The jinn is global warming" (*Thinner than Skin*, p. 49).

Global warming is regarded as jinn that can openly be called as a devil. Its wild extreme rage softens the snow of Malika Parbat with full force and causes it to melt. It

breaks the edges of the lake and becomes the cause for drowning of the people. By relating global warming with the jinn, the writer describes the fact.

6. “By the time we crossed the glacier and arrived on the banks of Lake Saiful Maluk, Malika Parbat’s reflection was being admired and broken by a stream of exhausted pilgrims and a dozen boats. Irfan warned Wes and Farhana to avoid the boats, declaring, simply, “They sink.” It was Malika Parbat’s snowmelt that created the lake that reflected her. Her melt, tossed in with that of the surrounding mountains” (*Thinner than Skin*, p. 66).

Glaciers float on the surface of water that is produced as a result of snow melt. People enjoy the view. The lake is formed as a result of snow melt from Malika Parbat. One can think of the huge snow melt that can generate a fully-fledged lake. Snow melt is so huge in Pakistan. It forms a full fledge lake in which dozens of boats float. The biggest fact is the melting of snow of Malika Parbat that is due to global warming.

7. “Not surprisingly, their snowmelt was thick today” (*Thinner than Skin*, p. 78).

Now snow melt becomes a usual thing for people. They do not get surprised if it is huge or not. Same is the thing here is snow melt that is deep but people do not get amazed. There is no uncertainty about the snow melt. The writer mentions it with surety that it is thick. There is no use of modal verb that shows probability.

8. “Glaciers might have been growing in north Pakistan for three decades.” She said (*Thinner than Skin*, p. 97).

Northern areas of Pakistan are mountainous. There are certain mountain ranges located in the North. They become covered with snow in winters. In these selected lines from the text, it is mentioned that the glaciers of the northern areas in Pakistan may be growing from the past 30 years. Massive decrease in temperature can also be a possible reason behind that is the indicator of climate change. In these selected lines, there is the use of modal verb ‘might’ that shows probability and uncertainty. The writer is not completely sure about the growth of the glaciers from almost past 30 years.

9. “Glaciers might have been growing or receding” (*Thinner than Skin*, p. 162).

Nobody is sure whether the glaciers in Pakistan are rising or declining. They are increasing in their size or not. The writer is not certain about the growth of the glaciers

in Pakistan. That's why there is the use of modal verb 'might' here. She is not sure either they are increasing in their size or decreasing.

10. "The field had been rotten because the land was easily destroyed in the floods the previous year. The land was easily destroyed because it had no trees" (*Thinner than Skin*, p. 217).

Floods are also one of the forms of climate change. Floods destroy the land badly. They make the land infertile as they take all the minerals from the soil with them and left the soil barren. The land gets easily ruined if it has no trees. Trees make the land hard by spreading their roots in it and do not allow the soil to flow it with the water of flood. The land in Pakistan gets easily ruined just because of no trees. These lines are based on the facts as there is no use modal verb. It shows that the land is decayed by the floods and is easily decayed just because of lack of trees on it.

11. "And we know you need three things to be free. Mountains, from security and glaciers; rivers, for drinking and irrigation; farmland, for food and money. Here we have all three" (*Thinner than Skin*, p. 244).

The writer wants to say that we need our country Pakistan to be liberated from three entities. First one is the mountains. They need to be free from the security system and glaciers. Glaciers form by the collection of snow over snow and ultimately it turns into ice. Then with its own weight, it starts flowing that is dangerous. Mountains in our country should be free from glaciers and then ultimately from the security. The second entity is the rivers. The water in the rivers should be so clean that everyone can easily use it for drinking and other purposes. Their water should also be available for provision to lands in order to nourish the fields. The last entity is the farmland. Farmlands should be free for agriculture production that will ultimately provide people with food and money. We are fortunate enough that we have all of the three. What to do is to set them free. This selected paragraph is full of facts description. There is a dire need of three entities to be free i.e. mountains, rivers, and farmlands. The biggest fact is that we have all of them. Just the need is to set them free from different dangers.

12. "It was laughter that could turn seditious in the rainy season, and he could not forget the floods of 1991, when he was just a buffalo boy hoping to one day see the world" (*Thinner than Skin*, p. 252).

There is laughter in the rainy season. That laughter can be rebellious in the rainy season just because of the fear of the flood. Nobody can overlook the flood of 1991 in Pakistan. Laughter on a very serious matter is not a normal or simple thing. It can be so serious like the act of rebellion. There is the use of modal verb ‘could’ here that shows uncertainty.

13. “We climb at night. When there are fewer landslides and icefalls” (*Thinner than Skin*, p. 279).

Landslide is a form of natural disasters that is usually accompanied by floods. Ice in the icefall is the small portion of glaciers that fall due to comparatively rapid flow. Landslides and icefalls both are due to excessive rains and floods that are ultimately due to climate change. People climb the mountains but by taking care of the icefalls and landslides. These sentences show the fact that there are icefalls and landslides. They are one of the forms of climate change.

14. “On she walked, keeping the rhythm that out-tricked the rain, a rhythm that was almost enjoyable, like a game. She hoped there would be no floods this year. They had endured enough. She hoped the glaciers would behave, and not gallop down the mountain slopes to block their roads and break their bridges. There was nothing more worrisome than a glacier that looked around and decided it no longer wanted to mate and melt gradually, but instead, to run like a horse. You could harness a horse but not a Gujjar _ or a glacier” (*Thinner than Skin*, pp. 302-303).

It rains with some constant pattern that is quite enjoyable. Along with that people do not hope for the flood to come. Floods have persisted much. They do not hope for the glaciers’ fall too either on the roads or on the bridges. They fall and block the roads or break the bridges. As they take much time to melt so it becomes quite problematic for the public. There is a saying about the glacier that one can control a horse but not a glacier. The use of words like ‘would’ and ‘hoped’ show the uncertainty. People just hope for no more floods but they are not sure whether there will be more floods or not. Along with that, they are also not sure about the glaciers’ fall.

4.1.2 *The Hungry Tide* by Amitav Ghosh

This novel gets published by Harper Collins publishing company in 2005. This publishing company is basically in New York and its subsidiaries are located in different countries all over the world. One of its subsidiaries is located in India and this

novel gets published there. This publisher is particularly linked with English language fiction and non-fiction.

This novel talks about the relationship between man and nature. It says that man has complicated his relationship with nature. The condition of physical environment shows the activities and happenings that are going on inside the ecosystem. All the time man is in the risk of floods, tides and cyclones that are the forms of climate change. Climate change that is caused by mankind affects the tropical cyclones by heating up the air and rising sea level. Ghosh also talks about the most dangerous cyclone ever i.e. Agunmukha Cyclone of 1970 and disadvantages of globalization. The theme of climate change is proved by following evidences taken from the text of the novel:

1. “The destitution of the tide country was such as to remind them of the terrible famine that had devastated Bengal in 1942 — except that in Lusibari hunger and catastrophe were a way of life. They learned that after decades of settlement, the land had still not been wholly leached of its salt. The soil bore poor crops and could not be farmed all year round. Most families subsisted on a single daily meal. Despite all the labor 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. The settlers were mainly of farming stock who had been drawn to Lusibari by the promise of free farmland. Hunger drove them to hunting and fishing, and the results were often disastrous. Many died of drowning, and many more were picked off by crocodiles and estuarine sharks. Nor did the mangroves offer much of immediate value to human beings — yet thousands risked death in order to collect meager quantities of honey, wax, firewood and the sour fruit of the kewra tree. No day seemed to pass without news of someone being killed by a tiger, a snake or a crocodile” (*The Hungry Tide*, pp. 77-78).

There is extreme state of poverty in Bengal. It reminds people the condition of Bengal in 1942. The severe shortage of food ruins the country. People face hunger and disaster that are beyond their expectations. Land does not regain its original condition even after so many years. It does not completely seep off all of the salts. The lands give very bad productions. They are not able to produce yield throughout the year. People live on a single meal per day. Farmers invest for the shortage of water but the land is totally infertile now. Colonists promise the farmers for providing them free farmland but it takes time. The hunger and poverty reach to its highest level. Now people move

towards hunting different animals and fishery to get food but this also ends terribly. Many of them get drowned or eaten by different animals. Different plants and shrubs are insufficient. Very few of them get food from the honey and fruits. The news only comprises of deaths of different people. This whole selected paragraph is based on the depiction of facts. It is about the condition of people during severe drought. Ghosh describes the situation with full facticity and certainty. During reading these lines in the novel, every condition comes in front of eyes in the form of images that it is actually happening.

2. “On the upper floor Moyna pointed out Nirmal’s single contribution to the hospital: a large ward specially equipped to withstand cyclones. The windows had thick wooden shutters and the doors were reinforced with steel. Although he had rarely interfered in anything to do with the Trust, when the hospital was under construction Nirmal had taken the trouble to find out if any anti-cyclone measures had been provided for. He was horrified to learn that they hadn’t: did nobody know about the tide country’s history of catastrophic cyclones? Did they think that Lusibari was the one place where history would not repeat itself? It was at his insistence that this ward was built” (*The Hungry Tide*, p. 122).

Climate change that is majorly caused by human activities also impacts the tropical cyclones. It impacts by increasing the temperature of the air and elevating the level of sea water. Here is the discussion of cyclones. In cyclones, there is wind in rotational movement having low atmospheric pressure in the center. There must be some measures taken to oppose the cyclones. In this example, there is the discussion of anti-cyclone measures taken in hospitals. In order to withstand with the cyclones, windows have thick protective panels made by wood and doors are strengthen by steel. It is very shocking that the people are not even aware of the cyclones though they are living in the country having the history of catastrophic cyclones. This evidence also has the description of facts. These are all the facts about cyclone. This actually happens in the countries that have the history of cyclones. No uncertainty and modality is revealed. Anti-cyclone measures are described. The writer tells the ways to tackle the cyclone.

3. “Are we going to be finished off this time?” I said. “No, Saar,” he said. “I’ve lived through much worse than this.” “When?” “In 1970, Saar, during the Agunmukha cyclone. If you had seen that, this would not seem like a storm at all” (*The Hungry Tide*, p. 145).

People get horrified by the existing situation. They think that this is the end. But they have not seen the condition in 1970. The Agunmukha cyclone is the poorest of all. It is also known to be the Great Cyclone of 1970. The present condition does not even look like a storm in front of the cyclone of 1970. The writer describes the situation in a very real way without showing any sort of uncertainty and modality. There is destitution and people get worried and horrified by it. They die due to lack of food. But the people who have experienced the cyclone in 1970 share their experience and argue that it is nothing before that cyclone. Just in the last sentence, the writer uses the verb ‘would’ while comparing both of the cyclones. There is uncertainty that whether the cyclone in 1970 may be more severe or not. But the possibility is that that would be more severe and appalled.

4. “To me, a townsman, the tide country’s jungle was an emptiness, a place where time stood still. I saw now that this was an illusion, that exactly the opposite was true. What was happening here, I realized, was that the wheel of time was spinning too fast to be seen. In other places it took decades, even centuries, for a river to change course; it took an epoch for an island to appear. But 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. In other places forests take centuries, even millennia, to regenerate; but mangroves can recolonize a denuded island in ten to fifteen years. Could it be that the very rhythms of the earth were quickened here so that they unfolded at an accelerated pace?” (*The Hungry Tide*, p. 201).

It is the tide country where it is accepted that time passes very slowly. But life is changed now. What is happening is totally opposite. Time has changed its pace. It passes on very rapidly. Rivers take time of centuries to transform the track. There is a notable time period for it. Islands also show some remarkable time span to become visible. But here the thing is totally opposite. Both rivers and islands take very less time. The pace of everything has been changed now either it is of revival of forests or mangroves. In the simplest way, one can say the frequency and pace of the earth is accelerated and all it is due to climate change. The writer describes the biggest fact in these selected lines.

5. “It was as if the whole tide country were speaking in the voice of the Poet: “life is lived in transformation.” (*The Hungry Tide*, p. 201).

The theme of transformation, alteration, and modification is mentioned here. Life is speeded up and lived in revolution. This happens just because of climate change. It effects the cycles of nature and changes their time period and life span.

6. “The marshes were steaming under a blazing sun and the water had fallen back to its accustomed level. He arrived to find some twenty animals floundering in a shallow pond. Their heads were rounded and their bodies black with white undersides. The adult males were over thirteen feet long. The water was too low to keep them fully submerged and their short, sharply raked dorsal fins were exposed to the sun” (*The Hungry Tide*, p. 204).

The wet areas get steamed under the intense sunlight. Due to too much severe sunlight, the water comes back to its original level by evaporating. As the water in the ponds and pools are little deep now, so one can easily see the animals taking bath and enjoying in it. The water is too low that they cannot get sunk. The theme of climate change adjusts here in a way that extensive heat from the sun evaporated the water present on the earth’s surface. The glowing and gleaming sun steams the ponds and marshy places. This extreme is one of the forms of climate change. These lines are about the excessive temperature. Severe sunlight evaporates the water from ponds and other water reservoirs.

4.1.3 *Flight Behavior* by Barbra Kingsolver

This novel is written by an American female writer whose works are read and liked all over the world as her works has been translated into twenty different languages. In 2010, she has won the Orange prize and also awarded in 2023 for her fiction work. This novel gets published in London by Faber and Faber publishing company.

There are the themes of class struggle, climatic crisis and poverty. The element of climate change is found frequently in this novel. The writer wants to give awareness to the public about this serious issue. It shows that not only man gets affected by this issue but animals equally get affected. The writer mentions the example of butterflies. It would be quite right to say that this novel is about the impact of climate change on the whole Earth.

Here are certain evidences that point to the theme of climate change. They are analyzed on the basis of certainty and uncertainty.

1. “Their pasture looked drowned. In the next field over, the orchard painstakingly planted by the neighbors last year was now dying under the rain” (*Flight Behavior*, p. 3)

The couple of lines that are mentioned above have the theme of climate change. There are excessive rains that are shown by the use of word ‘drowned’ and the phrase ‘dying under the rain’. Pasture seems drowned after too much rain as the soil stops to intake or suck more water. The water gets collected in the pasture as it seems drowning. Then the phrase ‘dying under the rain’ also shows too much rain or unwanted rain that is not useful for the plants and it is damaging them. Too much rain that drowns the pasture and damages the plants is one of the symptoms of climate change. As far as facticity is concerned, there are no modal verbs that prove that it is based on the facts. It is clear that due to too much rain, pasture looks drowned and plants get damaged. This shows the description of facts.

2. “After so much rain upon rain this was happening all over the country, she’d seen it in the paper, massive trees keeling over in the night to ravage a family’s roofline or flatten the car in the drive. The ground took water until it was nothing but soft sponge, and the trees fell out of it” (*Flight Behavior*, p. 7)

‘So much rain upon rain’ is one of the symptoms of climate change. These lines explain the condition that there is too much rain without any major gap. Non-stop rain makes the ground soft and spongy that causes the trees to uproot. The fact of rain without any major gap is described in the selected lines. The repetition of the word ‘rain’ shows the intensity of rain. This is the fact that there is too much rain due to which the ground has become soft and spongy. It dislodges the trees that destroy the cars and roofs under them. There is no modality found in the selected sentences.

3. “Trees were getting new diseases now. Cub had mentioned that. The wetter summers and mild winters of recent years were bringing in new pests that apparently ate the forest out of house and home” (*Flight Behavior*, p. 17)

‘Wetter summers’ means that it rains too much in summers that indicates climate change. When it does not rain on the exact time and in exact range then it means that it is due to climate change and is harmful for both living beings and plants. Trees get affected badly by too much of the rain in summer season. Too much rain in summer is described by the writer that is shown by the phrase used ‘wetter summer’. As a result

of too much rain trees acquire newer diseases that directly or indirectly damage the ecosystem. There is an idiom used ‘to eat out of house and home’ that means the pests live on the trees in the forest and eat a lot of their food. It is also harmful and damaging for them. In all of the themes described here, the writer describes the condition with full clarity.

4. “A small shift between cloud and sun altered the day light, and the whole landscape intensified, brightening before her eyes. The forest blazed with its own internal flame. “Jesus,” she said, not calling for help, she and Jesus weren’t that close, but putting her own voice in the world because nothing else present made sense. The sun slipped out by another degree, passing its warmth across the land, and the mountain seemed to explode with light. Brightness of a new intensity moved up the valley in a rippling wave, like the disturbed surface of a lake. Every bough glowed with an orange blaze. “Jesus God,” she said again. No words came to her that seemed sane. Trees turned to fire, a burning bush. Moses came to mind, and Ezekiel, words from Scripture that occupied a certain space in her brain but no longer carried honest weight, if they ever had. Burning coals of fire went up and down among the living creatures” (*Flight Behavior*, p. 19)

There is the theme of intense hot weather that impacts each and every living being badly. The condition is too much worst that the people call the Jesus and their other prophets for help as anything else does not work. The selected lines show the high facticity patterns. First of all, clouds and sun take turns that change the day light. Then temperature rises due to which forests get burnt in their flames. This hot weather even changes the mental state of people. The writer produces the statements about hot weather with full facticity and surety.

5. “Hester’s flower beds had melted under the summer’s endless rain, and so had the garden. They’d finished tomato canning almost before they started. Hester’s prized rose beds were reduced to thorny outposts clotted with fists of mildew. It was Hester who loved roses. For Dellarobia their cloying scent and falling apart flower heads opened a door straight into the memory of her parents’ funerals” (*Flight Behavior*, p. 24)

Summer’s unrelenting rains damage the crops and gardens. Now this unstoppable and damaging rain in summer season is also one of the symptoms of climate change. All the facts are described here in this paragraph with full certainty. No

modal verb or any other sort of modality is described. Like, beds of flower melt in the unstoppable rain in summer season. Along with that tomato canning just ends just because of this rain. This rain badly affects the flowers. The trees are just left with thorns. They have no leaves or flowers in them. These are all the facts that are also perfectly related with what is actually happening today in this world.

6. “The neighbor’s tomato crop had melted to liquid stench on the vine under the summer’s unstoppable rains, and their orchard grew a gray, fungal caul that was smothering the fruit and the trees together” (*Flight Behavior*, p. 28)

The evidence shows the facts related with the consequences of unstoppable rains. There is a great flood and rain. The writer says that rain totally dissolves the tomato crop that produces too much foul smell. Fungus starts growing under the standing water that gives the impressions of trouble. No uncertainty is mentioned in the example.

7. “They’d lost the late summer cutting because three consecutive rainless days were needed for cutting, raking, and bailing a hay crop. All the farmers they knew had leaned into the forecasts like gamblers banking on a straight flush: some took the risk, mowed hay that got rained on, and lost. Other waited, and also lost” (*Flight Behavior*, pp. 49-50).

Unstoppable and excessive rain completely demolishes the crops’ yield. It is not an easy task in continuous rain to cut, collect and securely move the crops to their destination place. It is quite hard and time taking activity. Rain does not give them way to do so. The people who wait for the rain to stop get destroyed their crops and those who cut them also destroy them in the rain. Facticity patterns are present in this evidence like people lose the late cutting due to scarcity of rainless days. Some of the farmers take the risk of cutting crops in rainy days and some wait for the rain to stop but at the end both lose their crops.

8. “Dellarobia couldn’t remember a sadder looking November. The trees had lost their leaves early in the unrelenting rain. After a brief fling with collaboration they dropped their tresses in clumps like a chemo patient losing her hair. A few maroon bouquets of blackberry leaves still hung on, but the blue asters had gone to white fluff and the world seemed drained” (*Flight Behavior*, p. 67).

The month of November is lamentable this time because due to unstoppable and damaging rain trees lose their leaves in advance. The leaves fall just like the falling of hair of a cancer patient. Doubt and uncertainty is shown in this evidence by the use of modal verb ‘could’. The writer is not sure about her saying. She talks about the month of November. She shows doubt about it whether this is the saddest November ever or not.

9. “But the weird weather must have bewildered everyone to some extent. On stepping outdoors, she sometimes has to struggle a few second trying to place the month of the year, and Cub had said the same. It felt like no season at all. The season of burst and leaky clouds” (*Flight Behavior*, p. 116).

The weather is not according to its time and schedule. Everyone is confused about the weather. Before guessing the weather, first of all one shows some effort in thinking about it. Nobody is sure about the name of the month that is going on. It is easy and fine to say that there is no season at all. Anytime the whole sky seems to be covered with clouds and eventually it starts raining. The use of the modal verb ‘must have’ shows the modality in the sentence ‘but the weird weather must have bewildered everyone to some extent’. ‘Must have’ is the past form of the modal verb ‘must’. So to some degree, everybody gets confused with the strange and odd weather. To some extent the verb phrase ‘has to’ also shows modality in it. The sentence ‘it felt no season at all’ shows the fact that the weird behavior of the weather shows no season at all.

10. “Preston gave up hoping for a white Christmas and asked his mother if Santa knew how to drive a boat. That’s the kind of December they were having. It fell on them in sheets and gushes, not normal rain anymore but water flung at the windows as if from a bucket. At times it came through the screens, visibility zero, and gusts of air seemed to burst from the ground, swirling the deluge around in clouds of spray. Groundwater was rising everywhere. The front yard became a flat, grassy pool. Dellarobia couldn’t let the kids play out there unless they wanted to pull on their rubber boots and splat around on it” (*Flight Behavior*, p. 169).

Now it’s the time to celebrate Christmas and people are hopeless to enjoy it fully just because of extreme rain. Due to excessive rain, there is a lot of standing water that is even suitable for driving a boat. People end up with the visibility. There are strong rushes of wind that scare people. Along with that there is too much rain in a

twisted manner. It raises the ground water. It will not be wrong if one calls it an emergency situation. Kids are not allowed to go outside without having any proper getup for rain. The whole situation of unlimited rain is described in this selected paragraph that creates an image in front of readers' eyes. Facticity patterns are used to describe the whole scenario like groundwater raises everywhere and gusts of air seem to burst from the ground. People are unable to celebrate Christmas.

11. "The rain made her want to bawl. For days without cease it had lashed the window casings and seeped under the kitchen door, puddling on the linoleum. She got tired of mopping and blocked it with rolled up towels. The times seemed biblical. Save me, O God, for the waters has come up to my neck" (*Flight Behavior*, pp. 169-170)

Due to unstoppable rain, water enters into the houses. It is totally impossible for the people to stop entering it into their houses. People call it undeserved suffering and start linking it with their biblical sayings. The language and vocabulary that is used here in the text is quite appealing. The writer describes the situation very beautifully. It seems like it is happening in front of our eyes. It feels quite real. The situation is described in the form of facts have full facticity. This piece of text shows the problems that are created by heavy rain. People are fed up of mopping and cleaning rain water that enters into their houses.

12. "A tree had been torn from the ground and pinned sideways, backing up the flow. Pete and Dr. Byron went ahead to find a place where they could safely cross or get around the water" (*Flight Behavior*, p. 188).

Just because of excessive rain, trees get separated from the soil and fall off on the ground the makes blockage for the rain water to drain out. As a result, rain water moves back and creates hurdles for the people. People look for a safe place to get refuge. People try to find out a way to get out of the water. They are not sure whether they would succeed in finding out the way or not. That's way the writer has used the modal verb 'could' for it. This uncertainty is not actually linked with the central idea of the sentence.

13. "Pete pointed out to her how the two different streams merged, one yellowish and silty from the road cut, the other one clear, from the forested side, the dark and light waters running parallel for several yards before they blended. The forest protected

against erosion, was Pete's point, but this one felt a little wrecked" (*Flight Behavior*, p. 190).

Due to excessive rain, there is water everywhere. The streams get full of water and start flowing. Rain water is not clear but yellowish in color and muddy. The water also flows from the forest. The writer says, 'The forest protected against erosion'. She means to say that forests shield against erosion that means they protect soil and other minerals in it from flowing away. The forest near to them is slightly destroyed and ruined. These lines that are produced by the writer are full of facts. The biggest fact here is that forest helps in defending against flow of soil and its minerals. Trees make the soil firm and prevent it from gushing. Another fact that is mentioned is about the forest that is closed to them is slightly ruined.

14. "Every disaster proved useful for someone, it seemed, and flooding was good for the gravel business. Cub was called in to work double shifts through the weekend and into the following week, even missing church, which Hester felt was justifiable for those involved in emergency services" (*Flight Behavior*, p. 213).

Everything can have both positives and negatives. Same is the case with the disasters. Disasters mainly give some negative meaning but they can be helpful for someone. People those have jobs linked with flooding, are called for double shift at work. Double shift gives them double pay that proves quite helpful for them. It is not obligatory that everything bad or negative proves bad for everyone. It can be beneficial for somebody but it is quite rare. Same thing is described here. It is a fact that in emergency situation of floods and storms, staffs is called on duty for extra hours. As a result, they are paid more. This is positive thing that is discussed but at the same time flood are dangerous for all living beings.

15. "Rain being sent to the wrong places, in the wrong amount" (*Flight Behavior*, p. 385).

The theme of unnecessary and unwanted rain is mentioned by the writer. It rains too much where there is no need of rain and it does not rain where it needs direly. At one place people are fed up of the rain and they want no more rain. It rains in these areas by mistake. The quantity of rain is also not fine as it is too much. So, this is all due to the climate change. It does not rain where it is demanded.

16. “Walls of flame, Dellarobia. Traversing the and like freight trains, fed by dead trees and desiccated soil. In Victoria hundreds of people burned to death in one month, so many their prime minister called it hell on earth. This has not happened before. There is not an evacuation plan” (*Flight Behavior*, p. 385).

The temperature rises too much. It is now beyond the patience of people and they lose their temper. Trees are totally lifeless and soil is dehydrated just because of excessive heat and scarcity of water. Large numbers of people died due to unjustified heat. It happens for the very first time as it never occurs before. These all are the symptoms of climate change. Due to shortage of rain, the temperature rises very high. The trees are totally dead as their soil is dehydrated and their leaves are burnt with excessive heat. People are dying of excessive heat. This happens for the very first time. These are the facts that are described by the writer in her work.

17. “A four-degree rise in the world’s average temperature might be unavoidable at this point. The accumulation plays out for a very long time, even if we stop burning carbon” (*Flight Behavior*, p. 386).

The writer talks about average rise in temperature due to excessive use of carbon. Four-degree average rise in temperature needs attention. It requires notice and awareness. Just stopping the usage of carbon will not be enough. Some other major measures should also be taken. The phrase ‘might be unavoidable’ shows that there is doubt. The average increase in temperature may or may not be inevitable. There is no surety about it but there is full surety about the average rise in temperature.

18. “He told her that forests absorb carbon from the sky, but not when they are dying of drought or burning. Those oceans also buffer the atmosphere, but not when their carbon levels make them too acidic for life. The oceans, he said, were losing their fish” (*Flight Behavior*, p. 388).

Forests have multiple functions and benefits for us. One most prominent function is that they take in carbon from the atmosphere and help in reducing its level. But right now due to climate change, forests get destroyed either due to floods or burning due to excessive rise in temperature. In this condition they are unable to perform their function fully and cannot absorb enough carbon from the atmosphere. Oceans also shield the atmosphere but they are acidic in nature right now. Due to excessive carbon, they are harmful for the life existing inside them. These are the facts

that are described in this evidence. First of all, it is described that forests are beneficial for the environment as they absorb carbon and help in reducing its level. Along with that oceans are also useful but now they themselves are acidic due to excessive carbon in them. In this way they cannot perform their function properly.

19. “Why do they say is doing it? Hester asked. Dellarobia considered possible answers. There was no easy way to talk about the known world unraveling into flood and fire. She came up with a reliable word, “Pollution,” she said. “You pollute the sky long enough, and it turns bad on you” (*Flight Behavior*, p. 465).

The whole world is just resulting into floods and fire due to climate change. There is either flooding or fire i.e. excessive rise in temperature. If one wants to summarize this situation in one word, there is pollution. The reason behind it is man. People pollute the environment and as a result they face all these drastic problems. The biggest fact that is described here is that climate change is due to pollution. The writer mentions the cause behind climate change. The world gets divided into flood and fire just because of pollution. Man creates this pollution. In response, he comes across floods and fire.

4.1.4 *The Swan Book* by Alexis Wright

This novel gets published by Giramondo Publishing. It is an Australian publishing company founded in 1995. Its headquarter is located in Sydney. It is a printing press of poetry, fiction and non-fiction. It also works on translation.

This novel goes for the situation of man and other living beings in future due to climate change. It has a vision for the future that is corrupted, dysfunctional, and abnormal. Living beings are just suffering in that environment. Nature is totally destroyed and become a catastrophe. The evidences having the theme of climate change collected from this work are as following:

1. “Mother Nature? Hah! Who knows how many hearts she could rip out? She never got tired of it. Who knows where on Earth you would find your heart again? People on the road called her the Mother Catastrophe of flood, fire, drought and blizzard. These were the four seasons which she threw around the world whenever she liked” (*The Swan Book*, p. 15)

Nature is given by the quality of a mother that is always caring and keeps on growing. She does many sacrifices. Now it has become the 'Mother Catastrophe'. Unexpected disastrous events happen in it anytime. There is too much rain that is a usual thing now and it results in floods. If one notices that we live with four seasons that exist all over the world at the same time. Those are the snow storms, floods, a dry spell that we usually regard as drought and excessive heat. It is the fact described that four seasons exist all over the world at the same time if one observes. Those seasons are the floods, a dry spell, snow storms and excessive high temperature. No modality or uncertainty is there. The writer is obvious about his saying.

2. "They talked about surviving a continuous dust storm under the old rain shadow, or they talked about living out the best part of their lives with floods lapping around their bellies; or they talked about tsunamis and dealing with nuclear fallout on their shores and fields forever" (*The Swan Book*, p. 15)

People talk about their sufferings in rains and floods. They face dust storms and spent most of the time in the floods. Flood water comes up to their bellies. Half of their bodies are under water. They think that now rains, floods, and tsunamis become important parts of their lives. Here writer explains the facts describe by the people that happen in their day to day lives and become the important part of it. They suffer from dust storms, floods, and tsunamis. They spent most of their lives in these sufferings. It will be quite true if one says that these things become the important part of their lives. Their lives will spend in dealing with rains, floods, storms, droughts and tsunamis. There is no use of modal verbs or any other uncertainty in this evidence so it is completely based on the description of facts.

3. "The swans had become gypsies, searching the deserts for vast sheets of storm water soaking the centuries-old dried lakes when their own habitats had dried from prolonged drought. They had become nomads, migratory like the white swans of the northern world, with their established seasonal routes taking them back and forth, but unlike them, the black swans were following the rain waters of cyclones deeper and deeper into the continent" (*The Swan Book*, p. 22)

Here the writer compares the swans with the gypsies and nomads. Swans travel from one place to another waiting and searching for the water of the storm to be soaked in the lakes. They become the nomadic swans that follow some fixed recurring routes

for going and returning back. The difference is only that these swans keep the track of rain water in the continent. There is no uncertainty observed here in these selected lines. The writer talks about the swans that wander from one place to another. They wait for the rain water to seep into the dried lakes.

4. “Wanymarri white woman was from one of those nationalities on Earth lost to climate change wars” (*The Swan Book*, p. 27)

There is a woman named Wanymarri who is a white woman. She is a woman from a country that is completely vanished by the climate change. This shows the level of destruction made by climate change. It has the power to diminish the whole nationalities. It is the fact that climate change has completely vanished and diminished certain nationalities.

5. “She claimed that one day, some devil, not a person, but a freak of nature, went to war on her people. Old woman what kind of freak was that? Well! Swamp people wanted to know. Had a right to know. She looked startled, as though she had been asked to describe the inexplicable, of what happened to people affected by the climate changing in wild weather storms, or the culmination of years of droughts, high temperature and winds in some countries, or in others, the freezing depths of prolonged winters. Peace, she said, it was called peace by the governments that called on their people to fight land wars. She had seen its kind rampaging across the gentle lands of her country, destroying everything in its path, and leaving those who survived with a terrible story to tell” (*The Swan Book*, p. 29)

The write declares that there will come a devil one day. He will come and suddenly change his mind towards nature. He will start a war against people living there. After listening this, people want to know and need explanation about devil. It is their right to know. It is climate change. Climate change is in the form of storms, drought, and extreme summers in some countries and freezing winters in others. This war will end in demolishing many things and leaving those who exist with a dreadful story to tell others in future. Here the writer predicts something very furious about climate change in the future.

6. “Families of bush ducks flew from out of the reeds on the side of a dry riverbed, where there were still ponds of water from the flood after the rains of months ago” (*The Swan Book*, p. 160)

There is a lot of standing rain water even after few months of the rain. The plants that grow on the sides of the riverbed are full of water and the ducks fly from it. There is too much rain water standing near the riverbed. This too much standing water is said as pond of water. Ponds are the water bodies that are usually fed by the springs. The rain water is still standing after months. These lines also contain facticity regarding excessive rains.

7. “Which is a good job with the way it has been raining all the time, the red haired man said with a sigh. That’s right love, the wife replied with another happy peal of laughter. All the trees must have grown approximately three meters, just since spring. Whatever happened to the good, old, hot Australian Christmas, hey, Warren? It will be snowing next thing. Warren said it was all to do with global warming and climate change, but his moving-mouth friends were more concerned with the failure of the electricity in the yard” (*The Swan Book*, p. 168)

There is constant rain that is like spring for trees. People do not get worried by this unstoppable rain though they know that it is just because of global warming and climate change. They wait for snowfall that is likely to happen. The thing that is worrisome for them is the breakdown of electricity. There is the use of verb phrase ‘will be’ for snow. It means that it will be happening but people are not sure about it. There is constant rain and people are also hoping for the snowfall.

8. “The girl had slept against a wall with the cat, and dreamt of a river walled up with knotted debris composed of words describing tree trunks, branches and leaves that had been washed away by previous floods” (*The Swan Book*, p. 173)

A girl sleeps by taking the support of a wall with her cat. During her sleep, she dreams of a river that builds a wall of ruins of preceding floods. It contains the ruins of stems of different trees, their leaves and branches. Though it is a dream that is not something real but there are facts in it. There are ruins and decays of past floods that contain leaves, branches and trunks of trees. Means to say that dream is related with an imaginary world but still it has facts in it.

9. “She followed the routes of rainwater pouring through the moss and black lichen that grew in profusion down the shady walls, or dripping melodically like piano notes onto the drooping foliage of fig trees, banana trees, tropical trees and ferns growing from cracks in these buildings” (*The Swan Book*, p. 186)

Due to excessive rain, fungus grows everywhere. Most commonly it grows in the shaded places where access of the sunlight is very low. Drops of water fall on the leaves of different trees. This dropping of water produces a piece of music too. There are also some vascular plants that grow out from the breakages present in the buildings. The reality is described here with full facticity. This is what actually happens in the real world after excessive rain. The courses that are followed by the rain water are full of fungus and algae. The water droplets fall on the leaves of different trees and other small vascular plants and produce a sort of music. This facts description is quite interesting and enjoyable.

10. “She watched dark-hooded people drifting into the lane to sleep. Those who formed a huddle for security at night, then left in the morning. Sometimes, she would be awakened in the middle of the night when she heard people screaming King Billy, and she rushed to the window to watch dark shadows scattering though the waters flooding in the laneway, the old drought-buster spirit when tidal surges flooded through the sewers into the lower, poorer, and central parts of the city, usually at times when violent hail storms from cyclonic weather struck the coastline. She watched the people from the lane moving away, or sheltering from the rain and hailstones under pieces of cardboard and plastic, or standing around for hours in floodwater, holding their belongings to their chests, until the waters subsided” (*The Swan Book*, pp. 186-187)

These excessive rains become a serious issue and create stress in the lives of people who experience it. People who do not suffer from it also get disturbed at night while having a sleep due to loud sound piercing to their ears. They get up and try to sort out the cause. They see sudden rushes of floods from the drainage of the central parts of the city. People try to take shelter under boards or such sort of things. Many of them just stand in the flood water from a very long period of time. They hold their precious belongings tightly and wait for the rain water to settle. The verb phrase ‘would be’ is used as a modal verb. This modal verb is used here in the sense that many people get disturbed too much by the situation that is outside. This may or may not happen but the other entire situation that is described here is based on the facts. There is no modality and uncertainty. The situation of flood and the issues created by it are explained thoroughly in these lines.

11. “This invisible world of the city, a place where decades of dampness, flooding and rain had ridden the lane with slimy algae, was now the street kids’ cathedral” (*The Swan Book*, p. 192)

There are rains and floods from many years. All the time water stands outside that creates algae and fungus. Nobody can easily pass from the street. Now it can be just used for playing. Kids love to play over there and its now their throne. These selected lines are based on the description of facts. There are rains and floods that result in humidity and growth of fungus. People are suffering from these problems from number of years.

12. “The people in this city did not regularly use words like once upon a time for being nostalgic and remembering things, but once, when it was hoped that the bad weather would change back to normal climatic patterns, the city had also hoped that the historical richness of the site would never be lost. Whatever was within man’s power to save his environment was done for the rare old trees, flowers and shrubs, but in the end the struggle to save greenery seemed meaningless. The long drought killed kindness in hardened hearts. Then, when the drought was replaced by saddening rains, year in and year out, the canopy grew into an impenetrable wilderness too dangerous to people, and the precinct was just another place locked up forever” (*The Swan Book*, p. 207)

People are not used to of remembering the past. But when it comes to hope for good weather, they love to hope for the past prosperity to be remained. Man tries his best to save his environment specially the scarce old trees. At the end all goes in vain and nothing can be saved just because of any rain. When extensive drought gets substituted by depressing rain, everything goes into wilderness. Firstly, there is the use of verb ‘hoped’ number of times. It means that people just hope for the best but later on it actually does not happen. In real all go in vain and get destroyed by miserable rain.

13. “Rigoletto had seen flooding on seaboard city streets all over the world. It was really just as natural as seeing water flooding in the lanes of Venice, Bangladesh or Pakistan” (*The Swan Book*, p. 218).

Coastal cities get filled up with the floods not just in some countries but all over the world. It looks normal and usual. There is nothing exceptional. It seems same like if streets of Pakistan, Bangladesh and Venice are flooding. There are floods all over the

world. It is said with full certainty and surety. It has become a natural and common thing for people. They are used to of it now.

14. “Rigoletto’s experience of global warming was academic, not practical” (*The Swan Book*, p. 218)

Few decades ago, global warming and climate change like things seem to be just academic. Students just read them in their academics. Now everybody experiences it. It is practical now all over the world. Knowledge about global warming and changing climatic patterns are just academic before. Few decades ago, it just seems bookish and people can only imagine them after reading them in the books. Now they become realistic. People experience them practically.

15. “It happened this way, until the remaining bony creatures find they are descending into the stagnant, blue-green algae blooms of a flooded plain where the trunks of dead trees are a reminder of what was once a forest. Then they continue, the swans flying through seasons and changes in the weather, and over travelling refugees, and the fence posts of flooded and then bone-dry lands” (*The Swan Book*, p. 246)

There is flooded ground having algae and fungus that grow due to standing water. In the standing water, there are stalks of trees that indicate the existence of woodland that is no more now. Swans move from one place to another just due to changing spells. These selected lines explain the situation of the flooded land. There is algae and fungus due to the standing water for long time. There are stems of the trees lying inside the water that specifies the existence of a forest. These are the facts described by the writer with full facticity.

4.2 Metaphor

The second category selected for analysis is metaphor. The evidences in which the writers make use of metaphor are as following:

4.2.1 *Thinner than Skin*

Metaphors that are used in Pakistani novel *Thinner than Skin* are:

1. A glacier is given by the qualities like ‘slow moving, sluggish, having the bout of extreme rage’ (*Thinner than Skin*, p. 46). The qualities of slow motion, inactiveness, laziness and extreme anger are the qualities of man. The writer takes these qualities of a man and regards them to a glacier. The source domain is man here and Pakistani

glacier is the target domain. They also grieve and quarrel. These are also humanistic qualities. Along with that they act like a dead body.

2. Global warming is considered as jinn (*Thinner than Skin*, p. 49). The anger and rage of jinn is source domain and target domain is global warming that melts the snow of Malika Parbat.

4.2.2 *Flight Behavior*

The use of metaphor in *Flight Behavior* is as under:

1. There are certain instances of metaphor in which the writer compares the hottest weather with. “The forest blazed with its own internal flame” (*Flight Behavior*, p. 19). In this sentence the intensity of weather is compared with flame. As the flame of a fire is too much hot same is the weather. So here ‘flame’ is the source domain and the hot weather is the target domain.

2. Another metaphor used is “trees turned to fire, a burning bush” (*Flight Behavior*, p. 19). Trees do not get burnt in the fire in reality but what exactly happens here is due to too much rise in temperature, trees seem like burning. Fire here is the source domain. The quality of fire is taken and adjusted into the target domain that is hot weather.

3. One more metaphor “burning coals of fire went up and down among the living creatures” is used here in which too much high temperature and summers are compared with burning coals of fire (*Flight Behavior*, p.19). So the source domain here is burning coals of fire and too much high temperature is target domain.

4. In the sentence ‘all the farmers they knew had leaned into the forecasts like gamblers banking on a straight flush’, farmers are linked to the gamblers whose crops are on high risk in every situation either they cut them or not (*Flight Behavior*, pp. 49-50).

5. The falling of leaves and clumps are compared with the falling of hair of cancer patient. As the hair of a cancer patient fall abruptly, same is the case with the leaves of trees right now. Falling of hair of a cancer patient is a source domain and falling of the leaves of trees is the target domain (*Flight Behavior*, p. 67).

6. The weather is explained in a very beautiful manner. There is too much rain. The rain water splashes on the windows in the same way as somebody throws the water with a bucket on the window. Here water in heavy rain is compared with the water stored in a bucket. The quality of splashing is common in both situations (*Flight Behavior*, p. 169).

7. There is a phrase used ‘wall of flame’ (*Flight Behavior*, p. 385). Due to extensive rise in temperature, the walls also get too much hot like flame. As the flame emits too much heat same is case with walls right now. Due to excessive rise in temperature and direct heat from sun, walls are hot like a flame and they emit heat. Here flame is the source domain and heated walls are target domain.

8. The phrase ‘hell on earth’ has a metaphor (*Flight Behavior*, p. 385). Earth is regarded as hell because of excessive rise in temperature. The most prominent quality of hell is its hotness and warmth. Same is the condition here on earth. It burns the people that even cause their death. Hell is the source domain and summers and excessive temperature is target domain here.

4.2.3 *The Swan Book*

This section contains the metaphors that are used by the Australian writer address to climate change.

1. Here the swans are first compared with the gypsies and nomads that have no fixed place to live. They travel from one place to another having a purpose. Swans just travel to find out the track of rain water. The qualities of gypsies and nomads are source domains here that have the quality of travelling from one place to another having no fixed home. Black swans do the same right now. They have the same qualities. So they are targeted. They follow the qualities of gypsies and nomads (*The Swan Book*, p. 22).

5. Climate change is regarded as a devil. Devil is an evil creature that has destructive force in it. Same is the case with the climate change. It is destructive in nature. It has enough power to completely destroy the whole countries or nationalities. Devil is the source domain and climate change is the target domain having destructive forces common in them (*The Swan Book*, p. 29).

4.3 Ideology and Discourses

The third strategy that is selected for analysis in order to trace climate change is ideology and discourses. I want to know the ideology of the writers behind producing text and type of discourse. The ideologies of the writers are analyzed against the created ecosophy in the current study in order to examine the type of discourse.

4.3.1 *Thinner than Skin*

Here is the analysis of ideology and the type of discourse of the Pakistani writer:

1. Melting of glaciers means that the level of water will arise. It is quite dangerous. It has power to sink certain countries. The writer talks about her own country. It is possible that the glaciers may expand in Pakistan but it cannot be said with surety at this time. The writer creates a negative meaning as she just states the issues and does not go for the proper solution. So the discourse produced is destructive (*Thinner than Skin*, p. 46).

2. Nobody is sure about the growth or decline of the glaciers. Growth and decline both are dangerous. Growth means excessive fall in temperature and decline means excessive rise in temperature. Both the extremes are dangerous. So the discourse produced is destructive here (*Thinner than Skin*, p. 46).

3. The Writer describes the conditions of glaciers. They are half melted and their surface is slippery. It means that they start melting due to rising temperature. So the writer mentions that it is global warming due to which they melt. This meaning gives negative impression by stating the problems clearly. So the text produces destructive discourse (*Thinner than Skin*, p. 46).

4. After climate change, this world gets converted into a new world. Glaciers are exposed to the global gases. There is both growth and reduction of the glaciers. All these happenings are just because of global warming. The theme of global warming and climate change in this evidence is quite distressing that is why this discourse is destructive in nature (*Thinner than Skin*, p. 47).

5. Global warming is regarded as jinn. It is one of the major causes behind melting down of all the snow of the mountains. This theme does not go with the created ecosophy so the discourse is destructive (*Thinner than Skin*, p. 49).

6. The writer mentions melting of snow of the Malika Parbat. It is quite stressful as the snow melt is so huge that creates a fully-fledged lake. This is all due to global warming. The discourse produced is destructive (*Thinner than Skin*, p. 66).

7. The phrase 'snow melt' is used. It means that snow melts due to global warming. People do not get worried by the huge snowmelt though it is quite problematic. It creates negative meaning and the discourse is destructive (*Thinner than Skin*, p. 78).

8. Glaciers usually grow due to massive decrease in temperature. The writer talks about the expansion of glaciers that indicates climate change. They are growing from almost past 30 years that is quite worrisome. Here the writer just discusses the issues and make her readers worried so the discourse is destructive (*Thinner than Skin*, p. 97).

9. The writer creates a sort of confusion for the readers about the growth and decline of glaciers. She does not go for any possible solution. As a result, the discourse produced is destructive (*Thinner than Skin*, p. 162).

10. Trees help in protecting soil to flow. They make the ground firm. Due to deforestation, land gets easily destroyed. When there is flood, it takes all the soil and its minerals with it. The land becomes left with no minerals and is eroded. Same happens in Pakistan. This is the theme mentioned that is stressful for the readers. This theme does not go parallel to the ecosophy. So the discourse produced is destructive (*Thinner than Skin*, p. 217)

11. The writer discusses three things that should be free. Pakistan has all of the three things. So people can flourish. But the writer does not provide proper solution for it how to get them free. The writer comes up with positive meaning but it is not complete in itself. This ideology does not follow the running ecosophy of the current study. So, the discourse that is produced is destructive (*Thinner than Skin*, p. 244).

12. The writer remembers the past flood and its effects. Nobody can ignore it. The word 'seditious' is used here for laughing in the rainy season. Laughter is like the rebellion. So here she produces destructive discourse (*Thinner than Skin*, p. 252).

13. The words 'landslides' and 'icefalls' relate with the disasters. Then it is obvious that it is about something negative having negative meaning. It does not go with the created ecosophy of the work (*Thinner than Skin*, p. 279).

14. People hope for good this year. They hope for no flood this year. This must be the end of their sufferings. But the point here is that they just hope for the good. They do not do anything positive to get rid of the problems. This is not the proper solution for the problem. So we cannot regard this discourse as a positive or ambivalent discourse rather it is destructive in nature (*Thinner than Skin*, pp. 302-303).

4.3.2 *The Hungry Tide*

Interpretation of ideology and type of discourse of Indian writer is as under:

1. There are certain words and phrases used that most of the time produce negative context. The sentence starts with the word 'destitution' that means extreme state of poverty. The country experiences the extreme circumstances of poverty. This condition is compared with the severe shortage of food in Bengal in 1942 that has totally ruined it. The writer compares the worst condition with the same condition in the past that shows his ideology. The writer also mentions the after effects of the severe dryness and shortage of food that are quite depressing. The selection of the vocabulary shows the ideology of the writer that goes against the ecosophy of the study (*The Hungry Tide*, pp. 77-78).
2. Anti-cyclone measures must be taken in advance in the countries having the history of cyclone. In the selected lines, the writer talks about the anti-cyclone measures taken in the hospital and it is good. Before the construction of this hospital, most of the people do not know how to endure and resist cyclones. Even they are not aware of the history of cyclone in their own country. It produces an ambivalent discourse that is somehow both positive and negative. These lines mention both the problem and the solution (*The Hungry Tide*, p. 122).
3. The writer makes a comparison between two severe conditions. He is of the view that the current condition is far better than the previous one. It is not more than a storm. The Writer just mentions the issues and does not go for either the solution or its positive side. So it is destructive discourse because it does not follow the ecosophy of current study (*The Hungry Tide*, p. 145).
4. The writer uses a famous saying here that 'transformation is the rule of life'. It means that pace and beat of the earth is quickened. How? The things that require decades, centuries and millennia to get changed are now taking very less time. Millennia are converted into centuries and centuries are converted into decades. All these modifications are due to changing climatic patterns. These changes are not due to something positive. So the discourse produced is destructive in nature (*The Hungry Tide*, p. 201).
5. Transformation and change in something has both positive and negative faces. But here transformation is due to something negative. All the cycles of nature are disturbed

due to climate change and their pace and rhythms are changed. People live their lives in change. The writer does not talk about the ways to restore the primary natural patterns. In this way this ideology does not go parallel to the created ecosophy of the work. The discourse is destructive in nature (*The Hungry Tide*, p. 201).

6. Wet and marshy places are under the intense sunlight. Water level also decreases due to the blazing sun. It is one of the signs of climate change. Animals are in the ponds but neither they can enjoy nor get their full bodies dipped inside the water due to this intense sun throwing heat and evaporating the water. Ghosh just discusses the issue of excessive temperature and sunlight and does not go for recommending solution for it. So the discourse is destructive (*The Hungry Tide*, p. 204).

4.3.3 *Flight Behavior*

While doing discourse analysis, the first step goes for the selection of lexical items selected by the writer. The word itself cannot be regarded as a negative or positive. It is the very context in which it is being used makes it either negative or positive.

1. The use of word ‘drowned’ and the phrase ‘dying under the rain’ produces negative meaning. Rain is useful for many things but raining not on the demanded time and rain more than demand is harmful. Same is the case here. The plants in the pasture get drowned in the excessive rain and they are dying. So here the writer has negative ideology which produces a destructive discourse. This created meaning goes against with the created ecosophy (*Flight Behavior*, p. 3).

2. The phrases ‘after so much rain upon rain’, ‘massive trees keeling over’, and ‘soft sponge’ are used by the writer in a negative context. There is rain upon rain that is not beneficial. Due to excessive rain, huge trees fall on the ground. The ground gets covered with soft sponge that stops water to get absorbed into the soil. This meaning is not positive in nature. It conveys some negative message. So, the writer has negative ideology and producing a negative discourse as it goes against the created ecosophy of the current study (*Flight Behavior*, p. 7).

3. The phrases that give negative meaning are ‘getting new diseases’, ‘wetter summers’, and ‘bringing in new pests’. It rains too much due to which trees get affected by new diseases that are obviously harmful for them and man too. There are wetter summers that mean rains are not at their exact time. It is also not something positive. At the end,

due to excessive rains, trees get attacked by pests that are harmful for them. These all things consecutively give negative meaning and do not go parallel with the created ecosophy of the work (*Flight Behavior*, p. 17).

4. Now, there are certain phrases used that give an overall negative meaning. Firstly, the phrase ‘the forest blazed with its own internal flame’ is used. It means that there is too much high temperature inside the forest. Due to its own heat, it gets burnt. Secondly, there is a phrase ‘the sun slipped out another degree’. It means that there is more increase in the temperature as there is already too much heat. Lastly, there is a phrase ‘trees turned to fire’ that also shows excessive rise in temperature. All of these phrases give an overall negative meaning and do not align with the ecosophy of the work (*Flight Behavior*, p. 19).

5. The writer says that flowers get dissolved due to excessive rain. Rain is useful and necessary for life on earth. Here it has damaging effects. This excessive rain is in the summers not even in the winters. It creates negative meaning and goes against the created ecosophy. Consequently, the discourse produced is destructive in nature (*Flight Behavior*, p. 24).

6. The writer uses the phrase ‘melted to liquid stench’. The writer wants to say that unstoppable rains result in the failure of tomato crops. They get liquefied that is malodorous. It is quite disgusting. It produces a negative discourse and the ideology of the writer is shown by going against the created ecosophy of the work. Along with that another phrase ‘the summer’s unstoppable rains’ also gives negative meaning as it proves damaging for the public (*Flight Behavior*, p. 28).

7. The use of word ‘risk’ shows that there is something problematic and worrisome. The writer does not recommend any possible solution for it. The risk is due to unstoppable rains and it is for crops. So the discourse produced is negative as it does not go side by side the ecosophy of the work (*Flight Behavior*, pp. 49-50).

8. The use of phrase ‘unrelenting rain’ shows that there is excessive unstoppable rain and it produces damaging effects. Hence it is used in negative context. There is another phrase ‘a chemo patient’ used by the writer. This phrase is giving negative impact regardless of the context in which it is used. The context in which this phrase is used here is falling of the leaves of the trees. It is compared with the falling of the hair of cancer patient. It does not produce a positive meaning that is why it is negative

discourse having negative ideology of the writer. There is another phrase used that is also giving negative meaning i.e. the world seemed drained (*Flight Behavior*, p. 67).

9. People are worried about the kind of weather. It is neither close to winter nor to summer. It seems like there is no season. It suddenly starts raining and after it everything gets clear. Sudden rain also proves maleficial for many people. People are not already prepared for it due to which they lose their belongings. So, it also produces negative discourse as it does not go parallel with the ecosophy (*Flight Behavior*, p. 116).

10. Due to very confusing weather, people are so worried. They will not be able to celebrate their Christmas fully. There is rain water everywhere. This context is also giving a negative meaning and producing negative discourse as just problems are discussed here. It goes against the running ecosophy of the current work so it is destructive discourse (*Flight Behavior*, p. 169).

11. The use of phrases like ‘lashed the window casings and seeped under the kitchen door’ means that the rain and rain water is making people worrisome and creating many hurdles for them. It shows that the discourse produced is negative in nature. The writer just states the issues. It neither goes for the solution of the problem nor for something positive. So the discourse produced is destructive (*Flight Behavior*, pp. 169-170).

12. There are certain worries of people regarding rains and floods. There is blockage for the rain water to move outside. There are no proper arrangements in order to tackle rain water in case there is excessive rain. It has negative meaning here and does not go side by side the running ecosophy of the study (*Flight Behavior*, p. 188).

13. There is a positive point mentioned here that gives a proof for positive discourse. The writer mentions ‘the forest protected against erosion’. The word ‘protected’ makes a positive context. Trees make the land firm by spreading their roots in it. Hence it helps in protecting it from flowing with the floods (*Flight Behavior*, p. 190).

There is also something negative here that creates negative context. The writer states that forest that is near to them is little ruined and destroyed. It creates negative discourse (*Flight Behavior*, p. 190).

14. The writer raises a positive point here. It is not true that calamities and tragedies are bad for everyone. There is the phrase used ‘every disaster proved useful for someone’. It means that it is not obvious that something bad is bad for everyone. It can be good

for somebody in the same field. During emergency situations, the hours for those who are on duty staff are increased and as a result they are paid with additional salary. So, this evidence is creating a positive discourse having positive ideology of the writer behind. But in the context of climate change, the writer does not mention something positive so the discourse is destructive in nature (*Flight Behavior*, p. 213).

15. Two phrases ‘wrong places’ and ‘wrong amount’ are used that creates negative context. It rains where it is not needed and also it is huge. The discourse produced here is negative because it just talks about rain and rain and not going for its solution (*Flight Behavior*, p. 385).

16. The selection and use of the lexical items show the ideology of the writer. There are certain phrases used in the selected evidence that gives some negative meaning like the phrase used ‘walls of flame’. There is too much rise in temperature due to which walls get too much heated. Then the other phrases used like ‘dead trees, desiccated soil, people burned to death and hell on earth’ are also producing negative context. The writer wants to describe the situation on earth that is due to excessive rise in temperature. It is dangerous for all plants, trees and mankind. This evidence produces destructive discourse (*Flight Behavior*, p. 385).

17. The writer talks about the solution of the drastic problem of climate change. He gives the solution but not in a proper positive manner. The accretion of the carbon is too much. If its production is decreased to zero, it will not work at this stage. People are not getting motivated by this ideology of the writer rather they are getting depressed by it. So the discourse produced here is negative in nature. It is not going parallel with the created ecosophy of the work (*Flight Behavior*, p. 386).

18. The writer starts her point positively but later on she mentions the same negative condition that goes against the running ecosophy. The positive point is that the forest, plants, and trees are helpful in sucking up the carbon from the environment. They help in decreasing its level. But now the condition of forests is very bad. They are not in the condition that they can work and function properly. They are either dying in the water of floods or burning in the excessive temperature. They are just left in two extremes of weather. Along with that the writer mentions the function of oceans how they are helpful. Due to excessive carbon in them, they are not able to perform fully.

Rather they become dangerous for the full world and life that exists inside them. The discourse is negative in nature having negative connotation (*Flight Behavior*, p.388).

19. The writer also talks about the root cause of climate change due to which whole world results into either floods or fire. The major cause behind the climate change is pollution. Man pollutes the environment and as a result he faces the adverse and unfavorable affects. This theme goes against the created ecosophy so discourse is destructive (*Flight Behavior*, p. 465).

4.3.4 *The Swan Book*

Analysis of ideology and discourse of Australian writer is following:

1. The writer blames the Nature for the entire current situation. Nature hurts people too much. It throws snowstorms, floods, excessive temperature, and severe dryness whenever it wants. The writer produces negative discourse by blaming Nature for every disaster. We all know that nature has the quality of a mother who is always caring and loving. This ideology does not go with the running ecosophy. So discourse is destructive (*The Swan Book*, p. 15).

2. At the present time, most of the people face the same issues all over the world regarding climate change. They are either face to face with the floods or tsunamis most of the time. The context that is made here is worrisome for the reader and does not go parallel with the ecosophy so it is destructive discourse (*The Swan Book*, p. 15).

3. Not only the humans are worried due to climate but animals are in the same condition. Swans move from one place to another in search of suitable climate and environment. They are like the nomads having no fixed home. The ideology seems worrisome and does not go for the proper solution. In this way, it produces destructive discourse (*The Swan Book*, p. 22).

4. The outcomes of climate change are revealed. There are certain nationalities that are fully destroyed by climate change. This is the ideology exposed going against the ecosophy and creating destructive discourse (*The Swan Book*, p. 27).

5. Climate change is regarded as a devil that will come and destroy everything. This devil will take snowstorms, floods, droughts, fire and freezing winters with it. The use of single word 'devil' is enough to create negative meaning. This is the ideology of the

writer behind that goes against the running ecosophy producing destructive discourse (*The Swan Book*, p. 29).

6. The use of phrase like ‘dry riverbed, ponds of water, and flood’ show that the writer describes the situation of climate change that is worrisome. This is the ideology behind that produces destructive discourse (*The Swan Book*, p. 160).

7. There is a phrase ‘raining all the time’ used that means excessive rain. So here is the ideology of excessive rain. The writer calls excessive rain and snow as the climate change. This is regarded as negative discourse but at the same time the writer also mentions the positive face. He says that excessive rain is spring for the plants and trees. Plants and trees are growing very fast just because of this rain. Overall theme of the selected lines does not align with the ecosophy of the current work. So the discourse produces is destructive (*The Swan Book*, p. 168).

8. There is the ideology of fear of floods and their damaging effects. People have the same things in their dreams. This proves the fear and terror of climate change in the hearts of people. This ideology creates destructive discourse (*The Swan Book*, p. 173).

9. The writer mentions the theme of continuous rain that creates fungus in the shady places. But he takes it in positive manner. He uses the phrase ‘dripping melodically like piano notes’. He says that the sound produced by the falling of rain drops is enjoyable. But at the same time, he does not talk about protecting the ecosystem so the discourse is destructive in nature. (*The Swan Book*, p. 186)

10. The word ‘screaming’ is used for the people who face floodwater. Their sounds pierce into the ears of the sleeping people in houses. They take shelter under the different pieces of plastic from the hailstorm and rain. It produces destructive discourse as the writer shows his full attention toward explaining defective ecosystem (*The Swan Book*, pp. 186-187).

11. The phrase ‘decades of dampness, flooding and rain’ produces negative context. There is constant and excessive rain that has formed fungus and algae. But it also has a positive context. Children enjoy fungus by playing games and running on it. But the discourse does not talk about protecting the ecosystem. So it is destructive in nature (*The Swan Book*, p. 192).

12. The writer mentions that there is a place where people are not used to of remembering old things but now they are hoping to restore the older climatic patterns.

This thought gives it a positive context. People also want to save infrequent old trees that are now very hard to grow but it seems impossible. Here the writer's ideology appears to be negative as it produces negative context. People just hope for good now. They do not do anything positive in order to protect the ecosystem. They just want to save the old trees. This step is not enough now because condition is the poorest (*The Swan Book*, p. 207).

13. There are floods all over the world. Floods and excessive rain seem to be a normal thing now. Floods are the biggest form of climate change. This piece of text is about the destruction of ecosystem so the discourse produced is destructive (*The Swan Book*, p. 218).

14. The writer talks about global warming and climate change. Previously it is not that much practical and common but now it is experienced by the majority. It relates with the destruction of ecosystem. The discourse produced here does not go equivalent to the ecosophy so it is destructive in nature (*The Swan Book*, p.218).

15. As a result of floods, the forests have just dead remains of trees. Along with that, the writer mentions that due to too much flood, animals also travel from one place to another in search of a safe place. Climate change is equally problematic for all the animals, birds, and human beings. This negative context shows the ideology of the writer that creates destructive discourse (*The Swan Book*, p. 246).

4.4 Findings

All the selected fictional works from English literature comprise of the theme of climate change. The writers from the different countries use different strategies to pass on their message to the readers regarding climate change. I have taken 3 strategies out of 8 given by Arran Stibbe in his book *Language, Ecology and The Stories We Live By* (2015) and applied them on the selected works. The selected strategies are conviction and facticity patterns, metaphor and ideology and discourse.

4.4.1 *Thinner than Skin*

Thinner than Skin is a Pakistani novel written by Uzma Aslam Khan. This novel has the theme of climate change. She discusses global warming as a major reason behind climate change. This piece of writing discusses the melting of glaciers due to excessive rise in temperature. First of all one can say that the writer is also confused by

the current condition of the glaciers. On the one hand, she declares that glaciers are melting very fast and mountains will be ice free very soon. On the other hand, she says that nobody is sure whether glaciers are expanding or declining. So, this is the scenario here. Then she produces a statement that growth and decline of glaciers both are equal indicators of global warming. It proves that there is global warming that is badly affecting the glaciers. She is not sure about what is actually happening but she is sure about the reason behind. Glaciers are all the time open to interact with global gases that cause them to melt. Those gases are obviously produced by manmade activities. So, man is a visible cause behind it. The process of glaciers melting produces water that causes floods to come. Floods badly damage the land and causes trees to fall. So, floods eroded the land that has many disadvantages. She also mentions the causes of glaciers melting and after effects of glaciers melting too. The writer also talks about rain that also causes floods to come. There is excessive rain that is the reason behind floods. Nobody is supposed to even laugh in the rainy season. It is considered as rebellion against country. People remind the adverse circumstances and outcomes of the floods in 1991 and the flood last year. They do not hope for flood this year. Just a reminder and hope is not enough to get rid of something. One has to do something very serious. This situation needs very efficient and effectual steps to be taken. In this way, the writer just states the problems taking place in the current time period and their causes. The writer also exercises the strategy of metaphor. She compares global warming with a jinn. A jinn is considered as something very furious and horrible. So global warming is also very violent and terrible. There is another metaphor used for glaciers. As the glaciers are very huge in size so, they move and melt very slowly. She makes their comparison with lazy and sluggish person. There is use of both facticity and conviction patterns but the frequency of facticity patterns is far more than conviction patterns. The writer also exercises metaphor. She states the issues and their consequences that create negative context having worrisome meaning. They do not align with the running ecosophy of the current work. So the discourse that is produced is destructive in nature.

4.4.2 *The Hungry Tide*

This novel is written by an Indian writer who takes the extreme state of drought as his main idea. There is severe shortage of water that leads to extreme state of poverty. Lands become infertile and unable to produce any kind of yield. Nationals are only left with hunting and fishing for their survivals. It is also very dangerous for their lives.

Many of them lose their lives during hunting. The writer describes the situation with full certainty while talking about the state of drought in a country having history of cyclone. The writer states that patterns of Earth get changed. He further affirms that life is lived in transformation and transformation is the rule of life. It is true but it is used in negative context. It is not a positive change. It needs attention. As this theme does not align with the selected ecosophy for the current study so it is destructive discourse.

4.4.3 *Flight Behavior*

In this American novel, the writer converses about the major issue of climate change in different forms by making use of certain strategies. In this piece of writing, climate change is in the form of unnecessary rains and excessive low temperature. These undue rains destroy the environment in a very unpleasant way. The damages that are caused by these rains are various. The rain uproots the trees and causes roof tops to fall down. They are very much dangerous for all kind of living beings. These trees take years to grow up properly and get destroyed within few minutes. Trees lose all of their leaves and flowers and are left with thorns only. This is also destruction of the beauty of our environment. Falling of the leaves is compared with the hair of a chemo patient. Here, the writer uses metaphor. She makes a comparison between falling leaves of trees and falling hair of a chemo patient. Both have similar quality. Unstopping rain is also harmful for crops. Crops get damaged and fall off. Standing water in crops produces very foul smell. Rain does not let anybody to enjoy December and celebrate Christmas properly. Rain water enters into the houses and people are compelled to leave their houses and other belongings. Temperature is too much low that is unbearable for not only man but for all other living beings too. Here, the writer discusses the condition of monarchs. They are frozen to death. If the condition remains the same, there will be no next generation for monarchs. Each and every entity is the victim of this unpleasant and unhealthy situation. These are all the facts that are described by the writer with full certainty. We also observe these situations and conditions in our real lives and experience them practically. Rains are not on time according to a natural schedule. All these things are discussed in a negative context that makes people worried. This ideology does not align with the selected ecosophy of the current work. Things get worst day by day. So, the discourse produced is destructive in nature. The writer talks about a single positive thing. This unwanted rain is beneficial for someone. The staff is called for double shift in order to tackle this emergency situation. They are paid double.

This thing is positive and advantageous for them but its overall effects are quite dangerous and adverse.

After discussing the whole scenario, Barbra also mentions the major cause behind this climatic condition. Only man is responsible for the adverse effects in environment. Man goes against the nature and as a result he faces extreme winters and extreme summers. There is average rise in world's temperature by 4°C due to human activities. It causes global warming. The writer compares earth with hell due to excessive warmth and high temperature. In this way, the writer makes use of metaphor. The writer goes for prescribing a single solution but in a negative way. She says that forests help against erosion but the existing trees fall due to excessive rain. When frozen grounds get melted, they produce carbon. Trees absorb that carbon. Due to lack of trees and forests, carbon remains inside the environment and causes climate to change. The writer is of the view that if we stop using carbon for years, even then this positive step will not be enough. Human activities has disturbed the natural phenomenon and schedule of the seasons and facing the consequences. The writer communicates about all these facts by using facticity patterns. There is certainty and surety in her statements. She discusses all those facts that happen in our day to day life. So, the writer states the facts by making use of metaphors. The text creates an overall negative context. The ideology of the writer does not line up with the running ecosophy of the current work that means the discourse produced is destructive in nature.

4.4.4 *The Swan Book*

This is an Australian novel that has the theme of climate change in the form of excessive rains. The writer produces a very beautiful statement at the beginning about nature. She writes that nature is regarded as a mother to all. Nature has the qualities like a mother. Mother is caring, kind, gentle, and loving. And at the same time mother is respectful. But now nature has lost all of these mothers like qualities and has become dangerous for all. Nature is left with four things that only have disadvantages. Those four things are floods, droughts, snowstorms, and fire. People are left to face these disasters only. They are unable to enjoy their lives by having exposure to the beauty of nature. They have unpleasant, inappropriate, and unhealthy lives. There is no balance in the whole world. Some of the countries face excessive temperatures and others have very low temperature. Some of them sink in floods and other face droughts at the same time. This is the scenario in the whole world right now. So, climate change does not

only affect some selected areas or individuals but number of whole nationalities get destroyed and ruined by it. People move from one area to another in search of suitable place and environment to live. This is a kind of argument build by the writer in her writing that has certain moral lessons in it. The writer talks about these points with full certainty and clarity. In this way, she discusses the current issues of the whole world linked with climate change. Then the writer becomes particular and specifically talks about excessive rains and their consequences. There is rain water standing everywhere due to which there is a lot of fungus. There are pounds of rain water standing even after of rain of months ago. Rain water enters into the houses and people are forced to leave them. They cry in a very shrill voice when they are left with no option other than to leave everything and go away. Rain water also harms trees and struggle to save them is totally meaningless. There are just dead leaves, branches and trunks of trees in the forests. The writer also shows full certainty in stating the issues that are particularly linked with excessive rains. She states that previously all these things are seen in books only but now we experience them practically. She also makes use of metaphors. Firstly, she compares birds and animals with gypsies and nomads who have no permanent and proper place to live. They are all the time in search of better place and environment to live. Secondly, climate change is compared with a devil that is an evil creature and has ability to destroy. The whole selected text that has the theme of climate change gives an overall negative connotation. It does not talk about anything positive. All the discussion builds negative and worrisome context. It does not go parallel to the selected ecosophy of the current work. Hence this discourse is destructive.

4.5 Discussion

It is clear from the findings that all the writers clearly mention the issue of climate change in their respective works. They describe different forms of climate change as their origin of country is different. The different forms of climate change mentioned by the writers are described in the following table:

TABLE 1: *The Forms of Climate Change in the Text*

Different writers talk about some specific form of climate change in their respective works, as following:

S.NO	Name of the Writer's Country	The Forms of Climate Change
1.	Pakistan	Glaciers melting due to global warming
2.	India	Drought
3.	USA	Extreme summers and frozen winters
4.	Australia	Excessive and unnecessary rains

The table that is drawn above shows that the writers from the Global South countries talk about global warming and excessive rise in temperature due to which there is change in climatic and earth patterns. While the writers from the Global North countries talk about extreme summers, frozen winters and unnecessary rains in their respective works.

This study finds out that all the selected strategies are exercised by the writers in their works. The table that is drawn below makes the approaches of the writers apparent:

TABLE 2: *Synthesized Findings*

S.NO	Texts	Strategy Used	Country Origin
1.	<i>Thinner than Skin</i>	Facticity patterns Metaphor Ideology and discourse	Pakistan
2.	<i>The Hungry Tide</i>	Facticity patterns Ideology and discourse	India
3.	<i>Flight Behavior</i>	Facticity patterns Metaphor Ideology and discourse	USA
4.	<i>The Swan Book</i>	Facticity patterns Metaphor Ideology and discourse	Australia

The table that is drawn above makes it clear that all the writers from financially different countries have used different strategies in order to convey their meaning. Firstly, the strategy that is used by all of the writers is facticity patterns. They make full use of this strategy and describe all the factual conditions regarding climate change. They state the facts that are linked with climate change with full certainty. They describe those conditions that we practically face in our real lives by making use of linguistic patterns that show facticity. The writer who describes climate change most frequently is the American writer. Larger numbers of evidences are located in the American novel. She describes climate change in the form of extreme summers, frozen winters and excessive rains by using facticity patterns. Pakistani and Australian writings also contain the evidences having the theme of climate change but they are less frequent than American novel. Australian novel describe climate change in the form of excessive rains while Pakistani novel has climate change in the form of global warming due to which glaciers are melting. All the selected evidences from both novels make use of the strategy of facticity patterns. The writers describe the situation with full facticity and certainty. The only difference is that the Pakistani writer is not fully sure about the situation in future but she predicts that future is worrisome. There are evidences present in the Indian novel regarding climate change but they are very limited. The Indian writer also makes use of facticity patterns and describes the factual position. The American and Pakistani writers clearly mention that man and his activities are the major reason behind climate change. So, man himself is responsible for unpleasant and unfavorable situations and their consequences his environment.

Now, let's talk about the second strategy i.e. metaphor. Only three selected writers make use of this strategy. The Indian writer does not exercise this strategy. The common thing about the use of metaphor is that all the writers compare climate change with something furious and devilish. The American writer frequently exercises metaphor in a very interesting way. As a result, all the discourses that are produced are destructive in nature. The ideologies of the writers do not align with principles of eco-resistance and eco-resilience. The writers are continuously stating what is happening across the world. One Pakistani study (Khan & Mustafa, 2023) finds out that negative message and destructive discourse impact more on the audience than a positive message and positive discourse.

I want to compare and contrast the results of previous related studies and the current study. Current study relates with the previous studies with both perspectives i.e. ecolinguistic and ecological. One of the previous studies states that the Global South contributes less to climate change and the Global North is more responsible just because of their stability. But the current study proves that the writers from financially different countries are least interested in mentioning major cause behind global warming and climate change. They just state the issues that man faces at the present day regarding climate change. Though The American and Pakistani writers mention that man is responsible but they do not blame any each other.

The roles of textbooks that are included in the syllabus of schools also play an important role in spreading awareness across students. There is a study that investigates textbooks of ecology and states that textbooks produce beneficial discourses and tries to make reader realize the beautiful relationship between man and nature (Larouz & Mliless, 2018). While the analysis of novels shows that this beautiful relation is no more now. It is destroyed. So, novels produce destructive discourses.

While analyzing newspapers, the analysis shows that newspapers provide enough material for problem solving of climate change while according to current study, novels just work for stating the problems.

In a comparative eco-critical study, Makhdoom & Yaqoob (2019) seems to be interested in making comparisons between the works of American and Pakistani writers. The results show that American works mention ecological pollution as a major reason behind climate change and Pakistani works prove that climate change is just because of insufficient economic resource in their respective country in order to overcome the issues. This work does not mention any ecosophical perspective. It just compares the works produced by the different writers. While the current work proves that the writers just state the conditions and circumstances. The American and Pakistani writers mention that man is responsible for climate change.

Ecolinguistic analysis of advertisements by Ain et al. (2021) proves that language plays a very crucial role in convincing the audience. So language must be appealing. The writers of data selected in the current study just take the audience away from any kind of fantasy and make them worried from the current situation of global warming and climate change all over the world.

There is an ecolinguistic analysis of environmental websites (Fernandez-Vazquez, 2021) of world's greatest polluters. The findings show that there is not enough debate on the issue of climate change. They ignore the main root cause of climate change. But the findings of current study prove that there is enough discussion on climate change in the genre of novel from different countries.

There is another study that tries to find out the growth in the field of ecolinguistics. It selects 76 journals from 50 countries published in a specific time period. The results show that there are number of articles written having the theme of climate change. While selecting data for the current study, I also find a good number of novels published on the theme of climate change in 21st century.

The examination of different ecosophical studies proves the beautiful relationship between man and nature. Man and nature are like the two wheels of a vehicle. Man destroys this beautiful relation and faces issues like climate change. Ecosophy behind vegan campaigns show that man is not only the center of Earth but all other non-human must be given by their due rights. Vegan reports foreground non-humans. Environmental science discourses also state that man continuously backgrounds the other living beings.

Existing literature on the selected texts from the Global North countries shows that it is not the duty of a novelist to describe environmental issues in his work (Ramadan, 2018). Analysis of *the Swan Book* shows that just because of climate change, places get transformed and people lose their ancestral stories and beauties of their countries (Gleeson-White, 2016).

There are certain effects that are created as a result of using these strategies. Stating the facts in the literary works put the readers aside from a total imaginative and fantasy world. It is a very practical approach. At the same time, they become aware of the current issues and try to locate them in their surroundings. They start thinking about them that is quite good. Use of metaphors make them worried as the writers compares the issues with something negative and devilish. Negative discourses also make them worried but there is lack of giving solutions to the existing issues. It has a positive face too. If the writers do not work on providing the solutions, readers themselves start thinking about them and try to locate them.

As far as my point of view is concerned, though I am a Pakistani but I find *Flight Behavior* more interesting. During rain, extreme summers and winters, I find out the same condition in my own country. So I can relate to it. It is easy to understand and it makes more sense to me. Along with that I really enjoy the metaphors that are used by the writers like global warming is regarded as a jinn and glaciers are very lazy and sluggish.

There is a phrase “art for art’s sake” by the Swiss writer (Benjamin, 1804). But the art that is produced in all the selected texts does not seem to be produced for the sake of art. It is produced for the sake of morality. All the writers show practical approach and try to make the audience aware of the current state of climate change.

4.5.1 Integrated ecosophy

There are two ways of presenting the concept of ecosophy in a work. The first way is to start your work by formulating an ecosophy and then interpret the work on the basis of that ecosophy. Arran Stibbe follows the same way in his book *Language, Ecology and the Stories we Live by* (2015). He formulates his ecosophy of Living! in the beginning of his work and later on he does the analysis on the basis of the formulated ecosophy. His ecosophy talks about the wellbeing of all species. It is usually done when you are an authority and you have full command and understanding in the specialized field. Wagma (2021) also follows the same approach and mentions the running ecosophy of her work in the beginning i.e. eco-centrism. Zhdanova et al. (2021) conduct the study which is based on the ecolinguistic analysis of vegan reports and campaigns. They also formulate the running ecosophy of their work prior to the analysis. The ecosophies of eco-resistance and eco-resilience are also produced prior to the analysis and discussion made on them. The other way is to formulate an ecosophy at the end of the work. It is based on the whole data analysis done in the work. Hategan (2021) produces an ecosophy for community in his work. The ecosophy is about developing a new sustainable community. In order to develop a new sustainable community, implementation of new counseling practices is needed. Same is the case with this research study. This research study also formulates an ecosophy after completing the whole procedure of data analysis. The ecosophy is produced on the basis of ecolinguistic analysis made on the all selected works.

The final integrated ecosophy of this work is “Eco-diversity is actually eco-inclusivity”. The whole world is a big place to live in. All the countries are one of the major divisions in it. They are connected with each other due to which they get affected by the actions of each other. Same is the case with climate change. There are impacts of climate change from one country to the other. It is already well proven that the Global North countries are more responsible for climate change than the Global South countries. Both actually impact the ecosystem badly. The Global South countries also get affected due to the industrialized Global North. There are varieties and diversity in ecosystem. As a result, the environment is getting affected badly. As the population increases, the needs also increase and as a result our ecosystem gets influenced. The only thing that is produced at the end is ecological disturbance that is the major reason behind the worries of a man. Unfortunately, these worries are increasing day by day and man is stressed out.

After carrying out the whole analysis, this study shows the universality of literature. It also shows that climate destruction did not happen in a short time but it took a long time in happening; nations remained oblivious to climate change. These works raise awareness about climate change and other interlinked issues. The works despite their fictive nature move the readers from an imaginative world to a real world. The use of creative language helps us understand the dangers of neglecting mother-nature. These works add to the discourse on the issue. There is a certain practicality in the approach of all the works. The writers do not seem to mince words to show that there are real consequences of destroying the nature. This destruction takes place across regions, countries, classes and other denominators.

An important aspect that is evident is that the works do not indulge in a blame-game. They do not blame anyone rather they remain focused on the issue. They state facts as they are. The disturbances to the ecosystem are portrayed in a manner to elicit action for its restoration.

By relying on the selected novels, my study also makes a contribution in the field of ecosophy. Firstly, the unified ecosophy that is created as a result of this analysis can be applied globally as this study takes the data from two major divides existing in the world i.e. the Global North and the Global South. Furthermore, this study shows the approaches of writers from financially different countries in their literary texts. All the writers show their major focus and attention on stating the existing issues regarding

climate change. Climate change is present in different forms across different countries. As a result, the readers become aware of the current state of the existing issue. So the approach of the writers seems quite practical. This study amply demonstrates that ecological disturbance is taking place because of distressing climatic conditions. Hence, in this way, this study adds to the existing body of knowledge in the field of ecosophy.

CHAPTER 5

CONCLUSION

Environmental issues exist across the whole world right now. The only difference is that some of the countries suffer more than the others. Same is the case the global issue of climate change. The whole world is suffering from it at the current time. The Global North countries are more responsible for climate change than the Global South countries. Due to advancement in science and technology and industrialization, the Global North countries are the biggest polluters. They are the greatest source of carbon emission. The Global South countries are also accountable for climate change but their contribution is quite less. There is lack of awareness and poor policies in the under developed countries that is also a major reason behind climate change. Climate change needs to be controlled as it vanishes the whole nationalities. Everybody must have basic knowledge about climate change.

A large number of fictional and non-fictional works are being produced in order to give awareness to the public all around the world. it is easy to trace the theme of climate change in the non-fictional works but it is a task to locate them in the fictional works. In fictional texts, the writers exercise different strategies in order to convey their message and make their works appealing and attractive. That is why fictional texts appeal more to the senses than non-fictional texts.

Findings reveal that all of the writers show their major focus on stating the facts by making use of facticity patterns. They make very perfect use of the strategy of facticity patterns. They state the factual conditions and circumstances of climate change in their respective countries. Writers from the Global North state that the climate change is in the form of extreme summers, frozen winters, and unnecessary rains. Climate change is in the form of global warming and droughts in the Global South.

Along with that three selected writers exercise the strategy of metaphor i.e. Pakistani, American and Australian. They compare climate change with horrible, terrible and horrific things. For example, they compare climate change with hell, devil, and Jinn etc. They try to make their audience worried of climate change. The Indian writer does not exercise the strategy of metaphor.

The last selected strategy is ideology and discourse. All of the selected works contain this strategy used by the writers. Discourse is there as all of the works include use of similar lexical items that are used for building the theme of climate change. Lexical items like floods, rain, water, trees, and rivers etc. Use of these similar lexical items by all of the selected writers shows one discourse. There is also creation of similar themes in all of the selected works that proves it is one discourse. They create the themes of death, hunger, destruction, infertile land, marshes, time, high temperature, and struggle for existence. As far as the type of discourse produced is concerned, destructive discourse is produced. The ideologies of all of the writers do not align with the running ecosophy of the work. The writers try to make people aware and conscious of the current situation of climate change. We can say that the under surface meaning is positive as the writers talk in the favor and for the benefit of the readers. Destructive discourses have more positive impact on the reader than the beneficial discourse as they make them aware of the dangers linked with the existing issues.

This research study also creates a collective/combined ecosophy out of all the selected texts. The integrated ecosophy is “eco-diversity is actually eco-inclusivity” that can be applied on all of the works. Means to say that due to diversity and varieties in ecosystem, the ecosystem is badly affected and as a result multiple environmental issues are produced. The environmental issues in one area/country do affect the other one. In this way, the whole world becomes the victim of different environmental issues. Same is the case with climate change. The Global North countries are the major polluters behind the climate change and the Global South countries are also suffering due to them. The Global South itself is also responsible but the role of the Global North is also very much prominent.

So, it is true to say that these fictional works are not entirely produced for the purpose of entertainment only but they are equally for the purpose of morality. The writers want to teach their audience through their works and try to alert them from the extreme consequences of climate change. This integrated ecosophy can easily be applied globally as it is produced after analyzing fictional texts from different parts of the world.

Hence, this study offers a fresh insight into the intersection of language, literature and environment. It reveals how modern authors use language to reflect and shape social realities. It also shows the role of language in shaping human experiences.

Recommendations for future research

The suggestions for the future research are following:

- Further study can be conducted on larger sample of literary works.
- Any other kind of literary works like poems can be selected as data.
- A comparative study among different kinds of literary works can also be the part of research.
- There are many other environmental issues at the present time. Future researches can also look for them in order to give awareness.
- Current study goes for only 3 strategies out of 8 given by Arran Stibbe. Further researchers can go for more strategies.

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