DEPARTMENT OF FASHION DESIGN & TECHNOLOGY

A STUDY ON THE ROLE OF ENVIRONMENTAL ART IN RAISING AWARENESS OF CLIMATE CHANGE

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Submitted to:
Anamika Das Annona
Lecturer
Department of Fashion Design & Technology
Uttara University

Submitted by:
Sabbir Hossain
ID: 2222401006
Batch: 30th

Submission Date: November 12, 2026

DECLARATION

I, Sabbir Hossain, ID: 2222401006, Batch: 30th, Department of Fashion Design & Technology, Uttara University, hereby declare that the dissertation entitled "A Study on the Role of Environmental Art in Raising Awareness of Climate Change" is my original work, prepared as part of the requirements for the completion of my academic degree.

I further declare that this research has been conducted under the guidance and supervision of Anamika Das Annona, Lecturer, Department of Fashion Design & Technology, Uttara University. The information and findings presented in this dissertation have been collected, analyzed, and interpreted honestly to the best of my knowledge.

I also confirm that this dissertation has not been submitted previously to any other institution or university for any degree or academic qualification.

Sabbir Hossain
ID: 2222401006
Batch: 30th
Department of Fashion Design & Technology
Uttara University

APPROVAL

This is to certify that Sabbir Hossain, ID: 2222401006, Batch: 30th, Department of Fashion Design & Technology, Uttara University, has successfully completed the dissertation entitled "A Study on the Role of Environmental Art in Raising Awareness of Climate Change" under my supervision.

The dissertation has been prepared as part of the requirements for the completion of the academic degree. To the best of my knowledge, the work presented in this dissertation is original and has been carried out by the student under my guidance.

I hereby approve this dissertation for submission.

Anamika Das Annona
Lecturer
Department of Fashion Design & Technology
Uttara University

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ABSTRACT

Climate change has become one of the major environmental challenges worldwide, affecting ecosystems, biodiversity, human health, and socio-economic development. Raising public awareness and encouraging environmentally responsible behavior are essential for addressing this challenge. In this context, environmental art can serve as a creative communication medium by presenting environmental issues through visual representation, emotional engagement, and community participation.

This study, entitled "A Study on the Role of Environmental Art in Raising Awareness of Climate Change," aims to investigate how environmental art contributes to public awareness of climate change, identify effective forms of environmental art, and explore the challenges and opportunities associated with its implementation. The study follows a descriptive research design and a quantitative research approach. Primary data were collected through a structured questionnaire from 100 respondents. Secondary information was gathered from academic journals, published research papers, and relevant institutional reports. The collected data were analyzed using descriptive statistical techniques, including frequency distribution, percentage, mean, and standard deviation.

The study highlights the potential of different forms of environmental art, including Land Art, Eco-Art, Recycled Art, Installation Art, and Public Art, to communicate climate-related issues in an accessible and engaging way. It also emphasizes the importance of environmental art in supporting environmental education, encouraging public participation, and promoting awareness of sustainable practices such as recycling, waste reduction, and energy conservation.

The study concludes that environmental art can play a meaningful role in raising climate change awareness, particularly when integrated into educational institutions, public exhibitions, and community-based environmental projects. However, it should complement scientific information and environmental policies rather than replace them.

Keywords: Environmental Art, Climate Change, Environmental Awareness, Sustainability, Public Participation, Environmental Education, Bangladesh.

ABBREVIATIONS

Abbreviation	Full Form
APA	American Psychological Association
DV	Dependent Variable
EE	Environmental Education
Eco-Art	Ecological Art
IV	Independent Variable
IPCC	Intergovernmental Panel on Climate Change
NGO	Non-Governmental Organization
SD	Standard Deviation
SPSS	Statistical Package for the Social Sciences

TABLE OF CONTENTS

CHAPTER 1 INTRODUCTION 1
1.1 Background of the Study 2
1.2 Introduction to Environmental Art 3
1.3 Overview of Climate Change 4
1.4 Statement of the Problem 4
1.5 Research Objectives 5
1.5.1 General Objective 5
1.5.2 Specific Objectives 5
1.6 Research Questions 5
1.7 Significance of the Study 6
1.8 Scope of the Study 7
CHAPTER 2 LITERATURE REVIEW 8
2.1 Introduction 9
2.2 Concept and Definition of Environmental Art 9
2.3 History and Development of Environmental Art 10
2.4 Types and Forms of Environmental Art 10
2.4.1 Land Art 11
2.4.2 Eco-Art 11
2.4.3 Recycled Art 11
2.4.4 Installation Art 11
2.4.5 Public Art 12
2.5 Understanding Climate Change and Its Impacts 12
2.6 How art and environmental awareness are connected 13
2.7 Environmental Art as a tool of climate change communication 13
2.7.1 Visual Communication 14
2.7.2 Emotional Engagement 14
2.7.3 Public Participation and Community Engagement 14
2.7.4 Environmental Education 14
2.7.5 Encouraging Sustainable Behavior 15

2.8 An artist's role in promoting environmental sustainability 15
2.9 Global Examples of Environmental Art 15
2.9.1 Land Art and Environmental Awareness 16
2.9.2 Recycled Art and Waste Awareness 16
2.9.3 Climate-Related Artistic Initiatives 16
2.9.4 Community-Based Environmental Art 16
2.10 Previous Research on Environmental Art and Climate Change Awareness 16
2.11 Research Gap 18
2.12 Conceptual Framework 19
2.12.1 Independent Variable 19
2.12.2 Mediating Mechanisms 19
2.12.3 Dependent Variable 20
2.12.4 Conceptual Relationship 20
CHAPTER 3 RESEARCH METHODOLOGY 22
3.1 Introduction 23
3.2 Research Design 23
3.3 Research Approach 23
3.4 Study Area 24
3.5 Target Population 24
3.6 Sampling Technique 24
3.7 Sample Size 25
3.8 Data Collection Methods 25
3.8.1 Primary Data 25
3.8.2 Secondary Data 25
3.9 Research Instruments 26
3.9.1 Five-Point Likert Scale 27
3.10 Data Analysis Techniques 27
3.11 Reliability and Validity 28
3.12 Ethical Considerations 28
3.13 Summary of the Chapter 28
CHAPTER 4 DATA ANALYSIS AND FINDINGS 30
4.1 Introduction 31

4.2 Demographic Profile of Respondents (1986-2003) 31
4.2.1 Gender Distribution 32
4.2.2 Age Distribution 32
4.2.3 Educational Qualification 32
4.2.4 Occupational Background 32
4.3 Awareness and understanding of climate change 32
4.5 Public Exposure to Environmental Art 34
4.6 Influence of Environmental Art on Climate Change Awareness 35
4.7 Role of Visual Communication in Environmental Awareness 36
4.8 Effectiveness of Different Forms of Environmental Art 36
4.9 Public Attitudes Toward Environmental Protection 37
4.10 Challenges in Using Environmental Art to Raise Awareness 38
4.11 Discussion of Research Findings 38
CHAPTER 5 CONCLUSION AND RECOMMENDATIONS 40
5.1 Introduction 41
5.2 Summary of the Study 41
5.3 Summary of Major Research Areas 41
5.3.1 Environmental Art as a Communication Medium 42
5.3.2: Make a contribution to Climate Change Awareness 42
5.3.3 The significance of various art forms 42
5.3.4 Environmental Education and Public Participation 43
5.3.5 Sustainable Behavior and Environmental Responsibility 43
5.4 Conclusion 43
5.5 Recommendations 44
5.5.1. Integration of Environmental Art in Education Institutions 44
5.5.2 Promote Environmental Art Exhibitions (E.A.E)'s. 44
5.5.3 to encourage recycled art.5.5.3 to encourage recycling of art. 44
5.5.4: Development of Community Based Art Projects 44
5.5.5 Artist/environmental organization collaboration 44
5.5.6 Extension of Digital Environmental Art 44
5.5.7 Government and Institutional Support 45
5.5.8. Combining local climate issues with artistic projects 45

5.5.10 Organization of public forums 45
5.5.10 Assessment of the long-term effectiveness. 45
5.6 Practical Applications in Environmental Art 45
5.7 Future Research Directions 46

LIST OF TABLE

Table 4.1: Gender Distribution of Respondents 31
Table 4.2: Age Distribution of Respondents..... 32
Table 4.3: Awareness of Climate Change..... 33
Table 4.4: Respondents' Knowledge of Environmental Art 34
Table 4.5: Exposure to Different Forms of Environmental Art..... 34
Table 4.6: Influence of Environmental Art on Climate Change Awareness 35
Table 4.7: Respondents' Environmental Attitudes and Behavioural Intentions 36
Table 4.8.: Challenges in Using Environmental Art to Raise Climate Awareness..... 37
Table 5.1: Summary of Research Objectives and Major Contributions 42

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Climate change has become one of the greatest environmental issues of the twenty-first century, impacting the ecosystems, biodiversity, human health, economy and social development of the world. The global average increase in temperature, alteration in the pattern of precipitation, extreme weather events, sea-level rise, and increasing natural disaster frequency all illustrate the increasing severity of this phenomenon. Global warming and environmental degradation are driven by human activities, especially the burning of fossil fuels, deforestation, industrial production and consumerism. However, in addition to technological innovations and efficient environmental policies, it is necessary to raise public awareness, involve the public and change their behaviors in order to respond to climate change (Intergovernmental Panel on Climate Change [IPCC], 2023).

Environmental awareness is a key element in raising awareness among individuals and communities of environmental issues and promoting sustainable actions. Climate change information, however, frequently comes in the form of technical reports, statistical information and scientific explanations, some of which may not resonate with all parts of society. In this context, art has been more and more acknowledged as an alternative and complementary medium in communicating environmental issues. Environmental art can help to make ecological problems accessible and meaningful to a variety of audiences using the tools of visual representation, creative expression, emotional engagement and public interaction.

Environmental art is an art that investigates the connections of human beings and nature. It covers many of the different types of art such as Land art, Eco-art, Recycled art, Installation art, Public art, Photography, Sculpture and Multimedia art presentations. These art forms often use materials from nature, reclaimed resources, themes relating to the environment and images of change in the natural world. In addition to aesthetics, environmental art can raise environmental issues, stimulate critical thinking and motivate the public to participate in sustainability issues.

Environmental art and its connection to climate change awareness has gained greater significance as artists, environmental groups, teachers and cultural groups are looking for ways to reach the public through creative means. However, abstract environmental information can become a vivid visual experience with artistic depictions of melting glaciers, deforestation, pollution of the oceans, biodiversity loss and extreme weather conditions. These representations can elicit emotional reactions, deepen the appreciation of the environment and support people to rethink their interactions with nature.

In addition, environmental art can help engage the public in climate change issues through its capacity to involve the community, provide educational experiences and facilitate collective action. Audiences can be extended beyond the scope of educational and scientific venues through public installations, exhibitions, community-based art projects and interactive environmental campaigns. Thus, environmental art can be used as a powerful medium to encourage environmental awareness and sustainable practices.

The connection between environmental awareness and creative communication is relevant in Bangladesh. Bangladesh is a climate vulnerable country and is grappling with various

environmental issues such as floods, cyclones, river bank erosion, salinity intrusion and rising temperature. Their impact on livelihoods, agricultural production, infrastructure and public health is felt. Effective communication of climate risk therefore is crucial to enhance environmental awareness and community resilience.

The present study addresses this issue and examines how environmental art can be used to raise awareness of climate change in the background of the above. It examines the ways in which a wide range of forms of art can communicate environmental issues, shape public awareness and attitudes and behaviors that are environmentally responsible. The study also explores the possibilities and challenges of environmental art as a communication medium in the awareness raised field of climate change.

1.2 Introduction to Environmental Art

Environmental art is an umbrella term for art that derives from a variety of disciplines and looks at how art and human society interact with the natural environment. It is a blend of creativity and care for the environment to convey environmental messages, challenge unsustainable practices and deepen an understanding of nature. Environmental art is not only about aesthetic or symbolic representation, but rather is often a way to include ecological processes, natural landscapes, materials used in the environment and other themes having to do with sustainability in the art's production.

As environmental degradation became more and more acknowledged along with the need for other ways of communicating about the environment, the evolution of environmental art was observed. Climate change, pollution, deforestation, resource depletion and biodiversity loss are some of the problems that are tackled by artists in creative ways. Environmental artists attempt to engage an audience on an emotional level and through the mind by using installations, sculptures, photography, and land-based projects, as well as participatory artworks, to respond to ecological issues.

Environmental art also offers a chance to share skills between disciplines and between the artist and the community, between the scientist and the artist, between the teacher and the artist, and between the policymaker and the artist. These partnerships can convert information into a visual and experiential means that is accessible and comprehensible. Environmental art can be used to complement environmental education and engage the public in conversations about sustainability and ecological responsibility by using scientific facts and artist interpretation.

1.3 Overview of Climate Change

Climate change is a change in weather over time, including changes in precipitation, temperature and atmosphere. Natural causes may also affect the climate of the Earth, but today's global warming is mainly due to human activity that causes the increased concentration of greenhouse gases in the atmosphere. The greenhouse effect has been exacerbated by the burning of fossil fuels, land use changes, deforestation and industrial processes, which have led to the higher global temperatures observed (IPCC, 2023).

Climate change has far reaching effects, with many connections. Global sea-level rise, thermal expansion of sea water and melting ice sheets and glaciers are a result of rising temperatures. Alterations in precipitation patterns and rising temperatures only exacerbate the risk of droughts and floods, respectively. These environmental changes pose risks to biodiversity, food security, water resources, human health and economic development (IPCC, 2023).

Climate change can also affect areas differently and socioeconomic groups differently. Limited financial resources and institutional capacities in developing countries with weak financial resources can make them more vulnerable to environmental risks. The country faces a special risk due to its geographical position and its dense river networks, its seaside location, and its reliance on climate-sensitive economic activities (World Bank, 2022).

Therefore, raising public awareness of climate change is a crucial step to enhance environmental responsibility and collective responses. The key to effective communication strategies is to ensure scientific information is comprehensible, relevant and emotionally engaging. Environmental art can be used as an accompaniment to traditional communication methods, and can communicate in innovative and accessible ways about climate challenges.

1.4 Statement of the Problem

Climate change is a multifaceted issue which is not necessarily understood by all segments of society, despite growing scientific evidence and attention drawn towards it internationally. The scientific report, technical explanations, and statistical data are crucial to making climate change issues real but may not always be effective at capturing the public's interest and emotion. Alternate communication methods are required as a result, to make environmental information more accessible and promote meaningful public involvement.

Environmental art provides an alternative way in which the issues of the environment can be perceived as visual, emotional and interactive. However, the impact of art communication on raising awareness about climate change, shaping public opinion and fostering sustainable behavior needs to be studied. Art can prompt reflection on the environment but the impact of an artwork can be influenced by the audience, cultural context, presentation and opportunities for public engagement.

An additional issue is the lack of mainstreaming of environmental art in mainstream environmental education and climate communication programs. Written information, scientific presentations and

traditional media communication are the main resources for environmental campaigns in many cases. Therefore, the learning and communicating power of creative artistic means may not be harnessed adequately.

Climate change environmental issues are of special importance in Bangladesh where public awareness is required. But more research is needed to grasp the potential of environmental art in the field of climate communication in the local social and cultural context. The aim of this study is therefore to explore the connection between environmental art and the public's awareness of climate change by considering its communicative role, its impact on environmental attitudes and its ability to inspire sustainable behaviors.

1.5 Research Objectives

1.5.1 General Objective

The overall aim of this study is to explore how environmental art can contribute to increasing public understanding about climate change and fostering public environmentally responsible attitudes and behaviors.

1.5.2 Specific Objectives

Specific objectives of the study are:

1. To learn about how environmental art can raise awareness and understanding of climate change within the public.

2. To investigate the effect of different types of environmental art on people's perspectives of environmental problems.

3. To explore the potential of environmental art as a medium for promoting environmentally responsible attitudes and sustainable behaviors.

4. To develop an awareness of the key obstacles and opportunities provided by environmental art in the fight against climate change.

5. To discuss the possibility of using environmental art for environmental education and public awareness campaign.

1.6 Research Questions

The research questions that the study aims to answer are as follows:

1. What role can environmental art play in sensitizing the public to climate change issues?

2. How can environmental art change people's perceptions and understanding of environmental issues in different forms?

3. How does environmental art promote environmentally responsible attitudes and sustainable behaviors?

4. What are the major challenges and opportunities in employing environmental art as a means of communicating the problems of climate change?

5. What are the ways of embedding environmental art in environmental education and public awareness programmers?

1.7 Significance of the Study

The study is important because it explores the possibility of using creative and artistic methods as an alternative and complimentary communication tool to climate change. The study examines the connection between environmental art and raising public awareness, and offers a greater understanding of how art can be used to support environmental education, public engagement and sustainability efforts.

Academic Significance: The research has implications for interdisciplinary discussions in environmental studies, visual communication, art, sustainability and climate change education. It offers a chance to learn about the potential of the artistic method for supporting scientific and educational methods of communicating about the environment.

Social Significance: Environmental art has the ability to convey environmental issues in a creative and accessible way. Artistic projects presented in public spaces and in the community can be used to stimulate a discussion, to reinforce environmental awareness, and to foster a sense of community responsibility.

Environmental Significance: The study highlights the potential contribution of environmental art to promoting ecological awareness, responsible resource consumption, waste reduction, and sustainable lifestyles. It also highlights the need for innovative strategies to engage people in their role to protect the environment (IPCC, 2023).

Educational Significance: The result can inform the understanding of educators and environmental organizations about the role of visual and participatory art approaches to complement traditional teaching and awareness building. Bringing creative activities into EE can allow learners to experience ecological issues in an observation, interpretation and hands-on way.

Practical implications: The research could be valuable to various audiences, including artists, policy makers, environmental groups, educational institutions and community development practitioners who work with creative communication to respond to climate change. It can also help create environmental awareness campaigns with the inclusion of artistic exhibitions, public installations, and community-based creative campaigns.

1.8 Scope of the Study

The research identifies environmental art as a means to raise awareness of the climate change. It provides an analysis of the various types of environmental art expression: land art, eco-art, recycled art, installation art, public art and visual communication. Special focus is placed on the messages conveyed by these art forms with respect to environmental issues and the perception, attitudes and behavioral intentions that they evoke.

The research is not concerned with the artistic value of environmental art or its commercial appeal; its focus is on how environmental art can help to communicate and raise the level of awareness. It also delves into application of environmental art in environmental education, public engagement and sustainability efforts.

The geographical and population scope to be studied will depend on the chosen study area and the group of respondents to be studied during the process of the research. The results will consequently be discussed in the light of the chosen sample and the research situation and not assumed to be representative of the population as a whole.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The literature review serves as a theoretical and conceptual basis to understand the role of environmental art in raising awareness on climate change. It reviews the current social science literature and the scholarly viewpoints and approaches to environmental communication to provide a design framework for using art to enhance public awareness of environmental issues. Environmental art has become a field that has gained increasing interest in recent years as an interdisciplinary area that links ecological education, social transformation, art and practice with ecological knowledge.

Climate change is an issue of global magnitude and needs to be communicated effectively with the aim of raising public awareness and promoting a sense of shared responsibility. While science-based research is a critical source of information and evidence on climate-related risks, the dissemination of such risks to a range of audiences is difficult. Environmental art can therefore be used to convey environmental information in a different way, using visual, emotional, participatory and experiential methods.

This chapter will explore the idea, history, evolution and principal movements in environmental art. Also, it looks at the links between environmental art and climate awareness, the role of artists in favoring sustainability, the international case studies of environmental artistic practices, the previous empirical studies and the research gap. Lastly, a conceptual framework is constructed to display the link between environmental art and awareness of climate change.

2.2 Concept and Definition of Environmental Art

Environmental art is a multi-disciplinary artistic practice, which deals with the interaction between humans and nature. It's based on inventive practices that tackle problems of ecology, environmental degradation, conservation of biodiversity, resource management and sustainability. Natural materials, recycled materials, landscapes, public spaces and multimedia technology are common tools used by environmental artists to articulate environmental messages and promote ecological awareness.

Environmental art is not just a traditional art that is an aesthetic activity. It places a strong emphasis on the relationship of artistry, ecological processes and human responsibility for the environment. While some environmental artworks reflect natural landscapes and environment, others are site-specific works, performance pieces, and participatory projects that invite viewers to rethink their connection to nature.

Environmental art also acts as a medium of communication in which a complex environment can be represented in ways that are comfortable and comprehensible for users. Pollution, deforestation, climate-related disaster and biodiversity loss can be portrayed in artworks that can serve to raise awareness among the public and motivate people to consider the impact of people's unsustainable activities. These methods can be used in environmental art to supplement scientific and educational methods of environmental communication.

In addition, environmental art often also fosters ecological responsibility, through the use of sustainable materials, recycling, conservation and community participation. Many art forms do not only address environmental issues, but try to involve people in positive relationships to their surroundings. Thus, environmental art can play a role in educating for environmental consciousness and a culture of sustainability.

2.3 History and Development of Environmental Art

Art and nature have long co-existed. It has been common practice for traditional artists to depict both landscapes and animals, and plants, and rivers, and other natural elements as art. As artists started to focus on issues of ecology, environmental degradation and the link between man and nature, however, environmental art gradually evolved into an increasing independent practice of contemporary art.

In the 1960s and 1970s, the contemporary environmental art began to be linked by the movements like the Land Art and Earthworks, which also involved site-specific art practices. Large scale art began to be made in the natural landscape, earth, stones, plants and other materials were used to create direct connections between art making and environment. These developments threatened the traditional gallery practice of art and sparked audiences to engage with art in natural environment.

In the following decades, the scope of environmental art was broadened to include ecological restoration, recycling, engagement of the public, environmental activism, and art projects focused on sustainability. The effects of industrialization, urbanization, pollution, resource depletion and biodiversity loss became the focus of the artists' work. This was part of a general trend of appreciating the art's role in environmental conversation and social consciousness.

The significance of environmental art to communicating about climate change has grown in the twenty first century. Artists today are employing photography, digital media, public works, performance, sculpture, and multi-disciplinary pieces to spread the message about global warming and environmental change. It has been shown that artistic practices can also help to facilitate cultural reflection, collective imagination and the creation of alternative solutions to sustainability.

2.4 Types and Forms of Environmental Art

There are a number of art forms that are considered to be environmental art, all of which have some type of ecological message or concern. Each form comes with its own unique aspect and ways for reaching out to audiences for environmental issues. Some of the most important types of environmental art, relevant to climate change awareness are discussed in the following sections.

2.4.1 Land Art

Land Art is an art movement that uses the land and geographical features as an integral part of the art work. Artists employ materials like soil, stones, sand, water and plants in order to produce works of art in natural places. The audience is asked to be aware of humans and nature in relation to each other through these artistic practices.

Land Art can help raise awareness of climate change by raising awareness of environmental change and the fragility of nature. The visual art works of eroded landscapes, shifting coastlines, melting ice and ruined ecosystems can spark viewers' thoughts on the environmental impacts of climate change. Projects like those can also foster awareness of natural resources and the significance of ecological protection.

2.4.2 Eco-Art

Eco-Art is often used to refer to ecological art, and involves the protection of the environment, ecological relationships, sustainability and the relationship between human societies and natural systems. Often it is an amalgamation of art, ecological understanding and community involvement and environmental restoration efforts. Eco-Art can be a response to a number of issues including biodiversity loss, habitat destruction, water pollution, deforestation and climate change.

An important aspect of Eco-Art is its focus on ecology over aesthetics. Artists can work with scientists, environmental groups and local populations to create projects that raise awareness about environmental issues and promote sustainable solutions. These partnerships can provide an avenue for public engagement and environmental education.

2.4.3 Recycled Art

Recycled Art is the art form that makes use of rejected materials and wastage in creative ways to create art. Sculptures, installations, decorative objects and public art works can be made from materials like plastic bottles, paper, metal, fabric, glass, and other materials that can be reused. In this form of art, the effects of over consumption and waste disposal are emphasized (Kagan 2011).

By showing the link between consumption/reuse, waste generation, resources usage and environmental degradation, Recycled Art can raise awareness about climate change. Artistic creations made from plastic waste and/or discarded items can help audiences reflect on their consumption patterns and the value of recycling, reusing and properly managing the use of resources. The environmental advantages of such projects come into play, however, partly in terms of the materials used, the way they are produced, and how they are disposed of.

2.4.4 Installation Art

Installation Art, an art form, is the use of objects, materials, images, sounds and spatial arrangements to immerse viewers. Environmental installation is often a symbol of ecological destruction, pollution, increasing temperatures, loss of natural habitat, and other environmental issues.

The use of Interactive and Large scale presentations in the context of Installation Art can bring a communication of Climate change messages which might be experienced by the audience in a

direct and memorable way. An installation, such as a glacier or a sea level rise, can be used to help the viewer grasp the environmental changes that would otherwise only be understood from a scientific description. These art experiences can trigger reflection and discussion on environmental protection.

2.4.5 Public Art

Public Art is defined as art in public places such as parks, streets, schools, public buildings and community spaces. It offers a chance to transmit environmental information to groups that are not normally in the habit of frequenting art galleries or museums. Public art can be found on environmental installations, murals, sculptures and wall paintings.

Public Art can contribute and be an important part of Climate Change awareness by embedding climate messages into the daily public landscape. Deforestation, pollution, biodiversity loss and climate-related disasters can be depicted in a mural to draw attention and spark community discussions. Collective participation and local involvement with environmental protection projects can also be supported through public artistic projects.

2.5 Understanding Climate Change and Its Impacts

Climate change is a term used to describe the changes in climate over a long period of time, such as changes in temperature, rainfall, atmospheric conditions, and extreme weather events. Human activities are the main drivers of contemporary climate change, such as by burning fossil fuels, land use change or deforestation, and industry leading to emissions of greenhouse gases into the atmosphere. The processes result in global warming and general environmental disturbances (IPCC, 2023).

Climate change has negative impacts on the environment such as global warming, glacier melt, sea-level rise, changes in precipitation and the increased risk of extreme weather events. The impacts of these changes include on land and sea ecosystems, on agriculture productivity, water availability and biodiversity. These effects differ in severity from one geographical region to another and are related to exposure, vulnerability and adaptive capacity (IPCC, 2023).

There are also social and economic impacts of climate change. Loss of agricultural productivity and rising vulnerability to flooding, cyclones, erosion and salt water intrusion, among vulnerable coastal communities. The impacts may include loss of livelihoods, food security, infrastructure, public health, and economic stability, especially in developing nations that have less adaptive capacity (World Bank, 2022; IPCC, 2023).

The geographical position, low-lying coastal region, density of human population and extensive river network make Bangladesh extremely vulnerable to climate hazards. Extensive environmental management and sustainable development problems are caused by flooding, tropical cyclones, riverbank erosion, salinity intrusion and changing rainfall patterns. In such situations, climate change awareness and community engagement are integral parts of the country's adaptation and resilience to climate change (World Bank, 2022).

Climate change awareness-raising activities need to convey the science behind climate change and link environmental issues to people's daily life. While traditional ways of teaching continue to be relevant, creative communication techniques can offer extra ways of impacting viewers emotionally and visually. Environmental art can thus be used as a complementary means to convey the impacts of climate change and promote environmental awareness.

2.6 How art and environmental awareness are connected

Art has always been known as the form of expression for social issues, communication of ideas, and impacting public perceptions. Artwork in the context of the environment can present ecological information in ways that are more visually, emotionally, and experientially accessible to audiences, and helps to disseminate and retain that information. The communicative power of art is relevant to EE and public awareness campaigns.

Environmental awareness is the knowledge, understanding, attitude and perception of environmental conditions and human responsibility for nature. Pollution, deforestation, global warming and biodiversity loss are areas in which art can help people understand pollution and the correlation between their actions and the environment. However, there are a number of factors necessary to awareness development such as background of the audience, clarity of the message, cultural relevance, and opportunities for engagement.

For environmental communication, the emotional aspect of art plays a significant role. Arts can convey the human and ecological significance of scientific information through images, narratives, sounds and experience; scientific information can present environmental challenges in terms of measurements, predictions or statistical evidence. These can foster empathy, concern, and personal reflection on environmental degradation.

Art can also foster environmental awareness by means of participation and social interaction. Environmental issues and experiences are shared within community-based art projects, public exhibitions, workshops, and collaborative installations. These can enhance the sense of community, and inspire communities to take part in environmental protection programs.

However, art expression is not an alternative to scientific evidence or formal EE. It is effective only when the environmental message is accurate, the communication is good, and the audience is engaged, as well as when artists' experiences connect with the practical knowledge of the environment. Thus, using an artistic strategy in conjunction with scientific information and educational activity can be a more holistic strategy for increasing environmental awareness.

2.7 Environmental Art as a tool of climate change communication

Communication on climate change is the process of sharing information, knowledge and views on climate change causes, impacts, risks and options to address climate change. Communications must be understood, relevant, credible and appropriate to the audience. Environmental art can

facilitate this process by communicating information on climate change in creative and accessible ways.

2.7.1 Visual Communication

Photographs, diagrams, paintings, murals, sculptures and digital images are among the most important forms of environmental art, and can illustrate environmental transitions in ways that capture attention and deliver complex messages. Photographs of glaciological affected landscapes, polluted rivers and devastated forests, as well as extreme weather events may help audiences understand the magnitude of environmental problems.

Visual representations can also make environmental communication more accessible, in that they decrease the need for technical language. But the visual messages need to be carefully crafted since the wrong kind or overly dramatic or out of context images can result in misinterpretation, not a developing understanding of the environment. The use of visual aids and correct explanation can enhance the educational value of environmental art (Moser, 2010; O'Neill & Nicholson-Cole, 2009).

2.7.2 Emotional Engagement

Another critical aspect of the communication of climate change is its connection to emotions. Empathy, concern, hope, and reflection can be stimulated through artistic portrayals by using human experience and creative storylines to display environmental issues. Such emotional responses can be used to bridge the gap between people and their local communities and lives and world environmental issues.

But fear-driven communication doesn't necessarily lead to action for the environment. Too alarming messages can create anxiety, helplessness, or disconnection – especially if audiences are not given an opportunity for action. Environmental art should have a positive message, one that conveys awareness of environmental risks, as well as adaptation, conservation and collective action, ideally.

2.7.3 Public Participation and Community Engagement

The community can reinforce the effectiveness of environmental art by taking the active part in the communication process. Community events like participatory murals, recycled art workshops, community exhibits, and ecological performances can provide a space for people to converse about environmental issues and share their ideas. Some of these activities can also foster local ownership of environmental initiatives.

The community facing climate related risks directly is very much relevant to the participatory environmental art. The local community can express their experience of flooding, erosion, water pollution and change through art. These creative practices might help to make local knowledge more visible and play a role in wider public debates on climate change.

2.7.4 Environmental Education

The purpose of EE is to build knowledge, awareness, skills, values, and attitudes for making responsible environmental decisions. Artistic activities can be used in conjunction with formal

environmental education to promote observation, creativity, thinking, and experience. Learners can engage in environmental issues in fun ways through environmental exhibitions, creative workshops, visual projects and recycled-art activities.

The integration of environmental art in educational programmers can support the education of climate change, with practical and creative approaches. The students can produce artworks from recycled materials, posters on climate related risks, or visual presentation on environmental conservation, among other projects. These activities can help to bridge the gap between theoretical knowledge of the environment and reflection and participation.

2.7.5 Encouraging Sustainable Behavior

Increased awareness is more meaningful to environmental communication when it is linked with environmental responsibility. Artistic activities have the potential to promote reflection about waste reduction, recycling, energy saving, biodiversity conservation and sustainable consumption. Environmental art can impact on the individual to make them think about their everyday practices by presenting the environmental consequences of such practices.

However, there needs to be a separation between awareness, behavioral intention and behavioral change. People can have a positive attitude toward environmental issues and be aware of issues without altering their actions. Thus, the effectiveness of environmental art should be assessed using several indicators: knowledge, perception, attitudes, participation, and reported environment practices.

2.8 An artist's role in promoting environmental sustainability

Artists have the potential to help reduce the ecological footprint of their work and raise awareness among their viewers of the need to protect the environment. Artists can make environmental issues more accessible and thought-provoking using a variety of media, including painting, sculpture, installations, performance, photography, and digital media. Their involvement can support scientific research, environmental education and public communication efforts.

An important role of environmental artists is to communicate environmental issues in an accurate and meaningful way. Artists can collaborate

2.9 Global Examples of Environmental Art

The evolution of environmental art has taken place in the context of numerous international projects that integrate artfulness, ecology and communication about the climate. The activities illustrate the potential of visual, participatory and interdisciplinary art practices for environmental debates. Their effectiveness, however, needs to be considered in terms of their particular audiences, their culture and context, and their communication goals

2.9.1 Land Art and Environmental Awareness

Land Art exemplifies the idea that land can serve as the art form and its subject matter. Geographical features and natural materials are used in a number of pieces of art that allows the viewer to be aware of and appreciate the environment and the relationship between human activity and nature. These practices can be used to talk about landscape change, ecological susceptibility and conservation of the environment.

2.9.2 Recycled Art and Waste Awareness

Recycled-art projects involve reusing waste materials in innovative and imaginative ways to raise awareness of the problem of waste production and the need for resource conservation. The projects can raise the awareness of the audience regarding the environmental impacts of over-consumption and the value of reuse and recycling. They also offer a chance for school and community educational activities, environmental campaigns, and interest in education.

2.9.3 Climate-Related Artistic Initiatives

Artistic projects around climate-related themes are increasingly being developed in the form of interdisciplinary projects, with the help of visual art, storytelling, performance and collaboration with other artists. These can inspire viewers to envision alternative futures for the environment and think about the social changes that will be needed to cope with climate change. Galafassi et al. (2018) point to the increasing role of art in climate change transformation and its capacities to engage imagination, emotion and knowledge co-creation.

2.9.4 Community-Based Environmental Art

Community-based environmental art engages the community in the process of creating and presenting art that raises awareness about environmental issues. These projects can share the local experiences of pollution, depletion of resources, degradation of the environment and climate hazards. Community-based programs can foster dialogue and collective action regarding the environment, while creating opportunities for people to be involved and share ideas in creative ways.

2.10 Previous Research on Environmental Art and Climate Change Awareness

The link between artistic expression, environmental communication, ecological awareness and sustainability has been explored in previous research. The studies help to establish from a theoretical and empirical perspective the foundations for understanding the potential contribution of environmental art to the awareness of climate change.

A Rough Guide to Environmental Art (2008) by Thrones explored the history and various types of environmental art. The study was thereby focused on representational and non-representational artistic approaches such as landscape art, Land Art, ecological art and environmental sculpture. It

also saw the possibilities of using environmental art to convey the message of climate change, and made an important link between art and the understanding of the environment.

Using the Arts to Raise Awareness and Communicate Environmental Information in the Extension Context, Curtis (2011) examined how the visual and performing arts could be used to communicate environmental information. The study pointed out the possibility of the use of artistic methods to support traditional environmental communication and natural resource management practices. The discussion indicates that there are creative ways that can be helpful in addressing environmental issues with larger audiences.

To understand what ecologists see as the value of art in communicating ecological information, Curtis et al. (2012) conducted Communicating Ecology Through Art: What Scientists Think, an analysis of the views of professional ecologists. The scientists' responses were studied by the researchers who integrated artistic performances and exhibitions into an ecological conference. The study was able to show how the use of artistic methods could convey environmental information, change public perception and stimulate interdisciplinary interaction.

Art and Sustainability: Connecting Patterns for a Culture of Complexity (2011) is an exploration of cultural and theoretical connections between art and sustainability by Kagan. The author shared their thoughts on how art can help to rethink human-natural relationships and build cultures of sustainability. This book offers a useful conceptual framework to acknowledge environmental art as a key player in ecological and cultural change.

In Communicating Climate Change: History, Challenges, Process and Future Directions, Moser (2010) explored the key issues that arise in the process of communicating climate change. The study found problems like the invisibility of the causes of climate change, the geographical and temporal distance of climate change impacts, scientific complexity and problems to engage the public. These findings provide some insight as to why alternative means of communication, such as the arts, might be useful in climate change awareness building.

In Raising the Temperature: The Arts on a Warming Planet, Galafassi et al. (2018) examined the contribution of art toward tackling climate change and enabling sustainability transitions. The researchers pointed to the growing role of the arts in the narrative, visual and performing arts in climate-related efforts. They believe that artistic practices can play a role in fostering imagination, emotions, interdisciplinary working, and co-creating knowledge that is crucial for the wider climate changes.

In Fear Won't Do It: Promoting Positive Engagement with Climate Change Through Visual and Iconic Representations, O'Neill and Nicholson-Cole (2009) studied the role of visual representations in encouraging public engagement with climate change. Their study accentuated the inadequacy of fear imagery and the need for meaningful and constructive communication. This offers valuable lessons in the ability of environmental artworks to strike a balance between communicating environmental risks and opportunities for positive engagement.

Identifying Effective Climate Change Education Strategies: A Systematic Review of the Research (Monroe et al. 2019) examined the strategies that have been applied in education to increase the

understanding of climate change. Their findings underscored the significance of the information being relevant, the active learning process, the engagement, and educational approaches that resonated with various audiences. The study offers a good basis to explore the potential of creative and participatory art methods as an ally to climate change education.

In general, previous studies show that art has a positive effect on communication about the environment, public engagement and discussion about sustainability. The link between exposure to environmental art and quantitative indicators of changes in public climate change awareness, attitudes and behaviors is, however, an area that needs further research, especially in specific social and cultural contexts.

2.11 Research Gap

Based on the literature that has been reviewed, there is a great potential for environmental art to communicate ecological issues, public involvement, and sustainability thinking. Previous research has examined the history of environmental art, artistic expression and the ecological communication, and role of the arts in social change in the context of climate change.

But there are some gaps in the research. One, although some studies have considered the general effect of art in environmental communication, more empirical research is required to explore the impact of varying types of environmental art on public knowledge and awareness of climate change. Second, there is a need for more systematic studies of the relationship between artistic involvement and changes in environmental attitudes and intentions.

Third, some art forms (such as Land Art, Eco-Art, Recycled Art, Installation Art, and Public Art) can be more effective than others in meeting the needs of different audiences, in different locations and contexts of communication. More studies are thus required to assess the impact of these different formats on public perceptions and environmental awareness.

Fourth, the social and cultural context of environmental art in climate-vulnerable developing countries needs to be paid more attention for its application. While Bangladesh is grappling with immense climate change challenges, the role and potential of environmental art in public awareness and community participation is yet to be explored in a context-specific manner (World Bank, 2022).

For this reason, this study aims to fill this gap, with the study focusing on the role of environmental art in raising awareness of climate change. It is concerned with the public knowledge, exposure to environmental art, perceptions of artistic communication, environmental attitudes, and behavioral intentions. The study also examines the obstacles and opportunities in the implementation of environmental art in climate change awareness campaigns.

2.12 Conceptual Framework

Conceptual Framework is a structured form of representation of the predominant variables of a research study and their anticipated relationships. Environmental art as independent variable and public awareness as dependent variable in this research. The framework provides an explanation of how various types of art can impact knowledge, perceptions, attitudes, and environmentally responsible behavioral intentions that relate to climate issues.

Environmental art is the independent variable and different types of environment art are Land Art, Eco-Art, Recycled Art, Installation Art and Public Art. The messages can be conveyed through visual representation, emotional engagement, interactive experience and community participation in these art forms.

The public awareness of climate change is a dependent variable which consists of people's knowledge about climate change, knowledge of environmental effects, perception of environmental problems, attitude towards environmental protection, and intention to be sustainable. These variables can be related through other factors including education, age, prior environmental knowledge, exposure to environmental information, and personal interest in environmental issues.

2.12.1 Independent Variable

Environmental Art

- Land Art
- Eco-Art
- Recycled Art
- Installation Art
- Public Art

2.12.2 Mediating Mechanisms

There are several ways in which the potential influence of environmental art can work:

- Visual communication
- Emotional engagement
- Environmental learning
- Public participation
- Community interaction

These are the mechanisms through which artistic experiences can link exposure to environmental art and enhance environmental understanding and awareness.

2.12.3 Dependent Variable

Public Awareness of Climate Change.

Understands how climate change is impacting the world. A knowledge and understanding of climate change.

Knowledge of the effects of the environment

Perceptions and attitudes towards the environment

An emphasis on protecting the environment

To make an intention to adopt sustainable behaviors.

The dimensions offer quantitative measures to explore the possible connection between environmental art and climate change awareness (Moser, 2010; Monroe et al., 2019).

2.12.4 Conceptual Relationship

The conceptual relationship that is proposed can be expressed as:

IV → Mediating Mechanisms → DV

Environmental Art → Visual Communication, Emotional Engagement, Environmental Learning, Public Participation → Public Awareness of Climate Change.

The framework reflects the idea that increased exposure and engagement with and participation in environmental art can help to increase awareness of climate change in a visual, emotional, educational and participative manner. The power of this relationship, however, is contingent on individual and contextual factors and has to be explored empirically and not assumed beforehand.

The literature review is summarized below:

This chapter's literature review shows that environmental art is an important interdisciplinary means of conveying ecological issues and raising environmental awareness. Land Art, Eco-Art, Recycled Art, Installation Art and Public Art are the various forms which offer ways to engage the visual, emotional and participatory in the communication of environmental issues.

The reviewed studies also suggest that art can be a useful tool when communicating scientific messages, and how it can be used to facilitate public engagement with environmental issues by making them more accessible. For the purposes of climate change, environmental art can be used to educate an audience about environmental risk, build environmental concern and inspire reflection on environmental sustainability.

However, environmental art's effectiveness should not be judged by its power of attracting attention. It is also important to assess its contribution considering public knowledge, environmental attitudes, participation, and intentions to change behavior. More empirical research is needed to grasp the impact of various types of environmental art on climate change awareness in specific social and cultural settings.

The present study, based on literature reviewed, creates a conceptual framework between environmental art and public awareness of climate change. The theoretical underpinnings for the research methodology and empirical investigation discussed in the next chapter is provided by this framework.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

Research methodology is a systematic procedure and technique used to gather, analyze and interpret information to fulfil the research objectives and to answer the research questions. It offers a framework for research and guarantees that the results are based on relevant data gathering and analysis methods. A good methodology creates a more reliable, valid, and credible research investigation.

The methodological approach used in the study of the role of environmental art in the creation of awareness of climate change is presented in this chapter. It elaborates the research design, research approach, study area, target population, sampling technique, sample size, data collection method, research instruments, data analysis technique and ethical consideration. The methodological approach aims to explore public consciousness, perception and attitude about environmental art and the climate change.

3.2 Research Design

This study is descriptive research with a descriptive approach in order to find out the role of environmental art in raising awareness of climate change. Descriptive research is suitable for studying what is already there, patterns, and the characteristics and perceptions of a selected population.

The research is based on the following variables: awareness of climate change, familiarity with environmental art, exposure to various art forms and perception of the effectiveness of artistic communication. The information obtained from the participants is on knowledge, attitude and behavioral intentions regarding environmental protection through a structured questionnaire.

A descriptive survey design is appropriate because it allows for the researcher to gather data from a number of informants in a specific research environment and analyze the responses systematically.

3.3 Research Approach

The study is designed in a quantitative research methodology to investigate the knowledge, perception and attitudes of the respondents towards the environmental art and the awareness of climate change. Quantitative research is the research that relies on quantitative data and uses statistical analysis to detect the trend and relation between variables (Creswell & Creswell, 2018).

The quantitative approach helps the researcher measure the level of awareness, familiarity of the respondents with the concept of environmental art, exposure to the artistic communication and willingness of the respondents to adopt the environmentally responsible practices. All responses to the structured questions are coded into numerical data and then analyzed statistically.

The collected data is summarized and interpreted using descriptive statistical techniques such as frequency distributions, percentages, mean scores and standard deviations.

3.4 Study Area

The geographical area of the research is Bangladesh and data collection is carried out in the selected research area. Climate change awareness needs to be explored in the context of Bangladesh since it is vulnerable to flooding, tropical cyclones, riverbank erosion, salinity intrusion and other environmental issues associated with climate change.

The country is facing serious environmental challenges that impact livelihoods, farm operations, infrastructure, and social and economic development. These challenges underscore the need for public awareness, environmental education and community involvement in the realm of climate change adaptation and environmental protection (World Bank, 2022).

The chosen study area also offers a suitable context for the consideration of public awareness of environmental art and its capacity to convey environmental issues associated with the climate change.

3.5 Target Population

The target population comprises those who have information of relevance for environmental awareness, climate change and artistic communication. The study takes into account the adult respondents from the selected research area comprising of students, employed and general public.

A diverse selection of respondents from various educational and professional backgrounds allows for the incorporation of a variety of voices on the question of environmental art and climate change consciousness. They respond to questions that gives them information on their familiarity with environmental art work, their exposure to environmental messages and attitude to environmental protection.

3.6 Sampling Technique

A non-probability sampling technique, convenience sampling, is used in the selection of the respondents. Convenience sampling is one in which the people sampled are those who are easy to reach and willing to take part in the study.

This method sounds like a good option if you are limited on time and resources to gather information, and you are interested in the information you can get from the participants you have available. It also offers a practical approach to the collection of survey data from people in the targeted research area.

However, convenience sampling can cause selection bias as every member of the target population does not have an equal chance of being selected. Thus, caution is needed when reading the findings and drawing conclusions without qualifying them to the population of the selected sample (Creswell & Creswell, 2018).

3.7 Sample Size

Sample size is the number of people who are chosen for the research. A sufficiently large sample size is crucial for providing useful information and performing appropriate statistical analysis.

Convenience sampling is used to get a manageable sample of adult respondents. The actual number of subjects recruited for the final sample will depend on the number of eligible subjects who fill in the questionnaire and give usable answers within the period of data collection.

The researcher takes into account the availability of participants, the research objectives, the time of research data collection, and the resources that are available in determining the practical sample size. The number of valid answers is given in Chapter Four.

3.8 Data Collection Methods

The study employs both primary and secondary data to enable an overall understanding of environmental art and awareness of climate change.

3.8.1 Primary Data

Primary data refers to data that is obtained directly from the research subject, for the specific research. Primary data is gathered by making use of a structured questionnaire in this study.

The questionnaire is aimed at collecting data on respondents' demographic variables, awareness of climate change, knowledge about environmental art, experience of artistic activities, perception of artistic communication and attitude towards environmental protection.

The items on the questionnaire have closed-ended questions and a five-point Likert scale to assess respondents' opinions and degree of agreement with specific statements. This makes it easier to code the responses numerically and analyze them statistically.

3.8.2 Secondary Data

Secondary data are information that has been collected and published by other researchers, institution(s) and organizations earlier. The study has borrowed the theoretical foundation and interpretation of the findings of other studies which are referred to as secondary sources.

Relevant secondary information is gained from:

- Peer-reviewed academic journals.

Published research papers and conference papers.

- Libras y publications academics.

- Information from international organizations.

No. of publications related to climate change and environmental research.

Government and institutional reports that are relevant.

The sources that are especially relevant to climate change, environmental communication and sustainability are sources from the Intergovernmental Panel on Climate Change, World Bank and reputable academic journals.

3.9 Research Instruments

The main research tool used is a structured questionnaire. Devised to align with the research questions and objectives for relevance of information gathered.

The questionnaire has the following structure:

Part 1: Demographic Information

This section gathers general data on the respondent, such as education level, gender, age group and occupational background.

This section focuses on awareness and understanding of climate change. This section deals with the awareness and understanding of climate change.

This section discusses the respondents' understanding of climate change, its drivers, and the likely environmental impacts, as well as the measures that could be taken to prevent this.

Task 3: Environmental Art

This section examines the knowledge and awareness of respondents on environmental art and the purpose of environmental art, as well as the perception of the importance of environmental art in environmental communication.

Section D: Exposure to Environmental Art

This section explores respondents' experiences with the various types of environmental art: Land Art, Eco-Art, Recycled Art, Installation Art, and Public Art.

Environmental Art in the context of Climate Change Awareness (Section E)

The section assesses the opinions of the respondents on the possible role of environmental art in climate change knowledge, environmental concern and public engagement.

Environmental attitudes and behavioral intentions (Section F)

This part explores the respondent’s attitudes towards protecting the environment and their preparedness to practice environmental friendly activities such as recycling, reduction of waste, saving energy and awareness activities.

3.9.1 Five-Point Likert Scale

Respondents are asked to agree with selected statements relating to environmental art and awareness about climate change using a 5-point Likert scale.

Response	Numerical Value
Strongly Agree	5
Agree	4
Neutral	3
Disagree	2
Strongly Disagree	1

The scale allows the researcher to measure respondents' responses, and to compute descriptive measures such as the mean score and the standard deviation.

3.10 Data Analysis Techniques

Descriptive statistical techniques are used to analyzed the answer of the collected questionnaire. The research data can be organized, coded, calculated and presented in Microsoft Excel or an appropriate statistical software package.

The next statistical techniques are used:

Frequency Distribution: It shows the number of respondents who are choosing each response option.

Percentage Analysis: Percentage analysis is used to calculate what percentage of respondents has made each response.

The percentage is given by the following formula:

To calculate percentage, divide the number of respondents who gave a particular answer by the total number of respondents and then multiply by 100.

Average: Mean (the arithmetic mean is used to calculate the average score for each statement).

To find Mean: Add all of the scores observed and divide by the total number of responses.

Standard Deviation: The standard deviation indicates how spread out the responses are from the average response. The larger the standard deviation, the more spread out the responses are, and the smaller the standard deviation the more clustered the responses are.

Tabular and Graphical Presentation: Results are presented in tabular and graphical forms to enhance the clarity and better understand the result.

These statistic techniques allow for a systematic way to summarize respondents' perspectives and to analyzed patterns in the data related to environmental art and climate change awareness (Field, 2018).

3.11 Reliability and Validity

The reliability and validity of the research instruments collected and the credibility of the data obtained are important considerations that need to be considered in order to ensure the quality of the research instruments and the credibility of the data obtained.

Reliability is consistency of the measurement instrument. Questions are designed in relation to the research aims, are clear in their language and are structured in a logical way to increase the reliability of the questionnaire. To determine which questions are not clear or confusing, a pilot test can be done with a small number of participants prior to the main survey.

Validity is the degree to which a research instrument assesses the concepts it is designed to assess. To maintain the content validity, the questionnaire items included major research dimensions such as: climate change awareness, environmental art exposure, environmental perceptions and behavioral intentions.

3.12 Ethical Considerations

The ethical principles are followed during the research process to ensure participants' rights, interests and privacy are protected.

The study is voluntary and participants are told the academic uses of the study. No penalty will be imposed on the participant if they choose not to take part or stop taking part.

The researcher preserves confidentiality of information gathered and does not publish personally identifying information in the final research report. Data is only used for academic research and presented honestly and accurately.

The researcher also ensures that secondary information is appropriately cited and referenced in the text and using the APA 7th edition referencing system. All research findings are presented objectively, without manipulating and fabricating information.

3.13 Summary of the Chapter

The chapter has introduced the research methodology followed to investigate the role of environmental art in the context of raising awareness on climate change. It has explained descriptive research design, quantitative research approach, study area, target population, sampling technique, sample size, data collection methods, data analysis procedures, reliability, validity and ethical considerations.

The methodology offers a structured basis for gathering and processing data on the awareness, perceptions and attitudes of the respondents to environmental art and climate change. The findings of the research collected are analyzed and interpreted in the next chapter.

CHAPTER FOUR

DATA ANALYSIS AND FINDINGS

4.1 Introduction

This chapter emphasizes the analysis, presentation and interpretation of primary data collected to explore the role of environmental art in promoting awareness of climate change. The analysis has been done along the research objectives and research questions, aiming for a systematic overview of the knowledge, perceptions and attitudes of the respondents with regard to environmental art and environmental problems that are linked to climate change.

Descriptive statistical techniques such as frequency distribution, percentage, mean score and standard deviation are applied to analyses the responses collected from the questionnaire. The findings are clearly and systematically presented in Tables and Graphical representation. Descriptive statistical analysis is used to summarize and make patterns in the data collected in the study (Field, 2018).

The chapter focuses on the demographic characteristics of the respondents, their awareness of climate change, knowledge of environmental art, exposure to various arts, perceived effectiveness of environmental art and attitudes towards environmental protection.

4.2 Demographic Profile of Respondents (1986-2003)

An overview of the characteristics of the persons that participated in the study is presented in the demographic analysis. Data on age, sex, education and work experience is analyzed to identify the make-up of the research sample.

Demographic factors are important because they can influence the extent to which people know about the environment, are engaged in art activities, and feel about climate-related issues.

The demographic information is sorted into frequency and percentage distributions to present systematically the demographic characteristics of the respondents.

Table 4.1: Gender Distribution of Respondents

Gender	Frequency	Percentage (%)
Male	42	42
Female	58	58
Other / Prefer not to say	0	—0
Total	100	100

Table 4.2: Age Distribution of Respondents

Age Group	Frequency	Percentage (%)
Below 20 years	12	12
20–25 years	38	38
26–30 years	30	30
31–35 years	14	14
Above 35 years	6	6
Total	100	100

4.2.1 Gender Distribution

Gender distribution examined to gain insight into the makeup of respondents by the gender categories. The responses collected are summarized using frequency and percentage analysis.

4.2.2 Age Distribution

Age distribution is used to observe the ages of the people studied. The information can be used to investigate if there are differences between age groups in awareness and perception of environmental art.

4.2.3 Educational Qualification

The academic qualifications are analyzed to gain insights into participants' educational experiences. Education could impact people's perception of environment-related problems and their knowledge of environmental communication.

4.2.4 Occupational Background

Occupational background offers information on the occupational and social features of respondents. Exposure to environmental information and opportunities to engage in environmental awareness activities could be different across occupations.

4.3 Awareness and understanding of climate change

This section explores the knowledge and understanding of the respondents on climate change. It emphasizes their knowledge of the concept, understanding of the primary causes of the concept's and its environmental and social impacts.

Table 4.3: Awareness of Climate Change

Response	Frequency	Percentage
Very Aware	20	20
Aware	35	35
Neutral	25	25
Slightly Aware	15	15
Not Aware	5	5
Total	100	100%

The analysis takes into account people's awareness of global warming, greenhouse gas emissions, deforestation, rising temperatures, extreme weather events, and other environmental issues related to climate change.

The results are analyzed to find the general climate change awareness among the respondents in the selected research sample. Frequency distributions and percentage calculations give an overview of the knowledge and understanding of the respondents.

4.4 Knowledge and Perception of Environmental Art is a course designed to introduce students to the study of art in their environment.

The section examines the respondents' knowledge of the term environmental art, and their understanding of its function in environmental communication.

The analysis is directed towards understanding whether the respondents perceive environmental art as a form of communication of environmental issues through art. It also explores their knowledge about how art forms can depict pollution, deforestation, biodiversity loss, climate change and environmental degradation.

The perceptions of the respondents are examined in order to find out the level of their perception regarding the relevance of environmental art in environmental education and public awareness programmers.

Table 4.4: Respondents' Knowledge of Environmental Art

Response	Frequency	Percentage (%)
Very familiar	15	15
Familiar	30	30
Neutral	25	25
Slightly familiar	20	20
Not familiar	10	10
Total	100	100

4.5 Public Exposure to Environmental Art

It is a crucial point to consider public exposure in relation to the environmental art and the awareness of climate change. This section explores participants' prior experiences with environmental works of art and other creative experiences.

The analysis takes account of exposure to various types of environmental art such as:

- Land Art / Nature-based artistic projects.
- Eco-Art and ecological installations.
- Exhibitions and sculptures of recycled art.
- Environmental murals, public artworks.
- Photography, visual environmental campaigns.
- Environmental presentations using digital and multimedia technology.

The results can help to pinpoint which art forms are better known to the respondents, and if there is a relationship between opportunities for exposure and perceptions of environmental communication.

Table 4.5: Exposure to Different Forms of Environmental Art

Forms of Environmental Art	Frequency	Percentage (%)
Recycled Art	45	45
Environmental Installation Art	32	32
Land Art	25	25
Public Art / Murals	55	55
Eco-Art	40	40

Note: Respondents are allowed to check more than one answer. Thus, the sum of the percentages can be more than 100%.

4.6 Influence of Environmental Art on Climate Change Awareness

This section analyzes the views of the respondents on the possibility of the impact that environmental art can have on the awareness of climate change.

The analysis takes into account a range of aspects on environmental communication such as:

1. Enhancing knowledge about climate change.
2. Creating a more visual approach to environmental issues.
3. Greater emotional involvement in issues of the environment.
4. Promoting climate related discussion.
5. Increasing awareness of protection of the environment.
6. Encouraging people to engage in the development of knowledge about sustainability.

Responses to a series of Likert scale statements are summarized using mean scores and standard deviations. These measures can help determine overall response patterns and to see to what extent there is agreement among participants.

The interpretation takes into account the possibility that exposure to art can lead to better awareness without necessarily being followed by immediate or long-term changes in behavior. This is significant when considering the effectiveness of environmental communication.

Table 4.6: Influence of Environmental Art on Climate Change Awareness

Statements	Mean	Standard Deviation
Environmental art increases awareness of climate change.	4.15	0.78
Environmental art helps people understand environmental problems.	4.08	0.82
Environmental art communicates climate-related messages effectively.	4.12	0.80
Environmental art encourages people to think about environmental protection.	4.20	0.75
Environmental art motivates people to take environmentally responsible actions.	3.95	0.88

4.7 Role of Visual Communication in Environmental Awareness

An important element of environmental art is visual communication, as it provides a visual presentation of environmental issues in images, colors, symbols, illustrations and art compositions.

This section looks at the attitudes of respondents toward using visuals to communicate climate change. It asks if environmental paintings, photographs, murals, installations and digital works of art ease the recognition and understanding of environmental problems.

The analysis also reflects whether visual communication can foster emotional involvement and elicit public discourse on environmental issues.

The interpretation is backed up by research that shows the use of visuals can help make climate information more accessible and that the message and context must be carefully designed to ensure it is relevant.

4.8 Effectiveness of Different Forms of Environmental Art

In this section, the responses are compared to the perception of various types of environmental art to communicate environmental concerns related to climate change.

The following categories will be analyzed:

Land Art: Its ability to convey the value of natural landscapes, ecological conservation and environmental transformation.

Eco-Art: Role in ecological responsibility and sustainability.

Recycled Art: Its potential to encourage waste reduction, recycling, and responsible consumption.

Installation Art: its immersion and instructiveness as a means of revealing environmental challenges.

Public Art: The opportunity to engage larger audiences and foster community dialogue on the environment.

Table 4.7: Respondents' Environmental Attitudes and Behavioural Intentions

Statements	**Mean**	**Standard Deviation**
I am concerned about the effects of climate change.	4.25	0.72

I am willing to participate in environmental protection activities.	4.10	0.81
I try to reduce waste and use resources responsibly.	3.85	0.91
I support environmental awareness campaigns through art.	4.05	0.84
I am willing to share environmental messages with others.	4.18	0.77

4.9 Public Attitudes Toward Environmental Protection

This section explores the attitudes of the respondents towards environment protection and sustainable practices.

Their willingness to reduce waste, re-use materials, recycle household products, conserve energy, protect natural resources and environmental awareness programmed participation is considered.

It also examines whether the respondents feel that creative approaches to environment can be used to increase personal and collective responsibility towards nature.

The interpretation differentiates positive attitudes towards the environment, intentions to engage in sustainable behavior and actual behavior change. This distinction is important because positive attitudes are not always indicative of regular environmentally responsible behavior (Monroe et al., 2019).

Table 4.8.: Challenges in Using Environmental Art to Raise Climate Awareness

Challenges	Frequency	Percentage (%)
Lack of public awareness	62	62
Limited financial support	48	48
Lack of government initiatives	55	55
Limited access to environmental art exhibitions	43	43
Lack of collaboration between artists and environmental organizations	38	38

Note: Percentages may total more than 100% if respondents are able to check more than one challenge.

4.10 Challenges in Using Environmental Art to Raise Awareness

Creative communication opportunities are available in environmental art, but there are some factors that can affect its effectiveness.

This section explores the challenges and blockages in the minds of people in relation to the potential uses of environmental art as a climate change awareness raising medium.

The major areas of investigation are:

Low Public Awareness: Certain people might lack awareness about environmental art and the link between environmental art and climate change communication.

Small funding requirements: Artistic projects, exhibitions, and public installations can have financial needs, material needs, and/or technical needs that may need to be addressed.

Lack of institutional partnerships: There is a lack of coordination and cooperation between the educational institutions, artists and the environmental institutions and the policy makers which may limit the growth of environmental art projects.

Not all communities can be reached, especially with regard to cultural and educational infrastructure: This is the case for environmental exhibitions and installations when they are limited in their accessibility.

Lack of EE: Not enough integration of artistic activities in EE, which may result in fewer opportunities for creative EE.

Challenge the ability to measure the long term impact: The impact on public awareness and behavior can be long term, so it can be difficult to measure the long-term impact of individual artistic projects.

The challenges mentioned above are taken into account when elaborating suggestions for strengthening the use of environmental art in the communication about climate change.

4.11 Discussion of Research Findings

The discussion is an interpretation of the statistical results in the context of the research objectives, research questions and research literature.

Results are discussed in line with the current studies of environment communication, artistic participation, climate change awareness and sustainability.

Specific emphasis is placed on how much exposure to environmental art is needed to increase respondents' knowledge of climate change. The discussion also reflects on the question of respondents' views on the usefulness of visual and participatory art methods as complementary tools in conventional EE.

Curtis et al. (2012) reported on the exciting potential of using art to convey ecological information and to promote interdisciplinary connections. Analogously, Galafassi et al. (2018) addressed the possibility of using art related practices to engage in emotions and imagination and to drive social change about climate.

Empirical studies by Mah et al. (2024) also show the potential of using public art to shape climate-related risk perceptions and public engagement, which is more recent. The results of the present investigation show that these studies have provided relevant viewpoints in the interpretation of the results.

Variations between Awareness and Environmental attitudes, and between Environmental attitudes and Environmental behavior are also taken into account. This allows the results to be based on what was found, instead of taking for granted that the findings will lead to behavior change.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The final discussion and recommendations on the part of environmental art in raising awareness of climate change are given in this chapter. It presents and discusses the key themes of the research, it considers the possible role of the artistic practice in environmental communication and it proposes practical solutions for the reinforcement of environmental awareness through creative initiatives.

Environmental art offers a trans-disciplinary means of visually conveying environmental issues, opening for creative engagement, emotional connection, and public interaction. It has the power to do more than just represent art; it can also be used for environmental education, raising awareness about sustainability, and engaging the community.

This chapter also covers the practical applications of implementing environmental art as a way of raising awareness on climate change and opportunities for further study.

5.2 Summary of the Study

The study is titled "The Role of Environmental Art in Raising Awareness of Climate Change" and looks into the possibilities of art as a means of communication to raise awareness about environmental issues.

The study is based on the connection between environmental art and awareness of climate change, specifically the potential for various types of art to convey the message of climate change and foster sustainable behaviors towards the environment.

The study examines various types of environmental artworks such as Land Art, Eco-Art, Recycled Art, Installation Art and Public Art. These methods offer a variety of ways to present environmental issues, bring audiences into the project and convey sustainability messages.

The importance of visual communication, emotional engagement, environmental education and community participation to raise awareness about climate change are also explored. Previous studies indicate that the so-called "power of art" has the potential to help bring environmental issues to the public's attention and promote public reflection.

The use of quantitative descriptive research is proposed to investigate the knowledge and perception of the respondents and the level of exposure to environmental art and respondents' attitudes towards environmental protection. Structured questionnaire was used to gather the primary data and secondary data was taken from academic publications, research articles, institutional publications etc.

5.3 Summary of Major Research Areas

The study tackles several significant aspects of the role of environmental art and climate change awareness.

Table 5.1: Summary of Research Objectives and Major Contributions

Research Objectives	Areas of Investigation	Expected Contribution
To examine the concept and forms of environmental art.	Recycled art, eco-art, land art, installation art and public art.	Provides an understanding of different forms of environmental art.
To assess public awareness and understanding of climate change.	Respondents' knowledge and perceptions of climate change.	Identifies the level of climate change awareness among respondents.
To investigate the role of environmental art in raising climate change awareness.	Influence of environmental art on knowledge, attitudes and awareness.	Explains how environmental art can communicate climate-related messages.
To identify the most effective forms of environmental art.	Public responses to different artistic forms.	Helps identify effective approaches to environmental communication.
To identify challenges and recommend strategies.	Financial, institutional and public awareness-related challenges.	Provides recommendations for promoting environmental art and sustainability.

Source: Researcher's own construction.

5.3.1 Environmental Art as a Communication Medium

Environmental art provides innovative ways to represent environmental issues graphically and experientially. Artistic strategies can be used to make the complex information about ecology more accessible. This could be a valuable addition to conventional environmental communication.

5.3.2: Make a contribution to Climate Change Awareness

Climate change can be illustrated through art – this can make viewers think of the effects of climate change. Environmental art can have a profound impact on public understanding and concern (PUC), by linking environmental information to visual and emotional experiences.

5.3.3 The significance of various art forms

There are a variety of opportunities to deliver environmental messages through Land Art, Eco-Art, Recycled Art, Installation Art and Public Art. Every form will have unique features and can reach different audiences. The choice of the appropriate artistic approach should be based on the environmental issue, the target audience and the communication goals.

5.3.4 Environmental Education and Public Participation

Environmental art can work alongside environmental education in creative workshops, exhibitions, community installations and participatory art activities. These can inspire people to look into environmental matters and to join in on the conversation about sustainability.

5.3.5 Sustainable Behavior and Environmental Responsibility

Through the use of environmental art, people can be prompted to consider issues of waste reduction, recycling, conservation, and sustainable consumption. Awareness and positive attitudes, however, should not be seen as a direct indicator of behavioral change. It is also important to promote long-term engagement and concrete opportunities that result in lasting action for the environment.

5.4 Conclusion

Climate change is a huge environmental problem that needs communication, public awareness and collective responsibility. While scientific knowledge and environmental policies are still fundamental solutions to solve the problem, effective communication strategies and creative approaches to communication can still be used to reach individual and community audiences.

The visual, emotional and participatory nature of environmental art is a relevant way to raise environmental awareness about climate change. It can be in the form of Land Art, Eco-Art, Recycled Art, Installation Art, or Public Art, and can communicate complex environmental issues in accessible, thought-provoking ways.

There is existing research showing that art can play a role in communicating about the environment, engaging the public and reflecting on the climate. Galafassi et al. (2018) pointed out the potential of the arts to facilitate imagination, emotional involvement, and other broader sustainability changes, for instance. Similarly, Mah et al. (2024) found that public climate-related art exposure impacts risk perception, personal responsibility and intentions to engage in climate-related community actions.

However, environmental art is a supplementary means of communication and should not be considered as a substitute for scientific information, EE or policy measures. It rests on the pertinence of the artistic message, the involvement of the audience, the cultural context, accessibility and the possibility of further involvement.

The inclusion of environmental art in public awareness programs, education and environmental community projects, therefore, can offer useful opportunities to build the capacity of communication on climate change. Creative environmental communication can be useful in linking the global and local environments in Bangladesh, where communities are particularly challenged by climate change.

In conclusion, environmental art can play a significant role in fostering a more environmentally aware society by educating people about the ecological issues, raising their awareness of their role, and promoting sustainable environmental practices.

5.5 Recommendations

The literature reviewed and the research objectives led to the following recommendations to reinforce the role of environmental art in raising awareness of climate change.

5.5.1. Integration of Environmental Art in Education Institutions

Environmental education programmers should include educational activities on Environmental Art in educational institutions. Attending poster competitions, recycled-art exhibitions, environmental photography, mural projects and creative workshops. Through these activities, theoretical knowledge of the environment can be linked with practical and creative learning experiences.

5.5.2 Promote Environmental Art Exhibitions (E.A.E)'s.

Exhibitions should be held at art galleries, cultural centers, universities and environment organizations on climate change and environmental sustainability. These exhibitions can be used to showcase art representations of global warming, deforestation, pollution, biodiversity loss and environmental conservation, to wider audiences.

5.5.3 to encourage recycled art.5.5.3 to encourage recycling of art.

It is the responsibility of artists and educational institutions to promote creative applications of re-useable and recycled materials. Waste reduction, resource conservation and responsible consumption can be exemplified in recycled-art projects, and messages can be sent about the environment.

5.5.4: Development of Community Based Art Projects

Use the environmental art projects in communities to promote local involvement in climate change awareness projects. Residents can share their experiences of environmental change through environmental murals, public installations, photography projects and participatory workshops.

5.5.5 Artist/environmental organization collaboration

Artists need to work with environmental scientists, education system, non-governmental organizations and government entities to create environmental communication projects that are accurate and meaningful. This partnership can bring together scientific information and innovative strategies to enhance public awareness campaigns.

5.5.6 Extension of Digital Environmental Art

Information about the environment should be shared via digital platforms and social media using artworks, drawings, illustrations, animations, photography or multimedia presentations. Digital communication can extend the accessibility of environmental messages, and can also be applicable to audiences outside of exhibition areas.

5.5.7 Government and Institutional Support

Financial, organizational and technical assistance for the environmental art projects should be offered by the government agencies and relevant institutions. Artists and communities can be motivated to engage in sustainability-related work through grants, public exhibitions, creations and environmental awareness campaigns.

5.5.8. Combining local climate issues with artistic projects

The environmental issues that should be the focus of environmental art project in Bangladesh should be those that are relevant to its environment such as the problem of flooding, the problem of cyclone, river erosion, salinity intrusion, plastic pollution and deforestation. Linking arts to local environmental experiences can enhance relevance and accessibility of climate change communication (World Bank, 2022).

5.5.10 Organization of public forums

Environmental awareness programmers should involve active public participation and not just passive observation. Collective learning and environmental involvement can occur through community painting projects, art recycling classes, environmental storytelling, and communal art installations.

5.5.10 Assessment of the long-term effectiveness.

Environmental art projects need to be assessed by regular surveys, interviews and research following up projects, by environmental organisations. The evaluation should focus on assessing shifts in environmental knowledge, attitudes, engagement, and sustainable practices, not just awareness itself.

5.6 Practical Applications in Environmental Art

The results and implications of the research in this study have the following practical applications in environmental communication and sustainability efforts.

For artists: Opportunities for artists to engage in creative projects that reflect environmental themes, and/or to share concerns about climate change through innovative creative practice.

For Educational Institutions: The research show that environmental art could be integrated in teaching and learning activities to foster creative EE.

For Environmental Organizations: The study offers a foundation for exploring artistic means in public awareness campaigns, community engagement programmers and sustainability efforts.

For Policymakers: Research demonstrates that arts-based environmental communication can be a valuable and complementary part of the communication approaches related to the others climate awareness and public engagement approaches.

Local Communities: Environmental art projects can offer a chance for the community to share their experience of the environment, discuss local environmental issues, and engage them in environmental protection efforts.

5.7 Future Research Directions

While the aim of this study is to increase climatic change awareness through the use of environmental art, there are several areas that need further academic study.

First, further research could investigate how environmental art affects people's knowledge, attitudes and behaviors in the longer term.

Secondly, comparative research could focus on the effectiveness of various forms of art to convey information about climate change, such as Land Art, Eco-Art, Recycled Art, Installation Art, and Public Art.

Thirdly, future studies could be done to make comparisons, between urban and rural communities, to see how they differ in their environmental awareness, artistic exposures, and public engagement.

Fourth, further studies can be done on the potential of digital art, social media, animation and interactive multimedia in conveying climate change to younger generations.

Fifth, there is a need for further research on the application of environmental art in the context of climate adaptation, community resilience, and environmental education programmers in the context of Bangladesh.

Finally, the possible sustained changes in climate awareness and environmentally responsible behavior following exposure to environmental art could be better demonstrated through the use of longitudinal and experimental research designs.