

# The Therapeutic Use of Poetry and Music in Climate Change Adaptation and Mitigation for Global Sustainability

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## Abstract

Poetry and music have been discovered as therapeutics which can be used in communicating to communities and institutions across cities, countries and continents of the world about the impacts of climate change and ways to adapt and mitigate effectively for global sustainability. This study explores the science of poetry and music. It also highlights how important it is for scientists, psychologists, educationists and artists to develop their creativity to obtain relevant skills which can be valuable in tackling climate change and other related environmental catastrophes which pose as global challenges today. This study identifies poetry and music as immensely valuable tools which can be used in hostile climates for climate change education, adaptation and mitigation for global sustainability. The effects and benefits of poetry and music as valuable tools for climate change education, adaptation and mitigation for global sustainability are discussed in details.

**Keywords:** Climate Change, Education, Music, Poetry

## Introduction

Climate change is one of the global trends which we must of necessity tackle with urgency in order to prevent a global warming too unbearable for the survival of mankind and to ensure global sustainability. The Intergovernmental Panel on Climate Change defines climate change as statistical variations that persist for an extended period, typically decades or longer. The Intergovernmental Panel on Climate Change (IPCC) defines adaptation as the “adjustment in natural or human systems to a new or changing environment. Adaptation to climate change refers to adjustment in natural or human systems in response to actual stimuli or their effects, which moderates harm or exploits beneficial opportunities. Various types of adaptation can be distinguished, including anticipatory and reactive adaptation, private and public adaptation, and autonomous and planned adaptation [1]. Climate mitigation is any action taken to eliminate or reduce the long-term risk and hazards of climate change to human life, property and the society. The International Panel on Climate Change defines mitigation as: “An anthropogenic intervention to reduce the sources or enhance the sinks of greenhouse gases [12].

Weather reflects short-term conditions in the atmosphere. Climate, on the other hand, refers to the average temperatures and precipitation rates over an extended period of time. When these rates change over time, it can result in profound impacts on our planet. Impacts like rising sea levels, more extreme weather events, like droughts and floods, melting glaciers, shifts in ecosystems, etc. Climate change brings about changes in precipitation levels, a rise in sea level, and more frequent and intense weather events. And it can threaten our access to such basic needs as food, water, health and shelter. It also has a profound impact on our educational sector. Of the many problems generated by our economic and industrial progress, climate change is one that dominates media headlines in recent memory. The current warming trend of the Earth's atmosphere that started with the industrial revolution has given scientists, educationists, politicians, and individuals around the world cause for great concern. Dramatic reductions in seasonal sea ice at the Earth's poles, rising sea level, shifts in precipitation patterns leading to extended droughts or flooding, and more frequent extreme weather events are just some of the effects of climate change.

Climate change education is therefore vital for preparing communities, countries and continents for the impacts of climate change and to learn how to adapt and mitigate effectively for global sustainability. Poetry and music are valuable tools for climate change adaptation and mitigation which will enable communities and institutions around the world to achieve the sustainable development goals. Poetry and music can be effectively and efficiently used in climate change education for communities and institutions around the world which in turn brings about sustainability. This paper therefore issues a clarion call for us to rise to our responsibility for global sustainability using poetry and music as valuable tools for climate change adaptation and mitigation for global sustainability.

## Methodology

Data used for this study is derived from published works including academic journal articles, conference papers, textbooks and internet materials. The researchers gathered a lot of materials for the research but summarized the characteristics of the papers that centered more on the therapeutic use of poetry and music in climate change adaptation and mitigation for global sustainability. This enabled the researchers to generate the synthesis of various researchers' views on the therapeutic use of poetry and music in climate change adaptation and mitigation for global sustainability.

## The Science of Music in Climate Change Adaptation and Mitigation

Music has been discovered to be a powerful and valuable tool which can be used to communicate to communities and institutions around the world the message of the impacts of climate change and ways to adapt and mitigate effectively for global sustainability. Music can be used in a special way to teach students both in a formal or informal setting about the use of renewable energy which is one of the climate change mitigation strategies. It passes the message to the listeners in a pleasurable manner and has the good intention of achieving a pleasurable result in climate change adaptation and mitigation for global sustainability.

Responding to thoughts regarding previous studies on music, Pascal Wallisch said, "To be honest with you, I don't think we fully understand what music is." Pascal Wallisch, a clinical assistant professor of psychology at New York University, began his lecture by explaining that what differentiates music from sound in general is repetition. "If you ask people," Wallisch said, "to judge when [a repeating sound] becomes music, there's a certain repetition frequency in which a random environmental noise becomes music." For example, as Wallisch explained, water droplets falling are just sounds, but at a certain point of repetition they would be considered musical [2]. Music therefore helps individuals to appreciate the harmony of nature and the serenity of fertility. It helps us to see the beauty of keeping the environment clean and green thereby achieving a healthy and sustainable environment for the betterment of communities and institutions globally.

Numerous studies suggest that music training can improve a variety of cognitive functions; memory, multi-tasking, co-ordination, attention and brain processing, which is particularly the case for children to the point where it has been suggested that music is an integral part to a child's curriculum [3]. Musical training increases cortical thickness which aids in anxiety, depression, attention problems and aggression. Musicians' brains are structured very differently to non-musicians: music training leads to changes in the grey and white matter of the brain and an increase of brain volume. Studies of how music benefits the brain has blossomed into a field of its own and even listening to music can help heal neurological impairments which include those with stroke, dementia, autism and Parkinson's disease [3].

Listening to music has been shown to improve memory functioning, increase rate of healing, improve your workouts and more. Patients with memory loss can often remember songs and specific song lyrics. Doctors will often use music and lyric recall to help individuals retrieve lost memories. Certain music can trigger particularly unique memories- music from a specific time period will trigger memories from that time period. Listening to music releases endorphins in the brain. Endorphins give us a heightened feeling of excitement. In addition to feeling euphoric, endorphins quell anxiety, ease pain and stabilize the immune system. With high endorphin levels, we have fewer negative effects of stress.

Music connects with the automatic nervous system (brain function, blood pressure and heartbeat) and the limbic system (feelings and emotions). When slow music is played, the bodily reaction follows suit- the heart slows down and blood pressure drops. This causes the breath to slow, which helps release tension in the neck, shoulders, stomach and back. Listening to slow or calming music on a regular basis can help our bodies relax, which over time, means less pain and faster recovery time [4]. Climate change music will certainly do good to the listeners, help them to memorize the message of climate change adaptation and mitigation and further inspire them to rise to become positive change agents to achieve global sustainability.

## The Science of Poetry in Climate Change Adaptation and Mitigation

Professor Colin Bailey, Vice President and Dean of the Faculty of Engineering and Physical Sciences, said: "The art of engineering and science is critical to address the global challenges facing society.

"It is important that our engineering and science students develop their creativity to obtain the skills to address these challenges. This initiative allowed students to express their ideas through the medium of poetry and I was particularly pleased that 166 students decided to enter the competition, with the quality of the poems being extremely high. "

John Mcauliffe added: “Reading the poems was fascinating: science and wonder combined in the best poems, but the 166 poems, a big entry for a competition confined to a single faculty, also offered a real sense of the students’ multicultural backgrounds, of how their own individual interests shape their studies of the sciences and engineering.” [5].

There is no doubt, therefore, that poetry can be used as a valuable tool to convey the message of climate change in schools, universities and institutions around the world in a very profound way. Poetry is beauty and beauty attracts. Poetry has a unique way of communicating to the listeners and readers the message of hope, beauty and love that enables them to seek creatively ways to preserve our planet from global warming. Poetry for climate change education with its healing and therapeutic benefits can be used with mothers, fathers, children, and adolescents; battered women, the elderly, the depressed, the suicidal; those living with terminal illness, the bereaved, those with HIV, the mentally ill, and even hurricane victims and soldiers returning from war who suffer post-traumatic stress. Poetry can give students a healthy outlet for surging emotions. Reading original poetry on climate change aloud in class can foster trust and empathy in the classroom community while also emphasizing speaking and listening skills that are often neglected in high school literature classes.

Climate change poetry can help in language development, creative language skills, creativity, writing skills, self-expression, and in the development of natural rhythms while helping to educate the community on climate change adaptation and mitigation. Poetry is fun and exciting and beautiful and can be used effectively for climate change education for global sustainability. Inclusion of climate change poetry and anthologies into our educational system which includes the primary schools, secondary schools, vocational institutions and universities will make it easy for our youths to learn about climate change impacts and how to adapt and mitigate effectively. Poetry helps to make the message of climate change adaptation and mitigation easily accessible and memorable to the young and old alike. Climate change poetry also helps to bring about the promotion of peace, love, unity, beauty and other attitudes needed to safe guard our environment from global warming and pollution in order to ensure global sustainability.

## The Benjy Poetry and Music Global Concepts

The Benjy Poetry and Music Global Concepts is one of the new companies in Nigeria which is very passionate about climate change education, adaptation and mitigation for global sustainability. Through the Project Green Initiative which is an arm of the company, research, seminars and symposia in the field of climate change are conducted across various institutions and communities in Nigeria with profound impacts. This passion to see the environment kept clean and green has led to a lot of study and research work on climate change education, adaptation and mitigation. It also brought about the launch of the Project Green Educational blog: [www.projectgreeninitiative.wordpress.com](http://www.projectgreeninitiative.wordpress.com) which features educational articles, events and poems about climate change adaptation and mitigation for global sustainability. This passion for a positive change of attitude towards our environment has also engineered the writing of climate change poems which is being compiled into an anthology and inspiring music to help promote the right attitudes and behaviors needed to safe-guard our environment. According to Victor Pinchuk, a Ukrainian businessman and philanthropist, “Art, freedom and creativity will change society faster than politics”.

Below is one of those climate change poems advanced by the Benjy Poetry and Music Global Concepts:

### Poem: Plant A Tree

Trees provide us with oxygen.  
Trees help keep the environment clean.  
Trees help to purify the air;  
Increasing moisture as they transpire.  
  
Trees help to prevent water pollution.  
Trees help to prevent soil erosion.  
Trees conserve energy.  
It is so beautiful to plant a tree.  
  
Trees absorb odors and pollutant gases.  
Trees provide shade for the masses.  
Trees cool the streets and the cities.  
Trees create economic opportunities.  
  
Trees are like the lungs of the planet.  
Preserver and greener of the earth.  
Trees matter beautifully and truly.  
Be dutiful to plant a tree.

Trees provide a canopy.  
 A shade for the hungry.  
 A shade from the raging heat.  
 A beautiful place for retreat.

Trees provide food.  
 Trees provide wood.  
 Trees combat climate change.  
 When properly managed.

Trees slow run off and hold soil in place.  
 As beauty and bliss, they embrace.  
 Trees help us appreciate nature.  
 Plant a tree for the future.

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### Case Study: Poem “Plant A Tree” Review by James Hope

Benjamin Anabaraonye’s poem “Plant A Tree” has ignited the global call to everyone to plant a tree. His call to plant a tree is in line with the mandate of Sustainable Development Goals (SDGs). The impact of man on the environment has been seen as a primary cause of climate change (global warming). In the poem, greater emphasis was made on the importance of having trees in our homes and societies. He can’t agree less with Richard ST. Barbe Baker when he said that “It is not merely that the world is bettered by saving, replacing, and multiplying trees. It is that an aim of this kind becomes an impulse towards developing a mood and an outlook which will increasingly make it natural to think for the future, for other people, for generations yet unborn. Planting a tree is a symbol of a looking-forward kind of action; looking forward, yet not too distantly”. Each nation has that responsibility and obligation to ensure that the environment is protected and sustained against further damages and destruction. He made this call by using the following poetic technique:

- 1. Theme:** The central theme of the poem is centered on planting a tree for the betterment of the world and curbing the menace of climate change.
- 2. Tone:** The tone of the writer is approving, hopeful and demanding.
- 3. Mood:** The writer’s mood is inviting, candid, urging, emotional and very passionate about the subject matter.
- 4. Imagery:** Imageries were also used, such as “Trees help to purify the air”, “Trees provide shade for the masses”.
- 5. Style:** The poem contains seven stanzas with each having an end rhyme of AABB. The poet exhibited a style of capitalizing each beginning line.
- 6. Techniques:** The use of Simile “Trees are like lungs of the planet”. The use of so many Personification “Preserver and greener of the earth”; The use of Repetition “trees”; The use of Hyperbole “lungs of the planet”. The use of Conjunction “Trees absorb odors and pollutant gasses.”

For the call to combat climate change in the international world, He aligned himself with this stanza:

“Trees provide food  
 Trees provide wood  
 Trees combat climate change  
 When properly managed”.

This poem is a way of encouraging the participation, co-operation, and understanding of the population towards combating climate change problems. The education of our youths and children about the values of sustainability is our most important ally for the huge cultural change we seek in the world today. Thank you for adding a voice to this [6].

Below is a second poem advanced by the Benjy Poetry and Music Global Concepts which further helps to illustrate how poetry can be used efficiently and effectively in educating communities, countries and continents about climate change adaptation and mitigation for global sustainability [7-9]. Do enjoy the poem:

Poem: Keep Clean, Stay Cool

Keep clean, Stay cool  
 Be disciplined and dutiful  
 Think positive, Think creative  
 Be passionate and innovative

Keep clean, Stay cool  
Make the earth bright and beautiful  
Help make the earth a better place  
Earth's pollution we must efface

Keep clean, Stay cool  
Be diligent, Be careful  
Pick the trash and keep clean  
Throw the trash into the waste bin

Keep clean, Stay cool  
With poetry as a tool  
Go green, Keep clean  
With a formidable team

Keep clean, Stay cool  
With a heart so grateful  
Enjoy the beauty of nature  
Help create a sustainable future

Keep clean, Stay cool  
Drink freely from wisdom's pool  
Feel the gentle whispering breeze  
Enjoy the sweet fragrance of peace

Keep clean, Stay cool  
Be disciplined and dutiful  
Help make the world a better place  
Put a smile on someone's face.

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## Review of Poem “Keep Clean, Stay Cool” by James Hope

World Health Organization data [10] shows that outdoor pollution has risen to 8% globally in five years, with billions of people around the world being exposed to dangerous air in more than 3,000 cities. We dream of a world where everything beneath it is clean and cool. Each day we expose our lovely environment to several threats which has become global problems for humanity and society due to regular deforestation, environmental pollution, improper disposal of waste, spillage, and lots more. These activities of man have resulted to climate change situations. Al Gore [11] stated that “from wherever the emissions come, they have the same effect: They trap much more heat from the sun, melt the ice, raise the sea level, cause stronger storms, floods, drought, bigger fires, generates millions of climate refugees, destabilize political systems, threaten the growing of food crops and cause a number of other catastrophic consequences which, taken together, threaten the basis for the future of human civilization on earth. The seventeen goals of the Sustainable Development Goals (SDGs) and most especially goals 12, 13, 14 and 15 all related to the environment and are categorized as ‘Environmental SDGs’ [12-15].

When the environment is clean, achieving all the SDGs goals will bring about the needed development. This poetic work has added the needed voice in tackling environment pollution which is a major cause of global warming [16]. The following poetic techniques were used in the poem:

### **Theme**

The author centered his theme on the need to keep our environment cleaner and neater.

### **Tone**

The writers tone is approving, candid, urgent and straightforward

### **Mood**

Even though the writers' mood is calm, yet there is a mode of urgency, acceptance and invitation on the subject matter.

### **Style**

The poem contains seven stanzas of four lines each. The writer maintained a unique end rhyme scheme of AABB. Punctuations used by the writer were coined to give a better understanding of the verse. The writer was expository, yet persuasive in his choice of words.

### Technique

The writer employs the use of several techniques to include:

**Personification:** “Whispering breeze”, “Wisdom pool”, “Fragrance of peace”

**The use of conjunction;** “disciplined and dutiful”, “passionate and innovative”

**Repetition:** “Keep clean, stay cool”

Keep clean, Stay cool

With poetry as a tool

Go green, Keep clean

With a formidable team

The author has made a global call through the usage of poetry to join in curbing the menace of climate change and environmental pollution [17]. The society should be seen to be part of the solution in preventing this global diseases and educating the society. Poetry is one of the partnership ways of achieving a clean and cool environment for sustainable development [18].

### Recommendation and Conclusion

It is our recommendation that poetry and music should be well recognized and used as valuable tools in climate change education, adaptation and mitigation for global sustainability. Climate change poetry should be included in the curricula for primary schools, secondary schools and even our Universities because of the many therapeutic and economic benefits which we have listed above. Climate change songs and music should be regularly featured in special radio and television programs, Social media like YouTube, Facebook and Twitter, and in environmental leadership summits which is good for educating the communities while also providing entertainment. Our youths should be encouraged towards creativity and excellence in acquiring relevant artistic skills in poetry and music for the purpose of climate change education, adaptation and mitigation for sustainable development. It is also good to know that climate change education, mitigation and adaptation is loaded with green entrepreneurial opportunities and has the capacity to provide employment for the unemployed and underemployed youths globally. Children and youths must be well educated on the issues of climate change and encouraged to deploy their skills and talents which should be used effectively to help overcome the global challenges facing the world today.

### References

1. Intergovernmental Panel on Climate Change (IPCC) (2001) Climate change 2001: the scientific basis.
2. Messana M (2018) The Science of Music: A Talk with Pascal Wallisch Ph.D.
3. Dodge D (2015) The science of music: The brain on music.
4. Baker MD (2020) The Benefits of Music: How the Science of Music Can Help You. Science of People.
5. Cochlin D (2012) The Science of Poetry.
6. Hope J (2018) Review of Peom “Keep Clean, Stay Cool” Review by James Hope.
7. Anabaraonye B, Nji AI, Hope J (2018) Poetry as a valuable tool for climate change education for global sustainability. Int J Sci Eng Res 9: 81-85.
8. Asian Development Bank (ADB) (2014) Promoting renewable energy climate change mitigation and green development Asian.
9. Barker ST RB (1948) Green Glory: The Story of the Forest of the World.
10. Anabaraonye B (2018) Keep Clean, Stay Cool.
11. Anabaraonye B (2018) Plant A Tree.
12. Global Greenhouse Warming (2018) Climate mitigation and adaptation.
13. Gore A (2009) What in the Hell Do They Think is Causing It?. Interview with John Dickerson.
14. Keats J (2018) What We Can Learn from the Science of Music.
15. Nakagawa M (2015) The Science of Climate Change.
16. Pinchuk V (2001) Victor Pinchuk quotes.
17. Vidal J (2016) Air Pollution Rising at an Alarming Rate in World Cities. The guardian.
18. Hope J (2018) Poem “Plant A Tree” Review by James Hope.