

Climate Change and Music: Exploring the Relationship Between Sound, Nature and Environment

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Abstract

Climate change is a burning concern of present times. Climate change is not merely an ecological or scientific crisis; it is also a cultural, social and emotional crisis. As changing temperatures, extreme weather events, biodiversity loss, water scarcity and environmental degradation transform human relationships with nature. Music provides an important medium through which these changes can be experienced, expressed and communicated. Music has historically maintained a close relationship with natural surroundings, seasonal cycles, landscapes, animals and community life. In the contemporary context, this relationship has developed into areas of study such as ecomusicology, soundscape studies and environmental musicology.

This paper examines the relationship between music, sound, nature and climate change and explores the ways in which music can contribute to environmental consciousness and climate action. It argues that music can function simultaneously as a medium of environmental communication, a repository of ecological memory, a tool for education and activism, and a means of emotional engagement with climate-related concerns. At the same time, the music industry itself has an environmental footprint through touring, transportation, energy consumption, production and digital technologies. Therefore, the relationship between music and climate change is twofold: music can respond to environmental crisis, but the musical sector must also transform its own environmental practices. The paper concludes that music has the potential to contribute meaningfully to a sustainable future when artistic expression, ecological awareness, traditional knowledge, education and sustainable music practices are brought together.

Keywords: Climate change, music, nature, environment, ecomusicology, soundscape, sustainability, ecological awareness, environmental activism, Indian music

1. Introduction

Climate change has emerged as one of the defining challenges of the twenty-first century. Its effects extend beyond changes in temperature and weather patterns to ecosystems, livelihoods, cultural practices, migration, health, heritage and social relationships. Consequently, climate change needs to be understood not only through scientific and technological perspectives but also through cultural and artistic perspectives.

Music occupies a particularly significant position within this cultural dimension. Unlike many forms of communication, music operates through sound, emotion, memory and collective experience. It can communicate ideas that are difficult to express through conventional scientific language. A song about a disappearing forest, a composition incorporating the sounds of birds and rivers, or a traditional seasonal song can create an emotional relationship between listeners and the environment.

Music should not be regarded merely as entertainment in the context of climate change. It can become a form of environmental communication, cultural memory, activism and ecological imagination.

Indian musical literature contains several miraculous legends associated with Tansen. Among these, the most widely known are the stories of lighting lamps through the performance of Raga Deepak, bringing rain through Raga Megh, and attracting deer and other animals through the influence and inherent nature of musical notes.

Similarly, Greek literature contains references to the legendary musician Orpheus, whose music is believed to have possessed such extraordinary power that it could move the animate and inanimate world, calm the turbulent waves of the sea, restrain the force of the wind, and even set mountains into motion.

The paper aims to examine the relationship between music, sound, nature and the environment.

To understand the emerging field of ecomusicology in relation to climate change.

To explore how music can communicate environmental and climate-related concerns.

To examine the role of music in creating environmental awareness and encouraging climate action.

To investigate the significance of traditional and indigenous musical practices as repositories of ecological knowledge.

To examine the relationship between changing natural soundscapes and climate change.

To explore the environmental impact of the contemporary music industry.

To suggest ways in which musicians, educators and cultural institutions can contribute to a more sustainable future.

This study follows a qualitative, interdisciplinary and exploratory methodology. It draws upon literature from musicology, ethnomusicology, ecomusicology, environmental studies, climate studies and cultural studies.

The research is primarily based on secondary sources, including scholarly articles, academic publications and institutional material relating to music, environment and climate action. The study uses conceptual analysis to examine the different ways in which music interacts with environmental change.

The approach also considers examples from traditional and contemporary musical practices to demonstrate how music can function both as a reflection of environmental change and as an instrument for responding to it.

The relationship between music and nature is as old as human musical expression itself. Human beings have historically used sounds from their surroundings as sources of musical inspiration. Birds, animals,

flowing water, wind, rain and seasonal changes have influenced musical instruments, rhythms, melodies, poetic imagery and performance traditions.

Music can therefore be understood as part of a broader sonic environment. Sound is not produced exclusively by humans. The natural world itself is filled with sounds generated by animals, water, wind, vegetation and geological processes. The study of these relationships has contributed to the development of soundscape studies, acoustic ecology and ecomusicology.

Music-environment identifies several important areas of convergence, including music as an expression of place, soundscape studies, acoustic ecology, environmental activism and the study of relationships between humans, animals and sound.

In modern times, some scientists have also been recording the sounds and music of animals, birds, insects, and other creatures. Such recordings assist researchers in investigating the effects and influence of music. A notable experiment involving a ferocious animal such as a lion was conducted by the renowned Indian classical vocalist Pandit Omkarnath Thakur at the Lucknow Zoo. When he approached the lion, its aggressive nature was clearly evident. However, after Pandit Omkarnath Thakur employed a distinctive use of the komal Gandhar (flat Ga) note, a remarkable change soon became visible in the lion's eyes and behaviour. Like a domesticated dog, it began wagging its tail, and an expression of affection became apparent in its eyes. This incident is often cited as an illustration of the profound influence that music can exert on living beings.

Music does not exist independently of its surroundings. It is produced, performed and experienced within particular physical, cultural and ecological environments.

Ecomusicology is an interdisciplinary area of research that explores relationships among music, sound, culture and the natural environment.

Its significance has increased as environmental problems have become more urgent. Scholars have begun asking questions such as:

How does music represent nature?

How does environmental change affect musical traditions?

Can music communicate climate change?

How do changing landscapes alter soundscapes?

How can musicians contribute to environmental activism?

What is the ecological cost of producing and distributing music?

Ecomusicology therefore moves beyond simply identifying songs about nature. It examines the broader ecological relationships involved in musical production, performance, listening and cultural practice.

Soundscape and Climate Change

One of the most important connections between music and climate change can be understood through the concept of the soundscape.

A soundscape consists of the sounds characteristic of a particular environment. A forest, village, river, coastline or agricultural landscape has its own distinctive sonic identity.

Climate change and environmental degradation can alter these soundscapes.

For example:

loss of forests can reduce the sounds of birds and insects;

changes in water availability can transform river and wetland soundscapes;

changing animal populations can affect ecological acoustic patterns;

urbanization and environmental degradation can increase human-generated noise;

extreme weather events can dramatically alter the acoustic character of places.

The loss of a soundscape can therefore represent a form of ecological loss.

This is particularly significant because human beings often notice environmental changes emotionally before they fully understand them scientifically. Listening can become a way of recognizing environmental transformation.

Music as a Language of Climate Change

Scientific descriptions of climate change frequently depend upon statistics, graphs and technical terminology. While these are essential, they may not always produce emotional engagement among the general public.

Music offers another form of communication.

A climate-related composition can transform an abstract concept such as global warming into an emotional experience. Musical elements such as tempo, dynamics, harmony, timbre, silence and rhythm can represent environmental destruction, uncertainty, loss, hope or renewal.

Music as a Medium of Environmental Awareness

Music has a remarkable capacity to reach large audiences. A climate-related scientific report may be read by a limited audience, whereas a popular song can circulate through radio, television, concerts and social media.

Music can contribute to environmental awareness through:

Climate-themed songs

Songs can directly address:

global warming;

deforestation;

pollution;

water conservation;

biodiversity;

environmental justice;

climate migration; and

the protection of natural habitats.

Environmental concerts

Concerts and musical performances can be organized around environmental themes, combining artistic performance with awareness campaigns.

Music videos

Visual imagery combined with music can communicate environmental destruction and possible solutions in an accessible way.

Community singing

Songs performed collectively can create a sense of shared responsibility and community participation. Thus, music can transform environmental awareness from an intellectual concept into a collective emotional experience.

Music and Environmental Activism

Music has a long history of social and political activism. The same tradition can be extended to climate action.

Musicians possess public visibility and cultural influence. They can use their performances, recordings, interviews and social-media platforms to promote environmental consciousness.

Music can therefore contribute to climate activism in two complementary ways:

First: by communicating the urgency of climate change.

Second: by demonstrating sustainable practices within the music industry itself.

This distinction is important because climate advocacy becomes more credible when the industry also examines its own environmental impact.

Traditional Music and Ecological Knowledge

Traditional music provides another important dimension of the relationship between music and environment.

Many traditional musical cultures are closely connected with:

agricultural cycles;

monsoon and rainfall;

seasons;

forests;

rivers;

animals;

religious and ecological rituals;

harvesting; and

community relationships with land.

Traditional songs often contain knowledge about the environment even when they do not explicitly describe themselves as "environmental music."

Traditional music can therefore be regarded as a form of ecological memory.

When environmental conditions change, the songs associated with particular seasons, agricultural practices or landscapes can also become historical records of earlier relationships between communities and nature.

Indian Music and Nature

The relationship between music and nature is particularly significant in Indian musical traditions.

Indian classical music has historically developed associations between musical expression, time, season, emotion and nature. The concept of raga provides an important framework through which musical sound is connected with mood and temporal experience.

Certain ragas have traditionally been associated with particular times of day or seasons. Monsoon-related musical associations, for example, demonstrate how musical imagination can reflect the natural world.

This does not mean that ragas can be scientifically considered causes of rainfall or climate phenomena. Rather, their cultural associations reveal how Indian musical thought has historically connected musical experience with seasonal and environmental imagination.

This provides an important foundation for contemporary research into music and environmental consciousness.

A promising research direction would therefore be to investigate how traditional associations between raga, season, nature and emotion can contribute to modern environmental education.

Music and Climate Anxiety

Climate change is also an emotional issue.

People may experience:

fear;

grief;

uncertainty;

helplessness;

ecological grief;

anxiety about the future.

Music can provide a means of processing such emotions.

It can transform environmental anxiety into artistic expression and collective reflection. Instead of presenting climate change exclusively as a crisis, music can create spaces for mourning, hope, solidarity and imagination.

This emotional dimension is particularly important because climate action requires not only information but also motivation and emotional engagement.

Music may therefore function as a bridge between knowing about climate change and caring about climate change.

Findings

The study identifies the following major findings:

Music has a longstanding cultural relationship with nature and environmental experience.

Ecomusicology provides an important framework for studying music and environmental crisis.

Soundscapes can provide meaningful evidence of ecological and social transformation.

Music can make climate change emotionally understandable and culturally accessible.

Traditional music can preserve ecological memory and environmental knowledge.

Indian musical traditions provide valuable opportunities for studying relationships among raga, season, nature and emotion.

Music education can become a significant medium for developing environmental consciousness.

Musicians can contribute to climate activism through performances, compositions and public communication.

The music industry must also address its own environmental footprint.

Sustainable music-making should be considered an essential part of contemporary cultural practice.

Music can encourage hope, solidarity and collective imagination in response to climate anxiety.

The greatest potential lies in combining music with scientific knowledge, environmental education, community participation and policy action.

2. Conclusion

Climate change has fundamentally altered humanity's relationship with the natural world. In this changing environment, music can become an important cultural medium through which people listen to, understand, remember and respond to environmental transformation.

The relationship between music and climate change is multidimensional. Music can represent environmental loss, communicate scientific and ecological concerns, preserve traditional environmental knowledge, create emotional engagement, support activism and inspire collective action. At the same time, climate change can transform the soundscapes, cultural practices and material conditions in which music is created.

The emerging field of ecomusicology demonstrates the value of bringing music studies into dialogue with environmental humanities and climate science. Recent scholarship increasingly treats music and sound as significant components of environmental discourse.

For Indian music, this field offers particularly rich possibilities. The historical relationships among raga, season, time, nature and emotional experience can provide an important cultural foundation for examining ecological consciousness in music.

Ultimately, music cannot stop global warming on its own. However, it can help society listen differently—to the environment, to communities affected by climate change, and to the possibility of a sustainable future. Music's greatest contribution may therefore lie in its ability to transform climate change from a distant scientific statistic into a human, emotional and cultural experience.

A sustainable future requires not only technological innovation and political action but also a transformation in the way people perceive their relationship with nature. Music can contribute to that transformation by teaching us not only to speak about the environment, but also to listen to it.

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