

The Environmental Problem in Anime *Weathering With You* Directed By Makoto Shinkai

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Abstract. Environmental issues have become a major issue that concerns all parties, including the attention of directors in the anime they make. Many anime takes the theme of environmental issues which contain a moral message about the importance of protecting and preserving the environment from damage. This study aims to examine what environmental problems are described in the anime *Weathering with You* by director Makoto Shinkai, what negative impacts arise from these environmental problems, and what kind of environmental criticism the director wants to convey through the anime. This study uses the descriptive analysis method, namely the method used to analyze the data by describing the data that has been collected as it is without intending to make conclusions that apply to the public. Because the material object in this study is anime, the theory used in this study is the literary ecocritic theory. From the results of the study, it was found that the environmental problem described in this anime are problems of extreme climate change which result in various kinds of negative impacts such as falling air temperatures, erratic seasonal changes, losses in economic problems, and others. Through this anime, the director wants to invite the audience to be wise in protecting and maintaining the environment so that the negative impacts resulting from environmental damage can be avoided.

1 Introduction

Many people think that literature is only concerned with and contains social, psychological, religious, and educational problems. Many people do not know that literature can be connected with environmental problems. Nowadays, many literary creators are aware of the importance of preserving and protecting the environment. In creating a literary work they raise environmental issues in which it is full of moral messages about the importance and value of the environment to always be preserved and preserved to be sustainable [1].

One type of environmental problem is the problem of climate change. Climate change is one of the threats to environmental issues which is quite crucial for the world community. Climate change is defined as the average change of at least one weather element in a certain area [2]. In a study conducted by The Royal Society and the US National Academy of Science [3] provides an illustration that the problem of climate change has occurred since the era of

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the 1900s. Several indicators of concern due to climate change problems were detected with an increase in temperature of up to 0.8 degrees Celsius or 14 degrees Fahrenheit. This is accompanied by an increase in warmer temperatures in the oceans, creating large amounts of polar ice, the occurrence of extreme weather is also a number indicator of climate change. Climate change which has resulted in various adverse impacts on life has become a major problem for all countries. Japan is no exception. The issue of climate change has become a concern for all circles of society in Japan, including anime directors. Anime is one type of modern literary work where many anime in Japan take on the theme of climate change. One of the anime that takes on the theme of climate change is the anime entitled *Weathering with You* by director Makoto Shinkai. This anime tells about the struggle of the main character named Hina who wants to save the earth from disasters caused by very extreme climate change that occurred in the Kantou area and its surroundings. This anime provides many valuable lessons for the audience about how bad the impact caused by climate change is. In detail, this anime describes the bad impacts that must be faced by all circles of society caused by very extreme climate change caused by global warming. The efforts made to tackle climate change are not very much explained in this anime.

The director seems to tend to focus more on the negative impact of climate change on the audience so that the audience will become aware of how important it is to maintain and maintain the natural environment so that it is not damaged which can have a negative impact on society.

To discuss a literary work associated with environmental problems, an ecocritical approach is usually used. Ecocriticism aims to show how literary works have a concern for the environment and play a role in solving ecological problems.[4] One of the things discussed in literary ecocriticism is environmental management. In managing the environment, humans must pay attention to applied ethics. Without a type of ethics (the theory of rights and responsibilities) and a theory of values, humans will actually lack guidance and direction to deal with problems whether global, environmental, or otherwise [5].

Climate change does not only occur due to natural factors but also due to human activities. That way, climate change can cause the threat of floods, droughts, landslides, tidal waves, and various other natural disasters. [6] Climate change is, unquestionably inducing changes to natural and social systems. The effects of these changes are already grave and are growing further currently. The ongoing changes highly threaten human development for the world of poor and spread to the entire world becoming long-term dangers for all human beings [7].

Climate change as defined by the Intergovernmental Panel on Climate Change (IPCC) (2007) is “the change in the state of the climate that can be identified (e.g. by statistical tools) by changes in its mean or the variability of its properties ” and that persists for a long time (usually decades or longer) [8]. Parry et al [9] referred to climate change as “change in the climate which is caused directly or indirectly by human activities that cause an alteration in the composition of the global atmosphere, and which is in addition to natural climate variability observed over comparable periods”. Variations in climate parameters whether induced by humans or natural forcing can bring about changes in the likelihood of the occurrence or strength of extreme weather events and their resulting deleterious effects. Climate change is a global problem that can have a negative impact on society, therefore there is a need for education in the community about what climate change is, what causes climate change to occur, what impacts are caused by climate change, and what can be done by the community and the government. to counteract the negative impacts of climate change. The four points above are described quite clearly in the anime *Weathering with You* as the main object of this research.

2 Methodology

The method used in this is the descriptive-analytical method. This study uses an eco-critical approach that focuses on the discussion of criticism of environmental problems. The type of research used is qualitative. The data source in this study is the anime *Weathering with You* by director Makoto Shinkai. Data analysis was carried out by investigating the types of environmental problems that occurred in this anime as well as the negative impacts caused by these environmental problems as well as criticism submitted by the director regarding environmental issues. The data obtained were then analyzed and interpreted. After that, the data is presented in the form of a description, then concluded.

3 Discussion

3.1 Environmental problems depicted in the anime *Weathering with You*

Education is an important.

There are many kinds of environmental problems. The environmental problems described in this anime are about climate change which is very extreme and results in various bad impacts on the community. According to Law no. 31 Year 2009 climate change is a change in climate that is caused directly or indirectly by human activities that causes changes in the composition of the global atmosphere and changes in natural climate variability observed over comparable time periods.

Meanwhile, in terms of climate change on a global scale, it is a change in climate with reference to the entire earth's area. One of the phenomena of climate change is global warming, which occurs due to changes in temperature which will have a major impact on human activities. Changes in Earth's temperature can change environmental conditions which in turn will impact where we live, how and where we can grow food, and what organisms pose a threat.

In this anime, Tokyo and surrounding areas are told in the summer when the weather should be sunny, the sky is blue, and the air temperature is high, but the opposite happens. Many scenes in this anime describe this phenomenon. Even from the beginning of the anime, this climate change is clearly depicted by showing the city of Tokyo being drenched in very heavy rain in the summer. Summer, which should be sunny, displays blue skies, caused by climate change, which is very extreme, summer becomes a season of heavy rain every day.



Fig. 1. The atmosphere of the city of Tokyo in the summer when it rains very heavily.

3.2 The negative impact of environmental problems depicted in the anime *Weathering With You*.

Global warming is an increase in the average temperature in most layers of the earth's surface. This is caused by the emission of large amounts of greenhouse gases that trap solar thermal energy in the atmosphere. Global warming has resulted in various impacts on the survival of people's lives on earth. These consequences include rising sea levels, extreme climate change,

disturbance of forests and ecosystems, and so on [10]. Global warming is estimated to be able to raise sea levels, as a result, natural phenomena and inundation in coastal areas may occur as well as the loss of some wetlands that are rich in biodiversity. Sea level rise can usually result in several impacts such as an increase in the frequency and intensity of floods, changes in ocean currents and widespread damage to mangroves, expansion of seawater intrusion, increased threats to the socio-economic activities of coastal communities, and reduced land area or even loss of islands. small [11]. Climate change is a global phenomenon marked by changes in temperature and rainfall patterns. The biggest cause of climate change is the increasing concentration of greenhouse gases in the atmosphere, such as carbon dioxide (CO₂), methane (CH₄), and nitrogen (NO). Existing greenhouse gases absorb hot longwave radiation and as greenhouse gases increase, the earth's surface temperature rises. Global climate change can affect the world's climate patterns, rain distribution, wind direction, and speed. This will directly have an impact on life on the earth's surface, such as the development of various diseases in humans, animals, and plants, drought, floods, the effect on plant productivity, and so on [12].

Climate change does not only occur due to natural factors but also due to human activities. That way, climate change can cause the threat of floods, droughts, landslides, tidal waves, and various other natural disasters [13]. Global climate change is characterized by increasing temperatures on the earth's surface as a result of increased human activities. Global climate change is characterized by an increase in temperature as a result of increased human activities. It is recorded that since the 19th century the earth's surface temperature has increased by about 0.8 °C. The increase in temperature is estimated to be around 0.15° C to 0.3 °C every decade from 1990-2005. (IPCC/Intergovernmental Panel on Climate Change, 2007).

This climate change causes negative impacts on human life such as increased rainfall, decreased rainfall, and drought [14]. Global climate change as a result of global warming has resulted in an unstable atmosphere in the lower layers, especially those close to the earth's surface. Global warming is caused by the increase in greenhouse gases produced by many industries. Observations of global temperatures since the 19th century show a change in the average temperature which is an indicator of climate change. This change in global temperature is indicated by an increase in the average temperature of up to 0.74°C between 1906 and 2005. This global average temperature is expected to continue to increase by about 1.8-4.0°C in the current century, and even according to other studies in the IPCC projected to range from 1.1-6.4°C [15]. Climate change is something that until now cannot be avoided. This is believed to be able to expand its impact on various aspects of life. The greater the resulting climate impact, the greater the active effort to avoid negative impacts through mitigation and adaptation strategies [16]. Climate change has had various impacts in various sectors as well. These impacts have been felt in the fisheries, marine, forestry, agricultural, water resources, environment, and even economic and social sectors [17].

The negative impacts caused by extreme climate change experienced by the city of Tokyo and its surroundings described in this anime can be explained as follows.

a. Summer turned into an extremely rainy season

Climate change can provide very significant changes to the conditions of a season. This can be seen very clearly in this anime. The summer which should have been hot and sunny has turned into a very extreme rainy season. It rains every day in Tokyo. The depiction of this phenomenon is carried out through the scene of the city-wide announcement that it will rain soon, as shown in the following scene.



Fig. 2. The scene depicting the notification that heavy rain will soon fall

This weather change phenomenon can also be seen from the dialogues of the characters in the sweet potato anime who complain about the rain that falls every day,



Fig. 3. Scene depicting the complaints of the main character, named Hodaka, against the rain that often suddenly falls.

- b. Air temperature dropped drastically
Climate change can cause air temperatures to drop to extremes. This phenomenon is clearly described in this anime. It is said that under normal conditions the average summer air temperature in Tokyo is 35 degrees Celsius, but due to climate change, Tokyo's air temperature in summer is described as an average of 20 degrees Celsius, as an announcement by a television broadcaster stated that "the temperature is Tokyo air in the season reaches the range of 20 degrees ". This is abnormal and unusual. The decrease in air temperature from an average of 35 degrees Celsius to 20 degrees Celsius in summer is a natural phenomenon that can lead to other negative impacts.
- c. There are many typhoons
Another negative impact of climate change is the occurrence of other disasters such as typhoons that hit certain areas. In this anime, there are two scenes that depict the occurrence of a typhoon caused by climate change. Here is the scene.



Fig. 4. The townspeople being warned of the emergence of a typhoon



Fig. 5. A passenger ship in the middle of a typhoon

Figure 4 depicts the atmosphere of the townspeople being warned of the emergence of a typhoon that will hit the city, while Figure 5 depicts a passenger ship in the middle of a typhoon that occurs in the middle of the ocean.

d. Floods and rivers overflow

Climate change can cause very extreme weather changes. Climate change can cause summer to turn into the rainy season where every day it rains heavily, causing the river to overflow and flood. In this anime, there are many scenes that describe this phenomenon. As a result of climate change, the anime depicts overflowing rivers and floods everywhere. Here are some scenes that describe the phenomenon of flooding and overflowing rivers.



Fig. 6. A Overflowing rivers



Fig. 7. A Flood in the middle

Figures 6 and 7 depict scenes of an overflowing river caused by very heavy rainfall which caused flooding over the entire city.

e. Snow falls in summer

Another extreme thing that can happen due to climate change is the temperature drops and snow falls in the summer. This weather anomaly is described very clearly in this anime. The townspeople were surprised because in the summer it snowed in Tokyo. Here is a scene that depicts snow falling in Tokyo in the summer.



Fig. 8. The main character, Hina, said, "It snows in August, you know"

The scene above depicts the main character's surprise when it snows in August in summer.

f. The Submerged Part of Tokyo

The most extreme negative impact that occurs due to climate change described in this anime is the sinking of most of the Tokyo area, especially the coastal part of Tokyo. This is in accordance with the theory of meteorologists that climate change can sink an area. As told in this anime, after three years Tokyo was hit by a very extreme rainy season, finally, some areas of Tokyo were submerged and turned into the ocean. The following scene depicts the sinking of the city of Tokyo.



Fig. 9. The city of Tokyo is sinking due to the incessant rain caused by climate change.

3.3 The Weathering with You anime director critiques environmental issues.

In the Weathering With You anime, the director does not explicitly criticize environmental issues, but in one dialogue the characters in this anime convey that it is humans who can change the climate to this extreme and that humans must pay dearly for their actions. The following scene depicts the dialogue between the main character, named Hodaka, and a mother who says that climate change is caused by humans themselves.



Fig. 10. Dialogue scene between the main character Hodaka and a housewife who tells the story

Climate change has a terrible impact on humans, therefore humans must always maintain this natural environment so that harmony between nature and humans is maintained. Through scenes depicting the adverse effects of climate change, the director seems to want to remind the audience of this anime to understand and realize how important it is to protect and maintain the environment. Destroying the environment will only have a negative impact on the survival of human life as described in this anime. Through the anime he made, the director conveys a message so that we don't experience floods, typhoons, the sinking of an area, whether anomia, let's be wise and wise humans in interacting with the surrounding environment.

4 Conclusion

Literary works in their contents can not only raise general themes such as social issues, education, and others but can also raise issues related to environmental issues. And more and more literary works take on the theme of environmental issues. This is in line with one of the functions of literary works, namely to provide the principle of benefit for the audience. Anime Weathering with You is one of the modern literary works that is full of environmental education related to the phenomenon of climate change which turns out to have a lot of negative impacts on human life. The description of the phenomenon of climate change and

its negative impacts conveyed in this anime provides many valuable lessons for the audience on how terrible the impact of climate change on human life is.

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