

The Impact Of Climate Change On Food Security Political Economy Perspective

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Abstract

This paper aims to analyze the Impact of Climate Change on Food Security from a Political Economy Perspective. In the last few decades, the issue of climate change has received increasing global attention and is considered one of the most serious and urgent environmental issues that need to be addressed by the international community, and Indonesia is no exception. This climate crisis has had various impacts, one of which is on food security for the community, the number of crop failures to disasters due to the climate crisis resulting in food supplies that are not smooth, causing other domino impacts such as hunger, poverty and the economy. By using qualitative research methods. The qualitative method was chosen based on the conditions and situation of the research object and the expected results after the research.

Key words: Climate Change, Food Security, Political Economy.

INTRODUCTION

Informatization of society is an organizational, socio-economic, and scientific- In recent decades, the issue of climate change has received increasing global attention and is considered one of the most serious and urgent environmental issues that needs to be addressed by the international community. This is evident from the signing of various international agreements such as the Kyoto Protocol in 1997 and the Paris Agreement in 2015, which aimed to reduce greenhouse gas emissions and overcome the effects of climate change. The Paris Agreement is a monumental global agreement

to deal with climate change (UNFCCC, 2015). The commitment of countries is stated through Nationally Determined Contribution for the period 2020-2030, the Paris Agreement aims to stop the global warming temperature of no more than 2 degrees Celsius (UNFCCC, 2015).

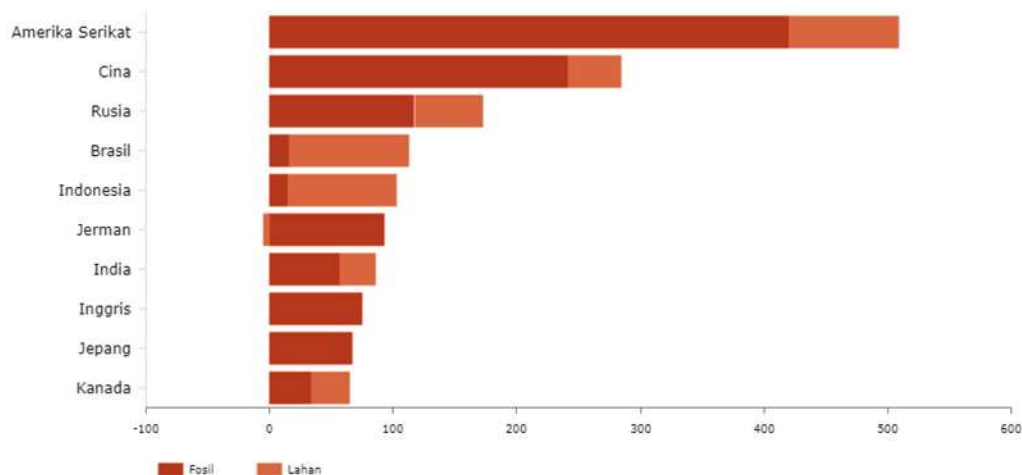


Figure 1 The World's Largest Carbon Emission Contributing Countries
Source: databoks.katadata.co.id, 2022

In the data above, it can be seen that the superpower countries that occupy the highest ranking of contributors to carbon emissions in the world that cause greenhouse gases, the United States, China, Russia are ranked in the top 3 and Indonesia is ranked 5th in the world for contributing countries to carbon emissions. The largest in the world, there needs to be a big commitment for these countries to reduce carbon emissions as a step in minimizing the impact that will arise in the future, especially in the climate crisis (databoks.katadata.co.id, 2022).

Climate change is a phenomenon that occurs when the climate on Earth changes drastically and continuously through time. It is caused by a range of variables, including human activities like fossil fuel combustion and deforestation, as well as natural ones like volcanic activity and variations in solar radiation. Climate change can have massive consequences, such as rising global temperatures, increased extreme weather such as floods and droughts, rising sea levels, and effects on ecosystems and the availability of natural resources such as water and food. Climate change can also impact human health, such as increasing the risk of disease associated with polluted air and extreme weather (Stern, 2007). The signing of this paris agreement for every country in the world is an

agreement that must be serious and must be prioritized for adoption by world countries as a contributor to gas emissions that cause environmental damage. Because it is undeniable that climate change is causing many negative impacts that endanger the sustainability of human life, directly or indirectly. The resulting impacts include drought and water scarcity, extreme weather, health, environmental changes and food security.

In this paper, food security is one of the focuses of research as a result of the impact of the climate crisis. Global warming can affect crop yields and food availability. Changes in rain patterns, droughts and extreme weather can affect crop production and reduce food supply in Indonesia itself. In recent years, food production has declined due to erratic weather changes. BPS data shows that annual rice production in Indonesia has decreased below the average harvest in recent years (BPSRI, 2021) this is a problem that must be looked for a way out of the need for appropriate policies to deal with the problem of climate change on food security. This is in line with what was conveyed by Indonesian Vice President Ma'ruf Amin who said that food security is a crucial factor for a country including Indonesia because it plays an important role in people's daily lives as well as political and economic stability (antaranews.com, 2021).

One of the domino effects that will arise from insufficient food or low food security is regarding political and economic stability in particular. Political economy is a field of study that discusses the interaction between government policies and the economy of a country or region. The goal is to achieve certain economic goals, such as economic growth, monetary stability, infrastructure development, increasing social welfare, and others (Stiglitz, 2018; Kuhparuw et al, 2023). If the climate crisis continues to occur and reduces the production rate of people's crops, then Indonesia's economic goals will not be achieved. this is based on that in terms of meeting the needs of the community it cannot be fulfilled and will have an impact on people's welfare and economic stabilization which will increase poverty rates and hinder development in Indonesia. Climate change that results in decreased productivity or increased pest and disease attacks. Another threat is an increase in extreme climate phenomena which can cause floods and droughts, which have implications for crop failure or crop failure.

Food security in Indonesia can be said to be still vulnerable, one of which is indicated by the persistent hunger rate. (Hasibuan, 2021; Jamaliah & Elyta, 2022). The impacts of climate change affect food systems including production, storage, access and price stability of food. Indonesia is one of the countries with food security that is most vulnerable to the effects of climate change in the Southeast Asia region. (IPCC, 2014). Based on this, this paper will discuss the Impact of Climate Change on Food Security from a Political Economy Perspective.

LITERATURE ANALYSIS AND METHODOLOGY

Political economy is a field of study that discusses the interaction between government policies and the economy of a country or region. The goal is to achieve certain economic goals, such as economic growth, monetary stability, infrastructure development, improving people's welfare, and others. In economic politics, the government has an important role in regulating, managing and supervising economic activities. The government can use various economic policy instruments, such as fiscal policy, monetary policy, and trade policy, to achieve certain economic goals (Chang, 2010).

In addition, political economy also discusses the relationship between government policies and economic actors, such as companies, consumers and workers. This includes government regulations and policies on markets, international trade, and the financial sector (Rodrik, 2015; Haryaningsih & Elyta, 2022). By understanding and applying sound political economy principles, the government can create a healthy, efficient and sustainable economic environment for the community and economic actors in a country or region.

Food security is a difficult topic to grasp. Food security is attained when all people have enough physical, social, and economic access to meet their food needs at all times, which can include enough safe and nutritious food to meet their dietary demands and preferences, day, as well as other food-related requirements (Bulog.co.id, 2014). Furthermore, food security is described as a scenario in which all individuals have continuous and sustainable physical, social, and economic access to safe, nutritious, and halal food that fits basic food needs and personal preferences continuously (Mulyasari, 2016). The definition above reflects that food security is not only about food production and supply, but also about access to food that is fair and equal, and the use of food according to the needs and preferences of each individual. Food security also involves broader social, economic and environmental aspects. The method to be used in this study is a qualitative research method. The qualitative method was chosen based on the conditions and situation of the research object and the expected results after the research. Qualitative research allows researchers to answer research questions by analyzing behavior, actions, social structures and generating facts that cannot be quantified or measured with certainty (Berg, 2001). Qualitative research is used to examine, discover, describe, and explain social influence traits or features that cannot be explained, measured, or characterized through quantitative research (Saryono, 2010). Researchers employ qualitative methods because they are relevant for the problem under investigation. Furthermore,

qualitative research is defined as a type of research whose results cannot be achieved via statistical processes or other forms of calculation (Anselm & Juliet, 2009). This research focuses on the impact of climate change on food security from a political economy perspective

RESEARCH AND RESULTS

Impact of climate change on food security

Climate change is the effect of global warming, which harms the environment and endangers human life. The negative impacts of climate change include rising sea surface temperatures, extreme weather intensity, changes in rainfall patterns and big waves (indonesia.un.org, 2023).

Climate change can also affect human life, especially in the fulfillment of food, housing, safety and employment. Several impacts have been seen in various countries, especially developing countries and those with low land geography. Conditions that can be seen are rising sea levels which are submerging several land areas, as well as the availability of food which is increasingly worrying for several countries due to prolonged droughts and floods that never subside (indonesia.un.org, 2023)

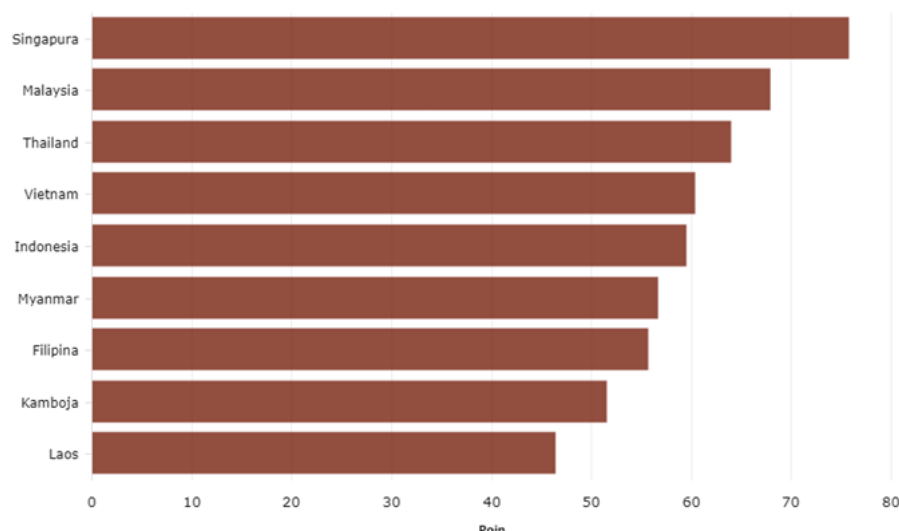


Figure 2 Global Food Security Index in Southeast Asia

Source: databoks.katadata.co.id, 2021

Indonesia's Global Food Security Index score in 2020 reached 59.5, down 3.1 points compared to the previous year which was 62.6. This score brings Indonesia's food security to rank fifth in Southeast Asia. Its position is below Vietnam which has a

score of 60.3. Meanwhile, Singapore is lined up as the country with the highest GFSI score in Southeast Asia in 2020. The Lion Country has a GFSI score of 75.7 points. On a global scale, Singapore is ranked 19th (databoks.katadata.co.id, 2021).

Food security is one of the impacts arising from the climate crisis, this is based on the various impacts arising from the climate crisis which affect the fulfillment of food needs from the manufacture to the distribution of food, even though in the Indonesian food security index it is still ranked 5th in the Southeast Asian region but cannot ensure the sufficiency of food for the people of Indonesia, which number more than 200 million people. In addition, according to The Economist Intelligence Unit (EIU) in 2018, Indonesia is a country that has food security that is most vulnerable to being affected by climate change in Southeast Asia. The value of Indonesia's natural resource and resilience dimensions is 43.9 which is included in the category of risky conditions. This is reinforced by evidence that the value of Indonesia's food security has decreased after adjustment for climate change factors, namely from 54.8 to 47.10 (The Economic Intelligence Unit, 2018). Food security is also one of the issues contained in the UN SGDS to support the implementation of the 2030 Agenda for Sustainable Development, food security is at point no. 2 Without Hunger Eliminating Hunger, Achieving Food Security and Good Nutrition, and Improving Sustainable Agriculture (indonesia.un.org, 2023).

Climate change and increased frequency of extreme weather events are two of the reasons behind the increase in hunger and malnutrition globally. The fisheries, agriculture and livestock sectors can be destroyed or become less productive. As the oceans become increasingly acidic, the marine resources that billions of people consume are under threat. Heat stress can reduce water sources and pastures for grazing, causing a decrease in crop yields and affecting livestock, which is the big impact on food security (indonesia.un.org, 2023). Climate change affects various sectors. One sector that is at high risk as a result of climate change is the agricultural sector. The impact of climate change affects the food system including production, storage, access and stability of food prices resulting in economic instability. Experts, including the Food and Agriculture Organization (FAO), have made research and predictions about the impact of climate change on the domestic food crop sector. The research reminds all elements of society that there will be a decrease in food crop production due to erratic seasonal patterns, due to floods or the long duration of drought, food crop production in Java has the potential to decrease by around five (5) percent in 2025 and 10 percent in 2050, warnings of the impacts arising from climate change on the agricultural sector or the availability of food for the community not only for the country of Indonesia will remain for all countries in the world, one of the countries that has experienced the destruction of the agricultural food crop sector due to climate change is Madagascar, in 2021 the country of Madagascar became

the first country to experience famine due to climate change according to a report from the United Nations. The climate crisis felt by the country of Madagascar is quite extreme where the very long duration of drought causes the agricultural sector of food crops to fail to harvest due to insufficient water intake which is the main factor in agriculture (Bbc, 2021).

When this happened, a report from the United Nations, tens of thousands of people are suffering from hunger and food insecurity resulting from crop failure because for four years the country has never had rain. This severe drought due to climate change - the worst in four decades - has devastated farming communities, changing the daily habits of the people of Madagascar to survive by scavenging for insects (Tempo.com, 2021). This is a warning to every country in the world because it is undeniable that the impacts arising from this climate crisis or climate change are not just a hoax, therefore it is necessary to have a mature plan in dealing with the impacts of climate change to minimize other impacts that will be generate.

Food security and political economy

Food is an important and strategic commodity because food is a basic human need, the fulfillment of which is the basic right of every human being. Food security is a complex issue that involves many dimensions, including economic and political aspects. There are several economic and political factors that can affect food security, including food policies made by the government that can affect food production, distribution and prices. Poor food policies can lead to volatility in food prices, dependence on food imports, and under-investment in food production. Furthermore Land and resource ownership Different land and resource owners can affect food production and people's access to food.

Stable and affordable food prices are very important to ensure access to food for the community. Sharp increases in food prices can lead to hunger and malnutrition. As well as Investments in the agricultural sector and agricultural infrastructure can increase food production and help create jobs in rural areas. Furthermore, food trade can also affect access to food in various countries. Unfair trade policies can lead to dependence on food imports and threaten food security (kumparan.com, 2019).

In the relationship between food security and politics, political decision-making and food policies made by the government can influence people's access to food. Democratization of access to public policies, community participation, and control over food policies are important to ensure people's food security. In addition, access to information and knowledge about food, including healthy and sustainable ways of producing and consuming food, is also important for increasing food security.

Furthermore, the impact of the climate crisis is also anticipated by the Indonesian state by implementing various policies. In Indonesia, food policy is regulated by the Ministry of Agriculture and the Coordinating Ministry for Economic Affairs, who work closely with various related parties, such as food producers, distributors and consumers. Several food policies implemented in Indonesia include the Food Self-Sufficiency Program, Food Availability Policy, Prosperous Food Program, Farmer Empowerment Program, Sustainable Food Policy (akademidesa.id, 2022). These programs are expected to be a solution to food security in Indonesia and to provide sufficient food availability for all Indonesian people in accordance with the right to obtain food, as stated in Article 27 of the 1945 Constitution and in the Rome Declaration (1996) (bulog.co.id, 2014)

In addition, the Government launched the National Food Security program which provides support for the food supply chain, such as through the provision of agricultural machinery and increased land productivity (djpb.kemenkeu.go.id, 2021). In addition, Indonesia is also active in various world organizations that focus on climate change and the economy, this is evidenced by Indonesia's involvement in various world organizations such as participating in the Paris agreement, as the organizer or host of the G20 and so on. In addition, even though each country has various programs in dealing with the climate crisis on food security, Indonesia as one of the countries in the ASEAN region, Indonesia also has programs that are carried out in collaboration with ASEAN countries. The ASEAN region has various policies and programs such as the ASEAN Food Security Program. This program aims to create sustainable food security in the ASEAN region, with a focus on increasing agricultural production and productivity, developing food markets and distribution, and strengthening early warning systems for food crises. Furthermore, there is also the ASEAN Food Information System. This system was created to facilitate the exchange of information and data on conditions of food production, supply and prices in ASEAN countries. Not only does it depend on countries in the same ASEAN region, they also have cooperation on food security such as the ASEAN-China Food Cooperation through programs such as the ASEAN-China Agricultural Cooperation Program and the ASEAN-China Free Trade Agreement (pertanian.go.id, 2019).

However, there are still many challenges in achieving sustainable food security in ASEAN, such as climate change, poverty, unequal distribution of resources, and lack of access to food markets. Therefore, cooperation among ASEAN countries and efforts to strengthen agricultural infrastructure and systems are still very important to achieve the goal of food security in ASEAN.

CONCLUSION AND RECOMMENDATIONS

Climate change is becoming a serious problem for every country in the world today, there are many impacts arising from this climate crisis, especially in terms of food security which is a big challenge. When the climate crisis occurred, many factors that strengthened food security were disrupted, such as uncertain weather changes between the dry and rainy seasons so that the right land for planting food was hit by landslides, floods or severe drought in various places which resulted in crop failure and disrupted the food supply chain to various regions. , which also has an impact on the economy of the people and the country which will cause various other impacts such as an increase in poverty and hunger

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