

GLOBAL GREENHOUSE GAS EMISSION ISSUES: "ITCHY HEAD, SCRATCHED FEET"

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RESUME

The concentration of GHG emissions in the earth's atmosphere has increased rapidly since the 1700s to the present. Referring to global emission data (Oliver et al., 2020), the total global GHG emissions in 1990 were around 33.1 Gt CO₂ eq and continued to increase to 52.4 Gt CO₂ eq (excluding LULUCF) or around 57.4 Gt CO₂ (including LULUCF) in 2019. The increase in GHG concentrations is believed to be the cause of global warming and climate change. The main source of GHG emissions comes from fossil energy. Meanwhile, the Top-4 emitters in the world from the past until now are China, India, USA, and the EU-28. Therefore, the Top-4 emitters must be responsible for their willingness to reduce emissions, especially from the use of fossil energy as a significant solution to reducing global emissions. But the problem is, are these countries willing to reduce their fossil consumption, which also means reducing their welfare? Another solution is the implementation of the Polluter Pay Principles (PPP), in which the Top-4 emitters as polluters are required to pay emission costs (negative externalities) to affected communities as a form of responsibility for their contribution to increasing global emissions. On the other hand, the main emitters, especially the European Union and the United States, have formed an alliance whose task is to divert GHG emission issues and their responsibilities to the global palm oil industry. The adage "itchy head, scratched feet" is suitable to describe this phenomenon. NGOs and the alliances used the framing of the global palm oil industry as the major emitter, the driver of deforestation and other issues. What the two developed countries have done has not contributed to the solution and has even further distanced the world community from global emission reduction solutions. The alliances formed by the top emitters, especially the European Union and the United States, should change their perspectives on palm oil and all its advantages (high productivity, long life cycle and production of biofuels that lower emissions and ability to substitute fossil fuels) as a solution to reduce global emissions, not as a "scapegoat".

INTRODUCTION

The issue of global greenhouse gas (GHG) emissions has been one of the trending issues in the last 30 years. This issue has become a concern to the global community because experts believe that GHG emissions are responsible for the occurrence of the phenomena of global warming and global climate change.

Increasing the concentration of GHG emissions in the earth's atmosphere has long been known. The footprint of GHG emissions from the beginning of civilization to this day has also been known to experts. The main sources of emissions and from which countries are the top emitters are also known and published internationally.

But what is concerning is how to respond to the problem of GHG emissions. The biggest concern of the public, politicians, academics and NGOs should be how to minimize the use of fossil energy as the biggest contributor to the world's GHG emissions. On the contrary, what happens is the diversion of issues and responsibilities to the other problem and parties. Not infrequently, developed countries, which incidentally are the top 10 emitters in the world, actually use the issue of emissions as a "shield" for trade protectionism.

Around 74 percent of the world's GHG emissions are carbon dioxide (CO₂) emissions that sourced by fossil energy (Oliver *et al.*, 2020; IEA, 2019), but an issue that has been intensively debated and discussed in the last 20 years is emissions Land Use Land Use Change and Forestry (LULUCF), including the expansion of oil palm plantations. Only 7 percent of total global emissions are attributed to LULUCF. This condition reflects the proverb "Itchy Head, Scratched Feet". This way of shifting

issues and responsibilities will not do much to address the global GHG emission problem.

This article will discuss the development of global GHG emissions, the main sources of global GHG emissions and who are the top global GHG emitters. In addition, it will also discuss how to diversion issue of emissions that are currently taking place, whether or not it is effective in producing solutions related to global emission reduction.

MAIN ISSUES

GHG emissions, especially the concentration of CO₂ emissions in the Earth's atmosphere, have increased from 180-280 ppmv (parts per million volume) in the pre-industrial era i to 353 ppmv in 1990 (Figure 1). The GHG emissions footprint resulting from the consumption of fossil energy, agriculture, and LULUCF that occurred since the pre-agricultural era, the first industrial revolution, the green revolution, until 1990, and is recorded in the increase in the concentration of GHG emissions.

Along with the increase in global community economic activity, CO₂ emissions also continued to increase to 399 ppmv in 2015 and 407.4 ppmv in 2018 (IPCC, 1991, IEA, 2016, IEA, 2019).

A study by Ritchie and Roser (2017) revealed that the global GHG emissions during the 1700-1900 period were almost entirely contributed by the UK and European countries, especially during the period of the first industrial revolution (Figure 2). The United States' contribution to global emissions began to increase in the 19th century to the 20th century, and peaked in 1950, especially in the era of the industrial revolution and the green revolution.

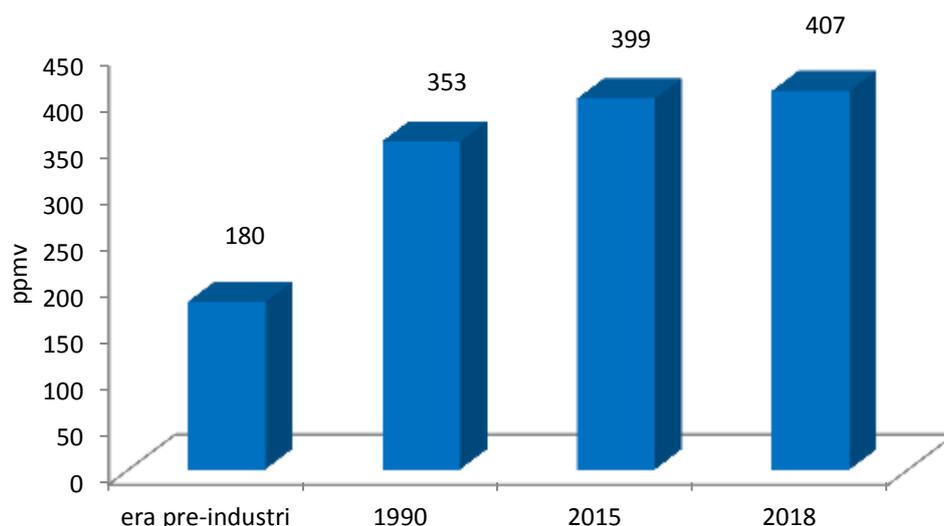


Figure 1. The increased of CO₂ Emissions in the Earth's atmosphere (Source: IPCC, 1991; IEA, 2016, 2019).

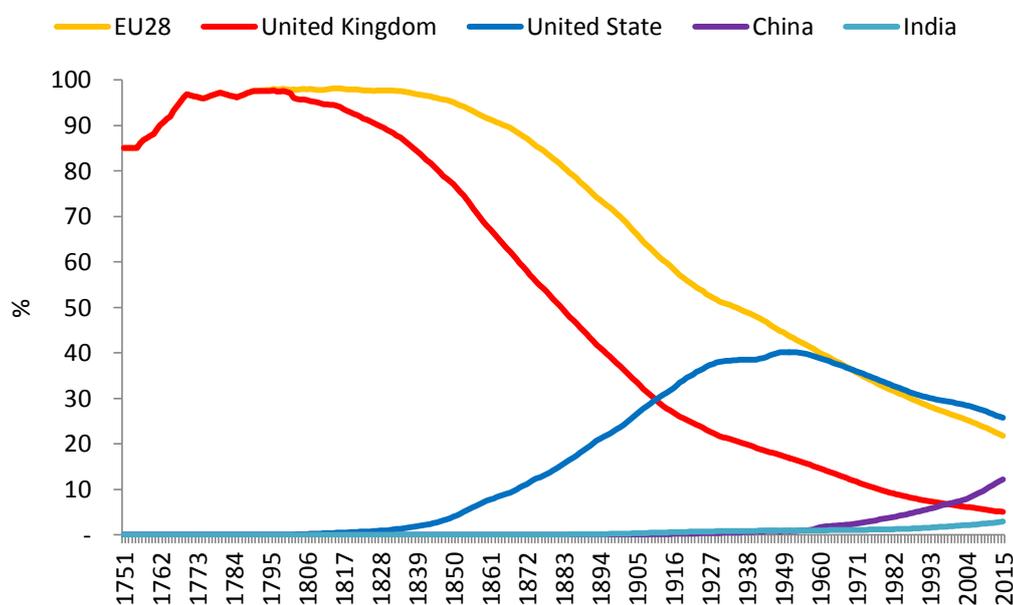


Figure 2. The Top-5 Emitter Countries' Shares of Cumulative Global CO₂ Emissions from 1751 to 2015 (Source: Ritchie and Roser, 2017).

Increasing the concentration of GHG emissions in the atmosphere is believed to be the cause of global warming and changes in the global environment that have threatened life on planet Earth (The Royal Society, 2020). Referring to global emission data (Oliver *et al.*, 2020), the total global GHG emissions in 1990 were still around 33.1 Gt CO₂ eq and continued to increase to 52.4 Gt CO₂ eq (excluding LULUCF) or around 57.4 Gt CO₂ eq (including LULUCF) in 2019.

The Top-4 emitters in the world in the last 30 years have not changed, namely China, the United States, the European Union, and India (Figure 3). The contribution of each emitter country to global emissions in 2019 is as follows: China (14.0 Gt CO₂ eq), the United States (6.6 Gt CO₂ eq), EU-28 (4.3 Gt CO₂ eq), and India (3.7 Gt CO₂ eq). They account for approximately 55 percent of global GHG emissions.

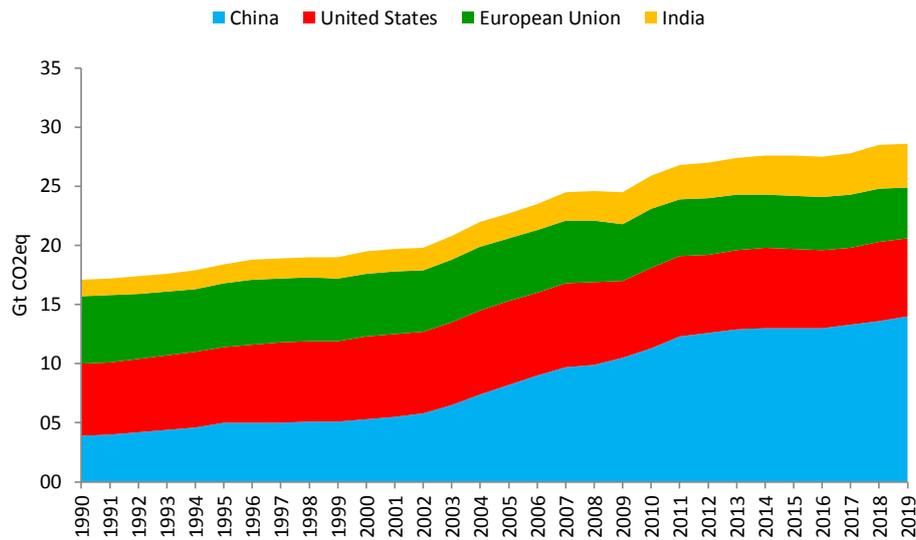


Figure 3. The Contribution of Top-4 Emitters to Global GHG Emission (Source: Olivier *et al.*, 2020)

The data (in Figure 3) very clearly shows that the world's top emitters from the pre-industrial era to today are China, the USA, the European Union, and India. This is the source of the problem that must be resolved and not diverted to other countries or sectors. The Top-4 emitters must be responsible for the increase in the concentration of GHG in the earth's atmosphere, which triggers global warming and global climate change. The solution should start with them immediately reducing and re-absorbing their emissions

that have already been released into the earth's atmosphere.

In more detail, CO₂ emissions are the main component of GHG emissions, accounting for 74 percent (Figure 4). The use of fossil fuels (coal, oil, and gas) is the primary source of carbon emissions, accounting for approximately 89 percent of total global CO₂ emissions (Oliver *et al.*, 2020). Meanwhile, the contribution of emissions from Land Use and Land Use Change Forestry (LULUCF), which is currently being debated, is estimated to be around 7% of total global emissions.

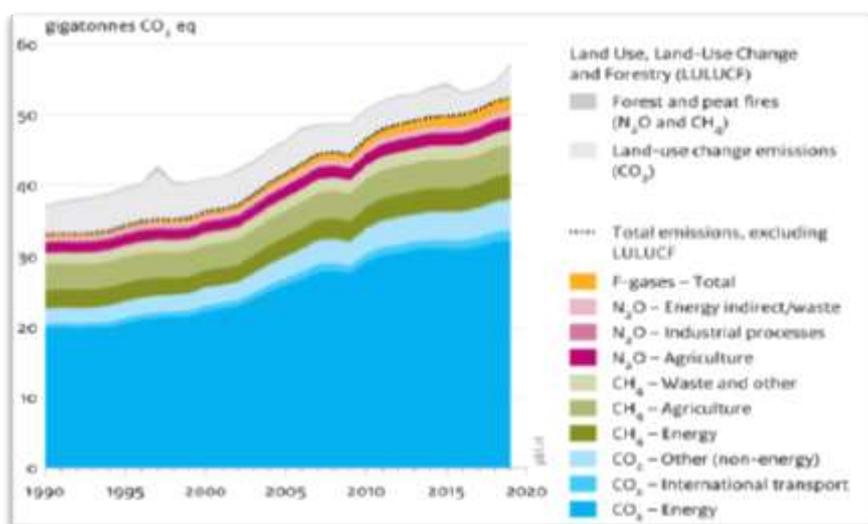


Figure 4. Global Greenhouse Gas Emission Sources by Sectors in 2019 (Source: Olivier *et al.*, 2020)

Data on the main emission sources provides directions on what solutions should be taken to reduce global GHG emissions. Given that the primary contributors to global emissions are emissions from the combustion of fossil fuels. Therefore, the main solution to reduce the world's GHG emissions is to reduce the consumption of fossil energy.

Reducing emissions requires a change in the development paradigm from "sustainable growth" to "sustainable de-growth" (Kallis et al., 2018). With the solution offered, namely reducing fossil energy consumption to reduce GHG emissions, it means reducing production, consumption and welfare. This is where the problem is. Are developed countries that enjoy the highest welfare in the world but are also among the world's Top-4 emitters, such as Europe and the United States, willing to reduce their welfare? Or India and China, which are currently still middle-income but are among the top-4 emitters, willing to reduce their welfare?

DIVERSION OF ISSUES TO THE PALM INDUSTRY

In the Rio declaration in 1992, it was agreed upon the importance of an international agenda, namely sustainable development and poverty eradication. One of the policy approaches to sustainable development that have been developed is the Polluter Pay Principles (PPP). Polluters or those who pollute are required to pay emission fees (negative externalities) to the affected community.

In the context of world GHG emissions, although all countries contribute to the world's GHG emissions, the Top-4 emitters that contribute about 55 percent of the world's total GHG emissions should and must be held more responsible. Top-4 emitters should be responsible for bearing the costs of the negative impacts (externalities) of rising global emissions that have an impact on global warming and global climate change.

The European Union and United States, as super-rich countries that are also included in the Top-4 GHG emitters, which

should be more responsible for increasing global emissions, actually build alliances to diversion these issues and responsibilities. The alliance in question is the EU commission, USA agency, agribusiness companies/producers in the EU and the United States, with a network of trans-national environmental NGOs (Roberts, 2011). Since 1998, billions of US dollars (USD) have flowed from them to NGOs to finance the alliance's movement. Recently, producers of oil and gas in the European Union and the United States have also joined the alliance to divert issues and responsibilities for their contribution to global emissions.

The alliance has common interests. The European Commission and United States agency have an interest in diverting the issue of top emitters from the European Union and the United States to other countries. Agribusiness companies in the two regions of the country also have an interest in refusing the imports of palm oil, which is a competitor to vegetable crops as feedstock for biofuel in the European Union and the United States. Meanwhile, the interests of producers of oil and gas in the European Union and the United States are to refuse the import of biodiesel and palm oil (as feedstock biodiesel) to replace fossil fuels, while the interests of NGOs and their networks in target countries are related to employment and income.

The NGO supported by the alliance are tasked with obscuring and covering up the fact that the European Union and the United States as top emitters of GHG and diverting them to the global palm oil industry. Through structured, systematic, and massive campaigns, NGOs and their networks build a new perception that the palm oil industry is the world's largest emitter, the main driver of global deforestation, the cause of global warming, the cause of the loss of world biodiversity, the cause of global climate change, and so on. No need to be supported by data and facts, this alliance and NGO campaign adopted the Nazi-Hitler propaganda method, that "Lies that are repeated, with intensive and widespread reporting and involving global media networks, one day the people will accept lies as truth".

The alliance has diverted the issue and created a negative perception of palm oil. Negative perceptions of environmental aspects increased more than doubled from around 20 percent to 45 percent between 2012-2017 (Salleh, 2021). With the method Life Cycle Analysis (LCA) as an emission calculation that does not yet have a valid scientific basis and is full of uncertainty (Liska, 2012), the ILUC approach (European Commission, 2019) classifies palm biofuels as having higher emissions than fossil diesel. This approach contradicts the findings of a previous study conducted by the European Commission (2013), which showed that palm oil biofuels can reduce emissions by 50-62 percent.

The framing of the negative issue of palm oil is also used by the alliance of vegetable oil producers as feedstock for biofuel and producers of oil and gas in the European Union with the European Commission to design protection measures by imposing a Pigovian Tax on palm oil imports, promoting labeling of palm oil free and even designing a phase out of palm oil from the European Union before 2030.

Diversion of global environmental issues, from the issue of the top-4 global GHG emitters to issues of the palm oil industry, like the saying "itchy head, feet are scratched". The main problem of the global environment is global warming and global climate change due to the increasing increase in GHG emissions and most of these emissions come from fossil energy. So why is the global palm oil industry in question?

The world's top-4 emitters account for about 55 percent of global GHG emissions. Why the palm oil producing countries becoming the targets of the EU-USA-NGO alliance? As the Top-4 GHG emitters, all products produced from the European Union and the United States should be categorized as "High Risk GHG Emission Products". However, the European Union has done is to categorize palm oil as a "High Risk ILUC Commodity".

This way of diverting environmental issues clearly does not contribute to international efforts to find solutions to global warming and climate change. By "scapegoating" the palm oil industry, as so

far, it keeps the global community away from solutions.

Oil palm plantations, which are vegetable oil crops, have advantages such as productivity ten times higher than other vegetable oil crops, a longer life cycle (25 years) and the potential derivative products, namely biofuel with lower emissions and able to substitute fossil fuels. This should become one of the solutions for the world, especially for the world's Top-4 emitters to reduce the GHG emissions. Therefore, the alliances formed by the world's top emitters, especially the European Union and the United States, should see palm oil as a solution, not as a "scapegoat".

CONCLUSION

The concentration of GHG emissions in the earth's atmosphere has increased rapidly since the 1700s to the present. The increase in GHG concentrations is believed to be the cause of global warming and climate change.

The largest source of GHG emissions comes from fossil energy. Meanwhile, the Top-4 emitters in the world are China, India, the USA, and the EU-28. Therefore, the willingness of them to reduce emissions, especially from the use of fossil energy, is a significant solution to reducing global emissions.

On the other hand, the main emitters, especially the European Union and the United States, have formed an alliance whose task is to divert GHG emission issues and responsibilities to the global palm oil industry. What these countries have done has not contributed to the solution and has even further distanced the global community from GHG emission reduction solutions.

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