Committee: International Labor Organization (ILO)

Issue: Facilitating Net-Zero status through transparency in governmental or private carbon-related infrastructure

Student Officer: Kalliope Patera

Position: Deputy President

PERSONAL INTRODUCTION

Dear delegates,

My name is Kalliope Patera, and I am a student in the 11th grade at Athens College. It is my honor to serve as a Deputy President of the International Labor Organization (ILO) and have this place in the 7th ACGMUN conference. Even though I haven't attended a lot of conferences, from the first ever conference I attended I knew that through this whole experience, while gaining knowledge, you also make real friendships and acquire unforgettable memories.

With this study guide, you can have an insight into the topic in general. More specifically, the topic I chose to oversee was the following: "Facilitating Net-Zero status through transparency in governmental or private carbon-related infrastructure", which I will be analyzing more in the following pages. Do not forget that each one of you has a different delegation, so you are expected to conduct your own research.

If you have any questions concerning my topic or need help with anything else regarding the conference, don't hesitate and contact me via my email, <u>kalliopepatera2007@gmail.com</u>.

Best Wishes, Kalliope Patera.

TOPIC INTRODUCTION

Reaching Net- Zero is a goal that a lot of countries have set, and it is something that can be achieved, by emerging multiple solutions.

We all know that our planet is currently going through a climate change crisis, and a big cause of it is the excessive amount of greenhouse gas emissions that we produce into the atmosphere. It is important now to note that more than 50% of the emissions that are in the atmosphere are produced through transport,

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industry, power, and infrastructure. The UN Intergovernmental Panel on Climate Change declared that if the temperature increases above 1.5 Celsius, then the impact of climate change will be even more severe. Thus, the 196 nations reached an agreement in 2015, called the Paris Agreement. To be more precise, this decision included limiting average temperature increase to 1.5C and above.

As mentioned before, an excessive amount of the greenhouse gas emissions in our atmosphere comes from carbon-related infrastructure. This means that our focus should be on the construction of low-carbon infrastructure that will help in achieving the net-zero goal. Consequently, the harmful effects coming from carbonrelated infrastructure will be limited. However, for that to be accomplished both private companies and governments should ensure transparency, open communication, and exchange of data.

DEFINITION OF KEY TERMS

Carbon Emissions

"Carbon dioxide that planes, cars, factories, etc. produce, thought to be harmful to the environment"¹

Greenhouse gases

"Gases in the earth's atmosphere that trap heat"²

Infrastructure

"Infrastructure is the basic physical systems of a business, region, or nation and often involves the production of public goods or production processes"³

¹ "Carbon Emissions." *Cambridge Dictionary | English Dictionary, Translations & Thesaurus,* <u>www.dictionary.cambridge.org/dictionary/english/carbon-emissions</u>

² "What Are Greenhouse Gases? | GHGs Explained | National Grid Group." *Welcome to National Grid Group | National Grid Group*, <u>www.nationalgrid.com/stories/energy-explained/what-are-greenhouse-</u>

gases#:~:text=Greenhouse%20gases%20(also%20known%20as,greenhouse%20gases%20in%20the %20atmosphere

³ "Infrastructure: Definition, Meaning, and Examples." *Investopedia*, 20 Nov. 2003, <u>www.investopedia.com/terms/i/infrastructure.asp#:~:text=Infrastructure%20is%20defined%20as</u> <u>%20the,%2C%20water%2C%20and%20school%20systems</u>

Net-zero status

"Net zero refers to a state in which the greenhouse gases going into the atmosphere are balanced by removal out of the atmosphere"⁴

Transparency

Transparency is having the ability to become aware of something easily.⁵

BACKGROUND INFORMATION

Net zero, a recently introduced concept, aims to strike a delicate balance between the carbon emissions generated and those removed from the atmosphere. Recognized as a pivotal measure in the fight against climate change, this initiative assumes a position of paramount importance. Addressing this critical issue becomes imperative in order to avert further climate devastation, which not only imperils our environment but also poses a significant threat to humanity. It is no lie that the adverse effects of air pollution, primarily stemming from elevated levels of carbon emissions in the atmosphere, are a major contributor to respiratory issues and even fatalities. Consequently, embracing the concept of net zero presents immense advantages, serving as a crucial step towards fostering a more equitable future where carbon is harnessed for benefit rather than for detriment.

Reaching Net Zero

Reaching the goal of net zero will be a very challenging process that will require multidimensional approaches. First and foremost, companies and industries need to take proactive steps to cut their carbon emissions by converting to renewable energy sources, deploying energy-efficient technology, and implementing sustainable practices. Afforestation and reforestation initiatives are also essential for absorbing and mitigating residual emissions at the same time. Furthermore, improvements in carbon capture and storage technology might help to lessen the effects of emissions that cannot be prevented. People may also make a difference by leading eco-friendly lives, using less energy, and endorsing sustainable projects. The transition to net zero can be accelerated by government

⁴ "What is Net Zero?" *Net Zero Climate*, 22 Sept. 2023, <u>www.netzeroclimate.org/what-is-net-zero-</u> 2/

⁵ "Glossary:Carbon Dioxide Emissions." *Glossary:Carbon Dioxide Emissions - Statistics Explained*,<u>www.ec.europa.eu/eurostat/statistics-</u> <u>explained/index.php?title=Glossary%3ACarbon dioxide emissions#:~:text=Carbon%20dioxide%20</u>

⁽CO2)%20is,area%20and%20period%20of%20time. Accessed 3 Jan. 2024.

policies that penalize excessive carbon output and reward emission reduction initiatives. International cooperation, information exchange, and research are crucial elements of a collective effort to achieve net zero, promoting an optimal balance between emissions and removal actions to guarantee a robust and sustainable future.

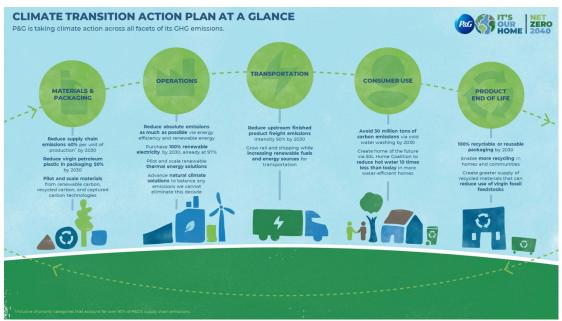


Figure 1: In the photo, we can see a transition action plan that has been created in order to become a carbon-neutral world⁶

Challenges

Facilitating the transition to a net-zero status within both governmental and private carbon-related infrastructure poses formidable challenges, notably exacerbated by the intricate nature of global supply chains. A primary obstacle lies in the inherent complexity of tracking and managing emissions throughout these expansive networks. Companies engaging in carbon-related transactions face difficulties in precisely monitoring and attributing emissions to specific sources, particularly given the intricate web of suppliers and their varied geographical locations.

The difficulties continue with supply transportation, where complications result from both the actual transport and the complicated process of calculating emissions related to shipping procedures. Determining emissions from discrete sources, including industry and transportation, is still a major challenge because there aren't any extensive tracking systems in place. It is crucial to attain

⁶ "P&G toward Net Zero GHG Emissions by 2040." *P&G Toward Net Zero GHG Emissions by 2040*, Procter and Gamble, 29 Sept. 2021, <u>www.us.pg.com/blogs/net-zero-by-2040/</u>.

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transparency in emissions accounting in order to efficiently handle and reduce carbon footprints across a variety of supply chains.

The energy industry, which is a significant source of greenhouse gas emissions, is also vital for achieving net-zero emissions. Making the shift in this industry to renewable energy sources, such as wind power, is essential. But this shift calls for significant adjustments and inventions. Developing cutting-edge solutions for energy storage and transmission is essential to effectively using intermittent renewable energy sources. However, it necessitates several adjustments and inventions, including energy storage and transportation systems. Simultaneously the same problem arises in the creation of technologies for storing carbon dioxide underground and repurposing it, where the lack of technological advancements is prevalent.

To successfully navigate these obstacles, improving communication in both governmental and private infrastructures is a crucial point. Important elements include creating strong reporting systems, encouraging global collaboration on emission monitoring guidelines, and allocating funds for research and development. By taking care of these, we open the door to a more transparent, responsible, and effective strategy for reaching net-zero status in the complex world of carbonrelated infrastructure.

Benefits

Achieving net zero is essentially an all-encompassing goal that balances social, economic, and environmental aspects for a sustainable and successful future. It addresses the pressing issue of climate change, especially in terms of reducing rising sea levels and high temperatures. In addition to protecting the environment, limiting carbon emissions creates new job opportunities globally and turns remote areas into centers of activity for a variety of industries. By reducing the effects of floods on communities and reducing temperature extremes, this preservation of the environment improves the standard of living conditions.

From an economic point of view, companies that implement net zero plans draw attention from investors in addition to promoting sustainability. Companies that have ambitious aims to achieve carbon neutrality are favored by investors more and more because of their long-term viability and moral position. Moreover, net zero projects indicate organizational progressiveness, which attracts talented staff members.

International collaboration and technological advancements

The use of technical advancements has become essential as we work towards reaching net zero. Unprecedented insights into environmental dynamics are provided by satellite photography and advanced data monitoring technology. We can now track and analyze global carbon emissions on a scale that was previously inconceivable thanks to these instruments. Simultaneously, as organizations struggle with the complexity of global data management and emission tracking, sophisticated software solutions have become vital. Businesses are using technology to improve their environmental performance beyond just gathering data. Businesses are under growing pressure from investors to strengthen and prioritize their sustainability efforts. The situation incentivizes businesses to embrace and use state-of-the-art technology that not only optimizes their processes but also significantly aids in reaching net zero.

MAJOR COUNTRIES AND ORGANIZATIONS INVOLVED

Algeria

Algeria has developed a thorough plan to cut greenhouse gas emissions by 7% and is actively involved in the worldwide effort to combat climate change. Even while it might not seem like much, this is a big step in the right direction toward sustainability and fits with the nation's goal under the Paris Agreement. Algeria, in spite of its size, is actively interacting with the international community and is aware of how difficult it will be to achieve these reductions. The country has promised to work with other nations to create other plans that would go above and beyond the first goal. Algeria is realistic about the timeline and intends to accomplish its netzero objective beyond 2050, acknowledging the difficulties that lie ahead.

Austria

Austria is a country that wants to achieve a net zero by 2040. It aims to mitigate all carbon emissions; thus, it spreads awareness to its citizens, global companies, investors, etc, to prioritize actions that help reach this goal. It also suggests that they need to focus first on eliminating all carbon emissions and then finding a way to maintain that lifestyle. Such changes have already been made in Austria, as it is a country that increased its renewable energy by almost 15% before 2020. In the infrastructure sector, Austria is a country that has always maintained the emissions from new cars low, nearly as close as the EU average.

Bhutan

Even though Bhutan is a small country, with a population of nearly one million people, in the continent of Asia, and more specifically close to the Himalayas, it is one of the very few countries that has achieved the net zero goal. To be more exact, it was the first country to become carbon neutral and it is important to note that it is now carbon negative, meaning that it induces more greenhouse gas emissions than it actually emits. It is an example for all the other countries, as it was the first country to achieve this goal. Examples that helped this nation achieve its goal are forestry practices, sustainable organic farming, and carbon-related infrastructure such as trains. This shows that Bhutan has actually given priority to the environment and is a model for the rest of the world.

United Kingdom

The UK is one of the many countries that want to have achieved net zero before 2050, following Bhutan's steps but also showing that a nation that is bigger can also achieve goals that contribute to the better of our environment. To be more specific, the UK was the first country in the major economy to have contributed to achieving this goal. It has reduced its emissions by 42% and it is working hard to set an example for other major economy countries. It is trying to raise awareness and help itself and other countries as well.

Orange

"Orange" is a telecommunication service company, founded in 2008, aiming toward achieving net zero by 2040. Things that they want to accomplish is to decrease the greenhouse gas emissions until 2025 by 30%, something that people think is possible, as they have already reduced them by 35% in the last 10 years. Moreover, they have changes to transport and buildings that are hybrid or even electric cars and in order to give an example to the rest of the world they use video conferencing and work by computers, reducing at the same time emissions by 25%.

Siemens Ag and American Airlines

Another company that is involved with the same matter is Siemens Ag, which tries in every way possible to engage its clients, decreasing the carbon emissions by 54% and 70% of the electricity they consume. It would be interesting to mention that American Airlines is a company that has announced its effort and

action plan to help our world become a better place. They announced their Environment, Social, and Governance Report, which stated their strategy in achieving the goal of net zero by 2050.

Date	Description of event
11 December 1997	Kyoto Protocol: puts into use the UN Framework Convention on Climate Change by making countries agree to the target in reducing carbon emissions.
12 December 2015	The Paris agreement was adopted in France, by 196 nations in order to help achieve the net-zero goal.
2008	Company, "Orange" was founded. A company that aims to achieve the carbon neutral goal by 2040, focusing in a plethora of factors, such as buildings and transport.
2015	The first nation, Bhutan, achieved the net-zero goal.
31 March 2022	The High-Level Expert Group on climate change, was discovered by Antonio Gutteres, that encourages the public to act according to the Paris Agreement.
8 November 2022	The UN Climate Conference took place in Sharm-el Sheikh, Egypt, where they launched a report that included 10 ways in which countries can act towards net zero.
2050	2050 is a year that many countries have set as a mark; either to achieve carbon neutrality before 2050, in 2050, or after 2050.

TIMELINE OF EVENTS

RELEVANT UN RESOLUTIONS, TREATIES, AND EVENTS

High-Level Expert Group

On the 31st of March 2022 António Guterres, the United Nations Secretary-General, settled a High-Level Expert Group on the Net-Zero Emissions Commitments of Non-State Entities. The purpose of this was to create a clearer view for the countries on the standards for net-zero emissions. This may be helpful in the future since improvement attempts will be targeted and aimed toward specific matters and the most affected regions.

Launch Event for the report at the UN Climate Conference (COP27) 8/11/22

In Sharm-el Sheikh, Egypt, on the 8th of November 2022 the Launch Event for the report at the UN Climate Conference (COP27) was organized by the UN Secretary-General, Antonio Guterres. More specifically, this report outlined 10 recommendations, which described ways in which countries and non-state actors need to act for carbon-related infrastructure, while they are on their progress for the net-zero goal.

The Paris Agreement

The Paris Agreement of 2015 is an international treaty on climate change signed by 195 nations in the United Nations Climate Change Conference. This treaty had as a goal to develop a strong and global response to climate change and raise awareness of the nations. To be more specific, the agreement aimed to keep the global temperature 2 degrees below what it was before the industrial levels. Obviously, it also wanted to help the 195 Parties understand the impact climate change has and help them communicate with each other in order to create strategies and plans to battle the problem.

PREVIOUS ATTEMPTS TO SOLVE THE ISSUE

Carbon Disclosure Project

The Carbon Disclosure Project (CDP), is a previous attempt to solve the issue, which from the name itself we understand it is related to carbon emissions. More precisely, this project is an initiative that takes place globally, and it aims to encourage companies to limit their environmental impacts, such as the greenhouse gas emissions they produce. There are a lot of companies that take part in this project in order to achieve these goals and show their commitment to transparency and sustainability. These companies have the opportunity to report and share their data on their carbon emissions and track themselves. In that way, they will try to limit their carbon emissions, in order to not show big numbers to the world and to keep their clients.

Corporate Social Responsibility

Another solution that has been proposed, is Corporate Social Responsibility Reporting (CRS). These reports help governments and companies to track their

emissions and as they are published annually, each nation shows their commitment, and we are one step closer to achieving our goal. It has the same mentality as the Carbon Disclosure Project.

Cap-and-trade systems

In many nations, there is a system called cap and trade systems, that they have adopted. This system limits the amount of greenhouse gas emissions each nation or company is allowed to produce and so it is specific for each one. The way in which this solution is helpful is because if a company or region produces less than it is allocated, then it can sell the rest and thus it helps improve their economy and at the same time help us achieve our goal.

POSSIBLE SOLUTIONS

Creating more sustainable transportation infrastructure

Constructing infrastructure specifically for trains, such as the trails they use, can lower the number of vehicles that generate carbon dioxide, as we can build trains used to replace various means of transport. Moreover, trains are a solution to help us reduce the greenhouse gas emissions in our world, as they can be better for the environment than most planes or cars. However, in order to do that, the transport infrastructure projects created, need to follow strict environmental requirements and state-of-the-art eco-friendly technology. The majority of global emissions come from transportation infrastructure construction and usage, as it is a really important factor in the development of high-functioning societies as it provides a better quality of life. Consequently, transportation will be more sustainable and contribute to tackling climate change.

Tax breaks or economic incentives

A solution that will be one to help us accomplish our goal is tax breaks or economic incentives to motivate companies. The way that these incentives and tax breaks are going to motivate the companies is by making them known to the public when reducing greenhouse gas emissions. More specifically, if the government offers money to a company, or allows them not to pay taxes, that will help them grow and develop as a company. Then, these companies will become more known and in order to have a positive image, they will have to/want to become ecofriendly. As a result, a plethora of companies will become eco-friendly and thus influence their clients to follow their steps.

Raising Awareness

The most important thing we need to focus on is raising awareness on a global level. There need to be public awareness campaigns in order to sensibilize our fellow citizens and educate them on the importance of carbon transparency. Each and every one of us has to take the matter into our own hands and understand how transparency in the carbon-related infrastructure sector will help us achieve the goal of net zero. Another important thing to mention here is the fact that even though we have all the above and are trying to achieve this very difficult goal we have set, without activism nothing can be achieved. The public needs to be aware and at the same time raise awareness on the topic. In this way, companies, investors, and governments can be held accountable for their actions.

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