



UNEPA

ATIDNUN 2021

*Lessons Learned from the Pandemic: Reducing the
Carbon Footprint of the Transportation and
Aviation Industry*

Chair Letters

Dear delegates,

My name is Yiftach Kolodner, I am 16 years old, and I'm really excited to chair all of you at ATIDMUN2021. I hope you're all excited about the conference at least as much as I am and I can't wait to meet all of you.

ATIDMUN2021 is going to be the first time I'm chairing in a conference, it is going to be the 7th conference that I'm taking a part in since I joined MUN. I joined MUN when I was in 9th grade and in this past year I have learned a lot of important life skills like talking in front of an audience and how to express my opinions and I think that it is so cool that in MUN you can have fun and learn a lot of things on the way. In addition to that, I'm also playing American football and I play the drums as well.

If you have any questions about the study guide or the committee, feel free to contact my email:

y.kolodner@gmail.com

I'll see you soon, and good luck!



Dear delegates,

I am happy and honored to welcome you to the United Nations Environmental Assembly as your chair. My name is Yonatan Ram, and I am a sophomore at Atid Lod High School for Sciences and Leadership. My majors are Chemistry and Biology. In my free time, I usually work out with my friends 5-6 times a week, play on my computer, listen to any type of music that you can imagine (especially rap, rock, and Eastern songs), and most importantly re-watch shows on Netflix; I love “How I Met Your Mother, and I watched “Avatar The Last Airbender” 4-5 times.

I have been affiliated with our Atid Lod MUN and Debate Club for 4 years, during which I have been debating in every single one of those years, and have been doing MUN since my 8th grade. I had the privilege to participate in 13 conferences (and yes, some were online) and to get awards in most of them, the most wonderful one-has been the Best Delegate Award in the DUNE Crisis committee at TIMEMUN 2021.

I have been enjoying every second of MUN from my first conference. I won 1st place in IOMUN 5 in the Crisis Committee where I learned about MUN from a different perspective. I want you to enjoy the MUN online experience as much as I did and even more while debating and solving the problems that you will face in our committee. And I can assure you, all of us will have super fun activities during the sessions as well. My co-chair and I are really excited to chair our committee, and we will do our best so that you will have an amazing time.

Yours,

Yonatan Ram yonatan.ram2005@gmail.com



Dear Delegates,

My name is Ariel Vincent and I have the great pleasure to welcome you to United Nations Environment Assembly committee.

I am a female student in the 11th grade in Atid Lod High School for Science and I am majoring in Biology and Biotechnology. This is going to be my 3rd year in MUN, and my 8th conference. During my time in MUN, I took part in a variety of conferences discussing numerous pivotal topics which enabled me to expand my knowledge and make new friends.

The effect of covid-19 pandemic and the imposed restrictions have had positive and negative outcomes on the environment. Additionally, the awareness to climate change has been raised due to precautions of staying at home longer and the publicity of data. As pressure on moving to renewable energy resources increases, conflicts to sustain livelihoods can lead to tensions and disputes in governance frameworks, international relations and resolution mechanisms. The hardship of this topic is tacking in account such complex and eye opening matters while forming an authentic strategy. My hope is that every one of you will be able to focus on the importance of the environment and your economy in your specific country, while initiating a creative approach of your own towards the topic.

This year, due to the Covid-19 Pandemic, we are required to have an online conference instead of a meeting face to face. Online conferences could be challenging at times yet, I believe it is a great way to practice, broaden our horizon and establish new connections in our ever changing and challenging world. I am widely aware that preparing for conferences, especially with this new online platform, could be overwhelming at times; therefore please feel free to contact me about any sort, in need.

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Looking forward to meeting you and hope to see you soon!

All the best,

Ariel



Table of Contents

Chair Letters	2
Table of Contents	5
Introduction to the Committee	6
Background	6
The Past and Present of Pollution	6
The Transportation Sector	8
Current Situation	9
Covid-19 and its Impacts	9
Recent Developments in Green Transportation Technologies	11
Electric Air Travel	11
Electric Cars	11
Considerations for the Future	12
Encouraging Working from home	12
Incentivizing a Reduction in Business Trips	12
Discouraging Unessential Travel	12
Promoting Electric Transportation	12
Solutions Targeted at Developing Nations	13
Conclusion	13
Questions to Consider	14
Familiarizing Questions	14
Clash-Oriented Questions	14
Bibliography	15

Introduction to the Committee

The United Nations Environment Assembly (UNEA) is the world's highest-level decision-making body on the environment, addressing critical environmental challenges facing the world today. The Environment Assembly meets every two years biennially to set priorities for global environmental policies and develop international environmental law.

Founded in June 2012, the United Nations Environment Assembly is now composed of 193 member states and deals with problems placing the environment at the center of the international stakes, including peace, poverty, health, and security. Decision-making requires broad participation, which is why the Assembly provides an opportunity for all nations to help design solutions for our planet's health. It adopts some resolutions on major issues such as air quality, financing the Green Economy, and above all the sustainable development goals as a part of the 2030 Agenda for Sustainable Development. In 2017, the fourth environment assembly took place in Nairobi, Kenya on the theme "Innovative solutions for environmental challenges and sustainable consumption and production". The fifth session of the UN Environment Assembly (UNEA-5) was scheduled to take place during the last week of February 2021, in Nairobi, Kenya, as agreed during UNEA-3 in December 2017.

Background

The Past and Present of Pollution

Pollution, as we know it today, was kick-started by the Industrial Revolution in the 1800s, with the burning of coal and oil in factories and the introduction of cars and machinery. By 1870, America's biggest cities were becoming intolerable, while the "Great Smog" of 1954 killed 4000 people in London. Industrialization, while being essential for development and progress, has always been at a terrible cost for the environment.

An awareness of the topic of pollution was formed in 1962 when Rachel Carson released her most famous book – Silent Spring. Ever since then, efforts are being made globally to reduce pollution and greenhouse gas (GHG) emissions. The major focus was put on energy production, and green energies have been successfully developed and proven economically viable in many different countries.

However, in spite of the great advancements in the fields of green energy, which is still far from perfect, the transportation industry has not yet seen a great reform in the last few decades. Private vehicles and buses are still highly prevalent and usually operate using fossil fuels. The following graph demonstrates the severity of the problem.

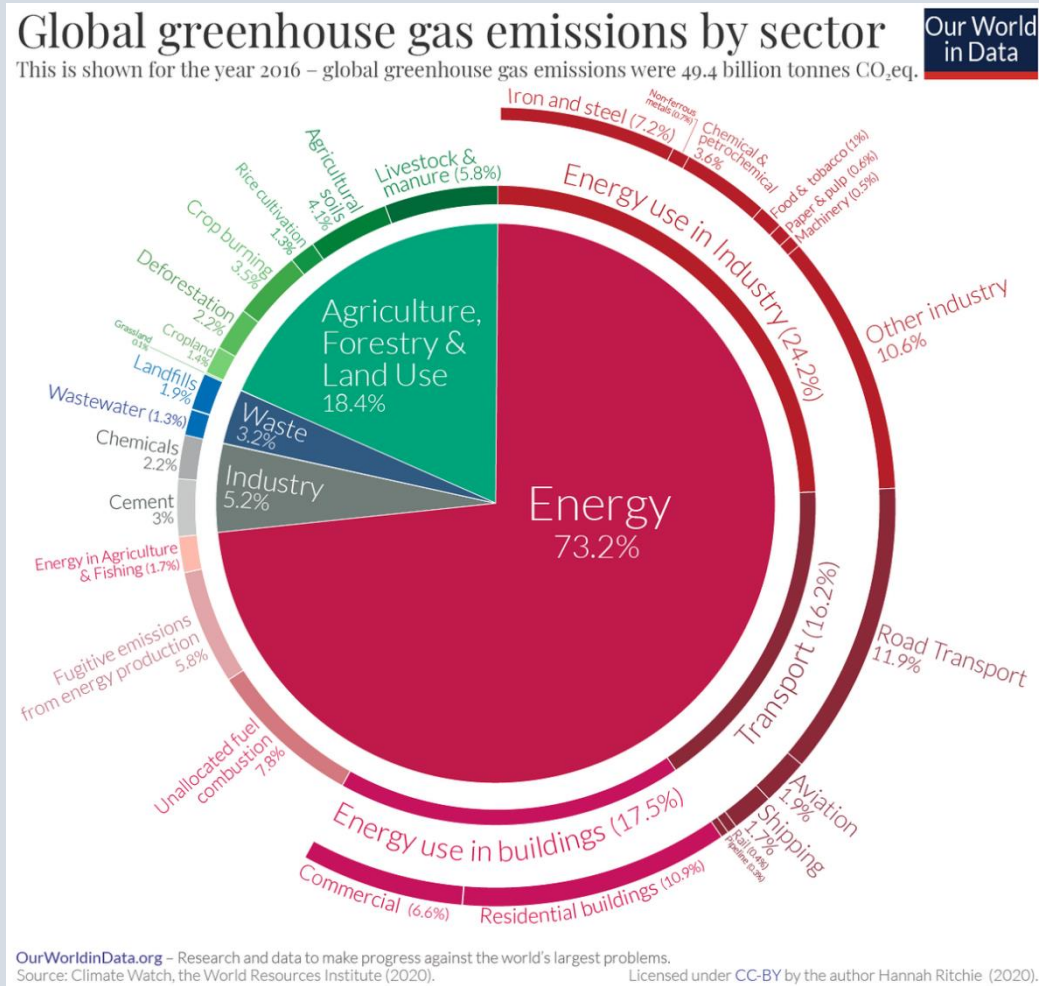


Figure 1: Global GHG emissions by sector in 2020 (taken from Our World in Data): In this figure, it is possible to see that the transportation sector accounts for 16.2% of the global total.

Pollution has always been a divisive issue around the world. Many countries claim that this issue is of top importance (mostly developed countries), however many other countries claim that they would not rather allocate expensive economic resources to protect the environment, seeing as they could be allocated towards other goals such as economic development (mostly developing countries). Some would even go to the extent of claiming that economic and societal growth can only be achieved

through pollution, seeing as there are no good examples for countries that are doing economically well and have not been industrialized in the past. One thing is certain – this dilemma is one that has no easy solution.

Despite that, the Paris agreement, which was signed in 2016 has been a tremendous global achievement that called for global collective actions to reduce GHG emissions with a set numeric target and a relatively organized plan.

The Transportation Sector

Transportation is growing tremendously. It is hard to believe that in just under 250 years after the invention of the steam motor and the train, our world has gone from riding horses everywhere to an interconnected world crisscrossed by networks of flights, shipping routes, railroads, and motorways. This comfort obviously comes at a cost, as can be seen in the following figure:

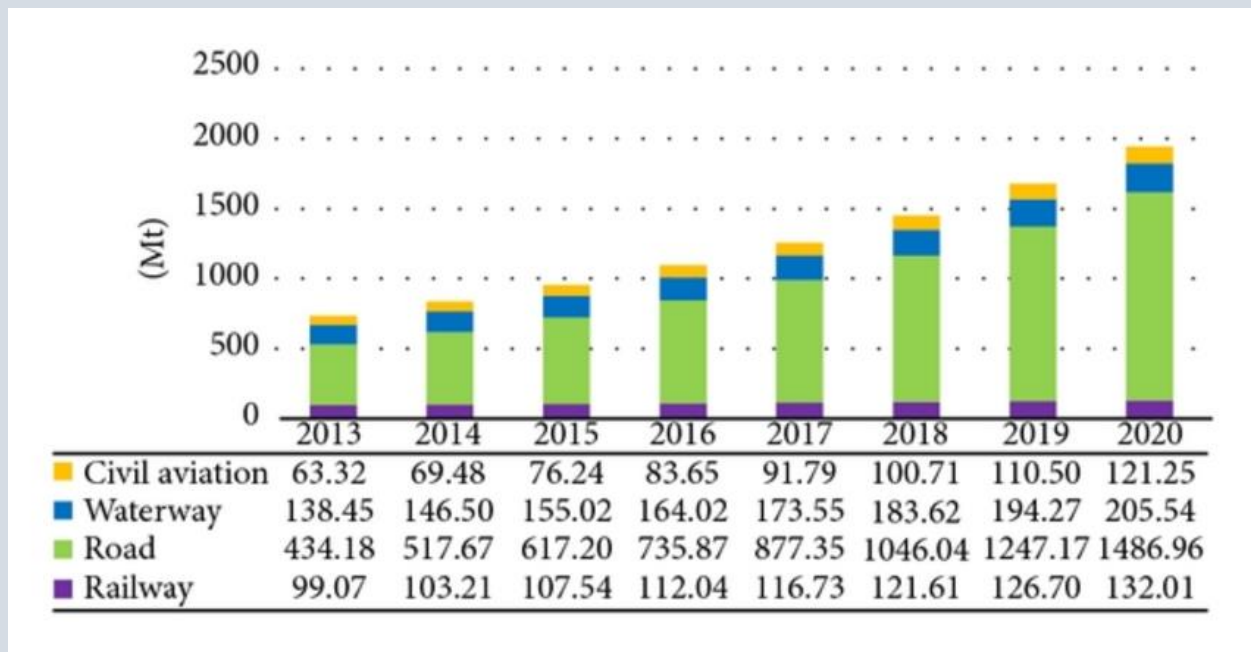


Figure 2: CO2 emissions of the transportation sectors in China from 2013 until 2020 (taken from ResearchGate): This graph shows both the rapid development of all forms of transport and its great economic cost.

Current Situation

Covid-19 and its Impacts

Nearly no other event influenced the world as much as covid-19. In the first quarter of 2020 most countries in the world have almost stopped everything. People were self-isolating at home, the roads were empty, and planes were grounded.

This situation has produced incredible pictures – an empty Champs-Elysée, swans swimming in Venice’s canals, dolphins nearing the shores of Sardinia, and moose rambling the streets of Tokyo. It is clear that the worldwide lockdown, which caused a reduction nearing 90 percent (in some countries) in many forms of transportation, has vastly contributed to the environment. China and Israel, for example, have seen a 36 and 30 percent reduction in air pollution (respectively).

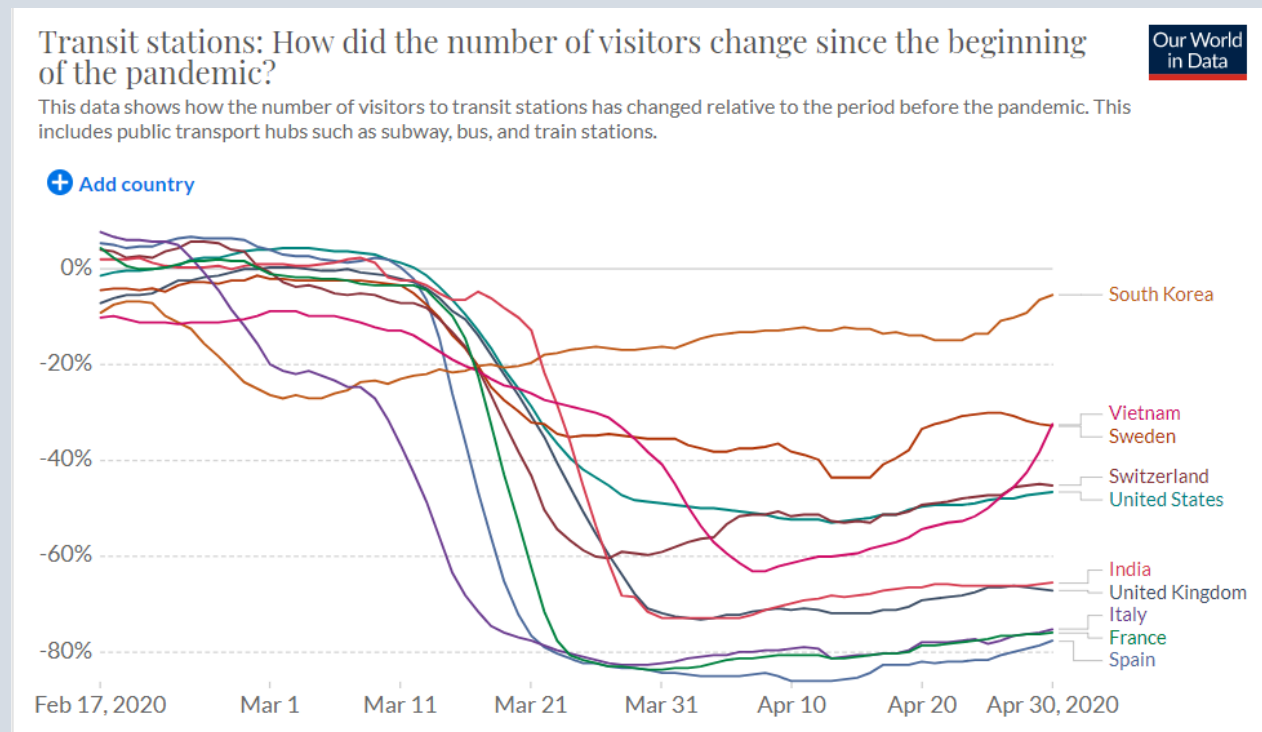


Figure 3: The change in the number of public transit users in February-April 2020

COVID-19 Improves Air Quality in Just Three Months

Weekly average concentration of NO₂ in the air in selected cities (Feb-Apr 2020)*



Central locations

* 95 percent of NO₂ in the air is caused by fossil fuel combustion

Source: World Air Quality Index (WAQI)



statista

Figure 4: Air Quality Improvement across 4 cities

While it is possible to claim that other factors such as lower demand for energy due to the lockdown have contributed to the reduction in pollution, it is impossible to miss the obvious correlation between the reduction in transportation and the reduction in air pollution.

The lockdown may have caused significant economic damages; however, it did prove that many things that in the past required the physical presence of people, can be done effectively from home or from the office, and thus utilizing these habits that were formed due to the pandemic, can become a great opportunity to reduce the carbon footprint of the transportation industry and help to turn the world greener.

Recent Developments in Green Transportation Technologies

While covid-19 was indeed and by far the most popular story of 2020, many initiatives aimed at transforming transportation and making it greener have nonetheless continued and reached impressive milestones.

Electric Air Travel

Air travel is one of the greatest sources of pollution and GHG emissions in the world. It is also the most problematic field in transportation in terms of green alternatives. This is large because jet fuel is highly efficient in terms of energy density and conservation – it encompasses a lot of energy compared to its weight, and thus it is very problematic to find a green alternative to it. Luckily, jet fuel is incredibly expensive, and by going green, the industry can save a lot of money.

However, this reality is starting to change, as technologies such as batteries develop. Many companies such as Volocopter, Zero Avia, and Magnix are developing the first generation of green airplanes and helicopters. These airplanes operate using electricity or hydrogen and are mainly meant for relatively short distances of up to a few hundred miles.

One of the more interesting companies listed above is Volocopter, which develops electric urban helicopters that are meant to replace taxis in the future. The company claims that in the future these electric aircraft will be almost as cheap as taxis. These helicopters can become a true game changer in urban transportation.

Electric Cars

2020 has been a key year for electric cars. It was the first year when Tesla was no longer the main manufacturer of electric cars – Volkswagen passed Tesla and became the biggest manufacturers of electric cars.

Senior executives in the company express great hope regarding the market for electric cars. They claim that demand for electric cars is growing significantly, particularly in Germany, and in an interview with

the Economist the CEO of Volkswagen has said that this market will continue to grow and that more brands that are under Volkswagen will increase their involvement in the electric car industry.

Considerations for the Future

Encouraging Working from home

Offices create a lot of pollution, from the workers' journey to and from the office every morning and evening, as well as the electricity needed to run offices. Additionally, Employers have discovered that by enabling workers to work full time or part-time from home, their productivity can increase. Data shows that workers that work from home, work 40% more and that over 70 percent of workers increase their productivity at home. This can be a win-win situation, where employers benefit from greater productivity and lower operating costs, and simultaneously help the environment.

Incentivizing a Reduction in Business Trips

Business travels account for roughly 12% of all airline passengers while accounting for up to 75% of all airline profits. In the past, business trips were very prevalent, however, the pandemic caused a sharp decline specifically in business travel. American Airlines reported that it had seen a reduction of roughly 95% in business travel after the pandemic. However, the pandemic has taught many businesses how they can replace many physical meetings with virtual ones, which can cause a significant decline in business trips for years after the pandemic. Experts estimate that business trips can decline by 33-40% in the next years, even after the pandemic.

Discouraging Unessential Travel

As previously stated, many events that used to happen in real life with a full audience have become virtual over the past year. This is a great opportunity to rethink common events that cause great pollution and GHG emissions and about the possibility of hosting those events via zoom. This can reduce unessential travel and thus help to make the world greener.

Promoting Electric Transportation

As stated above, the potential of electric transportation is great both economically and environmentally, and thus its development can be a win-win situation. This field will require assistance

both in technological developments around batteries and other energy storage alternatives as well as support to the startups themselves.

Solutions Targeted at Developing Nations

It is obvious that many of the aforementioned solutions are too technologically advanced for developing nations. Additionally, many developing nations only pollute more as they continue to grow.

It is possible to help these developing nations to make a technological leap by skipping an older form of transportation technology, for instance: private cars that run on gasoline. However, these processes are rather expensive, may require establishing new infrastructures, and their efficiency can be questionable many times.

Conclusion

The pandemic has taught us valuable lessons about doing things differently. It has advantages as well as disadvantages. If we can be wise enough to fully use the advantages while minimizing the disadvantages, we can benefit the environment as well as improve transportation as a whole.

This committee must decide which new policies and technologies should be promoted in order to reform the transportation industry and protect the environment. There are many incredible options that this committee can choose to promote, however it must keep in mind that their many solutions are not necessarily suitable for developing countries.

This committee will ultimately determine how the future of transportation will look like and how it will influence the environment.

We wish you the best of luck, Yonatan, Yiftah and Ariel.

Questions to Consider

Familiarizing Questions

- Is your country developing or developed?
- How much is your country devoted to protecting the environment?
- Is your country in the Paris agreement?
- How large is your country's carbon footprint?
- How does the transportation industry in your country look like? What are the popular means of travel?

Clash-Oriented Questions

- What is more important – economic growth or the environment?
- Should the UN and its members encourage more activities to take place virtually? How can this be done effectively?
- Can and should the UN and or its member states incentivize working from home?
- Is the global transportation industry ready for the introduction of new green technologies such as the ones listed above?
- Can and should the UN help the development of new green technologies in the transportation sector?
- How can the UN ensure that the same progress can be achieved in developing nations?
- Should entities that fail to adopt some of the aforementioned proposals be negatively sanctioned? How exactly?

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