

LAST NIGHT A DJ TOOK A FLIGHT:

Exploring the carbon footprint of touring DJs and looking towards alternative futures within the dance music industry.



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SUMMARY *

Before the pandemic, global dance music was in full flight. DJs commanded massive audiences at clubs around the world, often flying between multiple countries in the same weekend. When COVID-19 hit, the industry was grounded, disproportionately impacting the livelihoods of most who work within it.

With vaccinations rolling out, we hope to dance again. But before the planes start taxiing up the runways once more, we should acknowledge the unique chance for the music industry to take stock, and use this restart as an opportunity for change. The demand for a small number of DJs to tour constantly is the result of an environmentally unsustainable industry – and an industry that we have an opportunity to collectively reimagine. This report collates and analyses the carbon footprint of Resident Advisor’s top 1000 DJs touring in 2019, and shows that collectively:

51,000

Flights Taken

117,000,000

Km Travelled

3,200,000

Litres of Fuel

35,000,000

*Kg of CO₂ Into the Air **

** This is equivalent to 20,000 households’ electricity for one year, powering 8000 festivals for three days, or pressing 25 million records!*

Our actions have consequences: By travelling over 118,000 km per year, the average DJ from RA's top 1000 has double the impact of even the world's frequent-flying "super emitters". The average touring DJ emits 35 tonnes of CO₂ per year and their carbon footprint is more than 17 times higher than the recommended personal carbon budget of approximately 2 tonnes of CO₂.



The recommended personal carbon budget is 2 tonnes of CO₂ per year

The average touring DJ emits approx. 35 tonnes of CO₂ per year

The disparity is real: The data shows a great disparity between those travelling the most and least within the list. The average footprint of the 100 DJs travelling the most is nearly 88 tonnes versus just 3.3 tonnes for the 100 travelling the least. Respectively this is 44 and 1.5 times higher than the recommended personal carbon budget mentioned above. This unequal distribution of carbon emissions mirrors the disparity of environmental harm caused by a small fraction of the population of the world at large.

We urgently need to act: Our industry is at a standstill, so now is the time for us to create change. While we highlight artists' flight data as a striking metric of our scene's environmental impact, it is clear that everyone within the dance music industry plays a role in the accumulation of these numbers. We are not blaming artists – this report is directed at all those who are part of the music industry, who we are calling on to start a meaningful conversation.

We can act now: Our aim is to better understand the mechanisms by which our scene fails the environment and encourage a collective response to correct those systems, making them work in a less environmentally damaging, more equitable way.

We hope the data in this report shocks you (as it did us) and for it to be a vehicle for change. In reading this document, we implore you to think introspectively, to be empathetic and honest. There will be no shortage of critiques and questions surrounding these findings. So we suggest that rather than grandstand in favour of distraction, we mobilise and organise; instead of deflection, we idealise change and work together to affect it.

While we are not data scientists or carbon footprint experts, it was important for us to get a global sense of artists' behaviour for the purposes of starting this discussion. These numbers are the facts, and these facts are urgent. The "but what about..." defense does not change our industry, nor does it diffuse our responsibility. There is no wrong way to protest for climate justice. Such a suggestion is a distraction.

And this is not just about now – we MUST think about the future. The world is (slowly) waking up to the climate emergency and governments are starting to understand the implications it is having on society. Cheap oil and flights are not going to be around forever when a carbon tax is levied on fuels. We all need to begin this process of adaptation by preparing for what lies ahead and future-proofing our vocations.

In order to address the problems highlighted by our research, we defined some overarching themes for consideration. These include:

- Planning for future equity.
- Rethinking exclusivity.
- Celebrating and investing in the local scene.
- Prioritising more efficient tour-routing.
- Establishing agency and promoter networks to provide peer support and sharing best practices.
- Nurturing relationships between agents and promoters to further this work and narrative.

Music and dance floors provide us with euphoric spaces to be free and create. How can we continue to enjoy them without causing irreparable damage to our planet?

ABOUT *

Clean Scene is a climate action collective exploring alternative futures for the dance music community. Through our work we aim to shift perspectives and rethink our scene's impact on the planet. We want this work to be a collective response. While our core team works across different areas of the dance music scene, we are connected through a shared need to create a cleaner, greener, and more equitable future for dance music. And we know that we aren't the only ones.

We are a small volunteer team who care deeply about the impact we have on the environment. We are all truly terrified of the climate crisis and what it means for the future. This project is a direct response to this. As music heads who work in the industry and recognise that we have also contributed to the problem, we want to facilitate transformative collective action that affects positive change from within.

Following the release of this report Clean Scene fully intends to play a supportive role by building community and facilitating the conversations that we hope will begin the unravelling of the aforementioned issues.

BACKGROUND *

This report was born out of a need to understand the impact our industry has on the planet. Before challenging the status quo and shifting practices, we first need to understand what is actually going on. The figures are staggering.

The dance music industry has become globalised and schedules of touring DJs have become increasingly intense. The fabric of our industry demands curation at every level, perhaps most importantly the lineup. Unconscious programming and fast gigging demanded by this industry has resulted in DJs becoming frequent flyers. This outcome was enabled by the availability and normalisation of cheap flights offered by airlines that receive enormous subsidies and tax breaks.¹

We have a collective responsibility to take care of ourselves and the planet, to do things in a different, less ecologically harmful way. We're fully aware how hard this will be – especially when working within the limits of the capitalist system we are so deeply entrenched in. But we must remember: A business that is only profitable at the expense of our planet is ultimately not a viable business.

“ *Humanity is facing a crisis unprecedented in its history. A crisis that, unless immediately addressed, threatens to catapult us towards the destruction of all we hold dear, our planet’s ecosystems and the future of generations to come. This crisis has been caused by human activities and we have to stop making it worse or we will face catastrophe that we cannot think our way out of, invent our way out of or buy our way out of. In one way or another, it will affect every one of us and everything we love.*

Dr Emily Grossman, Extinction Rebellion

¹ [Exclusive report: is it high time airlines paid tax on fuel?](#)

IMPACT *

The focal point of this report is the sheer scale of the aggregated numbers, with a spotlight on just how much carbon is emitted as a result of the flights taken by artists within the dance music community.

Also remarkable is the disparity between the top (i.e. those who are regularly flying two, three, or four times a week), compared to those hardly flying at all and how these stats compare to the rest of the world's population, who actually fly very little. The findings stress that touring DJs have incredibly high carbon footprints which have a significant impact on the environment, even in a global context.

Through our research this report collates and analyses the carbon footprint of Resident Advisor's top 1000 DJs touring in 2019, and shows that collectively:

51,000

Flights Taken

117,000,000

Km Travelled

3,200,000

Litres of Fuel

35,000,000

Kg of CO₂ Into the Air *

Understanding and visualising measures like these can be hard, particularly when the numbers are so big. We felt it useful to draw some comparisons and provide equivalents to some things we know and love in the music industry. The carbon emissions emitted by the top 1000 DJs is equivalent to running 20,000 households' electricity for one year, powering 8000 festivals for three days, or pressing 25 million records!

GLOBAL CONTEXT, DISPARITY & INEQUALITY

In 2019 Flightradar24 tracked a total 68,948,849 flights.² The top 1000 Resident Advisor DJs' flights account for a tiny percentage of the global total³, but on the other hand, they also represent a tiny percentage of the global population.

The question to ask is how our industry is doing compared with the rest of the world? Staggeringly, data from a report in 2018 tells us just 11% of people worldwide took a flight, and only 4% flew internationally.⁴ In fact, the majority of people globally don't fly at all, and even in countries like the UK, just 15% of the population takes 70% of the flights.⁵

Frequent flyers are identified as those who travelled about 56,000km a year. These super-emitters represent just 1% of the world's population yet caused half of aviation's carbon emissions in 2018, according to a study by Stefan Gössling.⁶ Our research concludes that the average DJ travels about double that, flying 118,618km annually.

Annual CO₂ Emissions

Top 1% EU Household Air Travel
(22.5 tonnes of CO₂)



The 100 Least Travelled DJ's
(3.3 tonnes of CO₂)



The 100 Most Travelled DJ's
(88 tonnes of CO₂)



Furthermore, our research has shown that on average DJs emit 35 tonnes of CO₂ and take 52 flights each per year. To break it down even further: The average footprint of the 100 DJs travelling the most is 88 tonnes versus just 3.3 tonnes for the 100 travelling the least. To give some context, a recent study of household carbon footprints in Europe found that the top 1% of EU households emitted 22.5 tonnes of CO₂ by way of air transport (with a total annual footprint of 55 tonnes).⁷ This unequal distribution of emissions among professional DJs reflects findings by a 2015 Oxfam study that the richest 10% of the world's population produces approximately half of all global emissions, while the poorest 3.5 billion account for just one-tenth.⁸

² [2019 total flight numbers - Flightradar24](#)

³ [Flights taken by the top 1000 represent 0.07% of total flights taken in 2019.](#)

⁴ [1% of people cause half of global aviation emissions - study](#)

⁵ [A Free Ride Campaign Research](#)

⁶ [The global scale, distribution and growth of aviation: Implications for climate change study](#)

⁷ [The unequal distribution of household carbon footprints in Europe and its link to sustainability](#)

⁸ [Confronting carbon inequality - Oxfam](#)

And while it's useful to work out averages, this representation also has shortcomings. There is a huge disparity between those flying and emitting the most compared to the least. Our research shows that:

→ The amount of carbon emitted by the 10 DJs who travel the most is equal to that of the 207 who travel the least.

→ The number of flights Taken by the 10 DJs who travel the most is equal to the 147 who travel the least.

→ The distance travelled by the 10 DJs who travel the most is equal to the 196 who travel the least.

In 2015 the UN Climate Conference agreed that an increase in temperature of no more than 1.5 °C was acceptable in order to prevent runaway climate change. In a 2018 special report on the impacts of global warming of 1.5 °C, the Intergovernmental Panel on Climate Change (IPCC) found that in order to achieve this, CO₂ levels would need to be slashed by 45% before 2030. This requires unprecedented change across all sectors of society, from energy and transport to agriculture.⁹ Additionally, they calculated a global carbon budget and therefore a personal carbon budget for each individual on the planet.¹⁰ This recommended personal budget is approximately 2 tonnes CO₂ per person, per year. For context the average carbon footprint of a person in the UK is 6 tonnes.¹¹

From our calculations the average footprint of an artist is nearly 35 tonnes (based on flying patterns alone). This is 17 times higher than the IPCC's recommended personal carbon footprint needed to curb runaway climate change.

⁹ [IPCC Special Report 15](#)

¹⁰ [Climate Outreach - Communicating Lifestyle Change Report](#)

¹¹ [Emergency on Planet Earth - Extinction Rebellion](#)

METHODOLOGY *

Data was collected from 3 public internet sources using a computer script authored by Clean Scene:

- [Resident Advisor](#) (RA) was used to obtain a sample of 1000 DJs working in the dance music industry and their 2019 touring schedules.¹²
- [Atmosfair](#) provided Clean Scene with access to the carbon footprint related statistics that are the focus of this report.
- [Google Places](#) enabled us to find the nearest commercial international airport to a given venue.

We identified our community as the Resident Advisor Top 1000 DJs because we felt this was a good representation of a specific and related group of artists within the wider electronic dance music community. The sources chosen provided an easily accessible cohort of data. Resident Advisor describes the community as:

*"The list of the Top 1000 artists on RA is based on a combination of an artist's popularity, touring, productions, and influence in a region and/or genre."*¹³

When reconstructing an estimated touring schedule for each artist on the RA Top 1000 DJ list (which included metadata such as a DJ's home city and chronological list of played shows), a set of assumptions were applied.¹⁴ For example, if an artist had more than one gig within two days of each other we assumed they would fly from one gig to the next instead of flying home in between. The same was assumed with consecutive shows on a foreign continent that were within two weeks of each other*. This enabled us to estimate how much each DJ was flying, how far, and at what cost to the planet.

*If you are an artist and feel your flight data has been miscalculated please calculate your carbon footprint using [Atmosfair](#) or [FlightRadar](#) then get in touch with us [here](#).

¹² Please note some DJ's were omitted from the sample as outliers, due to lack of information, or they were a band. Additionally those artists who are known to be more than one person were counted twice. The final number of DJs used as a sample in this study is 987.

¹³ [Resident Advisor Top 1000](#) (webpage now archived)

¹⁴ The assumptions made can be found on the [README.md](#) page of the github and were made in order to give the artist the benefit of the doubt.

In the data section of the Appendix you will find the detailed breakdown of figures. For a thorough description of our methodology, please refer to the [script](#) which has been made public for transparency.

DEFINING PARAMETERS – It is important to note that the script assumes that all DJs travelled in economy class and therefore doesn't address the further inequality and environmental damage caused by flying business class and taking private jets. Another piece of the puzzle, and something we chose not to focus on, is the impact of destination festivals and the mass audiences who travel to attend. To determine the impact of these would require a study of much greater scale and, since a lot of these people travel for leisure anyway, it would be more difficult to estimate.

Please also note that this is an imperfect data set and was used to get a global sense of artists' behaviour for the purposes of starting this discussion. The numbers in our research are an estimate and have been collated from publicly available data producing estimated touring schedules, which we cannot independently verify. The analyses do not account for additional touring staff or band members or any journeys that were taken via lower carbon modes of transport such as trains, buses, or ferries. However, our understanding of current industry practices suggests that these modes are likely to comprise a very small fraction of the journeys taken.

NEXT STEPS *

Concepts for transformative collective action – As a collective we have been thrashing out solutions and reimagining how things could be for well over a year, and working hard to better understand our scene's glaringly obvious environmental problem. When the world came to a standstill due to COVID-19, we were presented with an opportunity to formulate these ideas through the writing of this report.

Collating and presenting the data in order to identify our scene's collective impact is the main goal, but we also want to suggest and catalyse ways in which everyone can begin to make positive changes. Doing this was no light undertaking and, while some are more practical to implement than others, it's useful to think about the industry overall, where you sit within it, and what you can do individually and as a part of it.

Rather than focusing solely on individual action, we must focus on collective action and in order to develop into a source of power, collective action must be transformative.¹⁵

¹⁵ [*To Support a Stronger Climate Movement, Focus Research on Building Collective Power*](#)

1. Future Equity – Climate change is dehumanising, and those whose lives have been historically exploited will always be the first to feel it's real impact. Climate justice intersects racial justice and justice for those who are oppressed by power structures which consistently prioritise profit over humanity.

These structures are inseparable from the politics of whiteness. The politics of whiteness; aggression, exclusion, domination, and a blatant disregard for the health of our planet is responsible for our climate emergency, and because of the power it holds, must make space for the collective good and create solutions. It's 2021 and we are still watching indigenous peoples fight for their land and already fragile ecosystems, as power grabs for pipelines become more intense. We have witnessed entire Black communities in first world countries unable to access clean water as a result of fracking. An entire rainforest and its inhabitants used as mere pawns in a clear grasp for eternal capital growth.

We recognise that flying less could have serious consequences on the livelihoods of many (as has already been established with the standstill brought on by the current pandemic crisis). The dance music industry is very Euro-centric, meaning people often have to travel to and within Europe to earn a living from performing. This reduction could have a disproportionate impact on people who must travel far from where they live to earn money - especially BIPOC communities whose origins in Black culture gave us dance music. With this collective action we must ask: how will our scene further ensure that marginalised communities can thrive?

→ **Promoters** - We suggest prioritising BIPOC artists when booking your lineups, especially when flying acts in from out of town.

→ **Agents / Artists** - When booking a show, apply pressure for promoters to include BIPOC artists to lineups, even giving up your own slot for someone else.

2. Accountability – Committing publicly to making your organisation / practice less environmentally damaging is a great start. Make it tangible and target-based, and work hard to implement practices and policies which will help you achieve this.

- **State your environmental intentions publicly and commit to something tangible;** whether it be booking fewer international artists, taking fewer flights, or reducing the number of international shows your agency has on the books.
- **Promoters and venues:** Measure your carbon footprint and commit to reducing it.

3. Celebrate Local – The international touring DJ industry almost completely overshadows the wealth of local talent in each city. But it didn't always used to be this way! Even just 10 years ago, it was more common for clubs to become known for the strength of their resident DJs – not for how often they bring hot names from out of town. We have so much talent in our own cities. It's time to make locals the heroes of their hometown dance floors once again.

- **Promoters** – Book more local artists.
- **Dancers** – Dance more locally instead of travelling to parties.
- **Agents and artists** – Book and play more local shows.

4. Rethinking Exclusivity – prevents artists from returning to play the same cities within timeframes agreed upon by promoters and agents. This prevents artists from playing different clubs in the area, meaning they have to travel further to play until that period has passed.

- **Promoters** – Rethink exclusivity. Is it working? Can it be changed to make it more effective or useful and ultimately cause less environmental damage?
- **Agents** – Continually challenge promoters on their exclusivity rules. Is it really necessary?

5. More Efficient Tour Routing – Berlin based booking agent Ben Start wrote [this article](#) on reducing impact by improving tour route efficiency. His hypothetical rerouting reduced the number of flights taken by 50%. Imagine the collective impact that could have on a full roster over a month / year / lifetime.

- **Agents** – How can you introduce this when planning shows? Can you create some sort of policy or rule that ensures routing is as efficient as possible?
- **Artists** – Is this important to you? Speak to your agent about it. Use our email template [here](#).
- **Promoters** – Book early. Think of the advantages of having lineups confirmed and therefore promoted in advance. Connect with other promoters that are within train-ride distance of your event and make joint offers for a weekend of reduced fly touring.

6. Collaboration

INTER AGENCY AND PROMOTER NETWORKS

In order to really affect change there must be a seismic shift across and within the entire industry, and we need to do this together through collaboration.

- **Agents** – Work with your peers to create a green agents network that shares resources, best practices, and use that collective weight when discussing issues with promoters.

AGENCY - PROMOTER RELATIONSHIPS

Nurture those relationships with agents / promoters who are willing to work to improve on the current situation. Work together to ensure the environment is a priority.

- **Agents** – Where possible, say no to single international gigs and to promoters who want to fly artists far for one gig!
- **Promoters** – Work with agents and artists who put the environment at the forefront of their decision making.

PROMOTER WORKSHOP SERIES

We are putting together a network and series of workshops for promoters to establish new industry standards and share best practices. This will also include a series of events tying together themes discussed within the report.

- Promoters – Email us [here](#) for more info and to register your interest.

Immediate Personal Actions*

1. *Continue this conversation by joining our Slack channel:*

A place for different actors in the community to come together and share best practices and collectively solve problems! Complete this form [here](#) to join. We need to start talking to each other and supporting each other to fix this.

2. *If you are in the position to, consider offsetting last year's emissions:*

We recommend using [Atmosfair](#). Or, donate directly to a climate charity. We recommend [Client Earth](#), an ambitious charity that lobbies to protect the planet. Offsetting isn't a long-term solution, but it's worth doing while we work on wider change. And this is not just aimed at artists – all who fly should really consider offsetting.

3. *Artists can update to a green rider:*

This helps set your intentions and provides promoters with a guide on how to reduce environmental impacts both big and small. We've collated some examples you could include in your own rider [here](#).

4. *Educate yourself:*

We've collated a further reading section on the topic. Dive in at our website (Coming Soon).

5. *Reduce your individual carbon footprint in other ways:*

Switch to a plant-based diet, source energy from green suppliers, insulate your home, buy ethically and locally, bank ethically, boycott fast fashion, vote for parties who prioritise environmental and social agendas etc.

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APPENDIX

[RA Top 1000 Ordered By Carbon](#)

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