

MACRO

ENVIRONMENTAL

DATA for

HEALTH

JUSTICE

**We have to continually look at the tools, processes, and structures that different players have available to them when we talk about achieving health justice within communities.**

*Macro environmental data* is a term more often used in the business sense when researching and analysing the external factors, such as policy, financial, and societal, that affect a business's ability to operate and succeed. This approach comes from the belief that simply understanding the inputs and outputs of a business is not enough to account for the complexity of changing societies and industries. The same can be said about individuals, communities and health.

**We define health justice as a requirement that all persons have the same chance to be free from hazards and stressors that jeopardise health, fully participate in society, and access opportunity.**

Health justice addresses the systems of power and their determinants of health that result in poor health for individuals and consequential negative outcomes for society at large. In the case of health justice, macro environmental data accomplishes a similar goal, but with individuals and communities as the “businesses.”

**Despite the work we have all been able to achieve with our current sources of data, there is still a lot of space for improvement on data that is intentionally used for health justice.**

Data intentionally used for health justice considers the human, societal factors when creating ranges and values, such as how we frame the scoring of pollutants in the Stress Risk Score (SRS) based on research on the levels of pollutants that begin to affect chronic stress. We will walk through a loosely structured set of steps to understand how to take phenomena at a larger societal level and create meaningful environmental data for health justice.



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# introduction

Every data set you find had to have a reason the data was collected.

You will often see that the more accessible environmental data is usually the result of a government or a not-for-profit being transparent and accountable for larger political commitments to society.

You will additionally find macro environmental datasets as a result of special interest groups creating data around a societal concern, or the work of a private organisation, such as a consultancy.

To create accurate context of the macro environmental data to be collected, you need to gather information on the phenomena itself, the research and relation to public health, the current relevant policy goals, the cultural significance and value, and the current tools and metrics people use to represent this information.





# The Phenomena

You have to understand what phenomena or foundational question you're addressing before you can confidently determine how the data will need to look; are you looking at the emissions of trucks in London? Are you monitoring ambient light in the UK?

The phenomena should be easy to identify by the average citizen, even if they are not well versed in the related data.

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# The Research & Relation to Health

For environmental data, research can cover the mechanics of collecting but additionally looks at the impact on society.

For example, we have air pollution research that will tell us that certain levels are more dangerous for the short and long term health of people.

This research will be based on certain factors such as exposure and average demographics that will not likely be represented in the typical environmental data around air pollution.

The specific health research provides grounds for how data on the presence of environmental factors translates into more specific risks or benefits for individuals and communities.





# The Policy Goals

Most macro environmental datasets, especially with metrics related to climate change or health, tend to base their insights and analyses on the politically presented long-term strategies from national governments and larger political institutions such as the United Nations and European Union.

The institutions usually have their own researchers and collaborators who determine the current knowledge and try to create politically viable targets that can be advocated for at multiple levels across the globe.

These targets are often a compromise knowing that there will be politics involved and should be understood in this context. It is therefore risky for the direct translation of global-to-local.





# The cultural significance and value

The long-term policy goals don't always capture the entirety of the cultural value in creating data around certain issues. The cultural value of creating data for an issue refers to the varied and changing perspectives or experiences that will affect how people prioritise and understand the data based on their relationship to the phenomena being captured.

Looking at further context such as lived experiences on the ground and consulting both the producers of the measured values and those affected will improve the ability of the data to be more aligned to health justice.

You can use the framing, worries, and ideas people have around the potential of the dataset to create a culturally informed quality and format for the data.





# Current tools & metrics

You have to evaluate the current tools and metrics used to present the phenomena, as well as the current accessibility of those tools and metrics to those who would benefit from the information they provide, if you want to completely understand the context around data of a certain phenomenon.

For example, you may find that the data does actually exist in a very useful format, but they have not been able to update the dataset due to how expensive or time consuming the collection has been.

You may also find that there are processes that have yet to be applied to the specific use for this data that would improve the quality and accessibility. Evaluating the current tools and metrics can save you investment in time and resources while also providing accountability to organisations who already have more progress in addressing issues with data.



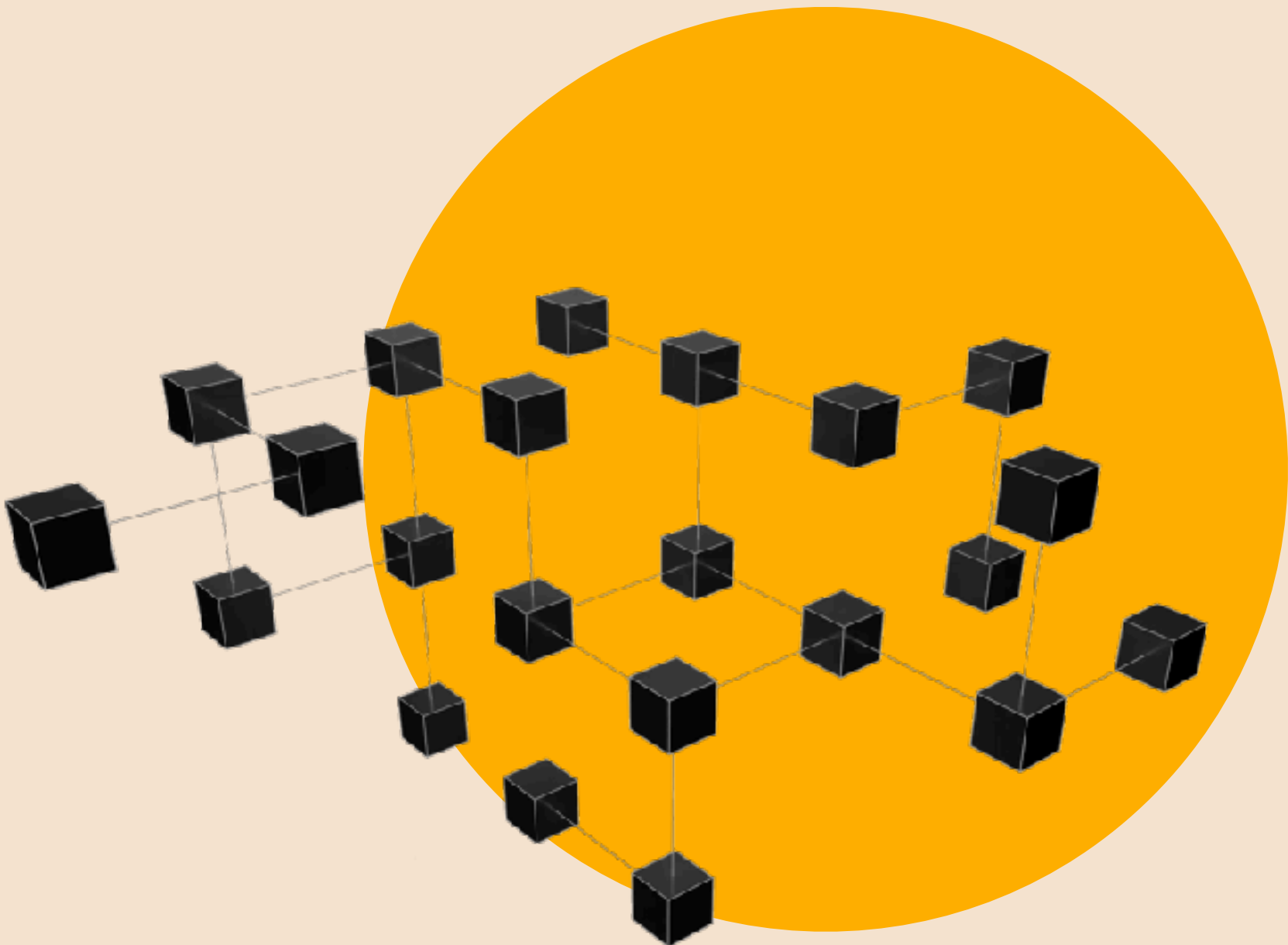


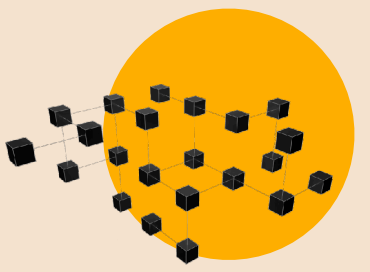
# CONCLUSION

**Before we can create environmental datasets for health justice, we have to be clear that the phenomena is understood from the intersectional lenses that may exist within the ecosystem.**



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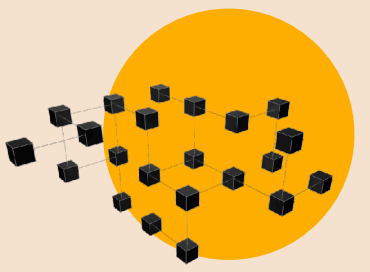
# introduction

Collection can only be done confidently if you have a clear idea of the context.

Collection then becomes the process where you start with what would be the ideal metrics to collect and create as macro environmental data, consider the investment to collect given the resources available, and come to an agreement on what feasible metrics would contribute to the goal of health justice.







# Ideal metrics

A healthy part of the macro environmental data process for health justice is ideation on what the ideal metric(s) would be.

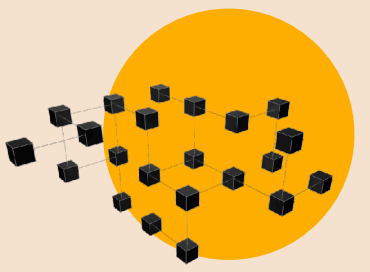
You might say that it is so every street corner has a monthly reading on the light pollution present. It could be the average noise pollution created near hubs for vulnerable populations.

Even if these metrics are not currently achievable, technology moves fast and sometimes the initial dataset motivates people to get higher quality data.

The ideation allows you to be prepared to propose better quality data in the future.







# The investment to collect

The scope and frequency of data collection is important to the overall impact and value to health justice.

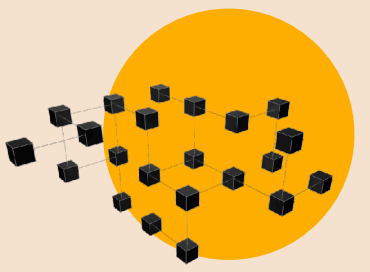
There is a compromise on both of these factors when it comes to environmental data for health justice because most macro environmental data related to health would be expensive in time and money to collect with the frequency of immediate health insights.

We can often benefit from seasonal or annual collections. Even every five years can be beneficial for some insights if the community is less transient or the phenomenon itself does not change rapidly over a year (such as the built environment).

We have to be innovative to find this balance.







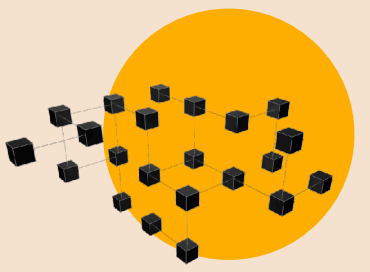
# Feasible metrics

The reality of most macro environmental data is that there will be some compromise needed to create the dataset.

The feasible metrics will be what you can reasonably expect to collect within the time, budget, and resource constraints.







# CONCLUSION

**There is a growing area of research that merits looking into the establishment of well-funded decentralised forms of data collection, informed by multiple participants. For example, can Civic Data Trusts be established to support the ecosystem and prevent abuses of power?**



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# introduction

Environmental data for health justice is only as good as people's ability to interpret it and use it. Communication and advocacy through the data is a process that should be carried out with relevant groups or individuals to the just outcomes.





# The limitations and guidelines

It's good practice to be transparent and accountable on the limitations of the environmental data being presented.

For instance, because Centric Lab's *Stress Risk Score* is not updated annually in its current form, there will be local environments that were accurately represented on macro level a few years ago that, due to socio-political changes ranging from gentrification, change in leadership, new buildings developments, or change the activities and demographic makeup of an area (industrial to residential), will not appear as accurate.

This is a limitation that we are transparent about as we make it clear that the tool is used for education and to motivate further investigations at a local level.





# Making the data accessible

Before collecting any data, you would have had a clear understanding of the types of decisions this data could affect as well as the types of people making these decisions.

Once the data is collected and the supporting document(s) are created, this information has to be made available to the intended audience





# Supporting the use of data for Health Justice

Accessibility is about enabling people to use the information.

Enabling is only fully effective when people expect the data to exist and understand how it can be used.

Because environmental data is not a standard source of information for the average person, there needs to be intentional support in working with people from these intended audiences to make use of the information for health justice.





# CONCLUSION

How a dataset is communicated and onboarded is crucial to the health justice impact.

Even a simple table or index that is communicated well can provide the support people and organisations need to represent and advocate for community health justice.



**These steps represent the ideal process of going from macro phenomena that we know can affect populations to the macro environmental data that equips people and organisations working to achieve health justice goals.**





About us

**We're a lab creating tools and strategies to elevate public health.**

We're a team of neuroscientists, data ethicists and urban strategists building what's needed.

[thecentriclab.com](https://thecentriclab.com)

