



environMENTAL Consensus Conference

CITIZEN PANEL REPORT

February 2024



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Introduction

This report highlights the recommendations arising from the environMENTAL Consensus Conference (CC). The CC served as a unique public engagement initiative to enable the citizens to engage with the project. The primary goal was to stimulate public debate and to gather valuable feedback to shape the project's future activities.

The report has been written by members of the CC citizen's panel – an independent panel of citizens representing diverse backgrounds. It is an account of the consensus reached by the panel of citizens on key recommendations for the ongoing environMENTAL project and the broader landscape of mental health research.

It begins with an explanation of the purpose of the document. This is then followed by an overview of the CC, describing the event and how it was structured. The report then provides a set of recommendations covering 5 key topics, namely, public participation, scientific research, data collection and management, project impact, and the streetMind App. To enable an understanding of the rationale for the recommendations, the report provides appendices that present some reflections of the citizen's panel on the environMENTAL project and highlight open questions which might also have some relevance for the broader mental health research community. This structure has been taken to ensure that the report is kept as short and as concise as possible.

Purpose of this Document

This document captures the collective insights and agreements reached by the citizen's panel during the environMENTAL consensus conference. It provides a record of recommendations for guiding the ongoing activities of the project.

In the wake of this report, it is anticipated that there will be a response from the project to indicate the specific measures and actions that will be undertaken in consideration of the recommendations provided. This will enable a dynamic feedback loop that will ensure that the consensus reached is actively translated into practical steps and decisions within the framework of the project.

It is also anticipated that the report will go beyond its role as an internal document, when combined with the forthcoming response from the project, it will form the basis for dissemination/communication activities with a broader audience. Potential venues for publication of such communication include [British Medical Journal - BMJ](#), Biomed Central's [Journal of Involvement and Engagement](#) and Springer's [Journal of Patient Reported Outcomes](#). This will be a collaborative effort between the project and the citizens panel and participation for participation will be invited in the coming weeks.

Overview of the environMENTAL Consensus Conference

The environMENTAL project outlined the intention to conduct a CC in its DOA. A consensus conference is a type of public engagement activity aimed at gathering the diverse perspectives of ordinary citizens (with their different backgrounds) on the research and innovation of activities of science and technology. The CC is thus designed to stimulate public debate while providing valuable feedback about the public's perception of such activities.

Given that the environMENTAL projects focus on the intricate relationship between the environment and mental health, a CC presents an invaluable opportunity to engage the public in deliberation about the activities of the project. For this project, the overarching goal of the CC is to get the public to reach

a consensus on key issues and recommendations, fostering collaboration and assisting in shaping the project's plan for further research and action in this area.

The environMENTAL CC began with a series of online meetings on June 20, 2023, and culminated in a hybrid event held physically in Berlin on December 01 – 03, 2023. The online meetings were grouped into 2 sets of 4 meetings. Each meeting was of a duration of 2 hours. The first set of 4 meetings were held weekly from Tuesday, June 20 to Tuesday 11 July. Subsequently, the second set of online meetings started on Tuesday, 12 September to Tuesday 03 October 2023. Furthermore, in preparation for the Berlin event, 2 additional online meetings were held on November 17 and 28, 2023.

The event was widely advertised online using the environMENTAL website, social media platforms and within partner networks. Although participation was open to everyone, 22 of the 48 people who indicated an interest in participating were shortlisted to the citizens panel of the CC. This number was considered adequate because the focus of a consensus conference is to engage with a diverse group of lay people and not necessarily a representative sample of society in a numerical sense. 19 persons attended the physical meeting in Berlin. Of these, 10 were members of the citizen panel, along with 3 members of the environMENTAL Stakeholder Board and 1 external expert in the field of public participation. The others were members of the environMENTAL consortium. Online attendance for the final event was 17. A brief profile of some members of the citizen panel can be found in appendix III.

Recommendations to the EnvironMENTAL project

i. Public participation

- Develop a common terminology within the project to delineate the individuals who act as public contributors to the project. The panel recommends “*experts-by-experience*” to refer to those with lived experience of mental illness. This differentiates the unique contribution that should be included by a variety of public stakeholders, for example, citizens, NGOs and charities, during public involvement and engagement activities. For the purposes of this report the term ‘public involvement’ is used generically to include experts by experience, public stakeholders including citizens (and those excluded from citizenship, public advocacy organisations, charities and other bodies representing public perspective).
- Establish formal structures and processes for experts by experience, public and public stakeholder organisation’s participation in the project including for example in the areas of:
 - Methodologies, outcomes, support and training initiatives,
 - Encourage public involvement as core of future hop-on project
 - Facilitate public involvement and engagement in technology transfer activities
 - Include experts-by-experience in the development of StreetMind app and virtual reality platform
 - Regular evaluation meetings with appropriate citizens
- Work with experts by experience to explore ways of encouraging research subjects to (continue to) engage in ongoing research.
- Increase the visibility of the project team’s personal connection to mental health issues
- Ensure appropriate structures for including experts-by-experience for monitoring, reviewing and management of data.

ii. Scientific Research

- Provide sensitivity analysis of the data to ensure that decisions are valid or supported
- Ensure sensitivity analysis is conducted on geospatial data to validate or bolster decisions the perspective of the modifiable area unit problem.
- Clearly define relevant terms including the distinction between mental wellbeing and severe mental illness.
- What can we say/not say about the data from minority groups within existing data?
- When using existing data, it is important to clearly indicate the underlying assumptions that was made during its collection and how this impacts the research within environMENTAL.

iii. Data collection and management:

- Ensure that the data includes the Individual level of engagement with the environment
- Inclusion of dynamic urban data sources and examples include sensor data, movement data, number of people in spaces etc
- Consider environments beyond the physical for example digital (e.g. social media presence, online presence or virtual environments), emotional, experiential, past experiences,
- Include data from other regions, for example, South America, Africa, Turkey etc.
- Consider the inclusion of existing data that is likely to be of value such as nature connectedness (e.g. Shinrin Yoku or data from the RESONATE project); interaction with animals; connection to food production, other ways of interacting with the world
- Consider responsible processes/tools for collecting data automatically from data subjects
- Ensure that the public is included in ethical deliberations to future-proof the data and make it available ethically and responsibly post-project

iv. Project Impact

- Assemble team(s) of mental health and environmental experts (including architects, urban planners & designers) with diverse backgrounds (lived experience, education and training) to:
 - Assist with the translation of research findings into new forms of interventions and treatment
 - Formulate policy recommendations with a focus on utilising existing mechanisms to ensure translation of research findings into practical applications
- Consider how project outputs can be translated into policy that meets the needs of the community, for example, usage of pollution penalties for research projects on mental health or promotion of environmentally sustainable tourism

v. The StreetMind App

- It must be made clear that the chosen username of people signing up to the StreetMind app becomes visible to the public.
- On the app, the question, “How do you feel at this location?” only has negative emotions. Ensure that positive emotions are also appropriately represented. (e.g. use the Plutchik wheel of emotions)
- Include personalised recommendations for improving mental health in the StreetMind app, for example by tracking which activities lead to improvement and then providing suggestions

based on that. Can data from the StreetMind App be used to suggest the best routes for commuting or locations that can help to improve mood?

- Leverage stakeholder networks to promote awareness and the visibility of StreetMind app

Appendix I: Reflections on the environMENTAL project

environMENTAL's ongoing research underscores the critical importance of preserving the environment. By safeguarding our natural resources, we ensure their availability for various essential purposes, such as the creation of medicine, innovation and beyond.

Inclusive Data

The discussions around data collection approaches utilised in the project have provided valuable insight into the challenges of gathering data for such a complex project. While appreciating the project's effort in re-using existing cohort data, it is evident that the current emphasis on collecting data from developed countries limits the scope of the project and skews the outcomes. There's an opportunity to enhance the depth and inclusivity of the project by considering alternative sources such as:

- Data from underdeveloped countries can enable a holistic view of urban experiences
- Incorporating data from diverse sources such as social media can provide a dynamic and real-time reflection of public sentiments and experiences without direct intervention through the streetMind app. This can provide a valuable unfiltered perspective on urban life
- Tapping into emerging data outlets such as wearables can significantly augment the efficacy of the project.

The inclusion of datasets beyond conventional data channels is crucial to enriching the project's understanding of global urban experiences, fostering a deeper understanding of experiences across diverse cultures and geographical contexts.

Public inclusion

- Active public involvement in shaping interventions for mental health issues is of utmost importance as this can help to ensure a comprehensive understanding of diverse perspectives and protect against unintentional bias. The environMENTAL project has put some effort into the inclusion of the public in its activities. However, this effort is limited in many segments of the project as there is a lack of visibility and clarity about the nature of public involvement caused the CC concern.
- How does the project to embed public participation in the different activities of the other segments of research being undertaken?
- The project is at a pivotal phase that presents a great opportunity for public inclusion in its activities as it is formulating some of the research questions that will drive its activities going forward. This allows the project to not only gain collective insight form a broad section of society but also enhance the relevance and impact of the research.
- It is important to remember that science does not exist in a vacuum or belong just to scientists. The relationship between the public and the researchers does not start at the end of a project. The context in which the research is done is as important as the theoretical underpinning and those who are experts by experience (including those who represent them) have intimate knowledge of the context. If the research is directed to making change, as opposed to just contributing to the knowledge-base, the credibility of the findings will be

compromised if the research is done in isolation. The point at which this credibility will matter is when the research is used to create policy and put the findings into practice: at the end of the project. At this point, it will be too late to remedy this matter. If the public are not involved, or the involvement is tokenistic, there is a serious risk to the return on investment for the funders. Again, this will be most apparent at the end of the project; too late. A strategy for public involvement needs to be embedded in the project planning. Such a strategy was not visible to the CC.

Classification / characterisation of mental illness in the project

- One aspect that has caught our attention and raises concern is the approach employed by the project in classifying mental illness. Although the environMENTAL project is not directly engaged in classification, it is a critical aspect as different spectra of mental illness often demand distinct treatment approaches. The lack of comprehension in the area can significantly impact the potential for recovery.
- To address issues with the characterisation of individuals with mental health illness it is important to incorporate experts by experience for example, by posing question such as “how do individuals with illness related to mental health and their carers classify themselves?” This can help in generating a more nuanced and emphatic categorisation of mental health conditions while being careful of potential feedback loops induced by diagnostic classification.

Missing data

- We have seen examples of the data collected by the environMENTAL project for its research, but it is crucial to address the missing data and its impact on findings. We haven't had much discussion on acknowledging what the project doesn't know and how these issues might influence the research results.
- It is essential to highlight the significance that missing data has on the research as it has implications for the outcomes. Also, how much are these data representative of the whole?
- For instance, there is a potential link between exposure to pesticides and mental health illness, as well as other conditions affecting mental health. However, the environMENTAL project is not collecting data on this aspect, prompting us to question other types of data that is being overlooked. Understanding these omissions is crucial in evaluating how they might skew the projects outcomes and ensures a more comprehensive and accurate research approach.

Other areas of research that might benefit the project

Additional research avenues that might benefit environMENTAL project include:

- Incorporating ethnography could offer valuable insights that the project is currently missing. It might be a good idea to integrate components of this in future hop-on projects or when applying for additional funding
- The current research appears to lack data on animals and the effect they have on mental health. Incorporating such data could contribute to a more comprehensive understanding of mental illness.
- Data on nature connectedness and the influence of related activities on mental health could enable better understanding of mental illness. We haven't heard if and how such data is utilised in the project.

Issues and challenges of interventions

- There is interest among a broad segment of society on the findings and interventions being explored by the project. How will these be communicated?
- How can innovative tools like the StreetMind App play a role in guiding development decisions to ensure a thoughtful and sustainable approach for minimising the adverse effect of urbanity on mental health?
- What is the timeframe over which benefits of interventions are being assessed? Given that a built environment has a long-lasting impact, the cumulative effects are likely to be significantly more substantial compared to the individual benefits observed over a shorter period, for instance, six months.
- There are potential opportunities for the project to deeply explore how the incorporation of leisure and tourism activities can serve as a means of social intervention in the prevention, treatment and management of mental and emotional health issues. There could be benefits of involving various organisations that complement mainstream mental health providers such as the NHS.

Appendix II: Open questions

Several important questions remained at the end of the consensus conference. We found that some of those questions are also relevant to the wider mental health research community. The questions cover a variety of topics but have been grouped together under the following broad themes, namely, impact of culture and environment on mental health; 'urbanicity and mental health' and pharmacological interventions. Relevant questions identified for these themes include:

Impact of culture and environment on mental health:

- How does the interplay of local cultures and individual preferences contribute to and influence mental health outcomes? For instance, an individual accustomed to the leisurely cafe culture of southern France might experience difficulty adapting to the fast-paced urban environment of central Berlin or London. However, it is important to recognise that what might be challenging for some does not inherently deem it "bad" for the residents who embrace and appreciate such a lifestyle.
- How does childhood exposure shape the impact the effect of one's environment on mood/mental health? For instance, exploring and embracing nature during childhood versus growing up with it perceived as 'unfamiliar' or 'scary' can significantly influence the emotional response to the environment later in life.

Urbanicity and mental health

- The impact of housing quality on mental health is evident, particularly in countries like England where a shortage of affordable housing necessitates the development of local greenfield sites. This raises a crucial question: How can we strike a balance between addressing the shortage of quality housing for citizens and preserving cherished local green spaces known to enhance the mental well-being of communities?
- Can we envision a future where environments are meticulously designed and distinctly 'labelled' to cater to diverse moods, mindsets, and desired outcomes? While this concept already exists in practice – as seen with real estate developers shaping atmospheres in various locations – it often remains subtle. Picture neighbourhoods explicitly designed for relaxation, vibrant communities for celebration, or invigorating spaces for refreshment. The potential for deliberately tailoring environments to our emotional needs could reshape our experiences in profoundly intentional ways. How can we effectively measure the impact of the environment on mental health, and if we aim to establish a return of investment (ROI) for changing the built environment – an undertaking which we acknowledge to be costly – what level of benefit must be realised to justify such an investment? Recommendation to the project

Pharmaceutical interventions

- What threshold of negative impact within the population would prompt a pharmaceutical company to consider the development of an intervention for environmental influences on mental health as a potentially 'worthwhile' endeavour?

Appendix III: Bio/ Profile of environMENTAL Citizen Panel

S/No	Name	Bio/profile
1	Chitaranjan Mahapatra	Researcher, Paris Saclay Institute of Neuroscience, France
2	Chun Kee	Global Health and Social Medicine undergraduate, King's College London, United Kingdom
3	Stephania Lamble	International Studies undergraduate, Venezuelan Central University. Tourism Business Administration Bachelor's degree, University Institute for New Professions, Caracas, Venezuela.
4	Richard Chapman	NHS Peer Leader and member of NHS England's national Strategic Co-production Group for personalised care, and founder of Climbing Matters, a structured program of climbing and coaching designed to help people living with severe mental illness. @climbingmatters
5	Ayse Giz Gulnerman	Assistant Professor at Ankara HBV University, holding a Ph.D. in Geomatics Engineering and a BSc in Urban Planning. Research focuses on information extraction from crowdsourcing data, geospatial data science, and human urban perception.
6	Gill Grimshaw	Retired Health Services Researcher trained as medical physicist specialising in diagnostic imaging. Research career using clinical science, epidemiology and health economics to transfer interventions into service use. Cochrane Reviewer and public involvement specialist; working as an advisor within UK NIHR and mental health charities as a service user and carer.
7	Zoe Underwood	MSc Environment and Human Health, University of Exeter with a focus on use of natural environments to improve mental health and wellbeing.
8	Mark Holden	
9	Damien Dep	Post-doc researcher in theoretical neuroscience
10	Ben James Stuchbury	
11	Ana Massa	Originally from Spain. Final year undergraduate student doing a BSC in Neuroscience and Psychology with Professional Placement Year in King's College London.

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