CLEAN-Air(Africa) - Community Engagement & Involvement (CEI) Strategy

NIHR CLEAN-Air(Africa) - Global Health Research Unit

Abbreviations

CAA	CLEAN-Air(Africa) Global Health Research Unit
CBPR	Community-Based Participatory Research
CEI	Community Engagement and Involvement
NIHR	National Institute for Health and Care Research
PAR	Participatory Action Research
PI	Principal Investigator
WP	Work Package

Contents

1. Introduction

Our CEI Strategy has been developed through a combined process of (i) engagement and discussion across the partnership with individuals experienced in CEI, (ii) reviewing existing guidance on CEI from international agencies and research organisations and (iii) engagement with the National Institute of Health & Care Research (NIHR) in CEI related activities. This document outlines the strategy for Community Engagement and Involvement (CEI) for CLEAN-Air(Africa).

The document provides an (i) overview of the key concepts of CEI and (ii) processes that will be adopted to implement and evaluate CEI across CLEAN-Air(Africa)'s programme of research and capacity building. The strategy document is structured as follows: firstly, the strategy aims and objectives are outlined. Then, a background on CEI is provided, including key terms and expectations from the research funder (the NIHR). The operational structure for CEI follows, together with the steps for implementing CEI across each work package and the process for implementing, monitoring and evaluating CEI. Finally, the capacity-building plans for CEI are described and the stories and podcasts on CEI activities are outlined.

2. Strategy Aim & Objectives

Following the review of existing guidance and internal discussions on CEI, the aims and four objectives were agreed on during a participatory workshop with team members across the partnership, during the launch of CLEAN-Air(Africa) in November 2022. The aim and objectives form the core of the strategy that follows below.

Aim: To embed community engagement and involvement across and throughout CLEAN-Air(Africa)'s programmes via integrated processes and capacity building.

Objectives:

1. To ensure CEI is considered in all research projects to maximise impact, specifically via a dedicated plan for CEI in each work package and/or specific sub-project.
2. To ensure implementation of CEI across the programmes through monitoring in a structured and integrated way.
3. To capture the impact of CEI through collecting stories and case studies of change.
4. To deliver training on CEI for all levels of the CLEAN-Air(Africa) teams.

3. Background to CEI

3.1.   What is CEI and Why is it Important for Global Health Research?

CEI has no agreed definition but generally refers to strategies and processes to ensure that global health research is undertaken in collaboration with the people and communities most likely to be affected by the research. In response to the call to "Leave No One Behind" within the Sustainable Development Goals, the UK National Institute for Health and Care Research (NIHR) – CLEAN-Air(Africa)'s funder – set out a vision for CEI as having a central role in all global health research. CEI strategies should aim to empower often marginalised people and communities to have a voice in the design, implementation, analysis, and dissemination of research that impacts upon their lives (Box 3-1). The NIHR highlights that involving communities will improve the research reach, quality and impact and has specifically chosen to use the term "community engagement and involvement" to encompass the full spectrum and levels of partnership (see, section 3.2).

Box 3-1: NIHR Vision for Community Engagement & Involvement.

NIHR Vision for Community Engagement & Involvement

NIHR's vision for Community Engagement and Involvement (CEI) is that all global health research is undertaken in collaboration with the communities who are most likely to be affected by the research outcomes.

We want to enable those who are marginalised to have a meaningful voice both in the research funding process, as well as in the design, delivery and dissemination of research.

Involving communities in LMICs who are affected by the health challenge you are researching will improve the reach, quality and impact of your research.

3.2.   Concepts of Community, Involvement and Engagement

"Community" is a broad term that can be understood and thought about in many different ways. The Clinical and Translational Science Awards Consortium (2011) offers some different perspectives to think about communities. A systems perspective considers a community to be comprised of different parts that operate with specific boundaries to meet community needs. Thompson & Kinne (1990) highlight that addressing a community's complex problem requires integration, collaboration and coordination of resources from all parts – thus using a system perspective for community engagement and involvement is central to improving health. For example, community health promotion work would likely involve community members, community groups and community health organisations as well as local and national health organisations and bodies – the parts are interconnected and should be considered as a system of actors. A social perspective describes a community as the social and political networks that link individuals, community organisations and leaders – understanding these networks is vital for community engagement efforts (e.g. help identify how to engage with community members and identify high-risk groups). For example, CLEAN-Air(Africa) partner Doula General Hospital in Cameroon previously successfully engaged with the community by understanding existing social networks and ensuring first contact is made with the community chief who will then notify the community about the research activities. Communities can be understood from a

virtual perspective by being mapped onto geographically defined areas or as linked by other digital forms such as emails, forums or social networks – which can be considered as virtual communities. Finally, individuals will have their perspectives and sense of community beyond that of researchers and community engagement specialists. This is known as an individual perspective of community. Individuals may have a sense of belonging to more than one community, with this sense of belonging changing over time. One's identity may be more complex than appearances, language or cultural origins first suggest, therefore assumptions should be avoided and participants' views incorporated to define communities for research projects and social programmes.

It is, therefore, important to remember that "communities" may be challenging to delineate. Consideration needs to be given to how and by whom any specific "community" is defined, and who might be marginalised or excluded by such definitions. This, in turn, requires an understanding of the dynamics of power that shape communities and the relationship between communities' members. For CLEAN-Air(Africa), the broad term "communities" refers to the participants, households, schools, policymakers, health service workers (e.g. community health workers, physicians), community organisations, faith groups and others who might be considered key stakeholders. The community will be specific to each work package and should be determined during the planning stage of the programme of work together with representatives of the communities themselves.

Similar consideration needs to be given to what is meant by the idea of "engagement" and "involvement", which are often used interchangeably and overlap with the concept of "participation". While there is debate on how to define and distinguish these two constructs, at CLEAN-Air(Africa), the following concepts will be used:

- **Community Engagement** refers to building relationships, collaboration, and ongoing communication with a community. It involves a two-way dialogue, where individuals or organizations actively listen to the community's needs, concerns, and aspirations and incorporate this feedback into decision-making processes. Community engagement is often a long-term commitment, aimed at fostering trust and inclusivity within the community. It can include activities like town hall meetings, focus groups, surveys, public forums, and other interactive events where community members have a direct say in decision-making processes.
- **Community Involvement** refers to individuals or organizations participating in specific activities or projects within a community. It often involves people contributing their time, resources, or skills to support or address a particular issue or cause within the community. Community involvement can be more project-oriented and may not always involve ongoing interaction or relationship-building with the community.

3.3. Meaningful Engagement through Power-sharing

Ultimately CEI is intended to shift traditional hierarchical structures and power imbalances through meaningful engagement with those individuals, programmes, and research they are aiming to benefit. Global health research's goal is to benefit those most marginalised. Without CEI being embedded in it, global health research may ultimately undermine the research aims and reinforce existing health inequalities:

"If the global health research community does not hold itself accountable to the 'target groups' it seeks to understand, or look for ways to creatively leverage collective influence to push for change at higher levels of power, then this work risks compounding the very health inequities that are the subject of investigation." (Nelson, 2019: 10)

Power differentials exist due to societal norms, that result in unequal distribution of power between individuals and groups. Privileges, or a lack of them, are fundamental elements of social and institutional power. Identities (e.g. gender, race, ethnicity, wealth, physical ability) that individuals and groups hold offer privileges: "automatic advantages and unearned assets available only to dominant groups of people" (McIntosh, 1989, Ferguson, 2014). Privilege can lead to power inequity as it can determine people's ability (or inability) to affect change, make decisions, and steward resources, even in their interests. In other words, some people benefit from how society is structured and behaves, while other people lose out or have to work harder to access similar opportunities. However, privilege is often invisible and those who have it may not realise they are at an advantage in comparison to others. In research, when working with marginalised groups inherently brings issues of power imbalances that must be addressed. Understanding power differentials is crucial for addressing social injustices, promoting equality, and fostering fair and inclusive environments. It involves recognizing and challenging systems or behaviours that perpetuate unequal power dynamics. Advocacy for social justice often involves addressing and dismantling power differentials to create a more equitable society.

The complexities, diversities and power imbalances within communities must be recognised in the research approach taken and should enable power sharing to allow community members to participate in decision-making. Arnstein's Ladder of Participant (1969) is commonly used to depict how levels of participation enable empowerment and how processes need to move from *nonparticipation* (no power) to *degrees of tokenism* (counterfeit power) to *degrees of citizen participation* (actual power). CEI approaches in global health research are often criticised as tokenistic with traditional approaches only engaging participants as "beneficiaries of programmes", rather than full decision-makers. However participatory and transdisciplinary approaches have started to be advocated for and recognised internationally.
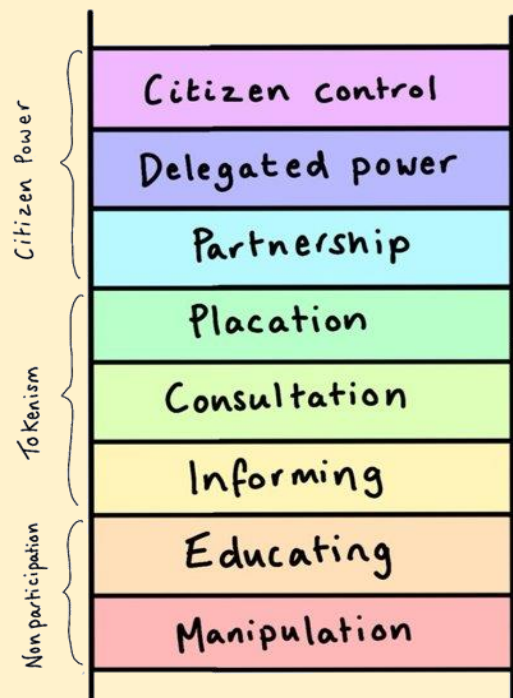
Figure 3-1: Arnstein's Ladder of Participation. Illustrated by © Juliet Young.

As the NIHR set out (Nelson, 2021), meaningful CEI requires effective community consultation to account for different perspectives and power differential between community members. This may lead to a revision of research questions and research strategies. The central goal of CEI is the empowerment of marginalised populations, as such research groups must be prepared to cede some of their power by allowing participation when setting research agendas and allocating resources, reflecting on the privileges they hold and giving attention to the needs of a given community. This process

requires openness to the lived experience and knowledge of research collaborators and community members; communicating the research, its processes and goals in terms that are understandable to all parties involved; and building regular opportunities of engagement throughout the project cycle for community feedback and dialogue. All these steps should be used to shape the research in ways that reflect community needs and interests.

3.4. CEI Principles

Efforts to engage and involve communities in public health research and interventions have a long history, and there is a deep pool of existing knowledge on the methods and strategies that could be employed. These include UNICEF's Minimum Quality Standards and Indicators for Community Engagement (2020), which consist of four parts: Part A - Core Community Engagement Standards, Part B - Standards Supporting Implementation, Part C - Standards Supporting Coordination and PART D: Standards Supporting Resource Mobilization. Part A is cross-cutting and includes principles of participation (involvement), empowerment and ownership, inclusion, bi-directional communication, adaptability and localisation, building on local capacity. The NIHR has recently outlined 7 principles of CEI, which are based on the UNICEF principles and other existing standards in research (Box 3-2):

Box 3-2: NIHR CEI Principles

NIHR CEI Principles

(1) Community Engagement and Involvement should be appropriate and relevant to the local context and research aims:
CEI needs to be appropriate, taking into consideration the type and aims of the research, local knowledge and context. This can be achieved through collaboration and partnerships with community members and organisations to enable wider representation, including those most vulnerable and marginalised.

(2) Understand your communities:
Communities are not homogenous. They are diverse groups of people with different histories, social structures, values and cultural orientation. Understanding the community and what is needed to enable engagement will form the foundation of relevant and appropriate CEI. Researchers should encourage diversity within the community they are working with, paying attention to people who may be underrepresented or marginalised.

(3) Build open, trusting and mutually beneficial relationships:
An understanding of the networks, power differentials and affiliations of, and between, community groups help to build relationships and enable community partnerships to thrive throughout the research process. Take time to build two-way relationships that are ethical and sustainable, based on trust, reciprocity and mutual respect.

(4) Involve the community at the earliest opportunity and throughout the research process:
Involving those whom the research aims to benefit in the design, delivery and dissemination of the research enables a sense of joint ownership, adds value and increases the relevance, reach and impact of the research.

(5) Be flexible and creative:
There is no 'one size fits all' approach to CEI as each community and context is unique, and responds to changing circumstances differently. Be flexible, and innovative and embrace new approaches in response to community needs and feedback.

(6) Promote power-sharing:
Be aware of power differentials that may exist in your local context. Power imbalances are due to a variety of factors, including cultural, societal and political influences. Explore and address power imbalances between and within communities and stakeholders you are working with, and create spaces for engagement that enable appropriate power-sharing.

(7) Embed monitoring, evaluation and learning:
Monitoring, evaluation and learning need to be firmly embedded in the research from the beginning. Plans should be in place to record and evaluate CEI processes and outcomes, both positive and negative, against the research objectives. Involve the community in these monitoring, evaluation and learning activities.

3.5. Theory and Research Methodology Connected to CEI

Community engagement is a practice that has its roots in several theoretical research frameworks. Some have been specifically evolved to ensure participation of marginalised individuals and rooted in the principles of CEI. While these may not be possible to follow directly for CLEAN-Air(Africa), aspects of their approaches may be useful to draw upon. Approaches include:

- **Participatory Action Research (PAR):** PAR is a collaborative approach to research that involves community members as co-researchers in the research process. This approach aims to empower communities to identify and address their own needs and interests through the research process.
- **Community-Based Participatory Research (CBPR):** CBPR is a research approach that involves partnerships between researchers and community members to address community health and social issues. This approach emphasizes collaboration, co-learning, and mutual respect between researchers and community members.
- **Empowerment Theory:** Empowerment theory emphasizes the importance of giving individuals and communities the tools and resources they need to take control of their own lives and make positive changes in their communities. This approach emphasizes the importance of building trust, collaboration, and mutual respect between researchers and community members.
- **Co-production and co-design approaches:** Co-production and co-design of research are becoming more common in research and adapted by organisations and research globally, on the recognition that involving community members and those with lived experiences bring significant insight and are vital to develop solutions that are meaningful and sustainable.

3.6. The Benefits of Meaningful CEI in Research

The Clinical and Translational Science Awards Consortium (2011) outlines a range of benefits to be derived from the inclusion of meaningful CEI in global health research.

The communities and participants involved in the research help shape the design and delivery of the research and the research outcomes in ways that reflect their own interests and needs. Meaningful CEI may also result in communities and participants gaining enhanced knowledge and skills in terms of the methods and process of the research itself and a greater understanding of the issues under study, and the relevance of these issues to different parts of the community, and its linkages within the community and with external entities.

For the research teams, meaningful CEI can improve the design and delivery of the research, the identification of new sources of relevant information, unappreciated causal links, and new collaborations and interventions. It can also help improve the understanding and resolution of ethical issues within the research, aiding processes of informed consent and approval. Meaningful CEI can help all parties involved in research understand the role and value of community engagement, the value of participation in research and the wide-ranging benefits that can be derived from research that values community engagement.

Box 3-3: Benefits of CEI for Research

Benefits of CEI for Research:

Agenda— Engagement changes the choice and focus of projects, how they are initiated, and their potential to obtain funding. New areas for collaboration are identified, and funding that requires community engagement becomes accessible.

Design and delivery— Improvements to study design, tools, interventions, representation/participation, data collection and analysis, communication, and dissemination can be implemented. New interventions or previously unappreciated causal links can be identified through the community's knowledge of local circumstances. The speed and efficiency of the project can be enhanced by rapidly engaging partners and participants and identifying new sources of information.

Implementation and change— Improvements can be made in the way research findings are used to bring about change (e.g., through new or improved services, policy or funding changes, or transformation of professional practices), and capacity for change and the maintenance of long-term partnerships can be expanded.

Ethics— Engagement creates opportunities to improve the consent process, identify ethical pitfalls, and create processes for resolving ethical problems when they arise.

The public involved in the project— The knowledge and skills of the public involved in the project can be enhanced, and their contributions can be recognized (possibly through financial rewards). These efforts foster goodwill and help lay the groundwork for subsequent collaborations.

Academic partners— Academic partners can gain enhanced understanding of the issue under study and appreciation of the role and value of community involvement, which sometimes result in direct career benefits. In addition, new insights into the relevance of a project and the various benefits to be gained from it can result in increased opportunities to disseminate its findings and their wider use.

Individual research participants— Improvements in the way studies are carried out can make it easier to participate in them and bring benefits to participants.

Community organizations— These organizations can gain enhanced knowledge, a higher profile in the community, more linkages with other community members and entities, and new organizational capacity. These benefits can create goodwill and help lay the groundwork for subsequent collaborations.

The general public— The general public is likely to be more receptive to the research and reap greater benefits from it.

4. CEI Structure for CLEAN-Air(Africa) Unit

4.1. Remit of CEI for CLEAN-Air(Africa)

CEI is a key overarching principle to which all project partners must give consideration through the research project cycle and through work on health systems strengthening. CLEAN-Air(Africa) aims to develop and operationalise a strategy for community engagement and involvement by drawing best practice literature and the wealth of expertise from partners who have experience in CEI. This work will be carried out under work package 7 but will link directly to all work packages, as demonstrated in Figure 4-1. The proposed structure for the management and implementation of CEI is described below.

WORK PACKAGE 1: Sustained use of clean cooking fuels in households

WORK PACKAGE 3: Burns

WORK PACKAGE 5: Empowering community health workforces (CHW)

WORK PACKAGE 6: Air Pollution Centre of Excellence

WORK PACKAGE 2: Institutional transitions to clean cooking

WORK PACKAGE 4: Household air pollution and hidden disease

Cross-cutting WORK PACKAGE 7: *Community Engagement and Involvement (CEI)*

Figure 4-1 Cross-cutting community engagement and involvement work package for CLEAN-Air(Africa)

4.2. CEI Operational Structure

The operational structure for CEI is depicted in Figure 4-2.

CEI Advisory Group

CEI will be overseen by an Advisory Group with 3-4 experienced experts in CEI and participatory research. The experts include:

- Professor Miriam Were, KEMRI – Kenya Medical Research Institute, Nairobi
- Professor Rupert Jones, University of Plymouth
- Dr Steve Clayton, University of Liverpool

The Advisory Group will meet frequently during the initial planning and preparation period, after which they will meet on an ad hoc basis, when specific advice is required to provide guidance and input to deal with specific challenges. Recommendations will be fed to the CAA Directorship and WP Leads and the CEI Working Group. The CEI-Leads will be responsible for engaging the advisory group and organising the topics for discussion.

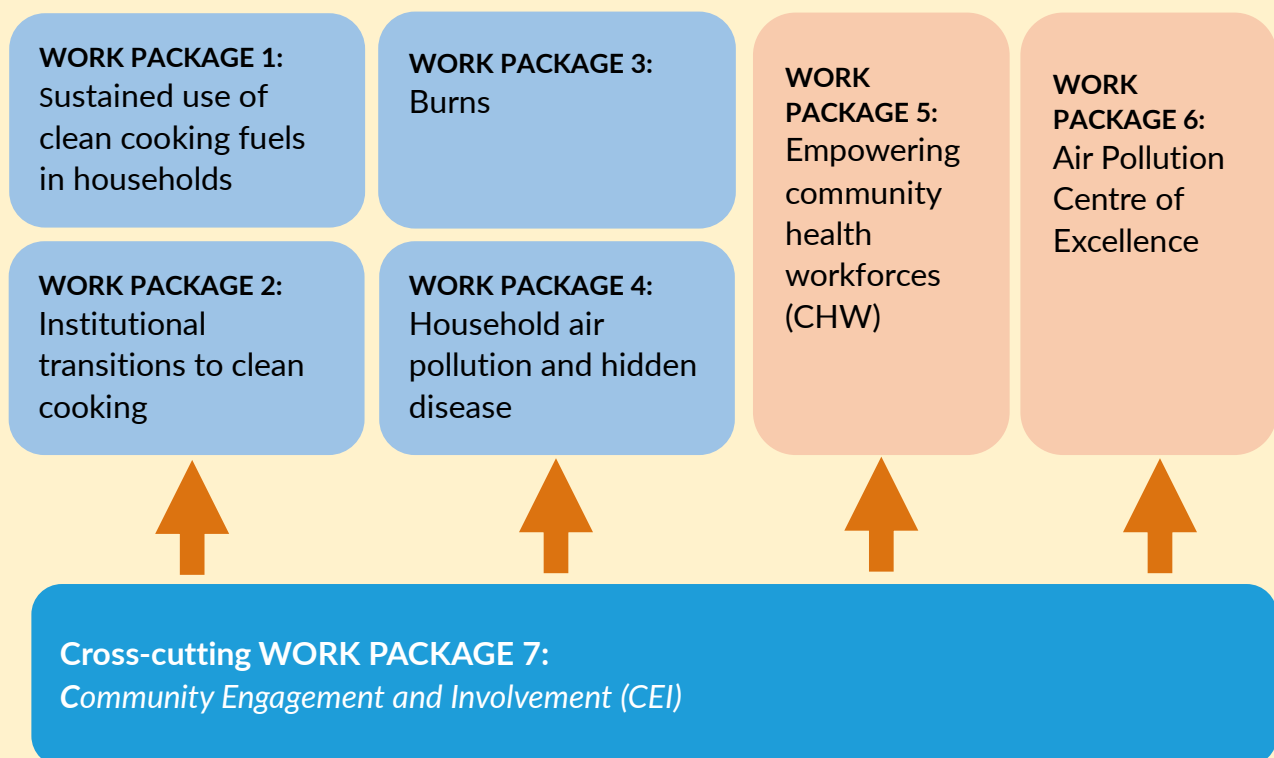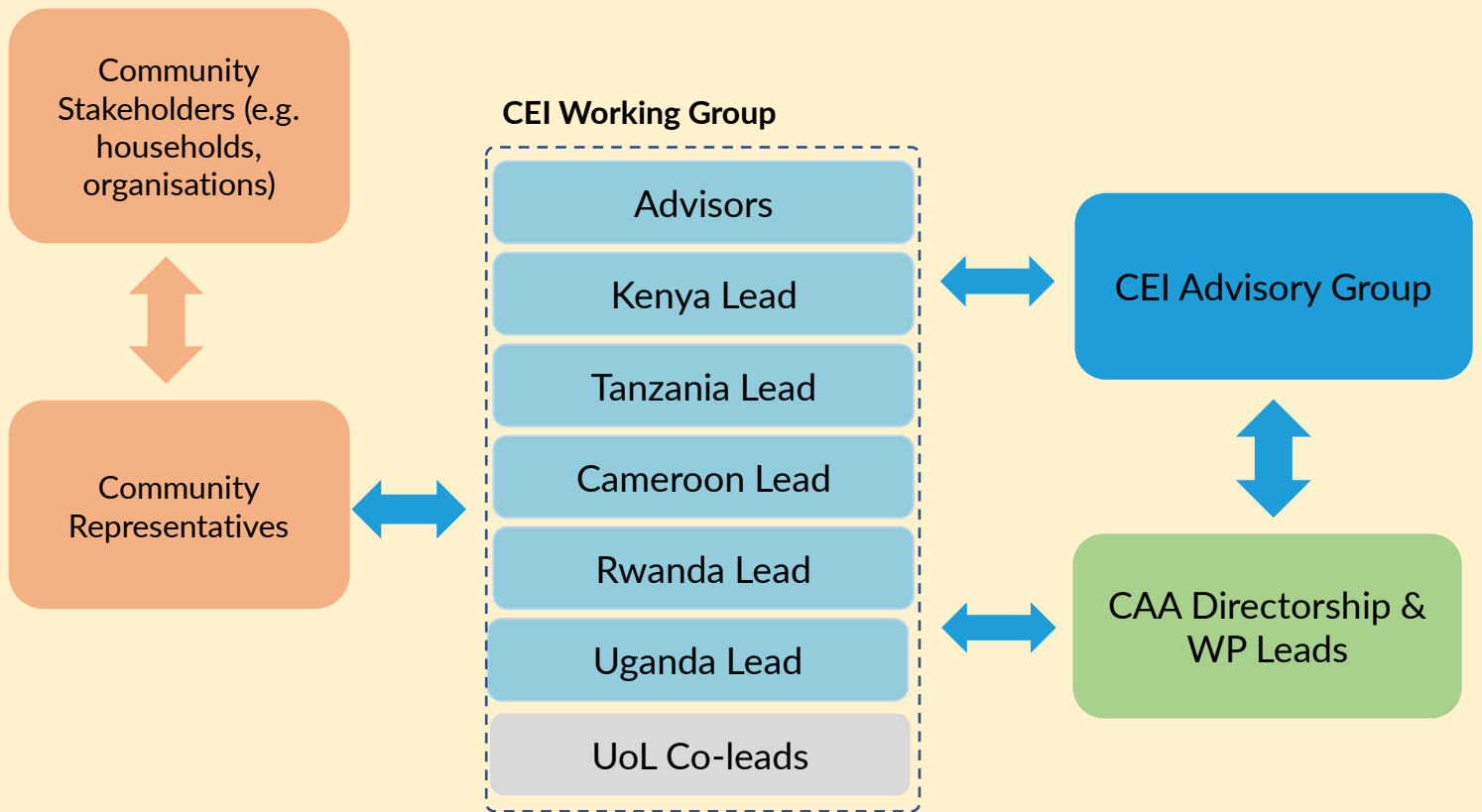*Figure 4-2 Cross-cutting community engagement and involvement work package for CLEAN-Air(Africa)*

CEI Working Group
The purpose of the CEI Working Group is to develop and support community engagement and involvement initiatives across the CLEAN-Air(Africa)'s research and capacity-building programmes. The CEI Working Group will be responsible for delivery of Work Package 7: Community Engagement and Involvement. This includes developing the CLEAN-Air(Africa) CEI strategy, implementing CEI activities across the programme and following established CEI principles.

The CEI Working Group will be made up of representatives from each country/community (National Leads), where research and capacity buildings are taking place, and coordinated by CEI Co-Leads, from KEMRI and the University of Liverpool. The CEI Steering Group will act as sounding board for the Working Group.

CEI National Leads
The National Lead will be a member of the CEI Working Group and will act as the lead for their respective location. National Leads will be active in the decision-making on CEI strategy and the delivery of the CEI strategy. Depending on what is appropriate, leads may decide to

establish local national committees or work with individuals and bring challenges and learnings for discussion to the working group.

The National Lead should be an existing member of the CAA Global Health Research Unit and have experience in/ or desire to forward CEI initiatives. The National Representative will take on this role on addition to wider their CLEAN-Air(Africa) tasks, the time commitment for the role is flexible and can be managed to fit in with their workload. They will work closely with both the CEI Leads and the Principal Investigator (PI) in their respective location.

The CEI National Representative's responsibilities are as follows (not exhaustive):

- Be the liaison between CLEAN-Air(Africa) and community members in their respective locations/country
- Be the contact point for CEI activities within their community and provide feedback to the CEI Working Group
- Contribute to the development of the CEI strategy for the CAA Global Health Research Unit
- Document CEI activities within their respective location

5. Implementing CEI across CLEAN-(Air)Africa

This section details the steps to implement CEI across each work package. Due to the varied nature of the research and capacity-building programmes, these steps outline the broad processes to be taken, allowing flexibility for each setting but ensuring there is consistency across CLEAN-Air(Africa).

There are five broad steps to implementing CEI:

1. Defining the community of interest
2. Identifying appropriate engagement methods
3. Develop and implement a CEI activity plan
4. Monitoring CEI activities
5. Evaluating the impacts of CEI

Steps 1-4 should be implemented at the work package or specific project level and are the responsibility of the CEI National lead for that work package/project. The CEI National Lead should be an active member of the work package and be fully part of the decision-making (as shown in Figure 5-1). The evaluation of CEI will be conducted at the Unit level (Step 5), based on the data that is fed from each specific work package/project. Steps 1-3 are described below, and Steps 4 & 5 are detailed in Section 6.
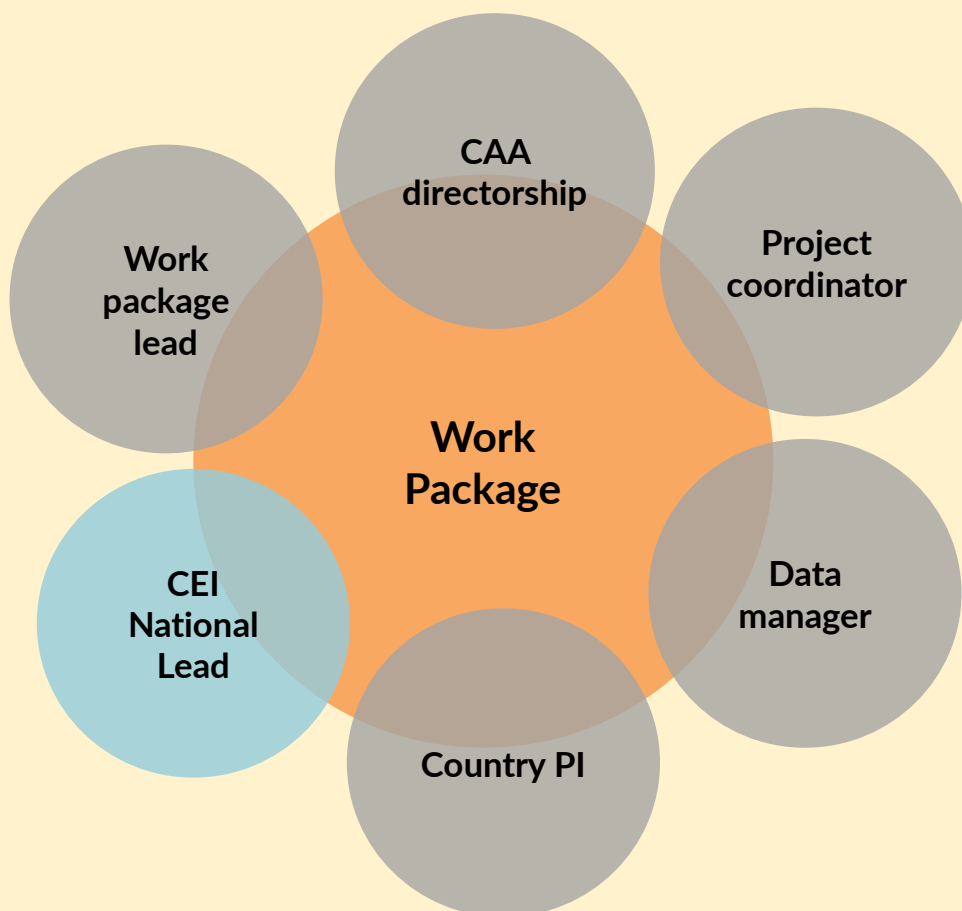

Figure 5-1: CEI Role as part of the work package.

5.1. Defining the community of interest

The first step for CEI is to define the community that the research/capacity-building programme intends to benefit. Understanding the community you are working with is essential for creating a CEI activity plan that is effective, respectful and ensures meaningful engagement and involvement in all stages of the project cycle. The project team should consider the following questions: *Who are the community? What are their needs and interests? What are their priorities?* Ideally, this will involve discussions with members of that community to co-define this definition to ensure what the researchers see as the community is reflected on the ground.

As part of defining the community, it is important to understand existing structures/community networks that could be used to enhance or support CEI activities. By building on existing community structures, we can better tailor our efforts to the needs and existing capacity of the community and ensure community engagement and involvement efforts are more sustainable and effective over the long term. Understanding and leveraging existing networks can also foster stronger relationships with the community and promote more effective engagement and participation in our research and capacity-building programmes. Therefore, we need to gain knowledge about the social networks and relationships that exist within the community the research intends to address and work to develop relationships between these existing networks and the research team. This may involve identifying key individuals or groups within the community, as well as understanding the nature and strength of the relationships between these individuals or groups. For example, in Kenya and other East African Countries, there is an existing network of community health workers/volunteers who can provide a structure for engaging community members as well as feed their experiences and knowledge in public health interventions relevant to the remit of the research area.

Several methods could be employed to understand existing community structures, such as informal interviews, scoping visits to the area, the analysis of social media or other online platforms. These strategies can help to identify social hierarchies and other subgroups within the community, as well as patterns of communication and interaction between members. For the case of CLEAN-Air(Africa), we likely have local knowledge of community structures and relationships among the partnership but we may need to supplement this understanding with additional work to understand subgroups that we are not aware of or in settings that are new to the research team. The following methods can support defining the community and the existing structures:

Stakeholder mapping

Stakeholder mapping is a widely used technique that can be used to identify individuals/organisations, such as community leaders, community groups, and relevant organisations, that may have relevance to a project or activity. It can also support the prioritisation of who to engage with. Table 5-1 details the process for completing a community/stakeholder mapping. Stakeholder mapping can be conducted by gathering project team members and listing who they know. Additional desk searches or discussions with relevant stakeholders might help to identify relevant individuals/organisations. The list can be updated when additional individuals/organisations are identified and will provide a useful tool to guide the project throughout.

Table 5-1 Steps for stakeholder mapping

Step	Overview
Stakeholder identification	Start by creating a list of all the stakeholders who may be impacted by or have an interest in the research project. This may include community members, advocacy groups, government agencies, funders, academic institutions, and others.
Stakeholder prioritisation	Once you have identified the stakeholders, categorize them based on their level of influence and interest in the research project. Stakeholders with high influence and high interest should be prioritized, while those with low influence and low interest can be given less attention.
Stakeholder analysis	For each stakeholder group, conduct an analysis to understand their perspectives, priorities, and concerns. This information can be used to develop targeted engagement and communication strategies for each stakeholder group.

Transect walks

Transect walks offer a tangible and immersive way to connect with local residents and understand the geography, social dynamics, and features which define a given community. They involve actively walking alongside or with local residents while observing, inquiring, listening, engaging in discussions, and identifying noteworthy contextual elements. Transect walks allow to collect a wide range of insights as well as gain an understanding of the community's challenges and issues which may interfere with the research process. Furthermore, transect walks help identify the specific needs and assets of a community, informing more targeted and effective ways to engage and involve them into the research. In essence, these walks bridge the gap between research teams and the community, ensuring that initiatives are not only well-informed but also rooted in the genuine experiences and material possibilities of the communities involved.

Discussions with stakeholders

Discussions with stakeholders can help ensure that the perspectives and concerns of all community members, especially those who might be marginalized or underrepresented, are considered and taken into account. They are a tool that promotes transparency, especially in terms of decision-making processes that are concerned with the research carried out in the community. Stakeholders' input is essential to identify issues and concerns that may not be immediately apparent to the research team, and to develop effective strategies to ensure these can be addressed. Discussions with stakeholders also allow room for knowledge-exchange processes, where all parties involved can learn from each other. In particular, the research team can gain valuable information about the community, its history, its internal social dynamics, and its current challenges. Finally, involving stakeholders in discussions can help foster a sense of ownership over the research process and enhance their engagement, involvement, and commitment toward the research while promoting their empowerment and a sense of shared-responsibility toward the research process.

Informal dialogue with community members

Informal dialogue with community members plays a pivotal role in fostering a deeper understanding of their perspectives and needs, which is central to CEI. These conversations, often free from the constraints of structured interviews or surveys, are thought to provide a judgement and pressure-free environment to engage with the interlocutor and gain invaluable insights into the nuances of a community's culture, structures, values, and concerns.

Furthermore, informal discussions allow researchers to establish trust, build relationships, and gain access to tacit knowledge that might not emerge through formal inquiries alone. They also empower community members to have a voice in the research process, promoting inclusivity and ensuring that the study is more representative and relevant to their lives. In essence, these interactions enrich the quality and relevance of research, making it a more collaborative and community-driven endeavour.

5.2.   Appropriate Involvement & Engagement Methods

Based on the community and existing structures, strategies to engage, involve, and communicate with research participants need to be tailored to their needs, possibilities, priorities, and interests, and in consideration of the specificity of each community sub-group. For example, community members may prefer town hall meetings or community workshops, while academic institutions may prefer webinars or academic seminars. There is a wide variation of activities that can be used to engage community members and stakeholders - an overview of common methods is provided in Table 5-2. It is important to note that methods engagement should be clear and consistent so that community members know what to expect and fully participate in the process.

Table 5-2 Involvement and engagement methods

Method	Description
Scientific cafes	A scientific café is an informal gathering where scientists or researchers meet with the public to discuss scientific topics in an accessible and engaging way. The idea behind scientific cafes is to create a relaxed and comfortable atmosphere where participants can learn about scientific topics, ask questions, and engage in discussions with experts. They usually take place in an informal setting, such as a community hall, or a café. The format can vary from presentations to interactive sessions and group discussions.
Stakeholder meetings	Stakeholder meetings are more formal business meetings to discuss specific topics of interest, such as sharing details on related programmes of work and future agendas on specific topics or issues.
Community champions	A Community Champion is someone local in the community with good networks in the area. They may volunteer to promote and enhance people's well-being in the community or to develop community voices into local policy. Generally, they have the lived experience from the community they represent and may have grown up in the area or worked/lived there for many years. Community champions can provide both an understanding of the community to the research team and directly feed into the research process by providing feedback and advice. They can also enhance data collection methods through support access to participants.
Participatory research and methods	Participatory research and methods are both a range of methods and an ideological perspective, with the fundamental principle that the participants are involved as partners in the process of the enquiry. The research can be designed as a fully participatory approach, such as participatory action research and co-production approaches, or use participatory methods within more linear research approaches.

Community meetings/town hall meetings	Community meetings/town hall meetings are usually open meetings where community members are invited to participate in a dialogue and provide feedback on an issue or local challenge. In Kenya, these are often known as "dialogue days". These are widely used by planners to discuss proposed changes to an area.
Newsletters	Regular newsletters can keep the community informed about the progress of the research project, any important updates or developments, and any upcoming opportunities for engagement.
Social media	Social media platforms such as Twitter/X, Facebook, and Instagram can be used to share updates, engage with the community, raise awareness and discuss aspects of the research project.
Online forums and discussion boards	Online forums and discussion boards can provide a space for community members to share their thoughts and ideas about the research project and connect with other community members who are interested in the project.
Focus groups	Focus groups can be used to gather in-depth feedback from community members on specific research topics or questions.
Community advisory boards	Community advisory boards can provide a formal structure for community members to participate in the research process, provide feedback and guidance, and ensure that the research remains respectful and inclusive for the community. This can include

5.3. Developing a CEI Plan

Once the community has been identified and engagement and involvement methods are determined, a CEI plan can be developed. This should span the whole research life cycle, and define when CEI activities will take place, who should be involved in this activity, why the activity is taking place and the method of engagement (how). Again, ideally, this should be defined with community members to develop this plan.

Table 5-3 Example CEI plan

When	Who	Why	How
Protocol development	Ministry of Health	Feedback on research ideas	Stakeholder meeting
Protocol development	Households from the research setting	Feedback on research ideas	Community meeting
Launch of research activities	Households from the research setting	Awareness of research activities	Community meeting
Delivery of research activities	Households from the research setting	Enhance data collection	Community champions support data collection
Research activities	Household & stakeholders	Priority setting	Participatory workshop

6. CEI Monitoring, Learning and Evaluation

CEI activities happening across CLEAN-Air(Africa) should be monitored, reflectively learnt from and evaluated for wider impacts throughout the life of the programme. Monitoring, reflexive learning and evaluation serve different purposes and are conducted at different stages of CEI initiatives. They are important as they:

- Keeps us accountable
- Helps us learn from what works/what doesn't
- Track activities for reporting and documenting outcomes
- Evaluate the wider impacts
- Supports the production of case studies & papers.

6.1. Monitoring

Monitoring involves the ongoing, systematic, and iterative collection of data and information to track the progress and implementation of community engagement or involvement activities. It should be carried out during the course of the project to (i) stay informed about the project's status, (ii) ensure this is being implemented as planned, (iii) identify any deviations or challenges in real-time, so that appropriate responses can be developed and implemented and (iv) build the resources and material needed for reflexive learning.

Monitoring should include tracking of the CEI activities undertaken, the number of meetings held, the attendance of community members, and a preliminary reflection of what worked well, which can be further unpacked by the work package teams through reflexive learning. A tracking tool has been developed and tested by the CEI team, containing the following areas and related questions:

Table 6.1 Activity Tracker Questions

Aspect	Questions
Engagement details	Which activities took place? How long did it take? How many were present?
Engaged groups	Who was engaged (which group/groups/or individuals)?
Engagement purpose	What was the purpose of the CEI activity?
Research cycle stage	Which stage of the research cycle was the CEI activity carried out?
Outcomes of the engagement	What happened as a result of the activity? (e.g. were there new aspects incorporated into the research agenda?)
Engagement learnings	What worked well during the activity? What could be improved for next time?

6.2. Reflective Learning

Reflective learning refers to the process of self-examination and critical thinking in which research teams or communities look back on past experiences to assess their process and outcomes and consider what went well, what could have been done differently, and what can

be learnt from them. Reflexive learning is important for community engagement and involvement initiatives for several reasons:

- It produces contextual and fine-grained knowledge about CEI trialled-initiatives that can be used to make informed decisions and improve future actions. It also sustains innovation by encouraging the search for new approaches/problem solving to community challenges.
- It develops awareness that communities are dynamic, and their needs and priorities can change over time. It thus prompt CEI initiatives to adapt and remain relevant to local priorities and needs.
- It empowers the communities involved by encouraging them to become more self-aware and confident in their abilities. This can lead to increased participation and a greater sense of ownership in CEI initiatives.
- It commits the research teams to constantly question their practices and reflect on the often-implicit biases they may incorporate or sustain.
- It promotes collaboration and inclusivity by encouraging open dialogue and a culture of sharing insights and experiences.

Critical reflection around CEI and activities should take place continuously throughout CAA. Cycles of reflexive learning should be feedback to each work package/sub project to ensure the learnings are implemented within the largely linear research process. This requires am active link between the research team and the community, through the community engagement lead. Time should be set aside to discuss the learnings from the CEI process through the work and involve a range of team members, representing different aspects of the research programme.

6.3. Evaluation

Evaluating the impacts of CEI initiatives is important as it allows to determine whether the project achieved its objectives and its long-term impacts on the community. Evaluation helps answer questions about what worked, what didn't, and why, and to reflect on what could have been done more or differently to enhance CEI. It is also important to make informed decisions about the future of the project, whether to scale it up, replicate it in other communities, or make improvements for future initiatives.

Evaluation is typically conducted after the project has been completed or has achieved a specific milestone. It involves a comprehensive and retrospective exercise of assessing the overall impact, effectiveness, and outcomes of a community engagement or involvement initiative.

As mentioned, the overall aim of CEI is the empowerment of community members to participate in decision-making processes, that are aimed at affecting them. Across CLEAN-Air(Africa), the **Most Significant Change (MSC)** methodology will be used to capture the wider impacts of CEI occurring as part of CLEAN-Air(Africa). and has been used to retelling stories of significant changes that individuals/groups have witnessed as a result of the project. The qualitative MSC methodology is useful when there is a wide diversity of approaches and when you have different stakeholders, who may have different understandings of what success looks like. A simple tool has been developed to capture MSC stories that have occurred during the course of the CAA programme. It will be the responsibility of the CEI Leads to record these stories through the research. Example stories of change are detailed in Box 6-1/

Box 6-1 Example MSC stories from CLEAN-Air(Africa) CEI

Personal stories on the impact of polluting fuels drive community health programmes

What change took place?

Stakeholders became aware of the devastating impact that cooking with polluting fuels has on the lives of families, particularly about the risks from carbon monoxide exposure. This led to the expansion of the training to community health workers and an increased focus on this as a key issue for health promotion.

Who was involved, which activities and when did the change take place?

Individuals who had suffered from the bereavement of family members due to exposure to carbon monoxide Is retold their stories during meetings with stakeholders. This brought to light the significance the issues families are facing due to the use of polluting fuels and the need for programmes to address this health burden.

Why is the story significant?

The research processes gave stakeholders direct exposure to issues faced by families and the serious impacts these have. First-hand stories provided a powerful message to stakeholders to act.

Headteacher acts to implement clean cooking transition in school

What change took place?

A school headteacher is now keen to transition to LPG for clean cooking and has initiated discussions with the school board of management and other stakeholders, such as Equity Bank Foundation, about the specifics of their programme supporting schools to use LPG and this might be possible for the context of this school.

Who was involved, which activities and when did the change take place?

Engagement between the school and CLEAN-Air(Africa) has been sustained and ongoing, and the headteacher was invited to the CAA Unit Launch. Through the engagement, the research team learnt about the difficulties to resource fuels for cooking experienced on a daily basis and provided links to Equity Bank Foundation who visited the school to discuss a potential switch.

Why is the story significant?

The research project enabled the engagement of diverse actors, who may not have normally interacted. It provided understanding to Equity Bank representatives about specific challenges faced by schools located in informal settlements and open the door for the school to transition. The headteacher has taken ownership of the issues faced and has initiated action.

7. CEI Capacity Building

Capacity building is the process of developing and strengthening the skills, knowledge, abilities, and resources of individuals, organizations, and communities to enhance their capacity to perform effectively, sustainably, and to achieve their objectives. Supporting capacity building is essential to ensure that those working in CEI initiatives are adequately supported and can access a platform to share their experiences, challenges, and develop ideas for improved approaches.

We will support capacity building through bimonthly Working Group Meetings and Share Learning Sessions, and through an annual CLEAN-Air(Africa) Best Practice Seminar:

7.1. CEI Working Group Meetings

CEI Working Group meetings will be held bimonthly and will provide CEI country leads with the opportunity to gain guidance and support, and to share their experiences of implementing CEI with other members of the CEI team. The meeting will also serve the purpose of coordinating CEI activities and dealing with administrative tasks CIE requires to be implemented consistently across the programme.

7.2. CEI Shared Learning Sessions

Shared learning is an essential component of the iterative and continuous processes of self-growth and learning CEI leads undertake to create, develop, and sustain CIE initiatives. Shared learning consists of creating opportunities for CEI leads to get together and share knowledge, resources, strategies, and tools about CEI. Shared Learning sessions are underpinned by a developed CEI syllabus, which will be expanded through the programme with all CEI leads encouraged to contribute. The syllabus collects relevant literature, guidance, case studies and resources which can be discussed in dedicated CEI meetings through journal clubs or other shared-learning opportunities that can be facilitated by different CEI leads on a rota. Shared learning opportunities will be held bimonthly and the invitation to join may be extended to the whole CLEAN-Air(Africa) team.

7.3. CEI Best Practice Seminar

Across CLEAN-Air(Africa) will host an annual CEI Best Practice Seminar to which everyone in the programme will be encouraged to participate. The Best Practice Seminar will showcase exemplars of CEI activities undertaken across the programme and foster shared learning and discussions amongst the attendees.

8. CEI Impact Stories & Podcast Series

Documenting how the CEI strategy is implemented across the CLEAN-Air(Africa) partnership is essential to demonstrate the impacts achieved through sustained and cross-cutting work with the communities involved in the research. Those involved in implementing the CEI strategy will be asked to identify examples of CEI Best Practices and review the Most Significant Change Stories to be developed as dedicated Case Studies and as Podcast Series. These outputs will be supported by the CAA Comms Team, who have experience in communications.

8.1. Best Practice Case Studies

Articles will be written in the form of Case Studies and published on the CLEAN-Air(Africa) website: cleanairafrica.com, under the CEI Section. Case studies are an effective way to share approaches for others to adopt, showcase the impact of CEI, and keep our audience informed and engaged. They will provide an overview of the context where the CEI strategy has been implemented, its purpose, and the engagement and involvement activities it involved. We will pay particular attention to describing the preparation and planning process, and how those helped identify community stakeholders, as well as social, cultural, and economic characteristics of the community target. We will provide exemplars of the specific activities we undertook, including details about events, workshops, meetings, or any other initiatives. Case studies will be accompanied by visual content like photos, videos, or infographics to make the content more engaging. They will also embed anecdotes, quotes, or success stories from community members to add a human touch to the post and demonstrate the impact of CEI on individuals. We will share positive changes, improvements, or benefits observed as a result of CEI activities. Case studies may be reworked and published in platforms, journals, and blogs external to CLEAN-Air(Africa) medias.

8.2. Podcast series

Podcasts are an excellent medium for storytelling. Hearing real voices enables a personal connection with the audience, providing a platform for sharing narratives that capture the essence of community engagement initiatives that make them more relatable and compelling. They are also accessible to a wide audience and can be listened to while doing other tasks. This is why we plan to employ them to document lived experiences of participating in community engagement and involvement initiatives.

Podcasts will feature the in-depth exploration of a given topic from different perspectives and experiences. They will incorporate interviews with community members, the research teams, or external experts to keep the content dynamic and adaptable to various storytelling styles. They will, in particular, be used to amplify diverse voices within the community, encouraging them to share their stories, thoughts, and feedback and foster a sense of co-creation. Podcasts can therefore be considered both a strategy to foster CEI and a tool for documentation of its impacts.

References

Arnstein, S.R., (1969). A Ladder of Citizen Participation. Journal of the American Planning Association, Vol. 35, No. 4, pp. 216-224.

Clinical and Translational Science Awards Consortium, (2011). Principle of Community Engagement (2nd Edition). NIH Publication. Available at https://www.atsdr.cdc.gov/communityengagement/pdf/PCE_Report_508_FINAL.pdf.

Ferguson, J., (1994). The Anti-Politics Machine: 'development', depoliticization, and bureaucratic power in Lesotho. Minneapolis: University of Minnesota Press.

McIntosh, P., (1989). White Privilege: Unpacking the Invisible Knapsack. Peace and Freedom Magazine, pp. 10-12. Philadelphia: Women's International League for Peace and Freedom.

Nelson, E., (2019). Resource guide for community engagement and involvement in global health research. NIHR. Available at https://www.nihr.ac.uk/documents/resource-guide-for-community-engagement-and-involvement-in-global-health-research/27077.

Nelson, E., (2021). Empowering meaningful community engagement and involvement in global health research - critical reflections and guiding questions. NIHR. Available at https://www.nihr.ac.uk/documents/empowering-meaningful-community-engagement-and-involvement-in-global-health-research-critical-reflections-and-guiding-questions/27361.

Thompson, B. & Kinne, S., (1990). Social change theory: applications to community health In: Bracht, N. (Ed.), Health promotion at the community level (1st ed.), pp 45-65. Newbury Park (CA): Sage.

UNICEF, (2020). Minimum Quality Standards and Indicators for Community Engagement. UNICEF. Available at https://resourcecentre.savethechildren.net/document/minimum-quality-standards-and-indicators-community-engagement/#:~:text=The%20minimum%20standards%20for%20community,proposal%20writing%2C%20budgeting%20and%20monitoring.