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The role of the arts in a community-based participatory research project

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Recycling metals such as iron and lead appears crucial for sustainable development, but metal recycling often results in poor quality of life for people living near recycling sites. Transdisciplinary approaches, involving researchers from the physical, natural, and social sciences and humanities working with non-academic partners, are now recognized as essential for tackling such a challenging Anthropocene issue. However, collaboration and understanding between partners are often hampered by the specific modes of communication and concepts used by each community.

We present here the beneficial role of the arts in a community-based participatory research project addressing the impacts of metal recycling activities in West Africa, particularly in terms of air pollution. In Senegal (Africa), the town of Sébikotane has become a rapidly growing urban center with three recycling plants (steel and lead batteries). The project aims to produce, jointly evaluate, and share knowledge on air quality in this urban area in transition, far from official measurements. The team includes researchers from geosciences, aerology, anthropology, literature, and botany. Artists, the city council, an NGO, and citizens are officially and actively involved in the project as non-academic partners.

We will show how the different artistic productions helped to implement and share knowledge along the project, especially the participatory part, and promoted efficient communication between all partners. Forum theater, live sketching, literature, and design provided effective artistic means to translate concepts and share knowledge. The collaboration between artists and scientists facilitated the elaboration of ethical rules governing the project's stance.