Imperial College London

Natural Environment Research Council

2024_4_CEP_CA: Inclusive Stakeholder Engagement in Nature Based Solutions for Transformational Urban Climate Adaptation

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The world's increasingly urbanised population is particularly vulnerable to the effects of climate change and extreme weather events, such as floods and heat waves. These impacts are disproportionately concentrated on the economically vulnerable and socially marginalized (IPCC, 2022). In this way, the global effort to adapt to urban climate impacts hold the potential to exacerbate or redress social injustices (Shi et al., 2016; Diezmartínez & Gianotti, 2022; Amorim-Maia, 2022). As such it in increasingly recognised that transformational adaptation that both minimises the impacts of a changing climate and addresses socio-political injustices is needed (Revi et al., 2020; March & Swyngedouw, 2023).

Nature-Based Solutions (NBS) involve "working with and enhancing nature to help address societal challenges" (European Commission, 2015. They are widely prompted as a way to support human adaptation to the effects of climate change (e.g. IPCC, 2019, and the Global Adaptation Commission Report, 2019). For example, planting trees and increasing green space in cities can help with urban cooling and flood abatement. NBS have also been identified as providing benefits to society (e.g. social justice and cohesion, public health and well-being), the economy (e.g. economic opportunities and green jobs, urban regeneration) and ecology (e.g. biodiveristy, water management) and thus have potential to provide holistic solutions for sustainable development (Seddon et al.,2020).

Successful implementation of NBS and the realisation of multiple benefits requires involvement and collaboration between a range of stakeholders. Such engagement is required to ensure that solutions are context relevant and socially acceptable. Furthermore, involvement can empower stakeholders and develop community cohesion which have been identified as being key to ensuring that NBS can be maintained over time. The recent IPCC sixth assessment report highlighted that for adaptation to be transformational it must be rooted in diverse values, worldviews and incorporate indigenous and local knowledge. Despite this recent work has highlighted a lack of incorporation of such knowledge, with involvement of locals in NBS planning rarely adopted. This has been identified as a "major gap" for NBS research and suggests that the implementation of NBS is not yet contributing to social inclusiveness. Furthermore, failing to address this risks increased maladaptation and entrenching inequalities.

This PhD will investigate how to improve inclusivity within NBS design and how this can contribute to transformational climate adaptation. It will develop a theory of change regarding inclusivity for transformational climate adaptation and use this to investigate case studies in order to identify best practice and barriers and enablers to inclusivity. Building on this it will work in a climate vulnerable neighbourhood to explore how inclusive engagement can be developed in practice.