

## Introduction

Urban flooding in the UK disproportionately affects socially vulnerable communities (O'Hare & White, 2018); a phenomena called 'flood disadvantage' (JRF, 2011). In 2020, the UK Government set aside £200m for novel flood risk management (FRM) approaches. Wildfowl & Wetlands Trust (WWT), National Flood Forum (NFF), Barnes Common Ltd (BCL), and London Councils won £6m to co-produce nature and neighbourhood-based FRM in socio-spatially vulnerable communities in Slough and Richmond.

Working alongside this project, my research asks: *How can novel coupled human-nature-based solutions (HNBS) to flood risk governance (FRG) support urban flood risk justice (FRJ) outcomes?*



Salt Hill Stream, Slough

## Aim & Objectives

**Aim:** Investigate and recommend if and how coupled human-nature-based (HNBS) solutions to FRG can contribute to flood risk justice (FRJ) outcomes in urban communities.

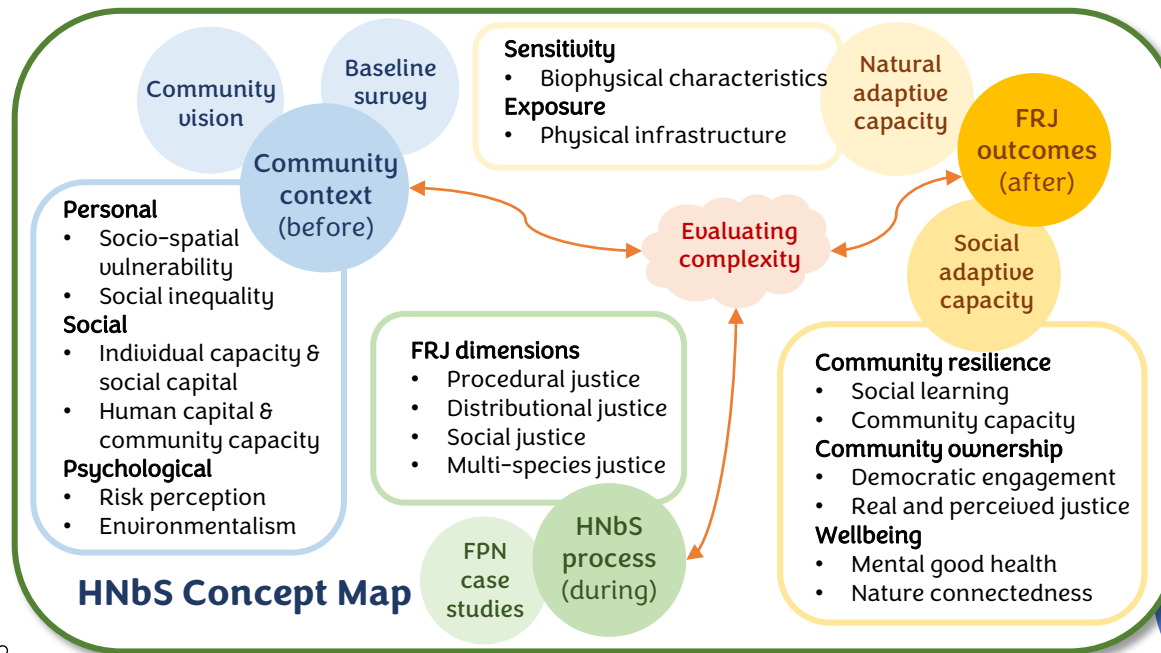
1. Produce FRJ evaluation strategy and framework for NNBS; systematically reviewing & framework synthesis
2. Critically evaluate FRG process and FRJ outcomes in FPNs; co-creatively, ethnographically, and qualitatively
3. Report on how (not) to achieve FRJ in urban FRG; critical comparative case study analysis

## References

- O'Hare, P. and White, I., 2018. *Beyond 'just' flood risk management: the potential for—and limits to—alleviating flood disadvantage*. *Regional Environmental Change*.
- Lindley, S., O'Neill, J., Kandeh, J., Lawson, N., Christian, P. and O'Neill, M., 2011. *Climate change, justice and vulnerability*. Joseph Rowntree Foundation, York.
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- Franklin, A., 2022. *Co-creativity and engaged scholarship: transformative methods in social sustainability research* (p. 559). Springer Nature.
- Climate just, 2022: *Neighbourhood Flood Vulnerability Index (NFVI)*: Mapping Tool: (Accessed 17.05.23) <https://www.climatejust.org.uk/map>

# Flood risk governance (FRG) for urban flood risk justice (FRJ); investigating coupled human-nature-based solutions (HNBS)

Sam Watkins, Alex Collins (CEP), Julia Newth (WWT), & Andy Graham (WWT)

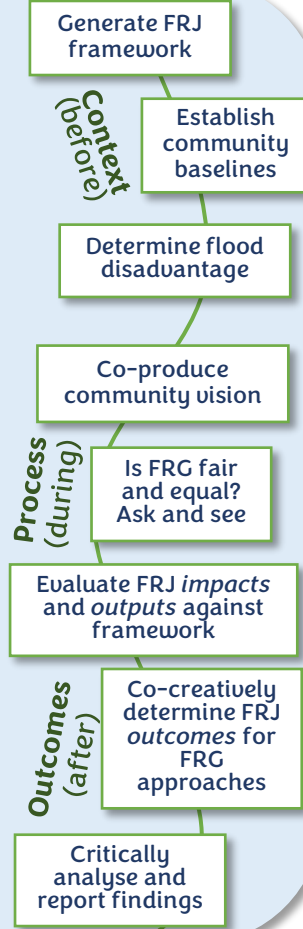


## Evaluation Methods

**Developmental evaluation (DE):** seeks to support the wider project for mutual gain towards shared purpose (Patton, 2014); contribute towards FRJ outcomes in the participating communities. This means knowledge sharing, co-producing strategy, iterative feedback to strengthen ongoing decision making, not extracting data observationally.

**Qualitative inquiry framework:** the complex nature of the social phenomena being studied require multiple lines and levels of evidence from non-linear and adaptive qualitative methods (Patton, 2010).

**Co-creative and inclusive methods:** reflecting participatory epistemic values and developmental/action research aims, the core line of evidence will be drawn from a co-creative, participatory workshop. Seeking to positively effect participants towards FRJ outcomes (Franklin, 2022); specifically, community ownership.



Imperial College London

## Systematic Review

**Satisfying Objective 1, and addressing gap in knowledge, the systematic review seeks to:**

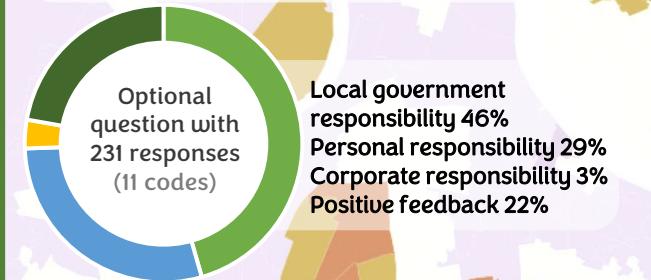
- A. Explore existing evaluation approaches for of community based participatory processes in environmental resource management (ERM)
- B. Explore existing frameworks conceptualising FRJ and the evaluation of justice dimensions in ERM
- C. Explore existing approaches to the evaluation of 'co-benefits' or 'social effects' of Nbs interventions

A subsequent systematic best-fit framework synthesis will finalise an evaluation framework for FRJ in HNBS; representing a novel contribution to literature.

*The HNBS Concept Map above is the initial output from the review.*

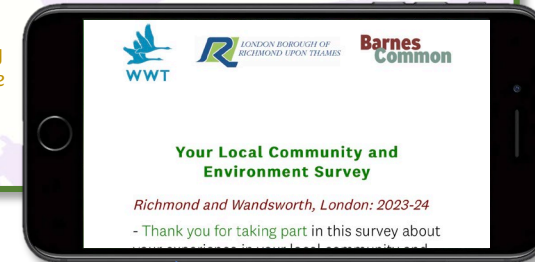
## Baseline Survey Results

**Early project results:** 300 representative respondents in Richmond and Wandsworth with 100% completion rate. Establishing baseline, pre-intervention environmental beliefs, behaviours and community cohesion in the project area.



**The key result:** Open question regarding local community and environment suggested appetite for the project in the socio-spatially vulnerable communities identified on the map behind this text (Climate Just, 2022).

Neighbourhood Flood Vulnerability Index Map (Climate Just, 2022)



Beverly Brook, Richmond

## Conclusion

**This research responds to knowledge gaps in FRG & FRM literature and to emerging FRJ trends:**

- Broader project combines human- and nature-based approaches to create an original approach to urban FRJ issues (HNBS)
- My research is an opportunity to critically explore this novel FRG approach through multiple cases to produce original insight
- My evaluation approach itself also represents an opportunity to explore novel FRJ outcomes
- FRJ framing of research is effective and timely; accommodating demands of research funding and partners, whilst building on emerging justice themes in FRM literature
- Working to publish in the upcoming Justice Special Issue in the Journal of FRM, and advised by academic from Project SOLARIS; exploring the extent of justice dimensions in FRM globally