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# #609 - A Socially and Behaviourally Grounded Framework for Inclusive Engagement Towards Community Flood Resilience

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## Abstract

*Without robust community engagement, flood resilience efforts often lack legitimacy, traction, and sustainability. However, many existing engagement frameworks—often designed outside the flood context—fail to reflect the lived realities of flood-affected communities, overlooking emotional and informal dynamics, assuming linearity, relying on civic access and rationality, and neglecting structural inequalities. Many of these frameworks adopt a deficit-based lens, framing communities primarily in terms of what they lack—be it knowledge, organisation, or capacity—rather than recognising their existing strengths.*

*This study addresses these limitations by proposing a socially and behaviourally grounded framework for inclusive engagement in flood-affected communities. Drawing on academic, policy, and grey literature—particularly from flood resilience, disaster studies, behavioural science, planning theory, and community development—it engages key theoretical contributions related to assets, social capital, adaptive learning, emotional wellbeing, and community knowledge to identify persistent gaps around diversity, emotional readiness, leadership, informal behaviours, and lived experience.*

*In contrast to deficit-based frameworks, the framework positions engagement as an iterative, asset-driven, and context-sensitive process rooted in trust and mutual accountability. Structured across three phases—Community Groundwork, Engagement, and Reflection—it foregrounds community strengths, trust-building, emotional connections, and local leadership. Its distinctiveness lies in how engagement is implemented: communities choose their own entry point; leadership emerges from within; trust—not templates—guides the process; external actors support rather than steer; and built-in reflection ensures learning and adaptation over time. Unlike existing frameworks, it integrates emotional and behavioural dynamics, begins before formal participation, and*

*offers a replicable yet flexible structure applicable across diverse flood contexts. By embedding these dynamics, the framework offers policymakers, practitioners, and communities a more grounded, equitable, and sustainable approach to engagement in flood-affected settings.*

## INTRODUCTION

Flood resilience begins long before the rain—and it starts with people, not just plans. As climate change and urban growth increase flood risks across the UK, the need for meaningful community engagement has become more urgent (Cvetković and Ivković, 2022). This became especially clear during the 2007 UK floods, which exposed major failures in communication and preparedness. The Pitt Review (2008) issued 92 recommendations, emphasising stronger public communication, local leadership, and engagement. These shaped both national policies and legislation, including the Floods and Water Management Act 2010, which formally integrated community engagement into flood risk management (DEFRA, 2012).

Despite these policy shifts, vulnerabilities persist. The Environment Agency (2025) now estimates that 6.3 million UK properties are at flood risk—projected to reach 8 million by mid-century. Highlighting the insufficiency of technical solutions alone, alongside challenges such as infrastructure decline and short-term planning, this underscores the need for socially and behaviourally grounded strategies that reflect lived experiences (Pitt, 2008; O'Donnell and Thorne, 2020; Lamb et al., 2022; Olatunji et al., 2024). Community engagement has the potential to leverage local knowledge, social cohesion, and emotional investment to build trust and shared responsibility (Neerunjun, 2024). However, this potential remains unrealised in many existing frameworks (Ekundayo et al., 2025).

Many existing engagement frameworks—often developed outside the flood context—struggle to address the realities of flood-affected communities, where disruption, emotional strain, and place attachment call for relational, cyclical, and trauma-informed approaches (Rosenberg et al., 2022; Ekundayo et al., 2025; Henderson et al., 2025; McKie and Aitken, 2025). Ladder, institutional, and community-centred models assume linearity, procedural control, or cohesion that may not exist. Practice-based approaches like the Environment Agency's DAD–EDD and *Working with Others* remain tied to institutional timelines and overlook emotional recovery (Colbourne, 2008). The NFF's two-stage model starts post-flood and lacks sustained reflection (NFF, 2018a; 2018b). Crucially, many neglect the social, emotional, and behavioural dynamics that shape community engagement (Aerts et al., 2018; Cvetković and Ivković, 2022; Ekundayo et al., 2025). Further, deficit-based ones remain common among these frameworks—framing communities as lacking rather than capable (Mathie and Cunningham, 2003; Morgan and Ziglio, 2007; Foot and Hopkins, 2010; Woodward et al., 2021; Martin-Kerry et al., 2023), undermining empowerment and reinforcing exclusion (Rong et al., 2023; Melendez Guevara et al., 2024). These limitations highlight the need for a more bespoke framework.

This study proposes a socially and behaviourally grounded framework for inclusive engagement, drawing on Asset-Based Community Development (ABCD), Social Capital Theory, the Salutogenic

model, Empowerment Theory, the Capabilities Approach, Adaptive Management, and Community Cultural Wealth Theory. The framework repositions communities as co-creators of solutions. The novelty lies not in structure alone, but in how engagement is implemented: communities choose their entry point, leadership emerges from within, trust guides the process, and reflection ensures adaptability. This framework offers practical guidance for policymakers and local authorities to support bottom-up, equitable engagement. The paper first explores conceptualisations of community and engagement in flood resilience, critiques existing frameworks, and then introduces a new conceptual model.

## COMMUNITY AND COMMUNITY ENGAGEMENT

The concept of 'community' resists simple definition, extending beyond geography or social ties. Communities are dynamic systems shaped by internal relationships and external forces—economic, environmental, and institutional (Weil et al., 2012; Mittelmark et al., 2022). MacQueen et al. (2001) identify five dimensions: locus, shared experience, joint action, social ties, and diversity. Yet communities are not homogenous—they are stratified by class, culture, and power. While this diversity can enhance resilience, it can also create barriers to participation (Stanford Social Innovation Review, 2015). Effective engagement must begin with a context-specific understanding of local realities and capacities.

Community engagement is equally complex, broadly defined as participatory processes where communities influence decisions affecting them. The Scottish Community Development Centre describes it as "a working relationship between one or more public bodies and one or more community groups" to promote shared understanding and action (Scottish Flood Forum, 2019). This frames engagement as relational, grounded in trust, dialogue, and shared purpose. Moving beyond transactional approaches, it must attend to the interplay of context, relationships, and social structures (Rippon and South, 2017).

## COMMUNITY ENGAGEMENT FOR DEVELOPING FLOOD RESILIENT COMMUNITIES

Community engagement is a practical pathway to enhance flood resilience at the local level. Global frameworks—including the Sendai Framework, Paris Agreement, and SDGs (notably Goals 11 and 13)—emphasise community-led disaster risk reduction (UNDRR, 2015; Neerunjun, 2024). Yet, translating these principles into practice remains challenging. Despite being recognised as key stakeholders, communities are often marginalised in decision-making. Vague definitions of 'engagement' and 'partnership' contribute to tokenism and misaligned expectations (Mehring et al., 2018). While the Environment Agency (2021) promotes inclusive engagement, this is rarely sustained in practice (Geaves and Penning-Rowsell, 2015; Kujala et al., 2022; Davies et al., 2024; NDC Partnership, 2024; Henderson et al., 2025; Watkins and Collins, 2025).

A major barrier is the dominance of deficit-based models, which define communities by their perceived shortcomings—such as lack of awareness or organisation—rather than their assets. These models position authorities as 'fixers', reducing engagement to something done to communities, not with them (Morgan and Ziglio, 2007; Environment Agency, 2021). Even well-

meaning efforts can reinforce stigma, disempowerment, and inequality (Dinishak, 2016; Popay et al., 2021). While deficit approaches may serve short-term crisis response (Morgan, 2014; East Ayrshire Council, 2017), their use in long-term engagement is increasingly challenged (Shokane et al., 2020).

In contrast, asset-based approaches emphasise community strengths—skills, knowledge, networks, and creativity—as foundations for engagement (Cassetti et al., 2020; Razak et al., 2022; Cassetti et al., 2024). They support co-production by valuing relational and systemic dimensions of participation (Foot and Hopkins, 2010; Rippon and South, 2017). Drawing on ABCD (Kretzmann and McKnight, 1993), Social Capital Theory (Putnam, 1994), and Empowerment Theory (Zimmerman, 2000), this approach promotes local ownership and mobilisation. Kretzmann and McKnight's typology identifies assets across individuals, associations, institutions, ecology, economy, and culture. While infrastructure gaps present challenges (Sarah, 2023), early participatory work can surface and strengthen hidden assets (Cassetti et al., 2020; Russell, 2020). These are not rigid steps, but relational processes rooted in trust, identity, and community voice.

## ANALYSIS OF EXISTING COMMUNITY ENGAGEMENT FRAMEWORKS

This review systematically examined academic and grey literature, including institutional and policy reports. Search terms combined "framework" OR "model" OR "ladder" OR "spectrum" AND "community" OR "engagement" OR "public participation" OR "citizen participation" AND "flood resilience" OR "community resilience". A total of 2,362 sources were identified via Scopus, Web of Science, JSTOR, Google Scholar, institutional websites, and practitioner networks. Sources were screened for relevance, presence of a defined framework or model, and inclusion of theoretical or practical insight. General documents, those lacking a clear framework, or unrelated to participatory practice were excluded. This yielded 27 frameworks: 14 academic and 13 agency/practitioner. Frameworks were grouped by orientation: some structure engagement hierarchically (e.g. ladders and spectrums), others embed it within institutions, some prioritise community relationships, and others focus on local strengths. This produced four categories: Ladder/Continuum-Based, Institutional/Policy-Oriented, Community-Centred, and Asset-Based/Strength-Oriented. NVivo was used to code key themes and compare key themes. Table 1 summarises the findings.

**Ladder and spectrum-based frameworks**: These include Arnstein's Ladder (1969), Connor's New Ladder (1988), and the IAP2 Spectrum (2018), which offer shared language for power and participation (Legacy et al., 2023). However, they often assume linear progress and neglect trust, emotional readiness, or local assets. Arnstein has been critiqued for rigidity and cultural blindness (Collins and Ison, 2006), while the IAP2 Spectrum can reduce engagement to a procedural checklist. González's Spectrum of Engagement to Ownership (2019) adds relational depth but is resource-heavy and assumes community readiness. Likewise, the EPA Spectrum (2015) and Warburton et al.'s Policy Cycle (2009) align participation with governance but overlook emotional dynamics and exclusion. These frameworks often fail to ask who is included, who is excluded, and what supports meaningful participation—risks that are particularly acute in flood-affected communities, where informal practices and trust-building are essential.

**Institutional-oriented frameworks:** Democracy Cube (Fung, 2006), the Active Participation Framework (Gramberger, 2001), Multi-level Stakeholder Engagement (Thaler and Levin-Keitel, 2016), and the Community Disaster Resilience Framework (Vanderhorst et al., 2024) embed engagement within governance systems to improve coordination and procedural clarity. Democracy Cube offers design flexibility, while Gramberger promotes mutual learning. Vanderhorst et al. link resilience to systems and wellbeing. Yet these frameworks often assume institutional openness and civic rationality, overlooking emotional and behavioural barriers. They may privilege elite voices (Fung, 2006), subordinate community input to technical goals, or lack strategies for engaging excluded groups. The Environment Agency's DAD–EDD model reflects similar procedural logic—structured, time-bound, and with limited room for emotional recovery or long-term adaptation (Colbourne, 2008). Without grassroots legitimacy, such approaches risk reinforcing inequality (Thaler and Levin-Keitel, 2016).

**Community-centred frameworks:** Frameworks like Leighninger's Typology (2014), Dialogue to Change (Everyday Democracy, 2020), and the Active Community Engagement Continuum (Russell et al., 2008) prioritise trust, lived experience, and relational engagement. They promote equity, deliberation, and emotional safety. Leighninger advocates 'thick engagement' grounded in empathy, while Everyday Democracy focuses on justice. The 3C's model (Nyirenda et al., 2019), WHO's Framework (2020), and Ma et al.'s 'One Community at a Time' (2023) support co-production in low-trust settings. However, many rely on high facilitation, cohesion, or political will—often lacking in fragmented communities. Participation may remain consultative, with power imbalances persisting. The National Flood Forum's two-stage model shares this ethos but typically begins post-flood, depends on volunteers, and lacks mechanisms for sustained engagement (Geaves and Penning-Rowsell, 2015; NFF, 2018a; 2018b). While some, like O'Sullivan et al. (2012), incorporate emotional dynamics, structural change is often limited. These frameworks are strengthened when combined with asset-based approaches that support long-term capability (Cassetti et al., 2024).

**Asset-based/Strength-oriented frameworks:** This shift focus from community deficits to assets such as skills, relationships, cultural capital, and local knowledge. Frameworks like Asset-Based Community Development (Kretzmann and McKnight, 1993), the Community Capitals Framework (Flora and Flora, 2008), Community-Based Participatory Research (Minkler and Wallerstein, 2008), and Community-Partnered Participatory Research (Wells et al., 2013) promote agency, co-production, and capacity-building (Mathie and Cunningham, 2003; García, 2020). CBPR emphasises mutual accountability (Jagosh et al., 2015), while ABCD supports informal leadership and 'inside-out' development (Kretzmann, 2010; Bergdall, 2012). However, these models can assume cohesion and risk masking inequality or weakening state accountability if applied uncritically (Friedli, 2013; MacLeod and Emejulu, 2014). Related frameworks like the Three-Lens Approach (DFID-CSO Youth WG, 2010), Engagement Streams (NCDD, 2014), and UNITAID's people-centred model (2023) offer valuable tools but may overlook emotion, context, or implementation challenges. Though resource-intensive (Flicker et al., 2007), asset-based models—with equity safeguards—offer a strong foundation for inclusive, empowerment-oriented engagement (Cassetti et al., 2020; Russell, 2020).

**Table 1. Analysis of Community Engagement Frameworks**

| S/N | Framework | Strength | Weakness | Reference |
|---|---|---|---|---|
| **Ladder/Continuum-based** | | | | |
| **1** | Arnstein's Ladder of Citizen Participation | Highlights power dynamics | Hierarchical, context-blind, and lacks adaptability | Arnstein, 1969 |
| **2** | IAP2 Spectrum | Clarifies roles for participation | Linear; neglect emotional investment or shifting trust | IAP2, 2018 |
| **3** | EPA Spectrum of Public Involvement | Structured, adaptable engagement levels | Ignores emotional barriers (fear, apathy, or scepticism) | US. EPA, 2015 |
| **4** | Spectrum of Engagement to Ownership | Supports community control and empowerment | Resource-intensive, neglects participation anxiety and resistance | González, 2019 |
| **5** | Engagement in the Policy Cycle | Links engagement to governance | Lacks behavioural insight; assumes public readiness | Warburton et al., 2007 |
| **6** | New Ladder of Participation | Details a continuum of participation types. | Neglects informal behaviours/motivations | Connor, 1988 |
| **Institutional-Oriented** | | | | |
| **7** | Community Disaster Resilience Framework | Institutional collaboration and structural solutions | Overlooks grassroots and community-led resilience. | Vanderhorst et al., 2024 |
| **8** | Active Participation Framework | Emphasises institutional trust | Ignores individual behaviour | Gramberger, 2001 |
| **9** | Environment Agency's DAD–EDD | Emphasises collaboration | Procedural, time-bound; limited emotional recovery | Colbourne, 2008 |
| **10** | Multi-level stakeholder engagement framework | Captures dynamic power shifts and evolving roles across governance levels | Lacks operational detail for localised or marginalised community engagement. | Thaler and Levin-Keitel, 2016 |
| **11** | Community Engagement Framework | Inclusive and adaptable framework | Lacks behavioural depth | Western NSW PHN, 2020 |
| **12** | Democracy Cube | Designs participation mechanisms | Lacks emotional depth | Fung, 2006 |
| **Community-Centred** | | | | |
| **13** | Leighninger's Types of Engagement | Multichannel for different capacities | lacks behavioural activation strategy | Leighninger, 2014 |
| **14** | The 3 C's model of participatory community engagement | Encourages power-sharing and respect in low-resource settings | Top-down; difficult to apply in low-literacy, low-resource communities. | Nyirenda et al., 2019 |
| **15** | NFF 2-stage Engagement methodology | Builds trust and supports community-led action | Starts post-flood; volunteer-based and lacks sustainability. | NFF, 2018a; 2018b |
| **16** | Active Community Engagement Continuum | Promotes empowerment and long-term engagement | Assumes deep commitment; overlooks changing group dynamics | Russell et al., 2008 |
| **17** | Dialogue to Change Process | Equity-based dialogue, shared learning and action | Needs sustained facilitation and strong local leadership structures | Everyday Democracy, 2010 |
| **18** | Social Resilience Framework-URFlood | Integrates emotional worry | Overlooks deeper structural inequalities | O'Sullivan et al., 2012 |
| **19** | ''One Community at a Time'' | Localised and trust-based | Needs strong leadership | Ma *et al.* 2023 |
| **20** | The Comprehensive Community Engagement Framework | Offers culturally embedded health engagement | Lacks contextual sensitivity for complex and localised flood contexts | WHO, 2020 |
| **Asset-Based / Strength-Oriented** | | | | |
| **21** | ABCD | Bottom-up; Strengths and empowerment-focused | Assumes assets exist equally; overlooks social vulnerability. | Kretzmann and McKnight, 1993 |
| **22** | Engagement Streams Framework | Matches engagement to context and goals | Neglects emotional and behavioural dynamics | NCDD, 2014 |

| **23** | Community-Based Participatory Research (CBPR) | Equitable; focused on leveraging community strengths | Trust- and relationship-dependent, hard to sustain long-term. | Minkler and Wallerstein, 2008 |
|---|---|---|---|---|
| **24** | UNITAID's Community Engagement Framework | People-led grounded in existing structures. | Implementation challenges due to different contexts. | UNITAID, 2023 |
| **25** | Three-Lens Approach to Participation | Youth as assets | Overlooks age/culture power gaps | DFID-CSO Youth WG, 2010 |
| **26** | Community Capitals Framework | Holistic asset mapping | Hard to measure/operationalise | Flora and Flora, 2008 |
| **27** | Community-Partnered Participatory Research framework | Asset-based, adaptable, culturally aware, promotes co-leadership | Resource-heavy; needs sustained relationships and policy backing | Wells et al., 2013 |

## PROPOSED CONCEPTUAL FRAMEWORK FOR DEVELOPING INCLUSIVE COMMUNITY ENGAGEMENT IN FLOOD AFFECTED COMMUNITIES

Grounded in social and behavioural dimensions of risk, trust, and emotional response, this strengths-based, context-sensitive framework moves beyond top-down, deficit-led models by centring relationships, informal behaviours, and local leadership. Informed by ABCD (Kretzmann and McKnight, 1993), Social Capital Theory (Putnam, 1994), the Salutogenic model (Antonovsky, 1996), Empowerment Theory (Zimmerman, 2000), the Capabilities Approach (Sen, 2005), Adaptive Management (Holling, 1978), and Community Cultural Wealth Theory (Yosso, 2005), it builds on—but critically challenges—existing frameworks. Strengths include co-production, governance alignment, equity focus, and visual clarity, while addressing persistent gaps such as emotional readiness, behavioural nuance, exclusion, and inconsistent practice. Its distinctiveness lies in how engagement is delivered: communities define entry points; leadership emerges from within; trust drives the process; and external actors support only after local visions form. Reflection mechanisms enable learning and adaptability. Figure 1 illustrates the framework.

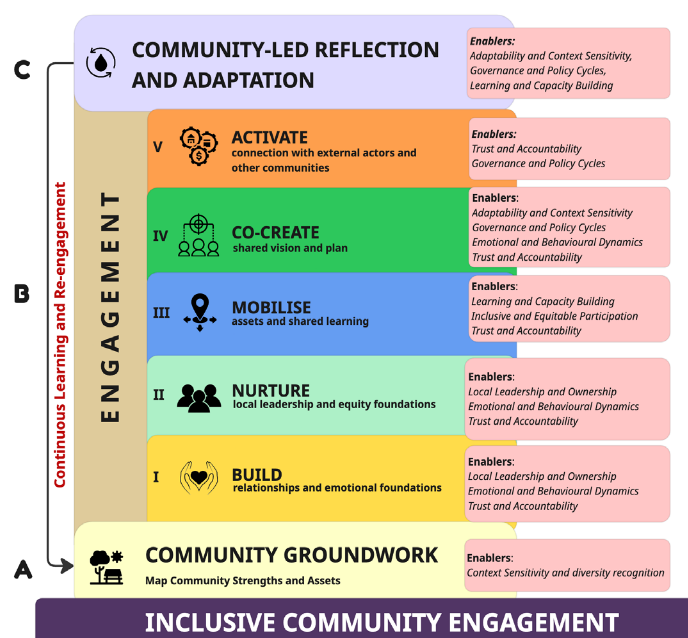


**Figure 1: Proposed conceptual framework for developing inclusive community engagement in flood-affected communities.**

Structured across three interlinked stages—Community Groundwork (A), Engagement (B), and Reflection (C)—this framework (see Figure 1) offers a strengths-based, adaptive pathway for inclusive practice in flood-affected communities. Each stage builds on the last, beginning with locally grounded insights, translating them into action, and sustaining learning through reflective adaptation. Rejecting one-size-fits-all approaches, it enables communities to define their own entry points, cultivate internal leadership, and co-create solutions with supportive external actors.

**A. Community Groundwork Phase:** The framework begins with a Community Groundwork phase—an often overlooked yet vital foundation for inclusive engagement. It recognises that meaningful participation starts with understanding the distinct social, cultural, and economic dynamics of flood-affected communities (Onwuemele, 2018; Johnston et al., 2024; Hohl et al., 2024; Issahaku et al., 2024). Unlike models that assume community readiness or cohesion (Flora and Flora, 2008; Minkler and Wallerstein, 2008; DFID-CSO Youth WG, 2010; Wells et al., 2013; UNITAID, 2023), this phase maps community assets—both tangible and intangible—including local knowledge of flood-prone areas, physical infrastructure, community gathering spaces, mutual aid networks, flood action groups, cultural practices of care, storytelling traditions, youth-led resilience efforts, and institutions such as schools, churches, and libraries (Kretzmann and McKnight, 1993; Flora and Flora, 2008; Gillian et al., 2020; Russell, 2020; Cassetti et al., 2024; Chuang et al., 2025).

Further, this phase also attends to varying emotional readiness and motivation, especially in areas without recent flood experience, avoiding assumptions of uniform urgency. This aligns with Kretzmann's (2010) emphasis on highlighting community success to build confidence and shift perceptions. Drawing on ABCD, Empowerment Theory (Zimmerman, 2000), the Capabilities Approach (Sen, 2005), and Community Cultural Wealth Theory (Yosso, 2005), this phase argues that building on existing strengths is more effective than imposing external solutions (Chuang et al., 2025). This phase affirms that no community is devoid of value (Kretzmann and McKnight, 1993), and that "what is strong" should be used to address "what is wrong" (Russell, 2020). However, asset mapping is not a one-off task; it must be dynamic, evolving with shifting risks and community transformations (Russell et al., 2020; Cassetti et al., 2024).

Yet, the framework does not romanticise assets. As evidenced in the analysed frameworks (O'Sullivan et al., 2012; Thaler and Levin-Keitel, 2016; Nyirenda et al., 2019; Everyday Democracy, 2020), even rich local inventories can fail if underlying inequalities are ignored. Asset-mapping may be skewed by class, gender, race, or social exclusion (MacLeod and Emejulu, 2014; Reddy and Barbalat, 2022). By adopting Hill et al.'s (2022) ABCD+E approach—starting with 'Assets' and ending with 'Empowerment'—this phase reframes mapping as a participatory, enabling practice through tools like community storytelling, visual asset mapping and Participatory GIS. This phase reframes engagement as co-creation, not extraction. External actors play a supportive role—"one leads best by stepping back" (Bergdall, 2012)—ensuring communities define what matters and how to act.

**B. Engagement Phase:** This phase translates Community Groundwork insights into action through five connected processes: *BUILD → NURTURE → MOBILISE → CO-CREATE → ACTIVATE*. Leveraging insights from diverse theoretical traditions and a critical review of the existing engagement frameworks, the framework offers a structured but flexible pathway to inclusive action. While communities may enter at different points depending on context, the sequence matters: trust must precede planning (Putnam, 1994; Chambers, 1997), and local leadership should anchor external engagement (Mathie and Cunningham, 2003; Cassetti et al., 2024; Ekundayo et al., 2025). Engagement is thus flexible in entry but deliberate in flow—cultivating internal strengths before connecting with external systems (Geaves and Penning-Rowsell, 2015).

**I. BUILD relationship and lay emotional foundation:** Effective engagement begins with relationships, not transactions. In flood-affected communities, where histories of exclusion and distrust persist, building trust and emotional connection is foundational (Geaves and Penning-Rowsell, 2015; Mckie and Aitken, 2025). This involves showing up, listening, and sustaining accountability over time. As Putnam (1994) notes, trust is the "lubricant of social life"; without it, engagement risks becoming hollow. Social capital—comprising structural ties, shared norms, and emotional reciprocity—sustains this trust (Tsounis and Xanthopoulou, 2024; van Bakel and Horak, 2024). Without trust, the entire engagement architecture can devolve into mere formality, as seen in some analysed frameworks (Gramberger, 2001; Wallerstein and Duran, 2010; Ma et al. 2023). Yet trust is neither immediate nor incidental. It emerges through consistent presence, emotional safety, and tangible follow-through (Chambers, 1997; Cloete and Veda, 2025). This framework therefore prioritises emotional connection and accountability, recognising that people engage more when their input yields visible outcomes and institutions respond genuinely (Jagosh et al., 2015; Liu et al., 2022).

Social Capital Theory affirms that networks of trust and reciprocity—rooted in associations and mutual aid—underpin collective action (Putnam, 1994; Tsounis and Xanthopoulou, 2024; van Bakel and Horak, 2024). As Chung et al. (2024) observe, trust deepens when individuals feel psychologically safe within familiar networks, highlighting the role of bonding social capital in fostering engagement. However, Social Capital Theory also cautions that bonding capital can become exclusionary if not complemented by bridging and linking ties, potentially reinforcing insularity or silencing dissent (Putnam, 1994). In this context, trust-building demands not just emotional presence but also consistency and reciprocity. As Chambers (1997) aptly notes, "you can't fake being part of the village."

Engagement is as emotional as it is rational. Flood-affected communities carry memories of trauma, exclusion, and failure, with emotions like hope, grief, fear, and distrust shaping how people engage and whether they engage at all (Bhavanani, 2020; Liu et al., 2022). Storytelling, mapping, and symbolic tools can surface these feelings and foster healing and psychological safety especially in communities facing repeated floods. Trust must also extend to include institutions. Fragmented governance and poor communication can erode this vertical trust—what Social Capital Theory refers to as "linking capital" (Harries and Penning-Rowsell, 2010;

Buchecker et al., 2013). Rebuilding it requires co-ownership, mutual accountability, and clear institutional commitments (Geaves and Penning-Rowsell, 2015; Mckie and Aitken, 2025).

**II. NURTURE local leadership and set equity foundations**: Beyond building trust, inclusive engagement depends on distributed, community-rooted leadership (Zimmerman, 2000; Mathie and Cunningham, 2003; Morales, 2023; Cassetti et al., 2024; Chuang et al., 2025; Cloete and Veda, 2025). Drawing on Hill et al. (2022), leadership is framed not by formal authority but by trust, cultural familiarity, and the ability to mobilise others. Informed by Empowerment Theory and the Capabilities Approach, this framework prioritises nurturing leaders from within—particularly among women, youth, and historically marginalised groups (Gillian et al., 2020; Chuang et al., 2025). Local ownership is not about "heroes"; it is not symbolic but substantive. Communities must not merely be invited to the table but be given the pen to shape agendas. As Mathie and Cunningham (2003) argue, the most effective leadership emerges from within, often through "everyday catalysts" who define priorities, nurture trust, and enable collective action. "There is no other choice," they affirm. This aligns with Community Cultural Wealth Theory and ABCD, affirming that leadership is not something granted—it already exists within the relational infrastructure of communities (Cloete and Veda, 2025).

Yet, genuine inclusion requires more than intent; It demands structural responsiveness: the removal of barriers such as inaccessible language, transport, childcare, financial limitations, or cultural and digital divides (Foot and Hopkins, 2010; WHO, 2020; Sakamoto, 2024; Tsounis and Xanthopoulou, 2024; van Bakel and Horak, 2024). It also calls for power redistribution, enabling historically excluded groups to shape decisions (Cassetti et al., 2024), thereby shifting engagement from a model of clients to collaborators (Morales, 2023). This also includes fostering bridging ties between diverse subgroups and linking ties with institutional actors, to prevent elite capture and ensure broad-based participation (Foot and Hopkins, 2010; Tsounis and Xanthopoulou, 2024). The framework treats leadership and inclusion as co-developed, not sequential, goals.

**III. MOBILISE assets and shared learning**: As trust and leadership deepen, communities can mobilise assets identified during the community groundwork phase, transforming mapped strengths into collective action (Cassetti et al., 2024). This extends beyond recognition to the active application of local skills, relationships, and cultural capital (Cassetti et al., 2020). community members might organise local flood response teams, establish flood action groups, repurpose schools or churches as resilience hubs, share indigenous coping strategies through peer-led workshops, or use storytelling and cultural rituals to strengthen awareness and solidarity. Central to this process is shared learning through peer mentoring, reflective practice, and co-learning spaces, enabling communities to build confidence, adapt, innovate and sustain the engagement process (Wallerstein and Duran, 2010; Appau et al., 2024). The Capabilities Approach frames this as expanding freedoms and opportunities (Sen, 2005). Learning must be reciprocal—institutions must learn from communities, not just train them—thereby affirming local knowledge and reversing extractive practices (Guarino et al., 2023; Sarjiyanto, 2024). Social capital again plays a key role: bonding ties offer emotional support, bridging ties foster

knowledge exchange, and linking ties open access to external resources—enhancing preparedness, recovery, and innovation (Fletcher et al., 2020; Vanderhorst et al., 2024).

**IV. CO-CREATE shared vision and plan**: With a foundation of trust, leadership, and mobilisation, communities are positioned to co-create plans grounded in their own values and priorities (Environment Agency, 2022; Morales, 2023; Ekundayo et al., 2025). Collective visioning fosters legitimacy and direction, particularly when paired with achievable early wins. This challenges traditional top-down frameworks, ensuring communities not only have a seat at the table but actively shape the table itself (Morales, 2023). 'Expanding the table' to include marginalised voices is essential to avoid replicating existing inequalities (Foot and Hopkins, 2010; WHO, 2020). However, some communities may prefer to defer engagement to experts due to past disappointments, perceived complexity, or fear of tokenism (Scottish Government, 2017; Attygalle, 2019). This framework responds by creating low-barrier entry points and demonstrating that community contributions—no matter how small—are valued and impactful. Planning must be inclusive, deliberative, and responsive, drawing on lived experience to inform not only preparedness and mitigation but also budgeting, policy, and institutional design (Mckie and Aitken, 2025).

**V. ACTIVATE connection with external actors and other communities:** This final stage repositions governance as a shared enterprise, not a starting point but an outcome of prior community-building. External actors engage only after local visions are established—aligning systems and resources with community-defined goals, rather than directing them (Sarjiyanto, 2024). This responds to critiques that ABCD underplays the state's role (Mathie and Cunningham, 2003), advancing instead a framework of relational governance built on mutual accountability, shared power, and institutional adaptability (Geaves and Penning-Rowsell, 2015; Raikes et al., 2023). Relational governance demands more than consultation; institutions must embed community insights into planning, budgeting, and regulatory cycles (Denning, 2023; Mckie and Aitken, 2025). Without this integration, engagement risks limited impact or scalability (Driessen et al., 2018). The framework advocates for policy co-ownership, ensuring local action plans inform official strategies, infrastructure, and spatial planning—crucial in flood contexts, where communities must not be left to rebuild alone (Kamarudin et al., 2022). Activation also extends horizontally, enabling communities to connect with one another, share practices, and build collective solidarity. At the same time, external support is mobilised—such as technical expertise, disaster recovery funds, legal protections, and long-term infrastructure investments that may be beyond local reach. Crucially, these resources must reinforce—rather than override—local leadership and ownership (Sarjiyanto, 2024). When done well, this institutionalises community knowledge, reduces consultation fatigue, and ensures community-driven insights and state capacity are mutually reinforcing.

Figure 2 maps the five engagement processes across the flood timeline. While all stages begin before a flood, Mobilise, Co-Create, and Activate extend into the *during* and *after* phases, reflecting their adaptive roles in real-time response and long-term recovery.

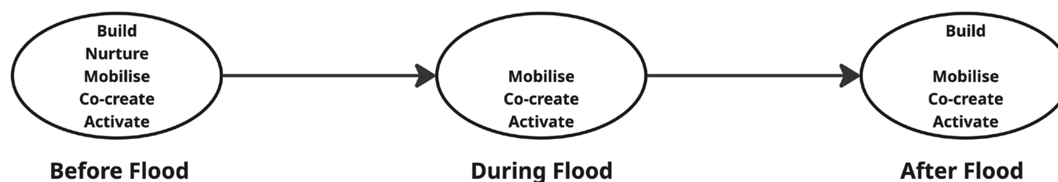


**Figure 2: Timeline of Engagement Phases**

**C. Community-Led Reflection and Adaptation Phase**: Grounded in adaptive management (Holling, 1978) and Antonovsky's (1996) 'sense of coherence', this phase positions reflection as essential to sustaining engagement. It involves ongoing learning, capacity building, and adaptation, enabling communities and institutions to revisit what has worked, identify emerging challenges, and respond to evolving risks, infrastructure changes, or social dynamics (Pitt, 2008; Appau et al., 2024; Cloete and Veda, 2025). Reflection must be a community-led, iterative practice—integrated into the process rather than treated as a final step. This phase offers a platform for co-learning, mutual accountability, and skill development, but sustaining it demands funding, long-term commitment, and responsive institutional support that integrates community insights into policy and planning (Sarjiyanto, 2024; Vanderhorst et al., 2024; Mckie and Aitken, 2025). By closing the loop back to Community Groundwork, this phase ensures that new knowledge informs future asset mapping and relationship-building, anchoring engagement as a sustained, adaptive, and regenerative process.

## CONCLUSION

This study proposes a forward-looking framework for community engagement in flood-affected areas, designed to address long-standing gaps in existing frameworks such as tokenism, emotional detachment, and top-down processes. While the framework includes a groundwork phase to assess relationships, emotional readiness, and local assets, its key innovation lies in how engagement unfolds: communities enter where it makes most sense for them; leadership emerges from within; trust shapes progress; and reflection mechanisms support continuous learning and adaptation. External actors support—but do not steer—the process, entering only after communities have defined their own vision. Structured across three interconnected phases—Community Groundwork, Engagement, and Community-led Reflection and Adaptation—the framework reframes engagement as a sustained, relational, and iterative process. Grounded in social and behavioural theory, this framework offers a practical blueprint for inclusive, adaptive engagement. Future research will validate the framework across diverse communities.

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