

# Readiness assessment in flood risk management and climate adaptation: A mechanism for social innovation?

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## Funding information

Environment Agency, Grant/Award Number: FRS17192; Natural Resources Wales, Grant/Award Number: FRS17192; Defra, Grant/Award Number: FRS17192; Welsh Government, Grant/Award Number: FRS17192

## Abstract

This paper discusses the development and initial trials of a readiness assessment methodology intended to support more informed, ethical and effective processes of project development and stakeholder engagement within an evolving and increasingly challenging context of Flood and Coastal Erosion Risk Management (FCERM) in England and Wales. In particular, it considers how and to what extent this approach to readiness assessment can be considered an example of social innovation. Drawing on scholarship about social innovation, the paper also considers challenges within the design and implementation of readiness assessment processes. In turn, this supports an exploration of obstacles to and limitations of social innovation, particularly in the context of far-reaching social-ecological change.

## KEYWORDS

climate adaptation, coastal erosion, community engagement, flooding, readiness assessment, social innovation, social-ecological systems, stakeholder engagement

## 1 | INTRODUCTION

This paper discusses the development and initial trials of a readiness assessment methodology intended to support more informed, ethical and effective processes of project development and stakeholder engagement within an evolving and increasingly challenging context of Flood and Coastal Erosion Risk Management (FCERM) in England and Wales. The aim of the paper is to critically assess this work in relation to the concept and discourse of social innovation. The practices described in the paper have many qualities and characteristics associated with social innovation: The readiness assessment methodology was developed in response to an identified social need, provided new ways of working for FCERM professionals, and has generated useful learning and enhanced capacity

within specific contexts for further innovation. The collaborative nature of the work also resonates with and indeed makes possible social innovation. At the same time, the complex nature of social-ecological challenges surrounding FCERM present limits to social innovation, leading to questions both about the concept itself and about this work on 'readiness assessment'.

As brief context, the readiness assessment methodology described below first developed as part of a package of work commissioned by Defra and the Environment Agency (EA) in England and the Welsh Government and Natural Resources Wales (NRW).<sup>1</sup> It aimed at enhancing the EA's/NRW's approach to community and stakeholder engagement in places that are facing emerging and novel adaptation challenges against the backdrop of accelerating climate change. An initial evidence review (Kelly &

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Kelly, 2019) suggested that many stakeholders lacked the knowledge and capacities needed for constructive engagement in planning and decision-making; they are not ready to engage around difficult adaptation choice. Subsequent work to develop practical tools for readiness assessment and enhancement appropriate to the context of flood and coastal erosion risk management in the context of England and Wales drew on and adapted existing work on coastal adaptation from the United States (Rumore, 2015; Susskind et al., 2015) as well as insights from the wider theoretical and practitioner literature on climate adaptation (reviewed in Kelly & Kelly, 2019). These tools intended to support communities and professionals in developing insights into their own 'readiness' for participation in discussion and decision-making around climate adaptation and were co-created and piloted with the involvement of FCERM professionals and other local and regional stakeholders.

The aim of this paper is to consider the nature and contributions of this work through the lens of social innovation. The first section provides a brief introduction to the concept of social innovation, highlighting its core elements and characteristics. We then introduce areas of debate about social innovation, with particular relevance for flood risk management. A longer description of the readiness assessment work follows, highlighting the problems it was a response to, the ways in which it might be considered an example of social innovation, and the ways in which it might prepare stakeholders in flood and coastal erosion risk management to engage in social innovation. The final section connects back to critical questions raised in scholarship on social innovation, particularly in the context of social-ecological change.<sup>2</sup>

## 2 | SOCIAL INNOVATION AND SOCIAL-ECOLOGICAL CHANGE

The concept of social innovation has found purchase among those interested in responses to linked social-environmental challenges (van der Have & Rubalcaba, 2016; van Wijk et al., 2018). The logic here is that the 'wicked problems' of the 21st century – climate change, biodiversity loss and energy transitions in particular – require more than technological solutions. As Adger et al. (2008) have argued, there may be a range of 'limits to adaptation', including not only material and technological limits but also cultural-subjective elements. The latter include social-cultural attitudes, knowledge (or not) about climate change, emotions associated with attachment to place and awareness of vulnerability/loss, diverse political and value-based perspectives, and capacity for informed problem-solving. The extent to which a

community or institution is ready and able to make decisions around complex and uncertain risks is, to a significant extent, linked to these social and psychological factors.

With an issue like flooding, for example, there will be a role for engineering and digital technology in monitoring and managing flood risk. But this work has other, social dimensions as well: new models of governance or collaboration, changes to social attitudes, or improved social resilience. Where 'innovation' has traditionally been associated with the development of new technology or business practices (van Wijk et al., 2018), social innovations are 'new solutions ... that simultaneously meet a social need and lead to new or improved capabilities and relationships and better use of assets and resources. In other words, social innovations are good for society and enhance society's capacity to act' (The Young Foundation, 2012, p. 18).

At its core, then, the idea of social innovation is relatively straightforward – a novel response to a social need that produces tangible benefits, makes effective use of available resources and enhances the agency of those involved. In addition, the literature suggests that successful social innovations commonly share a set of characteristics associated with process and values. The Young Foundation (2012), for example, describes a participatory, collaborative and bottom-up ethos, involving a wide range of stakeholders across sectors and at multiple scales. This in turn leads to new roles and relationships.

Arguably, social innovation is particularly attractive in the context of social-ecological challenges because it often orients towards smaller scale, grassroots initiatives (e.g. citizen energy projects, solidarity economies) and can therefore be associated with a politics of localisation and local empowerment that presents itself as an alternative to the systems that might be held responsible for the current ecological crisis (Krüger & Pellicer-Sifres, 2020). Similarly, Krüger and Pellicer-Sifres suggest that the practice orientation of social innovation – and, we would add, the positive associations of 'innovation' – make it attractive in funding and policy discourses.

While the above sounds relatively straightforward and positive, scholarship on social innovation also includes more critical voices, some of which are relevant to this paper. Despite the notional relevance of innovation discourse in relation to contemporary social-ecological challenges, a focus on innovation – social or otherwise – is not unproblematic. As Pansera and Fresoli (2020) suggest, the concept of innovation has strong normative associations with industrial modernity, and thus with the culture and systems that are largely responsible for the current environmental crisis. Innovation has come to be seen as the primary mechanism for economic

growth and development in modern societies. It is also central to the discourse of ecological modernisation, which suggests that innovation can support the decoupling of economic production from natural resource and environmental limitations, enabling solutions to social development challenges without fundamentally damaging the biosphere (Dryzek, 2013; Kelly, 2021). It can be argued that ‘innovation mania’ (Pansera & Fressoli, 2020, p. 3) suits a status quo that has become highly problematic. There are questions to be asked, then, about whether social innovation is reformist or radical in orientation – whether the parameters of (acceptable) innovation are largely set by current economic and political realities, or whether social innovation is a means for challenging and rethinking them.

In a similar vein, Krüger and Pellicer-Sifres (2020, p. 116) argue that the concept of social innovation has a ‘harmonious bias’: ‘What worries us it not that “nobody is quite sure of what [social innovation] means”; the real issue is rather that it “is a term that almost everybody likes,” but one that doesn’t challenge anything or anyone’. Their particular concern is that conflict and power are underexposed. Innovation seems like a good in itself, implying a consensus on social problems and their solutions that may not exist. Other authors have taken up similar questions. Avelino et al. (2019, p. 196), for example, claim that proponents of social innovation ‘underestimate the complexity’ of societal challenges, which are ‘interlinked and systemic in terms of their reach and persistence’. To them, the change that is needed is systemic and deep, addressing the underlying causes of contemporary challenges; the scope of social innovation needs to be matched to the problem.

A further set of questions is concerned with the extent to which contemporary societies foster and/or recognise capacities for agency among a range of social groups, including among those who have been marginalised and/or framed more as passive recipients of services rather than as active contributors (Moulaert et al., 2005; Westley, 2008). As Westley (2008) points out, the capacity to engage in social innovation relies on a complex set of cultural, social, political and resource mobilisation skills that need conscious attention and development among a wider population if the promises of social innovation (including its potential to enhance social-ecological resilience) are to be realised. Arguably, then, it is important to attend not only to instances where social innovation is happening, but also to those contexts in which it appears to be lacking – and to ask why this might be.

We return to some of these themes and questions later in the paper, when considering the nature and scope of social innovation in our work on ‘readiness assessment’.

### 3 | READINESS ASSESSMENT IN FLOOD AND COASTAL EROSION RISK MANAGEMENT: BACKGROUND

Initially, our work on readiness assessment was part of a project commissioned jointly by Defra, the Environment Agency, the Welsh Government and Natural Resources Wales and designed to explore the challenges and possibilities of ‘Working together to adapt to a changing climate’, with a particular focus on flooding and coastal erosion. In what follows, we first clarify the needs that a readiness assessment methodology tried to address in this context and explain how it attempted to do so. Subsequent sections assess this work against the core elements and characteristics of social innovation presented above and revisit critical questions around the strengths and limitations of social innovation discourses.

#### 3.1 | What social need was the project responding to?

The ‘Working together’ project aimed ‘to produce new learning about, and enhanced guidance for, community engagement practice in situations where engagement might be particularly challenging’ (Kelly & Kelly, 2019, p. iv). The focus was on situations where traditional responses – such as building hard defences to protect communities from flooding or to manage coastal erosion – may no longer be feasible or appropriate. The project was framed by an awareness that there is likely to be an increase in the number of areas facing ‘difficult adaptation choices’ (Kelly & Kelly, 2019, p. iv).<sup>3</sup> Against this background, the Environment Agency/Natural Resources Wales wanted to explore ways of working that might help professionals and affected stakeholders to grapple with difficult questions around the meanings, possibilities and limitations of ‘adaptation’, and to do so in a mode not of ‘deciding, announcing and defending’ (EA, 2016) but of ‘working together’.

The first phase of the project involved developing a better understanding of the social needs associated with climate adaptation and engagement work in these evolving contexts. This initially took the shape of an evidence review (Kelly & Kelly, 2019) that considered (a) what the EA/NRW already knew about FCERM engagement practice, and (b) what a wider body of theory and practice suggested about climate change adaptation and its implications for engagement and decision-making. Using a systematic rapid review method, we reviewed over 60 EA/NRW reports and 250+ academic papers. The review highlighted a range of emerging or evolving

challenges, with particular attention to research on place attachment, the mental health implications of far-reaching and unchosen environmental change, and issues of power and politics surrounding FCERM work and climate change itself.

The current paper focuses on a specific challenge highlighted in the report: ‘readiness’, understood as the extent to which stakeholders have the motivation and capacity to ‘participate constructively in the advanced and difficult stages of planning and decision-making processes, especially those related to more long-term adaptation choices associated with climate change’ (Kelly & Kelly, 2019, p. iv). To summarise briefly, the research considered in the evidence review suggested that most people do not yet know enough about climate change and its implications, or about options for adaptation or response, even in situations where there is direct experience of flooding or coastal erosion. Public expectations tend to be of continuity and state protection from risk. This presents an obvious barrier to constructive conversations about climate adaptation, especially in relation to more ‘radical’ options like managed retreat. At the same time, opening up discussion about risky and uncertain futures is not straightforward. Flood and coastal risks – and the options for adapting to these – are often complex and difficult to explain and understand. There can be strong emotions associated with anticipated or actual threats to cherished places, with unwelcome change, or with decisions that involve difficult trade-offs (Bushell et al., 2017; Hayes et al., 2018; Moser, 2013). Moreover, the work of FCERM engagement and decision-making can be complicated by past histories of engagement, by power dynamics between agencies and communities, by the framing of risks and choices (Mehring et al., 2021), and by the absence of clear, consistent national policy and discourse on climate change.

In short, the evidence review identified two specific social needs in FCERM work: First, it is important for FCERM professionals and engagement facilitators to understand the extent to which stakeholders have the knowledge, skills and motivation to engage in informed and constructive planning and decision-making associated with climate adaptation. The assumption here is that if engagement is designed without an understanding of levels of readiness, it is less likely to succeed. Second, there is a need to address low or inconsistent readiness where it is identified – that is to enhance knowledge or capacity, including among FCERM professionals themselves.

### 3.2 | What was the response or solution?

The evidence review established a case for readiness assessment but provided little practical advice about how

to do this. The next phase of the ‘Working together’ project created an opportunity to develop and test methods for assessing readiness. An action research phase began, involving close collaboration with groups of stakeholders in two locations in England – Hemsby, a coastal town in Norfolk that is being affected by coastal erosion and storm surges, and Caterham and Old Coulsdon, a semi-urban setting in Surrey that has experienced a number of flooding events that have severely affected some residents. The question of how to understand, assess and enhance readiness resonated among the multi-stakeholder groups we were working with: In both locations, there was a sense that the wider communities of local residents and other stakeholders were not necessarily ready to engage in the difficult conversations that were needed.<sup>4</sup>

In response to this need, we designed and piloted a methodology for readiness assessment (Kelly & Kelly, 2023b, 2023c). In essence, this involved developing a process and set of tools for data collection and analysis to generate a picture of readiness.

The first step was to clarify what ‘readiness’ might mean. Based on the evidence review, and in consultation with project members, we defined six dimensions of readiness and the kinds of questions an assessment might seek to answer in relation to each (replicated here from Kelly & Kelly, 2023c, pp. 10/11):

- **Knowledge and understanding of risks and vulnerabilities:** What do stakeholders know about climate change and how this might interact with flood/coastal erosion risks? How much do they already know about possible options for adaptation and risk management? How well do practitioners and stakeholders know this place, including any features of the local environment and/or culture that have a bearing on options for climate adaptation?
- **Climate sensitivity:** To what extent do existing policies, processes, initiatives and personal behaviours/decisions already take account of climate change projections? Do stakeholders actively pursue climate sensitive policies and decisions?
- **Attitudes and emotions:** What level of concern do stakeholders have about climate change and how this might affect their community/area? How strongly do people feel about where they live and the prospect of unwanted change? What emotions – potentially including anxiety, anger, grief and care – are likely to affect their willingness and/or capacity to be involved in climate adaptation planning? Do authority staff understand their own relevant emotions, and do they feel confident in handling emotions?
- **Sense of agency:** Do practitioners and stakeholders feel empowered to make changes that would help in



the management of risks, and/or to make a difference to policies or decision-making processes? To what extent are resources – people, expertise, funding – available to support climate adaptation efforts?

- **Conflict and disagreements:** What disagreements, divisions and/or conflicts exist in this place? What is the nature of these conflicts? How might they affect capacities for climate adaptation? How prepared are people to engage constructively with conflict?
- **Collaboration and trust:** To what extent are practitioners and stakeholders able to collaborate effectively with others who have relevant expertise and/or who have a high stake in what happens regarding climate adaptation in this place? Is there enough trust to allow for effective collaboration?

The project recognised that readiness could be assessed at different levels – for individuals, within particular groups or organisations, and for a wider community. The assessment of readiness also requires some means for distinguishing, for each dimension, the degree of readiness. Drawing on readiness assessment models used in other contexts (Rumore, 2015), we developed a scoring rubric with defined criteria against a 5-point range from ‘no readiness’ to ‘advanced readiness’ (see Kelly & Kelly, 2023c).

The next step was to develop methods for gathering and processing data – from individuals, groups or communities (Kelly & Kelly, 2023c). The approach used for this varied in different projects:

In the ‘Working together’ project, we piloted a community-level readiness assessment in Hemsby, so needed appropriate tools for gathering and analysing information on a large scale. The steering group decided on and helped to develop a community-wide survey that had both qualitative and quantitative elements (Bovey et al., 2023), plus a protocol for a series of one-to-one semi-structured interviews to gather more in-depth perspectives from key organisational and community stakeholders who were working within or engaging with the FCERM system. The intention throughout was to develop an approach that could be replicated elsewhere and conducted by people without research experience. This was reflected in the approach and guidance for analysing the data, using tools within an electronic survey platform together with the scoring rubric mentioned above. The project also generated guidance for facilitators on how to use readiness assessment findings to support conversations and learning among stakeholders (EA, 2023a). A detailed discussion of the methodology and the learning it generated can be found in the project reports (Kelly & Kelly, 2023a, 2023b, 2023c).

This readiness assessment tool was then adapted for use in two further Environment Agency programmes – the Flood and Coastal Resilience Innovation (FCRI) Programme (25 funded projects across England) and the Adaptation Pathways Programme.<sup>5</sup> The FCRI version focused on readiness within the context of funded partnerships and was partly informed by some related EA commissioned work on effective FCERM governance (Priest et al., 2021). This version involved a modified set of readiness dimensions to encourage reflection within partnerships on the maturity of their governance structures, the strength of partnership and external stakeholder relationships, the maturity of project proposals, and their plans for engagement within and beyond the partnership. Again, we developed a methodology for data gathering and analysis, and for facilitating conversations on readiness among relevant stakeholders. This involved a preliminary survey, an approach to generate initial assessments of readiness based on this, and guidance for two structured and facilitated workshops to share and discuss findings within each partnership. A team of stakeholder engagement consultants (under the Environment Agency’s SEAFS contracts) were employed to support completion of the readiness assessment with each partnership. The project was independently evaluated (RPA, 2022).

It is worth noting that readiness assessment was only part of the work carried out in each project. In all of these projects, readiness assessment was followed by attempts to enhance readiness. This took different forms: In Caterham and Old Coulsdon, the insights we had gathered via one-to-one interviews fed into the design of a role-play simulation (also see Susskind & Rumore, 2015; Susskind & Schenk, 2015) that was aimed at stimulating engagement from a wider audience in grappling with different options and trade-offs for flood risk management in an urban setting (Kelly & Kelly, 2023d). In Hemsby, we developed a scenario planning exercise that explored potential future pathways and their implications for wider community engagement (Kelly & Saunders, 2023). In the FCRI and Adaptation Pathways programmes, findings from the readiness assessment surveys were brought back to workshops to encourage further exploration and action planning.

#### 4 | READINESS ASSESSMENT AS/FOR SOCIAL INNOVATION

Earlier in this paper, social innovation was summarised as involving a ‘novel response to a social need that produces tangible benefits’. The development of a set of tools for readiness assessment and enhancement was a

response to an identified social need related to the management of flood and coastal erosion risk (a lack of knowledge and capacity that would support constructive conversation and decision-making around adaptation challenges).

We suggest that this links to social innovation in three main ways:

First, the approach to the development and testing of readiness assessment reflected many *characteristics of social innovation processes*, as discussed above. The ‘Working together’ project put a strong emphasis on collaboration and shared learning, creating structures within which grassroots/community actors would work alongside FCERM professionals, researchers and engagement specialists. There were elements of co-creation, with clear examples where local knowledge complemented and sometimes challenged formal expertise (e.g. in the formulation of survey and interview questions). Evaluations of the ‘Working together’ project (Kelly & Kelly, 2023a) suggested that the process had helped to build relationships and therefore local capacity for future collaboration. In short, collaboration enhanced the possibility of appropriate and innovative responses to local needs.

Second, the development and trial of an approach to readiness assessment that was tailored to the specific context of FCERM in England and Wales against the backdrop of climate change can be viewed as a *social innovation ‘product’*. While the idea of ‘readiness’ in itself was not new, and while our approach built on earlier work on coastal adaptation in the United States (Rumore, 2015), it was an approach that was experienced as ‘new to the territory’ (The Young Foundation, 2012, p. 9) that we were working in. Feedback from stakeholders who participated in this process confirms that readiness assessment challenged assumptions and ways of doing things that might not otherwise have been opened up to reflection. Evaluation of readiness assessment in the 25 projects that took part in readiness assessment via the FCRI programme, for example, suggests that 91% of respondents found readiness assessment helpful (EA, 2023b). A respondent who described themselves as ‘initially sceptical’ commented that ‘this process has changed our mindset about how we’re working with the community’ (EA, 2023b). In this sense, readiness assessment presented an interruption to business as usual that initially felt countercultural.<sup>6</sup>

Third, we suggest that this process is also a helpful way of *assessing and enhancing readiness for social innovation*. As noted above, successful social innovation commonly involves participation, collaboration and the claiming of agency for change. In contexts that present unprecedented and unsettling challenges, the capacity,

knowledge, confidence and motivation needed to engage in finding and implementing novel responses cannot be assumed. We found this to be true both for local stakeholders who are having to find ways of adapting to potentially far-reaching climate change trajectories and for organisations and professionals involved in this work. Readiness assessment, we found, can help to open up more explicit consideration of obstacles to social innovation, and of interventions that might be helpful in addressing such obstacles. For example, we heard professionals who are trying to respond to difficult adaptation challenges in coastal contexts reflect on how difficult it can be to be honest with local stakeholders about future scenarios that raise profound questions about current expectations of protection. In Hemsby, readiness assessment and the scenario planning exercise that followed challenged those who were already engaged in thinking through difficult adaptation choices to interrogate their own assumptions about future trajectories, and to consider whether new approaches to adaptation might be needed.

In what follows below, we expand on the ways in which readiness assessment in FCERM both constitutes a social innovation and helps to prepare the ground for social innovation.

#### 4.1 | Readiness assessment encourages early, critical learning in the FCERM system

Creating a methodology for assessing readiness was an attempt to encourage stakeholders across the FCERM system to develop an intentional approach to learning early in the process of project development. The relevant context is one in which planning and decision-making are complex and contested, with limited options and resources. Despite this, processes for community engagement often proceed on substantive matters (e.g. decisions about protection) without a full picture of what people know or understand – and crucially, why certain attitudes or perspectives might be common or influential. Readiness assessment can be considered a deeper form of situational and stakeholder analysis, going beyond a mapping of what perspectives and positions exist in a context, and into analysis of what these represent and might imply for engagement planning.

In important ways, the idea of assessing and enhancing readiness represents a deliberate slowing down, creating opportunities to pause, reflect and test assumptions at a critical and early stage of work. This can feel countercultural in organisations that are highly outcome-driven and delivery-focused, for understandable reasons:

Affected residents and other local stakeholders understandably often have a sense of urgency, particularly when they are facing imminent flood or coastal erosion risks in addition to the need to plan for likely climate change trajectories. Indeed, within the ‘Working together’ project it was sometimes challenging to resist pressure to deliver tangible changes for the project stakeholders and instead assert the value of pausing and learning before attempting difficult work.

Similarly, the subsequent pilots of readiness assessment on the FCRI and AP programmes faced some initial resistance from partnerships that were keen to progress quickly towards delivery (RPA, 2022). However, the independent evaluation of the readiness assessment process and outcomes within the FCRI programme (RPA, 2022) suggested that the requirement within the funding process for early structured conversations about governance systems, partnership/stakeholder relationships or the maturity of project proposals was beneficial in most cases. It allowed issues and concerns to be brought to the surface, creating opportunities to anticipate and address problems before substantive work was carried out.

Both the ‘Working together’ project and the trial of readiness assessment within the FCRI programme found that the process can open up possibilities that may otherwise be missed. For example, the community survey in Hemsby suggested that there is a wider range of perspectives and motivations within the community than had been visible to some of the actors who were already highly involved in the discussion of coastal erosion risks and their management. Assumptions that only those most affected by coastal change would want to engage with adaptation planning proved to be incorrect, creating openings for wider involvement.

Our readiness assessment went beyond common approaches to stakeholder analysis and engagement planning in another way too: Importantly, it included the readiness of FCERM and engagement professionals themselves as something to be assessed and reflected on rather than taken as given. Including them – and ourselves as researcher and facilitators – in this process encourages moves away from the ‘us and them’ framings that can shape interactions between risk management authorities and local communities (neither of which, of course, are actually homogeneous groups). Focusing on learning and capacity-building for all involved can also lessen the pressure to perform expertise or defend existing approaches. Under the right conditions, the benefit of readiness assessment does not lie only – or perhaps even primarily – in the data it generates, but in the self-reflection it stimulates at individual and group levels. As a member of one of our working groups put it, it is a chance to test ‘how honest we can be with each other’.

Overall, and given the real pressures and constraints that affect all stakeholders within the FCERM system, we found that making time for readiness assessment is worthwhile but needs appropriate resourcing, support and framing. Readiness assessment, when done well, certainly can open up ‘new ways of doing, organising, framing and knowing’ (Franz & Howaldt, 2012) – or alternatively, it might validate or remind people of older ways that have worked well.

## 4.2 | The explicit attention to emotions and conflict potential

The readiness assessment tools we designed acknowledged the role of emotions in engaging with climate change, not only for residents facing the impacts of a changing climate but also for professionals working in this field. They also explicitly named the possibility of conflicts and disagreements. In doing so, they opened up space for discussions that are often avoided but which, we would argue, are needed to build collective capacity to engage with a set of questions that are genuinely unsettling.

In both the ‘Working together’ and the FCRI programmes, there was a strong sense across different stakeholders in the FCERM system that the presence of independent researchers and facilitators was helpful in supporting this work (Kelly & Kelly, 2023a; RPA, 2022). This was evident in the process of interviewing (where participants valued the chance to reflect on their experience with someone outside of their immediate context), in the ability to voice disagreements anonymously via surveys, and in meetings and workshops in which facilitators were able to put actual or potential conflicts on the agenda for discussion.

It is important to note, however, that the presence of existing conflicts, disagreements and/or strong emotions also made it more difficult for some people to engage in these processes. For people already involved in live conflicts or those who are living with the emotional strain caused by past experiences or the anticipation of future incidents of flooding or coastal erosion, the invitation to step back and consider multiple perspectives and possibilities can feel like a distraction or an unwelcome delay in tackling immediate problems. At the other end of the spectrum, meanwhile, low emotional investment in places that will be particularly affected by a changing climate, a lack of relevant lived experience or a tendency to shy away from conflict and disagreement also mitigate against participation in attempts to assess or build readiness.

There is, then, a paradox: While arguably the task of building readiness is most important at the far ends of a

spectrum of emotional investment and involvement in conflict, it is perhaps most likely to attract those in the middle. Might this also be true of social innovation more generally?

### 4.3 | The encouragement of a more systemic, integrative view of issues

In the 'Working together' project especially, the design of the readiness assessment created space for local stakeholders to consider issues that were not directly connected to flooding or coastal erosion risks. This was partly a reflection of a concern with place and place attachment: we were interested in learning how people talked about their relationship to their place and community. But it also reflected learning from social-ecological resilience research that a holistic, systemic view of issues is important for effective planning and decision-making (de Kraker, 2017). For example, if affordable local housing or economic development are top priorities for a community, this might have implications for decisions about the relocation of properties most at risk. There might be competing interests within the community with regard to the future use of available development land, or there might be opportunities to develop lower-cost housing as part of a package of actions that includes targeted relocation. The point here is that if one only asks stakeholders directly about flood risk/coastal erosion issues, or if one works primarily with those most affected or actively involved with flooding and coastal erosion, the wider interests and concerns of the whole community may not be sufficiently present, even if they have a bearing on the options and possibilities for future adaptation. As such, opportunities for more integrative solutions to various social-environmental issues could be missed, as might actual or potential conflicts and tensions that later complicate decision-making.

## 5 | DISCUSSION

As we have noted, the projects discussed above were not approached with an explicit focus on 'social innovation', but they were framed by an intention to trial new methods and ways of working in response to emerging, novel social problems connected with the shared management of flooding and coastal erosion risk. The innovations were social in nature, both in the process through which they were developed and in their orientation.

These social innovations were enabled by a number of factors: the investment by the Environment Agency in

projects that had some scope and permission for experimentation; individual leadership within the agency that made the case for investment, especially in the social dimensions of FCERM work (including but not limited to community engagement); participation by local and regional stakeholders in pilot work; the involvement of skilled independent facilitators (from Icarus) who helped coordinate the projects and engagement work within them. We would also add that our academic background in peace and conflict studies brought different and complementary expertise to the projects. The greater attention to issues of conflict, power and emotions in the readiness assessment methodology was a reflection of this.

The projects described above all generated useful learning but were limited in their innovation and impact in various ways. Some of these limitations reflect fairly prosaic realities – these were time-limited projects with defined allocations of resources. Our project reports provide a fuller assessment of learning and impact than can be offered here (Kelly & Kelly, 2023a). Our interest in this final section is to return briefly to the critical literature on social innovation and consider the work on readiness assessment in the light of key points introduced earlier, particularly on the reformist versus transformative orientation of social innovation in relation to social-ecological issues.

The 'Working together' project reflected an awareness of very challenging and complex societal issues – how to support vulnerable communities in considering and responding to unwelcome change. The readiness assessment and enhancement tools we developed contained potential for supporting challenging conversations about these issues, through first building better awareness and capacity for engagement. We would argue, however, that this potential is difficult to realise in practice and thus, the level of 'innovation' in the project does/did not match the severity or urgency of the social challenges. The relative absence of a clear and honest national discourse on climate change and its implications for flood and coastal erosion risks remains a major obstacle for meaningful social innovation at local/regional levels. The lack of consensus on the nature and level of risks and the fact that clear and appropriate policy and funding frameworks to support adaptation planning are still in their early stages make honest conversation and engagement challenging. Going further, even where there is acceptance of risks and of a need for adaptation, there is still an assumption that state resources will continue to be available, and that politics will be stable enough to direct resources to issues like FCERM. In other words, there is not yet sufficient space to discuss more radical scenarios, which means that planning for the



future – materialised through definitions and policies of adaptation and resilience – is still largely rooted in present-day politics and assumptions.

This resonates somewhat with the ‘three-cycle model’ presented by van Wijk et al. (2018), which usefully explores the relationship between micro, meso and macro levels in social innovation. This allows recognition of how contextual factors – including dynamics of power within and across social institutions – shape the possibility and nature of social innovation. As they put it, ‘social innovators are central but so are the social orders that influence and pattern their action’ (2018, p. 889). In our work, it was clear that individuals could be influential in mobilising resources for the purpose of innovation, in creating networks and relationships that supported experimentation, in supporting ongoing reflection and engagement with emerging research and practice. Yet all this activity involved various forms of ongoing and complex negotiation ‘up’ (with the Environment Agency and its partners/sponsors), ‘down’ (with communities and their representatives) and ‘across’ (with local and regional stakeholders). The value of readiness assessment in important respects lies in bringing the issues that require negotiation into the open. But as key decisions ultimately sit with some stakeholders more than others, a readiness assessment itself cannot level the field, and the negotiation of institutional dynamics is demanding and sometimes disabling.

Subsequent applications of the readiness assessment (FCRI, Adaptation Pathways and Capital Programme) have been more technical in nature, focused on narrower objectives of project efficiency and quality. This is not to diminish the value of this work but to acknowledge that the parameters of social innovation in these later iterations of the readiness assessment became relatively limited: improved governance, more effective planning, early and enhanced engagement. This can be seen as both pragmatic – a still-useful improvement of practice – and the beginning of a longer process of cultural change in a particular sector. It could also, however, be interpreted as a dilution of the more critical potential in the original model – an accommodation to institutional realities. Time and further evaluation will be needed to understand this more fully.

## 6 | CONCLUSION

This paper has described the development and application of a set of tools to support the early stages of community engagement and project planning in flood and coastal erosion risk management. This included methods for assessing the readiness of a range of stakeholders for participation in planning and decision-making around

climate adaptation challenges in the UK. The paper examined this work through the lens of social innovation, highlighting the problems it aimed to respond to, what innovations were involved, and what we know about the early impact of these tools. Research on social innovation provides a useful framework for understanding mechanisms of social change and the conditions under which innovation is likely or possible, as well as challenges and limitations in securing meaningful and lasting change at different levels. In the context of FCERM and climate adaptation, we would conclude that social innovation ‘on the ground’ is necessary but not sufficient: The scale of the challenges associated with climate change means that social innovation within communities and institutions needs to be supported by changes at the levels of national (and international) policy and discourse. Nevertheless, the projects discussed in the paper also demonstrate the value of investment in experimentation and collaboration, especially where this brings different stakeholders into dialogue to explore the ideas and assumptions that guide their work, and to enhance their readiness in the process – including their readiness to engage in social innovation.

## ACKNOWLEDGEMENTS

The work we report on here was commissioned and funded by Defra, the Environment Agency (EA) (England), The Welsh Government and Natural Resources Wales (NRW) and carried out in close collaboration with stakeholder engagement specialists from Icarus ([www.icarus.uk.net](http://www.icarus.uk.net)) and, in the case of the Flood and Coastal Resilience Innovation (FCRI), Adaptation Pathways and the Environment Agency's Capital Programmes, with the additional involvement of 3KQ and Wilson Sherriff under the Environment Agency's Stakeholder Engagement and Facilitation Services (SEAFS) contract. The readiness assessment developed for the FCRI programme was further enhanced by a collaboration with Sally Priest and Megan Alexander (who had worked on a separate project for the EA on governance) and evaluated by Risk & Policy Analysis. The pilot work in Hemsby and in Caterham and Old Coulsdon was done in collaboration with local working groups that included Flood and Coastal Erosion Risk Management (FCERM) professionals, local residents and other institutional and community stakeholders. The project overall was supported by a project board and a wider community of practice. We would like to thank all of the above for their inputs, participation and reflections.

## DATA AVAILABILITY STATEMENT

This article is a reflection on a programme of work and does not report on a particular dataset. Reports on different elements of this work are available and have been

included in the list of references. The original data generated in surveys and interviews during the action research and stakeholder engagement phases of the work are protected by agreements of confidentiality.

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## ENDNOTES

- <sup>1</sup> Our role in this work was primarily as academic consultants and researchers, working closely with Icarus, a stakeholder engagement consultancy and one of the contractors under the Environment Agency's Stakeholder Engagement and Facilitation Services (SEAFS) framework.
- <sup>2</sup> Please note: This paper is a higher-level reflection on readiness assessment through a lens of social innovation – it is not a detailed account of the methodology or an in-depth analysis of the data it generated. It is also important to note that this was not a pure research project: From the outset, the intention was to work with a range of organisational and community stakeholders in a spirit of experimentation, reflection and shared learning. At times, this involved complex negotiations of different perspectives, priorities and ways of working, including when it came to developing and trailing the tools themselves.
- <sup>3</sup> A recent study on coastal risk in the UK suggests that between '1600–1900 km (~30%) of England's shoreline currently designated as a "Hold-the-Line" policy is likely to see increasing pressure to realign (assuming a rise in Global Mean Surface Temperature of between 2 and 4°C by 2100) with implications for ~120,000–160,000 residential and non-residential properties by the 2050s' (Sayers et al., 2022). In other words, a significant number of communities and businesses will face decisions about options for adaptation, including relocation.
- <sup>4</sup> It is important to acknowledge again that this project substantially benefited from the ideas and experiments of others. In our case, the New England Coastal Adaptation Project (NECAP) provided important inspirations and points of departure, both in drawing our awareness to the concept of 'readiness' and in suggesting ways in which it might be assessed and enhanced. Nevertheless, despite the valuable learning captured in the NECAP project, it was particular to the US context in many respects; there was a need to translate, adapt and trial these ideas and approaches for the specific needs of the UK context. There are many differences in culture, legislation, policy regimes and institutions that make work on FCERM and climate adaptation a different undertaking (and indeed, this point can be made in different parts of the UK). The approach we developed was an evolution as well as an adaptation of these methods.
- <sup>5</sup> <https://www.gov.uk/guidance/flood-and-coastal-resilience-innovation-programme>
- <sup>6</sup> It is worth noting here that following these initial trials, the Environment Agency's approach has been to embed readiness assessment into funded projects, with an intention of turning it into a 'new normal'. There are some interesting questions, perhaps, about what happens to social innovation when it becomes institutionalised.

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**How to cite this article:** Kelly, R., & Kelly, U. (2025). Readiness assessment in flood risk management and climate adaptation: A mechanism for social innovation? *Journal of Flood Risk Management*, 18(1), e12915. <https://doi.org/10.1111/jfr3.12915>