

NATIONAL
CENTRE FOR
RESILIENCE

BUILDING SCOTLAND'S RESILIENCE TO NATURAL HAZARDS

WHEN DOES RESPONSE END AND RECOVERY BEGIN?

What can resilience practitioners learn from
academia?

Research project Funded by The National Centre for Resilience

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List of Acronyms

RRP	Regional resilience partnership
LRP	Local resilience partnership
LA	Local authority
ER	Emergency responder
RP	Resilience practitioner
NHE	Natural hazard emergency
IEM	Integrated emergency management
TSI	Third sector interface
TSO	Third sector organisation
NPF	National Performance Framework
SCCAP	Scottish Climate Change Adaptation Program

SME

Small and medium-size enterprise

Section 1: When does response end and recovery begin: What can practitioners gain from academic research?

Introduction

This research project is the second phase of this two phase project, the first phase¹ funded by the National Centre for Resilience (NCR), was undertaken during February and March 2020 (Baxter, 2020). The findings from phase one have been taken forward in this follow-up NCR funded research project which made the recommendations shown in Box 1.

The focus of this report is to explore potential opportunities to develop strategies in advance of any natural hazard emergency (NHE) to maintain and build upon increased levels of social capital experienced by many communities in the aftermath of an emergency (Baxter, 2019, Cui and Li, 2020) to improve communities' longer term recovery and future resilience.

This is important because the process of recovering from a NHE or any emergency event as has been seen during the Covid-19 pandemic is affected by not only the physical and economic damage inflicted by emergencies but also by human reactions to them (Tebes et al., 2019, Thordardottir et al., 2018). These reactions fluctuate over time and can influence individuals', businesses' and communities' capacity to cope with current and future events (Baxter, 2020).

Utilising available mechanisms to support resilience practitioners to better incorporate recovery into emergency preparation and planning will improve the ability of communities to cope with and recover from future events. For example, there is potential for community resilience plans (Cretney, 2018) to more explicitly include the long-term recovery and resilience of communities. This will support planning and preparation for a community's, long-term recovery, and future resilience, which the Scottish government defines as "harnessing resources and expertise to help themselves prepare for, respond to, and recover from emergencies," (Scottish Government, 2019a).

Incorporating Scottish government policies such as the National Performance Framework (Scottish Government, March 2016); Preparing Scotland (Scottish Government, 2017); and the Scottish Climate Change Adaptation Program (SCCAP) (Scottish Government, 2019c) into the recovery phase may present a route to improving long-term community resilience to natural hazards (Di Giovanni and Chelleri, 2019, Hudson et al., 2019, Li and Landry, 2018). This is significant for policy, and the way in which the Scottish government guidance on community resilience (Scottish Government, 2019a, Ready Scotland, 2016), and the framework for community resilience (Resilient Communities Team, 2017), is taken forward, because how effective these policies are when deployed as part of community resilience depends upon the conditions in which they are used.

¹ <http://eprints.gla.ac.uk/215851/7/215851.pdf>

Recommendations

- There should be a managed transition phase in between the immediate response to a natural hazard emergency and the recovery of a community.
- All ERs and RPs involved in the response to an NHE should prepare a withdrawal or handover plan in advance of an NHE as part of the transition to the recovery phase
- ERs and RPs should consider strategies which actively promote a community's future resilience and the SCCAP (provided they do not compromise their core objectives).
- ERs and RPs should consider themselves part of the what creates the conditions in which a community's recovery takes place both during A) the response to, and B) preparation and planning for an NHE.
- The relationships between, the mechanisms involved in a response to NHE, (action, competency, efficacy, engagement, knowledge, understanding, information, observation, experience, empowerment, involvement, and altruism) and the actions and decisions taken at a strategic, tactical, and operational level should be mapped out and prepared for using scenario planning to help predict and manage the internal reactions of communities and individuals.

Box 1 Recommendations taken from NCR research project report (P 53, Baxter 2020).

Report structure

The report is divided into six sections, introduction, approach, three objectives sections, followed by a final section. The final section discusses and summarises the key findings from this phase of the research, concluding with a final list of recommendations.

Aims and Objectives

The aim of this research is to improve planning and preparation for the more effective long-term recovery of communities, which will improve future resilience and contribute the SCCAP. The original research objectives were:

Objective one (O1): aid practitioners and responders to clearly identify the difference between response to an event and recovery from it.

Objective two (O2): identify by organizations/sectors, roles, responsibilities, capacities, and strategic objectives that contribute to, A) community resilience, and B) SCCAP.

Objective three (O3): identify ways in which community resilience practitioners can integrate long term recovery planning to support communities to recover in the long-term in ways which meet SCCAP objectives.

Section 2: Approach Context and Data Collection

Introduction

The findings from “When Does Response End and Recovery Begin? Exploring preparation and planning to support community’s resilient recovery” (Baxter, 2020). Was the first phase of this research project. This second phase, further explores the key questions posed by practitioners during a series of workshops conducted in 2019: “a) When does recovery start/end? b) When can agencies leave? c) Different priorities, d) Should recovery be a part of response? e) Is it hindering the process to class it (recovery) as something different?” (Parker, 2019).

The first phase established the processes involved in creating conditions in which NHEs occur, illustrated by Figure 1. Phase 1 also identified the dominant mechanisms and reactions (Figure 3 and Appendix Figure 1) involved in community resilience, response and recovery.

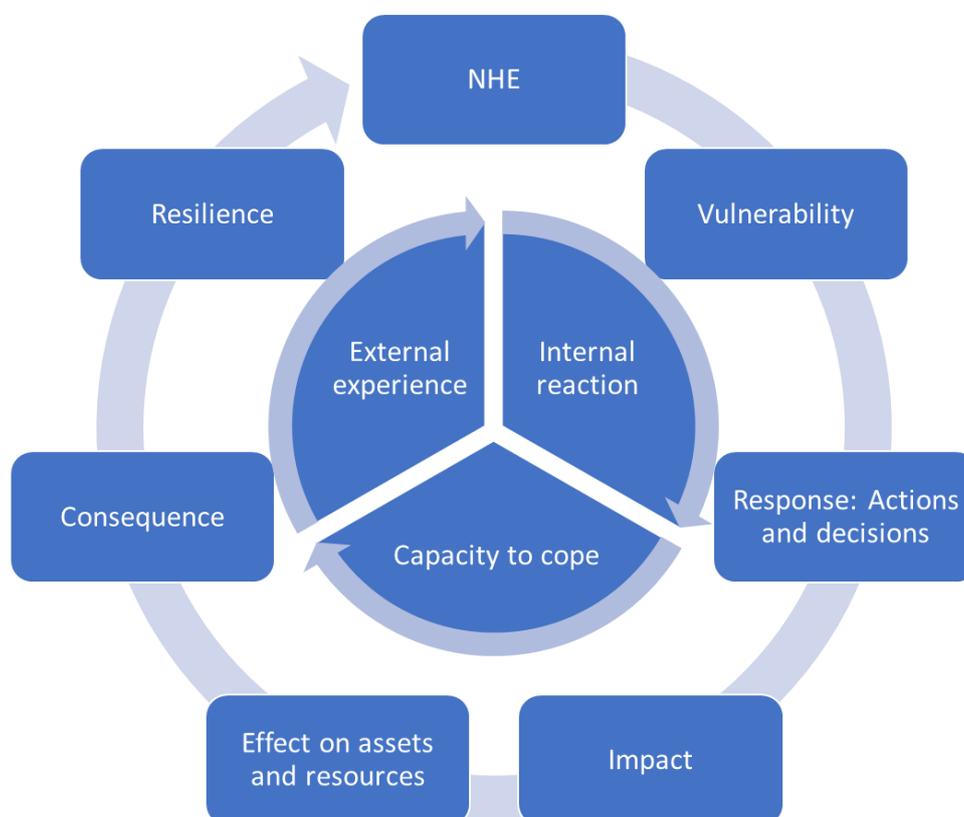


Figure 1 Generic illustration of processes undergone during a natural hazard emergency response. Outer cycle illustrates the stages experienced by a community during a natural hazard and the inner cycle (coping capacity feedback cycle) represents the community’s and individuals’ responses to natural hazard emergency. Authors own work.

The purpose of this research project was to test these findings with expert stakeholders through a series of workshops. The data collection and research were affected by the limitations resulting from the UK Covid-19 wide lockdown during 2020. Requiring the research project to be redesigned which was achieved by adapting the approach taken to primary and secondary data collection. The original research aims, and objectives were kept.

The adapted data collection involved ten in-depth semi structured research interviews with expert stakeholders and a series of two online workshops. The purpose of collecting these data was to

gather the perspectives and experiences of key actors on the community resilience phases response and recovery. These qualitative data were then used to, refine, deepen and challenge the findings in order to meet the three project objectives using a realist approach (see Box 2).

Objective one (O1): aid practitioners and responders to clearly identify the difference between response to an event and recovery from it.

Objective two (O2): identify by organizations/sectors, roles, responsibilities, capacities, and strategic objectives that contribute to, A) community resilience, and B) SCCAP.

Objective three (O3): identify ways in which community resilience practitioners can integrate long term recovery planning to support communities to recover in the long-term in ways which meet SCCAP objectives.

“It is through the workings of entire systems of social relationships that any changes in behaviours, events and social conditions are effected. A key requirement of realist evaluation is thus to take heed of the different layers of social reality which make up and surround programmes” (Pawson & Tilley, 2004).

Box 2 Explanation of the realist approach given by Pawson and Tilley 2004

Theoretical framework

The approach taken to address this research’s aim and objectives is founded within realist epistemology (Booth, 2018) which is appropriate for researching the challenges identified in the NCR workshops (Parker, 2019). This is because the approach taken by realist research acknowledges that all observations, enquiries and evaluations are filtered through, and influenced by, how peoples’ minds understand causation (Evans et al., 2020). This is important because it includes and gives value to the affects which peoples lived experience have, and the real impact this has on people’s reactions to the same event in ostensibly the same circumstances.

The realist approach understands outcomes to be a product of mechanisms and context, as illustrated in Figure 2. (Marchal, 2018), all of which are influenced by social interactions, belief, and human agency (Evans et al., 2020).

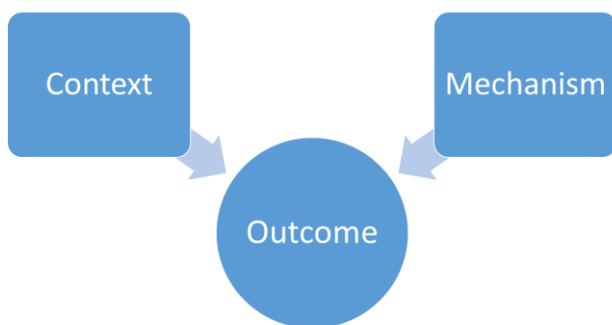


Figure 2 Simplistic illustration of how context and mechanism produce an outcome

It is important to understand that mechanisms are not simply actions or interventions but the product of complex interactions. Mechanisms can be understood have three dominant characteristics (Astbury and Leeuw, 2010):

1. They are hidden
2. They are sensitive to variations in context
3. They generate outcomes

The mechanisms identified in the first phase of this research (Baxter, 2020) all exhibit these characteristics, are influenced by the spontaneous reactions of communities and individuals which change over time, vary depending upon lived experience, occur within the conditions of a place as illustrated in Figure 3, and result in outcomes for that community, individuals and involved organisations.

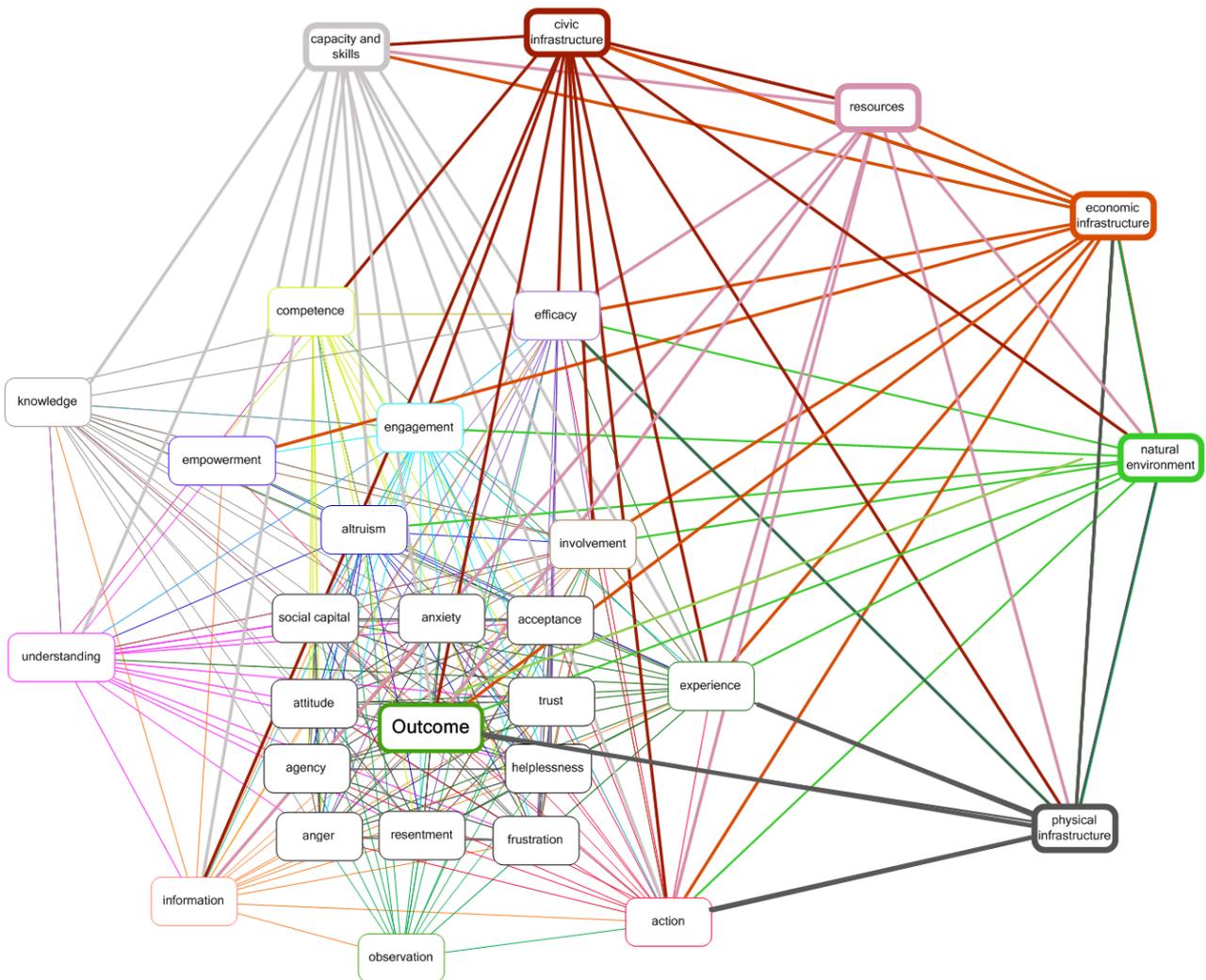


Figure 3 Illustration of the relationships between, features, mechanisms, and spontaneous reactions, which contribute to the outcome of a NHE for a community (features are represented by boxes with thick coloured outlines, mechanisms are represented by boxes with coloured outlines and spontaneous reactions are represented by boxes with black outlines). The central box outlined in green containing outcome represents the combined impacts of the NHE on the features of the community. Taken from P19, Baxter (2020)

MECHANISM identified in first phase are listed below

- Action

- Altruism
- Competency
- Efficacy
- Empowerment
- Engagement
- Experience
- Information
- Involvement
- Knowledge
- Observation
- Understanding

Policy influences context (Shaw et al., 2018) which is an important point when considering community resilience which is structured within Scotland as illustrated in Figure 4. This can be thought about as national or international policy cascading down through different levels from each in turn influencing the context in which decisions and actions are made at the subsequent levels as illustrated in Figure 5. This also applies to the way in which strategic decisions influence operational decisions which in turn can influence tactical decisions. Influence is not unidirectional, operational decisions can affect strategic decisions both directly and indirectly which is an illustration of how complex community resilience is.

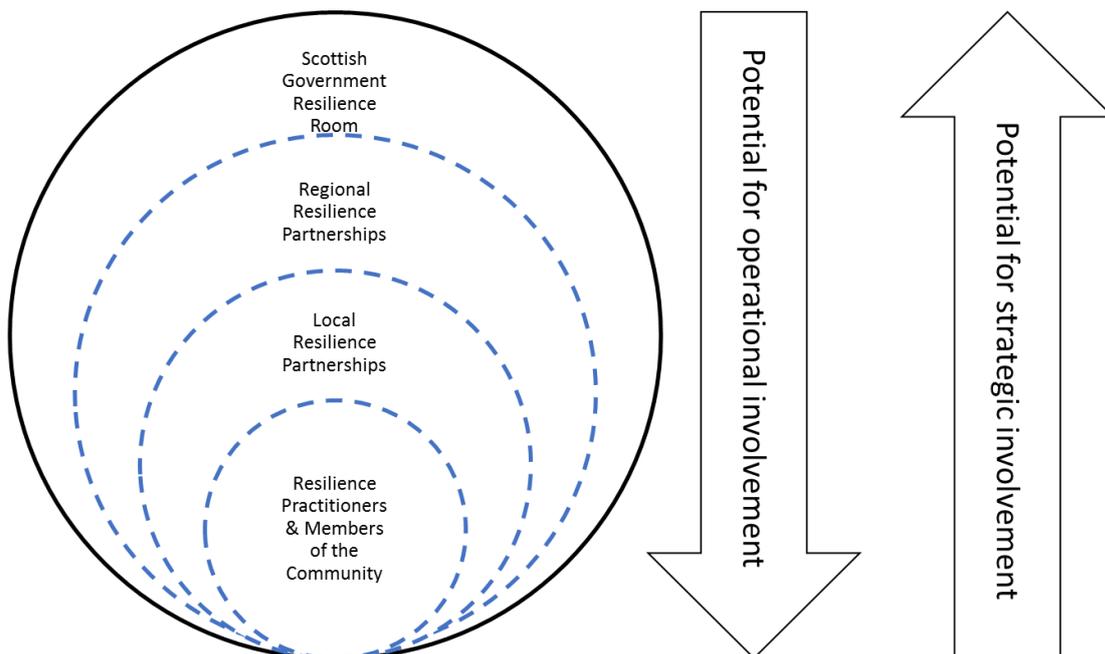


Figure 4 Overview of the Scotland civil contingency structure as laid out in the Civil Contingencies Act 2004 (Contingency Planning) (Scotland) Amendment Regulations 2013. The arrows indicate the levels of operational or strategic involvement of each of level of the resilience structure in Scotland. Tactical involvement has not been included as all levels are likely to have equal involvement in tactical decisions.

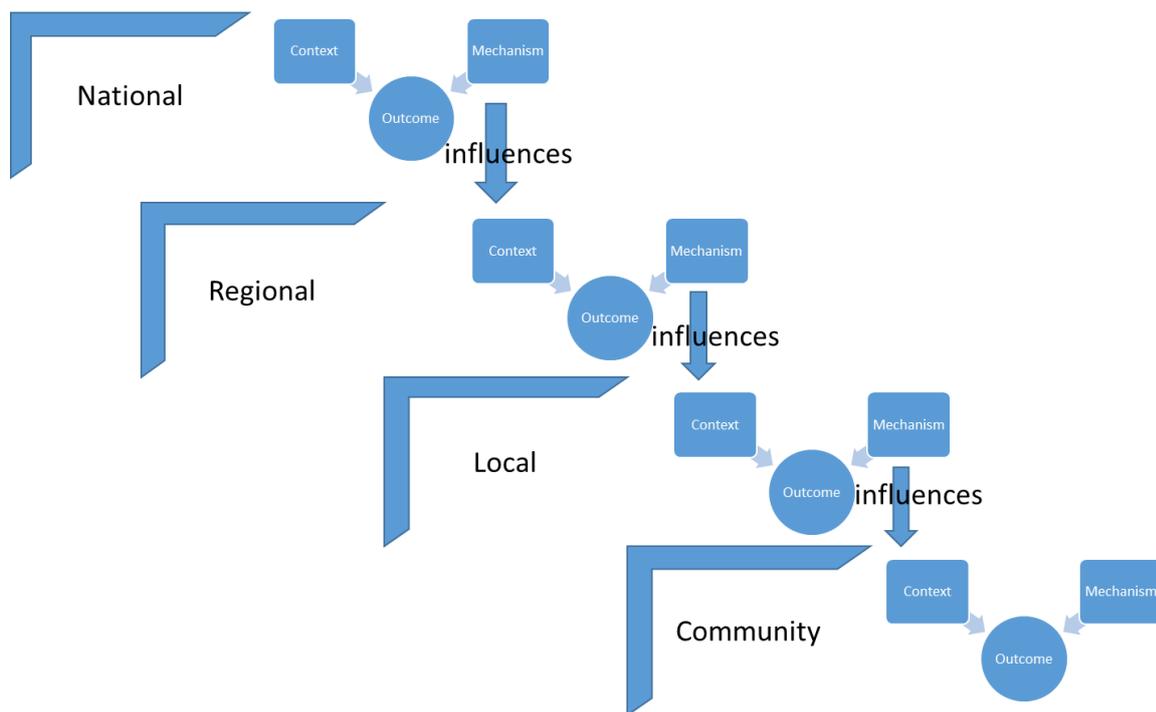


Figure 5 Representation of a limited over linear presentation of the way in which a policy may cascade down at more proximal levels along a chain, influencing context at a lower level, adapted from Shaw (2018).

This theoretical framework has been used incorporating the findings from the first phase and applied to the research objectives. A realist approach is iterative in nature and the process that was followed is iterative, the first research project was the first phase, which involved identifying initial contexts and mechanisms. The second two phases from this research project which involved critiquing the mechanisms and context using data gathered from stakeholders. These data are used to meet the three research objectives which can be broadly characterised as: O1 and O2 as primarily concerned with understanding context and mechanisms and O3 addressing how context and mechanisms can be used to achieve an outcome.

Data collection

Within the constraints of the UK national lockdown data was gathered from a self-selected group of resilience practitioners. In total there fifteen individuals participated in this research project. These data were gathered from a total of ten individuals in semi structured research interviews and two online research workshops.

Stakeholder Interviews

The interviews were conducted in the form of in-depth semi structured interviews which took place either using video conferencing or over the telephone. This approach was necessary as the research took place under the constraints of the U.K.'s Covid-19 national lock down, interviews were conducted during July and August 2020. The majority of stakeholders were based in Scotland, seven of whom worked exclusively in Scotland. A minority of participants worked across the UK some of whom were based in England.

The same questions (see appendix, Page 69) were asked of each interviewee to provide a structure for analysis. The main purpose was to begin a discussion to encourage open and authentic opinions to be voiced about the effectiveness and processes of community resilience. The purpose of this was to understand the process of community resilience moving from the activities needed in advance of an emergency moving through to after the emergency has taken place and beginning to recover from its impacts. To gain insight into how planning and preparation activities related to the how well communities can recover from natural hazard emergencies (NHE).

The questions were adapted as appropriate for each participant depending upon their involvement and experiences with community resilience. Participants were recruited with the support of National Centre of Resilience, the Scottish Government Resilience Division and Scottish Flood Forum (SFF). In total ten stakeholders were interviewed for between one to two hours. Participants included professional resilience practitioners from the public sector, private sector, and third sector organizations and from a range of different levels within these organizations. In addition to this were volunteers involved in local community resilience groups.

Online workshops

Two online workshops took place during August participants were self-selecting the workshops were advertised using the NCR newsletter and were promoted using the Scottish Government Resilience Division networks.

Each workshop lasted approximately three hours and participants were encouraged to engage with one another as the group worked through a series of slides (see appendix Page 72). The process was facilitated by the author of this report. The purpose of these workshops was to explore collectively the ideas and frameworks developed from the first phase of this work (Baxter, 2020) and their practical applicability for resilience practitioners. The workshops were designed to be a critical process giving participants the opportunity to interrogate the slides and ideas presented to them and to collectively generate ideas and learning using the slides as triggers for discussions.

Research participants

Table 1 shows the categories of research participants who were interviewed. As can be seen these participants were all resilience practitioners from the public, private and third sector as well as volunteers from local communities. The workshops participants were self-selecting and were public sector resilience practitioners exclusively.

Table 1 Table of research participants who were interviewed as part of this research project. Category refers to the type of or sector which the participant belonged to or worked in followed by a general description of this category, their geographic area of work refers to whom they work with, (e.g. individuals and communities, regional authorities, national organisations) the geographic reach refers to whom they have the potential influence and the activities and purpose of their organisation refers to the primary activities that they engage in and their main priorities.

Category	Number of interviews	General description	Geographic area of work	Geographic reach of organizations	Activities and purpose
Professional resilience practitioners	5	Work in the public or private sector and their roles are predominantly concerned with resilience related activities.	Highly localised, community level, regional level, and National (Scottish) national.	Community, local, regional, Scotland, and UK.	Coordination, communication, and information. Enabling and support systems. Maintenance and development of networks, resources and skills.
Third sector resilience practitioners	3 ²	Work in non-profit organizations within interest in community resilience or activities associated with community resilience.	Highly localised, within individual communities and aim to influence national strategy	Community, local, regional, and Scotland.	Supporting and enabling local communities. Outreach and engagement. Campaigning and awareness raising.

² inclusion of informal discussion with representative from Scottish Flood Forum covering same topics as in-depth interviews, individual gave consent for inclusion in this research

Category	Number of interviews	General description	Geographic area of work	Geographic reach of organizations	Activities and purpose
					Empowering and educating.
Community volunteers	3	Volunteer for a community resilience group.	Local communities	Community, local, regional, and Scotland.	Preparing and training Organising and engaging Educating and communicating Lobbying and fundraising

Overview stakeholder interviews.

The majority of participants focused upon flooding however other forms of NHE including storm events, mudslides and snow were mentioned. The participants who were local community volunteers had more direct experiences of flooding and this was the principal hazard that they were concerned with however they also incorporate other hazards when undertaking risk assessments.

The Covid-19 situation was also touched upon by all participants and the relevance of this to community resilience was also discussed. In relation to thinking about what a response to an emergency is and the management and relevance of recovery. This revealed an interesting insight into how the process of recovery is managed, and even whether it is considered to be a distinct part of community resilience or becomes by default part of “business as usual”. This issue was raised by multiple participants in different ways.

There were distinct concerns over the terminology of response and recovery. The goal of community resilience is to minimise the impacts of NHEs and other events upon them. Therefore, for community resilience to be successful only minimal recovery activities would be required except in the most extreme circumstances. This is often the case and participants gave examples where this had occurred and contributes to confusion about response and recovery and their roles within community resilience. This point was drawn out by some of the interviewees who argued for a more phased and less arbitrary approach when managing the aftermath of an NHE. This relates to a finding from Baxter (2020) and illustrated in Appendix Figure 2 Spontaneous reactions to NHE (Individual and community)(Baxter, 2020) which relates to autonomy of individuals and how this can influence future resilience.

More examples were given of the impacts of more extreme or frequent NHE and more severe impacts, causing physical damage to communities and unfortunately sometimes fatalities. This damage and disruption had impacts upon multiple areas including, businesses, infrastructure and individuals’ well-being both mental and physical. These impacts required active interventions, and engagement by resilience practitioners to mitigate and manage the effects of these impacts. Not only what was done but how this was done was viewed by all participants as very important to subsequent community relationships, trust and willingness of communities to engage with different organizations and as had the potential to impact upon a community’s future resilience. This again relates back to the internal reactions illustrated in Appendix Figure 2.

Most participants did see how practitioners interacted with each other and members of a community as important and requiring more preparation in advance of any NHE. Recovery focused activities should be distinct from “business as usual activities” which often absorb many of the processes required for effective longer-term recovery³ resulting in other needs potentially being neglected. A view was expressed that there is no difference between response and recovery and that in fact it was a case of appropriate actions in response to needs which evolved over time. It was expressed that sensitivity about terminology is necessary as some individuals and communities may find the term recovery problematic as it imposes a recovery narrative upon them which they viewed

³ long-term recovery is defined as when the community is at a point where the physical environment and civic infrastructure of that community (and which it can access) is able to function and provide the same or improved level of supporting services for the lives of the individuals within it to function.

as being inappropriate or even disrespectful to their lived experiences⁴. This illustrates the awareness of interview participants of the importance of being aware of people's reactions to what is taking place, how this needs to be sensitively and carefully handled. Participants understood these complexities and how people feel and react has consequences for individuals, resilience practitioners, and how the community and individuals move through the events.

The importance of relationships and trust were common interrelated themes which were emphasised by all interviewees. These were regarded as fundamental to community resilience activities and enabling effective responses to NHE. There was widespread agreement that this was not simple to achieve and requires substantial investment in the form of time and effort to forge connections and that it requires constant maintenance through both formal and informal and frequent contact across organizations and between individuals this was also seen as a necessary for relationships and trust with communities. It was asserted by some participants that this process is undermined due to constraints on resources both human and monetary, limiting the creation and nurturing of these connections. A tangible consequence of not making these connections in the opinion of some participants is a lack of awareness of what different organizations could contribute to an emergency response.

Preparation and planning in particular training events were cited by all participants as extremely effective ways of building relationships and trust between individuals and organizations. This was understood to be a key benefit, in addition to the practical learning and skills aspects training events and activities.

Debriefing and learning in the aftermath of events was mentioned by all participants and its importance to updating and revising resilience preparation and planning. This was often used as an opportunity to revise individual resilience plans and update processes. It was also mentioned as a means to, "decompress," manage stress for those actively engaged in the emergency response. In some cases, a social approach to debriefing was viewed as highly effective by one participant enabling in this case emergency volunteers to bond and share experiences in a relaxed social environment while discussing what happened and what they could learn.

There was some frustration expressed about the lack of template which could be used by communities to develop community resilience plans. One participant was actively working on developing processes and protocols which could be systematically applied across local areas and regions. It was recognised by some participants that there is conflict between balancing different contexts and requirements of individual communities, and having a consistent approach across Scotland. This may be a result of the way in which community resilience has developed from the Civil Contingencies Act 2004 and the Civil Contingencies Act 2004 (Contingency Planning) (Scotland) Regulations 2005.

There were diverging opinions regarding what should be included in community resilience, some participants viewing it very much through a focus lens of responding to natural hazard emergencies, in particular flooding and the protection of the community from that risk. Others took a more holistic interpretation of community and its infrastructure, determining that all aspects of community contributed to resilience and the ability to respond to and recover from the impacts of NHE. There was no correlation between participants having a more focused view of community

⁴ Lived experience is the direct experience of living with or through an event, how people experience their own biographies. MCINTOSH, I. A. N. & WRIGHT, S. 2018. Exploring what the Notion of 'Lived Experience' Offers for Social Policy Analysis. *Journal of Social Policy*, 48, 449-467.

resilience activities and whether or not they thought the Scottish Climate Change Adaptation Programme was of relevance to improving community resilience.

The majority of participants thought that climate change and its impacts and adapting to them was an important part of community resilience and the future resilience of these communities. There was a concern that climate change may be a distraction and could potentially be counter-productive in conversations about community resilience. However, adaptation to climate change was accepted by all participants to be of relevance and important for community resilience. This was something that was found in previous work. There was a concern that (Baxter, 2020) identifying strategies which have been found to be effective in incorporating climate change adaptation into recovery activities, (Appendix Table 1).

Overview online workshops

The workshop participants drew on a range of different examples drawn from their own extensive experience of being involved in emergency events. These included from terrorist events, major industrial incidents, house fires, the events at Granville Tower as well as natural hazard emergencies including flood storms snow events landslides et cetera. This reflected the extensive experience that these individuals have and their backgrounds. All participants were within the Scottish Government's civil contingency infrastructure, either currently or in the past. This represented resilience practitioners working within local authority structures, at the local resilience partnership (LRP) level and regional resilience partnership (RRP) level, including representation from blue light responders. This gave the workshops a richness of experiences and opinion with participants having an in-depth knowledge and understanding of the working of Scottish civil contingency infrastructure.

This range and depth of experience was useful as the participants discussed and critiqued the slides presented to them, they brought the perspective of working within government structures at a local level, embedded within communities and at a regional level. The emphasis of each workshop was slightly different. One workshop focused on higher-level regional responses the other focusing on RP working at a local level, and within communities. The participants in both workshops agreed with the premise that SCCAP and community resilience were intimately related and could contribute and support to one another (Slides Used for Online Workshops Page72).

These different perspectives affected the discussion within each workshop for example when discussing the withdrawal of organisations from a situation, as one participant put it, "we just don't do it, *leave..... It is about*⁵ moving on not leaving". In contrast to this, participants in the first workshop were much more engaged with how to withdraw from a situation. This reflected the level within the civil contingency structure at which participants sat and their responsibilities, all phases of resilience were covered during both workshops. Despite these differences in perspectives similar points were raised within both workshops. The same mechanisms required to achieve community resilience were the same. All the twelve mechanisms identified in phase one, see Figure 3, were raised during the workshops by participants, without prompting, as being vital to community resilience.

There was consensus across participants that fundamental to all mechanisms was communication. This was even identified as a fundamental thread of community resilience which ran through every aspect of community resilience. That type and approach of communication would vary, different tools being used at different times depending upon the purpose and context. Participants

⁵ italics authors own

mentioned the following attributes which they associated with effective communication; timeliness, relevance, honesty, truthfulness, consistency, and cohesion. A range of different ideas around ways to communicate were discussed during the workshops, including use of social media, also local information films similar to government information films used in the past.

A dominant thread that ran through both workshops was response and recovery terminology, all participants felt this was problematic. There were mixed opinions about how this should be resolved and the appropriate language that could be used. Participants had diverging opinions about what recovery is in terms of community resilience, if it was a useful term and when and if it should be used.

A participant working at resilience partnership level, felt that resilience guidance was too prescriptive particularly around recovery, all participants thought that there was a need for a cohesive community resilience structure which could be applied across Scotland but within that structure there should need to be flexibility and adaptability. A criticism of the guidance was that it was too “wordy” and possibly process maps would be more useful approach as it incorporated structure while allowing flexibility and adaptation. It was felt that the guidance particularly on recovering from emergencies could be too prescriptive however all participants recognised the challenges and difficulties providing guidance for emergency management due to the complexities and range of situations and contexts in which the Civil Contingency Act (2004) amended (2013) applies in Scotland and across the UK.

Another dominant thread was the necessary of community involvement with the response to an NHE, more involvement of the community and an expansion of RRP to include some form of community representation was also voiced. All Participants emphasised community empowerment, involvement and ownership at all stages, during preparation, during the direct response and in the aftermath. This linked strongly to communication and awareness of their own work amongst the public. More active involvement in work with third sector interfaces (TSI) was viewed as a potential route into communities and engagement with them. All participants emphasised the importance of the communities themselves having ownership over as far as possible over what happens and an understanding of the processes. It was repeated over and over again by all participants that “how something is done, has consequences for recovery”.

The personal resilience of individuals within communities and the resilience and emergency response sector was also discussed. The emotions, reactions, past experiences, politics and complexities of the web of relationships was acknowledged to be important to community resilience and that it should not be ignored, though challenging. The importance of managing situations with sensitivity and awareness was raised as a fundamental cornerstone of community resilience and relationships with communities. It was interesting that all participants while referring to themselves as practical people, people who got things done and got on with the job all displayed exceptionally high levels of emotional intelligence and awareness. They showed a deeper understanding of how their actions and decisions impacted on those around them and the effect that this could have. During the workshops there was a tacit understanding that processes involved in integrated emergency management (IEM) could and should be undertaken with sensitivity and awareness of the impacts on communities and individuals and that this had long-term impacts on the prospects of the potential to move forward after their experiences. It was captured thus “better relationships lead to better outcomes”.

All participants agreed on the importance of preparation and planning, training and the ability of participants in an emergency response being able to effectively undertake what was required of

them. This covered community members, as well as professional and volunteer resilience practitioners and emergency responders. The importance of building confidence through, knowledge understanding experience and skills was considered fundamental to an effective response. One participant voiced it as “anything that is done before an incident is a bonus”.

The common consensus on response and recovery that emerged from the two workshops was that recovery and response take place simultaneously from the very moment that an incident is activated. That recovery is a blended process and does not take place as a distinct stand-alone phase. That different communities have different levels of resilience, that there should be a focus on “generic resilience”. That communities needed to be empowered and engaged and form active part in their own resilience. That convergent volunteers should be incorporated into responses and handles sensitively and more guidance and understanding of how to do this was needed. There needed to be a consistent structure to the way in which resilience partnerships, both local and regional, operated and that there is a role for TSI and community representation within RRP. All participants felt that there was a need to manage public expectations of what could be achieved during an emergency event. It was felt that there was a lack of resources and investment in community resilience. That fundamentally effective responses about working together in partnership with communities and across organisations. This required resilience practitioners to know communities and understand them. Empowered communities contributes to creating resilient communities that this was needed in advance of any event. The importance of perceptions was emphasised and how perceptions are affected by people’s access to information, their understanding, experience and that ERs in PRS are in a position to influence this.

Conclusions

Community resilience has its roots in the answers to two questions: resilience to what? For whom?(Cutter, 2016). The approach taken by the Scottish government recognises that resilience to one thing improves resilience to others creating a more generalised all hazards approach to community resilience. This expands the answers to this question from the singular to the multiple making it much more difficult to know when The Scottish government hub and spoke approach brings in and recognises multiple aspects an approach which many of the interviewees and workshop participants use. Arguably this all hazards approach has generated some of the issues about the dividing lines between different phases of community resilience.

Many of the interviewees asserted that response and recovery were a series of actions which met a need that articulated by one interviewee is that “the right action at the right time” and that everything was a response, and everything was part of recovery. One interviewee said that the response was the recovery. This is true but I argue that it is useful to distinguish between these two phases because as was revealed by interview participants the recovery phase can get neglected and subsumed into business as usual. This is appropriate and a sign of the effectiveness of community resilience and is actually the goal, that communities are able to cope with the impacts of NHE or other emergency events.

However, if the capacity to cope with is mistaken for resilience this can have consequences and can result in resources not being adequately replenished or renewed. An example of this was given by a local authority official. She stated that the council were patching roads which had been damaged during flooding events to get back to “business as usual” but that these roads were not being properly repaired, leading to more severe damage in each subsequent flooding events, thus

gradually undermining the capacity of the community to cope and it's resilience with each subsequent event⁶.

In the following sections, I argue that the recovery is a distinct process in and of itself and may consist of ensuring that resources which have been used during the response are replenished and topped up or it may involve more extensive rebuilding. This is important and is what distinguishes the response phase to the emergency from activities associated with recovering from it. These activities may indeed be the same and fulfil dual purposes however recovery is distinct from the response and is a specific type of actions and decisions with the specific purpose of enabling communities to adapt, transform, reorganise and learn in the aftermath of an NHE so they are able to cope with future emergency events.

I propose that while actions which are responding to NHEs also can be acts which support recovery processes. The recovery phase of community resilience is specific in supporting the processes of adaptation, transformation, reorganisation and learning which are continuous and take place over multiple timescales. This is a useful way to consider these two different phases as it allows space to acknowledge that recovery is not an end point but a process it acknowledges people's different lived experiences. This also captures the extent to which recovery is actually required but by explicitly having the process in place this ensures it is not neglected and that resources are replenished and refilled and that the community may require external resource to achieve this. This problem needs to be made visible and acknowledged by decision makers and policymakers. The inclusion of recovery as part of resilience which is in the Scottish government guidance on community resilience should avoid this gradual eroding and undermining of community resilience.

This understanding of the two phases of community resilience, response and recovery is useful because it allows the identification of organisations which have the capacity and whose priorities are aligned with these things to engage with the recovery process and response process to enable communities to build their resilience and support SCCAP which has many shared objectives. This also has the potential to aid the maintenance of social/community capital which is often increased during a response to a natural hazard emergency but rapidly diminishes in its aftermath.

Key Points

- Outcomes from NHEs or other emergency, are a result of a combination of mechanisms and context
- Mechanisms identified in phase one of this research work were also identified in these data from in-depth semi structured interviews and two online workshops
- Language and terminology can be problematic particularly around "recovery" for some individuals and communities who have lived through NHEs or other emergency events
- Communication with communities which explains what is happening and why is a vital part of the effectiveness of an emergency response
- Developing a community's knowledge and understanding in advance of an NHE or other emergency contributes to the efficacy of a response
- Coordination and inclusion of a wide-ranging of sectors in preparation and planning structures has the potential to support the, immediate response phase, the transition as

⁶ interview broadcast on Today programme in the aftermath of the storm Ceria and Dennis Storm 1802/2020 <https://www.bbc.co.uk/programmes/b006qj9z/episodes/player>

some responders leave communities and others come in to support communities in their long-term process of recovering

- Resilience guidance needs to be flexible, adaptable and consistent across council and other geographic boundaries
- Expectation management about what can be achieved and who can achieve it is vital for relationship management and trust between organisations and communities
- Reactions, including anger must be acknowledged and heard as part of the process of recovery
- Trust is fundamental in both response and recovery
- Community and individual reactions fluctuate over time and are influenced by perceptions of what is happening and why
- Community engagement and empowerment is fundamental to the effectiveness of that community's long-term recovery process

Section 3: Objectives One: Aid resilience practitioners and emergency responders to clearly identify the difference between response to an event and recovery from it.

Introduction

The purpose of this part of the report is to explore the concepts, challenges, and meaning of response and recovery when applied to the process of community resilience. The similarities and differences between response to an event and recovery from it will be examined by integrating primary data collected during this research project with other sources of secondary data including, Scottish government policy documents, and the findings from the first phase of this research project⁷.

The reason for doing this is to aid RPs and ERs to identify appropriate actions available to them which support processes involved in recovering from an NHE. It should also enable RPs and ERs to consider when which mechanisms can be best utilised, by whom, and their potential impact on recovery as part of their planning and preparation activities.

It is important therefore to establish and define what is meant by the response phase and recovery phase when applied to community resilience related activities. This is because the way in which actions and decisions are taken is influenced by whether the NHE is perceived to still be occurring and the responsibilities associated with responding to affected communities change accordingly (LARGS, 2017).

Scottish government guidance

The Scottish government website Preparing Scotland includes a set of national guidance documents which set out the principles underlying the Scottish government's approach, Box 3, to planning, responding and recovering from emergencies⁸. It is from these set of guidelines that community resilience is structured. The focus in this section is the guidance on "Responding to Emergencies"⁹ and "Recovering from Emergencies in Scotland"¹⁰ both documents emphasise the importance of incorporating recovery into the response to any emergency event at the soonest possible opportunity (Ready Scotland, 2017b). The guidance gives no solid definition of what a

"Response to every emergency requires to be tailored to its particular circumstances. These circumstances will dictate the appropriate level of management required. The key principle is having the right people in the right place at the right time." P4 (Ready Scotland, 2017b)

Box 3 Scottish government approach to emergency response

7

file:///C:/Users/Helen%20Baxter/A_NCR_2_month_Project/Written%20Work/Final%20reports/Helen%20Baxter%20report%20FINAL%20-%20April%202020.pdf

⁸ <https://ready.scot/how-scotland-prepares/preparing-scotland-guidance>

⁹ <https://ready.scot/how-scotland-prepares/preparing-scotland-guidance/responding-emergencies>

¹⁰ <https://ready.scot/how-scotland-prepares/preparing-scotland-guidance/recovering-emergencies-scotland>

response is instead as shown in Box 3, it outlines an approach to what a response should be. The guidance on recovery includes both a definition of resilience (Box 4), and recovery (Box 5).

By necessity both response to and recovery from an emergency event and guidance on how to achieve this needs to be applicable to multiple different scenarios and it is impossible to predict what these will be. These guidance documents specify what is required during these two different phases, and the roles and responsibilities of different categories of responders. There is guidance of how to manage and emergency response using integrated emergency management (EIM) in compliance with the, amended Scottish Civil Contingencies Act (2013), regulation: 2(2)(a) which is a legal duty.

"Resilience is the ability to meet people's essential needs during times of crisis so that there is the capacity to robustly prepare for, respond to and recover from the unpredictable challenges presented by natural hazards." (NCR, 2020)

Resilience is defined as "the capacity of an individual, community or system to adapt in order to sustain an acceptable level of function, structure and identity". Charles Edwards; Resilient Nation; Demos; 2009 (Scottish Government, 2019d)

Box 4 The Scottish Government's approach to protecting the public in case of emergency is built around the concept of resilience.

" Recovery is a co-ordinated process of rebuilding, restoring, rehabilitating and, perhaps, regenerating communities following an emergency. Its purpose is to minimise their harmful effects on individuals and communities. It is more than a simple remedial activity, replacing what has been destroyed, or recuperation for those affected. It is a complex social and developmental process. The manner in which recovery is undertaken is critical to its success. "P5 (Ready Scotland, 2017a)

Box 5 Scottish government definition of recovery

The regional resilience partnerships (RRP) are the structure within which cooperation to meet these legal duties occurs, the RRP is do not have any power to direct individual members to undertake their legal duties. It is it within the context of this management structure that community resilience activities in Scotland are undertaken, see Figure 4 in section 2. This follows the principles of IEM and explicitly states that "IEM is undertaken as an extension of a local responder's normal day to day activities, defined as its functions in the Civil Contingencies Act. "Performing those functions at all stages of the resilience cycle is fundamental to IEM" and that "preparation and response to emergencies focuses on the effects of hazards rather than their causes." P 7(Ready Scotland, 2017a).

The deployment of resources during an NHE is undertaken according to the command and control structure outlined in these documents. These are taken at a strategic, tactical and operational levels depending upon the context and situation. How these decisions are taken and by whom can be opaque, and communication is paramount in an effective response to maintain both public trust and the efficacy of actions and decisions, for example through situational awareness. This will affect when the incident is deemed to have ended, at which point the lead is usually handed over to the relevant local authority(Ready Scotland, 2017b), and is often preceded by the withdrawal of some category one and two responders (Table 2). When the different categories of responders withdraw from a community should be dictated by the requirements of the situation. This arguably is the point at which "the recovery phase" has officially begun.

Table 2 Category One and Two Responders(Ready Scotland, 2017b)

Category 1 Responders	Category 2 Responders (legally required to, cooperate, and share information, with category one responders)
Local Authorities	Electricity Operators
Police	Gas Suppliers
Fire	Scottish Water
Ambulance	Communications Providers
Health Boards	Railway Operators
Scottish Environment Protection Agency	Airport Operators
Maritime and Coastguard Agency	Harbour Authorities
	NHS National Services Scotland
	Health and Safety Executive.

Context and mechanisms, response and recovery

The approach of the Scottish governments which incorporates IEM “consequences, not causes” principle. Contributes to the policy context in which response and recovery take place. This sits alongside the Scottish government (2009) Climate Change Act¹¹ and the Scottish Climate Change Adaptation Program (SCCAP). This document brings interrelated policies and legislation and structures them around Scotland’s National Performance Framework (NPF) (Scottish Government, 2018) taking a strategic holistic approach to climate change adaptation, and “crosscutting” policies bringing together physical policies; planning, flood strategy, energy, with social policies including community resilience and the work of Ready Scotland(Scottish Government, 2019b). Within SCCAP it is recognised that there is a need to improve recovery plans and identifies a need to understand “climate resilience and the critical components in planning for local and national recovery from extreme weather” P 37 (Scottish Government, 2019). This work sits under outcome one.

“Outcome 1: Our communities are inclusive, empowered, resilient and safe in response to the changing climate” P 32(Scottish Government, 2019b).

It is within this policy context that the duty of RPs and ER¹² during an NHE is to protect the community from and deal with the consequences of the NHE. Specifically, category one and two emergency responders are collectively tasked with achieving the following five objectives, (P6, Ready Scotland, 2017).

- Protecting human life, property and the environment
- Minimising the harmful effects of the emergency

¹¹ <https://www.legislation.gov.uk/asp/2009/12/contents>

¹² ER and PR is used throughout this document to PR capture professional and voluntary resilience practitioners which are not explicitly mentioned in the guidance documents as emergency responders and ER refers to blue light responders.

- Managing and supporting an effective and coordinated joint response
- Maintaining normal services as far as is possible
- Supporting the local community and its part in recovery

Underlying all of this are the communities themselves their, location, structure, and resources, and the individuals who create their fabric and character. This is the core of all resilience work this is what is being protected.

The perception of what is needed and when varies, not all areas or individuals of a community are impacted in the same way a point emphasised by many of the research participants. This can complicate individuals' perceptions of what is happening around them and affects their internal reactions to what has happened to them and their community. This is influenced by an individual's, and community's, lived experience and their spontaneous reactions to the NHE (Appendix Figure 2) which also has an effect upon the subsequent long-term recovery of that community (Baxter, 2020). So, types of activities and how they are labelled is important for these communities' attitudes towards resilience practitioners and the processes of recovering from the impacts of an NHE. This is one of the key challenges of this research project and is fundamental to supporting long-term recovery processes.

Drawing on data gathered from the in-depth semi structured interviews and the online workshops a distinction has been drawn between response and recovery aspects of community resilience. I argue why these distinctions are useful for the context of community resilience and the EIM approach used by the Scottish Government.

Proposed Definitions: Response and Recovery

A response to an emergency event is to deal directly with the impacts of the emergency and the aim of a response is to protect from, and mitigate those, direct harms associated with the event.

Proposed definition: **“The purpose of an emergency response is to address the direct impacts of the emergency with the intent of protecting and mitigating the direct harms associated with the emergency event.”**

Recovery from an event is dealing with the impacts and consequences resultant from that event having occurred and ensuring that the community is able to better cope with direct harms associated with any subsequent events.

Proposed definition: **“The purpose of recovery from an emergency event is to address the consequences resultant from that event having occurred with the intent to ensure that the community (and the individuals within it) is better able to protect and mitigate itself from subsequent emergency events, through learning, adaptation and transformation, to nurture community and individual resilience.”**

The above definitions are based upon the in-depth interviews and workshops undertaken as part of this research project (remember to upload your data so you can put the referencing in here). There is an active debate around response and recovery terminology which was reflected by some of the research participants during the interviews. The two workshops which were designed to explicitly explore this issue and debate raised some of the challenges about the use and understanding of these terms. The biggest challenge with the terminology, that emerged is that processes of response and recovery take place simultaneously, as illustrated in the quote below, Box 6.

"Recovery starts right at the beginning because traditionally we've talked about response and recovery as two different phases, and we've always spoken about when to move from response to recovery. When in fact they're not phases in the traditional sense they are actually functions which run concurrently. An example of which is when a fire and rescue service pull someone from a flooded area from that moment is when that person's recovery starts. What we do as emergency responders from that moment on will determine what the long-term recovery, is for that individual or those individuals and for those communities. So there has to be recognition that they are not waiting, and communities in particular are not waiting for a recovery process to start. If we are pairing them, response and recovery, properly then immediately that they are out of danger then their recovery processes start."

Box 6 Comment made by workshop participant on response and recovery

This is understood and acknowledged within the Scottish government guidance on both response and recovery. Within the workshops and some of the interviews the view was that this guidance has generated a linear way of viewing response and recovery, shifting from response to recovery and that this had almost become arbitrary, when handover of incident management lead, switches for example from the police to the local authority.

It is this false linearity which seems to have fuelled much of the debate around this terminology. Indeed, one participant suggested that there should not be a demarcation between response and recovery, because everything that is done is a response triggered by a need created by the emergency event, which should not be classified according to when need arises.

There is an intrinsic understanding displayed by all the research project participants, that impacts are both mental and physical. That living through a NHE or any other emergency event can have and will continue to have multiple impacts, that people may never be ready to "recover" making the terminology both problematic and inappropriate. The emotional intelligence demonstrated by many involved in community resilience and emergency response and is another driver I argue behind this ongoing debate within the resilience community.

Another challenge that emerged from the interviews and workshops was the complexity and length of the recovery process, that recovery is difficult to define compared to response. This is because in

terms of responding to an emergency, the emergency itself has an endpoint which is visible. The emergency event has been resolved, gone away, or ceased (Box 7).

"The strange thing is for me that response is easy to define. It's easy to define, it's easy to see, it's easy to understand because the fires burning, the oil is leaking, whatever. That simple. Recovery is a far, far, more nebulous kind of concept"

Box 7 Reply from participant when asked about moving between the response and recovery phase of an emergency event

The process of resolving the impacts from that event which I argue is what delineates response from recovery, cannot be easily defined. This is because, these impacts may be complex affecting multiple aspects of the community, Figure 6, not all of which are visible or even acknowledged. Resolving these impacts is "a complex social and developmental process" P5 (Ready Scotland, 2017a), ranging from and including individual well-being to physical damage to the built environment. These diverse impacts need to be addressed in very different ways, some of which can be quickly resolved others may never be.

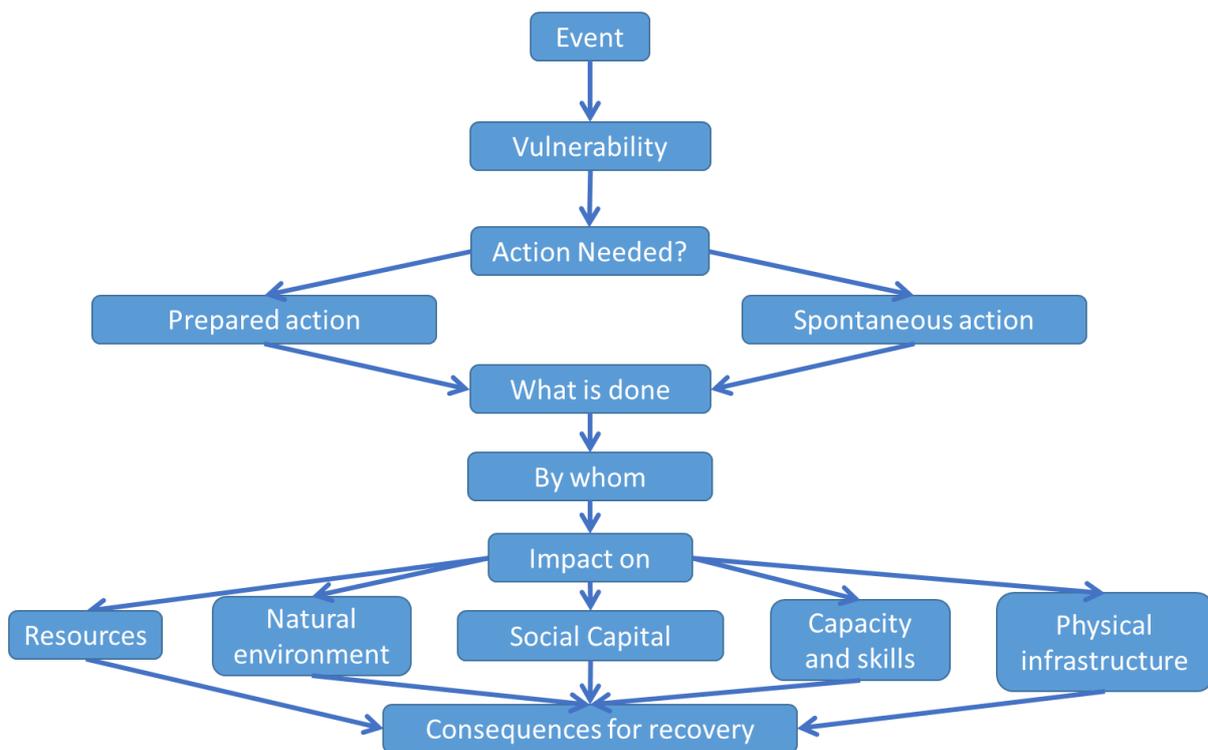


Figure 6 The flow of impact triggered by emergency through all aspects of a community, authors own work.

The impacts resulting from an emergency event vary in severity, extent, and type. This depends upon the emergency event itself, where it's happening, the community it is happening to and the efficacy of the response. As one workshop participant put it "you can't have recovery without a response". With the caveat that this does not necessarily have to be an official or external response.

I would argue that it is always necessary to have a recovery process, that without it is possible that, as stated in earlier sections, the replenishment of resources aspect is neglected. The debriefing process and learning from what's taken place during an emergency event is very well established

and is captured by the definition of recovering that I have proposed. Within this should be an assessment of what resources have been depleted which should be replenished. This replenishment should be an automatic process alongside debriefing.

So, to view response and recovery as functions and phases is a useful approach, rather than a linear process. This acknowledges nuance and complexity which is involved in dealing with any emergency event. Over time the balance of functions will shift, from those predominantly focused upon the direct impacts from the emergency event towards those dealing with the consequences, as shown in Figure 7. Using functions has the potential to solve differentiation of level of impact on individuals, geographic area, and communities. By explicitly differentiating between the purpose and intent of response to an event and recovery from it is useful because it allows incorporation and inclusion of diverse types of organisations onto the resilience committee and inclusion of resilience into the recovery of communities.

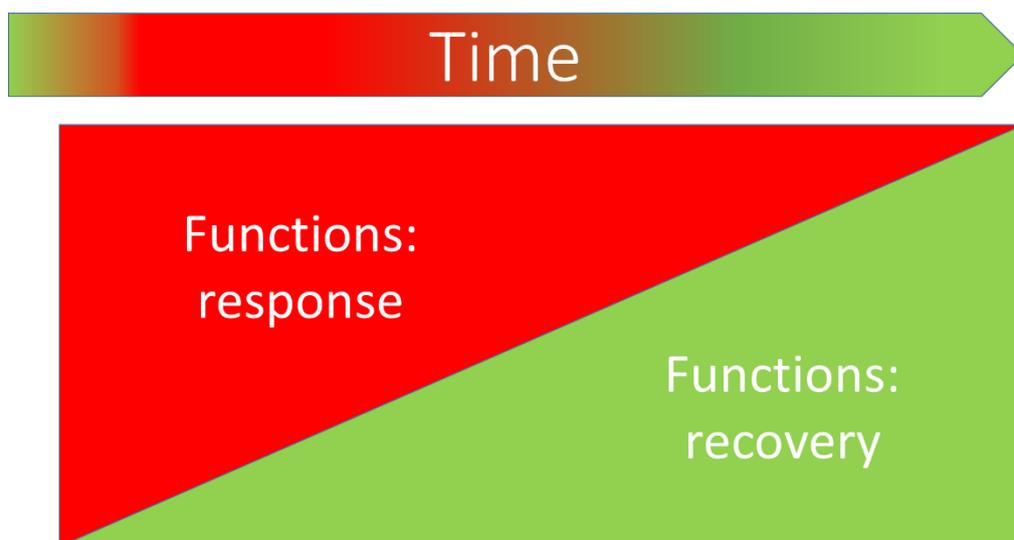


Figure 7 Simplistic representation of how balance of functions changes over time. The red triangle represents the number of functions performed which are directly associated with responding to the emergency. The green triangle represents the number of functions associated with recovery from the emergency. The arrow above represents time with the red area indicating the active emergency event phase the fading into green indicates the end of the emergency and the transition into the recovery phase.

There is a shift from the dominance of functions linked to response and those linked to recovery. This is a tipping point which could be used to define shifting into the recovery phase however it has been shown that moving from response to recovery phases is more effective when there is a transition phase, identified as an effective strategy (Baxter, 2020) for long-term recovery.

The definitions of response and recovery suggested here can contribute to addressing the challenge for local authorities of “maintaining normal services as far as is possible” (Scottish Government, 2017) and the resultant drain on resources required. Allowing them to delineate between the resources used to maintain normal services during an emergency response compared to those required for recovery. Thus, preventing short-term measures e.g. temporary road repairs, to maintain services becoming long-term and subsumed into business as usual.

These definitions may also be useful in maintaining social capital and community capital. Framing recovery as distinct from response, gives a continuing purpose which is often lost once an emergency event has ceased by maintaining that social and community capital which has been built. An example of this maintenance given by one interviewee participant, (Box 8) was that their group formed as a result of experiencing that community cooperation and social cohesion as a result of an extreme flood. This group has a dual purpose of being able to respond effectively themselves as a community during flooding or other emergency but in addition to this they have a long-term recovery objective which they are working towards while maintaining a sense of shared purpose and ownership of what their is recovery.

"I mean you could say we had an effective response last time... although we weren't able to prevent those houses from being flooded... the community came together in a way that was very effective and people enjoyed the fact that we were getting a real sense of community and they really appreciated the activities of the people that were able to step forward and proactively help, And we'd never have thought of doing that, funnily enough, until we were flooded. I mean you want to have that cooperation that infrastructure in place when you have a disaster, but we have it in place because we had a disaster.

There's no point in recovering back to the stage you're at, and then just leaving it at that. You've got to transition to something better. In our case, we could recover I getting the houses fixed, that's all been done now, and the houses are back to normal, which is fine, but we didn't have that permanent flood defence in place. So now we haven't completed the recovery yet, that we haven't completed the transition to where we want severe, it's only when we have that flood barrier permanently in place that we will have done our job."

Box 8 Quote from a local community resilience group secretary research participant

The following sections will show by meeting objectives 2 and 3 how this jigsaw of, organisations, communities, capabilities, resources and purposes, can fit together. What different organisation and sectors could be engaged with, and how this fit with their capabilities and objectives. How this contributes to the goals of community resilience, guidance and policy, as well as how this fits in with SCCAP.

Key points

- A response to an event is dealing directly with the impacts of the emergency and the aim of a response is to protect from and mitigate those direct harms associated with the event
- Recovery from an event is dealing with the impacts and consequences resultant from that event having occurred and ensuring that the community is able to better protect and mitigate itself from direct harms associated with any subsequent events
- Response and recovery occur simultaneously.
- The priority is protection and mitigation however how this is done builds into the long-term recovery and this is about the immediate reactions and emotional responses
- Response and recovery phases can be differentiated when the balance of functions tips over from being predominantly response related to being predominantly recovery related
- It is important to include third sector interfaces into resilience committees because of their capacity to support recovery functions

- It is important that short-term solutions to maintain functioning do not get subsumed into business as usual and not properly addressed
- Useful to maintain social capital and community capital, by framing recovery as distinct from response maintains purpose of community groups, inclusion of more long-term recovery type groups

Section 4: Objective Two: Identify organisations', roles, responsibilities, capacities and purposes, which contribute to A) community resilience, and B) SCCAP.

Introduction

The purpose of this section is to show the jigsaw of organisations and sectors, involved in a NHE or other emergency event, and their potential to support the affected community to, develop its resilience and in a way which complements the seven outcomes set out in the SCCAP (Box 9).

Outcome 1: our communities are inclusive, empowered, resilient and safe in response to the changing climate.

Outcome 2: the people in Scotland who are most vulnerable to climate change are able to adapt, and climate justice is embedded in climate change adaptation policy.

Outcome 3: our inclusive and sustainable economy is flexible, adaptable and responsive to the changing climate.

Outcome 4: our society supporting systems are resilient to climate change.

Outcome 5: our natural environment is valued, enjoyed protected and enhanced and has increased resilience to climate change.

Outcomes 6: our coastal and marine environment is valued, enjoyed, protected and enhanced and has increased resilience to climate change.

Outcome 7: our international networks are adaptable to climate change.

Box 9 Seven outcomes from the Scottish Climate Change Adaptation Program (Scottish Government, 2019b) which is a requirement of the Climate Change (Scotland) Act (2009).

The justifications for connecting the Scottish government's guidance on community resilience (Scottish Government, 2019d), which takes a "causes not consequences" approach to the SCCAP are:

- Resilience is a cornerstone of the SCCAP
- A consequence of climate change is the need to address its causes
- The Scottish government has committed to reduce in greenhouse gas (GHG) emissions by 75% by 2030 (compared with 1990) and to net zero by 2045 (Scottish Government, 2020)
- The Scottish government is committed to a coordinated approach "across all sectors - public, private and third – and from communities and individuals across Scotland. We must therefore ensure that our transition to net zero is collaborative and delivered in partnership" P 3 (Scottish Government, 2020)
- Climate change is a driver of more frequent and severe NHE and has a direct impact on communities resilience (IPCC)

Therefore, community resilience and the processes of responding to and recovering from NHE, should complement the SCCAP. This should mitigate and reduce the risks of climate change to

that community that impact on all features of a community ((CCRA), 2017) and therefore affect community resilience, as illustrated by Figure 8.

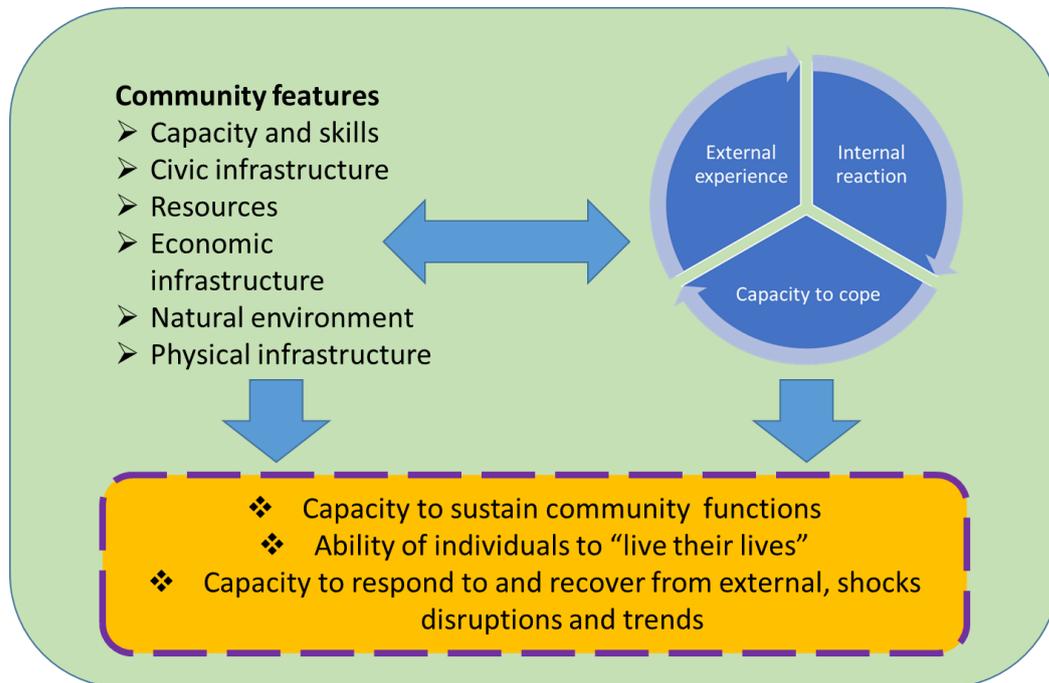


Figure 8 Representation of context of the community, represented by the light green background, community resilience (yellow rectangle) and the capacity to cope feedback cycle which drives community resilience.

Using the data collected from the in-depth semi structured interviews and online workshops, how this jigsaw of sectors and organisations can coordinate their capabilities and resources effectively to support communities through an NHE, or other emergency, is assessed. How this could be used to improve a communities' future resilience, in a way which compliments the seven SCCAP outcomes and long-term recovery is explored in the rest of this section.

The definitions proposed in section 3 (Box 10) have been used to identify which sectors or organisations are best placed to address specific needs to develop the community's resilience general resilience ¹³and if this can be achieved in a way which complements the SCCAP. When A) the NHE, or emergency event is taking place or B) in its aftermath, as balance of functions shifts towards recovery functions and away from response functions.

¹³ the Scottish government takes an all hazards approach to resilience SCOTTISH GOVERNMENT 2019d. Principles – Approach – Good Practice. Preparing Scotland, Scottish Guidance on Resilience. Philosophy, Principles, Structures and Regulatory Duties. In: DIVISION, R. (ed.). Scottish Government.

“The purpose of an emergency response is to address the direct impacts of the emergency with the intent of protecting and mitigating the direct harms associated with the emergency event.”

“The purpose of recovery from an emergency event is to address the consequences resultant from that event having occurred with the intent to ensure that the community (and the individuals within it) is better able to protect and mitigate itself from subsequent emergency events, through learning, adaptation and transformation, to nurture community and individual resilience.”

Box 10 Definitions proposed in section 3 of this report for response to an emergency and recovery from it within the specific context of the Civil Contingencies Act amended Scotland (2004) (2013) and the Scottish government's approach to community resilience(Scottish Government, 2017)

Organisations and sectors

The landscape of organisations who are directly or tangentially involved with community resilience is diverse. This can be broken down into the following broad sectors: public sector e.g. local authorities, Police Scotland, Scottish fire and rescue, SEPA, NHS, private sector e.g. resilience consultants, local businesses, private corporations, small and medium enterprises (SME), the third sector e.g. TSI is, voluntary community resilience groups, community councils, voluntary emergency responders, mountain rescue Red Cross et cetera, Red Cross et cetera as well as communities and individuals within those communities. This is a highly oversimplified view but within each of these categories is the ecosystem of organisations and individuals who play a role either directly or tangentially in a community's levels of resilience, as shown in Table 3.

Table 3 Overview of organisations and sectors with a role in emergency response, in the context of resilience(Ready Scotland, 2017b)

Category 1 Responder Duties (legal requirement of The Civil Contingencies Act (2004) Scotland amended	Category 1 Responders	Category 2 Responders are legally required to, cooperate, and share information, with category one responders	Other organisations with a role, in the context of resilience
1. Duty to assess risk	Local Authorities	Electricity Operators	The military
2. Duty to maintain emergency plans	Police	Gas Suppliers	The Crown Office and Procurator Fiscal Service (COPFS)
3. Duty to maintain business continuity plans	Fire	Scottish Water	Transport Scotland
4. Duty to promote business continuity¹	Ambulance	Communications Providers	Commercial organisations

5. Duty to communicate with the public	Health Boards	Railway Operators	The Scottish Government
6. Duty to share information	Scottish Environment Protection Agency	Airport Operators	The voluntary sector
7. Duty to co-operate.	Maritime and Coastguard Agency	Harbour Authorities	
		NHS National Services Scotland	
		Health and Safety Executive.	

When a community experiences an emergency event, depending upon the extent and severity of it, the whole or only part of that community may be affected either directly or tangentially. Any organisation business, school, hospital can be drawn into the response to an emergency either because they themselves are directly impacted by it or because they are involved in the response. Different organisations and sectors have prescribed responsibilities, laid out in the guidance, see previous sections. This section is concerned with those that do have statutory responsibilities and those organisations who are involved with community resilience, because of that organisations purpose for example Scottish Flood Forum, Mountain Rescue, British Red Cross, et cetera. It also deals with how sectors and organisations with the capabilities to supplement the response and recovery processes, can be identified, ultimately with the goal of engaging with them during preparation and planning for emergencies. The scope of organisations covered here is limited to those mentioned by the research participants and does not claim to be exhaustive, the purpose being to demonstrate the potential use of the definitions proposed in this research.

Roles, responsibilities, capability and strategic objectives

As laid out in the Scottish guidance there are specific objectives and statutory duties, (Civil Contingencies Act (2004)) related to the response and recovery from an emergency event as previously mentioned in this report. Their purpose can be described as, ensuring that communities don't tip over from being able to cope (with external support) with the impacts of an emergency event to being unable to cope (as external support is gradually being removed) with the consequences of an NHE or other emergency. The actions and decisions of everybody involved in the event, either directly or tangentially influences the capacity to cope feedback cycle, either positively or negatively. As illustrated in Figure 9 ensuring that the capacity to cope is maintained is achieved through actions and decisions which act as, functions of response, or functions of recovery.

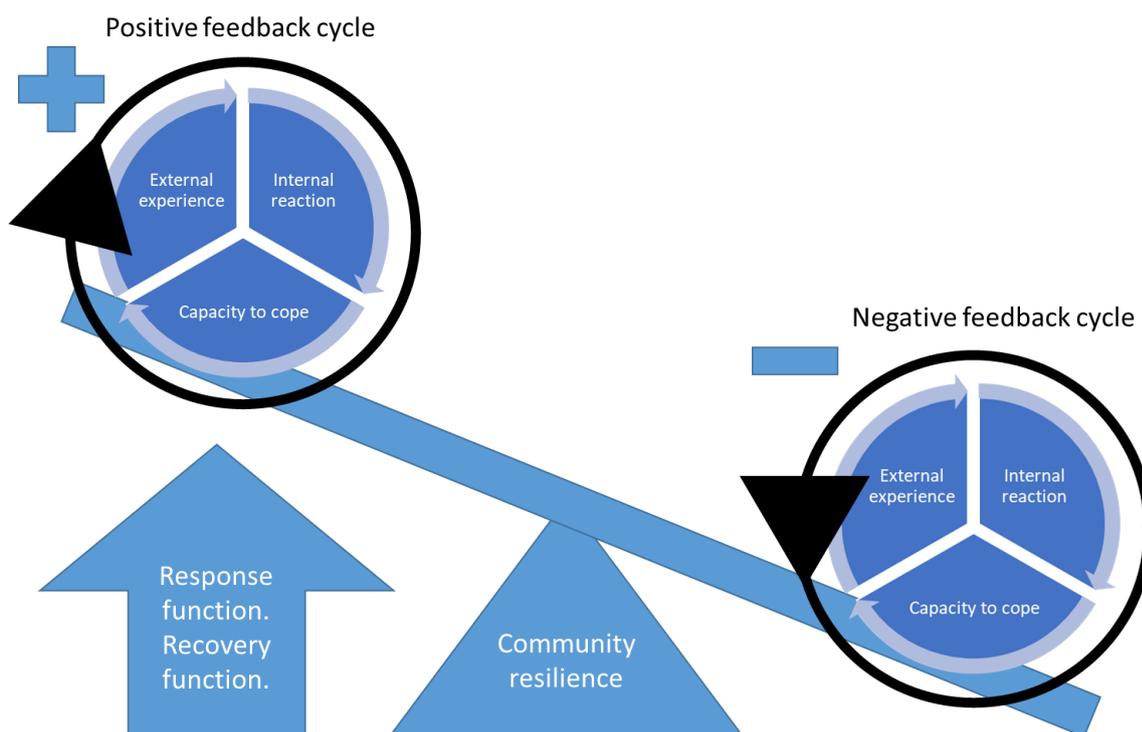


Figure 9 Illustration of the additional support required to ensure that a community maintains its capacity to cope with the direct and indirect impacts of NHE or other emergency using response and recovery functions to reinforce and create a positive feedback cycle

Table 4 summarises the principles as laid out in the Scottish government guidance of an emergency response and the recovery process. The following two subsections how different sectors and organisations can contribute to these objectives by linking how their capabilities and resources could contribute to either response functions or recovery functions (Baxter, 2020), based upon the organisations own objectives/purpose. This assessment has been made using the findings from the semi structured in-depth interviews and the online workshops.

Table 4 Principles of responding to and recovery from emergencies as set out in the preparing Scotland guidance (Ready Scotland, 2020a).

Responding to Emergencies: Scottish Guidance on Recovering from Emergencies P 6 (Ready Scotland, 2017b)	Ready Scotland: Recovery from Emergencies in Scotland P 7 (Ready Scotland, 2017a)
During an emergency it is essential that there is a shared understanding of multiagency coordination arrangements.	RPs consider recovery as a key feature of response to any emergency
Protecting human life, property and the environment	RPs should prepare for managing recovery as an integral part of their generic arrangements
Minimising the harmful effects of the emergency	The lead for managing recovery, through the RP, lies with local authorities

Managing and supporting an effective and coordinated joint response	Recovery should commence at the earliest stage of response to emergencies
Maintaining normal services as far as is possible	Those managing recovery should consider the appropriateness of its management arrangements at all times
Supporting the local community and its part in recovery	The management of recovery should embrace local political processes and structures
Managing and supporting an effective and coordinated joint response.	The community has a key part to play in its own recovery
	Flexibility, adaptability and innovation lie at the heart of the management of recovery.

Strategic objectives

Different organisations have different objectives, those classified as category one and two responders, Table 2, have clear objectives and responsibilities under the Civil Contingencies Act (LARGS, 2017). As do voluntary groups actively engaged in community resilience activities.

If third sector organisations and private businesses are to be involved in resilience, then a useful approach could be to identify what those organisations want to achieve and how these may be engaged with to support community resilience by supporting the delivery of response and recovery functions. It is beyond the scope of this research to examine each individual organisation or sector but thinking differently and engaging with TSI's presents a way to assess their capabilities, see Table 5.

Table 5 Summary of sectors and organisations with a potential role in delivering recovery and response functions

Broad overview of organisations, as set out in Table 3 and category	Potential			Capacity to support or provide response or/and recovery functions				
	Response Phase	Transition Phase	Recovery Phase	Resources	Natural environment	Physical infrastructure	Social capital	Capacity and skills
Green: indicates high potential involvement Yellow: indicate moderate potential involvement Blue: indicates potential capacity to provide support in this area								
Local Authority	Green	Green	Green	Blue	Blue	Blue	Blue	Blue
Other category one responders	Green	Green	Yellow	Blue	Blue	Blue	Blue	Blue
Category two responders	Green	Green	Green	Blue	Blue	Blue	Blue	Blue
TSO General, community	Yellow	Green	Green	Blue	Blue	White	Blue	Blue
TSO Wellbeing and mental health, other	Yellow	Yellow	Green	Blue	White	White	Blue	Blue

TSO Support- practical	Yellow	Light Green	Light Green	Blue	Blue	White	Blue	Blue
Private sector Local General	Yellow	Light Green	Light Green	Blue	Blue	Blue	Blue	Blue
Private sector Resilience	Light Green	Light Green	Light Green	White	Blue	Blue	Blue	Blue

An organisation which works with the business community to promote their role in community resilience is an interesting example of this type of approach, is used by a participant in this research. They work with large organisations and small businesses to facilitate the transfer of resources and skills which these organisations possess to enable them to support communities during an NHE. This involves matching capabilities with needs:

“what we’ve observed is quite often businesses sometimes responding appropriately, not necessarily with an intent but donating goods that aren’t necessarily appropriate to the community that they are wanting to support or not timing it particularly well and creating work for the voluntary community sector who don’t have the resources to be dealing with the private sector who are making mistakes.”

This is a key challenge in terms of encouraging resilience and utilizing agencies and organisations which are not within the resilience structures or include in resilience plans. So even if organisations have the capabilities that are needed, they require organising and managing appropriately. There is a danger that this may add an additional burden onto those leading responses or voluntary sectors already involved in the response. So, finding a way in which to utilise what is within community well, without adding burdens to those already involved is a key challenge. If this is not handled carefully it risks undermining recovery through the generation of frustration and resentment. Managing and mitigating these negative emotional impacts is just as important for an effective recovery as managing, logistics, resources, and coordination.

A way of accomplishing this could be through a transitional phase as identified in the related research project (Baxter 2020). This could involve a formal transitional process of impact assessment of what is needed and who has the capabilities to supply it, before activating the formal recovery phase recommended in Scottish government guidance (Ready Scotland, 2017a).

Response phase and recovery phase

During the response phase category one and two responders have very specific roles to fulfil, depending upon the nature of the emergency. For example, SEPA, local authorities, fire and rescue, the police, etc which are managed strategically by the RRP, LLP or the local body which is leading the response which will be decided based on the emergency event’s severity, geographic extent and duration (Ready Scotland, 2017b). This is well established process, a generic representation of which

is shown in Figure 10 this diagram was critiqued during the online workshops finding it to be a valid model, one participant commented, “that is basically what happens during RRP activation”.

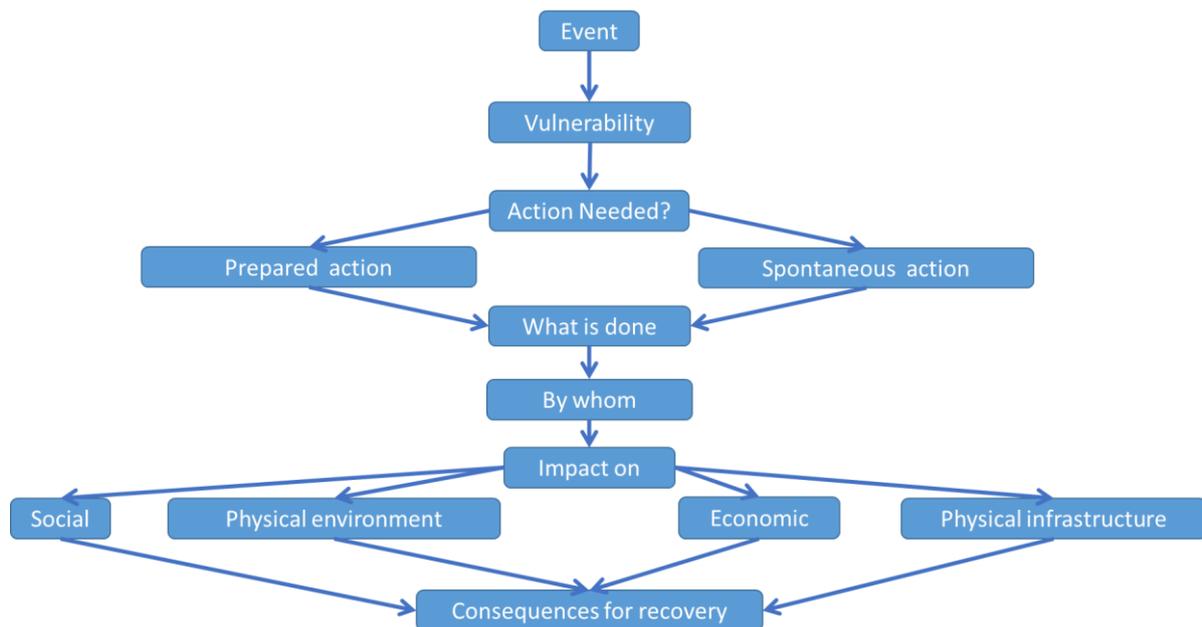


Figure 10 Flow diagram representing processes of activation from initial awareness of NHE or other emergency, authors own work. The validity of this flow diagram was endorsed by workshop participants who were asked to critique it.

Most research participant agreed that the activation of a response usually works well, however the effectiveness could be improved; by a more consistent processes across area boundaries, with additional resource, and by better communication and engagement across all sectors and with communities.

The primary purpose of the category one and two responders is to protect, people (including themselves), property and the environment. The level physical damage which result from the NHE is proportional to the level of resources required to recover from these impacts. The level of harm to other areas may be intangible and difficult to quantify and types of resources and capacities to meet these needs have the potential to have long-term effects which will also have a direct impact on any communities capacity to engage in the recovery process.

Harm and damage to individual and community well-being not only results from the direct impacts of the emergency they can also be caused the actions and decisions of those involved in the emergency response. This is an indirect impact is therefore a function of recovery, which occurs in the response phase. Both response functions and recovery functions are improved effective use of twelve mechanisms previously identified(Baxter, 2020) and confirmed by the thematic analysis of the data from the in-depth semi structured interviews, from which thirty-four common themes were identified all of which are related to the twelve mechanisms ,Appendix Figure 1. Which were further reinforced by participants during the online workshops.

The mechanisms are:

- Agency
- Altruism
- Competency

- Efficacy
- Empowerment
- Engagement
- Experience
- Information
- Involvement
- Knowledge
- Observation
- Understanding

Mitigating and minimising intangible harms and long-term economic impacts is more challenging than assessing physical damage. Some intangible harms may be better addressed through the inclusion of organisations and groups not currently part of RRP or LRP and thus outside the current approach to resilience, in the context of NHE and other emergency events. However, as one research participant raised, “local authorities are already working with TSI they know about them there involved in delivering services,I think they should be in the room when RRP meet”

Use of the mechanisms, listed above, by ER and RP could be supplemented and improved by effective coordination and inclusion of TSO. With more thought when preparing, planning and training for emergency response these mechanisms can be absorbed into current processes and ways of doing things during an NHE and in its aftermath. This is expanded upon in the next section. Identifying whom has the capability and resource to use and support the use of these mechanisms both in the response phase and recovery phase, and as functions of response and functions of recovery is explored in depth in the rest of this section.

Response functions

The majority response functions lie with category one and two responders as set out in the Scottish government guidance and should always take priority when people are at risk from harm. These is especially true during the response phase, but once the active event has ceased other organisations may be better placed to address direct harms caused by the NHE. This approach is embedded within the Scottish Government guidance and their role in resilience, as shown in Table 3.

For example, effectively engaging with, spontaneous and convergent volunteers. These individuals or/and groups are often reacting to a natural human instinct to give assistance when they see others in trouble. Managing convergent volunteers well is a challenge which is ongoing and was raised during one of the online workshops. Depending upon the situation, type and severity of the NHE being experienced there is a role for the third sector and members of the community to engage with this expression of altruism, need to act, and desire to be involved which is a direct result of their observations of the NHE or emergency as it unfolds. TSO such as the Rotary club, religious organisations, people involved with local unity groups, e.g. Scout and Guide leaders, youth clubs, local hall management committees, all have the potential to be utilised to direct and manage this expression of goodwill in an appropriate way, using the capabilities of those involved with these types of organisations.

This approach may not always be available, an example given by a research participant was when people living close to M80 gave hot drinks and food to drivers trapped in their vehicles overnight when the “Beast from East” struck Scotland in 2018. In which case communication information and use of social media and other media to convey information to members of the public may be the only form of engagement available.

This is just one example of the use of TSO whose local knowledge of the social make-up of an area may have which may not be available to category one and two responders. A challenge with the use of local community groups and members is the dynamic of local politics and attitudes, as one interviewee put it:

“there’s another element of the community who are very anti-establishment if I can put it that way and get frustrated... and articulate those feelings directing them towards the council.”

Responses to emergencies do require specialist skills, and these lie both within the public and private sector, in blue and red-light responders, and TSO. The specialist search and rescue skills, possessed by mountain rescue teams who are often deployed in emergencies, the ability to restore utilities, these are capabilities required in response to the emergency and as such are response functions.

Other forms of harm such as mental trauma and physical trauma can be addressed by TSO and other specialist groups, addressing these are also functions of response, which should be dealt with immediately if possible. For example, having organisations involved in counselling and used to dealing with traumatised people, in evacuation centres. There is scope for the third sector to come support an emergency response, such as organisations who support people recovering from alcohol or drug problems or other social challenges have a potential role here. Addressing and mitigating this form of harm immediately will have knock-on effects on the capacity of individuals and the community to engage with its process of recovery and the functions necessary to achieve this. In addition to this other example of the roles which these groups have their capabilities to fulfil i.e. providing hot food and drinks and coordination of people.

Like every NHE or other emergency what is needed depends upon the emergency event, a rapid assessment needs to be made and actions coordinated. Situational awareness and understanding of what is happening is key. This is an important role which individuals, community resilience groups and others can support. Social media provides a useful two-way way to engage with individuals directly enabling them to feedback information to category one and two responders. This is an approach which has been usefully deployed by the Dumfries and Galloway Council resilience team, Dumfries & Galloway Virtual Operations Support Team¹⁴ (DGVOS).

When asked about what their community resilience group’s role and responsibilities are during a response an interviewee responded:

“So, it’s eyes and ears and sticking plaster. So is tell the rest of the community that we are acting to give them updates of what’s going on.... It’s being safe but it’s also saying to the outside world what’s going on. And the Fire Brigade might be telling us “we may not come straight away because we’re elsewhere in the community,” same with the council it might be that all of the villages are being hit and because we have managed to protect the care home and protect vulnerable houses they may come along second. So, we just need to tell them what we can see on the ground as experienced people”

Actions and decisions which are taken in response to the direct impacts of an NHE, or other emergency, are important for the efficacy of recovering. This is often a function of how these actions are undertaken. When asked about category one responders arriving and leaving, community

¹⁴ <https://www.facebook.com/DGVost>

resilience group research participants were unanimous in that how this was done had an impact on them and affected their attitudes towards that agency.

“Yes it would be nice if the blue lights were actually....The handover process of them leaving is actually if they had come and seek us out and so we aren’t just going “Where have they gone? Where have they gone?” That would be absolutely wonderful.”

The communities do recognise that this may not always be practicable and acknowledge that.

“I mean I’ve said to you before, I think they probably were dealing with loads of different situations. I mean there were other areas that were as badly as affected as we were... Well there should have been some communication. It may be that council officials couldn’t travel, because of flooded roads and all of that but there was no communication.”

Trust, relationships, communication and cooperation, were dominant in the research data collected. All of those interviewed who are professional resilience practitioners, either directly working as resilience coordinators or practitioners connected to RRP, LLP, or local authorities (Scottish Council¹⁵ areas), in the third sector or private sector, emphasised these points repeatedly. That resilience is about relationships, “we also have to work very closely in cooperation with others.”

They emphasised the importance of knowing local communities both in terms of the risks but also about understanding the people and the different characters of different communities. This engagement with, understanding, and knowledge, can influence a community’s perceptions of how and why things happen, potentially supporting the recovery phase. To ensure that communities don’t tip over from being able to cope (with external support) to being unable to cope (as external support is gradually being removed).

There also the rebuilding requirements due to physical damage to infrastructure and private property. A large part of this work is taken on by the local authority and the appropriate department, as well as utility companies with the specialised skills. Who is responsible for what depends upon what has been damaged. These material and physical rebuilding efforts could be either defined as a function of response or a function of recovery. Often the larger work will take place over a longer timescale in recovery phase. Using the definitions proposed here would mean that clean-ups work, and temporary repairs and patching are classified as response functions. Permanent repair and rebuilding would be classified as recovery functions.

Recovery functions

Recovery functions, like the recovery phase, are more complex than response functions. Recovery and response functions can occur simultaneously. Often the recovery element of a response function is about people management, communication and engagement, and how the responses is done. This is all about the ERs and RPs on the ground at the time dealing with the events it is about people management relationships and it relies heavily on preparation, planning and emotional intelligence.

Recovery functions are about recovering from the NHE or whatever emergency event that that community has lived through or is still living with. Recovery functions and the recovery phase can start as soon as an awareness develops that an emergency may be about to take place. This is

¹⁵ <https://www.gov.scot/publications/local-authority-maps-of-scotland/>

particularly important during chronic long-term emergency situations, such as the Covid-19 pandemic.

“Recovery for me, is about people. It’s about what we do, how we do it, how we communicate and how we engage and that we absolutely recover where we, as a community, need to be.”

Some recovery functions are clear, once decided upon, such as those related to rebuilding and infrastructure. The process of replacing resources which have been used during the emergency should also be straightforward to achieve. The appropriate organisation who possess the appropriate capability and skills can be deployed, assuming resources are available.

Learning and debriefing after an event is a function of recovery, this is a very well-established process within the Scottish government resilience framework and all interviewees mentioned that they engaged in some form of debriefing process to learn and revise their planning and preparation. It was also highlighted that this process enabled RP and ER to recover themselves mentally and “decompress” with others. This process of recovery may also require specialist expertise when RPs and ERs are exposed to particularly traumatic or intense events which can be provided by TSO as well as the public sector who have the capabilities to meet this need.

Longer term learning and lessons such as public enquiries and other forms of investigation when things go wrong, the event is catastrophic, or there is intense dissatisfaction with outcomes are also a function of recovery. This learning often requires independence from government to re-establish trust and gain an outside perspective on an event and learn fundamental lessons. Whom has the capacity to conduct this type of learning typically lies within the remit, national government.

A fundamental recovery function is having access to, knowledge, information and resources, one research participants experience was:

“I would want them (the local council) to come to was and say look, we realise you’ve had this disaster, here is a set of measures that we (*the local council*) can bring to you straightaway, to help overcome, you know, and to help you recover, but that wasn’t the case. I mean it was the insurance companies ultimately that really got involved, and that’s not appropriate I think, to be honest.”

This is a challenge for community resilience, in particular RP within local authorities, whose goal is to support people to help themselves (Scottish Government, 2019a). However the very nature of the emergency necessitates the support from outside the community (Vallance and Carlton, 2015) so supporting people to see what they can achieve themselves and recognising where they do need support is a challenge which depends upon the community itself. For example, it was mentioned by interviewees that different communities had very different reactions when affected by an NHE or other emergency. They just did not want support they had high levels of resilience they just wanted to be left to get on with it whereas other communities affected by events of similar severity expected support from the local authority. Typically, they characterised more resilient communities being more rural and isolated in nature and more used to relying on themselves, it being their way of life.

This highlights these communities access to knowledge, information and resources, those not needing or rejecting help had those resources within their communities to do the things that they needed to do compared to less resilient communities, that arguably do not have these things. Things as simple as not knowing who your neighbours are reflected this lack of this type of intrinsic resilience. This is where TSO can lend support, frequently mentioned was the support of Scottish Flood Forum in aiding communities to recover and in enabling them to setup and think about their

own resilience. Especially when communities are receptive to this kind of intervention because of their personal experiences.

An example given was when a local rugby club came to help a community with clearing up their houses. This lies within the response function definition but illustrates how wider civil society and altruism support communities and generate good feeling.

“They happen without any coordinated plan in place. It was just the humanity of individuals, in their willingness to help, which I think was excellent”.

Scottish climate change adaptation program

In terms of response and recovery within the bounds of this research, climate change adaptation plays a significant role in how communities recover. If recovery is undertaken in accordance with the Scottish government’s climate change adaptation plan and complies with the key policies and legislation which have been put in place as part of the Scottish government’s climate change plan (Scottish Government, 2020) then communities who have been impacted by NHEs will become more resilient to their effects in the future through their long-term process of recovery. How policies and other drivers influence this process is illustrated in Figure 11 .

However as previously stated attitudes and emotions and engagement all play a role in this process often people just want to “get back to normal” but by its very nature this program necessitates change. Change is challenging even more so at times of stress, and so it should be expected that communities may feel ignored or side-lined if not consulted (Fazey et al., 2018).

A transitional phase presents an opportunity to discuss with communities and engage with them about what they want their community to be. Again, research participants emphasise this has been vital for community resilience understanding and engaging with the community so that the recovery met their needs. Using this and developing it to engage with and deliver on SCCAP would meet this dual-purpose of community resilience and climate change adaptation.

Engagement and understanding of local communities and working with them which is a skill and strength of resilience practitioners could potentially be better utilised during the recovery official process. Unfortunately, one research participant had had the experience of being excluded from the recovery process:

“They (*the council*) are dealing with the recovery really on an organisational basis and not really, as usual, picking up the potential for working collaboratively. That’s something that’s spring fashionably difficult for us here in the resilience team to accept. In effect we have been side-lined from the wider council recovery effort or supporting the wider council recovery effort. I can see that it is made difficult for us, not personally, but as an organisation with our partners, particularly going forward, I think that has the potential to undermine the partnership approach we’ve used very successfully with resilience.”

All research participants recognise the importance of climate change in community resilience in terms of it being causal but also the need to adapt to it. Planning regulations, not building on floodplains, as was ensuring that individuals’ properties were restored so that they were more flood resilient and protected, were given as examples as adaptation to climate change. Overall, it was acknowledged that Scotland needs to change to cope with the impacts of climate change. This process is challenging to achieve but utilising moments when communities are in the process of recovering is an opportunity to do this in such a way that complements SCCAP.

Engaging with TSI's in this recovery process and thinking about the economic impacts on businesses and developing and supporting the local economy through this process is an approach, identified previously (Baxter 2020), which has the potential to deliver tangible benefits to communities and support their long-term recovery.

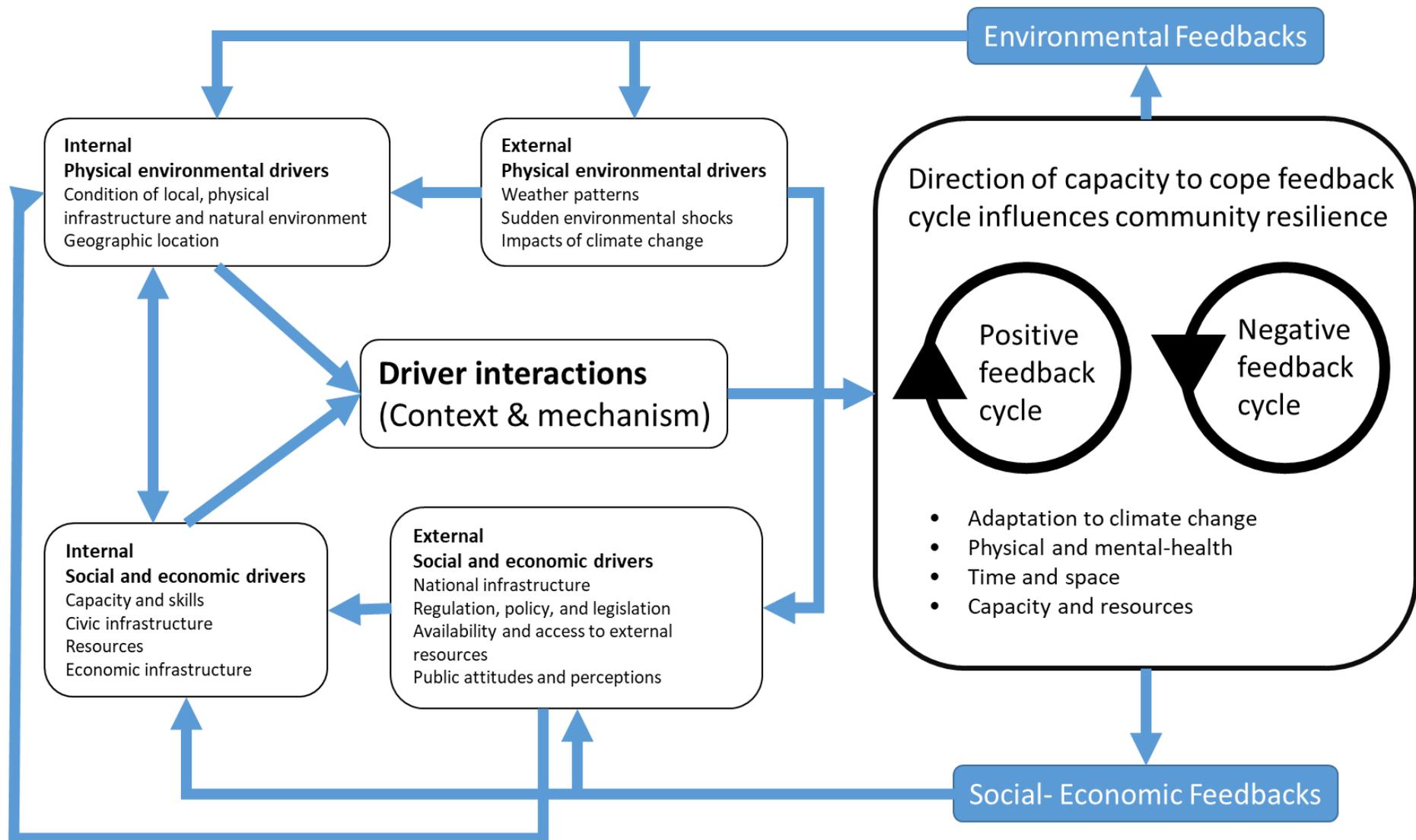


Figure 11 Diagram showing the connection between external and internal drivers which impact on resilience community to climate change, and general overall resilience (author's own work)

Summary

This section has shown how response and recovery is an integrated and simultaneous process which many organisations and sectors have the potential to support. This process needs to be managed carefully utilising resources appropriately through identifying needs and engaging with communities. Resilience practitioners possess the skills to support the SCCAP as part of the recovery process through engagement and that a transitional period could be a useful approach to support this process to become integrated into a community's long-term recovery.

Key Points

- Community resilience and SCCAP's seven outcomes are interrelated
- Scottish government policy influences the context in which community resilience takes place
- A community's resilience depends upon the ability to access and utilise internal resources and capabilities and external resources and capabilities
- TSO and other organisations including local businesses, SMEs and private corporations, possess resources and capabilities with the potential to support communities respond to and recover from the impacts of NHEs and other emergencies which are not yet being utilised
- TSI present a potential route through which category one and two responders using pre-existing infrastructure of response, can engage with these underutilised resources and capabilities
- The purpose, objectives and strategies (e.g. Corporate social responsibility) of some public and private organisations, complement the seven SCCAP outcomes, whom could be engaged with to support communities process of recovery in a way which supplement the roles and responsibilities of category one and two responders
- A formal transitional phase as potential to support the maintenance of community capital, into the longer-term process of recovery
- Communication with communities explaining what is happening and why, is necessary as the response to an NHE shift is towards longer term recovery activities

Section 5: Objective 3: Identify ways in which community resilience practitioners can integrate long-term recovery preparation to support communities to recover in the long-term in ways which support the SCCAP

Introduction

The purpose of this section is to explore what RPs and ERs can do now to embed the processes of recovery into their preparation for NHEs or any other emergency, which complements the seven SCCAP outcomes (Box 9).

Figure 12 has been revised from a diagram used as part of the online workshops (Slides Used for Online Workshops P72). It represents the influence of RP and ER on the outcomes of two phases of resilience (Baxter, 2019, Cabinet Office, 2019), with the addition of a transition phase. The “known” actions and decisions taken by RP and ER are represented by the rounded rectangles and the “unpredictable” outcomes are represented by the cloud shapes. The actions and decisions comprise of mechanisms and, occur in, and influence, the NHE context (Figure 11).

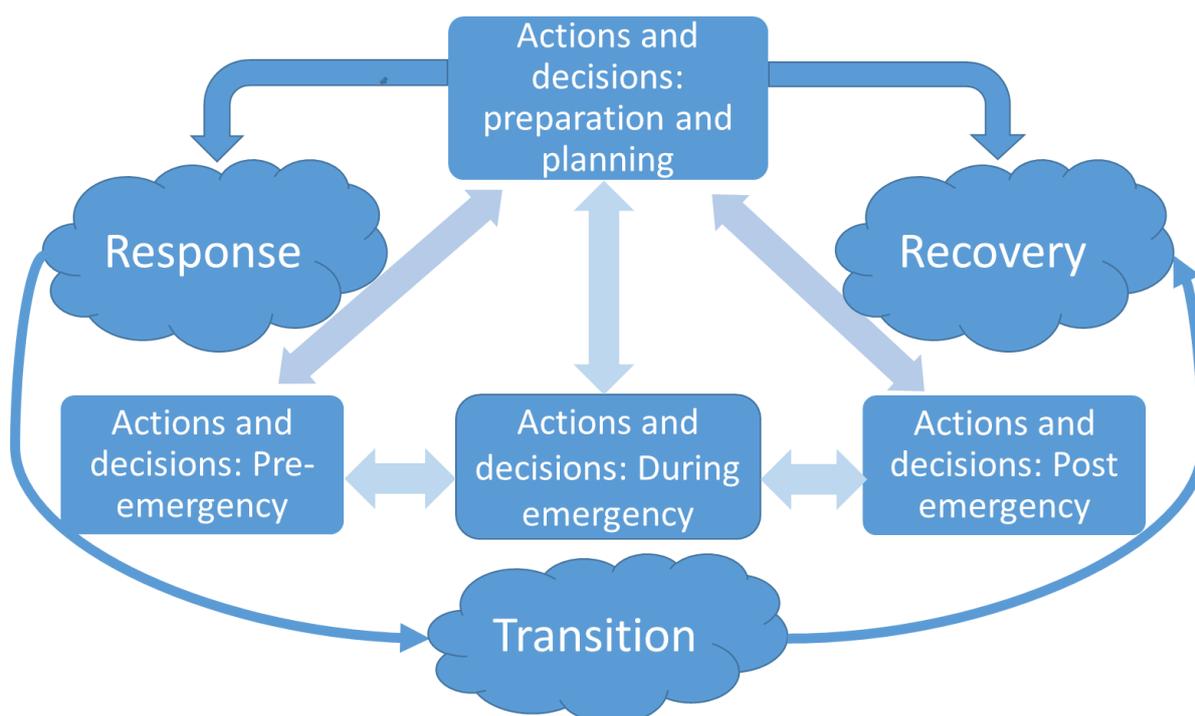


Figure 12 Simplified overview of known actions and decisions represented by rounded rectangles and the unpredictable outcomes, represented by the cloud shapes, which are influenced by these actions and decisions.

The changes that have been made to Figure 12, are; firstly as a result of the online workshops a separate “actions and decisions: pre-emergency” box has been added. This is because a workshop participant, and agreed by others in that workshop, that a pre-emergency is a specific type of response which should be separated from responses when the NHE or emergency is taking place. It was also noted that it was not always possible to have this pre-emergency phase and was dependent upon the nature and type of the emergency. The second change is the addition of the transition

“cloud”, to represent this proposed transition phase, as a result of findings from previous work (Baxter, 2020) and has been reinforced by the data collected during this project. Which suggests that a transition phase would be an appropriate and useful addition to the guidance on recovering from emergencies.

Preparation and planning: Overview of interview data

The interview data collected for this project was gathered from self-selecting participants which spanned individuals from; RRP, local authorities, regional and national TSOs, mountain rescue and British Red Cross, and local community resilience groups. Participants’ descriptions of what they currently do in terms of planning and preparation broadly follows the Scottish government guidance documents available on the Ready Scotland webpage. Participants did flag up some issues and areas of improvement, but in general the picture given from the interview data collected for this project is that preparation and planning can work well when allocated the appropriate resource.

There are issues and challenges, resilience is applied unevenly across Scotland, it was mentioned that some areas do not take it as seriously as others which is a challenge. This was largely a result of their geographic location and the areas level of vulnerability to NHEs. If an area had not experienced severe impacts from recent NHEs then it was not seen as a priority and resilience is neglected. Also, the interview data reflected a belief expressed by all research participants that typically rural communities are more likely to be intrinsically resilient compared to urban communities. This reflected the idea that rural and more isolated communities have lower expectations of what outside agencies will do for them relying instead upon the communities own internal, social networks, resources and capabilities. This compares to the belief that urban communities and communities made up of people who did not typically work within them or have strong connections to them had a greater expectation that local authorities would come and help them indeed that it was their responsibility to do this. These are a widely acknowledged challenges and beyond the scope of this research.

Regional Resilience Partnership

Reflections from RRP resilience coordinator on their role in planning and preparation:

“it is coordinators it’s very much people management job as much as anything else. So we get people around the table, we cajole, we coerce, we convinced, we communicate, we massage egos , and we manage people, really to get things done and to help them get those things done so they own the training, the exercising and the planning part of it but then we can help them with that... It’s really of the members, for the members. It’s their programme, so it’s that kind of hands off but at a distance, if that’s not a contradiction in terms.”

“I like to think that we are the conscience of the group sometimes. Might give them a nudge and a push along. To make sure that they’re doing things because they’re all busy people and their all doing their day job as well as.”

When asked about how frequently plans and protocols were reviewed it was mentioned that often plans were not reviewed and revised, though this interviewer was in the process of creating rolling review process which could take place annually and it would be their role to ask each LRP if this would be achieved. As mentioned by other interviewees plans and protocols were always reviewed and revised after any incident to ensure that lessons were learned and plans, and protocols were fit

for purpose. This is a well embedded process within local authorities, LRP and members who sit on RRP.

What this participant wants to accomplish in terms of preparation and planning for their RRP area is:

“what I’m trying to achieve is consistency. I’m trying to get our point where all the resilience partnerships in the xxx of Scotland look, feel, smell and touch the same way..... My hope is that they will be as uniform and similar as possible (given the constraints and complications of geographies and local authority structures).... If we have a situation where there is a blended resilience partnership between xxxx and xxx (crossing LRP boundaries) for example and they wanted to stand up a partnership... May well be a combination of membership of both of them. So therefore, they should recognise each other structures, plans and methodology and so on”

Scottish council resilience practitioners

The Ready Scotland approach to community resilience is a hub and spoke approach to resilience. Local authorities can be characterised in a similar way acting as a hub for local infrastructure and services. This is reflected in the in the interview data from resilience practitioners who work at Scottish Council level (local authority).

The local authorities, resilience practitioners, were very aware of the interrelated nature of their role in terms of business as usual and the impact that any event would have on infrastructure and the capacity to deliver services. Coordinating, making sure that during an event that people could turn to them to get relevant information, doing the background planning making sure that everything was in place to ensure that those who will be leading the councils response have the key skills they need. Their work is very focused on the efficacy of the response phase making sure that things run smoothly in a coordinated way and that information and knowledge is disseminated to those who need it when they need it.

All participants from this sector spoke about their involvement with understanding the risks within their area, this was the role of one individual interviewed who characterised their current role as being about collecting the data understanding where the vulnerabilities lie both in terms of physical risks and also social risks which may exacerbate that vulnerability for individuals and then planning for it. Others interviewed also spoke about the identification of vulnerabilities within their areas and the importance of this for their planning. The structures within councils varied but the cornerstone in terms of resilience and the civil contingencies act for local authorities is about emergency planning and preparing the councils response. Some interviewees spoke about the importance of identifying specific risks while others had a general emergency plan believing that this gave them the “flexibility to stand-up the right people and within the right structures”.

In terms of reviewing plans and protocols again this varied between interviewees but typically there seem to be an annual review of plans in process, but all interviewees said that this happened more frequently whenever any incident happened to ensure that plans were still fit for purpose and incorporate any lessons learned from that incident.

Identifying training needs and delivering training including real-world exercising, scenario planning and desktop exercises both to individuals within the councils and in partnership with LRP was a core part of council RP’s work. In addition to delivering the specific skills this was viewed as a fundamental way to build confidence and improve communication and coordination with external

partners. Relationships and confidence themselves and in others to do their job was frequently cited as part of what training achieved particularly in live exercises.

Another key role was to build relationships with partner agencies typically through local resilience partnerships and other forums the purpose behind this is to “to make sure that the right services within the XXX counsel are stood up.” Building and establishing trust and reinforcing relationships are a cornerstone of being able to respond well. As well as building relationships with other agencies preparation and planning also involved engaging with communities this had a dual purpose firstly to raise awareness and promote the ethos of community resilience and to encourage communities to engage with the community resilience agenda and secondly;

“from our perspective it was about working together, working in partnership, being clear about what our roles were, what their roles were and also managing expectation, because that can be really challenging given where we are.”

Managing expectations of local communities and members of the public was a theme that emerged repeatedly from this group and from participants in the online workshops.

Local community resilience volunteers

The interview participants volunteered to be involved in this research were highly engaged and proactive in their local groups. This is not representative of the level of engagement across all types of communities in Scotland. Typically, in terms of planning and preparation their main concerns were exercising, and gaining the materials resources and equipment that they needed for their response. What was noticeable was that all groups had had live training events cancelled or had these not taken place as a result of the Covid-19 pandemic. They saw the purpose of these training events to up skill themselves and other group members and to engage with professional RP and ER. All were positive about the support from Scottish flood forum which they saw as vital to their ability to understand what was expected of them how to achieve this and how to access resources. These groups establish networks the use of social media and newsletters was part of this process.

A challenge mentioned by interviewees from this group was the difficulty in getting people to “turn up” and to remain engaged. There was some level of disappointment about invited ER not attending any meetings or meeting with the group at all though this again was mixed. Also experience as with their councils were mixed. Also, this form of training and preparation is invaluable as it enabled them to learn for example one interviewee mentioned the importance of having scissors to cut open emergency packs, something very simple which could make a huge difference to their ability to respond. The importance of identifying key people within the community and connecting with them and getting people involved was viewed as fundamental to these groups in terms of effectiveness and local knowledge.

All of these groups had created their own risk assessment plans and followed the guidance on doing this so that they knew what the risks were and the people who were vulnerable within their communities(Ready Scotland, 2020b). Though it was mentioned by one organiser that there was no consistent protocols or guidance which they felt they could easily use for their community group. So, for these groups preparation and planning was identifying the risks and understanding who in their communities was vulnerable to those risks and enabling themselves to respond appropriately in partnership with emergency responders. It is About learning training accessing resources and engaging with their own local community, and external organisations.

Third sector organisations

Those interviewed from this sector were national organisations, either UK wide or Scotland wide. This is a diverse sector those interviewed for this project did have similar experiences and their views and experiences were typically that what they wanted to achieve in preparation and planning was, connectedness and engagement with local communities and responsible agencies, to enable them effectively to meet needs by providing; resources, skills and expertise to communities to support response and recovery activities necessary as a result of that community having experienced and NHE or other emergency event.

All these interviewees were frustrated by the inability to engage with category one and two responders or be involved in resilience partnership planning. These specialist response volunteers had specialist training in place to ensure that they had the skills and capabilities necessary to respond effectively, one interviewee saying, "I always aim for us to be more highly skilled than needed".

Again, all interviewees saw building relationships with one another and engagement and awareness of what they had to offer a frustrating process. It was something that they had to actively go out and participate in but were finding it challenging to get traction. There was recognition from those involved in the official processes of resilience that they did have something to offer but often this was not then engaged with. This was summarised by one interviewee as being a bit like a chicken and egg situation. Typically, organisations did get buy in and support from official organisations, but it was patchy and not uniform so ultimately, it's about building trust between individuals and people knowing that these organisations are ready, willing, and able to help. These organisations understand that this was challenging but again and again mentioned the frustration of communication and coordination with category One and two responders on the ground.

Another key area of this sector was raising awareness of the risks of NHEs and climate change to businesses and local communities and supporting them to build their own resilience to these types of emergencies.

Based on this small sample, what is currently taking place in the area of preparation and planning works well in some areas particularly with those already involved in the formal resilience structures such as RRP and LRP. Scottish flood forum has good traction with communities and is a positive example where TSO community and resilience are working well. A key stumbling block is awareness of and engagement with the wide-ranging of TSO and private businesses who want to be engaged in community resilience and have skills and resources which could be utilised to support communities. Addressing this specific challenge beyond the scope of this report however it does have implications for long-term recovery.

Planning and preparation activities are focused on the response phase and the active emergency event. This process and the ability to learn from what has happened is well established however the same approach does not apply to recovery. Some preparation is undertaken particularly at the local authority level but beyond this what happens as resources are withdrawn and the processes of recovery begin is not necessarily included in any meaningful way. There is scope for this to be included in pre-existing structures and processes in a way which complements the seven SCCAP outcomes.

Private sector resilience practitioner

The private sector, private contractors, and small and medium-size enterprises (SME) who possess specialist skills and capabilities have a role in resilience. Particularly in providing resilience expertise and knowledge to organisations who do not possess this specialist knowledge themselves. The research participant who was interviewed for this project had a background in the police service and had a long track record of supporting other businesses and organisations to enable them to manage emergency events, from terrorism through to flooding. The participant had experience of working with academy schools in England and used academies as an example of what they provided and the challenges that they faced as resilience practitioners when working with clients.

The service that this participants company provide was putting in place an incident management system which enabled the client to identify risks put in place plans and protocols to meet them and provide training for staff in use of the system and also how to respond to different types of emergency events. The incident management plans have tasks allocated to individuals. The key thing about this system was the ability for it to communicate, record actions and decisions in real time and enable others to view what was happening as it happened from within the client organisation depending upon level of access and clearance. This enabled responses to be coordinated across the organisation in real time and all actions and decisions to be recorded as they happened. This is important for learning and understanding what had happened during an emergency.

Because they are providing a service to a client the objectives and priorities of the organisation are key for example in schools it is about safeguarding. Providing a service to organisations to ensure that they are resilient to emergencies improves the overall resilience of the wider community. This in turn will support long-term recovery as having robust resilience organisations which are able to come through emergency events which impact on the community will support the whole community by being able to continue to provide whatever service it provided to that community.

Context, mechanisms, SCCAP and long-term recovery

Figure 13 shows how the local contexts, sits within the national context which in turn is influenced by the global context, this figure is a combination of the two diagrams from section 4.

As can be seen there are internal and external drivers, internal being those which can be influenced, either by global, national, or local, actions and decisions. These drivers' interactions lead to outcomes as a result of the interaction of the context and mechanisms in which they occur.

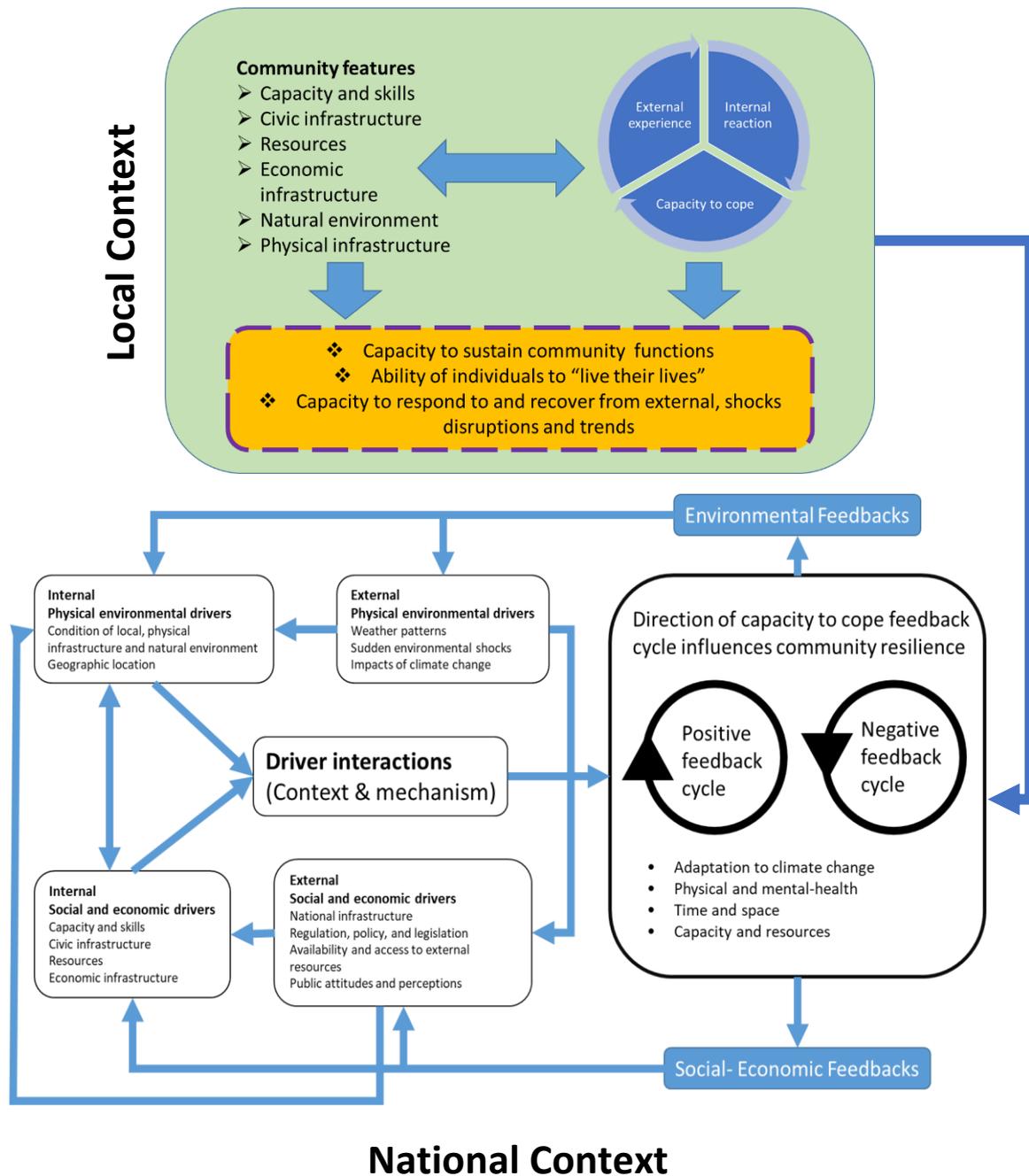


Figure 13 Representation of how local contexts sits within the wider national context and is influenced by and in turn influences that context.

The seven outcomes of the SCCAP, which Scottish government aspires to achieve are affected by the capacity of communities across Scotland to cope with the impacts of climate change which as previously argued is interrelated to community’s capacity to cope with NHEs and other emergency events. National policy and global agreements affect the context in which local resilience sits.

Figure 13 shows the local context and the national context in which this is embedded and how external drivers and internal drivers play a significant role this is where SCCAP influences are significant and climate change because of the consequences not causes approach (Ready Scotland, 2017b) is viewed as beyond their remit. Reframing the need to adapt, as a consequence of NHEs

becoming more frequent due to climate change, could be a useful approach to allow resources to be put into recovering beyond maintaining business as usual. This would potentially shift and influence the context for recovery.

Context is created in part by the by the policy environment which is without the control of the RPs and ERs though they are able to influence it to some extent depending upon their organisations ability to access policy and decision-makers , for example Scottish Flood Forum and the business resilience network actively engage with policymakers. Organisations such as these actively seek to improve policy and processes for better response and recovery for individuals and local communities. Policy can also be influenced in the aftermath of events through the debriefing process and when independent enquiries are instigated where individuals and organisations are able to give evidence. Parliamentary committees holding enquiries(The Scottish parliament, 2020, Parliament, 2020) into relevant areas of work are also a route through which ERs and PRS exert influence decision-makers. In addition to this the context of recovery is also supported by private organisations and businesses and their individual resilience also supports the capacity of that community to recover into the long-term. This can be supported both by private resilience practitioners and local authorities.

This purpose of this research is to explore what RPs and ERs can do now within existing policy and guidance structures. There are three requirements to exert and in fluence on a community's resilience. These are shown in Figure 14 and were identified in the previous linked research. These three requirements were discussed in the online workshops and participants agreed that they were necessary and the figure below has been changed from the original slide (Slides Used for Online Workshops P74) based upon their comments. When considering what ER and PR can do in their preparation and planning which will support a community's recovery that compliments the SCCAP. The following needs to be asked. In which areas do PRS and ERs have; the power to affect change, the capacity to act, and motivation to act?

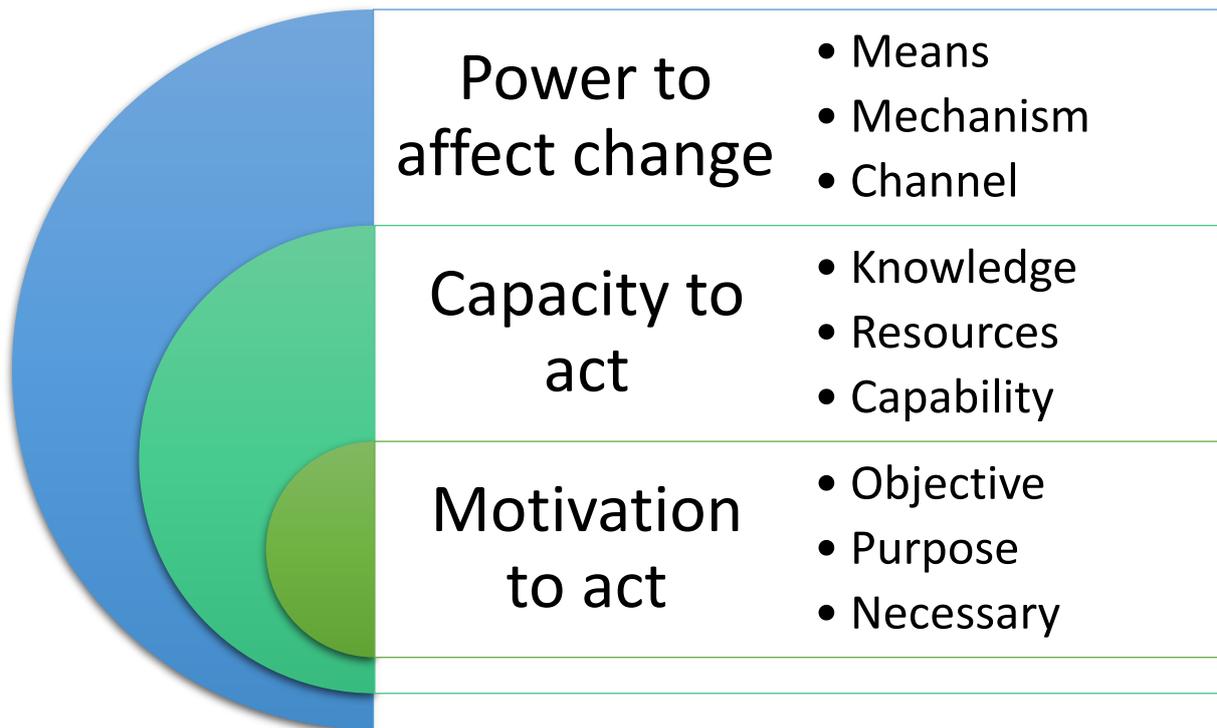


Figure 14 The three fundamental requirements of influence(Baxter, 2020), and examples ways in which these requirements can be met.

How any organisation, or individual meet these requirements will vary. For example, when planning and preparing how and organisation can influence outcomes from a NHE, or other emergency, Police Scotland meet all these requirements and how meet them will have some things in common and also some differences with how Dumfries and Galloway Council meet these requirements. This is because these two organisations have different purposes but share some objectives, have access to a different set of resources and different means of exerting their power.

Drawing on the data from both the interviews and the workshops examples of approaches that build on current guidance guidance(Ready Scotland, 2020a) and can be incorporated into planning and preparation are given. These examples have been used because of their potential to support long-term recovery in a way which complements the seven SCCAP outcomes.

Preparing for the processes of recovery

The focus here is the long-term recovery, the move into the recovery phase, and what can be done to supports it by RP and ER in their preparation and planning. As previously stated, the most effective way to enhance recovery is through mitigating and protecting communities from harm resultant from experiencing any NHE or other emergency therefore reducing the level of recovery functions necessary. Ensuring the efficacy of the response should always be the priority, there is extensive work on this both in the academic and grey literature. This is also undertaken by the Scottish government as part of Safer Scotland, through the Resilience Learning Hub¹⁶ which provides courses, training, and education programs for community resilience practitioners and others.

¹⁶ <https://www.scords.gov.uk/>

Training and exercising

Convergent volunteers and third sector volunteers are inevitably involved in the response and recovery phases. When large large-scale exercises are being planned and undertaken it may be possible to incorporate a wider range of individuals from voluntary groups and TSO through third sector interfaces. It may also be useful to recruit individuals from local communities near where the exercises taking place to act as convergent volunteers without any pre-briefing of what is going to be happening during the exercise. The purpose of doing this in terms of supporting response functions and the recovery phase is that: Firstly, it will begin to address a common theme that came through from the interviews that not enough organisations with resources and capabilities are being well utilised. This may be result of a lack of awareness of these organisations which could be accessed through TSI's as part of this live exercise process. Secondly, this has the potential to address some of the reactions, previously identified (Baxter, 2020) experienced by those who wish to express altruism by helping with the response but are not currently incorporated into it. Thirdly, this will help create a more positive attitude improve trust and manage expectations which is a fundamental need identified in both the online workshops and the interview data for those that are involved in these exercises. The social networks of those individuals, and TSO will further have the potential to spread this attitude reinforce this active engagement and empowerment through these activities which will have a knock-on effect on people's overall attitude to organisations which are "officially" involved in community resilience.

These will help with response functions and shifting to the recovery phase through improved attitudes, more realistic expectations of what can be achieved and building the social capital in advance of active response. Official organisations for example local councils, and SEPA may receive anger and blame due to their perceived shortcomings during a response and being able to draw on previous social capital will help then to engage with communities during the longer term recovery process.

Third sector interface representation on local and regional resilience partnerships

TSO are diverse group of organisations which cover many areas of life and are diverse as communities themselves. TSI¹⁷ are a potential route for RRP and LRPs to access and engage with this group of organisations in a manageable way. There are groups which already have a profile within community resilience. For example, The National Business Response Network¹⁸ and the Scottish Flood Forum¹⁹, and organisations like the British Red Cross and Scottish Mountain Rescue.

In addition to these there are sports clubs and eco-groups, support services for people, Brownies and Guides which may be members of their local TSI²⁰. These groups play a role in a community's response and recovery from an NHE, because they are part of that community. They have many resources and capabilities that may be directly relevant to the effective delivery of response and recovery functions, an example given by one interviewee was the putting on of warm drinks in a church hall. This has a direct impact on a community's ability to recover because it supports empowerment of that community which fuels the capacity to cope feedback cycle, as well as having a tangible benefit for those actively involved in the response and supporting other members of the

¹⁷ <https://www.gov.scot/policies/third-sector/third-sector-interfaces/>

¹⁸ <https://businessresponsecovid.org.uk/>

¹⁹ <https://scottishfloodforum.org/about-us/>

²⁰ <http://thirdsectordumgal.org.uk/members-directory/>

community in a time of need. These groups have the potential to be actively engaged with the long-term recovery process in a way which compliments the seven SCCAP outcomes, because they may already be engaged with relevant activities and also because they are individuals who have an interest and possess capabilities that can build their communities moving forward which is empowering for that community and has the potential to mitigate negative reactions and thus maintain the capacity to cope feedback cycle into the recovery phase. If they are actively engaged with in advance and are in the room as the lead on the response shifts from for example the police to the local authority this will further support the efficacy of long-term recovery.

Local citizens assemblies for community resilience, sustainability and SCCAP

Scottish councils Community Resilience Plans (Lyon, 2015) and community resilience groups own risk assessments are another route through which ERs and PRS can explore supporting long-term recovery, building upon the Community Risk Register (Scottish fire rescue service, 2020). Encouraging local communities to incorporate a recovery plan which goes beyond thinking about short-term fixes but incorporates what they would like their community to be. Relating these activities to the relevant outcomes of SCCAP.

Local citizens assemblies could be instigated by counsel resilience teams to engage and empower communities to think about their community's whole resilience to engage with the future of their community and how they could potentially recover from being impacted by a severe NHE. This would be an exercise to engage with local communities get their views and ideas on what they want their communities to be which can be directly incorporated into resilience planning and preparation undertaken by councils. This could also be linked to climate change adaptation but the important thing here is that having these plans prepared and in place as identified in previously (Baxter, 2020) supports the processes of long-term recovery. This is because it allows difficult conversations and decisions about what should be done to rebuild community to happen in advance, so that communities are empowered and take ownership of how they want their communities to be. This process can also mentally prepare individuals and communities for significant change which can occur in the aftermath of a severe NHE. This serves a dual-purpose linking community resilience and the resilience team within councils to communities as a process of listening to them their community to be with a wider remit to raise awareness and supports people to be actively engaged in other community activities. This would also relate to bringing in other TSO within the community to this process so they are more engaged with resilience related activities. An example of this is the approach taken by Alyth Development Trust which is a social enterprise and has undertaken a comprehensive holistic view of their community. Identifying what they want their community to be those within their community who have the capability to deliver it and supporting groups to achieve practical change on the ground. Thus, arguably putting them in a better position were they to be severely impacted by flooding again as they were in two already have plans in place about potential ways in which they could recover.

This process would involve building relationships and trust, resilience practitioners are highly experienced and skilled at this approach and could encourage incorporating recovery into community resilience planning. This would be of benefit for long-term recovery as having pre-existing plans in place which address approaches for adapting to climate change enable these things to have more traction with communities especially if they have already engaged with communities in advance and they have taken ownership and decided what they want communities to be (McDonnell

et al., 2019), once the immediate response phase has ended and communities are transitioning into the a longer-term process of recovering.

Withdrawal from communities

Part of moving on from an NHE or other emergency is the process of ERs and RPs leaving communities which is part of the shift from the dominance of response functions towards more recovery -related functions.

The experience of the research participants of how the withdraw of ER and other resources takes place was mixed. The perception of how this takes place and the impact on communities of this withdrawal was also mixed but there were more examples of this being mismanaged from participants than positive examples. In relation to ER the experience of the community resilience volunteers they clearly understood depending on who it was that it is not always appropriate or necessary to signal their departure (see Box 11).

“once they have removed their patients and/or secured somewhere so there is in a danger to life they will not be there anymore. They will take their exit.” Was that they just left without informing anyone within the group. And hope, and I don’t know, but that a person there would say “okay, we’re off,” and we’d be like “okay that’s fine, and we’re happy with that as long as you’re happy with that.””

Box 11 comment from community resilience group leader, when asked about the withdrawal of people and resources

Professional RPs who were embedded in the community typically as part of local authorities also felt that the withdrawal process of both emergency responders and other resources was mismanaged. Resilience practitioners when asked about different organisations withdrawing replied “Could this be done better? Probably”

“If everybody knows why and everybody knows how, you’re in good shape on a departure. This is why it’s time for us to go and this is how we’re going to go about it. If everybody knows that, 90% of your problems are sorted out. It’s not understanding why someone did something that triggers that animalistic defence mechanism that we have”

Taking this into consideration and having it as part of planning and preparation for organisations which is undertaken always will help to manage many of the community’s negative reactions and confusions that may result if this is done badly. This has a direct impact on communities’ willingness to engage in the recovery process and has implications for future resilience.

Withdrawal and handover of responsibilities is a part of the guidance on recovery(Ready Scotland, 2017a) . This was raised in the interviews and also by some participants in the online workshop as being overly prescriptive and some felt that sometimes a recovery phase was superfluous when the event had been handled well and the processes had been effective in mitigating and protecting communities from the impacts of the emergency. A transition process which it has been shown in the academic literature(Blackman et al., 2017) and identified in the previous research(Baxter, 2020) to enable communities to engage with long-term recovery better. Also it presents a potential solution to this issue of a recovery phase being overly prescriptive.

Transition phase

Arguably the incorporation of a transition phase into community resilience guidance on responding and recovering from natural hazard emergencies presents a strategy to cope with many of the challenges associated with the shift from the active phase of the emergency event towards long-term processes of recovery.

Often perception shift as dissatisfaction anger and frustration build within communities as they feel that their needs are not being met or they are faced with the prospect of long-term disruption to the way in which they have previously conducted their lives. Which can occur as a consequence the direct impacts of an NHE in addition to this there are the psychological and mental-health impacts which people experience.

After having lived through an NHE or other traumatic experience requires time and space to recover and capacity to make decisions is significantly impaired (Winsper et al., 2020, Tebes et al., 2019). If there is perceived to be a rush to recovery or that people have not had sufficient time to engage with the recovery process this has potential to impact on people's feelings about organisations who are involved in this process. This was highlighted by many of the interviewee participants who gave examples of experiences they had been in where people just needed to "vent their anger". They interviewees who were resilience practitioners with councils emphasised that it was important to be on the ground during the event itself and that people who weren't involved in the response was subject to more anger if they were brought in for the recovery. This emphasises the importance of resilience practitioners being involved in the recovery process from a continuity point of view as one interviewer put it:

"you would understand some stuff. They'd (the community) understand what your role this is, see your face, and now properly process easier because it's something they recognise."

A transition process would enable the handover from different agencies and individuals to take place in a managed way which would introduce and explain to communities what was happening and why.

Maintaining trust and establishing new relationships.

A transition process would also allow for an assessment to be made of what was necessary for recovery. So that a full recovery process as laid out in the guidelines could be engaged with alternatively after the debrief process which form part of the transition phase the event could be concluded, with the caveat of ensuring that all resources had been sufficiently replenished to enable all involved in that event to be able to respond as well or better to a subsequent event.

The strategies identified previously which are expanded in Baxter (2020), which included a transition phase all acknowledged the importance of some form of formal process of engaging with the recovery which involves using different capabilities and skills that which need to be introduced and accepted by the community if these are to come from external sources, Table 6.

Table 6 The dominant mechanisms required to develop resilience and summary of analysis of five successful strategies (Baxter 2020)

Strategy	Potential		Dominant Mechanism											
	Future Resilience	Adaptation to Climate Change	Efficacy	Engagement	Involvement	Competency	Altruism	Action	Observation	Knowledge	Information	Understanding	Experience	Empowerment
Green: indicates high potential to improve Yellow: indicate moderate potential to improve Blue: indicates mechanisms are engaged by each strategy														
Transition Phase	Green	Green	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
Resilient Recovery Planning and Managed Participant for Community Resilience	Yellow	Green	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
Machizukari “Creating Communities” Balancing Infrastructure Recovery With Local Sociality	Green	Yellow	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
Well-Being and Mental-Health Interventions and Support to Enable Community Recovery	Green	Yellow	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
Creating Space for Groups to Form in Response to Disasters (Building Psychosocial Capacity)	Green	Yellow	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue

The maintenance of social capital which increases during an NHE or other emergency event is difficult to maintain and typically dissipates over time. This may be a result of disillusionment with actions which are perceived to be done to them rather than empowering the community. Ensuring that the capacity to cope feedback cycle maintains its positive direction and thus enhancing long-term recovery could also be achieved through a combination maintain ring engagement because the community has a shared objective that may have been previously agreed upon during the citizens assembly process or through an agreed vision which can build on the enthusiasm and goodwill that is often created during an NHE. It will give people a purpose and a way to express their feelings of altruism going forward. After an event has ceased often it is difficult to maintain momentum and because there is no easy and readily available need that people can identify to channel their energies into. An example of this was previously mentioned where a community has a campaign underway to change current processes of assessing flood risk, which currently happens on a three-year basis, to enable them to have a permanent flood defence barrier putting place. This cause has enabled them to have a purpose which the community can engage with and helps maintain social capital. Social enterprises such as that in Alyth Development Trust strategy of incorporating the community resilience group into a wider vision for what that community can be, creates a pre-existing structure. To maintain and nurture additional social capital that may be generated during NHEs.

A transition phase would enable a process of engagement with social enterprises like this and through TSI partners a process of identifying organisations and in groups who could utilise the social capital build it and direct it in a way which empowers the local community, while giving them time and space to understand what it is they want their recovery to be.

Table 7 summarises the examples given here and additional strategies that could be adopted by RPs and ERs to support long-term recovery in a way which meets the seven SCCAP objectives.

Table 7 Examples of strategies to support successful long-term community recovery through future resilience and the seven outcomes of the SCCAP. All mechanisms are engaged in all strategies however the blue squares indicate the mechanisms that are of most significance for these strategies. Green squares indicate which strategies have the highest potential to improve either future resilience or adaption to climate change and yellow indicates a moderate potential to improve that area.

Strategy	Potential		Dominant Mechanism											
	Future Resilience	Adaptation to Climate Change	Efficacy	Engagement	Involvement	Competency	Altruism	Action	Observation	Knowledge	Information	Understanding	Experience	Empowerment
Green: indicates high potential to improve Yellow: indicate moderate potential to improve Blue: indicates main mechanisms which are involved in each strategy														
Professional training and development Live and desk-based exercises	Green	Yellow	Blue	Blue	Blue	Blue		Blue	Blue	Blue	Blue	Blue	Blue	Blue
Reviewing and updating organisations preparation and planning documents	Green	Yellow	Blue	Blue	Blue			Blue					Blue	
RRP and LLP linking to TSI	Green	Yellow	Blue	Blue	Blue			Blue						Blue
Risk assessment community engagement and awareness	Green	Green		Blue	Blue	Blue			Blue	Blue	Blue	Blue	Blue	Blue
Scenario planning: SCCAP directed recovery	Green	Green	Blue	Blue	Blue	Blue								
Community resilience through instigation of local citizen assembly	Green	Green		Blue	Blue		Blue		Blue	Blue	Blue	Blue	Blue	Blue
Community resilience plans incorporation of recovery impact assessment	Green	Yellow	Blue	Blue	Blue	Blue		Blue		Blue	Blue	Blue	Blue	Blue
Engagement and outreach, expectation management	Green	Green		Blue	Blue		Blue		Blue	Blue	Blue	Blue	Blue	Blue
Council area' s climate change adaptation programmes linking to recovery	Yellow	Green		Blue	Blue			Blue		Blue	Blue	Blue		Blue
Incorporation of guidance on a transition phase between response and recovery	Yellow	Green		Blue	Blue			Blue		Blue	Blue	Blue		Blue

Figure 15, illustrates the different approaches to resilience to the impacts of NHE which occur as a result of climate change. It is a mixture of these approaches which communities can engage with and decide to use as part of their recovery process. They are approaches to achieving the seven outcomes given by SCCAP and supporting communities through the response and into the recovery to enable them to engage with this is an important aspect of a community's long-term resilience.

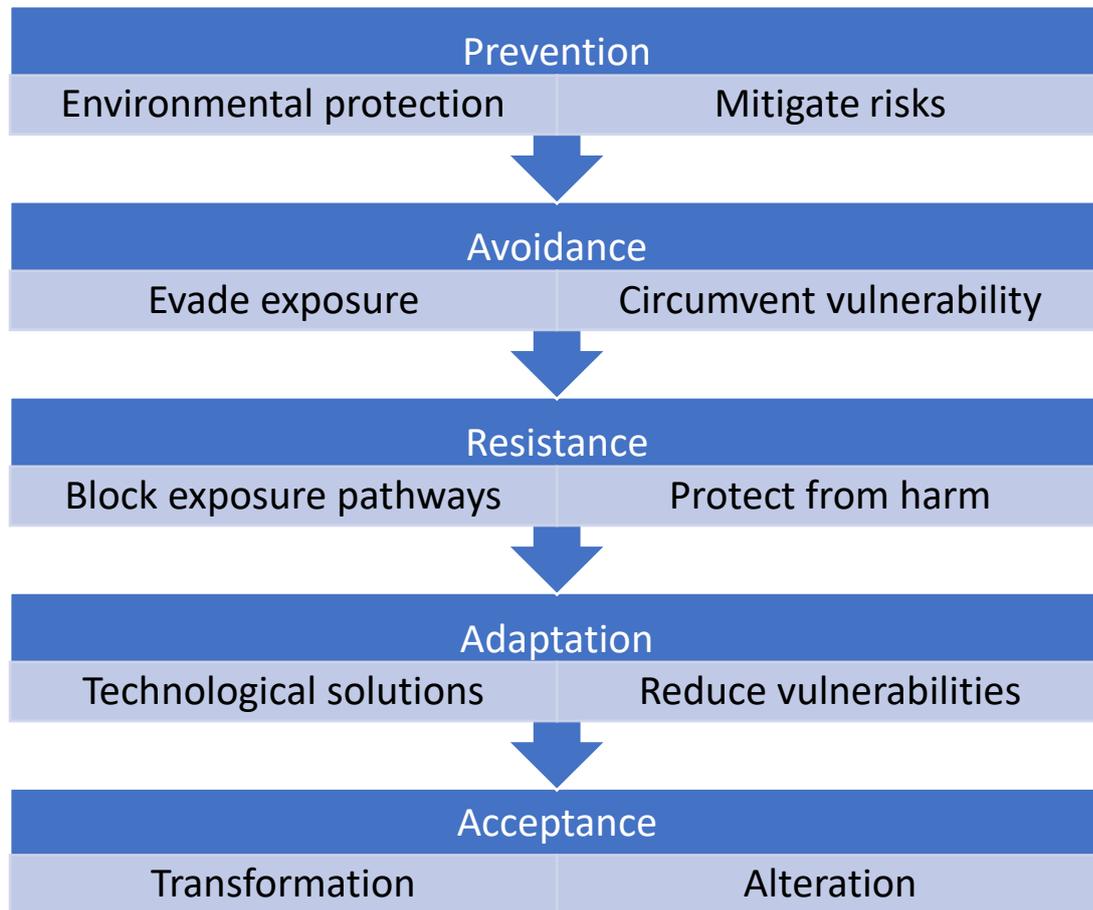


Figure 15 Different approaches to cope with the impacts of climate change

The final section of this report gives a number of recommendations which are based on the interview and workshop data, and the findings from the first phase of this research project. These recommendations have the potential to be used by RPs and ERs to support the process of communities' long-term recovery in a way which compliments the SCCAP outcomes.

Key Points

- What happens during an inert emergency event creates the conditions under which the recovery process takes place
- The outcomes which are a consequence of the NHE cannot be accurately predicted.
- The outcomes of an NHE are influenced by what is done in preparation and planning for an NHE or any other emergency event
- Relationships, trust, coordination and efficacy of the response are influenced by individuals' and communities' perceptions of RPs and ERs actions and decisions

- Engaging with communities, and coordinating across organisations and sectors, voluntary, public sector and private sector has the potential to encourage communities to be more engaged with to post NHE recovery activities
- The seven SCCAP outcomes supports community resilience and community resilience has the potential to complement the seven SCCAP outcomes

Section six: Discussion and Recommendations

Discussion

The starting point for the first and second phases of this research were the questions (Box 12) voiced by resilience practitioners during a series of workshops conducted by the NCR (Parker, 2019).

In phase 2, I wanted to explore: 1) What is the difference between response and recovery? 2) Is there a process of transition between the response to an event and the longer-term recovery from it? 3) Can different sectors better prepare to support the recovery process?

When does recovery start/end?

When can agencies leave?

Different priorities?

Should recovery be a part of response?

Is it hindering the process to class it (recovery) as something different?

Box 12 questions identified in NCR workshop report (Parker, 2019)

From the data collected during this second phase, it was found that there is an understanding that there is a difference between response and recovery. This difference was tacitly understood by all participants in this research. When asked what the difference was between response and recovery all respondents were able to answer. Typically, response was associated with the nature of what NHE or other emergency was being responded to, giving actions and decisions a clear purpose. Recovery was associated with longer timescales, being more complex, contentious, and undefined in its boundaries and nature. What the exact difference is became confused, when considering at what point response ends. The solution proposed here is to have a transition phase which allows the acknowledgement of the complexities and interrelationships between response and recovery. That the actions and decisions taken by those involved in an NHE or other emergency event have a function, that these functions can serve as, both a function of response and recovery, or as wholly a function of response or recovery.

A transition between response to an event and the long-term recovery from it, is something that all participants in this research agreed could serve a useful purpose. This transition happens to some extent naturally as the official handover takes place between agencies leading the response as set out in the Scottish guidelines (Scottish Government, 2019d, Ready Scotland, 2017b, Ready Scotland, 2017a, Resilient Communities Team, 2017). However, this process is can be easily missed managed exacerbating or even generating negative reactions, and loss of the momentum behind the community capital created during the emergency. Which can leave those still working with affected communities and those who live within those communities having to deal with avoidable additional negative reactions, in an already highly charged emotional situation. Equally a transition period would allow an assessment to be made about what was needed, if community resilience strategies and the emergency response has been effective and efficacious then a formal recovery process, beyond replenishment of capabilities and resources, and the debriefing process, may be unnecessary.

Expectation management, maintaining and building upon community capital, and building or maintaining trust with communities, are all fundamental challenges raised by research participants. A transition phase would help to some extent in working with communities and diffusing frustrations

(Blackman et al., 2017). It has also been shown to aid long-term recovery and provide an opportunity for assessment and time and space for the community to collectively pause and take stock of what has occurred and may be more willing to consider changes to their community (Finn et al., 2019). It is also important in enabling social recovery to take place alongside physical and infrastructure recovery (Okada et al., 2018). Also, a transitional period has the potential to address the challenge of perceived performance of organisations involved in the NHE emergency response. This perception fluctuates over time. A well-managed transitional period has the potential to address the difficulty of how organisations leave, and communities' expectations of the processes involved in recovery, which can undermine the previously positive reactions with a negative perception (Butler et al., 2018).

A formal transition period which is part of planning and preparation and is incorporated into Scottish guidance has potential to address some of the key challenges raised by participants in this research project. Presenting an opportunity to engage with and empower communities, giving them time to consider, what their recovery looks like to them.

Incorporating recovery into planning and preparation activities would be possible, though not appropriate for all organisations involved in NHEs and emergencies, beyond the replenishment of capabilities and resources, and the debriefing process as previously stated. This does not have to be over burdensome on organisations, and the reframing of conversations and the inclusion of recovery into community resilience plans for example provides a starting point.

SCCAP and the Path to Net Zero (Scottish Government, 2020, Scottish Government, 2019b) are all to be delivered in Scotland within the NPF (Scottish Government, 2018). These all require communities to change the way in which they live. Having conversations with communities about what this means for them is an opportunity to empower them to understand the benefits of doing this particularly in terms of their resilience. As identified in the literature (Adedeji et al., 2019, Thaler and Seebauer, 2019) and seen during the Covid-19 pandemic (Burch et al., 2020) recovering requires changing and in the aftermath of an emergencies communities may be briefly more receptive to changing (Finn et al., 2019). However if communities are already having this conversation with themselves, or these conversations are being facilitated by RPs and ERs then communities will be arguably in a better position to enter the process of recovery in a way which empowers them and engages them having experienced a NHE or other emergency. Whatever the extent of the impact upon.

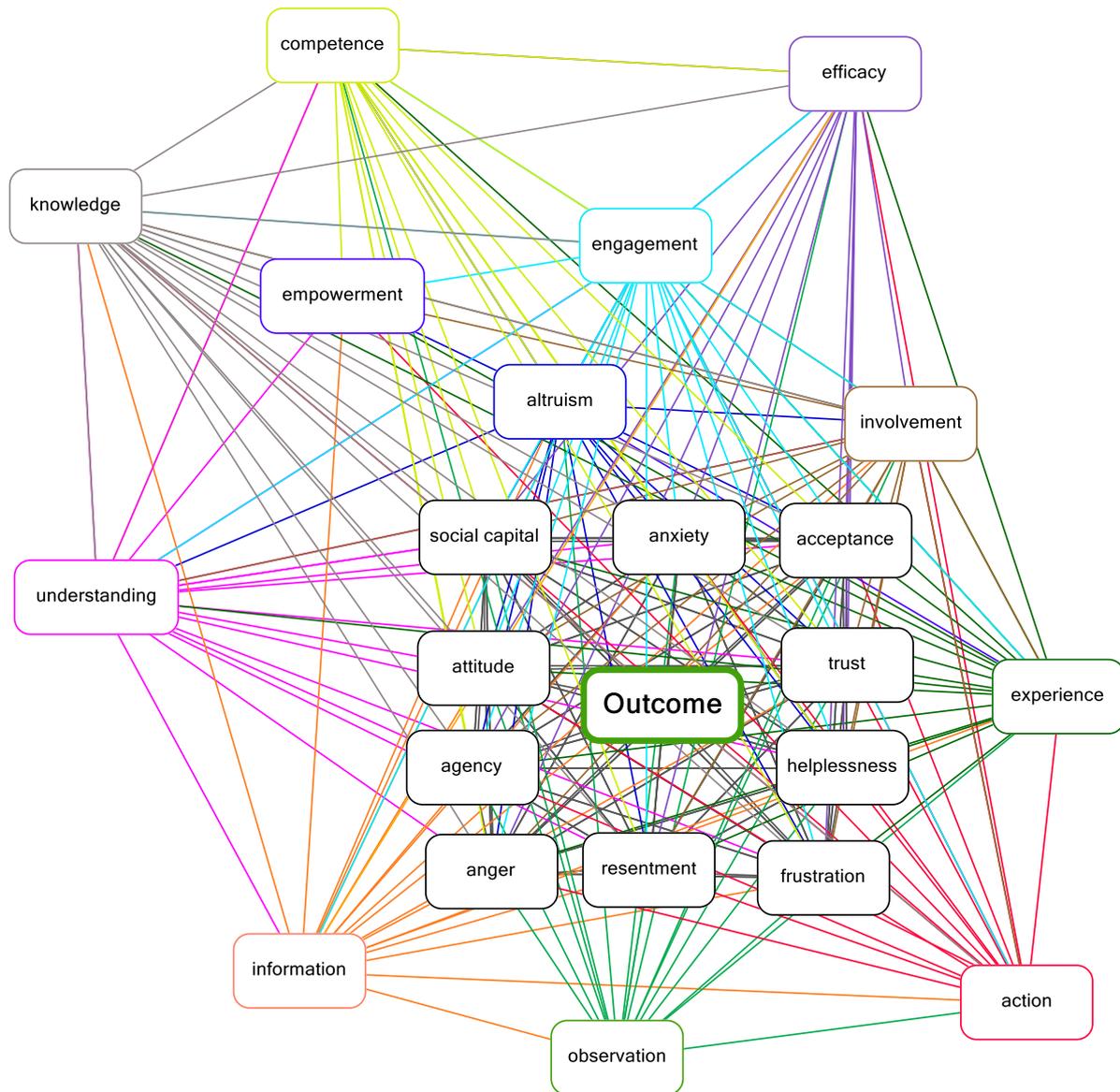
This arguably would support the maintenance and momentum of community capital that has been built up during an NHE or other emergency, because having an agreed purpose within a community can be used to direct people's energies into an ongoing endeavour. Often the community capital built-up dissipates because it is no longer deemed to be active and needed. If other TSOs are brought in during the transition phase and can support communities to direct their energies creating their vision of a resilient community which meets their needs in a way which compliments the seven SCCAP objectives this is a possible route to sustained long-term resilience. Indeed from the data collected community resilience groups with an ongoing purpose beyond responding to an emergency, for example campaigning to achieve a change legislation or with a shared vision of a sustainable community maintained were able to maintain uneven build social capital after being impacted by a severe flooding event.

Recommendations

The following recommendations build on the recommendations made in the first phase of this research Box 1.

- Guidance on a formal transition phase which is incorporated into category one and two planning and preparation activities should be added to the Scottish government guidance documents available on the register website
- Local citizen assemblies presenting opportunity to engage and empower local communities in advance of any NHE or other emergency event to engage with SCCAP and consider what they want their communities to be
- TSO should be actively engaged with and encouraged to participate in local citizen assemblies
- TSI should form part of RRP and LRP and be engaged with as part of preparation and planning for response and recovery
- Response and recovery phases should be delineated by a transition phase in which an impact of what is needed, how those needs can be addressed and by whom is assessed in partnership with the affected community
- Engagement and empowerment of communities should be part of the approach of category one and two responders to manage a community's expectations of, the response to, and recovering from an NHE or other emergency

Appendix



Appendix Figure 1 Illustration of the mechanisms involved in influencing the spontaneous reactions of communities and individuals (mechanisms are represented by boxes with coloured outlines and spontaneous reactions are represented by boxes with black outlines). The central box outlined in green containing outcome represents the combined impacts of the NHE on the features of the community (what is the level of damage the community has sustained, socially, economically, to its physical infrastructure and natural environment).

Questions around which the interviews were structured

These questions provided a general structure for all the interviews though they were adapted depending upon interviewee and responses given.

Training, preparation and planning

- What is your organisations role and responsibilities in planning for natural hazard emergency?
- I would like to explore with you your organisation's current protocols/plans for responding to a natural hazard emergency.
 - How often are these plans/protocols reviewed or revised
 - who is involved in that process?
 - What is taken into consideration when reviewing and revising plans and protocols?
 - What are the priorities?
 - Do consult with other organisations?
 - Any other comments
- What sort of training and preparation for an NHE do you/your organisation engage in?
 - How often does this occur?
 - Who is involved?
 - Effective?
 - What would you change?
 - Any other comments
- Next can we explore outreach and engagement activities to raise awareness of NHEs?
 - Purpose?
 - Effective?
 - Useful?
 - Any other comments

Responding to Natural Hazard Emergencies

- What is your organisations roles and responsibilities during a natural hazard emergency?
- How useful are the planning proration activities that you have been previously involved in during the NHE response?
- Can you see the effects of planning and preparation in the response?
- During a response to an NHE have there been any things that you wish you had done in planning and preparation?
- In your experience During a response have you noticed ways in which things can be done differently?
- In your experience does the impact of actions and decisions on the recovery ever influence what is done during the response? What are your views on this?
- Any other comments

After the NHE transition to recovery

- What role and responsibilities does your organisation have in supporting communities to recover from effects of NHE?
- What aspects of recovery does your organisation help with
- what is your view of the transition from their response to recovery?
- Does your organisation have in place any planning for how it is going to withdraw from the community once an NHE is over?
- What are your experience of withdrawing from a community?
- Do you think this affects relationship with the community?

- Do you think they should be a managed handover process? How do you think you should leave a community?
- Do you think this process affects recovery process? How?
- Any other comments

What would recovery “look” like to you?

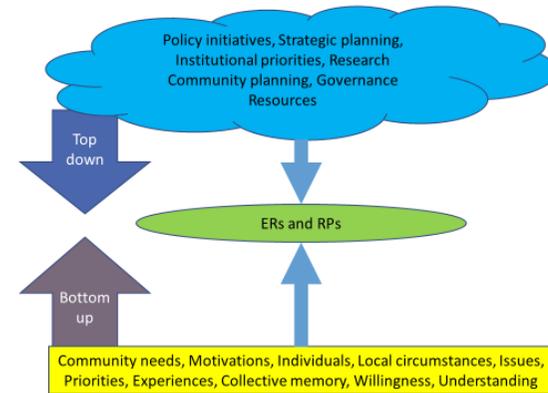
What are your views on the differences between recovery and response?

Do you think recovery is taken into consideration during preparation and planning?

The Scottish Climate Change Adaptation Program

- Does this have a role in community resilience?
- Comments?

What is the difference between response and recovery phases of resilience?
How might we incorporate long-term recovery into preparation and planning mechanisms e.g. community resilience plans?
What do long-term community recovery and SCCAP have in common?



Objectives after a natural hazard emergency

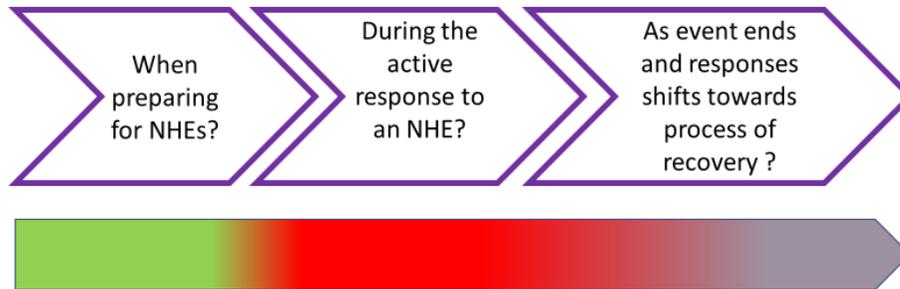
- Improved community resilience (multiple risks)
- Community is adapting to climate change
- Local (societal) supporting systems are resilient (multiple risks)
- Community is inclusive, empowered, resilient, and safe



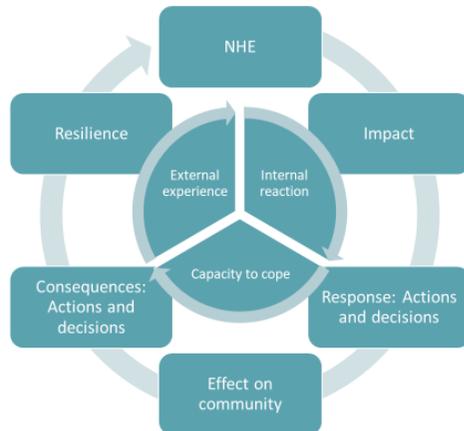
What does this look like for you?

What are the “conditions/requirements” which would support moving towards these objectives after a natural hazard emergency?

What affects these conditions/requirements?



Creating Conditions



You're leaving?



- Handover process?
- What happens
- Danger points.
- Positives
- What is still needed
- Relationships
- Situation
- What would help?

What tools or mechanisms could be used to manage community reactions through the NHE response process and towards the objectives?



Place re-making?



Power to affect change?

Means
Mechanism
Channel



Capacity to act?

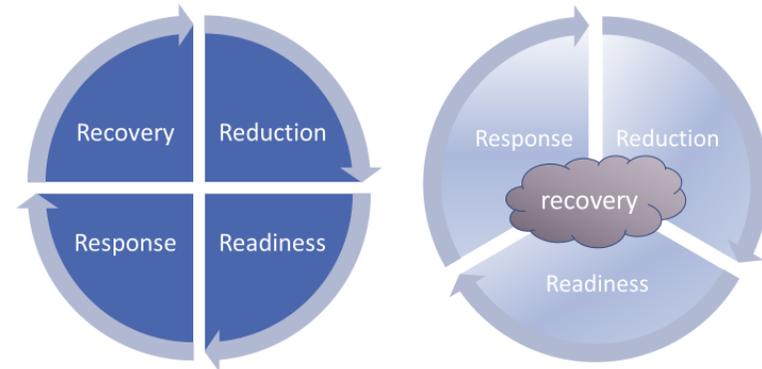
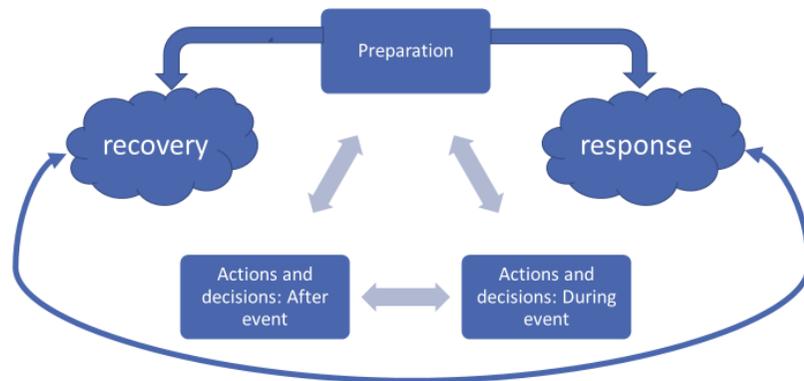
Knowledge
Resources
Ability
State of mind

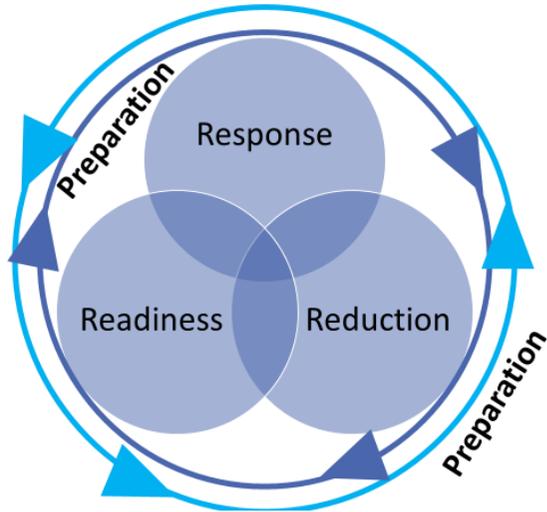


Decide to act?

Willingness
Risk
Necessary
Social norms

What could be done to be ready (prepared) for the process of achieving objectives?





Thank you for your time and your ideas.



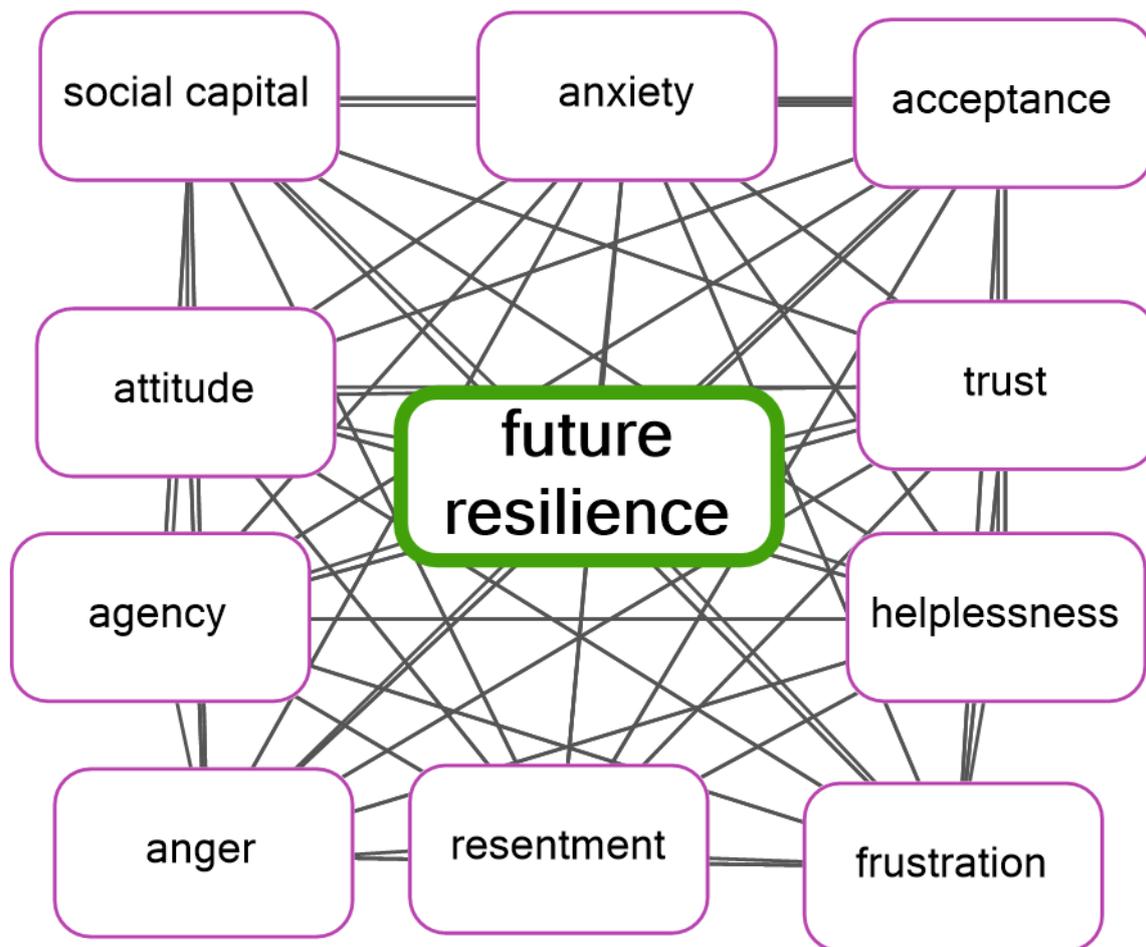
I WANT



I WISH



I WONDER

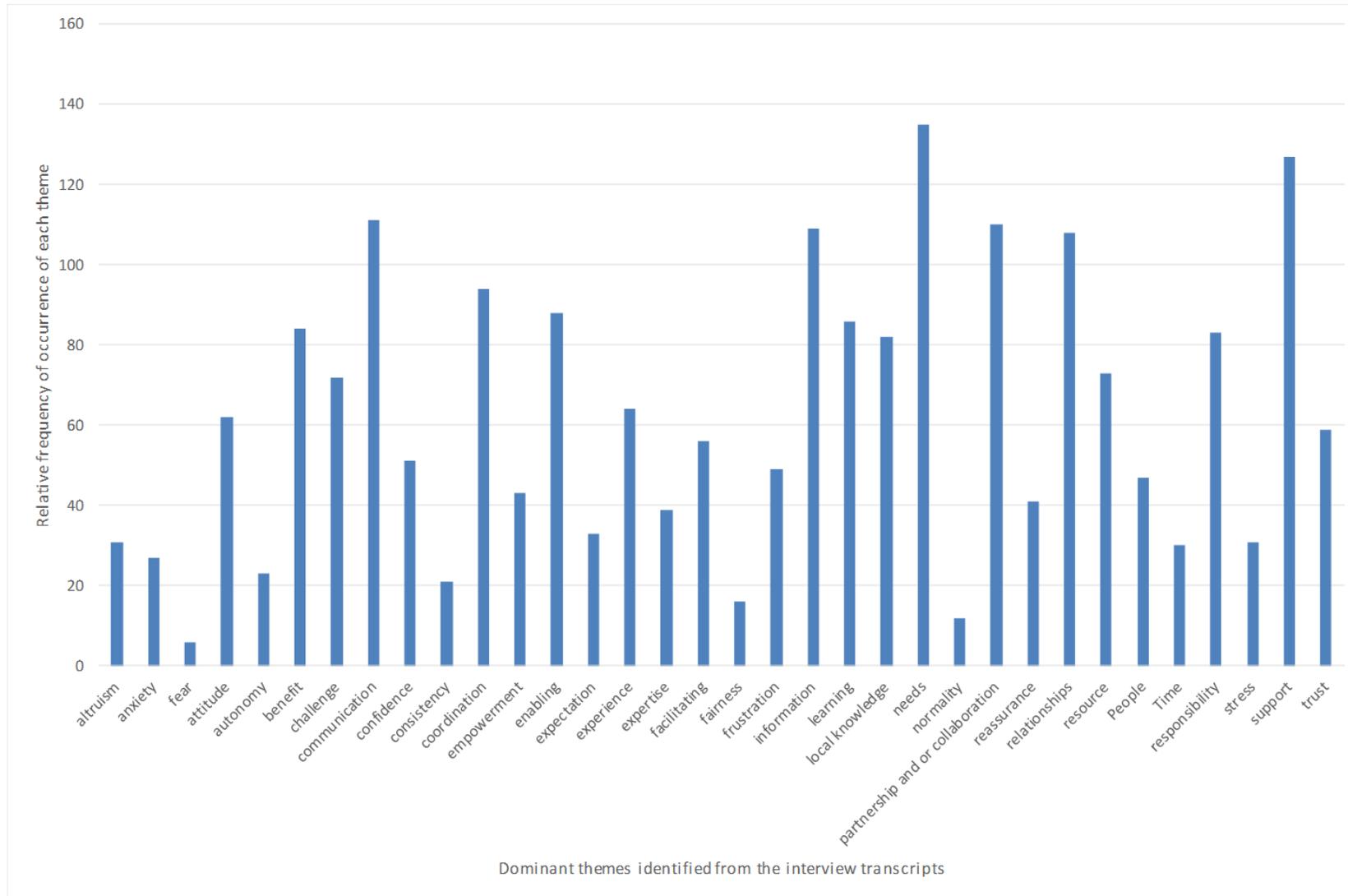


Appendix Figure 2 Spontaneous reactions to NHE (Individual and community)(Baxter, 2020)

Appendix Table 1 strategies identified from phase 1 of this research project and relating to the features of a community which they have the most potential to improve, denoted by the blue squares

	Features of the community which are replenished, rebuilt, adapted or transformed					
Strategy identified in phase 1 of this research	Natural environment	Economic infrastructure	Resources	Physical infrastructure	Capacity and skills	Civic infrastructure
Transition Phase						
Resilient Recovery Planning and Managed Participant for Community Resilience						
Machizukari "Creating						

Communities” Balancing Infrastructure Recovery with Local Sociality						
Well-Being and Mental-Health Interventions and Support to Enable Community Recovery						
Creating Space for Groups to Form in Response to Disasters (Building Psychosocial Capacity)						



Appendix Figure 3 Themes identified from analysis of interview transcripts.

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