ARTICLE

Creating the Conditions for Community Resilience: Aberdeen, Scotland—An Example of the Role of Community Planning Groups

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Abstract Governments are increasingly trying to ensure that communities are resilient to the effects of climate change and encourage community empowerment and autonomy. Local resilience planning groups (LRPGs), which include stakeholders with an interest in a local area, are emerging as one potential approach to building community resilience. A conceptual framework has been developed to identify the common requirements for community resilience, building upon existing work in the wider community resilience literature. Aberdeen Resilient, Included and Supported Group, Scotland, UK is an example of a LRPG. In this study the data collected during a workshop with the Aberdeen LRPG were used with the conceptual framework to identify some of the challenges faced when building community resilience. The study examined whether the Aberdeen LRPG illustrates the challenges and constraints faced by LRPGs more widely, and how the membership influences the potential to develop the attributes of community resilience outlined in the conceptual framework. The thematic analysis of the workshop revealed Aberdeen LRPG's six dominant challenges: engaging with individuals, culture, attitudes, assumptions, terminology, and timescale. These challenges impede the group in utilizing the skills, knowledge, and resources that its members possess to build community resilience. While the Aberdeen LRPG cannot change all factors that affect community resilience, framing specific problems experienced by the group within a conceptual framework applicable to any community contributes to understanding the practical challenges to developing community resilience.

Keywords Community planning · Community resilience · Natural hazards · Scotland

1 Introduction

The World Economic Forum identified the impacts of natural hazards as having a significant economic impact on the global economy (WEF 2018). To address this challenge governments are encouraged to think about long-term sustainability and how they manage the social, economic, and environmental impacts of climate change on their populations (UNISDR 2017). Policymakers use the concept of resilience to express this long-term ambition (de Bruijn et al. 2017). In this context resilience is used as a way to express both a process and an outcome that enables dynamic systems, such as communities, to respond and adapt to change (Darnhofer et al. 2016; Markantoni et al. 2018). Within international and national government arenas the concept of community resilience is treated as a way to progress towards the objective of sustainable communities (Wright 2016). An example of this is the incorporation of resilience into international agreements, including the United Nations Framework Convention on Climate Change (UN 2017), the Sustainable Development Goals (SDG) of the 2030 Agenda (UN 2016), and the Sendai Framework for Disaster Risk Reduction (UNISDR 2015). The Intergovernmental Panel on Climate Change (IPCC) defines resilience as "the capacity of social, economic, and environmental systems to cope with a hazardous event or trend or disturbance, responding or reorganizing in ways

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that maintain their essential function, identity, and structure, while also maintaining the capacity for adaptation, learning, and transformation" (IPCC 2014, p. 1772). This definition captures the complex nature and multiple aspects of resilience that these international agreements are seeking to pursue.

Strengthening resilience is fundamental to the Sendai Framework's goal to prevent and reduce existing risks to disasters, reduce population exposure and vulnerability to disasters, and increase population preparedness (UNISDR 2015). The Sendai Framework focuses on the role of the nation state while at the same time promoting the role of other stakeholders, including local governments, civil society, and the private sector. There is a growing awareness of the role and importance of communities in disaster risk reduction and that communities themselves have agency in this process (Graveline and Grémont 2016). In the United Kingdom (UK) a shift towards more neoliberal modes of government has actively sought to mobilize communities to address local challenges (Chmutina et al. 2016). In Scotland the Christie Commission Report (Christie 2011) determined that communities should be involved with coproducing services, making Scotland a useful example of community empowerment as part of government policy (Scottish Government 2015). Communities here will be understood as communities of place.

Community resilience has been identified as vital in continuing long-term community viability (Markantoni et al. 2018). The Scottish government defined community resilience as "communities and individuals harnessing resources and expertise to help themselves prepare for, respond to and recover from emergencies, in a way that complements the work of the emergency responders" (Scottish Government 2013, p. 4). This is an effort to explain what policymakers want communities to do without specifying how they should achieve it. Despite this, resilience and community resilience are largely abstract concepts for practitioners that have not been clearly defined by policymakers (Frankenberger et al. 2013).

A shift towards a more neoliberal model of government (Shaw 2012) has led to the formation of groups of stakeholders with the responsibility for improving a community's resilience (Schlosberg et al. 2017; Saxena et al. 2018). These groups may be third sector organizations (TSOs), that is organizations that are neither public nor private—examples include community groups, voluntary organizations, and charities (NAO 2017). Local health authorities, planning groups, local government, businesses, individuals, community councils, and other stakeholders may also be involved in these stakeholder groups. In this article these groups are referred to as local resilience planning groups (LRPGs), defined here by their role in working with a specific local community or communities

and their purpose of improving the resilience of those specific local communities. Given that LRPGs are being used as a mechanism to increase community resilience, their capacity to meet this need should be examined. Defining what community resilience means is often the LRPG's first challenge and what is included in the definition is vital precisely because of this point.

The focus here is on what LRPGs can promote as part of the "preparation phases of resilience." Vallance and Carlton (2015) argued that the skill sets required to respond to an emergency are not necessarily those that will allow a community to recover in the long term and reduce the impact of future shocks and stresses. Communities who already had an active civil society recovered more fully. They proposed that existing community activities can be used as a platform to deliver education and training for specific risk reduction measures. This illustrates how the focus on social capital and the work of LRPGs with respect to tackling social and economic issues has the potential to become an enabler that brings people into the activities that are needed for community resilience plans to be effective.

Utilizing data collected during a workshop with a LRPG based in Aberdeen, the "Aberdeen Resilient, Included and Supported Group," referred to here as Aberdeen LRPG, this article examines whether the Aberdeen LRPG illustrates the role of and challenges for LRPGs in building community resilience. The data gathered were examined using thematic analysis, and a conceptual approach was applied to the Aberdeen LRPG to assess its potential for helping to improve community resilience. This conceptual approach was developed using available community resilience frameworks, evaluation methods, and toolkits. The challenges of and constraints to improving community resilience are considered and how the composition of the Aberdeen LRPG contributes to its potential for promoting community resilience is discussed. Identifying specific issues faced by the Aberdeen LRPG will contribute to the wider literature by recognizing some of the common challenges faced by stakeholders involved in community resilience.

2 Theoretical Background

Resilience is a property used to describe materials, systems, and processes that occur at multiple scales, from individual to global. The communities term can be used to describe all types of human geographic settlements, as well as economic and social interactions and connections (Murphy 2007; Frankenberger et al. 2013). In the literature on community resilience the importance of the dynamic nature of social and ecological interactions is recognized (MacKinnon and Derickson 2013; Haworth et al. 2018).

The argument has been made that human agency prevents a direct transfer of physical and ecological frameworks of resilience to community resilience (Skerratt 2013). Patel et al. (2017) argued that a common definition of community resilience is needed and, until a common understanding of community resilience is arrived at, using the term "community resilience" could potentially obscure the importance of the individual features that should be included in any definition of community resilience. The features they propose are: local knowledge, community networks and relationships, communication, health, governance and leadership, resources, economic investment, preparedness, and mental outlook. Other authors have identified similar themes (McNamara and Buggy 2017; Patel et al. 2017). These features seek to capture the complexity and the importance of human agency in community resilience. This lack of clarity has implications for identifying suitable methods and indicators with which to evaluate a community's resilience and identify how to progress towards this objective.

In the literature on community resilience frameworks and assessments one approach is to subdivide community resilience into categories or dimensions that combine individual components of resilience and develop appropriate indicators for each category identified. Sharifi (2016) undertook a systematic review of tools for measuring resilience and identified four dimensions: social, economic, environmental, and infrastructure. Frameworks that have been developed for this purpose use similar categories that broadly fit into the same classifications as those identified by Sharifi (2016)—for example, the emBRACE framework, the Scottish government's Five E's strategic framework, and a resilience framework developed by Fielke et al. (2018) to assess four case studies in New Zealand. The emBRACE framework is a project funded by the European Union that investigates how to select appropriate indicators for the quantification and measurement of community resilience. The framework comprises three loops: resources and capabilities, learning, and actions (emBRACE 2015). The Scottish government's resilient communities strategic plan (Resilient Communities Team 2017) identifies five key areas of work, the so-called Five Es: engage the public; empower communities; enable collaboration and coproduction; education and learning; and evaluation and improvement. A notable addition in the framework developed by Fielke et al. (2018) is a category for factors that communities have little or no control over. This is important because, as argued elsewhere in the literature on community resilience (Hickman 2018), the neoliberal approach does not always take into account that communities themselves do not have the ability or power to influence all the factors that contribute to improving their resilience.

These frameworks have been developed empirically and they all raise the importance of context. Their purpose is predominantly for assessment or self-assessment, and to improve community resilience. The use of broad categories and dimensions of resilience is a useful starting point for LRPGs to determine and communicate their objectives, rather than trying to capture their purpose in a single definition of community resilience that could be misunderstood. This does not negate the need for a clear definition and understanding of resilience.

In a review of recent literature drawing on community psychology, disaster management, and the authors' own experiences, Fazey et al. (2018) outlined 10 essential criteria that are necessary in their view to enable a community to transform in the context of climate change. Transformation forms part of the definition of resilience (IPCC 2014) used here and is included in the principles outlined by the Scottish Guidance on Resilience (Scottish Government 2017a). Using these criteria to establish working practices for LRPGs helps to embed the thinking about their role within the larger system. For community resilience strategies to be effective it is argued that they should move away from institutionally imposed solutions towards more social innovations and place-based solutions (Baker and Mehmood 2015; Scottish Government 2015; McNamara and Buggy 2017).

Resilience, particularly resilience to natural hazards, means that people have to draw on external resources and capabilities during times of crisis because they do not possess them themselves (Vallance and Carlton 2015). How communities engage with the external entities, who possess these resources and capabilities, during different stages of a crisis (preparation, response, and recovery) is influenced by preexisting connections and experiences. Local resilience planning groups have the potential to link external resources and capacities with community-based initiatives. This enables the development of relationships and supports the community where necessary, but still gives it the space to build its own capacity—for example, helping communities to form their own flood forums and community response groups may be necessary in areas with low levels of social capital (McEwen et al. 2018).

Sustaining these groups and ensuring that they have the ongoing capacity to continue is a role that LRPGs could potentially meet. This may already be a role that some LRPG members are actively engaged in, particularly if a member organization has a specific interest in this area (for example the Scottish Flood Forum), in addition to other issues that a LRPG may be seeking to address. What a LRPG engages with is prescribed by what the members determine their role to be and how they define community resilience. It is important for the effectiveness of LRPGs that they understand that activities specifically directed at

community resilience to disasters and activities that contribute to social resilience can mutually reinforce one another (Vallance and Carlton 2015; Markantoni et al. 2018). Their work must include engaging with the community to seek their input, while at the same time recognizing human agency is unevenly distributed within and across communities and organizations, and that individual and group capacities are constantly changing (Skerratt 2013). To achieve this a LRPG needs to develop strategies to identify where communities are most in need of additional support and whether they are in a position to meet this need.

The conceptual approach that is used to frame community resilience in this article builds upon the emBRACE framework (emBRACE 2015) and the four indicator categories identified by Sharifi (2016)—social, economic, environmental, and infrastructure—to create a matrix that can be used to identify strategies to contribute to a community's resilience. The decision to add specific hazard mitigation activities to the emBRACE framework was taken to demonstrate how focused disaster resilience activities and other aspects of a community's resilience can contribute to one another. Combining the modified emBRACE framework with these indicator categories complies with the definitions of resilience and community resilience used here. The matrix consists of "Actions"—what the community does; ''Learning''—how it reflects upon response to change; ''Resources and Capacities''—that it has access to; and "Specific Hazard Mitigation Activities"—what it does to address a specific risk. Within each of these are the social, economic, environmental, and infrastructure indicator categories, or dimensions of resilience, identified by Sharifi (2016). The premise of this approach is that to develop community resilience all areas within the matrix need to be covered to ensure that the multiple components that contribute to a community's resilience are being addressed. Using this concept should allow LRPGs to identify areas where their communities need additional support and to work with communities to develop multifaceted strategies. An assessment of an individual LRPG to determine to what extent they can meet the 10 essential criteria identified by Fazey et al. (2018) will further highlight areas where a LRPG can potentially intervene to support a community's resilience and its limitations.

3 Context and Background

An overview is given of the global and national situation, which places the example of Aberdeen LRPG into context, illustrating the situation at multiple scales.

3.1 Context: Extreme Events, Climate Change, Austerity Environment

The circumstances in which LRPGs operate are complex. The increasing frequency of extreme weather events, the 2008 financial crisis, and the fact that many governments are adopting policies of austerity have all contributed to the decreased availability of funds to deliver services. The political nature of climate change, as illustrated by the decision of the Trump administration in 2018 to withdraw the United States from the Paris Agreement on Climate Change (UN 2017), adds a layer of complexity when adaptation and transformation options are being considered (Eriksen et al. 2015). The communities that LRPGs work in may be classified as vulnerable (Lyth et al. 2016), that is they have social and economic problems that subject individuals to chronic stresses resulting from these circumstances (Török 2017; Teo et al. 2018). As a result additional shocks and changes can act as stress multipliers, and reduce individual and community capacity to cope with additional problems (Carmen et al. 2016).

Community adaptation and transformation have been framed by some authors as climate justice issues (McNamara and Buggy 2017; Schlosberg et al. 2017; Torres and Casey 2017). They argue that without addressing the underlying social and economic issues, strategies to mitigate the effects of climate change will not be effective. There is an increasing shift by governments to place the emphasis on community empowerment and communities taking responsibility for themselves (Rolfe 2018). Resilience and community resilience are being treated as an answer to these rapidly changing circumstances and restricted resources, placing the responsibility on communities for their own well-being (Platts-Fowler and Robinson 2016).

A community's resilience is dependent on factors both internal and external to that community (Fielke et al. 2018). This may be forgotten or deliberately disregarded when the neoliberal narrative places responsibility for external factors on communities (Fieldman 2011; Schlosberg et al. 2017; Hickman 2018). It is important that LRPGs and their funders and oversight bodies recognize the constraints and limitations of what LRPGs can potentially achieve, while enabling them to maximize the benefits of what they can achieve. The policy environment in which LRPGs operate can influence actions—LRPGs with members who have statutory duties must prioritize them, as in the case of local authorities and the police in the UK (Cabinet Office 2016).

3.2 The Scottish Policy Environment

The policy environment in Scotland is framed by the National Performance Framework (NPF) that was updated in 2018 and aligned with the Sustainable Development Goals and the UN's Agenda 2030 (Scottish Government 2018a). Within this framework 11 areas pursue national outcomes. One area deals with the goal of achieving resilient communities. The national outcome for communities is that "we live in communities that are inclusive, empowered, resilient and safe" and also states on the webpage that "we recognize that to be healthy and happy as a nation we must nurture and protect our local resources, environment and all who live in them" (Scottish Government 2018b). The national outcomes are interrelated and some pieces of legislation apply to more than one area.

The pieces of legislation with relevance for this objective and that pertain to characteristics of community resilience (emBRACE 2015; Patel et al. 2017) include the Community Empowerment (Scotland) Act 2015 that promotes community ownership of assets, which requires local leadership and networks; the Climate Change (Scotland) Act 2009 that encourages adaptation, which requires economic investment and leadership; the Flood Risk Management (Scotland) Act 2009 that relies on local knowledge and being prepared; and the UK Civil Contingencies Act 2005, Regulations (Scotland) 2005 that demands preparation, governance, and local knowledge (LARGS 2017). If communities are to work with government locally and nationally and take on some of the responsibility for achieving the requirements of these acts, they will need to develop attributes that are important aspects of resilient communities: access to capacity and resources in times of crisis; the ability to make decisions and take action; and the aptitude to learn from past experiences.

The Scottish government in its approach to community resilience and the development of the Five E's Framework (Resilient Communities Team 2017) links the statutory duties of the Civil Contingencies Act 2005, Regulations (Scotland) 2005 with a more generalized model of community resilience, acknowledging community resilience to be an evolving process with community empowerment at its core (Scottish Government 2013; Resilient Communities Team 2017). Further developing community autonomy and empowerment the Community Empowerment (Scotland) Act 2015 explicitly seeks to engage communities directly in budgetary decisions and deciding on outcomes for their own areas (Scottish Government 2015). Fischer and McKee (2017) found that the successful use of this legislation depended on the capacities, abilities, and circumstances of a community. This represents a role for LRPGs in helping to create conditions for people to

successfully use the Community Empowerment (Scotland) Act 2015 to shape their own areas. How far this policy environment influences LRPGs in their approach to community resilience is unclear and beyond the scope of what is considered in this article. Here the potential for the Aberdeen LRPG to contribute to community resilience will be explored.

3.3 The Aberdeen Context

The Aberdeen is made up of 37 neighborhoods, of which nine are classified as deprived according to the Scottish Index of Multiple Deprivation (Community Planning Aberdeen 2019), the method used by the Scottish Government to identify localized areas of multiple deprivations. A statutory requirement of the Community Empowerment (Scotland) Act 2015 is locality planning—this requires that Community Planning Aberdeen identifies localities with < 30,000 residents where outcomes are lower than other residents in Aberdeen (Scottish Government 2017b). Three areas were identified as priority localities illustrating a set of circumstances (Table 1) that are encountered in many urban areas and can undermine resilience (Rapaport et al. 2018). This can reduce a community's ability to cope with and recover from external events such as flooding (Rapaport et al. 2018).

Aberdeen has areas of high risk of flooding, with five local flood risk management plans in place and 8500 properties identified as at risk, with an estimated annual damage of £15 million (Aberdeenshire Council 2016). In 2016, Aberdeen City experienced extensive surface water flooding. The city is also at risk from coastal and river flooding. The risks across Aberdeen are complex and result from an interaction between the River Don and River Dee, small watercourses, storage systems, surface water run-off, and tide levels (SEPA 2016).

The Aberdeen LRPG was formed as part of the Aberdeen City Local Outcome Improvement Plan 2016-26 and is responsible for making progress towards ensuring that people are resilient, included, and supported when in need, and that communities are empowered, resilient, and sustainable (Community Planning Aberdeen 2019), in the three localities identified (Table 1). Their locations are shown in Fig. 1. The sectors represented within the Aberdeen LRPG (Table 2) work in diverse areas and include: health and social care, drug rehabilitation, sports development, housing, priority families, community development, community safety, education, policing, and fire prevention among others. This combination of factors suggests that examining the challenges and constraints faced by the Aberdeen LRPG has the potential to illustrate some of the challenges and roles for other LRPGs that operate in similar circumstances. In addition to this,

Table 1 Localities identified by Community Planning Aberdeen (2019) for which Aberdeen LRPG has responsibility

| | Aberdeen City | Priority localities | | |
		Torry	Middlefield, Mastrick, Cummings Park, Northfield and Heathryfold	Seaton, Woodside and Tillydrone
Population	228,800	10,500	2500	14,000
Estimated percentage children (under 16) living in poverty	16.7%	23%	46% (East side of Middlefield)	25%
Males: Life expectancy, years	77.1	71.2	74.6	Seaton: 72.4 Woodside: 68.2 Tillydroyne: 73.7
Females: Life expectancy, years	81.2	77.26	Heathryfold: 79.48 Mastrick: 82.88	Seaton: 77.1 Woodside: 74.9 Tillyrone: 78.8
Median household income	£30,735	£20,031	Middlefield: £17,442 Heathryfold: £24,375	Seaton: £18,155 Woodside: £22,060 Tillyrone: £18,480
Potentially Vulnerable Area[a] (PVA); Source of flooding and highest level of risk[b] (SEPA 2018)	Total of 5 PVA in Aberdeen City River: High Surface water: High Coastal: High	Aberdeen City-Deeside PVA 06/18 (SEPA 2016) River: High Surface water: High Coastal: High	Aberdeen City-Bridge of Don and Deeside PVA (SEPA 2016) Surface water: High	Aberdeen City-Bridge of Don PVA 06/18 (SEPA 2016) River: High Surface water: High Coastal: High
Social challenges		Key issues that occur in higher concentrations in these localities compared to Aberdeen as a whole (Community Planning Aberdeen 2019) Drug misuse Low school attendance Unemployment Lack of community integration and social cohesion Low levels of educational attainment Anti-social behavior and crime Domestic abuse Social isolation Poor transport infrastructure Food poverty Chronic illness		

Comparative information (Community Planning Aberdeen 2017a, 2017b, 2017c) for each locality compared to Aberdeen City as a whole, flood risk, and key social challenges

[a] Potentially Vulnerable Areas are defined by Scottish Environment Protection Agency "Catchments identified as being at risk of flooding and where the impact of flooding is sufficient to justify further assessment and appraisal" (SEPA 2016, p. 340)

[b] Risk level: High is equivalent to 1 in 10 chance of event occurring in any given year, medium is equivalent to 1 in 200 of event occurring in any given year, low flood risk is equivalent to 1 in 1000 chance of event occurring in any given year (SEPA 2016)

Aberdeen LRPG was having problems determining what their collective understanding of community resilience was.

4 Method

A participatory workshop methodology was selected because this way of working enables participants to interact with one another, encouraging them to listen to other group members and consider ideas collectively. This enables

Fig. 1 Map showing location of Aberdeen and the three priority localities (adapted from D-maps.com 2007a, 2007b) identified by Community Planning Aberdeen (2019). Locality 1: Middlefield, Mastrick, Cummings Park, Northfield, and Heathryfold, Locality 2: Seaton, Woodside, and Tillydrone, and Locality 3: Torry
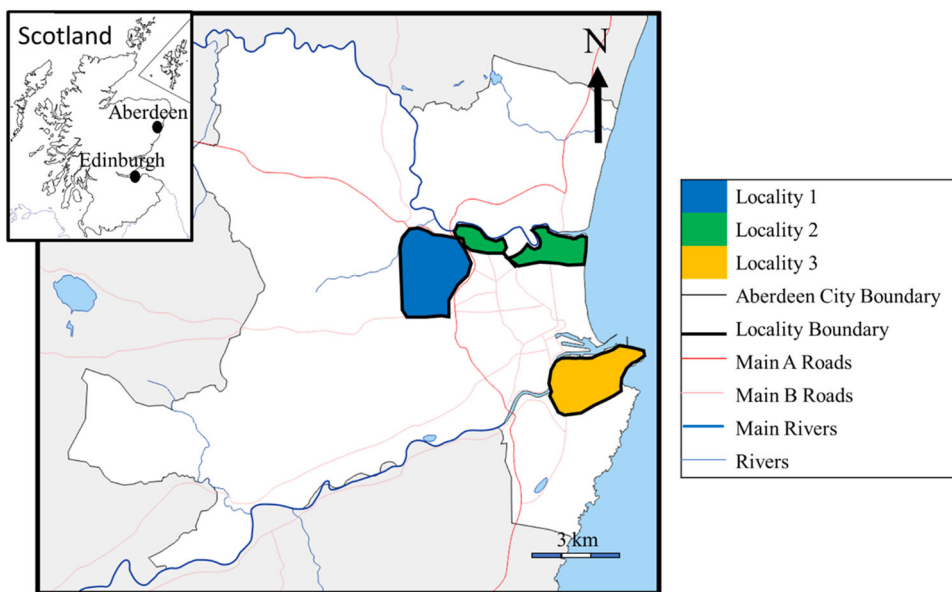
matters to emerge due to the mix of expertise and knowledge in the room (Dobie and Schneider 2017). The workshop took place on 15 January 2018, at Aberdeen Health Village. Twelve members of the Aberdeen LRPG participated in the workshop (Table 1, attended column), facilitated by the author. The purpose of the workshop was to assist the Aberdeen LRPG in exploring how to make progress towards ensuring (1) that people are resilient, included, and supported when in need; and (2) that communities are empowered, resilient, and sustainable (Community Planning Aberdeen 2019). The objective of the workshop was to enable the members of the Aberdeen LRPG to discuss and think about what their collective aim is and to explore ideas to achieve that aim.

The workshop was designed using the "Three Horizons Approach" to promote active discussion between participants (Fig. 2). This type of workshop has been successfully used to explore issues within communities and institutions and how to put into practice strategies to increase their resilience (Sharpe et al. 2016). It is based on the premise that the current situation is unsustainable and that new and transformational approaches are needed (Sharpe et al. 2016). The workshop was designed (Fig. 3) to avoid the explicit mention of resilience or community resilience because of the ambiguity of these terms (Patel et al. 2017).

The whole group discussions were recorded using a digital audio recorder, and the key points were captured on post-it notes and mapped on the Three Horizons charts (Fig. 4), with additional notes taken during the workshop by the author. The charts produced during the workshop were digitized and used in conjunction with the audio recordings and additional notes to identify dominant and recurrent topics raised during the workshop. The method of

analysis used was thematic analysis (Braun and Clarke 2006).

The "ten essentials of community resilience" identified by Fazey et al. (2018) are compared to the attributes and composition of the Aberdeen LRPG, and how the issues raised during the workshop relate to these "ten essentials" is shown in Table 3. The workshop discussions were summarized by the author. The applicability of the findings from the workshop about Aberdeen LRPG with respect to the role for other LRPGs in building community resilience is discussed.

5 Results

Six common themes emerged from the analysis of the workshop. Five themes—attitudes, assumptions, terminology, timescale, and culture—inhibit the theme of engaging with individuals. These themes and the composition of the Aberdeen LRPG are examined using the conceptual approach to community resilience outlined in this article.

5.1 The Composition of the Aberdeen LRPG

The Aberdeen LRPG's mix of members (Table 2) potentially enables them to influence decisions at multiple scales. To do this, organizations need to work cooperatively, which presents horizontal challenges, that is with respect to the ability of separate organizations to work together, and vertical challenges, that is the hierarchical structure of organizations that can prevent the taking of actions. Some members have access to higher levels of governance through the hierarchy within their own

Table 2 Composition, vertical and horizontal reach, reservoirs of interest, and dimensions of interests of the Aberdeen LRPG members in January 2018, and whether they attended the January 2018 workshop at Aberdeen Health Village

Organization	Area or Department within Organization	Attended	Vertical Scale	Resilience Reservoir	Dimension Resilience
Aberdeen City Health and Social Care Partnership	Heath and Social Care	Yes	Regional, Local	Actions, Learning, Resources, and Capacities	Social, Infrastructure
Active Aberdeen Partnership	Sports and Active Lifestyles	Yes	Local, Individual	Actions, Learning, Resources, and Capacities	Social, Environment
National Health Service Grampian: Category 2 Responder[a]	Health Intelligence	Yes	Regional, National	Actions, Learning, Resources, and Capacities	Social, Infrastructure
Aberdeen City Council: Category 1 Responder[b]	Community Justice		Regional, Local, Household, Individual	Actions, Learning, Resources, and Capacities	Social, Economic, Infrastructure, Environment
	Transformation	Yes	Regional, Local, Household, Individual	Actions, Learning, Resources, and Capacities	Social, Economic, Environment, Infrastructure
	Community Planning		Local	Actions, Learning, Resources, and Capacities, Identified Hazard Mitigation Activities	Economic, Infrastructure, Environment
	Locality—Communities and Partnerships	Yes	Local, Household, Individual	Actions, Learning, Resources, and Capacities	Social
	Performance Management		Local	Actions, Learning, Resources, and Capacities	Social
	IT and Transformation		Local	Actions, Learning, Resources, and Capacities	Social, Infrastructure, Economic
	Communities and Housing	Yes	Local, Household, Individual	Actions, Learning, Resources, and Capacities, Identified Hazard Mitigation Activities	Infrastructure, Social
	Localities	Yes	Local, Household	Actions, Learning, Resources, and Capacities, Identified Hazard Mitigation Activities	Social, Infrastructure, Environment
	Community Safety Service		Local, Household, Individual	Actions, Learning, Resources, and Capacities, Identified Hazard Mitigation Activities	Social, Infrastructure, Environment
	Priority Families	Yes	Local, Household, Individual	Actions, Learning, Resources, and Capacities	Social, Economic
	Digital Economy		Local, Household, Individual	Actions, Learning, Resources, and Capacities	Economic, Infrastructure
	Development		Local, Household	Actions, Learning, Resources, and Capacities	Social, Infrastructure, Environment, Economic
Aberdeen Council of Voluntary Organisations: Third Sector Interface (ACVO TSI)	Partnerships, ACVO TSI	Yes	Regional, Local, Household, Individual	Actions, Learning, Resources, and Capacities, Identified Hazard Mitigation Activities	Social, Environment
Scottish Fire and Rescue Service: Category 1 Responder		Yes	National, Regional, Local, Household	Actions, Learning, Resources, and Capacities, Identified Hazard Mitigation Activities	Environment, Infrastructure
Aberdeen City Alcohol and Drugs Partnership	Development	Yes	Household, Individual	Actions, Learning, Resources, and Capacities	Social

Table 2 continued

Organization	Area or Department within Organization	Attended	Vertical Scale	Resilience Reservoir	Dimension Resilience
Police Scotland: Category 1 Responder	Communities	Yes	National, Regional, Local, Household, Individual	Actions, Learning, Resources, and Capacities, Identified Hazard Mitigation Activities	Social, Infrastructure, Environment,
Skills Development Scotland—Virtual membership			National, Regional, Local, Household, Individual	Actions, Learning, Resources, and Capacities	Social, Infrastructure, Economic, Environment
Scottish Enterprise—Virtual membership			National, Regional, Local, Household, Individual	Actions, Learning, Resources, and Capacities	Social, Infrastructure, Economic, Environment
North East College—Virtual membership			Regional, Local, Household, Individual	Actions, Learning, Resources, and Capacities	Social, Infrastructure, Economic, Environment

The conceptual framework for community resilience used here is organized in a matrix of Resilience Reservoirs: Actions, Learning, Resources, and Capacities, and Identified Hazard Mitigation Activities, and with Dimensions of Resilience: Social, Infrastructure, Environment, and Economic. Vertical Scale refers to areas of operation of the organization

[a] Category 2 responders: "have statutory duties to co-operate and to share information with Category 1 responders in the planning and response to major emergencies." (LARGS 2017, p. 4)

[b] Category 1 responders: Statutory duties: 1. Undertake risk assessments, contribute to their regional Risk Preparedness Assessment and a Community Risk Register. 2. Plan for emergencies. 3. Make sure business continuity arrangements are in place. 4. Ensure that the public can be alerted and informed about potential and current emergencies. 5. Co-operate with partner agencies. 6. Share information with partner agencies. Councils have an additional statutory duty. 7. To promote business continuity to local businesses and the voluntary sector (LARGS 2017, p. 4)
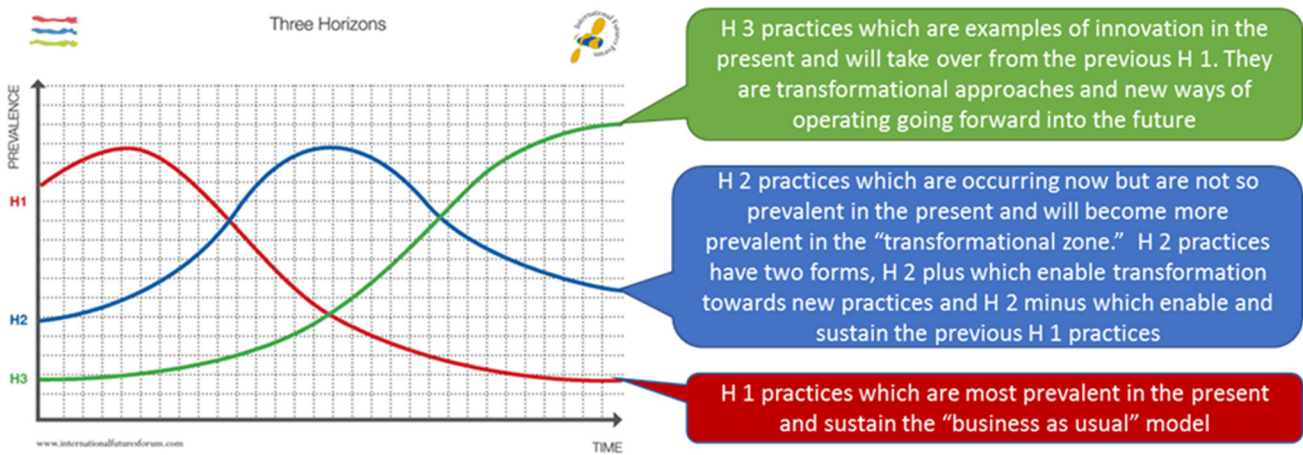

Fig. 2 Graphic representation of the Three Horizons Approach. *Source*: International Futures Forum (2017)

organizations. Aberdeen City Council, for example, has links to Aberdeenshire Council, National Health Service (NHS) Grampian has links with NHS Scotland, and the police and fire services are Scottish level organizations.

This opens a line of communication, through the Aberdeen LRPG, from the community to higher levels of influence.

Access to higher levels of power was discussed during the workshop and was spoken about in two ways: (1) the need to convey the message upwards of what was needed

Introductions, purpose, and workshop instructions

The present (25 minutes)
- What are the current concerns and challenges in these communities?
- Small group discussion, top three concerns or challenges to be recorded on post-it notes
- Feedback from each group, post-it notes positioned on the three horizons chart

The future (1 hour)
- In a world with no limitations describe these communities in 10 years time
- Small group discussion, top three ideas recorded on post-it notes
- Feedback from each group, post-it notes placed on the three horizons chart
- Group discussion. Ways to move towards the future?

Strategies to move forward into the future (35 minutes)
- Small group discussion, new strategies to move towards the future, examples of strategies already in place, what can each organization do?
- Feedback from each group, top three issues recorded on post-it notes and placed on the three horizons chart

Planning for transitions, whole group discussion (25 minutes)
- Shared goals
- Common themes
- Who can do what?
- Ideas recorded by facilitator on post-it notes positioned on "the planning for transitions chart"

Next steps (25 minutes)
- Group analysis
- Key points
- Summary of findings

Fig. 3 Workshop plan for the January 2018 workshop at Aberdeen Health Village, as designed by the author using the Three Horizons Approach (International Futures Forum 2017)

Fig. 4 Three Horizons charts, produced by the Aberdeen LRPG during the January 2018 workshop at Aberdeen Health Village

to address external factors that were not within the power of the LRPG to influence; and (2) the perception that the group needed to gain permission to act. Distribution of power was raised several times during the workshop, as a cultural and a practical issue. The Aberdeen LRPG members felt they had to get permission to experiment with new strategies and ways of working. An example identified was the sharing of facilities between group members. The move away from "command and control" style working and the balance between service providers and users were raised. Identifying who had the ability to act and who was

perceived to have permission to act was linked to the balance of rights and responsibilities, who is responsible for what, community empowerment, and relinquishing control. This was viewed as part of the process of transferring power to local areas. It was recognized that a cultural shift is needed for communities and individuals to take ownership of their ideas and acquire the capacity to act. It was suggested that the Aberdeen LRPG could set a precedent and initiate change in their own member organizations' culture. Silo thinking was identified as an obstacle to working with each other. The need to share

Table 3 Factors and issues of relevance to each of the 10 essentials for effective community resilience initiatives (Fazey et al. 2018, p. 31) using the example of the Aberdeen LRPG

Ten essentials for effective community resilience initiatives	Examples of factors that affect the potential to fulfill the essentials	Aberdeen resilient, included and supported group, issues raised during the workshop	Further actions identified
Enhance adaptability and flexibility for managing change and work with diverse resources and capacities	Range and area of expertise of organizations and individuals who are members of the LRPG Culture and working practices of member organizations Resources and capacities available to group members Ability of LRPG to take decisions and access resources	Group includes wide range of sectors Has access to diverse resources and capabilities Group members felt they did not have permission to act and this impacted on their ability to make decisions and respond flexibly to circumstances	Need to change current systems and working practices within individual organizations and between group members
Take account of shocks and stresses, direct and indirect impacts, and anticipated and unanticipated change by enhancing specified and generalized resilience	The purpose and aims of the LRPG Objective or responsibility of organizations and individuals within the LRPG Awareness of local issues and situation Ability to collect information and respond to changing situations Awareness of potential risks to a community's resilience	Current focus on chronic stresses, social and economic problems Strength is the focus on social justice issues and health outcomes, which enhance generalized resilience Direct link has not yet been made with climate change and natural hazards	Bring in partners who work on Aberdeen Community Resilience Plan
Work horizontally across sectors to avoid counterintuitive outcomes and to find novel solutions that simultaneously address multiple concerns	Range of sectors involved with LRPG Effectiveness and availability of channels of communication between group members and communities Ability to respond to and learn from change collectively Ability to work and think holistically Willingness to engage, work, and codesign with communities Access to and use of risk assessment and analysis tools	Multisector composition is a strength To improve information sharing agreements within the Aberdeen LRPG An awareness exists of the need to pool resources and change ways of working to meet this essential	Need more direct contact to enable stronger communication between organizations
Work vertically across social scales to ensure engagement in carbon reduction and to address issues of power, control, and ensure support	Group members' ability to communicate with and access higher levels of power Community attitude to individual group members Level of trust between group members and individuals within an area Willingness to lobby government and international organizations	Some member organizations are hierarchical in structure and there is the potential to access higher levels Some group members have direct contact with individuals within the areas of concern Aberdeen LPRG has the potential to engage vertically across scales	Make the case for different ways of working to those higher up in member organizations Make better use of members' existing contacts and organizational structures
Reduce carbon emissions through transformative and proactive change	Responsibility and objective of LRPG Access to resources Capacity to engage and empower communities to reduce carbon emissions	This issue is currently not being addressed	Identify local projects addressing this, investigate scope to work with them

Table 3 continued

Ten essentials for effective community resilience initiatives	Examples of factors that affect the potential to fulfill the essentials	Aberdeen resilient, included and supported group, issues raised during the workshop	Further actions identified
Build narratives of climate change to enhance climate literacy and inspire hope and action	Access to resources information Level of trust within the local community Ability to engage with individuals and groups	Climate change narratives are not being articulated, but there is a strong desire to create a narrative of hope and possibility within the communities for their own personal abilities to achieve	Seek out examples of this to learn from
Engage directly with futures to release creativity, imagination, and change	Willingness, resources, and capacity of individual LRPG to actively engage creatively with local communities	Potential strategies were identified during the workshop to create a "trajectory to a better life"	Investigate community mentoring schemes
Focus on climate disadvantage and reducing inequities to overcome injustices of climate change and climate action	Objective and responsibility of LRPG	Focus of this group is in deprived areas of Aberdeen dealing with underlying social and economic issues Strength of this group is its core purpose of creating "resilient individuals" rather than resilience to specific external shocks	Use trusted member of the Aberdeen LRPG to help other group members build relationships in the areas to build resilience
Focus on processes and pathways through encouraging participation, learning, and empowering forms of change	Local community capacity and willingness to engage with LRPG	Group recognizes the need to focus on the process and address issues of the prescriptive target	Examine current working practices
Focus on transformative change, rather than adjustment or reform kinds of change	Willingness of our community to transform Ability of the LRPG to access power to bring about transformation	Transformation of processes of current practices is recognized within the group, however power and control issues may prevent this	Need to seek permission to take actions from higher up within individual organizations

ideas and understand what other group members do was acknowledged. Feedback processes were identified as a way to strengthen knowledge exchange, to bring about new ways of working, and to learn from one another. This relates to the challenge of how to engage with people in the areas the Aberdeen LRPG is working in and was identified as a major issue.

5.2 Themes and Issues Raised in the Workshop

The attitudes of people in the areas where the Aberdeen LRPG works, and the attitude towards these people by some individuals working with them is important. Workshop participants admitted that this is an issue for both sides of the relationship, affecting the ability to engage with one another. The attitudes of those working with individuals had been observed to be negative, in some cases people being viewed as "stupid and difficult," which was reciprocated with suspicion. It was felt that the prevailing attitude within the three deprived localities is despondency and that the root of this is intergenerational. People who had had negative experiences with government systems or authority transferred mistrust to their children. This fed back into other themes discussed during the workshop—for example, timescales, using long-term planning over decades and the need for a shift in culture.

The discussion about why members of the Aberdeen LRPG were failing to engage effectively with individuals and households focused on the need to question the assumptions LRPGs make. It was observed that no one was asking people about their experiences and that the Aberdeen LRPG needs to engage "face-to-face" with people to find out what is important to them. Some of the people in these localities are regarded as hard to reach, but it was suggested that the reality is they are hard to engage.

Some Aberdeen LRPG members are more successful than others at engaging with individuals in the target areas. The police cadets and the "local heroes award" were given as examples of successful engagement, by workshop participants. The Northfield local heroes program takes a bottom-up approach, with local people nominating individuals in order to celebrate their contribution to the community. According to data collected by the Middlefield, Mastrick, Cummings Park, Northfield and Heathryfold Localities Partnership (Community Planning Aberdeen 2018a), the number of local hero posts on Northfield Total Place Facebook from August 2017 to early summer 2018 was over 59,000. This example implies that what is provided should be perceived as valuable to the community and therefore aid engagement. Other examples of improvements in these three localities involving third sector organizations and community engagement are cited

in all three areas 2017–2018 annual reports (Community Planning Aberdeen 2018a, 2018b, 2018c). They illustrate that it is possible to overcome the challenges identified during the workshop and to enable the capacity to act and improve resilience to develop locally. Third Sector Organization (TSO) inclusion in the Aberdeen LRPG provides more ways to connect with individuals and communities. These organizations are often embedded in the area themselves and not necessarily associated with authority, which can be a barrier to engagement with individuals.

This further illustrates interrelationships of the themes, particularly with respect to terminology and assumptions, and has implications for the culture within the Aberdeen LRPG's membership organizations. For example, the term "community" was viewed as difficult because the localities are not "communities" either geographically or socially. This may be because of the way in which these three localities have been created, grouping adjacent areas together to meet the requirements of the Community Empowerment Act (Scotland) 2015 (Community Planning Aberdeen 2018d). The observation was made that the individuals within the areas did not identify as being part of an externally defined community. It was agreed that a new term for these areas is needed, which should be neutral and clear, though none were suggested during the workshop. An issue that affected the Aberdeen LRPG's ability to take actions was the amount of time they were given to deliver outcomes. The workshop participants identified the need for separate delivery dates for different types of change, so that actions could be undertaken sequentially or in parallel. It should be noted that this observation was linked to the local election cycle of 4 years and the need for politicians to show that they had made improvements during their time in office. The Aberdeen Local Improvement Plan framework is projected over 10-year timescale (Community Planning Aberdeen 2019). This was not viewed as long enough to make intergenerational changes by some participants.

5.3 Coordination within the Aberdeen LRPG

The need for coordinated systems was raised multiple times. Data sharing and communication were pinpointed as challenges—Aberdeen LRPG members were not aware of each other's activities. During the workshop the Aberdeen LRPG discussed ways to share data without breaching confidentiality. It was suggested that members could communicate directly with each other. A participant cited a case where agreements had been drawn up between individuals within organizations although they did not give specific examples of which agencies were involved or how they had complied with data privacy requirements. This was viewed as a more pragmatic approach compared to using agreements between organizations, to begin to address the lack of data sharing between group members. This points to how cross-sector working could enable the Aberdeen LRPG to evaluate what actions are available to them collectively.

This discussion evolved, moving beyond sharing information, to how to sustain communication and retain skills, knowledge, and experience given the high rate of staff turnover experienced by members of the Aberdeen LRPG. An idea was proposed of formalized agreements between members, so people could be seconded between sectors, enabling the sharing of skills and the strengthening of interorganization relationships. This could help maintain continuity and create familiarity across sectors thus developing resilience. This was also raised as an option for sharing physical resources to meet the requirement to "work smarter." If the Aberdeen LRPG can successfully make these changes this has the potential to improve the overall resilience of the areas. For example, a requirement of the flood risk management plan for the northeast, which incorporates Aberdeen (SEPA 2016), is that organizations work together, which necessitates good communication and potentially sharing resources. Areas with a strong civil society can to cope better with disasters than those without (Vallance and Carlton 2015). To achieve this the Aberdeen LRPG needs to have autonomy to take actions collectively.

5.4 Challenges for the Aberdeen LRPG in Identifying Actions and Incorporating Statutory Duties

The process of identifying actions is integral to the purpose of the Aberdeen LRPG and was viewed as the most difficult aspect of the planning group's role. The actions taken to build community resilience should take account of the statutory requirements to protect local populations in Scotland. The members of the Aberdeen LRPG who are classified as category one responders, for example, must fulfill six statutory duties (Table 2)—this is a requirement of the Civil Contingencies Act (2013) (LARGS 2017). Actions taken by the Aberdeen LRPG to improve general resilience can also benefit emergency planning across all of its phases (Vallance and Carlton 2015). These duties have the potential to be supplemented by the work of the Aberdeen LRPG, which would have benefits beyond specific hazard preparedness (Cretney 2016). During the workshop specific hazards and events were identified as an opportunity to engage with residents within these localities as a community because they would have a shared challenge. It was recognized that how group members responded during an emergency could shape future relationships. The Aberdeen LRPG is currently not focusing on specific hazard mitigation strategies. This was viewed as an

option for developing new strategies and accessing additional funding.

6 Discussion

Local resilience planning groups are part of a complex system that incorporates social, environmental, technical, and economic interactions. Identifying what is needed in different communities to develop resilience is challenging. What an individual LRPG chooses to undertake will depend on the group composition and responsibilities. It is important for LRPGs to consider the interactions within their groups, vertically and horizontally, as well as the social, economic, and physical environment the members are working in. The Aberdeen LRPG exemplifies some of the difficulties faced by LRPGs, which illustrates the importance of approaching their tasks holistically.

Using a conceptual framework will help LRPGs identify the types of activities that contribute to community resilience. This approach has the potential to encourage sharing of resources and capabilities systematically to meet needs across sectors. Sharing information with other LRPG members is important to achieve this and begin the process of building an area's resilience. However, as illustrated by the Aberdeen LRPG, unless mechanisms are in place to allow LRPGs to work cooperatively they will be less effective. The identified themes are all potential barriers to community resilience that should be taken into consideration by LRPGs as part of the process of working with communities.

This is important because when considering LRPGs as an approach for communities to develop the attributes of resilience, it may appear that the members of a LRPG possess the requirements of this conceptual framework for community resilience. However, unless they are able to overcome their own internal challenges, they will be unable to work effectively to support the process of building an area's resilience. This highlights the need for recognition of the systemic barriers that may exist within LRPG memberships and the way these internal challenges can obstruct their potential to deliver the strategies that they have identified using a conceptual framework for resilience.

As LRPGs seek to empower and enable communities to be more resilient, it is important for the members to acknowledge the difference between what they can and cannot influence (Fielke et al. 2018). Empowering communities through the transfer of resources and responsibilities to them needs to be undertaken with caution. Areas may not necessarily possess the ability or the resources to take action or learn, individually or collectively (Fischer and McKee 2017). Encouraging individuals and areas to

engage with this process and provide the support needed to develop an area's own capacities is a role that a LRPG could usefully play.

A question pertinent to all elements of resilience, and an issue repeatedly raised during the workshop, was what the correct balance between public service delivery and the community is. This relates to who has the power and ability to affect an area's circumstances and whose responsibility it is to act. As observed by Vallance and Carlton (2015), in times of crisis communities do depend on external resources. For areas that are classified as deprived according to the Scottish Index of Multiple Deprivation, it may be the case that they are in a perpetual state of crisis. Therefore, additional resources need to be provided by the state and TSOs to begin the process of developing areas' resilience to external events that may affect them collectively or individually. For LRPGs working in this type of environment, as is the case for the Aberdeen LRPG, sustainable resilience requires long-term planning in conjunction with short-term support. The ability to work in this way will depend on LRPGs' access to power, to enable them to support individuals and areas to develop their capacity to take on some of the responsibility for their own resilience.

7 Conclusion

When tasked with community resilience LRPGs need to identify what they want to achieve; what they have the capabilities and resources to affect; how they can utilize these resources to improve community resilience; and what they have the power to influence. Understanding local issues and utilizing expert knowledge within LRPGs is vital for engaging with individuals to improve an area's resilience. When LRPGs have members with organizational access to higher levels of power they may be able to use this to communicate issues up the hierarchy, to break down barriers, and to enable new ways of working.

The Aberdeen LRPG illustrates the need to emphasize the ability of a LRPG to act in terms of a conceptual framework of community resilience. The issues raised and the themes identified using the example of the Aberdeen LRPG were dominated by the group's inability to work effectively together or take action. This exposes the need to investigate how to enable those working in communities to undertake the activities that enable communities to develop their resilience.

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