



# **Literature review on the meaning and role of mutual aid in Scotland as a response to natural hazards**

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## **Definition**

**Natural hazards-** ‘natural processes or phenomena that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage’ (UNDRR, 2009).

**Emergency** – ‘an event or situation which threatens serious damage to human welfare in a place in the UK, the environment of a place in the UK, or war or terrorism which threatens serious damage to the security of the UK’ (Great Britain, Cabinet Office, 2004).

**Resilience** – ‘the capacity of an individual, community or system to adapt in order to sustain an acceptable level of function, structure and identity’ (Scottish Government, 2016).

**Community** – ‘refers not only to geographical communities (such as urban or coastal) but also communities of interest, where people are brought together through common interests and a shared sense of commitment’ (Scottish Government, 2016).

**Individual** – ‘refers to the man or woman in the street, the people of Scotland, who also bear a responsibility to consider how best to prepare themselves for unforeseen or challenging events and how they might assist those around them during emergencies’ (Scottish Government, 2016).

**Local authority-** ‘Scotland’s 32 local authorities are responsible for providing a range of public services. This includes education, social care, roads and transport, economic development, housing and planning, environmental protection, waste management, cultural and leisure services’ (Scottish Government, 2017).

## **1. Introduction**

This project sought to identify the conceptual understanding of mutual aid, who is involved in it and how it works as a response to natural hazards in Scotland. It is important because the mutual aid ability of one region has implications on its ability to cope with natural hazards and adapt to the trend of climate change. The report focuses on previous mutual aid studies from the literature database and official reports from the UK government websites and Scottish government websites.

This project aims to inform policymakers and practitioners of the definition and role of mutual aid in Scotland so that they can consider the structure and role of different sectors when making plans and strategies to deal with natural hazard events. It will also be of use to those with an interest in community resilience, including individuals or organisations involved in emergency preparedness and responses. More specifically, the project's aims and objectives are as follows:

### **Aims**

- Identify the origin and definition of mutual aid.
- Identify the partners involved in the mutual aid process and how they work.
- Identify the role of mutual aid in response to natural hazards in Scotland.

### **Objectives**

- Provide the National Centre for Resilience Partnership an understanding of the role of mutual aid in Scotland.

## **2. Background**

Over the last decade, the frequency, intensity and severity of natural hazards have increased with climate change, Scotland experienced a number of natural hazards that have had profound impacts on society and economics (ASC, 2016). According to Climate Ready Scotland (2019), the average temperature in Scotland during the 2009-2018 period was 0.67 °C warmer than the average temperature during the 1961-1990,

annual rainfall in the same period was 15% wetter than 1961-1990, with winter 25% wetter. Natural hazards will likely become more frequent and severe in the future (Scottish Government, 2019). Research published in 2015 estimated that over 4% of residential properties in Scotland are estimated to be exposed to one or more sources of flooding. River flooding impacts mostly residential properties, followed by coastal and surface water flooding (Kazmierczak et al., 2015). During the period of Storm Desmond in 2015, hundreds of residents and properties in Hawick Town in Scotland were evacuated due to concerns over the River Teviot. Several major roads were flooded across central and southern Scotland, train services were suspended in the impacted areas (Scottish Government, 2020). Flooding damages to both homes and businesses in the UK for the winter of 2015/2016 was estimated to cost around 1.3 billion pounds (Terry et al., 2016). During 2017 and 2018, the heavy snow and strong wind caused by 'Beast from the East' cold and wintry conditions (Great Britain, Met Office, n.d.) cost Scottish farmers up to 161 million pounds (World Wild Fund, 2019).

In the context of natural hazard events, uneven population distribution and ageing population trend in Scotland cause challenges adapting to climate change in the future. As shown in Fig. 1, 83% of Scotland's population live on 2% of the land, the most populous cities are Glasgow and Edinburgh. Besides, 6% and 11% of the population live in remote rural areas and accessible rural areas respectively (Scottish Government, 2018). Urban areas and rural areas in Scotland present different challenges, urban areas are particularly at risk of flooding and storms, besides the direct impacts of natural hazards, rural areas are vulnerable to transport disruption and interruption to critical services (such as water, energy and technologies) from extreme weather (Scottish Adaptation Sub-Committee, 2011). Moreover, Scotland's population is ageing, 19 % of the population were aged 65 and over in mid-2019 compared with 17 % a decade earlier in mid-2009 (Scottish Government, National Records of Scotland, 2020), it increases vulnerability to the health impacts of some extreme events.

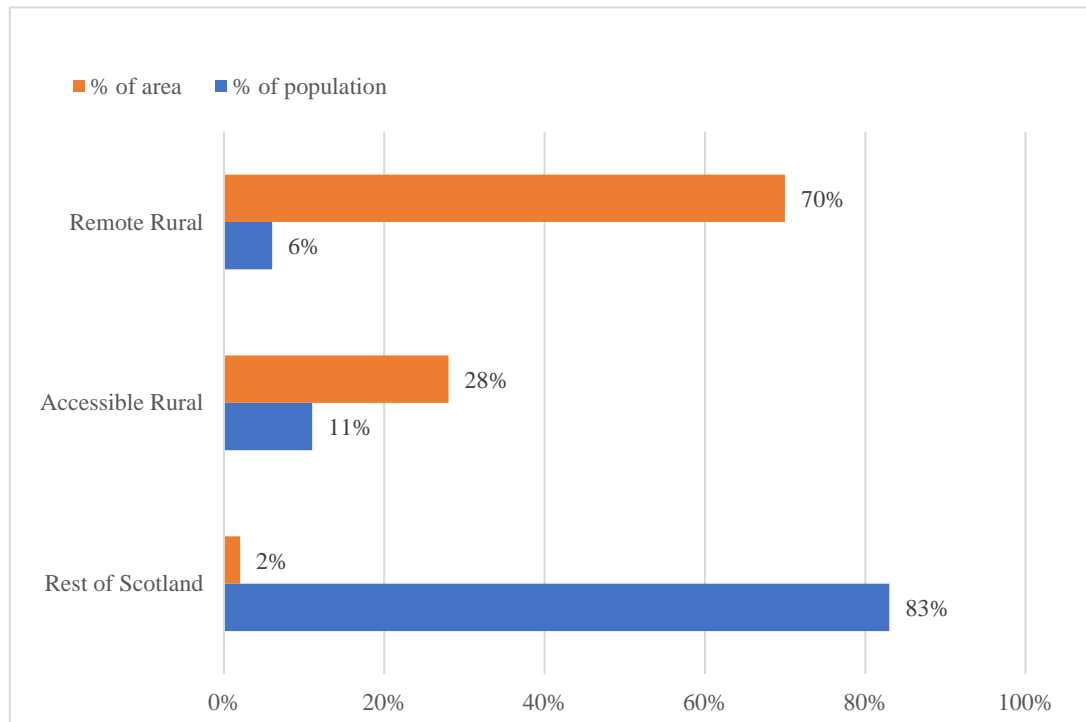


Figure. 1. Percentage of population and land by geographic area, 2017 (Scottish Government, 2018)

In this context, the communities and government sectors need to take effective actions to increase the resilience of Scotland in response to natural hazards. At government level, it is difficult for one sector to act alone to sustain their emergency response, especially when a large-scale event occurs (Great Britain, Cabinet Office, 2013). Mutual aid activities like sharing personnel and resources can enhance their ability in response to large emergency events. At the community level, the individual ability to cope with emergencies is also limited. Numerous pieces of evidence have proved the importance of mutual aid between individuals to deal with their common issues. Mutual aid groups emerging across the UK with the outbreak of Covid-19 providing a recent example. Many people joined mutual aid groups voluntarily to provide effective support to the people in need of help, the services include food supply, errands and mental consultation (Mutual Aid UK, 2020). These activities have proven the huge potential of community resilience in response to emergency events in Scotland.

### 3. Overview of mutual aid

Mutual aid originated in the nineteenth-century naturalist debated and anarchist socialism theories (Adams, 2016). This term was developed by the anarchist-socialist thinker Peter Kropotkin in response to Darwin's evolutionary theory which stressed survival of the fittest (Kinna, 2009). In Kropotkin's essay collection '*Mutual Aid: A Factor of Evolution*' (1908), he stressed co-operation was the driving mechanism promoting the survival of organisms rather than competition. Mutual aid plays a vital part in the process of evolution, however, Kropotkin did not deny the effect of competition, he wrote in his essay collection (Kropotkin, 1908):

‘The fittest are not the physically strongest, nor the cunningest, but those who learn to combine so as mutually to support each other, strong and weak alike, for the welfare of the community.’

In the mid-20th century, William Schwartz (1961) introduced the term “mutual aid” to social work. As a group work technical term in social work area, mutual aid can be understood as an exchange of help (Giacomucci, 2020). To achieve common goals, the member is both the help provider as well as the help recipient. More comprehensively, mutual aid can be conceptualized as multidimensional including several types of mutual support activities, such as information sharing, problem solving and new skill development (Hyde, 2013).

Mutual aid groups organised by volunteers who have similar experiences can be found in many areas. The aim of the mutual aid activities and the size of mutual aid group varies in different context. Such as in the health recovery area, mutual aid means ‘the social, emotional and informational support provided by, and to, members of a group at every stage of their recovery from active alcohol and/or drug use and addiction’. In this context, the members of mutual aid usually include people who are actively changing their behaviour by mutual aid programme, such as people who are

trying to stop their drug and alcohol use (Great Britain, Public Health England, 2015). In the education area, interaction between class members is a kind of mutual aid activity, including information sharing, thought exchanging, problem-solving and so on (Kristina, 2020).

Mutual aid also exists at government level, it refers to the joint work and support between two or more government sectors in the context of emergency services (Great Britain, Cabinet Office, 2008). The involved member normally established formal mutual aid agreements between members to clarify the responsibility of each side. The form of mutual aid between government sectors and community-led mutual aid is different, this report provides an understanding of mutual aid at both levels separately.

## **4. Mutual aid at government level**

### **4.1. What is mutual aid at government level and who is involved it?**

In the context of an emergency, mutual aid at government level can be seen as co-operation between several organisations to deal with an emergency. Preparing Scotland (2016) is an overarching guidance on resilience in Scotland, it outlines the key organisations responsible for managing the emergencies effectively in Scotland. Although the importance of co-operation between different organisations has been highlighted, the term ‘mutual aid’ is not defined officially in this guidance. To give a clear explanation of mutual aid activities at government level, the definition of mutual aid from the UK government has been adopted in this report. The UK National Recovery Guidance (2013) defined mutual aid in the context of an emergency as ‘an arrangement between Category 1 and 2 responders and other organisations not covered by the Act, within the same sector or across sectors and across boundaries, to assist with additional resource during an emergency, which may overwhelm the resources of an individual organisation’. Category 1 and 2 responders mentioned in this definition are the organisations of England and Wales. In the case of Scotland, Preparing Scotland (2016) outlines Category 1 Responders, Category 2 Responders

and other agencies respectively based on the Civil Contingencies Act 2004 (the Act) and the Civil Contingencies Act 2004 (Contingencies Planning) (Scotland) Regulation 2005 (the Regulations), as amended in The Civil Contingencies Act 2004 (Contingency Planning) (Scotland) Amendment Regulations 2013. These organisations are listed below (Scottish Government, 2016):

### **Category 1 Responders**

- Local authorities
- Police
- Fire services
- Ambulance services
- Health boards
- Scottish Environment Protection Agency (SEPA)
- Maritime and Coastguard Agency

### **Category 2 Responders**

- Electricity Operators
- Gas Suppliers
- Scottish Water
- Communications Provider
- Railway Operators
- Airport Operators
- Harbour Authorities
- NHS National Services Scotland
- Health and Safety Executive

### **Others (these include but not confined to)**

- the military
- the Crown Office and Procurator Fiscal Service (COPFS)
- transport Scotland
- commercial organisations
- the Scottish Government



- the voluntary sector

The Act and Regulations highlight a number of legal duties for Category 1 responders, including duties of collaboration. For example, Category 1 responders have to identify lessons learned from co-operation with other organisations and draw these to the attention of the Regional Resilience Partnership (RRP). They should request that other Category 1 and 2 responders join in their exercises through direct and bilateral collaboration. Furthermore, organisations of Category 2 responders have the responsibility to collaborate with Category 1 responders (Scottish Government, 2016). Besides the Act and Regulation, Integrated Emergency Management (IEM) also stresses the importance of cooperation. As the principle of resilience development in Scotland, IEM is the coordination of Category 1 and 2 responders and also other agencies. It aims to make rational use of all talents and resources from all the partners to build strong, resilient and supportive communities (Scottish Government, 2016). There are five key activities in IEM: assessment, prevention, preparation, response and recovery. These activities are linked closely and each activity can involve different organisations (Scottish Government, 2016).

#### **4.2. Mutual aid at governmental level in response to natural hazards**

To prepare and respond efficiently to natural hazards in the context of climate change, a number of collaborations of government departments and organisations have been established across Scotland. Different incidents involve different organisations, it might include Police Scotland, Scottish Ambulance Service, local authority and the Scottish Environment Protection Agency. Organisations of the energy, telecoms, transportation and water sectors, as well as volunteer groups, may also take part in these processes. In Scotland, Regional and Local Resilience Partnerships (RRPs/LRPs) are the operational mechanism for the co-ordination of different partners to plan and respond to emergencies and major incidents under The Civil Contingencies Act (2004) (Scottish Government, n.d.). Through forming a resilience

partnership, different organisations work together to identify potential risk, prepare and respond to emergencies that happened in their region.

At a regional level, there are three RRP in North, West and East of Scotland, every RRP comprised of a number of organisations that are legally responsible for preparation, responses and recovery in major emergencies (Scottish Fire and Rescue Service, n.d.). When extreme events happen in one region, the RRP members will maintain, test and exercise plans and strategies for an effective response, offer advice to local partners and businesses, engage with communities to develop community resilience (Scottish Fire and Rescue Service, n. d.). The organisations that make up each RRP include, but are not limited to:

- Local Authorities in the West of Scotland RRP
- NHS Health Boards in the West of Scotland
- Police Scotland
- HM Coastguard (MCA)
- Scottish Fire and Rescue Service
- The Met Office
- Scottish Ambulance Service
- Scottish Environmental Protection Agency (SEPA)
- Utility companies
- Voluntary sector
- British Transport Police

Each RRP has a multi-agency publication called the Community Risk Register (CRR) providing the public and organisations with risk information of all categories of non-malicious emergencies (natural occurrences, accidents). The CRRs can be used to produce agreed and effective multi-agency plans and procedures (Scottish Fire and Rescue Service, n. d.). RRP and LRP meet regularly throughout the year across Scotland to plan for emergencies. If an emergency needs support from the central

government, the Scottish Government (SG) will start its emergency response procedure by activating the Scottish Government Resilience Room (SGoRR). The role of SGoRR differs depending on the nature, scale and impact of an emergency event (Scottish Government, 2016).

According to the UK National Recovery Guidance (2013), there is no specific UK wide policy focusing on mutual aid, some organisations have inter-agency mutual aid agreements to stress the responsibilities for each partner. Mutual aid agreements can be established within the same and different sectors and across RRP boundaries. By legally binding contracts entered into by one or more jurisdictions, mutual aid agreements can relieve the challenges of resource, personnel scarcity and expertise shortages (McEntire and Myers, 2004). In Scotland, some local authorities have established mutual aid agreements at the regional level. Such as local authorities of West of Scotland Regional Partnership (including Argyll and Bute Council, Dumfries & Galloway Council, East Ayrshire Council, East Dunbartonshire Council, East Renfrewshire Council, Glasgow City Council, Inverclyde Council, North Lanarkshire Council, North Ayrshire Council, South Ayrshire Council, Renfrewshire Council, South Lanarkshire Council, West Dunbartonshire Council) have a mutual aid agreement covering the provision of assistance including staff and equipment. The agreement clearly states what mutual aid can be provided, including assisting another local authority in a single-area incident, or cross-boundary support in a combined response to a single-area incident or a multi-area incident (Inverclyde Council, 2018). Another example is five local authorities in Lothian and Borders (include City of Edinburgh Council, East Lothian Council, Midlothian Council, Scottish Borders Council and West Lothian) also have a regional level mutual aid agreement which includes detailed information about the mutual aid activities (East Lothian Council, 2003).

Besides mutual aid agreement between local authorities, local authorities may also establish formal mutual aid agreements between other organisations like volunteer sectors. For example, the East Lothian Council developed mutual aid agreements between local authorities as well as agreements between East Lothian Council and the Red Cross for emergency response to incidents (East Lothian Council, 2010).

## **5. Mutual aid groups in Scotland**

### **5.1. What are mutual aid groups and who is involved in the groups?**

Comparing with the mutual aid activities between large stakeholders at the government level, mutual aid between individuals is a self-help process where everyone can take part in the process equally (Joshua, 2020). Mutual aid groups led by individuals has a long history in Scotland. Since the Industrial Revolution, society was becoming more and more industrialised, yet the state welfare provision didn't adapt to changing needs (Kidd, 1999). In this context, mutual aid groups known as friendly societies flourished across the UK to help families during difficult times (Edwards and Chandler, 2001). Most of these groups were established by local people, they contribute a small group payment regularly so that they can receive financial support in times of need. Some of these groups were occupationally based (Edwards and Chandler, 2001), they may also further on a community basis, such as the Young Journey Shoemakers of Edinburgh. Some groups simply defined themselves on a street or community basis, such as several friendly societies were based in Dumfries (Rendall, 2020). Dumfries Female Society founded in 1789 is the earliest female society identified in Scotland. This mutual aid group aims to encourage female the value of independence and self-help (Rendall, 2020). A *Catalogue of Some Labour Records in Scotland* (1978) is a bibliography that contains a list of friendly societies in Scotland, yet, the author Lan MacDougall said that friendly societies recorded in this book were far from a complete survey. Because they were based on the collection of National Record of Scotland which was based on the materials collected from post-1829 (Rendall, 2020).

With the advent of the Welfare State, mutual aid groups shown a declined trend (Edwards and Chandler, 2001). Even though the number of these groups is not as many as they were before, they still cover many areas to meet the need of different social groups, especially vulnerable people. Autistic Mutual Aid Society Edinburgh (AMASE) is an Autistic People's Organisation (APO) that aims to help autistic people lives better through peer support, advocacy and autistic-led activities. They provide workshops, courses and published resources on their website to develop an understanding of autistic. In the AMASE, all members are on the autistic spectrum and people in need can found useful information on their official website. The Families Anonymous provides another mutual aid example, it is a group for family members and friends affected by another's abuse of mind-altering substances or related behavioural problems. This group provide mutual support and offer a forum where experiences and thoughts can be shared with others. People in need can join the meeting of the mutual aid groups in their city or nearby regions to discuss with other members.

Just like the above two mutual aid examples in Scotland, the information about other mutual aid groups can be found online easily. Especially with the outbreak of the Covid-19, the mutual aid groups in Scotland increasing quickly, people can find much more related information about mutual aid groups in their regions. No matter what area mutual aid involves, all the mutual aid groups aim to complete independence, power of self-organisation and right to achieve the mutual benefit of each member. However, there are limited mutual aid groups defining the term 'mutual aid' officially. A definition can be found at the Covid-19 Mutual Aid UK (2020) - mutual aid refers to a horizontal form of activity where people work together as equals to meet their own needs and there is no leader of activities.

Outwardly, both mutual aid and charity are the process of helping others, the difference between them has been discussed in many pieces of research. The slogan of

mutual aid: ‘social solidarity- not charity’ reflects that mutual aid is different from the charity (Spade, 2020). Radical activist and writer Dean Spade (2019) compared the difference between mutual aid and charity from several aspects. He found that mutual aid groups help people without expectations, but in the case of charity, there are usually some conditions for people who need help or want to participate. Eligibility criteria for charity services divide people into ‘deserving’ and ‘undeserving’, but mutual aid groups aim to help all the people in need of help. Dean stressed that these observations are not meant to be absolutes, many organisations have a mix of tendencies and qualities. The description of the differences between the two terms can also be found in an article about mutual aid after a disaster caused by Hurricane Maria in 2020 in Puerto Rico, India. The author thought mutual aid lasts longer compared with charity, he wrote in this article (Soto, 2020):

‘Mutual aid can fill some gaps to keep people and hope alive and to create a social foundation to continue to rally together and send the message: “We are still here; we are not defeated. We are still alive.’

## **5.2. The role of mutual aid to the natural hazard and the Covid-19 pandemic**

In Scotland, research focusing on mutual aid groups in response to natural hazard is limited. It may be because some mutual aid activities lasted a short term and did not be recorded in detail. Moreover, some mutual aid groups will disband after a disaster, so it may be not necessary for the members to record their activity officially. To provide a clear understanding of mutual aid groups in response to emergencies, this part mainly focuses on mutual aid groups arise since the Covid-19 pandemic.

The Covid-19 pandemic has claimed tens of thousands of people lives in the UK. To seek a way to support people in need of daily supplies and help, thousands of mutual aid groups have emerged in a short time, covering both urban and rural areas (Kaye & Tiratelli, 2020). Volunteer Scotland conducted a research on Covid-19 mutual aid groups in Scotland (2020), they found that in excess of 200 mutual aid groups have been created across Scotland in four weeks. The Covid-19 furlough scheme is an

important driving factor, it has increased the number of working-age people available to organise and take part in mutual aid groups (Kaye & Tiratelli, 2020). Traditional voluntary groups and community activities are associated with elder and retired people. Due to the specific circumstances caused by the pandemic, more working-age people are taking part in mutual aid groups than other types of voluntary and community activities.

The size and membership of these groups vary significantly, for example, Edinburgh Coronavirus Support covers the whole city, whereas many small groups such as Wester Ross Help in Highland with 68 members targets specific local communities (Covid-19 Mutual Aid UK, 2020). The finding from this research records the mutual aid groups that have registered with Mutual Aid UK, numerous micro-level mutual aid groups have not registered. Groups that have registered benefit from posting their contact details and information on Mutual Aid UK official website for people needing help or wanting to get involved in their groups. Micro-level mutual aid groups may not feel that it is necessary to register on Mutual Aid UK. This may be because they are already embedded within their communities (Kaye & Tiratelli, 2020), or that they can adopt other ways to post relevant information to their audience, such as utilising social media platforms like Facebook, WhatsApp or Twitter to target their communities on a street-by-street basis.

Social media provides a public platform for people to exchange information before, during and after emergencies (Niles et al., 2019). Due to the Covid-19 pandemic, numerous users of hyperlocal social networking sites, such as Nextdoor, have risen by up to 90% (Kaye & Tiratelli, 2020). Volunteer Scotland is an example of a Twitter account that was established to share important information with the public, especially in emergencies. People who need help can also search online to find local mutual aid groups, seek detailed information, find academic research and public training on dedicated websites and social media sites. For example, the Covid-19 Mutual Aid UK

official website has an up-to-date map including the information of existing mutual aid groups in the UK. The public can also set up a local group by themselves if there are no mutual aid groups in their area. This website encourages people to organise on a street-by-street basis because people in a community can be both volunteer and resident, they tend to know the community well (Covid-19 Mutual Aid UK, 2020, Soto, 2020). Yet online communication remains restricted to those with access to a computer, smartphone and the internet (Kaye & Tiratelli, 2020), Leafleting and telephone calls are also important ways to keep everyone in touch, especially for the people who don't use smartphone and computer, such as some ageing people, or for the areas without developed internet. To publicize the information more widely, mutual aid members can create leaflets or posters by themselves, guidance on how to create leaflets and posters can be found on the Covid-19 Mutual Aid UK website (Covid-19 Mutual Aid UK, 2020).

Throughout the pandemic, a sense of social solidarity has manifested across a large number of Scottish mutual aid groups. The Glasgow Mutual Aid Group is a good example of social solidarity. Their website promotes an online form for people in need to request help from the group. However, not all households have internet access, they also advertise a telephone hotline to ensure that all members of their community have equal access to their service. Their Facebook page actively encourages their online community to post messages sharing services, essentials and foodstuffs to others. Another example of social solidarity can be seen from Mutual Aid groups in Pollok. One group set up a Community Supermarket selling food that would be wasted and advertising to the community via Facebook. People in need can buy food supplies for a reduced price. They not only help vulnerable people with shopping and errands but also are very effective at connecting the people who feel and are isolated with those that can support them (Covid-19 Mutual Aid UK website, 2020). These mutual aid activities show that community spirit remains strong across Scotland. The Scottish Household Survey conducted in 2019 found that about 85% of Scottish adults agreed



the friends and relatives in their neighbourhood would support them in times of need help, 90% of Scottish adults agreed that they would help their neighbours in an emergency (Scottish Government, 2020).

### **5.3. The relationship between community-led mutual aid groups and local authority**

Among statutory agencies, local authorities have the most similar purposes with mutual aid groups, they are responsible for supporting neighbourhood, local business, the third sector organisations, and running many local services (Mutual Ventures, 2020). The relationship between community-led groups and the local authority is an important question when thinking about community resilience. The emerging Covid-19 mutual aid groups give significant evidence of the advantage of community-led groups. The characteristics of these groups make them play a special role in enhancing the community's coping capacity response to emergencies. For example, understanding their community well makes mutual aid members identify effectively which people needed support during the pandemic. However, it is a challenge for these group when the people in need help is overwhelming. In this condition, the local council can provide staffs, resources and financial support to enhance the ability of mutual aid groups. However, a UK-wide research has shown that interaction between the local council and mutual aid groups does not always go well, especially in the case of they have two different working mode (Kaye & Tiratelli, 2020). Simply speaking, the local authority's working mode is hierarchical and top-down (Preston and Firth, 2020), but the working mode of mutual aid groups is horizontal and equal (Covid-19 Mutual Aid UK, 2020). This research provides several examples of anonymity to stress the problems shown between mutual aid groups and local authority. However, there is no published work that stresses the real situation in Scotland of the relationship between community-led mutual aid groups and local authority. One thing that can be confirmed is the local authorities need to be aware of the horizontal

working form of the mutual aid group and respect mutual aid group's activities. A further thing that needs to be considered carefully is what exactly the measures ensuing effective cooperation should be taken on the council side, moreover, the significant measures of the different local council should differ from place to place. In face of an increasing number of natural hazard events, the local councils in Scotland should aware of the importance of community-led mutual aid groups and consider carefully what role these groups could play in building a strong, supportive community.

## **6. Challenges for the mutual aid groups**

Mutual aid activities at government and community levels provide essential personnel and resources to people in need of help during and after a disaster. However, there are still some challenges remaining to mutual aid activities both at a governmental level and at a community level.

For Scottish government-led mutual aid activities, effective communication between partners is vital for maintaining partnerships. Finding or establishing secure and efficient channels for the partners to share data and documents is a challenging question, especially for the large size files which cannot be sent by email (Hemingway & Gunawan, 2017). Therefore, establishing a reliable and secure online platform for the partners in Scotland is an important task that needs continual and dedicated efforts in the future.

For some community-led mutual aid groups, they run informally and lack leadership (Kaye & Tiratelli, 2020), members may stop their participation because of lack of time or other reasons. In this case, the progress of mutual aid activities may be impacted. Moreover, maintaining enthusiasm among members also is a challenge for all groups. Secondly, the resources of some mutual aid groups may be limited without the support of the local council, especially for those new mutual aid groups, for

example, they may not have enough budgets to support mutual aid activities. (Kaye & Tiratelli, 2020).

## **7. Discussion and conclusion**

It has been proven that cooperation is strong and powerful in the context of an emergency. The development of mutual aid groups during the Covid-19 pandemic shown the communities in Scotland have huge potential, so it is important for the authority to recognise and take advantage of these capabilities. Building a supportive relationship between mutual aid groups and local authorities is beneficial for making more resilient communities. However, there are still several points that need to be considered. Firstly, the outranging of mutual aid groups is close associated with working-age people, however, when these people back to work, how to maintain people's participation in mutual aid? We cannot predict when the emergencies will happen, we can prepare so that we can act quickly when needed, so maintaining mutual aid groups are essential for community resilience development. Many mutual aid groups may disappear with the crisis subsidies, we should think about what we have learned from this period. Secondly, the relationship between local authority and mutual aid groups needs to be considered carefully. Even though it is not necessary to encourage all the community-led mutual aid groups to work with the local authority, effective and beneficial cooperation can enhance the community's resilience in the context of climate change. Hence, local authorities what role these groups could play in building a strong, supportive community. Looking for the long term, local authorities need to establish detailed measures and strategies to encourage and support mutual aid groups according to the specific condition of the region. In this way, more and more individuals and communities in Scotland could benefit from the mutual aid activities in the future.

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