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Understanding the response to Covid-19 - Exploring options for a resilient social and economic recovery in Scotland’s rural and island communities

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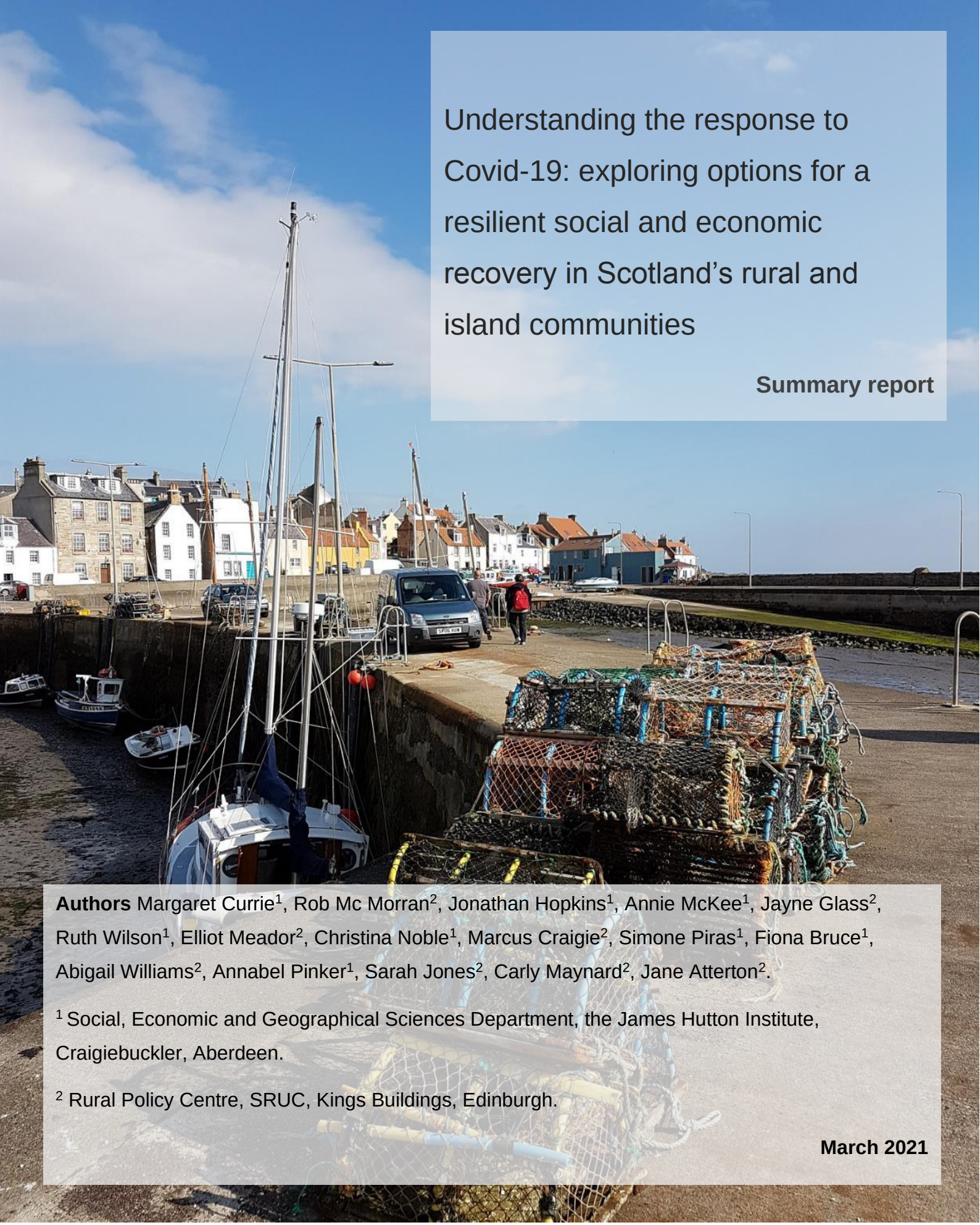

Understanding the response to Covid-19: exploring options for a resilient social and economic recovery in Scotland's rural and island communities

Summary report

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The James Hutton Institute

SEFARI

SRUC

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1 Highlights

What were we trying to find out?

This research considered the impacts of Covid-19 on rural and island communities, how resiliently communities have responded, and the most effective ways forward for recovery.

What did we do?

Our research approach involved: interviewing people in key rural sectors; carrying out a map-based analysis of resilience to the impacts of Covid-19; and using the map to identify case study communities. Interviews were undertaken in these communities to understand local perspectives.

What did we learn?

Rural and island communities have been vulnerable to the impacts of Covid-19. Specific factors that have increased their vulnerability include: reliance on limited employment sectors; being located far from centralised services (e.g. hospitals); limited digital connectivity; and an ageing population.

Communities with a more resilient response have some or all of the following features: a strong sense of community; community organisations and local businesses that are responsive to local needs; the existence of strategic partnerships between community organisations and the public/private sector; and good digital connectivity.

What needs to change in the future?

Covid-19 has brought rural vulnerabilities into sharp focus and these vulnerabilities are often connected. Strategic and joined-up partnerships between community, public and private sector organisations will remain important, as well as novel and flexible funding mechanisms to enable place-based and context-specific responses.

What do we recommend?

We recommend nine actions that would assist rural and island communities to thrive in the future:

1. Building on existing/new partnerships and supporting community anchor organisations.
2. Capitalising on and rewarding community spirit.
3. Encouraging and supporting young people to move to rural and island communities.
4. Retaining and enhancing digital connectivity opportunities.
5. Supporting adaptable local businesses.
6. Strategic partnerships which deliver place-based solutions.
7. Continuing to support diversification of the rural economy.
8. Enhancing the knowledge base about local-regional vulnerabilities.
9. Retaining a flexible, targeted and responsive approach to financial support.

2 Executive Summary

The Covid-19 pandemic has required many people to adapt their lifestyles and livelihoods to mitigate the spread and impact of the virus. This report summarises the findings of a research project conducted by the James Hutton Institute and SRUC on the impacts of, and responses to, the Covid-19 pandemic in rural and island areas of Scotland.

A three-phased research approach incorporated qualitative (Phases One and Three) and quantitative (Phase Two) analysis and attempted to represent a variety of both sectoral and place-based rural and island community interests during the first year of the pandemic. The research aimed to: firstly, understand the lived experiences of the pandemic in rural and island communities; secondly, identify the factors that support and promote resilience in Scottish rural and island communities; and thirdly, consider potential routes to a medium to long-term recovery process suggested by rural and island representatives across Scotland.

- The **impact of Covid-19 on rural communities** has been place and person-dependent as well as defined by levels of digital connectivity. Impacts were felt to be more challenging in rural communities due to ageing populations, in-migration of retirees, availability of affordable housing, peripherality issues, limited economic diversification and there were criticisms about the response to the pandemic by local authorities.
- In terms of **enabling factors of resilience** during the pandemic, five themes were found: community cohesion and in-built resilience; strategic partnerships and responsive service delivery; the role and responsiveness of community anchor organisations; responsive local businesses and services; and digital connectivity and upscaling online systems. Participants felt that rural communities have been vulnerable to Covid-19 for multiple and often inter-connected reasons: reliance on a few key industries; centralised service provision; limited digital connectivity; exposure to tourists; food supply issues; and ageing populations. However, stronger community bonds in many rural and island communities were felt to have increased their resilience due to effective community-based response strategies.
- Predominant themes emerging from what participants felt a **rural recovery** should look like include: building on new partnerships and supporting community anchor organisations; capitalising and rewarding community spirit; encouraging young people to move to rural areas; retaining and enhancing digital connectivity opportunities; strategic partnerships which deliver place-based solutions; supporting adaptable local businesses; supporting diversification of the rural economy; enhancing the knowledge base on local-regional vulnerabilities; and retaining a flexible, targeted and responsive approach to financial support.

3 Methods

Highlights

This research considered what the impacts of Covid-19 have been on rural and island communities, how resiliently communities have responded to the pandemic and the most effective way forward for recovery in the medium and longer-term.

Our research approach involved interviewing people in key rural sectors, carrying out a map-based analysis of resilience to the impacts of Covid-19, and using the map to identify case study communities. Interviews were undertaken in these communities to understand local perspectives.

The research aimed:

- To understand the lived experiences of the pandemic in rural and island communities (including examples of community responses)
- To identify factors that promote resilience in Scottish rural and island communities; and
- To consider opinions of the routes to a medium to long-term recovery process from rural and island representatives across Scotland.

This responsive research was co-designed with the Scottish Government's Rural Stakeholder Group and took place during the first year of the pandemic. The project consisted of three phases: Phases One and Three consisted of qualitative analysis, namely interviews with rural and island representatives from across Scotland, while Phase Two incorporated quantitative analysis. The views of a variety of both sectoral and place-based interests were included, with particular focus placed on understanding issues arising due to the Covid-19 pandemic and their short and long-term impacts. Building on that evidence, the project explored how policy responses could support both the current and long-term recovery, resilience and empowerment of rural and island communities.

Phase One involved interviewing stakeholders representing diverse rural sectors (e.g. land, health, etc.) to understand the impact and response needed for different sectors representing rural and island communities both during the pandemic and in the longer-term. In Phase Two an index of local resilience was developed and, as a result, a map was produced to highlight areas in which resilience might be stronger or weaker during the pandemic. Finally, in Phase Three, four case study areas were identified using the map produced in Phase Two. The areas included two pairs of case studies in two contrasting local authority areas. Phase Three involved interviewing representatives from the case study areas to understand more effectively the impacts being felt in different rural localities.

Research ethics approval was gained from the James Hutton Institute for Phase One of the research and SRUC for Phase Three of the research. The research was also given Social Research Approval by the Scottish Government.

3.1 Phase One: Interviews with stakeholders

In July and August 2020, SEFARI researchers from the James Hutton Institute and SRUC interviewed 26 key stakeholders who represented a breadth of different rural and island interests from a variety of sectors. The research included participants representing land, farming, crofting, economic development and enterprise, national parks, resilience, health, youth, local authorities, food and drink, tourism, housing, and broader rural and island community organisations. Interviews were conducted using video chat (e.g. Teams and Web-ex) or telephone, depending on each interviewee's preference[1]. Interviews were recorded digitally (if consent was given) and transcribed, and notes were written up. Interviewees were sent the interview questions and information about the project in advance to allow them to gather wider perspectives from the communities that they represent, thus the interviewees should be viewed as representing a range of views as well as their own.

[1] Interviews did not take place in person in order to comply with social distancing guidelines during the pandemic.

3.2 Phase Two: Quantitative spatial analysis

The quantitative analysis in Phase Two was undertaken to support the selection of paired case study locations in Phase Three, by identifying localities with evidence of very different sets of circumstances. The key output of this analysis was a small area-level index representing local-level resilience to the impacts of the Covid-19 pandemic. Resilience forms a novel and positive concept which complements existing analyses[2] of community vulnerability to Covid-19. The index of local resilience to Covid-19 impacts was calculated from nine specific indicators, drawn from seven national datasets and dataset themes, and representing five out of the seven themes related to enabling factors of resilience to the impacts of Covid-19 identified from a previous review. The indicators include two estimates of the impact of Covid-19 on the local economy, local demographic characteristics, the availability of fast broadband, and the numbers of local places and facilities which are linked to social capital and the care of potential vulnerable people, providers of childcare and care for older people. For data zones with complete data, the index was calculated with a theoretical range of 10 – 30. A full description of the approach can be found in Appendix 1.

The mapped index values[3] (see Figure 1) show clusters of high resilience (dark blue areas) around Edinburgh, Perth, Aberdeen and Inverness. However, high scores are also found in remoter rural areas, including parts of Shetland, Orkney and the Western Isles, although there are more obvious visual concentrations of low scores in remoter parts of the Highlands, and in Argyll and southern Scotland. The highest Data Zone score (29 out of 30) (i.e. high local resilience to the impacts of Covid-19) was recorded just south of Edinburgh (Rural South Midlothian), while the lowest score (11) (i.e. low local resilience to the impacts of Covid-19) was found at Elie in Fife. There are relatively small differences in mean index scores across accessible, remote and very remote small towns and rural areas[4]: the highest average (20.3, n = 585) (i.e. highest local resilience to the impacts of Covid-19) was found in accessible small towns, and remote rural areas had the lowest average (18.7, n = 214) (i.e. lowest local resilience to the impacts of Covid-19). A subsequent analysis of the distribution of extreme index values by local authority[5] points to geographical differences: in the Shetland Islands, c. 46% (12/26) of rural and small-town Data Zones are in the highest quartile (i.e. high local resilience to the impacts of Covid-19), and the

[2] British Red Cross Covid-19 Vulnerability Index (https://britishredcrosssociety.github.io/covid-19-vulnerability/); Scottish Public Health Observatory COVID-19 Community Vulnerability Analysis (https://scotland.shinyapps.io/scotpho-covid-vulnerability/).
[3] Mapping in this report was produced using Esri ArcGIS Desktop 10.7.1.
[4] Scottish Government Urban Rural Classification 2016 - Data Zone Lookup (link); Scottish Government Urban Rural Classifications 2016 - 8 Fold Description (link). Copyright Scottish Government, contains Ordnance Survey data © Crown copyright and database right.
[5] Data source for local authority values: Scottish Index of Multiple Deprivation 2020v2 data zone lookup (link). © Crown Copyright. http://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/.

respective figure is 40% or above in the non-urban parts of the City of Edinburgh and Aberdeen City. By contrast, around half of the Data Zones outside urban areas in each of South Ayrshire, Dumfries and Galloway, and Argyll and Bute are in the lowest quartile (i.e. these local authority areas do not have a high number of areas with high resilience to the impacts of Covid-19).

The fine-grained index also offers potential to be combined with other social and economic datasets to produce new local-level evidence and understanding relevant to the recovery from Covid-19. For example, there is a weak negative correlation between resilience to Covid-19 impacts (this index) and a Data Zone-level score of community vulnerability to Covid-19, as assessed by the Scottish Public Health Observatory using social, clinical and demographic information[6] (r_s = -0.204, n = 1,981, $p < 0.001$). This suggests that in rural areas and small towns, there is a weak overall tendency for community vulnerability to increase as resilience to Covid-19 impacts decreases, but with very high 'scatter' around this general trend, implying a complex relationship between these community characteristics, and representing a potentially interesting avenue for further analysis.

[6] Data source: ScotPHO COVID-19 Community Vulnerability Analysis (Version3.0). https://www.scotpho.org.uk/media/1974/scotpho-covid-19-community-vulnerability-analysis_v3.xlsx (downloaded: October 2020).

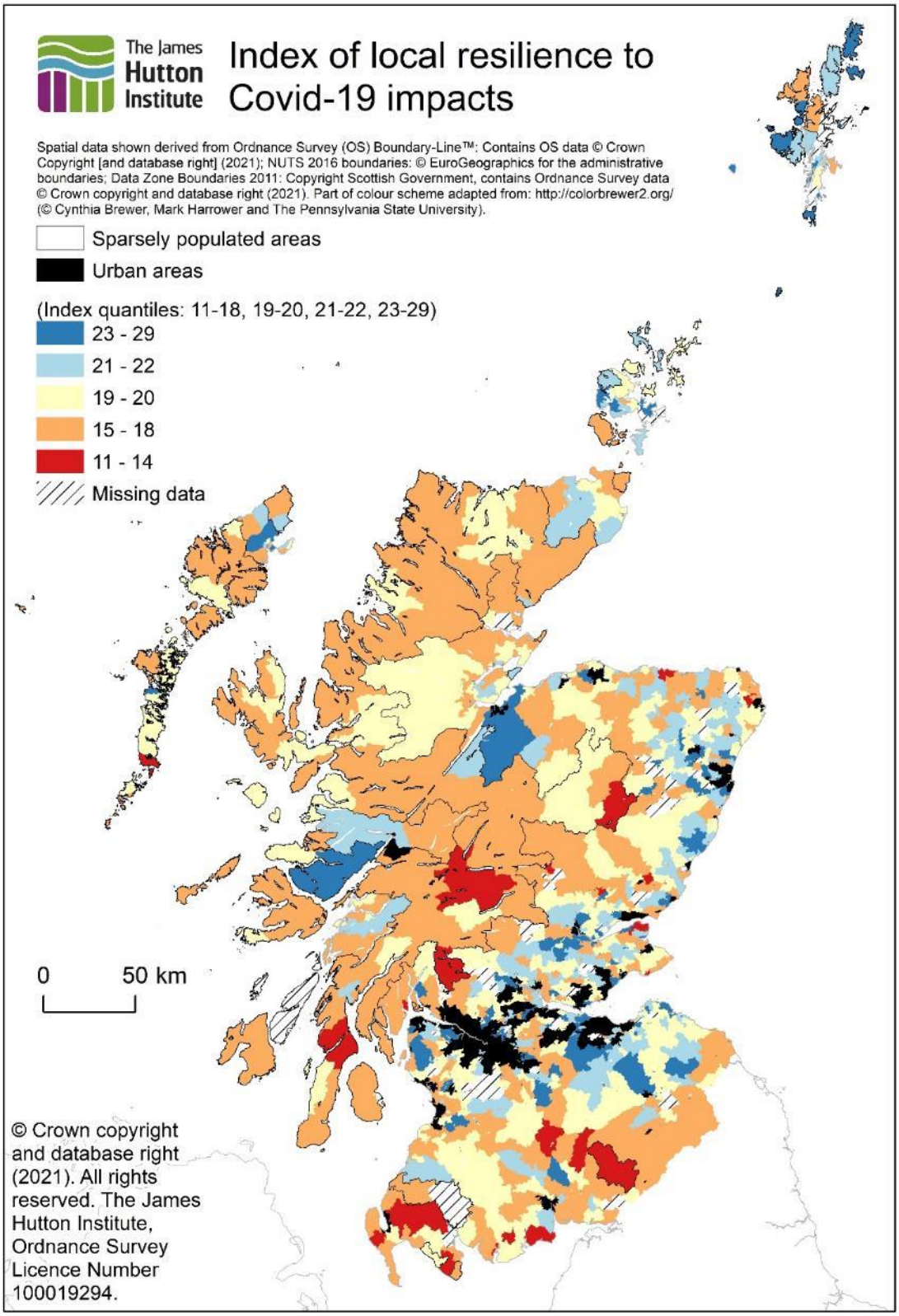

Figure 1: Index of local resilience to Covid-19 impacts

3.3 Phase Three: Interviews in case study communities

Based on the Phase Two spatial analysis of local resilience factors, two local authority areas (Fife and Western Isles) were selected due to their contrasting geographic, socio-economic and demographic characteristics. In these local authority areas, specific rural localities/communities were identified for use as paired case studies. Two pairs of contrasting case study areas were selected in the Western Isles (South Uist and the wider Stornoway area) and in Fife (Burntisland and Elie and Surrounds). The communities in each pair are examples of communities that exhibit characteristics which are indicative of lower or higher underlying resilience. The selection of pairs of communities from within the same local authority area allowed for a comparison based on localised and community-specific factors, set within an understanding of the regional context within which both communities sit. In total, 24 semi-structured interviews were conducted, with three to five interviews at local authority level in both the Western Isles and Fife (with council or other regional organisational representatives) to explore regional issues and responses, and three to five in each selected case study area (with community council representatives, community trusts, local businesses and local community groups). Figure 2 shows the case study selection.

Specifically, the case studies sought to explore the role and relevance of enabling factors for rural community resilience in relation to how communities have experienced and responded to the pandemic and lockdown measures. This included assessing:

i. socio-economic impacts;
ii. how communities responded and the importance of resilience and underlying capacity;
iii. opportunities for longer term rural recovery and support needs; and
iv. whether impacts and responses varied between communities.

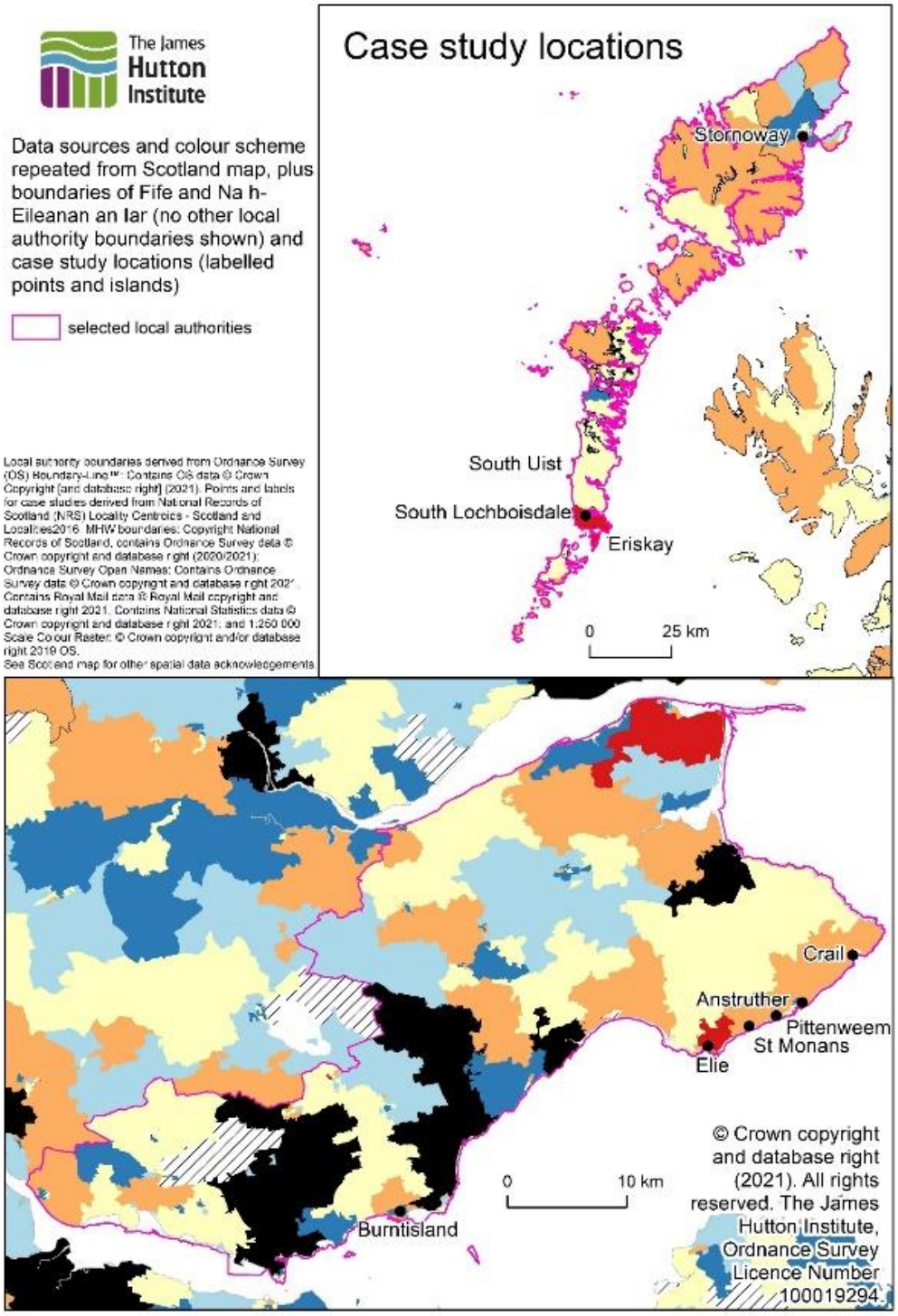

Figure 2: Selected case study areas in Fife and the Western Isles

4 Impacts of the pandemic on rural and island communities

Highlights

There are several vulnerabilities that were identified in rural and island communities, which have affected their ability to respond resiliently to Covid-19. These were: challenges relating to an ageing population; in-migration of retirees; peripherality issues and associated transport costs; limited economic diversification; and a perceived slowness of response by local authorities. Crucially, these vulnerabilities were dependent on specific place-based factors.

More specific concerns relating to the impact of the Covid-19 pandemic included:

- The most severe economic impacts were felt in key rural industries and disproportionately affected those on lower incomes.
- Rural businesses are often small and many people are self-employed, which made accessing government financial support more difficult.
- Services were disrupted, which had implications for peoples' wellbeing.
- Although there have been improvements in rural digitalisation and digital connectivity, digital exclusion continues to exist for some people and in some places.
- Age and gender effects also exist, and women have been more adversely affected by the pandemic than men in rural and island communities.

4.1 Rural vulnerabilities

The case studies identified that many issues facing local communities were ongoing and had been exacerbated by the pandemic, as opposed to being new issues resulting solely from the pandemic. The ongoing challenges are summarised below. These challenges constrained the ability of rural and island communities to act resiliently. Crucially, many of these challenges are interconnected, with one often exacerbating the others.

- Challenges relating to demographic vulnerabilities and an **ageing population** were emphasised. This has resulted in an increased need for social care, coupled with a rapid community response to mitigate isolation effects during lockdowns. The lockdowns were also perceived to have increased deprivation, and hence inequalities, evidenced by increased demands on food banks and social care during and after lockdowns.
- Concerns were raised about the **in-migration of retirees** adding to affordable housing pressures due to a perceived 'urban exodus' during and post-lockdowns. There was concern that this trend would worsen in the future, particularly in remote regions, with the result of reducing opportunities for younger people to access suitable housing.
- **Peripherality issues and associated transport costs** continue to act as a constraint, specifically in relation to retaining access to supply chains and the potential dependency on more accessible areas and visitors for income and resources.
- **Limited economic diversification** and specifically a reliance on tourism was recognised as having exacerbated wider economic impacts. A dependency on a relatively narrow range of economic sectors, accompanied by comparatively high levels of self-employment, were also identified as creating economic vulnerabilities. These factors were felt to limit existing and potential future employment opportunities.
- Criticisms of the **responses to the pandemic by local authorities** were apparent in the case study areas and were related to the perceived slowness of the local authority response, ineffective communication and coordination between the local authority and communities and, in some cases, a perceived lack of effective leadership from the local authority, resulting in some community organisations feeling isolated and unsupported.

Widespread concern was evident that the timescales for recovery were uncertain, linked to uncertainty around the scale of impacts when financial support measures are removed and potential ongoing risk-aversion. Furthermore, concerns about visitor pressures on local services and infrastructure and the potential for inbound viral transmission (in both the Western Isles and Fife case study regions) suggest the potential for future tourism-related conflicts.

The place-based effect of impacts was emphasised. Although the Phase Three work highlighted that impacts were often broadly consistent both within and between regions, variability existed in relation to access to services as well as some sectoral economic impacts and dependencies. For example, impacts were felt to be exacerbated in the Western Isles due to the high number of people operating small businesses (with limited financial reserves), high rates of self-employment and the loss of creative industries. There were several ways in which islands were viewed to be vulnerable, even though there were restrictions on people visiting, and levels of social cohesion and volunteering were felt to be higher than elsewhere. When Covid-19 was present on an island, access to Covid-19 testing was felt to be less accessible than elsewhere and there were concerns about people becoming seriously ill and needing to be flown to the mainland. Challenges also existed with maintaining supply chains for certain sectors (particularly fisheries and construction) which was a greater concern in the islands, reflecting the challenges of peripherality which are compounded by the effects of Brexit. Additionally, in some cases, sustained travel disruption had resulted in some people moving away from the islands to sustain their employment.

4.2 Economic impacts

The most severe economic impacts were specific to key vulnerable industries (including tourism, transport, fisheries and the creative industries), as well as having disproportionately affected those on lower incomes. The extent of the economic impacts in a place was dependent on the dominance of these vulnerable industries. These impacts have been exacerbated by wider factors such as Brexit (e.g. impacts on fisheries, supply chain delays, etc.) and parallel impacts (e.g. down-turn of the oil and gas industry). It is also worth noting that many businesses in rural areas are small and many people living in rural and island communities are self-employed and access to financial support for these groups was felt to be less available and straightforward than for larger businesses. As a result, many smaller businesses ‘fell through the gaps’ in support. Furthermore, interviewees highlighted that sectoral economic impacts have knock-on, community-wide effects on households in small, remote communities. Policy responses to the pandemic were not always felt to be suitable for small businesses, the self-employed and those people with multiple jobs. Additionally, while the tiering system allowed the islands to be in lower tiers than the rest of the country, this did not result in economic bounce-back due to the continued lack of visitors from the mainland.

4.3 Disruption to services and organisations

In all rural and island areas, all organisations were disrupted - in particular the NHS - but also statutory and community/voluntary services, which are heavily relied on in rural communities. Disruption to transport services had been widespread, exacerbated by underlying issues with high public transport costs (e.g. in Fife), which was felt to have increased the economic impacts and isolation effects for those on lower incomes during the lockdowns. The loss of community services,

community hubs and face-to-face engagement (and related connectivity) was widely felt and present in all case study communities, with knock-on impacts in terms of isolation and well-being effects, with less access to mental health services than before the Covid-19 circumstances. Although the pandemic showed the potential for digital healthcare opportunities and this was quickly normalised, this was not felt to replace face-to-face visits which were viewed for many as being important for good mental health. Home schooling has also resulted in stress and anxiety for many households. The case studies appear to show that geographic peripherality is not the over-riding factor in relation to isolation and loneliness effects, although there were concerns in South Uist relating to vulnerability and a sense of being cut off.

4.4 The importance of digital connectivity

The pandemic has highlighted the importance of digital connectivity. Pre-existing digital connectivity has provided opportunities for rural businesses and service providers to be agile, responsive and innovative, with participants mentioning that moving activities online had provided greater business coverage. The normalisation of homeworking was felt to provide opportunities for repopulation in rural and island communities and also allowed some people to work who otherwise would not be able (e.g. mothers constrained by distances to travel and school hours). However, there has been evidence of rural and island people struggling due to digital exclusion, especially in relation to education, home working, online shopping, socialising and access to services. Poor digital connections also resulted in social isolation from friends and family. Canna was given as an example of one place suffering from a lack of digital connectivity. An example was given of Ardeonaig where funding was given to the community to improve broadband and thus support people to work from home. It also was felt that a lack of digital connectivity has exacerbated existing inequalities between urban and rural communities.

4.5 The relevance of age in determining impacts

Impacts and responses also varied between different population groups, particularly between different age groups, and to a lesser extent, between genders. While an individual's age has led them to experience different impacts, the interviewees felt all age groups have been impacted in some way. Some of these impacts may be experienced more widely than in rural communities. Specifically, it was felt that: younger people have been affected by mental health issues, unemployment and anxiety over future prospects; middle-aged people have struggled with working or having financial worries, home schooling children and care for elderly relatives; and older people have faced greater social isolation than other age groups, especially for those with limited digital connectivity. It has proven difficult for older people (in particular) to develop digital skills under the restrictions in place; however, a positive impact is that the pandemic has potentially encouraged some older people to become more digitally connected.

4.6 The relevance of gender in determining impacts

In terms of gender, rural women were considered to have been impacted by the pandemic in different ways to rural men due to the increased likelihood of them being responsible for childcare and home-schooling. This has led to women being more likely to resign from jobs due to childcare commitments. Female-dominated industries (e.g. hospitality, retail) have been disproportionately hit meaning that women are more likely to be made redundant. However, there was some optimism that a move towards homeworking could allow more choice for rural women to enter industries that were more receptive to home working with children present than has previously been the case.

4.7 Summary

This section has outlined:

- Key rural vulnerabilities to the impacts of Covid-19.
- Economic impacts - these varied according to how dependent areas were on a few key industries. They also reflected the particular dynamics of the rural economy – i.e. large numbers of small enterprises and self-employed people – which had knock on effects for acquiring support.
- How the decline in service availability has had impacts on wellbeing and isolation.
- The importance of digital connectivity.
- Different effects of the pandemic on different age groups.
- A disproportionate impact of the pandemic on rural women.

5 Factors that supported resilience in rural and island communities

Highlights

Five key factors were found to promote resilience in rural communities during the Covid-19 pandemic:

- communities that pull together to help each other out.
- the presence of strategic partnerships and services that respond to changing needs and circumstances.
- the presence of community anchor organisations making decisions suiting the needs of the communities they represent.
- good digital connectivity and inclusivity.
- services that are both reactive to the situation and proactive about finding new ways of delivery.

5.1 Overall findings

Five key factors influenced resilience in the sample: community cohesion, strategic partnerships and responsive service delivery, community anchor organisations[7], digital connectivity, and responsive services. Overall, rapid, collective, agile and responsive action by voluntary and statutory

[7] We define these as long-standing and independent community-led organisations.

organisations was the cornerstone of the rural response to the pandemic, with the aim of such actions being to maintain services and community well-being and to support businesses. For example, in the Western Isles, the social isolation effects were felt, to some extent, to be countered by a rapid rise in volunteering levels and community cohesion. This was attributed to the existence of 'cultural resilience' among island residents, fostered through previous challenges and the geographic isolation of the region. In addition, the region's low population density and peripherality reduced the potential for viral transmission, which (when combined with high compliance) resulted in very low case rates and comparative internal freedom (for the Western Isles) at various points during 2020. These factors are considered in more depth in the following sections.

5.2 Primary Determinants of Resilience

5.2.1 Community cohesion and inbuilt resilience

High levels of community cohesion were a major asset during the pandemic (and in other emergency situations[8]). This trait engendered a sense of community responsibility and belonging, which to some extent counteracted some of the potentially more severe impacts of lockdowns relating to Covid-19 transmission (through compliance) and social isolation (through volunteer activity). This includes a wide range of community initiatives such as prescription deliveries, neighbour well-being checks, food deliveries for elderly residents and food banks, often taken forward by volunteer community bodies.

5.2.2 Strategic partnerships and responsive services delivery

A coordinated approach by organisations and the development of new strategic partnerships between community groups and other stakeholders was a key aspect of responding to challenges. There have been allowances to take people to the doctor/hospital in a safe way, which have included telehealth. A lot of these initiatives will continue now that the NHS has invested in the infrastructure. For some people this has made access to health professionals easier than before but only if they have good digital connectivity and literacy.

5.2.3 The role and responsiveness of community anchor organisations

Local community bodies, and well-resourced anchor organisations in particular (including development trusts), have played a critical role during the pandemic by forming genuinely place-based solutions. Their roles included: coordinating volunteers; re-tasking staff to community support roles; providing support to other community groups; and utilising their networks to target available support to where it was most needed. Such community anchor organisations have been able to respond rapidly and with agility to adapt their function/role due to their inherent embeddedness in the community and their ability to focus on local needs and solutions (e.g. mobilising an existing

[8] See for example Currie et al., (2020) *The long-term impacts of flooding: summary report* available online at www.crew.ac.uk/sites/www.crew.ac.uk/files/sites/default/files/publication/CRW2016_02_Summary_Report_1.pdf

volunteer network, using assets and people rapidly to address gaps in relation to food delivery, medicines, checking isolated people, etc.). The value of strong resilience partnerships already in place was also highlighted by Phase One participants (e.g. in Dumfries and Galloway, from their experience of Foot and Mouth Disease, and in Aberdeenshire relating to flooding experiences). Community anchor organisations that have gone through emergency events in the past have retained that learning which has enabled them to mobilise during Covid-19 and to react appropriately to the needs of communities.

5.2.4 Responsive local businesses and services

The existence of local businesses and services (including post offices, shops and GPs) was a further factor in ensuring continued service availability during lockdowns, with community infrastructure widely recognised to have played a crucial role in the resilience of rural communities during the pandemic. Many smaller local businesses in the island communities were recognised as having demonstrated adaptive capacity, with many having benefitted from an emphasis on local shopping during the pandemic. Local businesses and services also demonstrated agility, for example by doing deliveries, making up orders for collection and introducing online ordering. The example of Sanday was given where the shop ordered extra supplies to ensure everyone got what they needed and also set up a DIY and gardening section in response to local demand. Another example was in Argyll and Bute, where the Council made an agreement with the Co-op to provide credit facilities to volunteers. This enabled volunteers to buy groceries for people who were shielding, lived more than five miles away or were avoiding public transport. A website was set up to allow small craft businesses across the Scottish islands to go online.

5.2.5 Digital connectivity and up-scaling online systems

One of the most defining responses to the pandemic has been the rapid shift to using digital solutions to work, socialise, obtain support and access services. Participants commented that it is now more important than ever for everyone to be digitally connected. In the case studies it was found that existing high-quality broadband networks in most of the case study areas facilitated this shift, with related issues of lack of access to a computer or tablet addressed in many cases through provision of these by the local authority, agencies or community organisations.

Digital connectivity and previously tested systems (e.g. home working, E-Sgoil[9] and online events) was found to be an important facilitator in adapting to the impact of the pandemic in rural and island communities. In several cases, the potential additional benefits of inclusivity (e.g. online counselling, attending meetings from a distance, etc.) were recognised and in some cases community hubs had

[9] Digital learning from Comhairle Nan Eilean Siar.

been set up online. Some participants felt that digital connectivity was ‘good enough’ whilst others were thinking more in terms of ‘good enough’ for rural communities (i.e. people in rural communities are likely to put up with a worse service than might be expected by their urban counterparts). Variable broadband is an issue, but it is not only an issue in rural areas. Connectivity that did exist was under huge pressure due to children using it for school, both parents home working and potentially more than one person using video conferencing/heavy demand functions from the home network. Good digital connectivity can therefore be seen as a factor promoting resilience, while poor digital connectivity can also act as a constraint to resilience.

6 The rural recovery: what resilient actions are required for rural and island communities to thrive in future?

Highlights

This research highlights nine actions that would assist rural and island communities to thrive in the future. These include:

1. Building on existing and new partnerships and supporting anchor organisations.
2. Capitalising on and rewarding community spirit.
3. Encouraging and supporting young people to move to rural and island communities.
4. Retaining and enhancing digital connectivity opportunities.
5. Supporting adaptable local businesses.
6. Strategic partnerships which deliver place-based solutions.
7. Continuing to support diversification of the rural economy.
8. Enhancing the knowledge base about local-regional vulnerabilities.
9. Retaining a flexible, targeted and responsive approach to financial support.

6.1 Overall findings

Interviewees collectively agreed that the full effects of the pandemic were yet to be felt, with financial pressures likely to increase during 2021. The findings of this work demonstrate the importance of fostering community resilience in relation to both emergency response planning and preparedness *and* strengthening underlying capacity across a range of areas (e.g. community anchor organisations, demographics, housing, etc.) to enhance 'everyday' resilience and community

capacity over the longer term[10]. This is particularly critical given the concerns evident in relation to the uncertainty around recovery timescales and wider recognition of the disproportionate impacts of the pandemic in rural regions[11].

Participants made recommendations that align closely with the Scottish Government's focus on a rural recovery that is both 'green' and 'digital', and at the same time enhances peoples' wellbeing. There was a broad desire to build a recovery around a more equal and equitable society that is enabled by the Scottish Government's community empowerment agenda. Most participants were optimistic about the future of Scotland's rural and island communities and viewed the pandemic as an opportunity or catalyst to effectively rebuild these communities. It was also felt that interconnections and new networks between policy, stakeholders and industry should be utilised and capitalised on in recovery planning by the Scottish Government, and lessons in agility should continue going ahead.

6.2 Building on new partnerships and supporting anchor organisations

Building on existing and new partnerships between the third, public and private sectors is critical to ensuring a coordinated approach to addressing longer-term challenges, including community development, tourism recovery and visitor management. The pandemic has highlighted that community anchor organisations have the capacity and ability to react and respond with agility to community issues in a way which allows for genuinely place-based collaborations to be instigated. Community anchor organisations are therefore key to ensuring communities are sufficiently empowered and effectively structured to coordinate community responses and engage with challenges in collaboration with other organisations. From a policy perspective, approaches which support shared service delivery models, joint (and novel) funding mechanisms, and the development of strategic partnerships to address systemic challenges (e.g. affordable housing), offer considerable future potential. In addition, enhancing local leadership (including from local authorities) and communication remains a key challenge for building effective coalitions for enhancing services.

6.3 Capitalising and rewarding community spirit

Maintaining and building on the widespread community responses during the pandemic represents an opportunity for community organisations *and* the public sector. Working at home and the furlough support scheme increased the free time of many community members, resulting in a widespread increase in volunteering. While this is likely to decline post-pandemic, continuing work at home

[10] For an in-depth exploration of key underlying factors affecting community resilience see a previous output from this research: https://sefari.scot/research/objectives/local-assets-local-decisions-and-community-resilience
[11] For example, see data summarised by the Fraser of Allander Institute on regional impacts of the pandemic here.

opportunities and the community spirit 'footprint' of the pandemic offers scope for re-energising community bodies and engaging with the community development agenda across Scottish communities. Opportunities exist from a policy perspective in relation to supporting flexible working patterns and job-sharing arrangements and the longer-term potential for assessing the impacts of a four-day week on health and wellbeing. Some participants felt that community anchor organisations countered the lack of adaptability observed from local authorities and if such organisations received core funding this would maximise their ability to continue this function, particularly if there were paid employees to perform some tasks currently undertaken by volunteers.

6.4 Encouraging and supporting young people to move to rural and island communities

Many interviewees saw potential for rural and island repopulation in the wake of the pandemic due to people placing greater emphasis on the importance of green space and being enabled to work from home. This was considered to present enormous opportunities for rural communities, particularly if accompanied by the dispersal of public sector jobs away from the Central Belt and into rural and sparsely populated areas. However, repopulation must be accompanied by strategic planning to ensure it is sustainable and to avoid exacerbating existing demographic imbalance. With any rural population increase, the following key issues must be considered:

1. Creating a more diverse (green) rural economy that attracts young people of working age.
2. Building sufficient capacity in the construction sector to increase affordable housing.
3. Ensuring existing inequalities for people and places in rural communities are narrowed, not widened.
4. Addressing the question of equitable access to land and driving more effective ways for communities to contribute to their longer-term sustainability.

The continued (partial) adoption of the work at home model offers opportunities for repopulation, both in relation to attracting self-employed people to more remote parts of Scotland (where populations may be declining) and for further de-centralisation of the employment hubs of larger businesses and organisations. From a policy perspective, specific opportunities include decentralising (or partly decentralising) some agencies and government departments to sparsely populated areas and creating incentives (or strategic partnerships) to support businesses to establish hubs in remoter regions.

6.5 Retaining and enhancing digital connectivity opportunities

A rural recovery that includes a focus on digital connectivity was considered vital, not only to support existing rural and island populations and address deepening issues around digital exclusion, but also to facilitate rural repopulation across all age groups. Good digital connectivity was crucial to enable communities to be more resilient and economies to be more diverse in a longer-term

recovery process. Specifically, good digital connectivity was expected to lead to economic diversification by catalysing new and existing businesses, as well as enabling more home working.

The pandemic has also rapidly resulted in a wide range of new and more widely available applications of digital tools in education, health, social care, entertainment and wider community activity. These offer scope to support a 'levelling up' in service delivery in more peripheral regions of Scotland, including in relation to delivery of the curriculum and a re-configuring of services delivery, with potential knock-on benefits in relation to reducing emissions. Critically, post-pandemic, this will require an emphasis on effective 'blended' approaches, particularly in relation to online working and health care and assessment of the potential benefits and impacts of different models of service delivery.

6.6 Supporting adaptable local businesses

Local shops have played a crucial role in the resilience of rural and island communities during the pandemic and participants felt strongly that there is a need to think about how local shops can retain this broader role and can be supported to remain agile and responsive in future. The value and adaptability of local businesses in increasing local 'self-sufficiency' has been effectively demonstrated throughout the pandemic. Building on this going forward requires a specific policy emphasis on supporting local procurement by larger organisations (e.g. local authorities and agencies) and a focus on supporting local, place-based, private and social enterprises which add value to local produce. Participants stated that policy decisions about all forms of service provision must consider differing rural and island circumstances, i.e. that the policy decisions must take into account place-based differences. It will also be imperative to understand the barriers to digital services, particularly those that are replacing traditional methods of service provision or access.

The pandemic has highlighted the importance of local production and supply, especially in food and agriculture. It is important to retain and develop an emphasis on shopping locally and supporting local businesses which have been viewed as being adaptable to new circumstances. The local food agenda and local processing facilities such as abattoirs are currently very important for production, due to the effects of both the pandemic and Brexit.

6.7 Strategic partnerships which deliver place-based solutions

As evident from the Western Isles case study in particular (but also in relation to public transport provision in Fife) a number of infrastructural challenges (e.g. connectivity, housing) remain which potentially constrain the capacity of communities to be resilient during periods of change. These more systemic challenges are a key dimension of the relative resilience of a local community or region to both gradual (e.g. demographic decline) and rapid (unpredictable) impacts. In addition to ensuring sufficient connectivity of the island regions, affordable housing remains a growing

challenge in many peripheral regions (as demonstrated in the Western Isles case study). Addressing this challenge is recognised as requiring novel, place-specific approaches developed through strategic partnership approaches (e.g. between housing providers and asset-owning community anchor organisations). In combination with a de-centralisation and local-enterprise agenda, addressing affordable housing demand represents a critical opportunity for remote regions to ensure long term community retention as well as to support any repopulation of these communities.

Participants suggested that there is a need for real structural change and revisions to the National Planning Framework. There was a clear desire to move away from centralised decision-making and for rural and island communities to be kept at the centre of the debate. For example, there was a call for a 'Rural Bill' similar to the Islands (Scotland) Act 2018 that supports rural policy, and that is place and person-focused. However, there is also a need to know who the community-focused organisations are and what rural and island communities can offer. There must be more local intelligence-gathering about local needs. Nuances across rural and island communities must be more carefully considered by future government policy. For this approach to be achieved it was felt that the Scottish Government needs to prioritise place-based policy making[12] and reject centrally-designed and one-size-fits-all policy approaches. Some participants felt that there should be more local authority distribution of the funds available since they have good knowledge of local needs. Other interviewees felt that Trusts (both community and development) were able to mobilise rapidly during the Covid-19 outbreak and are critical to future-proofed and resilient rural communities.

6.8 Support for the economy and key rural industries

There was a consensus amongst participants that support is required to ensure the survival of current key rural and island industries including the hospitality sector, oil and gas, fishing and agriculture. Participants noted that increased emphasis on holidays in the UK could offer opportunities for rural communities in the medium term; however, the future rural economy should place less reliance on tourism and more on sectors providing year-round stability.

Participants felt that a green recovery should be integral to an economy based on wellbeing rather than consumption, and thus that recovery should be framed around empowerment, equity and a shift towards greater land 'sharing' models. Some suggestions to achieve a wellbeing-focused green recovery included incentives for businesses to enhance their environmental standards/reduce carbon emissions, a focus on digital innovation, and an emphasis on the employment of young people. Another suggestion was that the green recovery should include a discussion around flexible

[12] More information about parallel work being undertaken by the research team on place-based policy and rural Scotland can be found here: 3.4.2: Place-based policy and implications for policy and service delivery - Strategic Research Programme - SRUC

procurement, supply chains and local food production. Also noteworthy is that there are many small and micro rural enterprises that are vital to the wider rural economy requiring specialised support.

6.9 Enhancing the knowledge base on local-regional vulnerabilities

As evidenced from the case studies in both regions, knowledge gaps exist in relation to local-level understandings of care needs and specific vulnerabilities across communities. While embedded local organisations can coordinate measures to identify and respond to needs relatively rapidly, there remains a requirement for ensuring these vulnerabilities are understood before emergencies occur. This will ensure community-level responses can be effectively coordinated and targeted rapidly. Future research also offers scope for assessing the views of younger people across Scotland in relation to where they see themselves living and working in the future and the related opportunities and pressures for rural areas.

6.10 Retaining a flexible, targeted and responsive approach to financial support

Participants felt it was important to identify how best to support key rural sectors and communities. In the short-term and medium-term an economic hit is anticipated, but well-targeted funding now will mean that in the longer term there will be building blocks for stronger enterprises and assets that pay back that investment. Participants recommended that there should be flexibility for existing government grant deadlines for community funding (e.g. Rural and Island Housing Fund, Scottish Land Fund); and the establishment of a replacement for LEADER funding. Future funding needs to maintain levels of trust in community bodies to know what they want and need, and funding should be opportunity-focused. The Scottish Government was urged by participants to be less cautious about funding, to accept a higher level of risk, and to be more flexible in the application of ongoing funding mechanisms. Such an approach could allow the Scottish Government to “do the rhetoric” and enable community empowerment to be more fully achieved. Participants also suggested there should be sustainable funding for the voluntary sector, as well as support for social enterprises. Such an approach would be in keeping with the vision of a wellbeing economy. There was also a desire for more support to be available for organisations whilst they are applying for funding.

A range of examples from the case studies demonstrated the importance and usefulness of a responsive and more targeted approach to providing support to enterprise and communities. In addition, measures (e.g. seed funding) which foster the development of social enterprise and new income streams offer particular relevance going forward given ongoing economic pressures. As highlighted by the island case studies, policy responses are also required which reflect the specificity of different regions (e.g. ‘island proofing’ through Island Communities Impact Assessments introduced as part of the Islands (Scotland) Act 2018) and their unique socio-economic characteristics (e.g. peripherality) and consider the impacts of wider national level policy (e.g. the tiering system) on island regions.

Appendix 1: Summary of the Phase Two work

This work began with a discussion of potentially relevant datasets for indicators that were identified as part of the outputs in Phase One of the research. Themes and facilities raised in the Phase One interviews which are related to resilience were summarised. Discussions around potential sources of data stemming from the Phase One findings led to a compilation of a 'long list' of datasets (focusing on data available for Data Zones, other small areas, or spatial/location data) which identified possible links between these datasets and seven themes corresponding to enabling factors of resilience to the impacts of Covid-19: previous research for Scotland's National Centre for Resilience[13] had identified enabling factors of everyday resilience. The researchers then reviewed the list by theme and produced a final list of 50 datasets, which was then turned into a neat list of 34 datasets and 'dataset themes' (after adding more 'readable' names and combining similar or duplicated datasets into single themes) and their links to the seven themes noted above. This was presented to the project team for feedback: so that any in gaps or points from the stakeholder interviews could be included (Phase One). Four additional indicators were added following feedback: these included schools as a community space, and estimated furlough (or furlough vulnerability) rate, which were included within the final selected indicators. After this, the indicator selection and the scale of the calculations taken forward were pragmatic, given the responsive timescale. Datasets which could be covered using data on rural resilience[14] were considered, and priority datasets were identified within the seven themes. Thematic links were selected and adapted (e.g. the "Availability of high-speed broadband and communications" dataset was linked to the 'Transport/Migration' theme as well as 'Other'); the neatened dataset name "Infrastructure associated with medical, emergency, everyday resilience" was also changed to "Places supporting community resilience, including schools".

The index of local resilience to Covid-19 impacts was calculated from nine specific indicators, drawn from seven of the neat datasets and dataset themes, and representing five out of the seven themes related to enabling factors of resilience to the impacts of Covid-19 (Table 1). The selections correspond to previously discussed aims for forward-looking indicators, rather than those focused on lockdown, and avoiding indicators of vulnerability, but possibly capturing resilience and addressing needs of vulnerable groups. They include:

[13] Meador, J., Wilson, R. Spencer, M., Currie, M. (2020) Identifying Hot Spots of Rural Resilience in Scotland. 10.5281/zenodo.3733112.
[14] Publicly available data: Spencer, M., Meador, E., Wilson, R. (2019) Identifying Hot Spots in Rural Community Resilience in Scotland – database. 10.5281/zenodo.3386198.

- two estimates of the impact of Covid-19 on the local economy: the change in the claimant count from pre-pandemic months to during the first wave in 2020, and an estimate of the vulnerability of residents to being on furlough, based on the local industry-level employment structure.
- local demographic characteristics: medium-term population change and the old age dependency ratio.
- the number of local places and facilities which are linked to social capital and the care of potentially vulnerable people: active charities which have a local focus; places supporting community resilience (halls and community centres, gymnasiums, sports halls and leisure centres, community networks and projects, pubs, bars and inns) plus schools; and providers of childcare (child care agency, child minding, day care of children) and care for older people (nurse agency, adult placement service, support service, care home service).
- the availability of fast broadband.

The index was calculated[15] for Data Zones in rural areas and small towns[16] and used a transparent and simple scoring, with indicator values converted to a score from one to three (predominantly using thirds): higher values represent stronger or more desirable outcomes. For 1,981 Data Zones (out of 2,067) with complete data for all nine indicators, the index was calculated as a sum of these scores, which has a theoretical range of 10-30. A Scotland-level map of the index and interactive dashboard were presented to the project team; the mapping also highlighted the extent of sparsely populated areas within Scotland[17] as a second factor to consider in case study selection. The recommendation to the group was to select case study locations using the index and the team's collective research experience in rural Scotland. Key questions to consider for case study selection were: a) where is there a large difference in values, either over a short distance, or within the same region?; and b) does population sparsity correspond with clusters of high or low values?

The mapped index quantiles (Figure 1) show clusters of high resilience (dark blue areas) around Edinburgh, Perth, Aberdeen and Inverness. However, high scores are also found in remoter rural areas, including parts of Shetland, Orkney and the Western Isles, although there are more obvious visual concentrations of low scores in remoter parts of the Highlands, and in Argyll and southern Scotland. The highest Data Zone score (29 out of 30) was recorded just south of Edinburgh (Rural

[15] Index calculations were done using R (R Core Team (2019, 2020). R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. https://www.R-project.org/.), with the analysis also using the 'Hmisc' (https://CRAN.R-project.org/package=Hmisc),'corrplot' (https://github.com/taiyun/corrplot) and 'readxl' (https://CRAN.R-project.org/package=readxl) packages.

[16] Scottish Government Urban Rural Classification 2016 - Lookup and Code Description Files, Scottish Government. Downloaded from https://www2.gov.scot/Resource/0054/00542960.zip. Copyright Scottish Government, contains Ordnance Survey data © Crown copyright and database right (2018).

[17] Sparsely populated areas are locations where less than 10,000 people live within 30 minutes' travel: see Hopkins, J., Piras, S. (2020) Population projections and an introduction to economic-demographic foresight for Scotland's sparsely populated areas (2018-43) for data sources and information. Available at https://www.hutton.ac.uk/sites/default/files/files/research/srp2016-21/rd341briefprojectionsandforesightintro.pdf.

South Midlothian – 03), while the lowest score (11) was found at Elie in Fife. There are relatively small differences in mean index scores across accessible, remote and very remote small towns and rural areas[18]: the highest average (20.3, n = 585) was found in accessible small towns, and remote rural areas had the lowest average (18.7, n = 214). A subsequent analysis of the distribution of extreme index values by local authority[19] points to geographical differences: in the Shetland Islands, c. 46% (12/26) of rural and small-town Data Zones are in the highest quartile (i.e. high local resilience to the impacts of Covid-19), and the respective figure is 40% or above in the non-urban parts of the City of Edinburgh and Aberdeen City. By contrast, around half of the Data Zones outside urban areas in each of South Ayrshire, Dumfries and Galloway, and Argyll and Bute are in the lowest quartile.

Table 1: Indicators and data sources used in the calculation of the index

Theme	Indicator	Raw data
Employment/ jobs/sector	Change in claimant rate (claimants of Jobseekers' Allowance and Universal Credit, as a proportion of residents aged 16-64) (Jan-Mar 2020 – Apr-Jun 2020) (percentage points)	Claimant count by sex and age (ONS Crown Copyright Reserved [from Nomis on 8 September 2020])
	The estimated proportion of employed residents (aged 16-74) vulnerable to being on furlough (percent) (August 2020) (%)	Census 2011 population data: table QS605SC (© Crown copyright. Data supplied by National Records of Scotland); HM Revenue & Customs Coronavirus Job Retention Scheme (CJRS) Statistics: August 2020 - Table 2.1 CJRS claims by sector (3 digit SIC2007) (© Crown copyright. https://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/)

[18] Scottish Government Urban Rural Classification 2016 - Data Zone Lookup (link); Scottish Government Urban Rural Classifications 2016 - 8 Fold Description (link). Copyright Scottish Government, contains Ordnance Survey data © Crown copyright and database right.
[19] Data source for local authority values: Scottish Index of Multiple Deprivation 2020v2 data zone lookup (link). © Crown Copyright. http://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/.

Demographics	Old age dependency ratio (2019) (Old age population as % of working age population)	Table 1a: Estimated population by sex, single year of age and 2011 Data Zone area, and council area: 30 June 2019. © Crown Copyright 2020. Data supplied by National Records of Scotland
	Total population change (2009-19) (%)	Table 1a: Estimated population by sex, single year of age and 2011 Data Zone area, and council area: 30 June 2019. © Crown Copyright 2020. Data supplied by National Records of Scotland; Table 1a: Estimated population by sex, single year of age and 2011 Data Zone area, and council area: 30 June 2009. © Crown Copyright 2019. Data supplied by National Records of Scotland
Social capital	Number of active, locally-operating charities within Data Zone (2020)	OSCR Charity Register (© Crown Copyright and database right [2020]. Contains information from the Scottish Charity Register supplied by the Office of the Scottish Charity Regulator and licensed under the Open Government Licence v.3.0. (http://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/); National Records of Scotland 2020-2 Scottish Postcode Directory: Postcode Index. (Contains NRS data © Crown copyright and database right [2020])
	Number of places supporting community resilience, including schools, within Data Zone	Resilience Indicators from Michael Spencer, Elliot Meador, & Ruth Wilson. (2019). Identifying Hot Spots in Rural Community Resilience in Scotland - database [Data set]. Zenodo. http://doi.org/10.5281/zenodo.3386198
	Number of places providing childcare	Care Inspectorate Datastore (https://www.nationalarchives.gov.uk/doc/ope

Care (child/older people)	within Data Zone (2020)	n-government-licence/version/3/); National Records of Scotland 2020-2 Scottish Postcode Directory: Postcode Index. (Contains NRS data © Crown copyright and database right [2020])
	Number of places providing care for older people within Data Zone (2020)*	Care Inspectorate Datastore (https://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/); National Records of Scotland 2020-2 Scottish Postcode Directory: Postcode Index. (Contains NRS data © Crown copyright and database right [2020])
Transport/ migration/other	Percentage of premises where superfast broadband is available (2019) (%) **	Ofcom Connected Nations update: Spring 2019: Fixed output area data. https://www.ofcom.org.uk/__data/assets/file/0020/150662/fixed-output-area-data.zip. (https://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/); Output Area 2011 to Data Zones and Intermediate Zones 2011. https://www.nrscotland.gov.uk/files//geography/2011-census/OA_DZ_IZ_2011.xlsx (© Crown copyright. Data supplied by National Records of Scotland)

*- *1-3 score calculated from this variable was not based on thirds, due to the distribution of values;*

**- *1-3 score for this variable was doubled.*

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