Inequality in a Future Wales:
Areas for action in work, climate and demographic change

Dr Sara MacBride-Stewart & Dr Alison Parken

Foreword

The COVID-19 pandemic has highlighted new challenges for the people of Wales. It has affected the health and well-being of individuals and communities and impacted on wider areas such as how we work and the availability of jobs. These impacts however have not been felt equally. Those who were already living in poor health, poverty or in marginalised communities have been the hardest hit. It has highlighted the inequalities we knew existed in our society long before the pandemic arose – and these have been further compounded as a result of both the direct and indirect harms from the pandemic.

Our hope now is to harness this heightened awareness to tackle these problems with new energy. We also need to ensure that we take steps to anticipate future shocks and how they may affect different groups

That is why the Future Generations Commissioner for Wales and Public Health Wales have joined forces to look at what challenges and opportunities the future may hold for creating a more equal Wales. We have jointly commissioned this report to analyse the impact of three future trends – changes to how we work, climate change and demographic change. The report looks at how the effects may be different for different parts of the population and considers how current and future policies in these areas could tackle inequality.

The pandemic exposed some of us to new ways of working, such as home and more agile working. Continued advancement in technology and robotics may further change how we work, and as we look to a 'green recovery' beyond the pandemic, the type of work we do is ripe for change.

With the United Nation's Climate Change Conference (COP26) in the UK this year, it is important to focus on how climate change - and our efforts to mitigate against it – affects people in an unequal way. The recent flooding in Wales has shown once again that it is often the poorest communities that are hardest hit by the effects of climate change and the ones least able to make the adaptations needed to cope with these effects. As we address the climate emergency, it is important we remember that the well-being of people and planet go hand in hand.

Lastly, in future we expect to see a greater number of older people living in Wales. People living longer and in better health is something to be celebrated and allows us all to benefit from the value this brings society. But we need to better understand what this change to Wales' demographics could mean for the future of education, work, and health and care services. We will need to adapt and respond in a way that is fair to older, younger and future generations alike.

We must make sure that possible futures are considered as we work to tackle inequality in Wales and the Well-being of Future Generations Act provides us with a compass to travel through and beyond the current pandemic to create a healthier and more sustainable Wales than the Wales of today. We must seize opportunities to fast track new ways of working which could take us towards a more equal Wales, avoid taking decisions which could inadvertently exacerbate inequality and be prepared to take action now to mitigate future trends which could make things worse. We hope this report will be form an important part of the debate on how we do this together.

Sophie Howe
Future Generations
Commissioner for Wales

Dr Tracey Cooper
Chief Executive of Public
Health Wales

Dr Sara MacBride-Stewart & Dr Alison Parken
Inequality in a Future Wales: Areas for action in work, climate and demographic change

2

Table of Contents

Dr Sara MacBride-Stewart & Dr Alison Parken
Inequality in a Future Wales: Areas for action in work, climate and demographic change

3

Executive Summary

This report explores how three key trends – changes to how we work, climate change and demographic change – may affect inequalities in a future Wales. The research was based on a rapid review of literature evidence and discussions with organisations that advocate for greater equality.

The main finding of the report is that existing socio-economic inequalities in Wales risk being carried into the future unless they are specifically addressed. It suggests taking action on this would involve:

1 Looking for opportunities to promote equality in policy development across all areas; and

2 Creating opportunities for equalities advocates and policymakers to think and plan for the long-term in partnership as part of policy development processes.

This reflects the ways of working set out in the Well-being of Future Generations (Wales) Act 2015; particularly integration, collaboration and long-term.

Dr Sara MacBride-Stewart & Dr Alison Parken
Inequality in a Future Wales: Areas for action in work, climate and demographic change

4

The report also identified specific issues and areas for action with respect to each of the three future trends. These are summarised below:

Future of Work:

- Unless addressed, predicted growth in science, technology and 'green jobs' will advantage the already advantaged because of an existing lack of diversity in relevant education, training and jobs.
- Preparations for a changing future of work should focus on job redesign and training, rather than mass job displacement. Job redesign decisions must involve those effected and support must be made available so training is accessible to all.
- New policies, such as Universal Basic Income (UBI) and remote working, need to consider equality.

Climate Change:

- The poorest and most marginalised populations are least responsible for climate change but are
    - **a)** the most likely to be exposed to its negative effects,
    - **b)** more susceptible to damage and
    - **c)** have the least resources to respond, cope and recover.
- Climate change mitigation could benefit marginalised communities if done well but could increase inequalities if the impacts on different groups in society are not factored in.
- It is important that climate change does not become separated from equalities thinking and understanding, or limited to decarbonisation when it is just one part of achieving sustainability and well-being for people and planet. The broad portfolio of the new Climate Change Ministry is therefore welcomed as an important opportunity for integration.

Demographic Change:

- An ageing population will disrupt how health and social care, employment and education, and pensions operate, and these systems will need to adapt if they are to function in the long-term.
- Future challenges need to be tackled with the needs of all generations in mind or risk disadvantaging one at the expense of another and/or falling short of achieving ambitions.
- A 'care-led recovery' puts childcare and the care needs of older people on an equal footing with 'green jobs' in benefitting health, the environment and the economy.

Dr Sara MacBride-Stewart & Dr Alison Parken
Inequality in a Future Wales: Areas for action in work, climate and demographic change

5

Introduction

The sustainable development approach within the Well-being of Future Generations (Wales) Act 2015 requires Welsh policy makers to take a long-term view so that their decisions do not impact negatively on future generations. The purpose of this research was to examine three long-term future trends and consider how current and future polices associated with them can, simultaneously, tackle inequalities.
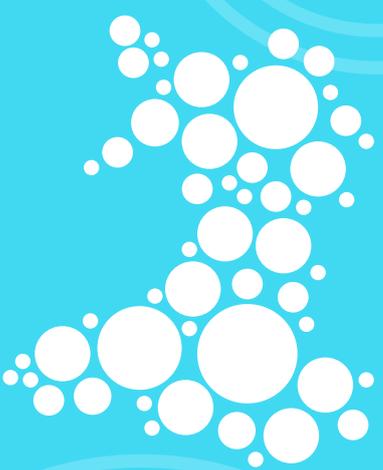
A review of the literature shows that long-term socio-economic inequalities have become entrenched in Welsh society through deindustrialisation and the 2008 financial recession.[1] Research on COVID-19 showed how existing structural inequalities led to an uneven distribution of suffering in terms of illness, poverty, unemployment, poor housing, and access to green space (British Academy, 2021). Without intervention, the climate crisis will similarly accentuate inequalities (Dasgupta, 2021).

The impact of the pandemic on socio-economic inequalities has been immense. Disabled and older people, men and people from Black and South Asian communities have been disproportionally vulnerable to acquiring COVID-19 and having serious or fatal outcomes (Marmot, 2020).[2] People on low-incomes, in frontline roles and in precarious work, disproportionately women, disabled people and some ethnic minority communities, have been further economically disadvantaged by COVID-19 (British Academy, 2021). These are also the groups most vulnerable to climate change, changes in the organisation of paid work, and changing demographics (Dasgupta, 2021), hence our focus on socio-economic inequalities throughout the report.

---

1. Deindustrialisation in Wales refers to the decline of the manufacturing and industrial sectors, which previously were dominant in the economic, social, and cultural life of Welsh communities.

---

2. The evidence review is based on sex disaggregated data. We use the term gender throughout to signify the gendering of education, employment etc., and its material effects.

Dr Sara MacBride-Stewart & Dr Alison Parken
Inequality in a Future Wales: Areas for action in work, climate and demographic change

6

Amy Elting

The Future Generations Commissioner's first statutory review of progress towards meeting the well-being goals, under the Well-being of Future Generations (Wales) Act 2015, identified three key future trends as central to 'A More Equal Wales':

1	Automation and the changing future of work
2	Climate change
3	Demographic change

A rapid review of these trends, from academic and think tank evidence, revealed that the idea of promoting equality is not central to policy innovations in these areas.[3] Further, that inequalities will increase in the future if nothing is done, and if conflicts between achieving economic growth, promoting equality and environmental change are not addressed.

Summaries of the reviews were shared with Welsh policy think tanks and civil society organisations advocating for equality in Wales, via online discussion groups.[4] The participants told us more about the immediate and serious implications of the COVID-19 pandemic, and how it has created new, or entrenched existing, inequalities. They told us that the focus on the immediate crisis, and the need to respond immediately and decisively, has left little time for reflection on potential future long-term impacts.

The discussion group participants agreed that automation, climate and demographic change should be central to futures thinking on equalities. They also identified the need for these trends to be considered when tackling poverty, mental health, and the further breakdown of social cohesion.

Emerging areas for action were subsequently discussed with the discussion group, and we are grateful to them for their time and providing a nuanced understanding of immediate concerns, and of the need to bridge equalities and futures thinking in the longer-term.

This summary report offers a snapshot of our findings and proposed areas for action. The areas for action will be more widely discussed with citizens panels, equality and environmental groups and policy makers, in a second phase of the research later in 2021. We also consider how to embed equalities in long-term policymaking and futures thinking. The full evidence base is available in a separate report.

---

3. The evidence review took place between March and June 2021. The full evidence base, detailing the potential equalities impacts of changing work, climate, and demographics, is available in the full report that accompanies this summary.

4. Participating organisations at Appendix 1

The Future of Work

The COVID-19 pandemic has highlighted entrenched labour market inequalities, particularly for young people, whose earnings were only just beginning to recover from the effects of the 2008 recession on wages and job progression (D'Arcy et.al, 2018). In addition, women, disabled people, and ethnic minorities were also more likely to be working in low-paid, precarious work in the sectors that were shutdown (retail, childcare, hospitality, accommodation etc.), and were therefore the ones who lost jobs, working hours and earnings at disproportionate rates during the first lockdown (Blundell et al., 2020).

These groups were also most negatively impacted by the 2008 recession and subsequent 'austerity' policies (Portes and Reed, 2018).

Workers in shutdown sectors are most vulnerable to redundancy when the 'Coronavirus Job Retention Scheme' (CJRS), also known as the 'furlough scheme', ends. Unemployment may have peaked at 5% but loss of working hours has continued from 2020 into early 2021 (Wilson, 2021). This may result in further under-employment and associated loss of earnings for these workers. Much of UK job growth in the first quarter of 2021 was in highly skilled jobs, particularly science and technology occupations (Wilson, 2021) – but these are occupational groups in which women (Arad, 2020), minority ethnic groups and disabled people are underrepresented at senior levels.

Remote working in Wales has been taken up mainly by professionals and highly skilled workers (Felstead, 2021). Nearly, 40% of jobs cannot be worked from home (Rodriguez, 2020). This is a policy area where social, economic, and cultural divides are clear, and the Welsh Government policy ambition for 30% of the Welsh workforce to work remotely on a regular basis needs to be examined from the perspective of differences across all the equality grounds (Welsh Government, 2021). By mainstreaming equality through the policy, new occupational or pay and progression inequalities could be avoided.

Dr Sara MacBride-Stewart & Dr Alison Parken
Inequality in a Future Wales: Areas for action in work, climate and demographic change

8

Mark Konig

Current debates on the future of work, and in particular the impact of automation, digitisation, and Artificial Intelligence (AI), tend to offer either utopian or dystopian scenarios (Cruddas, 2020). On the one hand, mass unemployment, social upheaval, and societal breakdown, and on the other, the automation of routine work; freeing humans to work less and concentrate on highly creative, satisfying jobs.

Prior analyses suggest that a shift to a technology-based economy does not guarantee economic growth (Brown, 2019), and that previous industrial revolutions have exacerbated inequalities (Brynjolfsson and McAfee, 2014). This is in keeping with findings on the shift to the knowledge economy in the 2000s.[5] By looking at the interaction of policy, funding, research and commercialisation activities by universities, government and business, researchers demonstrated that men held almost all the key positions in the innovation system in Wales (Parken and Rees, 2011). The conclusion from this is that each economic era can transpose existing inequalities into the next.

Without intervention, the same inequalities will be reproduced in the shift to a digital economy and the potential 60,000 'green jobs' that could be created in Wales (FGCW and New Economics Foundation, 2021). Routes into 'green' jobs such as housing retrofit, railway and cycle lane construction, and offsite housing manufacture are through construction training. In 2019/2020, 95% of all construction apprentices in Wales were men (Statistics Wales, 2020). This contrasts with apprentices in the Healthcare and Public Services pathways, where women make up 84% (ibid).

A review of digital occupations in Wales shows that women are present in very small numbers and mainly in IT support roles (ONS, 2020). Data samples were too small to estimate the number of ethnic minorities and disabled people in digital occupations. Overall, the review showed that insufficient consideration is being given to disabled people in futures thinking. These data gaps need to be addressed but based on what we already know about existing inequalities for women, ethnic minorities, and disabled people in the labour market, these inequalities will likely be replicated in future. Waiting for data shouldn't forestall action now. Who is involved in shaping our digital future has implications for the 'Wales we want', as evidence shows that poor diversity in tech innovation has contributed to creating algorithmic biases which have been detrimental in, for example, automated recruitment systems (Wacjman, 2018).

Billetto Editorial

5. The 'knowledge economy' is an umbrella term covering knowledge intensive inputs to create products and services, as opposed to those requiring physical or natural resources inputs (Powell and Snellman, 2004).

Possessed Photography

To date, studies on automation have mainly focused on job losses. They have shown that almost 90% of jobs lost worldwide have been in manufacturing, impacting men's employment more significantly than women's (Monkelbaan, 2021). The threat to jobs at all skill levels, and to women's jobs in professional and personal services, is likely to grow as automation progresses.

However, a review of digital economy prospects for the Welsh Government by Brown in 2019, notes that just because jobs are automatable, it does not follow that they will be automated. Automation decisions are cost sensitive, and where wages are low, as they are in Wales, cost efficiencies may be insufficient to make automation attractive (Brown, 2019).

This is one of the reasons that the focus has shifted from automatable jobs to automatable tasks; and why the Office for National Statistics (2019) estimates 7-8% of UK jobs could be lost to automation, rather than the ranges of 30%-50%, which can be traced back to an early paper on blue collar US jobs (Frey and Osborne, 2013). Based on a combination of international and UK studies, Brown offers a prediction that 19% of tasks will be automated in Wales by 2037. Therefore, the future of work should focus on task changes, job replacement and job redesign, rather than mass job displacement.

Automating tasks requires upskilling workers and/or changing the role that they play. The digitisation and automation of tasks should be integrated into the Fair Work programme, inscribing a commitment to improve job quality as job roles are redesigned.[6] This involves protecting job security, work-life balance, respect, autonomy, creativity, and the ability for individuals to use existing skills to the full (Unison, 2018).

A programme providing support to redesign jobs, with full worker engagement, is operating in Scotland with the aim of automating routine tasks and reskilling displaced employees - often resulting in better use of their higher-level skills (Findlay et al., 2016). The Wales Partnership Council report on technological innovation to improve public services, also calls for a redeployment and retraining bargain when jobs are displaced by automation (Wales Partnership Council, 2020). Further investigation of the Scottish approach, with a view to replicating it in Wales in conjunction with the Welsh Government, Local Government and Health Service Digital Officers who are rapidly automating and digitising services, would be beneficial.

---

6. The Welsh Government accepted the recommendations of the Fair Work Commission's Report, Fair Work Wales (2019). Fair Work was defined by the Welsh Government in 2019 as that in which workers are 'fairly rewarded, heard and represented, secure and able to progress in a healthy, inclusive environment where rights are respected' (WG, 2019a). The proposed Social Partnerships Bill will introduce measures to improve employment practices, leveraging public procurement to support this aim.

Figure 1 (below) sets out where we are now, and provides policy options for change, taking into account their ability to take us closer to the vision first set out in the 'Wales We Want' report (Cynnal Cymru, 2015) and formalised in the Well-being for Future Generations (Wales) Act 2015. It highlights, policy responses that may have inadvertent consequences unless provision is designed to tackle inequalities.

Figure 1:
The Future of Work

Where we are now

- Increasing task automation across all occupations and skill levels without sufficient attention on upskilling/reskilling workforce
- Existing occupational gender segregation is reproduced in new digital and 'green' jobs
- Low-skilled jobs decrease creating unemployment for those over-represented in low-paid and precarious work: women, some minority ethnic groups and disabled people

Examples of challenges

- New apprenticeships and training provision in 'green' and digital follow existing patterns and are disproportionately taken up by white able-bodied men
- Workers displaced by task changes instead of retrained/redeployed

Opportunities for change

- Employers supported with job redesign and employees engaged throughout
- New training in 'green' and digital jobs designed to be accessible to all, with support to move to non-traditional job roles

The Wales we want

- All careers are accessible to everyone with equal pay for equal work
- A diversity of people to design new technology and benefit from it
- People have the support to train and re-train throughout their lives
- Automation of tasks improves job safety and quality, with employees redeployed/retrained or involved in new job design

Dr Sara MacBride-Stewart & Dr Alison Parken
Inequality in a Future Wales: Areas for action in work, climate and demographic change

11

Emmanuel Ikwuegbu

Mandy Jones Photography

The literature showed, and our discussion group participants agreed, that there is a need for substantial investment in training, retraining, and reskilling. They also agreed that the formal programmes currently on offer are not accessible to all, and do not yet incorporate new digital and green skills pathways. They argued that training must be flexible; "not full-time and not only in the daytime", as a research participant put it, and not solely based on formal qualifications.

Others have also called for improvements to existing provision. The Wales TUC calls for paid leave to retrain and a rapid upscaling of the Wales Union Learning Fund (WTUC, 2020). The Bevan Foundation calls for an increase in the Educational Maintenance Allowance to £45 per week to remove disincentives to staying on in education post-16 (2020). There are also calls for access to free childcare to be extended to mothers who are unemployed, and for welfare conditionality rules to include retraining as well as job seeking (WESC, 2021). The economic imperative for free high-quality universal childcare from 9 months is another important element, as more women will be needed in the workforce to address the shrinking and ageing of the Welsh working-age population (Scott, 2019). See Demographic Change section for further discussion of this issue.

Finally, the idea that there will not be work for everyone in an automated future has led to renewed interest in Basic Income (UBI). Public Health Wales has reviewed the heath related evidence on UBI, and the Future Generations Commissioner for Wales recommended a pilot is carried out in Wales. Piloting UBI forms part of Welsh Labour's new programme for government. As the pilots are developed, consideration should be given to concerns raised in the discussion group; namely how UBI will account for the additional costs of living, and working, as a disabled person and how it would interact with other benefits such as learning and training grants, and free childcare.

The degree of change in Wales' labour market is potentially enormous and yet taking place mainly at a micro-level with task changes within job roles. A future of work strategy, underpinned by Fair Work principles, could integrate equality into the foundational economy, digital strategy, green economy, enterprise, reskilling and job redesign.

These areas for action have been informed by our review of the literature and initial discussions with stakeholders. They will be tested and developed further with stakeholders in the next phase of this work.

Areas for Action

1

Increasing the number of women, ethnic minorities, and disabled people in the digital and 'green' economy, so that existing inequalities are not recreated as these sectors grow.

2

Supporting employers as they redesign jobs to take into account the increased automation and digitisation of tasks, so that they protect and improve peoples' job quality, security, autonomy, and work-life balance, and involve employees in the process.

3

Targeting and improving the accessibility of business support, entrepreneurship programmes and retraining/reskilling opportunities to make sure they are open to all. Ways of achieving this may include offering paid leave/incentives to retrain, free childcare for all and/or additional financial support for job seekers and those in education.

4

The creation of a future of work strategy, underpinned by equality and Fair Work principles, could integrate policy and action on the foundational economy, shifts to the digital strategy, green economy, and enterprise.

Dr Sara MacBride-Stewart & Dr Alison Parken
Inequality in a Future Wales: Areas for action in work, climate and demographic change

13

Climate Change

Climate change is one of the most defining problems of our age with implications for the health and stability of existing and future generations (White, 2017). The changes to the global atmosphere described by the term 'climate change' is caused by human activities that release greenhouses gases e.g., burning fossil fuels (Diaz et al., 2019). In Wales, climate change has led to an increase in regional flooding, winds, drought, and temperature fluctuations, with direct effects on transport, agriculture, housing, business, and social and cultural activities (CCC, 2020).

According to Climate Central, large parts of Cardiff, Newport, Swansea, Prestatyn and Llandudno will be under water by 2100.[7] The expectation is that climate change patterns will intensify, along with other human-led processes, which together, are leading to the destruction of biodiversity and freshwater systems (Diaz et al., 2019). In Wales, public concern and awareness about climate change is increasing. At the time of writing, there is a new Ministry for Climate Change, highlighting the extent to which climate change is on the Welsh Government's agenda.

There is a strong relationship between climate change and inequality (Islam and Winkle, 2017). The poorest and most marginalised populations are least responsible for the production of greenhouse gases and are a) the most likely to be exposed to its negative effects, b) more susceptible to damage, and c) have the least resources to respond, cope and recover (Markkanen and Anger-Kraavi, 2021). There is concern that climate change will worsen within countries due to internal social inequality, as well as growing economic inequality between countries. The COVID-19 pandemic has also shown how a crisis can have worse impacts for vulnerable groups (Conceicao, 2021). Acknowledgement of the inequalities caused by climate change is increasing (Welsh Government, 2019c).

7. Climate Central, Coastal Risk Screening Tool: www.coastal.climatecentral.org/map/

Callum Shaw

Li-an Lim

To date, there have been two types of response to addressing social inequalities. Firstly, promoting economic growth to reduce poverty and improve the lives of the most impoverished (Diffenbaugh & Burke, 2019). Secondly, limiting economic development and reducing its climate change impacts, while at the same time finding ways to reduce inequality (Conceicao, 2021). Preferably, climate change policy should follow the latter, reducing the overall impact of human consumption and production while seeking to protect vulnerable people, and ensuring they benefit the most from climate change policies (Heffron and McCauley, 2018).

As emissions of carbon dioxide and other greenhouse gases into the atmosphere are primary drivers of climate change, efforts by the Welsh Government (2020) have focused on reducing the levels of greenhouse gases or 'decarbonisation'. This involves the lowering of emissions from the sources considered to produce the most outputs across sectors; from housing, transport and energy, to farming and agriculture. Prior to the declaration of a climate emergency by the Welsh Government in April 2019, efforts were focused on reducing emission to meet 'low carbon' targets. This target was pushed further in July 2019 to a declaration of intent to achieve 'Net Zero' by 2050 where the amount of greenhouse gas emissions put into the atmosphere is matched by the amount taken out (Climate Change Committee, 2020).

The Welsh Government efforts for Net Zero by 2050 focus on reducing emissions in the key areas of: transport; buildings/housing; electricity generation/fuel supply; agriculture/land use/forestry; aviation and shipping; waste; greenhouse gases and through behaviour change (Climate Change Committee, 2020). Whether it is planting trees, changing how we travel or what we produce and consume, lowering emissions will significantly affect how life will be lived in Wales. Each of these solutions is directly related to new ONS measures of societal well-being, which include assessments about where we live (i.e., access to the natural environment and satisfaction), our finances and the state of the natural environment.[8] The future of climate change mitigation policy requires us to take account of its combined effects on societal and human well-being, and the natural environment.

There is a lot of uncertainty about what these changes mean for communities who are less able to adapt because they have less resources to do so. The decarbonisation priorities identified by the Welsh Government post-pandemic are housing, transport and the 'resilience and adaptation of communities to climate change' (CCC 2020). To tackle concerns about creating or perpetuating inequalities, solutions in Wales must address:

- how the potential economic benefits of a low carbon, Net Zero economy will be shared;
- how relatively untested technical solutions like hydrogen fuels or low emissions zones will affect different social groups;
- how the impacts of each strategy (housing, energy generation) will affect different groups in society (Brooks and Bryant, 2013).

---

8. Office for National Statistics, Measures of National Well-being Dashboard:
www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/articles/measuresofnationalwellbeingdashboard/2018-04-25

Figure 2 (below) sets out where we are now and provides policy options for change in the context of reaching the 'Wales we want'. The figure focuses on the Net Zero priority areas of housing and transport. It explains what will happen if decarbonisation is assumed to have the same effect across all groups compared to if tackling inequality is considered.

Figure 2:
Climate Change

Where we are now

- Climate change action is focused on decarbonisation priorities
- Limited collaboration between public and private sector
- Reduction in emissions from the transport sector is not fast enough and some communities are 'left behind'
- Wales' homes are not energy efficient, and many households are in fuel poverty

Examples of challenges

- Climate change focus is on mitigation and support of the poorest people which retains existing inequalities
- Many social consequences of decarbonisation are overlooked
- Financial cost of decarbonisation passed on to the consumer
- Electrification of cars and public transport, and improved housing, only affordable and accessible for some
- Many social consequences of decarbonisation are overlooked

Opportunities for change

- All climate change strategies seek to reduce future inequality and balance future benefits to the well-being of people and planet
- Role of production and consumption in Net Zero is addressed with redistribution of costs and efforts to ensure equity
- Extra insulation in social housing is reducing heating cost and energy use; transport change improves access to work, care and play for the poorest people, disabled people and women

The Wales we want

- Quality, future-proofed homes, transport, jobs, and places to live, which improve health and the environment for communities and regions throughout Wales and create a more equal Wales
- Net Zero being achieved through coordinated commitment across the public and private social care, health, and environmental sectors, with those most affected central to decision-making and planning
- Businesses, public services, the voluntary sector and government working together to avert a climate and biodiversity crisis by prioritising the reduction of inequality

The Climate Change Committee (CCC) reviewed the progress of the Welsh Government towards Net Zero, outlining its achievements and priorities in each of the decarbonisation areas mentioned above i.e., transport, energy, and behaviour change (CCC, 2019). It did not however address inequalities as a priority. The following section reviews these decarbonisation areas and suggests a way forward for policy and reflective thinking about inequalities. Further detail is contained in the supporting evidence report.

Transport:

There is potential to increase or decrease inequality in transport as we move to Net Zero. In the early 1990s and 2000s, transport disadvantage was noted as creating social exclusion from work, education, and health services (Social Exclusion Unit, 2003). The report concluded that transport disadvantage and social disadvantage interact directly and indirectly to cause transport poverty. This can be seen in the promotion of Electric Vehicles (EVs), for example, which may have lower running costs but currently are more costly to buy. A lack of attention to poverty may be because poorer communities (as well as women, ethnic minorities, and disabled people) are not included in planning and policy decision-making related to EVs.

It is the most socially disadvantaged, and people from rural communities, who experience the greatest transport disadvantage, have higher emissions and are more likely to need to travel by car to work (Curl et al., 2018). Markkanen and Anger-Kraavi (2019) call for a better understanding of the complex relationships between poverty, transport choice and travel needs. This means understanding how different social groups in Wales use transport and travel, and how they are affected by transport polices (Arsenio et al., 2016; Ryan et al., 2019).

We advocate an approach to transport policy that accounts for the varied socio-economic and environmental factors that result from shifting to low carbon transport alternatives. Transport modality is not a neutral 'choice' for many people, and the inequality dimensions of travel in an area and for certain groups can profoundly shape the uptake of alternative travel solutions including EV's, public transport and active travel (cycling, walking). Planning solutions need to recognise that work is likely to be the furthest away for those with the lowest incomes and that different social groups travel in different ways with different purposes (Shaw, 2016). The aim is to ensure that those most in need have access to effective transport for recreation, care, and work, which does not further exacerbate existing inequalities.

Dr Sara MacBride-Stewart & Dr Alison Parken
Inequality in a Future Wales: Areas for action in work, climate and demographic change

17

Buildings/Housing:

Net Zero recommendations for Wales include a focus on improving and promoting 'green' efficient buildings, fuels, and heating across public bodies. Some key measures are untested such as the cost of alternative (low carbon) energy sources and the impact of a wide range of ownership models. There remains considerable uncertainty about future temperatures and cold weather events in relation to which solutions are most needed to future-proof homes and other buildings (CCC, 2020).

As the COVID-19 pandemic has highlighted, poor quality housing can contribute to the exacerbation of disease for the most vulnerable. The private rented sector generally has a higher proportion of poor-quality housing (e.g., containing damp or other hazards) (Welsh Housing Condition Survey, Welsh Government 2018a), and currently 18% of homes in Wales represent an unacceptable risk to health; accounting for 10% of excess winter deaths (Watson et al., 2019). Women, ethnic minority and disabled people are more likely to experience housing difficulties, claim housing benefit, or rent property (Women's Budget Group, 2018).

Researchers and policy makers have called for more equality-based analyses of housing systems and housing policy, and for Net Zero housing policy to be sensitive to existing inequalities. However, there is evidence that even though strategies like improved insulation can bring benefits of improved living conditions and lower energy use, poor understanding of inequality means that these suggested co-benefits can further increase inequalities (Shaw et al., 2014). For example, Net Zero policies will involve high upfront costs, cause significant disruption, and add costs to energy bills until at least 2030 for existing housing stock, adding to the financial burdens of those experiencing fuel poverty (CCC, 2020). However, energy efficiency for housing needs to be combined with actions to avoid overheating.[9]

In addressing inequality in housing solutions towards Net Zero, we advocate the fair redistribution of resources to include low-income households in private rented as well as state-supported housing. This is so that people forced into private rentals or the most vulnerable can also receive the benefits of lowered energy use and warmer homes. Including those with the least economic resources living in private rented housing, is one way of tackling the impact that changing climate will have on housing wealth inequalities (Christophers, 2019). Other approaches could include people who own homes but have the least economic resources to suitably adapt their homes.

---

9. Reference: https://www.ukclimaterisk.org/wp-content/uploads/2021/06/CCRA3-Briefing-Housing.pdf

Dr Sara MacBride-Stewart & Dr Alison Parken
Inequality in a Future Wales: Areas for action in work, climate and demographic change
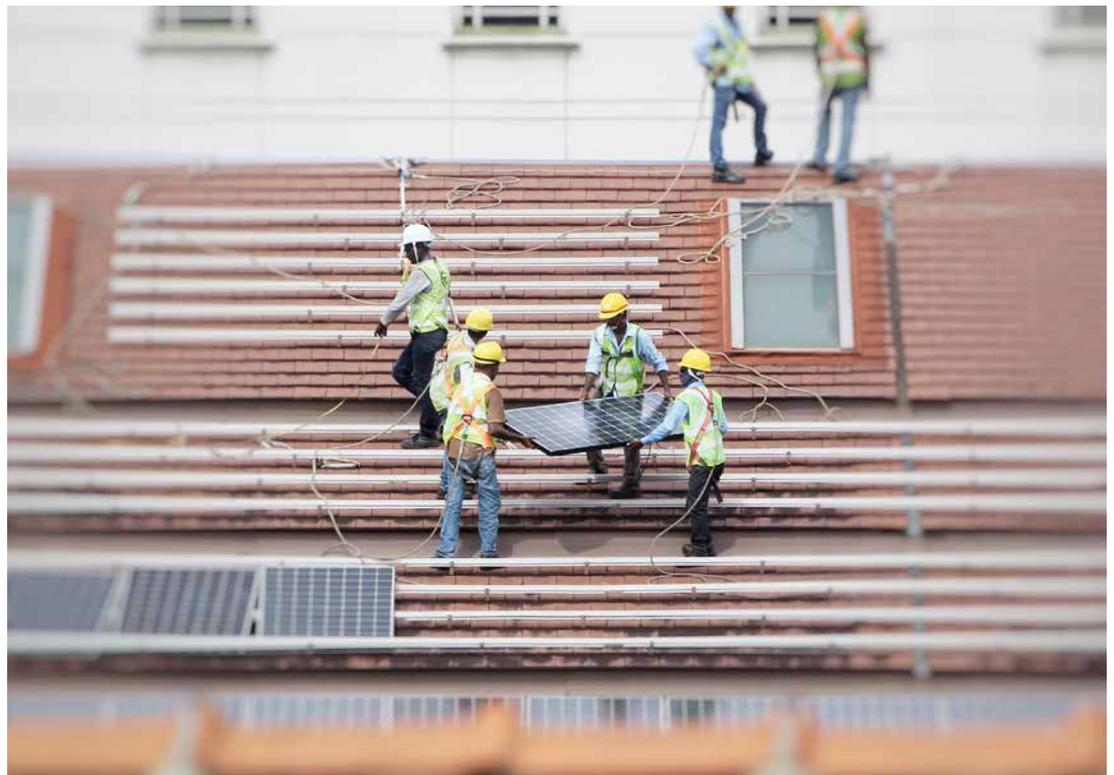
18

Electricity Generation/Fuel Supply:

Decarbonisation of electricity generation will have a significant impact on the poorest communities who may struggle to pay their bills if it means they become more expensive. This is due to existing structural inequalities. Nearly a quarter (24%) of the most vulnerable households in Wales already live in fuel poverty, meaning they do not have enough money to keep their homes adequately warm. However, people who are poor, or from minority groups, are also more likely to live in air polluted areas (Mitchell and Dorling, 2003). To reduce exposure to traffic fumes and noise in these areas, people may spend less time outdoors. This means they end up using, and paying for, even more energy (Roberts, 2008; Welsh Government, 2018b). Reduced air pollution would benefit their health and potentially reduce their energy usage.

Beyond the decarbonisation of homes, the Welsh Government's ambition is to reduce energy bills and harmful emissions, as well as address fuel poverty. However, there is a need to ensure that the economic costs and benefits of new energy sources are shared fairly and do not unevenly affect the most vulnerable (Setyowati, 2021). Including these vulnerable groups within decision-making and planning will further help to ensure that existing disparities are not transposed from the 'old' fuel economy to the 'new' (Perrons, 2005).

Justin Lim

Dr Sara MacBride-Stewart & Dr Alison Parken
Inequality in a Future Wales: Areas for action in work, climate and demographic change

19

Agriculture/Land Use/Forestry:

In the CCC (2020) report, Wales is reported to have a significantly higher proportion of total emissions from agriculture (16%) compared to the UK (10%). The report recognises the value in reducing emissions from agriculture in Wales while also focusing efforts to 'keep carbon in the ground' by growing forestry, protecting peatlands and pasture, and changing how land is used (Ostle et al., 2009; Goldstein et al., 2020). These solutions are said to reduce pollution and improve energy efficiency, biodiversity, and well-being (Kabisch et al., 2016). However, the impacts on inequality in terms of how land is used and whether those with the most to gain from the benefits of changing land use are those with the most social and economic need, are largely uncertain (Dasgupta, 2021).

In their report for the UK 2070 Commission, researchers explain how imbalances in economic activity and related social and environmental conditions across the UK creates 'left behind places' and communities (Tomaney et al., 2019). For example, the Welsh Food Poverty Network (2020) notes that not having enough money to reach affordable food shops or access a nutritionally balanced diet is now a common reality for many Welsh consumers. Ensuring that organic low-carbon food is available and locally grown could exacerbate inequalities, particularly if it is not affordable to some (CCC, 2020).

The COVID-19 pandemic has demonstrated the importance of green spaces to people's social and cultural lives, as low-cost places for recreation and connection. It is well documented that when local environments are polluted or degraded there are significant negative impacts on people's health and well-being (Lade et al., 2017). Poorer communities can struggle to access good quality green space near to where they live, often because it is more degraded, has poorer lighting, more litter and more anti-social behaviour. A lack of access to good quality green space, on top of being more likely to face work and housing insecurity, creates a cumulative negative burden on health (Cronin-de-Chavez et al., 2019). It is only recently that attention has been given to how gender, poverty, or ethnicity may affect people's experience of, or access to, good quality public green spaces, despite it being widely recognised as vital to people's well-being (MacBride-Stewart et al., 2016).

Despite these findings there is a gap in the data about the social, cultural, economic, and environmental benefits of natural landscapes for the most deprived. We recommend that more is done to understand, and reflect in policymaking, how the natural environment contributes to economic, cultural, and social well-being; how green spaces differ in terms of benefits; and most importantly, how the positive benefits of green spaces could be more fairly distributed across social groups (MacBride-Stewart and Headington, 2021).

Dr Sara MacBride-Stewart & Dr Alison Parken
Inequality in a Future Wales: Areas for action in work, climate and demographic change

20

Aviation and Shipping:

Research has shown that currently 'lowest flight activity is among the least educated, and the highest among those with the highest level of education' (Gössling et al., 2020). Research also shows that disabled people fly less due to cost barriers (Poria et al., 2020). Yet there is a lack of data to show how ethnic minorities, disabled people and people in the lowest socio-economic groups might be affected by future changes in cost, availability and desirability of flying.

Prior to the COVID-19 pandemic, international tourist arrival data and air passenger numbers worldwide were projected to still be increasing up to 2030. Currently, prospects for decarbonising the airline industry were under considerable discussion. An increased awareness of the climate implications of air travel has led to calls for people to fly less. So called 'flight shaming' has emerged, which is an undesirable approach given that the necessity of air travel cannot be generalised across the whole population (Gössling et al., 2019). There is a clear trend ahead in differential access and use of air travel between socio-economic groups, where flying is predicted to become prohibitive to the bottom 80% of society while those with higher incomes are expected to be less affected (Klein et al., 2017; Lopez et al., 2016).

Previous work on carbon or ecological foot-printing is one way of identifying the relative emissions between social groups (Alsamawi et al., 2017). It has been proposed as an equitable way forward for understanding how emissions outputs differ between social groups and for which groups social and cultural changes in relation to the need to travel should be addressed (Oswald and Ernst, 2019).

Dr Sara MacBride-Stewart & Dr Alison Parken
Inequality in a Future Wales: Areas for action in work, climate and demographic change

21

Waste:

The Welsh Government 2017 Future Trends report noted that there had been good progress on waste reduction in Wales. There are different responses to climate change among different socio-economic groups and by gender and disability (Islam and Winkel, 2017), but there is a research gap about whether this translates into recycling or waste reduction. There is some evidence that women and people who are affluent are more likely to undertake pro-environmental actions. However, women are also more likely to be involved in purchasing, processing, and disposing of household goods. Resources that support recycling are more likely to be distributed in urban and affluent areas (influenced by budgets, resources and even assumptions about resident's pro-environmentalism). In future it is important that the different resources needed by different communities to support pro-environmental actions, such as recycling, are considered.

Greenhouse Gas Removals:

The need to continue driving down both the levels of air pollutants and nitrous oxides was brought home starkly by the COVID-19 pandemic. People from ethnic minority backgrounds who were hospitalised for COVID-19 were more likely to come from areas with the highest levels of deprivation and the highest levels of pollution (British Academy, 2021). The British Academy (2021) report also showed that the 'lockdown' responses to the pandemic led to a big drop in pollution levels, returning at one stage to levels last seen in 2006. It also showed evidence of a wide range of structural factors being responsible for differences in the death rates between various groups. For example, men experience higher levels of pollution at work, due to employment type, and women experience higher levels of air pollution in the home due to poor housing (British Academy, 2021).

An equality approach to climate change needs to reduce the exposure of disadvantaged groups to pollutants (for example actively monitoring and reducing air pollution in streets). At the same time structural factors like poor quality housing and proximity to pollution sources that increase susceptibility to health risks, and that reduce the capacity to cope with, and recover from these exposures need to be addressed (Islam and Winkel, 2017).

Dr Sara MacBride-Stewart & Dr Alison Parken
Inequality in a Future Wales: Areas for action in work, climate and demographic change

22

Behaviour Change:

The longer-term response to climate change or to an extreme event like COVID-19 is unknown. However, in the COVID-19 pandemic and especially during the first 'lockdown', there was an increase in the use of green spaces and local parks, time spent exercising and preparing meals, and an overall improvement in the positive interest in nature. This does not seem to have been sustained though, apart from an overall increase in the appreciation of nature (ONS, 2021a). What the data also shows is that changes, like exercise, were not equal across all groups. Women and single parents had less time for themselves (ONS, 2021b). Access to and use of nature and the outdoors for recreation and exercise is unequal and is shaped by social and cultural factors such as the distance from where someone lives and the caring responsibilities that they have (MacBride-Stewart et al., 2016; MacBride-Stewart and Headington, 2021).

Behaviour change policies can unjustly displace responsibilities for emissions reductions onto vulnerable groups. Foundational questions, such as what counts as acceptable inequalities in the different access to resources that can bring about social change, need to be addressed. One mechanism for answering these questions is by ensuring that those most vulnerable to and affected by climate change strategies, are included as part of the decision-making that sets out plans for equitable access (Webster et al., 2016). Such effort is currently supported by the 'five ways of working' framework as part of the Well-being of Future Generations (Wales) Act 2015.

The evidence from this overview suggests that decarbonisation is often framed as being beneficial for marginalised communities as well as addressing climate change. However, an analysis of the literature shows the risks of perpetuating further inequalities in each area. There are opportunities for positive change, but there is also concern that thinking about climate change has narrowed in recent years, with a move away from biodiversity and ecological foot-printing to decarbonisation. This more technical and functional approach contributes to inequalities because it can avoid considerations of the social or the lived experiences of communities. It is also important that climate change thinking does not become siloed and separated from equalities thinking and understanding.

Future strategies need to include those most affected by and most vulnerable to climate change and related policies. We suggest generating regional Citizens Assemblies as part of a public engagement approach so that local communities are involved in decision-making processes. This affirms and builds on the existing work of local authorities in Wales who are currently engaging the public on climate change e.g., Blaenau Gwent Climate Assembly and Rhondda Cynon Taf's 'Let's Talk Climate Change' online conversation.

In its review of Wales' progress towards Net Zero, the CCC (2020) called for a Just Transition approach that formalises human rights and environmental justice in the decarbonisation agenda. Just Transition[10] can be a way forward towards widening Net Zero through integrated efforts to reduce inequalities across climate change and environmental decline agendas. Building on existing initiatives in Wales (including legislation), we would support a place-based approach towards a Just Transition considering the work that the Public Services Boards already do as part of their Well-being Assessments and Plans under the framework of the Well-being of Future Generations (Wales) Act 2015.

Areas for Action
These areas for action have been informed by our review of the literature and initial discussions with stakeholders. They will be tested and developed further with stakeholders in the next phase of this work.

Areas for Action

1

Ensuring that all climate change/ decarbonisation strategies progressed also reduce inequalities now and in the future by considering how they may impact on different groups and communities before decisions are made. This needs to recognise the overlapping importance of a wide range of policy areas to equalities and climate change/ decarbonisation, such as housing, transport, energy, rurality, and access to green space. The solutions should be tailored to each of the decarbonisation strategies learning from the existing experiences of inequality (i.e., in housing etc.).

2

Involving those affected by climate change and decarbonisation in policy decision making, either through existing platforms or by trialling new ones e.g., creating Citizens Forums as part of a Just Transition approach.

---

10. Just Transition is used to describe processes needed for equality in climate and environmental changes. We advise integrating three understandings of just transition: i) the human right to have an equal share in the benefits and burdens of climate change, ii) the human right to access the benefits of energy transitions at any stage of life and iii) the environmental justice actions needed to involve people in development, implementation and enforcement of environmental laws, policies, and regulations (Heffron and McCauley, 2018).

Dr Sara MacBride-Stewart & Dr Alison Parken
Inequality in a Future Wales: Areas for action in work, climate and demographic change

24

Demographic Change

Wales' population is the highest it has ever been, but it is also ageing because of falling birth rates and migration (Welsh Government, 2020a). The population is expected to continue to grow and then fall as we move to 2050, although this may be slowed by improvements in life expectancy (Sion 2019). However, there is a growing understanding that such improvements are not evenly distributed across different population groups.

Improvements to health care services, an increase in the number of households that are heated in winter and decreases in air pollution levels, are positive examples of actions supporting people to live longer (Harlan and Ruddell, 2011).

The emergence of regional variations is also important. Southeast Wales has the most even distribution across its age groups and the largest population growth, but recent data shows that less populated areas, like Ceredigion, are already experiencing population contraction. Wales is also becoming a more ethnically diverse nation (UK Govt, 2018). The percent of population who do not describe themselves as White British rose to 4% in 2011 from the previous census (ONS, 2015).

An ageing population may result in a rapid rise in inequalities and disruption of the traditional balance of education, work, health, and social care provision. Each of these social systems provides for people across all age groups and are organised to support the different needs of each. The changing pattern of ageing has implications for the roles of older workers, the availability and type of work, their financial stability and security (pensions and savings), and the resources available for care and support (D'Arcy, 2018).

Social and health care costs will increase (Klein et al., 2017). Projections for an ageing workforce mean that there will be proportionately more people of pension age for every person of working age compared to now (Foresight, 2016). The younger generations are predicted to have less wealth than the previous generation: those aged 25 today are expected to accumulate 84% less wealth than 25-year-olds from five years ago (ONS, 2018). The need for greater resources to support an ageing population is predicted to produce consequential impacts on health and social inequalities (Harper, 2016).

Dr Sara MacBride-Stewart & Dr Alison Parken
Inequality in a Future Wales: Areas for action in work, climate and demographic change

25

Older age was the most salient factor in the health inequalities exposed by COVID-19. Data from the ONS has shown that 'people who were aged 80 or older were 70 times more likely to die than those under 40' (Public Health England, 2021). The risk of dying was also higher for men, people living in the most deprived areas and ethnic minority groups. As Marmot (2020) concludes, much of this difference can be attributed to where people live and to socio-economic disadvantage, with existing inequalities leading to the worst outcomes for older people.

It is the case that an ageing population should be viewed positively. There can be opportunities for older people to retrain and remain economically active for longer. It is also likely that there will be more women in the workforce, and that a proportion of older people will be in good health (Klein et al., 2017). However, it is important to understand how social and economic inequalities across the life-course contribute. Economic inactivity due to long-term illness or disability or significant caring roles, reduces health and employment prospects into older age (Foresight, 2016).

Women, including those from ethnic minority communities, are more likely than men to have to provide care for another, or not to have carers and support (Johl 2016; Vlachantoni 2019). With the predictions for the future of work, there may be less jobs in the green economy for women, which may also mean more social and financial pressure on women to provide unpaid care due to expectations of a caring role. If current patterns of mixing care and part-time employment continue, women may experience lower levels of financial security, whilst living longer. The care burden for women across the life-course needs to be considered, so that inequalities are not solidified as the population ages.

The number of people living alone and without family members is increasing. People aged 65 and over now make up 45% of single person households. An increase in the numbers of older people living in isolation or living alone challenges the assumption that older people have viable networks of care and social interaction. The rapidly changing digital environment has been proposed as a solution for this, digital technologies can provide older people with opportunities that would improve their ageing experience, like easier to access family, medical help as well as new social outlets.

In the context of COVID-19, many GP consultations are now being conducted via video or telephone (British Academy, 2021). However, older people do not always have digital skills and there is a research gap in understanding the implications for their access to such services. There is evidence too of a digital rift or divergence between generations where the needs, values, opportunities, and skills to engage in digital technologies and services may differ between generations. New possibilities about how to bridge that gap should be explored.

Considerable uncertainties exist. However, there are two aspects that the evidence cannot overlook. Firstly, inequalities emerging in older age are often cumulative - acquired over a life-course of differential and often incremental opportunities (British Academy, 2020). Secondly, they are created by the social and cultural conditions of older age itself - disability, age discrimination, and loss of income, social status, and networks.

Figure 3 (below) sets out where we are now and provides examples of challenges and opportunities for change towards 'the Wales we want'. The figure focuses on making inequalities across all generations a thing of the past.

Figure 3:
Demographic Change

Where we are now

- Increasing demand for public healthcare services and uncertainty around the funding of it
- Growing polarisation and division within generations, e.g., home ownership, digital literacy, and attitudes to the environment
- Improvements in healthy life expectancy stalling and widening of health inequality gap

Examples of challenges

- Healthcare seeks to meet demand by offering more digital services without ensuring those in need, such as older people, have the necessary skills and access

Opportunities for change

- Healthcare services refocused on life-long care pathways (integrating workforce and users, older and younger needs)
- Design of care system and built environment works to bring communities and need together, reflecting changing needs through a life course

The Wales we want

- Public services promoting the long-term well-being of people and planet
- Young and older people have the means and opportunity to live long, healthy and fulfilling lives
- People are part of cohesive communities, drawn together across generations and backgrounds

Dr Sara MacBride-Stewart & Dr Alison Parken
Inequality in a Future Wales: Areas for action in work, climate and demographic change

27

Nathan Andersonlah

The current uncertainty surrounding the financing of social care, will affect our capacity as a society to build meaningful solutions. This includes finding ways to address a reported decline in trust between the generations. The solution may be to build intergenerational relationships that work towards creating a shared understanding of a common problem, for example, loneliness, and its contribution to the rise in mental ill health across both younger and older ages (Welsh Government, 2019b).

The Women's Budget Group (WBG) (2020) has also advocated for a care-led recovery, which expands the definition of green jobs to include care. This is an integrative approach that links care for the environment along with good, local, low carbon jobs/skills/training to childcare and the unmet care needs of older people, ultimately creating overall benefits for health, the environment, and the economy. The WBG notes that care is one of the most consistent gaps in existing policies that address futures and future inequalities. The first stage of thinking about what an intergenerational approach needs to do, is to consider the effects of unequal structures that shape care experiences across the life-course and to overcome traditional silos of age-related working (Marmot, 2020).

As a way of stimulating actions towards multi or intergenerational structures, we therefore propose investment in intergenerational approaches that seek to improve actions for an ageing demographic. This is in line with the Welsh Government's (2019) review of intergenerational mechanisms for improving health and well-being. Building on the existing work by the Older Person's Commissioner for Wales and the Children's Commissioner for Wales on intergenerational approaches, investment is needed to improve support for our ageing society. Such investment would support the creation of better conditions for a future society by setting out a method for integrating intergenerational solidarity into policymaking.

These areas for action have been informed by our review of the literature and initial discussions with stakeholders. They will be tested and developed further with stakeholders in the next phase of this work.

Areas for Action

1

Putting age equality at the centre of new policy development (an intergenerational approach), particularly for health and social care, mental health, community cohesion, digital inclusion, and childcare. One approach would be to create an intergenerational forum for policy making with a focus on integrative working.

2

Make care a shared and joint responsibility that meets the needs of a changing demographic. One approach would be prioritising a care-led recovery in the green transition.

Dr Sara MacBride-Stewart & Dr Alison Parken
Inequality in a Future Wales: Areas for action in work, climate and demographic change

28

Long-term Proactive Policy Making: Well-Being, Equality and Human Rights

To realise Wales' seven well-being goals, long-term thinking needs to be further embedded in policy development (FGCW, 2020). Long-term policies on the future of work, climate, and demographic change, should be considered as key sites where inequalities could be diminished. To do this, the sustainable development principle, the setting of objectives towards achieving the well-being goals, and the stepping-stones to achieving this (the five ways of working), as set out in the Well-being of Future Generations (Wales) Act 2015, need to be brought together in a cohesive policy development method.

The same has been said of achieving the statutory aims of the Public Sector Equality Duty - that a method is needed to bring together evidence and involvement in creating policy solutions, and the impact assessment and monitoring of policy solutions to promote equality (Parken et al., 2019).

In this respect we set out two models which have the potential to embed equality and sustainable development in long-term policymaking for further consideration, development, and integration.

The Integrated Equalities and Human Rights Mainstreaming Model
This is a collaborative 'learning practice' policy development model originally created to assist the Welsh Government with mainstreaming equality for all people and integrating human rights into policymaking on an intersectional basis (Parken and Young 2008, Parken 2010).[11] The method is based on creating collaborations between policy makers, academics, equality organisations and 'experts by experience', who together, undertake an open and exploratory evidence review process. The model begins by questioning the way social, economic, and cultural concerns are framed within existing policies, and leads to cross-cutting evidence-informed policy solutions.

---

11. An intersectional approach seeks to understand the way in which equality grounds such as gender, ethnicity, disability, and social class interact, producing unique experiences and compounding disadvantage in specific situations.

Dr Sara MacBride-Stewart & Dr Alison Parken
Inequality in a Future Wales: Areas for action in work, climate and demographic change

29

The equality mainstreaming model was developed in action research with representatives of all the equality strands, and differs from standard methods of assessing inequalities, as it does not start from a single equality ground, rather it holds all inequalities in view in an examination of a whole policy field, allowing the salient evidence to rise, enabling prioritisation (Parken, 2010). The processes within the model enable equalities evidence to 'activate' human rights, allowing us to draw on that framework for remedy or to improve public service standards. The model also creates 'political intersectionality'. This is where a solution for one equality ground also benefits other grounds but in different ways. For example, in an examination of unpaid carers, flexible working arrangements were seen to benefit disabled people and older workers as well as women. It is important to retain single equality ground voices in this process to provide rich, in-depth knowledge and shared learning, as well as, through qualitative data, creating intersectional evidence (Parken, 2010).

The Welsh Government accepted the recommendation of the 'Aligning Equality and Well-being Working Group' (Parken et al., 2019), for a 'real-time', properly resourced, test of the model on a live policy issue, in a way that would also examine how to incorporate the requirements of sustainable development and the well-being duty. This was delayed by COVID-19.

Just Transitions Model

The Just Transition approach to embedding equality in climate, economy and environment approach policies is one that would: '... consist of a dual commitment to human well-being (with respect to income, education, and health) and sustainability (with respect to decarbonisation, resource efficiency and ecosystem restoration).' (Swilling et al., 2016).

This aim is underpinned by a vision, and a set of principles that each public body uses to define and develop their own transitional opportunities and challenges. For example, the Scottish Government's Just Transition Commission has adopted the International Labour Organisation principles (ILO, 2015).[12] In summary, these are:

- Build a strong social consensus on the goals through proper investment in social dialogue;
- Respect and strengthen rights at work (including employment and social protection);
- Take account of, and ameliorate the considerable impact on gender equality of change (and we would add an intersectional approach to equality);
- Create social, economic, environmental policies (and we would add cultural) that foster enterprise to take up the new challenges and opportunities;
- Decent work for all as a core principle;
- And, avoid 'one size fits all' approaches.

12. Scottish Government, Just Transition Commission: www.gov.scot/groups/just-transition-commission/

Comisiynydd Cenedlaethau'r Dyfodol Cymru / Future Generations Commissioner for Wales   CARDIFF UNIVERSITY PRIFYSGOL CAERDYDD   GIG Iechyd Cyhoeddus Cymru NHS Public Health Wales

Dr Sara MacBride-Stewart & Dr Alison Parken
Inequality in a Future Wales: Areas for action in work, climate and demographic change   30

However, the literature does not set out a procedural method for embedding just transition in policymaking. The Welsh Government have been committed to establishing a Climate Justice group as part of the 2019 Low Carbon Plan (WCPP, 2021). As the definition of Just Transition used in this report includes environmental justice and human rights that extend beyond decarbonisation and Net Zero, there is a need to orientate its approach to include this within existing policy frameworks. Building on the work by the Future Generations Commissioner for Wales for example, there is a need to improve support so that Just Transitions is embedded across all policy and decision-making areas. The existing legislation combined with local actions would be the starting point of creating such a method.

Either model, or a combination of the two, requires a cohort of 'experts by experience'. To ensure that participants are well informed and thus able to engage, there is a need for ongoing conversations and shared learning between environmental, futures training equalities advocates.

These areas for action have been informed by our review of the literature and initial discussions with stakeholders. They will be tested and developed further with stakeholders in the next phase of this work.

Areas for Action

1

Exploring ways of embedding equalities in decision making processes. Options include Just Transitions and the mainstreaming equality and sustainability policy development models. Successful approaches would need to sit within the framework set out by the Well-being of Future Generations Act.

2

Pursuing opportunities for ongoing shared learning between equalities advocates and policy makers around long-term thinking and planning. This should involve developing the expertise of equalities advocates in futures approaches and ensuring futures projects engage with equalities communities. This may be aided by the creation of an Equalities Future Forum or could build on existing forums.

Dr Sara MacBride-Stewart & Dr Alison Parken
Inequality in a Future Wales: Areas for action in work, climate and demographic change

31

Discussion Group participants and individual discussions

Futures Workshop Participants
26th March 2021

Bevan Foundation
Chwarae Teg
Equality and Human Rights Commission Wales
Institute for Welsh Affairs
Older People's Commission
Race Council Cymru
Tai Pawb
Wales Council for Voluntary Action
Wales TUC
Women's Equality Network
World Wildlife Fund

Further individual discussions:

Welsh Government Wales Partnership Council
Bevan Foundation
Carers Wales
Disability Wales
Professor Caroline Lloyd, Cardiff University
Susie Ventris-Field, Wales Centre for International Affairs

Findings and Solution Testing Workshops
(various dates in April)

Bevan Foundation
Equality and Human Rights Commission Wales
Institute for Welsh Affairs
Race Council Cymru
Wales Council for Voluntary Action
Wales TUC
World Wildlife Fund

Dr Sara MacBride-Stewart & Dr Alison Parken
Inequality in a Future Wales: Areas for action in work, climate and demographic change

32

References

Arad Consulting (2020) *Baseline Evidence and Research Project for Gender Equality in STEM: Data review,* research report for the Welsh Government, retrieved from: https://gov.wales/sites/default/files/publications/2020-11/baseline-evidence-and-research-project-for-gender-equality-in-stem-final-report-data-review.pdf

Alsamawi, A., McBain, D., Murray, J., Lenzen, M., & Wiebe, K. S. (2017) *The inequality footprints of nations; A novel approach to quantitative accounting of income inequality, In The social footprints of global trade* (pp. 69-91). Springer, Singapore

Arsenio, E., Martens, K., & Di Ciommo, F. (2016) *'Sustainable urban mobility plans: Bridging climate change and equity targets?'*, Research in Transportation Economics, 55, 30-39.

Bevan Foundation (2020) *Learning a Living: Better Support for post 16 learners*, Merthyr Tydfil: The Bevan Foundation

Blundell, R., Costa-Diaz, M., Joyce, R. and Xu, X (2020) *'COVID and Inequalities'*, Fiscal Studies, vol. 41, no. 2, pp. 291–319 (2020) 0143-5671

British Academy (2021) *THE COVID DECADE: Understanding the long-term societal impacts of COVID-19.* [accessed 06 April 2021] COVID-decade-understanding-long-term-societal-impacts-COVID-19.pdf

Brooks, A., & Bryant, R. (2013) *'Consumption', in C. Death (Ed) Critical environmental politics*, London: Routledge. pp.72-82

Brown, P. (2019) Wales 4.0: *Delivering Economic Transformation for a Better Future of Work*, Cardiff: Welsh Government

Brynjolfsson, E. and McAfee, A. (2014) *The Second Machine Age: Work, Progress and Prosperity in A Time of Brilliant Technologies*, London: Norton & Co.

Christophers, B. (2021). *'A tale of two inequalities: Housing-wealth inequality and tenure inequality',* Environment and Planning A: Economy and Space, 53(3), 573-594.

Climate Change Committee. (2020) *The path to Net Zero and progress on reducing emissions in Wales.* https://www.theccc.org.uk/publicationtype/0-report/05-wales-reports/ Accessed 01 May 2021.

Climate Change Committee. (2019) *The UK's contribution to stopping global warming. Net Zero - The UK's contribution to stopping global warming - Climate Change Committee* (theccc.org.uk) Accessed 01 May 2021.

Cronin-de-Chavez, A., Islam, S., & McEachan, R. R. (2019) *'Not a level playing field: A qualitative study exploring structural, community and individual determinants of greenspace use amongst low-income multi-ethnic families'*, Health & place, 56, 118-126.

Conceicao, P. (2020) *'Urgency of inequality and climate change raised by COVID-19'*, Development Co-operation Report 2020 Learning from Crises, Building Resilience: Learning from Crises, Building Resilience, 65-72

Cruddas, J. (2020) *'From the end of work to the dignity of labour'*, Futures of Work, Issue 17, 2nd December 2020, retrieved 15th March 2021, https://futuresofwork.co.uk/2020/12/02/from-the-end-of-work-to-the-dignity-of-labour/

Curl, A., Clark, J., & Kearns, A. (2018) *'Household car adoption and financial distress in deprived urban communities: A case of forced car ownership?'* Transport Policy, 65, 61-71

Cynnal Cymru (2015) *The Wales we want report: Report on behalf of future generations*, Cardiff: Welsh Government

D'Arcy (2018) *The Kids aren't alright: A new approach to tackle the challenges faced by young people in the UK labour market*, London: Resolution Foundation

Díaz, Sandra Myrna; Settele, Josef; Brondízio, Eduardo; Ngo, Hien; Guèze, Maximilien; et al. (2019) *The global assessment report on biodiversity and ecosystem services: Summary for policy makers; Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services* https://ipbes.net/sites/default/files/inline/files/ipbes_global_assessment_report_summary_for_policymakers.pdf retrieved 20 April 2021

Dasgupta, P. (2021). *The economics of biodiversity: The Dasgupta review.*

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/962785/The_Economics_of_Biodiversity_The_Dasgupta_Review_Full_Report.pdf retrieved 20 April 2021

Felstead, A. (2021) *'Outlining the contours of the great homeworking experiment and its implications for Wales'*, report for the Senedd Economy, Infrastructure and Skills Committee, January 2021.

Foresight (2016) *The Future of an Ageing Population, UK Government Office for Science*, future-of-an-ageing-population.pdf (publishing.service.gov.uk) retrieved 01 May 2021

Findlay, P., Lindsay, C., MacQuarrie, J., Bennie, M., Corocoran, E., and Van Der Meer, R. (2016) *'Employer Choice and Job Quality: workplace innovation, work redesign and employee perceptions of job quality in a complex healthcare setting'* Work and Occupations, October 2016, Vol. 44, Issue 1.

Frey, C. and Osborne, M. (2013) *'The Future of Employment: How Susceptible are jobs to computerisation'?* Working Paper - Oxford University Engineering Sciences Department and the Oxford Martin Programme on the Impacts of Future Technology "Machines and Employment" Workshop, 17th September 2013

Dr Sara MacBride-Stewart & Dr Alison Parken
Inequality in a Future Wales: Areas for action in work, climate and demographic change

33

Future Generations Commissioner for Wales (2020) *The Future Generations Report 2020, Cardiff: FGCW*

Future Generations Commissioner for Wales, New Economics Foundation (2021) Skills through Crisis: Upskilling and (Re)Training for a Green Recovery in Wales, research report for the FGCW, Cardiff: FGCW

Goldstein, A., Turner, W. R., Spawn, S. A., Anderson-Teixeira, K. J., Cook-Patton, S., Fargione, J., ... & Hole, D. G. (2020). *Protecting irrecoverable carbon in Earth's ecosystems. Nature Climate Change*, 10(4), 287-295.

Gössling, S., Hanna, P., Higham, J., Cohen, S., & Hopkins, D. (2019) *'Can we fly less? Evaluating the 'necessity' of air travel', Journal of Air Transport Management*, 81, 101722.

Grieco, M. (2015) *'Social sustainability and urban mobility: shifting to a socially responsible pro-poor perspective'* Social Responsibility Journal11(1), 82-97.

Harper, S. (2016) *'Making the UK more Resilient to Age-Structural Change and Longevity: translating academic evidence into policy, Journal of Population Ageing*, 9(4), 285-287.

Kabisch, N., Frantzeskaki, N., Pauleit, S., Naumann, S., Davis, M., Artmann, M., ... & Bonn, A. (2016) *'Nature-based solutions to climate change mitigation and adaptation in urban areas: perspectives on indicators, knowledge gaps, barriers, and opportunities for action'*, Ecology and Society, 21(2).

International Labour Organisation (2015) Guidelines for a just transition towards environmentally sustainable economies and societies for all, ILO: Geneva

Islam, S. N., & Winkel, J. (2017) *'Climate Change and Social Inequality'* Islam: Climate change and social inequality - Google Scholar. Accessed 18 May 2021.

Johl, N., Patterson, T., & Pearson, L. (2016) *'What do we know about the attitudes, experiences and needs of Black and minority ethnic carers of people with dementia in the United Kingdom'?* A systematic review of empirical research findings. Dementia, 15(4), 721-742.

Klein, F., Bansal, M., & Wohlers, J. (2017) *Beyond the Noise: The Megatrends of Tomorrow's World.* LOGOPUBLIX Fachbuch Verlag. Lade, S. J., Haider, L. J., Engström, G., & Schlüter, M. (2017) *'Resilience offers escape from trapped thinking on poverty alleviation' Science Advances,* 3(5), e1603043.

Jones, A. (2021) A basic income to improve population health and well-being in Wales? Public Health Wales NHS Trust. Available at: https://phwwhocc.co.uk/wp-content/uploads/2021/06/PHW-Basic-income-report.pdf

López, L. A., Arce, G., Morenate, M., & Monsalve, F. (2016) *'Assessing the inequality of Spanish households through the carbon footprint: The 21st century great recession effect'*, Journal of Industrial Ecology, 20(3), 571-581.

Monkelbaan (2021) *Sustainable and Just Economies: From Science to Practice, consultation document*, Geneva: UNRISD

Markkanen, S., & Anger-Kraavi, A. (2019) *'Social impacts of climate change mitigation policies and their implications for inequality'*, Climate Policy, 19(7), 827-844.

MacBride-Stewart, S., Gong, Y., & Antell, J. (2016). *'Exploring the interconnections between gender, health and nature'*, Public Health, 141, 279-286.

Headington, J. J, and MacBride-Stewart, S (2021) *The Potential Health and Well-being Benefits of the Brecon Beacons National Park for a Community on its Periphery*. Sustainable Places Research Institute: Cardiff University BBNP-and-PLACE-Report-FINAL-260321.pdf (cardiff.ac.uk)

Marmot, M. (2020) *Health Equity in England: The Marmot Review 10 years on*, research report for The Institute of Health Equity, London: The Health Foundation

Mitchell, G., & Dorling, D. (2003) *'An environmental justice analysis of British air quality'*, Environment and planning A, 35(5), 909-929.

ONS (2021a) *Has Lockdown Changed Our Relationship with Nature? How has lockdown changed our relationship with nature? -* Office for National Statistics

ONS (2021b) *Coronavirus and how people spent their time in nature. Coronavirus and how people spent their time under lockdown -* Office for National Statistics (ons.gov.uk)

ONS (2020) *Regional employment by occupation and sex*, Annual Population Survey Jan-Dec 2020, NOMIS dataset, accessed 25 April 2021

ONS (2019) *The probability of automation in England: 2011 and 2017,* 25th March 2019, Newport: ONS, accessed 29th March 2021, https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/articles/theprobabilityofautomationinengland/2011and2017

ONS (2018) *Living Longer: How our population is changing and why it matters* https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/ageing/articles/livinglongerhowourpopulationischangingandwhyitmatters/2018-08-13, retrieved 20 April 2021

ONS (2015) 2011 Census analysis: Ethnicity and religion of the non-UK born population in England and Wales: retrieve, 30th March 2021 https://www.ons.gov.uk/peoplepopulationandcommunity/culturalidentity/ethnicity/articles/2011censusanalysisethnicityandreligionofthenonukborn population inengland andwales/2015-06-18

Ostle, N. J., Levy, P. E., Evans, C. D., & Smith, P. (2009) 'UK land use and soil carbon sequestration', Land Use Policy, 26, S274-S283.

Oswald, L., & Ernst, A. (2020) 'Flying in the face of climate change: quantitative psychological approach examining the social drivers of individual air travel', Journal of Sustainable Tourism, 29(1), 68-86. Parken, A. (2010) 'A multi-strand approach to promoting equalities and human rights in policy making', Policy & Politics 38(1), pp. 79-99.

Dr Sara MacBride-Stewart & Dr Alison Parken
Inequality in a Future Wales: Areas for action in work, climate and demographic change

34

Parken, A., and the Well-being and Equalities Working Group (2019) Improving Well-being and Equality Outcomes, research report for Phase 2 of the Welsh Government's Gender Equality Review

Parken, A. and Rees, T.L. (2011) 'Economic renewal and the gendered knowledge economy in Wales', Contemporary Wales 24(1), pp. 113-134.

Parken, A., and Young H. (2008) Facilitating Cross-Strand Working,

Cardiff: Welsh Assembly Government pp. 14 http://new.wales.gov.uk/topics/equality/research/facilitating/?lang=en

Poria, Y., Reichel, A., & Brandt, Y. (2010) 'The flight experiences of people with disabilities: an exploratory study', Journal of Travel Research, 49(2), 216-227.

Portes, J. and Reed, H. (2018) The Cumulative Impact of Tax and Welfare Reforms, research report from Aubergine Analysis and Landman Economics for the Equality and Human Rights Commission, Manchester: EHRC

Powell, W.W., and Snellman, K. (2004) 'The Knowledge Economy', Annual Review of Sociology, Vol. 30, pp. 199-220

Public Health England (2021) Disparities in the Risk and Outcomes of COVID-19. Disparities in the risk and outcomes of COVID-19 (publishing.service.gov.uk). Accessed 1 May 2021.

Roberts, S. (2008) 'Energy, equity and the future of the fuel poor', Energy Policy, 36(12), 4471-4474.

Rodriguez, J. (2020) Covid-19 and the Welsh Economy: Shut down sectors and keyworkers, Briefing Paper, Wales Fiscal Analysis Unit, Cardiff: Wales Governance Centre

https://www.cardiff.ac.uk/__data/assets/pdf_file/0017/2410343/Covid-19-and-the-Welsh-economy-shutdown-sectors-and-key-workers-briefing-paper.pdf

Ryan, J., Wretstrand, A., & Schmidt, S. M. (2019) 'Disparities in mobility among older people: Findings from a capability-based travel survey', Transport policy, 79, pp.177-192.

Scott. L. (2020) The Double X Economy: The Epic Potential of Women's Empowerment, London: Faber and Faber.

Setyowati, A. B. (2021) 'Mitigating inequality with emissions? Exploring energy justice and financing transitions to low carbon energy in Indonesia', Energy Research & Social Science, 71, 101817.

Shaw, C. (2016) 'The role of rights, risks and responsibilities in the climate justice debate', International Journal of Climate Change Strategies and Management.

Shaw, C., Hales, S., Howden-Chapman, P., & Edwards, R. (2014) 'Health co-benefits of climate change mitigation policies in the transport sector', Nature Climate Change, 4(6), 427-433.

Sion, C., and Ifan, G. (2021) Senedd Election Briefing, online- 27th April 2021, Cardiff: Wales Fiscal Analysis Unit; https://www.cardiff.ac.uk/__data/assets/pdf_file/0020/2516114/senedd_briefing_27Apr21_online.pdf

Sion. C. (2019) What do the latest population projections tell us about Wales? What do the latest population projections tell us about Wales? – Thinking Wales – Meddwl Cymru - Cardiff University retrieved 01 May 2020

Statistics Wales (2020) Apprenticeship learning programmes started by quarter, sector and programme type, accessed 7th April 2021, https://statswales.gov.wales/Catalogue/Education-and-Skills/Post-16-Education-and-Training/Further-Education-and-Work-Based-Learning/Learners/Work-Based-Learning/apprenticeshiplearningprogrammesstarted-by-quarter-sector-programmetype

Swilling, M., Masango, M., and Wakeford, J. (2016) 'Developmental States and Sustainability Transitions: Prospects of a Just Transition in South Africa', Journal of Environmental and Policy Planning, Vol. 18, No.5 pp.650-672

Tomaney, J., Pike, A., & Natarajan, L. (2019) 'Land Use Planning, Inequality and the Problem of 'Left-behind-places', accessed 18 May 2021 93-TOMANEY-et-al-Land-use-planning-inequality-and-the-problem-of-'left-behind-places'_J-Tomaney.pdf (uk2070.org.uk)

UK Govt (2018) Population of England and Wales Population of England and Wales - GOV.UK Ethnicity facts and figures (ethnicity-facts-figures.service.gov.uk) Accessed 12 May 2021

Unison (2018) Bargaining over Automation, London: Unison

Wajcman, J. (2019) The digital revolution: Implications for gender equality and women's rights 25 years after Beijing, Background Paper for the Sixty-fourth session of the Commission for the Status of Women, with Erin Young and Anna FitzMaurice, LSE, UN Women: New York

Wales Centre for Public Policy (2021) Climate Change: Making the Transition Happen in Wales, Cardiff: Wales Centre for Public Policy

Wales Partnership Council (2021) The Future of Work: The impact of innovative technology on the workforce, Cardiff: Welsh Government

Wales Trades Union Congress (2020) A Green and Just Recovery, Cardiff: WTUC

Wales Partnership Council (2021) The future of work: the impact of innovative technology on the workforce, report for Welsh Government 20th January 2021, Cardiff: Welsh Government

Watson I, MacKenzie F, Woodfine L and Azam S. (2019) Making a Difference. Housing and Health: A Case for Investment, Cardiff, Public Health Wales.

Webster, R., Shaw, C., Wiltshire, M., de Laigue, L., & Cowan, O. (2019) About Climate OutreachClimate-Outreach-Broadening-engagement-with-Just-Transition.pdf (talk.eco) accessed 14 May 2021.

Welsh Government (2021) Remote Working, Policy and Strategy information, 21st January 2021, retrieved 3rd July 2021, https://gov.wales/remote-working

Comisiynydd Cenedlaethau'r Dyfodol Cymru / Future Generations Commissioner for Wales · CARDIFF UNIVERSITY PRIFYSGOL CAERDYDD · GIG Cymru NHS Wales Iechyd Cyhoeddus Cymru Public Health Wales

Dr Sara MacBride-Stewart & Dr Alison Parken
Inequality in a Future Wales: Areas for action in work, climate and demographic change

35

Welsh Government (2020) Welsh Government response to the Climate Change Committee's 2020 Progress Report: Reducing Emissions in Wales Reducing emissions in Wales: Welsh Government response | GOV.WALES Accessed 1 May 2021

Welsh Government (2020a) Summary statistics for Wales, by region: 2020, summary-statistics-regions-wales-2020-629.pdf accessed 12 May 2021

Welsh Government (2019) Fair Work Wales, Report of the Fair Work Commission, Cardiff: Welsh Government

Welsh Government (2019a) Response to Fair Work Wales, Ministerial Statement, 9th July 2020, retrieved 3rd July 2021, https://gov.wales/written-statement-welsh-government-response-fair-work-wales

Welsh Government (2019b) Review of key mechanisms in intergenerational practices, and their effectiveness at reducing loneliness and social-isolation, accessed 30th March 2021, retrieved from: https://gov.wales/sites/default/files/statistics-and-research/2019-05/review-key-mechanisms-intergenerational-practices-their-effectiveness-reducing-loneliness-social-isolation.pdf

Welsh Government (2019c) Prosperity for All: A Climate Change Adaptation Plan for Wales   Prosperity for All: A Climate Conscious Wales (gov.wales) Accessed 1 May 2021

Welsh Government (2018a) Welsh Housing Conditions Survey, Cardiff: Welsh Government, https://gov.wales/welsh-housing-conditions-survey, retrieved 14 May 2021

Welsh Government (2018b) Greenhouse Gas Emissions in Wales greenhouse-gas-emissions-infographic-2018.pdf (gov.wales), retrieved 20 April 2021

Wilson, T. (2021) 'Getting Back to Work: Recovery from COVID-19', Institute of Employment Studies, for the Aptem seminar, Will the employability sector recover'? 21st April 2021

Women's Budget Group (2020) A care-led recovery from Coronavirus, research report, 30th June 2020, London: Women's Budget Group

Women's Budget Group (2018) Housing and Gender: Briefing from the UK Women's Budget Group on the gender impact of changes in housing policy since 2010, London: Women's Budget Group https://wbg.org.uk/analysis/2018-wbg-briefing-housing-and-gender/

Women and Equalities Select Committee (2021) Unequal Impact? Coronavirus and the Gendered Economic Impact, Fifth report of the session 2019-202, HC385, London: House of Commons

Vlachantoni, A. (2010) 'The demographic characteristics and economic activity patterns of carers over 50: evidence from the English Longitudinal Study of Ageing', Population Trends, 141(1), 54-76