Sustainable Development in Cornwall

Local Perspectives on Challenges and Opportunities

June 2021

Report

Acknowledgements

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Photo Credits

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and Angela Pham (p73).

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Introduction

Doughnut Economics is a framework for sustainable development that visualises the challenge of meeting human needs while remaining within the environmental limits of the planet (Raworth, 2012). Around the world, there has been policy interest in 'downscaling' the planetary-scale Doughnut Economics model to national, regional and local levels, as a tool to embed and monitor progress towards sustainable development. As part of a 3-month project funded by the UKRI Strategic Priorities Fund in 2020, a team of researchers from the University of Exeter, in collaboration with Cornwall Council, used the Doughnut Economics model to assess the current state of social wellbeing and environmental sustainability conditions across the county, providing a baseline from which to evaluate progress towards meeting human needs while reducing environmental pressures (Turner et al., 2020). The report identified a set of indicators that can be regularly revisited to assess progress towards sustainability goals, and has already influenced policy development, underpinning the vision for Cornwall and the Isles of Scilly, *Gyllyn Warbarth, Together We Can: The Cornwall Plan 2020-50* (Cornwall and Isles of Scilly Leadership Board, 2020) and informing Cornwall Council's revised *Environmental Growth Strategy: 2020-2065* (Cornwall Council, 2021a). This vision for a sustainable Cornwall incorporates the key tenets of Doughnut Economics, and seeks to address both social and environmental considerations in promoting sustainable development.

This report extends the application of this model to address a number of policy gaps and challenges identified in Cornwall. It addresses three questions:

– How do indicators of the social and environmental aspects of sustainability in the Doughnut Economics model vary across the county?

– How do social and environmental priorities differ across towns and parishes in Cornwall, and what are the challenges of taking action towards sustainability at this scale?

– How do residents and community groups perceive the social and environmental priorities for sustainability in their locality, and to what extent are these priorities reflected in the county-wide indicators?

This research has been designed to underpin an inclusive vision of sustainable development in Cornwall, giving voice to local communities in shaping the agenda.

Aims

To address the questions identified above, this report has three aims:

– To identify which of the social and environmental indicators underpinning the vision for a sustainable Cornwall can be disaggregated to examine geographical inequalities across the county.

– To examine local authorities' perceptions of, and priorities for, sustainability at the level of city, town and parish councils across Cornwall, capturing actions currently being taken and identifying any constraints to action at this scale.

– To identify the range of perspectives on challenges to sustainability among stakeholders within one locality, and further examine the opportunities and challenges for local-level action towards sustainability goals.

Ethical approval for all components of this study was obtained from the University of Exeter's College of Life and Environmental Science Ethics Committee.

"This research has been designed to underpin an inclusive vision of sustainable development in Cornwall, giving voice to local communities in shaping the agenda."

Background

Doughnut Economics and local governance

This section reviews previous research on the Doughnut Economics concept, its application at global, national, and city levels, and its relevance for local approaches to sustainable development.

The Doughnut Economics framework

First published in an Oxfam report by economist Kate Raworth (2012), the Doughnut Economics framework incorporates the concepts of planetary environmental limits and social needs into a framework that allows us to visualise just and sustainable development (Figure 1). The inner ring of the Doughnut represents the 'social foundation', indicating the minimum level of provision that an economy must make for its society in relation to key areas such as food, health, education, and income. A 'shortfall' indicates that this social foundation has not been reached for a given population. The outer ring forms the 'ecological ceiling', comprising critical Earth processes for which 'Planetary Boundaries' indicate precautionary thresholds that should not be crossed (Rockstrom et al., 2009). An 'overshoot' indicates that these boundaries have been exceeded. Within these rings lies the Doughnut, the 'socially just and environmentally safe space' where human wellbeing can be maintained without destabilising Earth's systems. Integral to the Doughnut framework are its domains: the social priorities and environmental processes that need to be measured to track progress towards socio-ecological sustainability. Raworth's original model attempted to quantify these domains at a global scale, reflecting international concerns and the planetary scale of the earth system processes driving global environmental change.
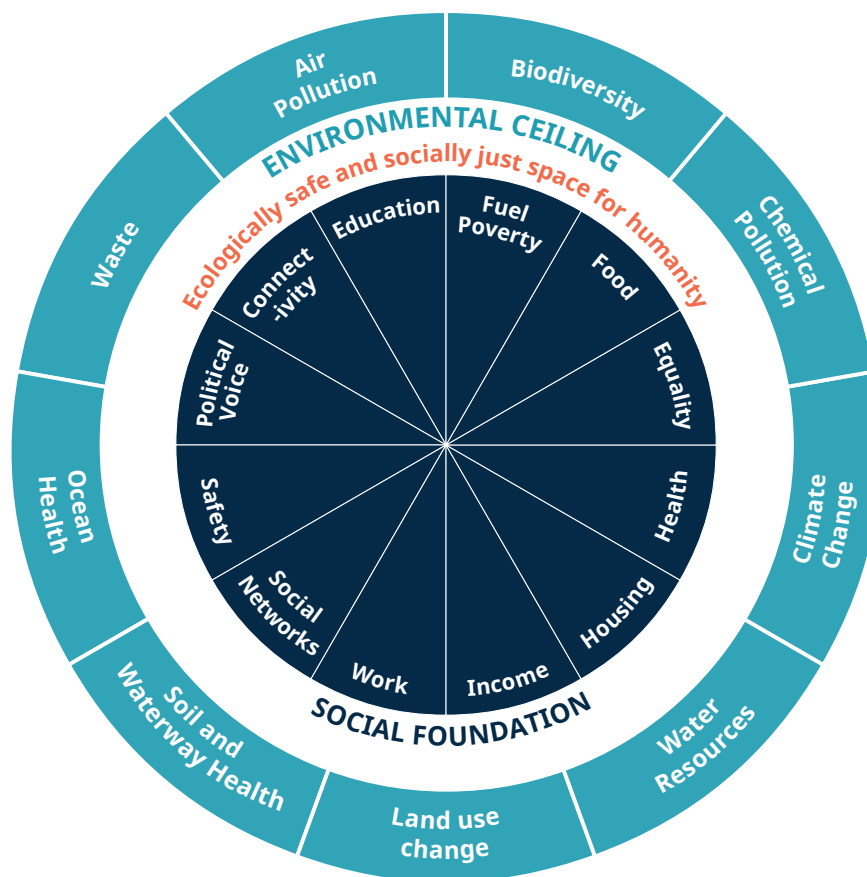

FIGURE 1

Visualisation of the Doughnut Economics model, showing the social and environmental domains for Cornwall.

Downscaling the Doughnut

Interest in 'downscaling the Doughnut' as a method for embedding and monitoring progress towards a holistic concept of sustainable development is accelerating. The Doughnut Economics framework has been applied to multiple contexts by both NGOs and academic researchers. Oxfam has supported the development of national models for South Africa (Cole et al., 2014; Cole, 2015), Scotland (Sayers et al., 2014), Wales (Sayers, 2015; Swaffield and Egan, 2020), and the UK (Sayers and Trebeck, 2015). A long-term study of sustainable development in China explored the challenges of quantifying a social foundation (Dearing et al., 2014), while other research has attempted to quantify the performance of cities (Toronto, Sao Paulo, Shanghai, Mumbai, and Dakar) against planetary boundaries and Sustainable Development Goals (SDGs) (Hoornweg et al., 2015; Valencia et al., 2019).

The model has been interpreted for application by local authorities and policymakers at regional and city scales. The Amsterdam City Doughnut (DEAL, 2020) demonstrates how stakeholders and policymakers may use the Doughnut framework to reflect on the opportunities, challenges, transactions, and trade-offs of alternative policies being proposed, with consideration for the impacts that such changes will have on a local and global scale. In the UK, Cornwall Council used the concept to develop a 'decision-making wheel' (Cornwall Council, 2020) for assessing the impact of a specific policy or intervention on broader sustainability goals.

Downscaling the Doughnut presents a challenge in identifying the appropriate interpretation of domains, and selecting which indicators are most relevant at a local level. Downscaled applications of the Doughnut framework often use stakeholder engagement to determine how the priorities of local populations are best represented, and to identify appropriate criteria that can be used to measure whether basic human needs are met. The domains of the environmental ceiling are more challenging to translate to different scales as they represent planetary systems. A pioneering study by Nykvist et al. (2013) sought to downscale planetary boundaries to a national level for Sweden. O'Neill and colleagues (2018) also sought to represent the ecological costs of global human activity on a local scale by assigning shares of each planetary boundary to individual countries on a per capita basis, highlighting the extent to which nations differentially impact planetary boundaries and meet social goals.

Local governance

Uptake of the Doughnut framework for assessing local-level sustainable development is supported by recent research that suggests the framework should be applied locally before being scaled-up and connected to other locations (Downing et al., 2019; Ensor and Hoddy, 2020). In this way, specific, local-level insights can be generated, allowing for distinctive social priorities and environmental conditions to be considered in wider decision-making processes. Such contextualised studies of local initiatives for sustainable development are well established in research on circular economy and transitions, where community action and citizen participation are seen to generate innovative, bottom-up solutions that may contribute to wider societal shifts (Coenen et al., 2012; Fischer et al., 2017; Ioppolo et al., 2016; Prendeville et al., 2018). Ensor and Hoddy (2020) argue that, to meet the social foundation and improve social equity, a bottom-up approach is needed to ensure that people's aspirations and needs are accounted for, whilst simultaneously evaluating the place-specific impacts on planetary resources.

"**Local-level insights can be generated, allowing for distinctive social priorities and environmental decisions to be considered in wider decision-making processes.**"

Background
Doughnut Economics and local governance

Interest in applying the Doughnut framework at the local scale is part of a renewed focus on local governance for sustainable development, with a growing conviction that strong local governance is needed to drive sustainable development (Geissel, 2009; Sterner et al., 2019). Such local-level governance comprises both state and non-state actors, including local institutions and organisations, each of which plays a role in decision making and determining outcomes in a specific location (Kardos, 2012; Williams et al., 2020). By being situated close to the public, local governance networks are ideally placed to understand the issues and priorities around sustainable development, and the progress being made to address them (Reddy, 2016; Fenton and Gustafsson, 2017). This level of understanding is possible through opportunities for participation in discussion and decision making, which allow a wide range of stakeholders and actors to contribute to the identification of sustainable development problems and their solutions (Hawkins and Wang, 2012; Wittmayer et al., 2016). Local organisations are best placed to mobilise individuals and groups in planning processes and the practical implementation of change (Fidelis and Pires, 2009; Fenton and Gustafsson, 2017).

Addressing governance challenges is central to realising the potential of the Doughnut Economics approach for achieving a safe and just space for all. Ensor and Hoddy (2020) argue that, in implementing the Doughnut framework, it is essential to recognise the institutions and practices that facilitate decision making, and to support under-represented or marginalised voices. Efforts to establish shared visions for environmental governance are placing increasing emphasis on involving a wide range of actors from local communities, and such participatory approaches are considered to lend legitimacy to decision making. Citizens assemblies and public consultations have recently helped inform national and local action plans, particularly in response to the declaration of climate emergencies (Cornwall Council, 2019a; Cornwall Council 2019b; The Citizens' Assembly, 2018; Davidson et al., 2020). Existing social networks such as community organisations provide an excellent base from which to reach people and allow them to play a role in determining change (Wills, 2016). In striving for a safe and just space for all, however, it is also important to seek the involvement of under-represented groups who may not be included in established community networks, but who may have diverse needs, perspectives, and priorities (Bussu and Galanti, 2018).

> "Addressing governance challenges is central to realising the potential of the Doughnut Economics approach for achieving a safe and just space for all."

While local approaches can be effective in connecting with the needs of stakeholders and communities, they are also a part of larger, multi-level governance systems. 'Local' governance systems involve overlapping tiers of authority that span parish councils, town and city councils, district and county level or unitary authorities that sit above these, and, in some areas, city-regional bodies. These institutions all sit within the jurisdiction of larger national decision-making structures that determine the statutory duties and associated financing of smaller-scale bodies. The distribution of power, responsibility, and resources across and between these tiers of governance can enable or constrain local action on sustainability. Indeed, there is a long-standing debate about the extent to which the United Kingdom remains over-centralised, despite recent forays into devolution and decentralisation (Wills, 2016; 2019). However, although our geo-constitutional inheritance shapes what can be done in law, there is evident opportunity for mobilising 'soft power', whereby local governance networks work together to convene local action around place-based concerns (Beer et al., 2020). The research underpinning this report, undertaken in Cornwall, has revealed that policy development at the county scale overlays a great deal of diversity at local levels.

This research examines the diversity of challenges and priorities among and within the smallest units of local authority in realising sustainable development in Cornwall, looking to highlight the opportunities for, and difficulties of, addressing such issues.

Disaggregating spatial data on sustainability

Introduction

The *State of the Doughnut* report (Turner et al., 2020) applied the Doughnut Economics framework to Cornwall, and sought to provide an initial assessment from which to evaluate progress towards achieving a social foundation that meets human needs while also reducing environmental pressures across the whole county. By identifying appropriate indicators to enable longer-term monitoring of social and environmental trends, the assessment aimed to support the identification of priority areas for action on sustainability challenges. These indicators have been incorporated into the future vision for Cornwall captured in *The Cornwall Plan 2020-50*.

Cornwall faces a range of sustainability challenges. The county encompasses areas of marine and terrestrial habitats, wealth alongside high deprivation, and both urban and rural areas. Consequently, both social and environmental issues vary in their extent and characteristics on the ground. This section of the report presents a geographical breakdown of the social and environmental data that was used to underpin the indicators in the county-wide report (Turner et al., 2020). It sets out the breadth and depth of spatial inequalities across the county, as revealed by published statistics, that are then examined in more detail, using new datasets.

Mapping the state of the Doughnut in Cornwall and the Isles of Scilly

To identify potential social and spatial inequalities across Cornwall, the datasets in the *State of the Doughnut* report were assessed and, where sub-county resolution spatial data were available, they were mapped for presentation in this report. This process was reliant on open-source data which, as might be expected, are limited at the sub-county scale. In cases when the original data used for the county-level report were not available, alternative datasets have been identified and mapped as a proxy.

In total, 21 of the original 33 indicators were successfully mapped at a sub-county resolution. Source data, either directly or with minor adjustments, were available for 15 of the mapped indicators, with a further six mapped using proxy data (Table 1).

The 'Ease of access to essential services' and 'Housing security' indicators were combined into a single map using the Indices of Multiple Deprivation's 'Barriers to Housing and Services' data as a proxy. Of a possible 20 social foundation indicators, 14 were mapped, compared to seven of the 13 environmental ceiling indicators. The environmental indicators were less reliant on proxy data, with six of seven having source data available at sub-county resolution. Comparatively, the social foundation domains were reliant on proxy datasets for five of the 14 mapped indicators. Data sources are detailed in the Appendix (Table 11).

The maps presented in this report were generated using the Geographic Information System (GIS) software ArcGIS (ESRI ArcMap 10.8) with data processing also completed in R, RStudio (4.0.3). To highlight spatial variation and standardise plots, data were visualised using five equal interval categories. Standardising symbology in this manner aids clarity both within and between plots, however, it is important to note that certain indicators only display small levels of variation between geographically distinct areas. It is therefore important to reference figure legends individually when interpreting and comparing plots.

To visualise spatial variation across Cornwall and the Isles of Scilly, datasets were scaled to the best available unit of governance. Where possible, these areal representations were then ranked 'best' to 'worst' regarding that particular indicator. Data that were already scaled to a political unit (for example, voter turnout by parliamentary constituency) were ranked according to the unit defined by the data owner. Site or point source data were aggregated to the most suitable political unit available. Methods for aggregating data varied by indicator and are explained in relation to the individual maps. Categorical data (e.g. 'Good' chemical water quality status) were scaled (0-1) to allow for spatial rankings, however methods of scaling data varied and are detailed on a case by case basis.

These rankings were also aggregated to provide an overall indicator of spatial variation in the social foundations and environmental ceiling, as explained in Compiling an aggregated indication of spatial variation at the sub-county scale at the end of this section.

TABLE 1
Data type used to map the Cornwall State of the Doughnut domains and indicators at the sub-county scale.
*Indicates source data used with caveats or minor modifications.

CATEGORY	DOMAIN	INDICATOR	DATA MAPPED
Social	Connectivity	Internet access	None
		Ease of access to essential services	Proxy
Social	Safety	'Violence with injury' recorded crime	Proxy
		Perceived level of safety	Source
Social	Education	GCSE attainment	Source
		Attainment gap	Source
Social	Equality	Gender pay gap	Source*
		Ethnicity stop and search	Source*
Social	Food	Food bank usage	None
Social	Fuel poverty	Fuel poverty	Proxy
Social	Health	Life expectancy at birth	None
		Economic inactivity due to long-term sickness	None
Social	Housing	Housing security	Proxy
		Rough sleeping	None
Social	Income	Jobs with pay below the real living wage	Source
Social	Political voice	Voter turnout	Source
		Civic influence	None
Social	Social networks	Sense of community	Source
		Sense of isolation	Source
Social	Work	People unwillingly out of work	Proxy
Environmental	Air pollution	Annual mean CO_2	Source
Environmental	Biodiversity loss	Biodiversity trends	None
		Aichi targets	None
Environmental	Chemical pollution	Chemical quality of surface waters	Source
Environmental	Climate change	Territorial CO_2 emissions	None
		CO_2 emissions	None
Environmental	Land use change	Land cover	None
		Land use for environmental growth	Source
Environmental	Ocean health	Sustainably harvested fish stocks	Source
		Bathing water ratings	Source
Environmental	Soil and waterway health	Ecological quality of water bodies	Source
Environmental	Waste	Household waste disposal	Proxy
Environmental	Water resources	Supply-demand freshwater	None

Spatial variation in social foundation domains

Connectivity: Access to services

The Connectivity domain measured 'Internet access' and 'Ease of access to essential services'. The original data used in the *State of the Doughnut* assessment were not available at a sub-county level for either indicator. The Indices of Deprivation's 'Barriers to Housing and Services' data are displayed as a proxy. This dataset measures the physical proximity and financial accessibility of housing and local services. It is therefore a partial proxy for access to essential services and the 'Housing Security' domain. No sub-county data for internet access were available.
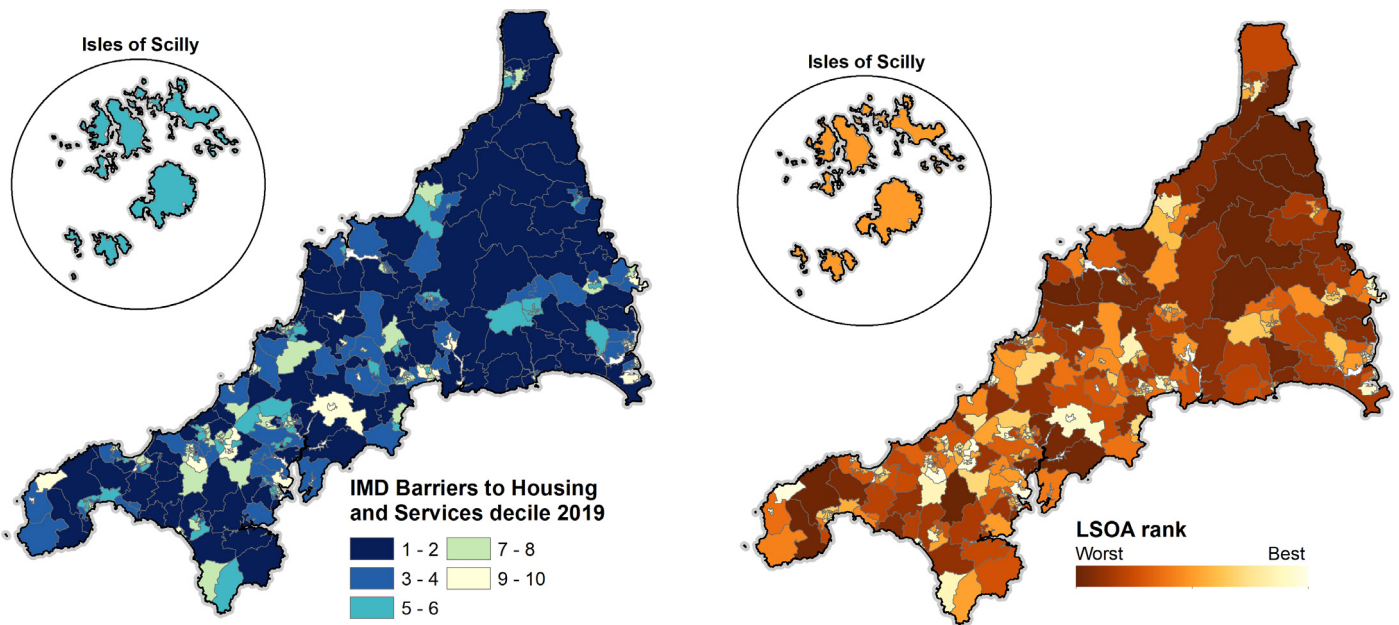
FIGURE 2

Indices of Multiple Deprivation 'Barriers to Housing and Services' decile data displayed at a Lower-layer Super Output Areas (LSOA) resolution. IMD decile ranks the 32,844 LSOAs in England from most deprived to least deprived and divides them into 10 equal groups. LSOAs in decile 1 fall within the most deprived 10% of LSOAs nationally and decile 10 fall within the least deprived 10% nationally.

FIGURE 3

LSOA ranked best to worst based on their IMD Barriers to Housing and Services domain score.

Safety: Perceived safety

The Safety domain measured 'Violence with injury recorded crime' and 'Perceived level of safety' indicators. The original data used in the *State of the Doughnut* assessment to measure 'Perceived level of safety' were available at a sub-county level from Cornwall Council's Residents' Survey. This dataset measures the proportion of respondents who answered: 'Definitely Agree' or 'Tend to Agree' to the question: 'To what extent do you agree or disagree that the Council and the police are dealing with anti-social behaviour and crime issues that matter in your local area?'.

Isles of Scilly

Proportion (%) of respondents who agreed 'the Council/police are dealing with anti-social behaviour and crime issues'

| 36.3 | 42.1 | 48.1 |

FIGURE 4

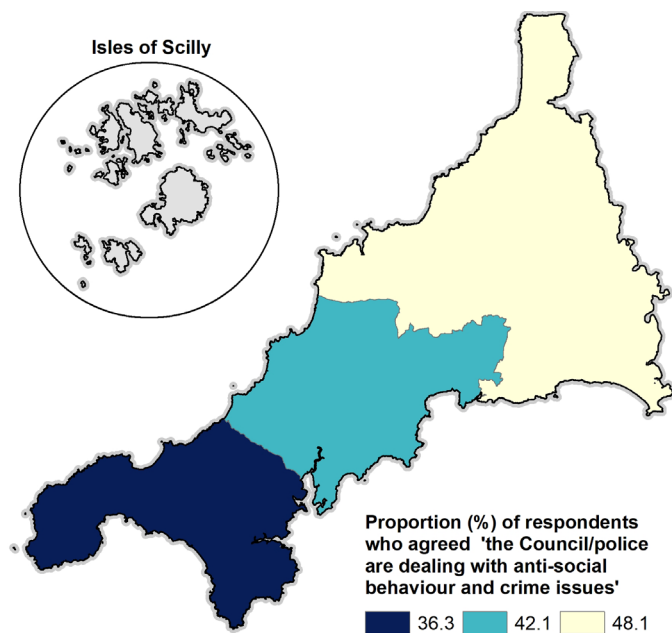'Perceived level of safety' data are displayed at a regional (East, Mid, West) resolution for surveys conducted in July and November 2019. Each survey had a sample size of 500 respondents (total =1000). Data were also collected at a Community Network Area (CNA) resolution, however the sample size for certain CNAs was considered too small to be representative, and these data were therefore not included.

Safety: Violence

The Safety domain measured 'Violence with injury recorded crime' and 'Perceived level of safety' indicators. The original data used in the *State of the Doughnut* assessment (Office for National Statistics data) on recorded crime with violence were not available at a sub-county level. Devon & Cornwall Police cases of 'Violence and sexual offences' per 1,000 population are displayed as a proxy. This represents a broader category than 'Violence with injury', resulting in a higher number of cases per 1,000 than reported in the *State of the Doughnut* assessment.

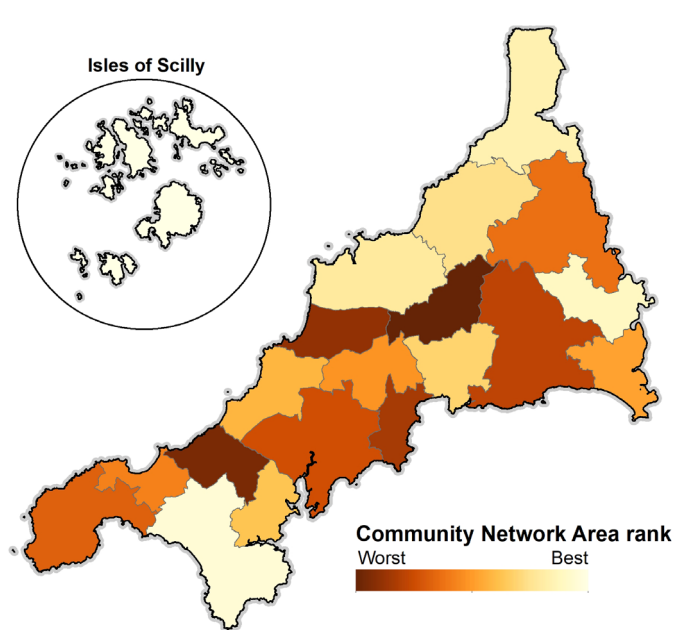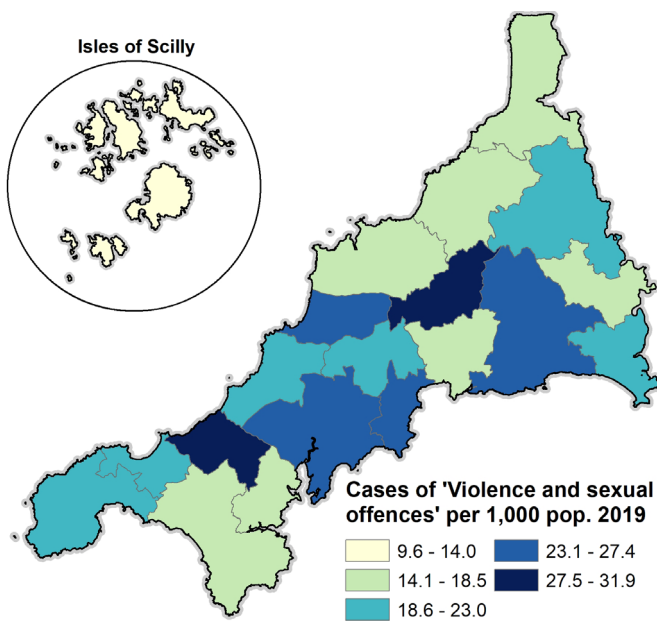**FIGURE 5**

Violence and sexual offences per 1,000 population, displayed at a CNA resolution. Total cases of 'Violence and sexual offences' aggregated for the year 2019 and corrected by CNA population (population data year 2014) to provide the number of cases per 1,000 population.

FIGURE 6

CNAs ranked best to worst by the number of violence and sexual offences cases per 1,000 population.

Education: GCSE attainment

The Education domain measured 'GCSE attainment' and 'Attainment gap' indicators. The original data used in the *State of the Doughnut* assessment to measure 'GCSE attainment' of pupils identified as disadvantaged were available at school resolution for 2019. This dataset shows the proportion of disadvantaged pupils achieving a grade 5 and above in English and Maths. Cornwall Council had a year-end target (2019/20) for 21.5% of disadvantaged young people achieving a 'strong' GCSE pass (grades 9-5) in these subjects.

FIGURE 7

Proportion of disadvantaged pupils achieving a grade 5 and above in English and Maths by school for the academic year ending in 2019. Only schools with pupils registered as 'disadvantaged' are displayed, and some schools with a small number (<5) of disadvantaged pupils were excluded due to data privacy.

FIGURE 8

Proportion of disadvantaged pupils achieving a grade 5 and above in English and Maths aggregated to a CNA resolution and ranked best to worst. Whilst schools are aggregated for ranking, students may travel across CNA boundaries from home location.

Education: Attainment gap

The Education domain measured 'GCSE attainment' and 'Attainment gap' indicators. The original data used in the Cornwall Doughnut assessment to measure the 'Attainment gap' between pupils identified as 'disadvantaged' and 'non-disadvantaged' were available at school resolution for 2019. This dataset defines 'Attainment gap' as the difference in proportion of disadvantaged and non-disadvantaged pupils that gained a grade of 5 and above in English and Maths.

GCSE Attainment Gap (%) 2019
- 0.0 - 8.3
- 8.4 - 16.7
- 16.8 - 25.0
- 25.1 - 33.3
- 33.4 - 41.7

Community Network Area rank
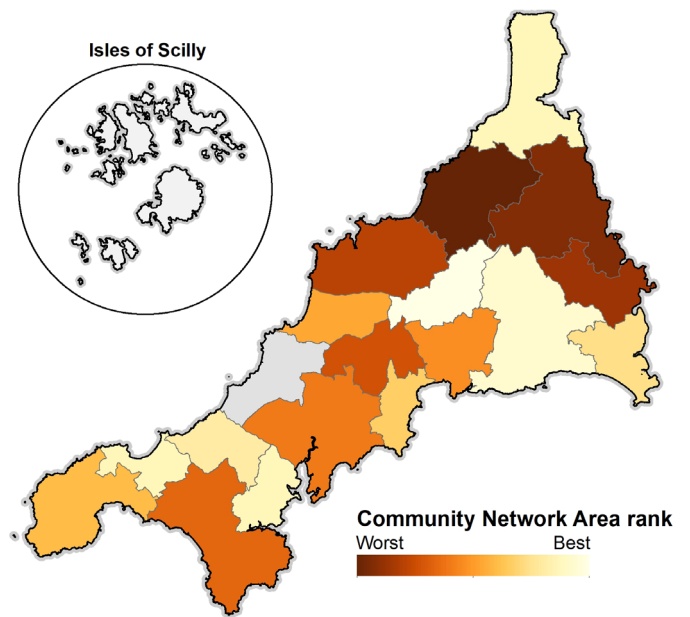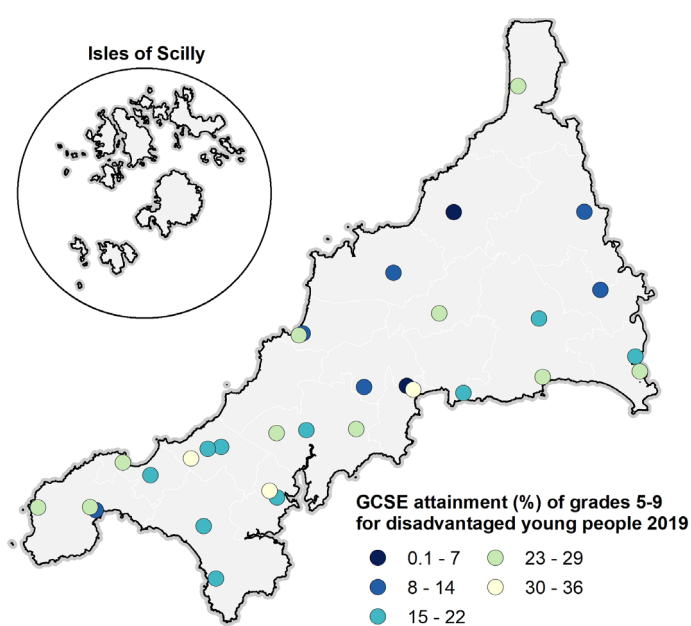Worst — Best

FIGURE 9

Attainment gap between disadvantaged and non-disadvantaged pupils achieving a grade 5 and above in English and Maths by school for the academic year ending in 2019. Only schools with pupils registered as 'disadvantaged' are displayed and some schools with a small number (<5) of disadvantaged pupils were excluded due to data privacy.
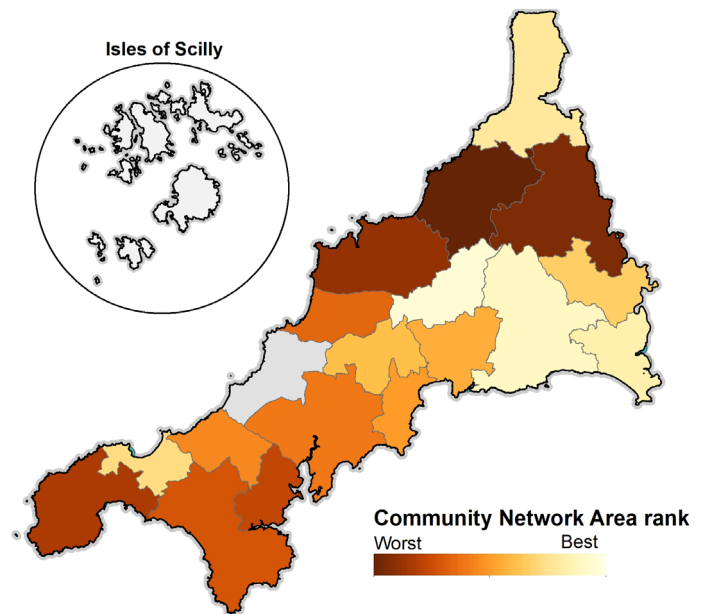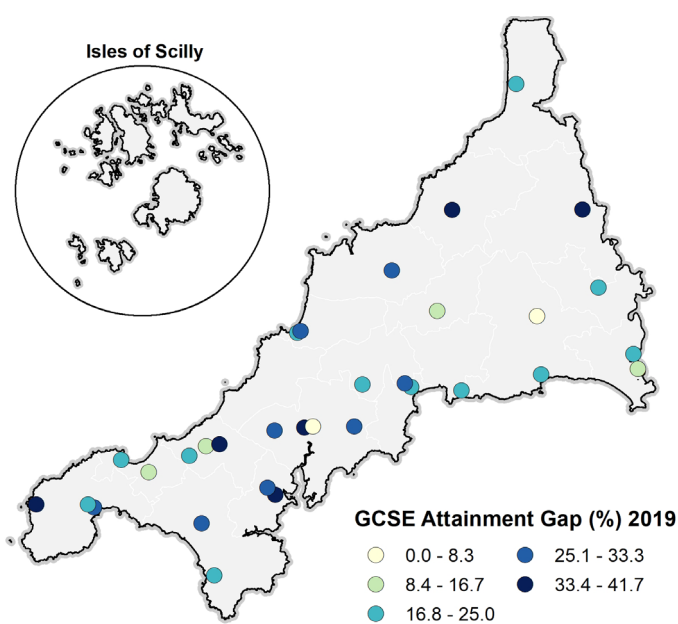
FIGURE 10

Attainment gap between disadvantaged and non-disadvantaged pupils achieving a grade 5 and above in English and Maths aggregated (mean) to a CNA resolution, ranked best to worst. Whilst schools are aggregated for ranking, students may travel across CNA boundaries from home location.

Equality: Gender pay gap

The Equality domain measured 'Gender pay gap' and 'Ethnicity stop and search' indicators. The original data used in the *State of the Doughnut* assessment to measure 'Gender pay gap' were available at a sub-county level from the Office for National Statistics' Annual Survey of Hours and Earnings 2019 for full-time employees. Part-time data were only available for a subset of constituencies so were excluded. This dataset measures the difference in mean hourly earnings (excluding overtime) of men and women as a proportion of average hourly earnings (excluding overtime) of men. Only data on companies with more than 250 employees are included, as there is no legal reporting requirement for companies below this size.

FIGURE 11

Difference in mean hourly earnings of men and women as a proportion of average hourly earnings of men, at a Parliamentary Constituency resolution.
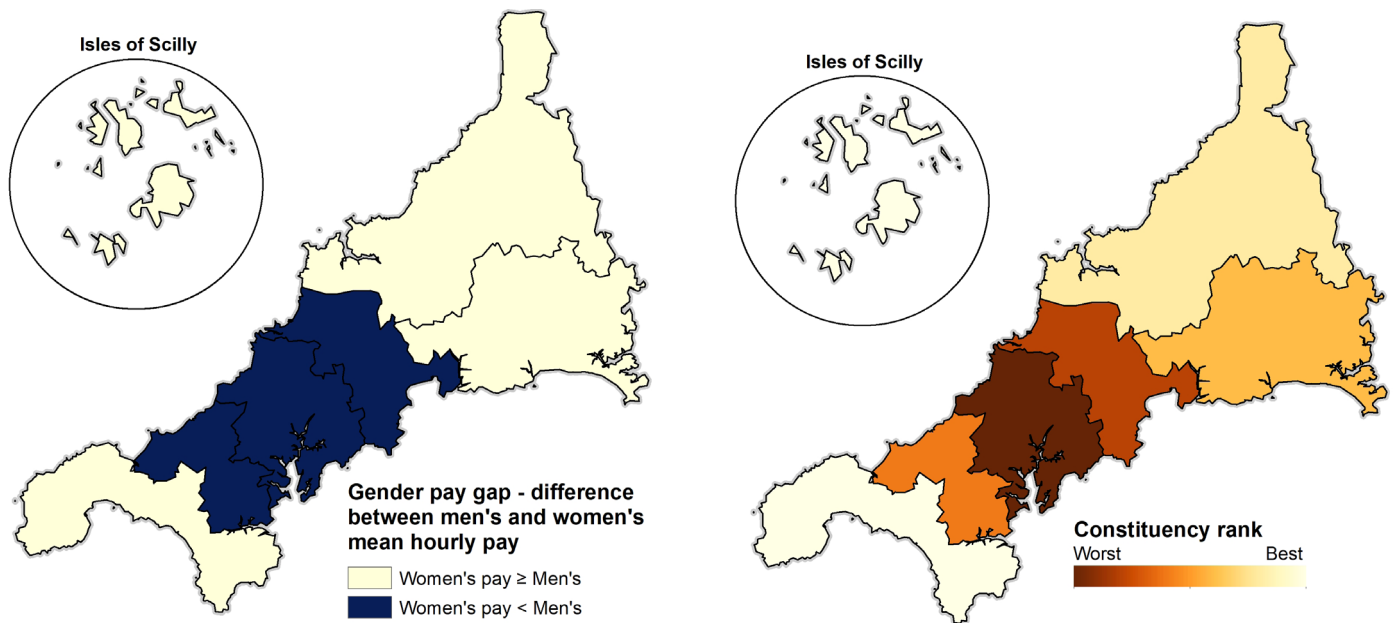
FIGURE 12

Difference in mean hourly earnings of men and women as a proportion of average hourly earnings of men, at a Parliamentary Constituency resolution, ranked best to worst. Worst sees the largest negative difference in mean hourly earnings (women earn less than men) and best has the largest positive difference (women earn more than men).

Equality: Stop and search

The Equality domain measured 'Gender pay gap' and 'Ethnicity stop and search' indicators. The original data used in the *State of the Doughnut* assessment measuring 'Ethnicity stop and search' were available at a sub-county level from Devon and Cornwall Police, however population by ethnicity was not available at the same spatial resolution. The data displayed is therefore a proxy, and only shows the number of 'stop and searches' of individuals with an officer-defined ethnicity of 'Black', 'Asian' and 'Other', as a proportion of the total number of 'stop and searches'. This differs from the original analysis which corrected stop and searches for population size by ethnic group.

FIGURE 13

Proportion of 'stop and searches' of individuals with an officer-defined ethnicity of 'Black', 'Asian' and 'Other' compared to the total number of 'stop and searches' displayed at a CNA resolution. Only CNAs with at least 15 stops are included due to sample size (range: 3–178). 'Officer-defined' ethnicity was used in preference to 'Self-defined' due to the number of incomplete records.
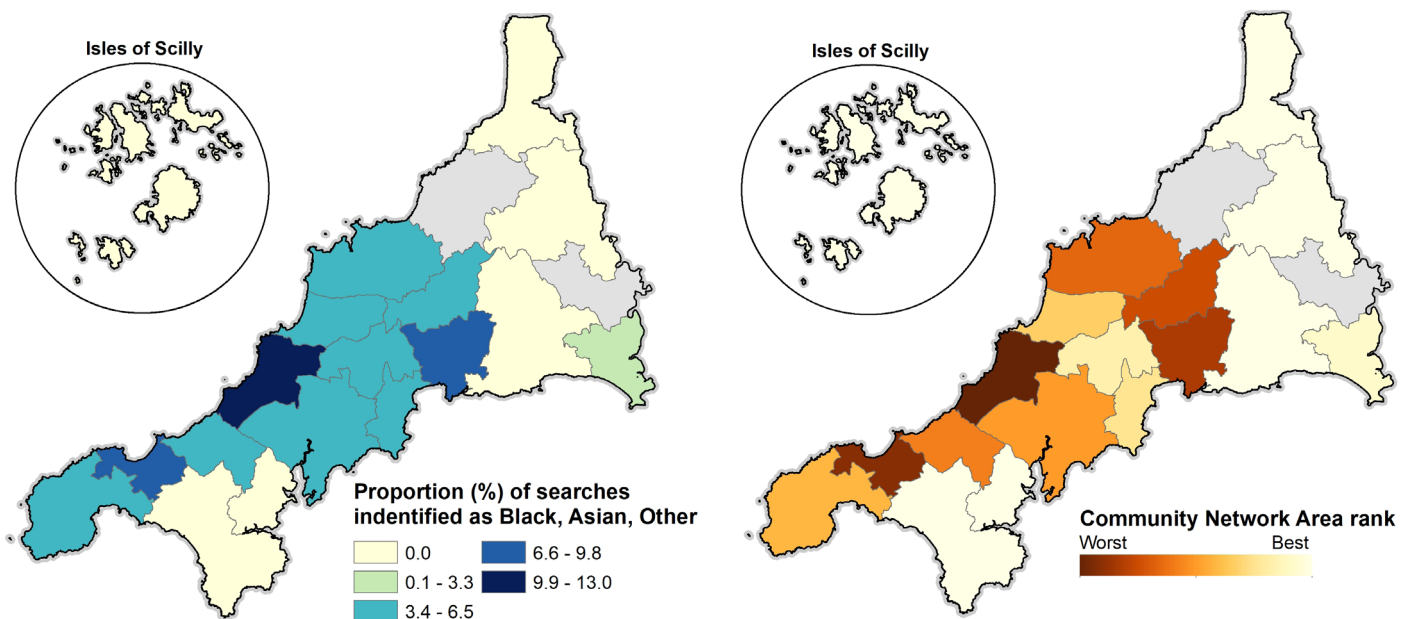
FIGURE 14

Proportion of 'stop and searches' of individuals with an officer-defined ethnicity of 'Black', 'Asian' and 'Other' compared to the total number of 'stop and searches' displayed at a CNA resolution, and ranked best to worst.

Fuel Poverty

The Fuel Poverty domain was a direct measure of the proportion of households in Cornwall in fuel poverty. The original data used in the *State of the Doughnut* assessment measuring households considered 'fuel poor' were available at a sub-county level from the Department for Business, Energy & Industrial Strategy (2018). This dataset measures the proportion of fuel poor households by comparing the number of households in fuel poverty to the total number of households. Households are defined as being 'fuel poor' if they: 'are living in a property with a fuel poverty energy efficiency rating of band D or below' and 'when they spend the required amount to heat their home, they are left with a residual income below the official poverty line'.
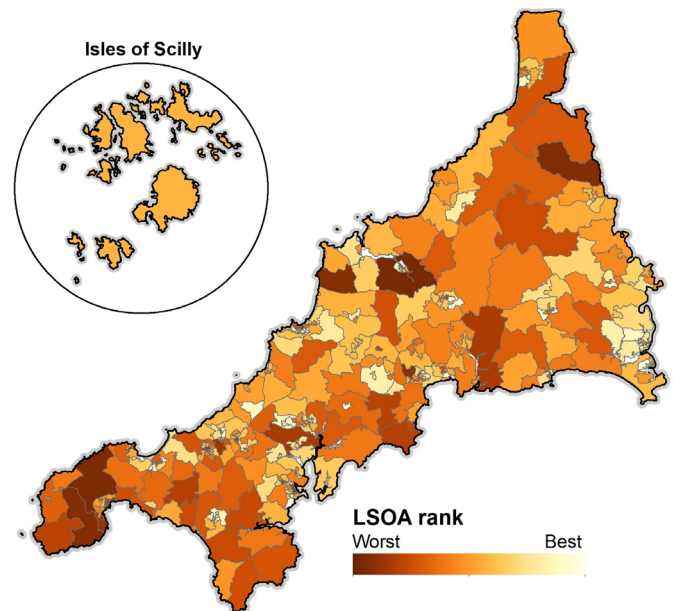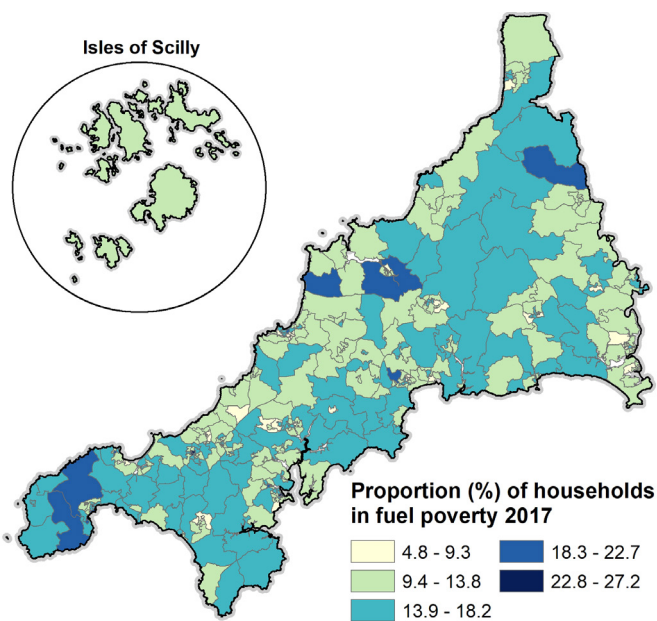
FIGURE 15

Proportion of fuel poor households compared to the total number of households displayed at a LSOA resolution.

FIGURE 16

Proportion of fuel poor households compared to the total number of households displayed at a LSOA resolution, ranked best to worst.

Income

The Income domain was a direct measure of jobs with pay below the real living wage. The original data used in the *State of the Doughnut* assessment to measure pay rates were available at a sub-county level from the Office for National Statistics' Annual Survey for Hours and Earnings. This dataset measures the number of people with hourly pay below the living wage, as defined by the living wage foundation in 2019.
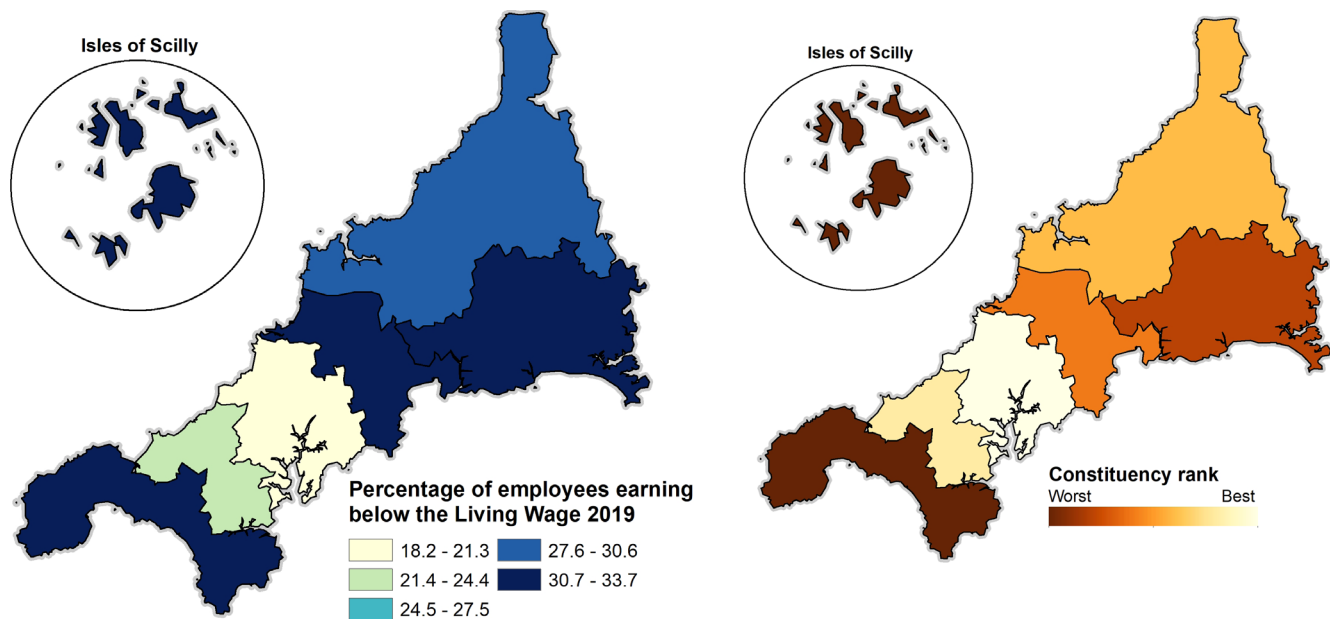
FIGURE 17

Proportion of the total population with hourly pay below the living wage by Parliamentary Constituency.

FIGURE 18

Proportion of the total population with hourly pay below the living wage by Parliamentary Constituency, ranked best to worst.

Political Voice

The Political Voice domain was a direct measure of voter turnout. The original data used in the *State of the Doughnut* assessment to measure voter turnout were available at a sub-county level from UK Parliament statistics. This dataset measures the number of people that voted in the 2017 general election as a proportion of the total population by Parliamentary Constituency.
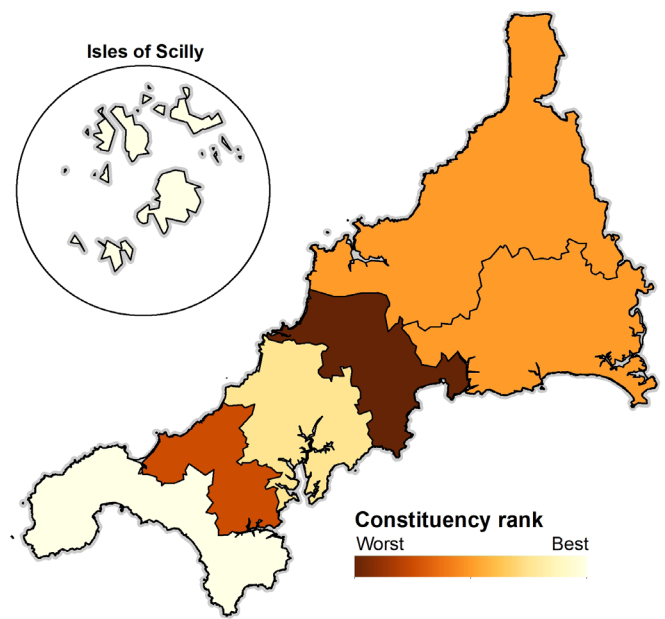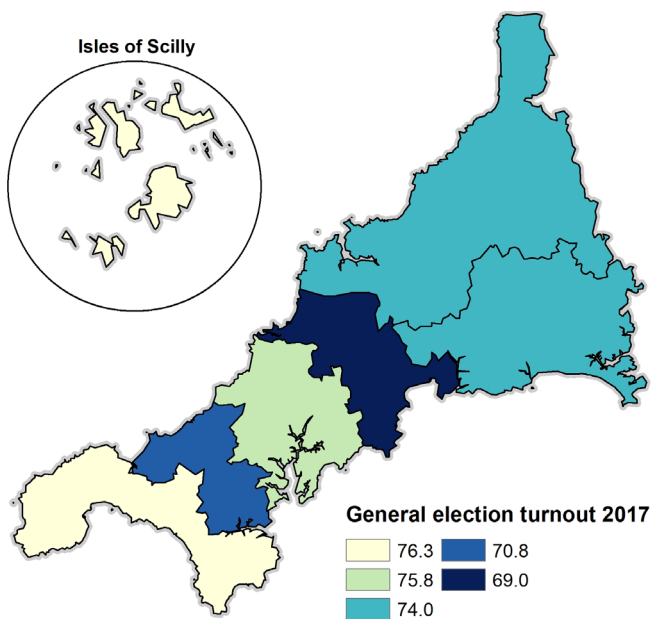
FIGURE 19

Proportion of the total population that voted in the 2017 General Election displayed at a Parliamentary Constituency.

FIGURE 20

Proportion of the total population that voted in the 2017 General Election displayed at a Parliamentary Constituency resolution, ranked best to worst.

Social Networks: Sense of community

The Social Networks domain measured: 'Sense of community' and 'Sense of isolation' indicators. The original data used in the *State of the Doughnut* assessment to measure 'Sense of community' were available at a sub-county level from Cornwall Council's Residents' Survey. This dataset measures the proportion of respondents who answered: 'Definitely Agree' or 'Tend to Agree' to the question: 'To what extent would you agree or disagree that people in this local area pull together to improve the local area?'.

Isles of Scilly

Proportion (%) of respondents who agreed people 'pull together to improve the local area'

| 62.3 | 64.8 | 71.4 |
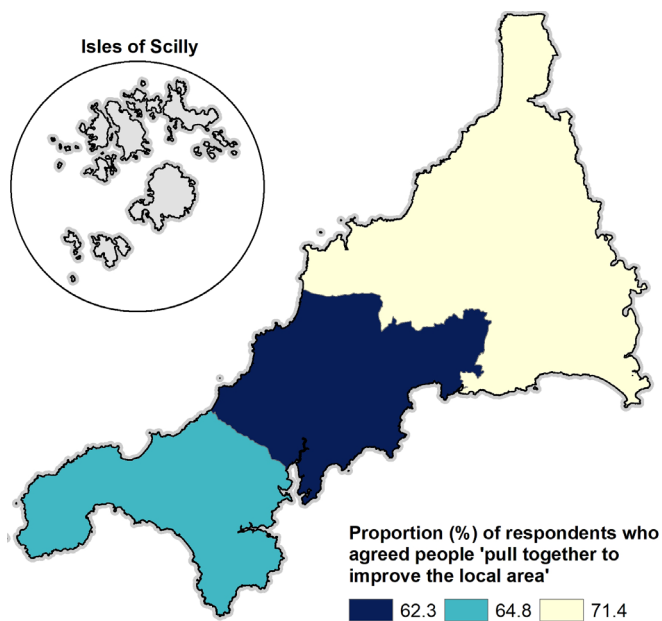
FIGURE 21

Proportion of the respondents who felt their local area 'pulls together' displayed at a regional (East, Mid, West) resolution (surveys conducted in July and November 2019). Each survey had a sample size of 500 respondents (total =1000). Data were also collected at a CNA resolution, however the sample size for certain CNAs was considered too small to be representative.

Social Networks: Isolation

The Social Networks domain measured 'Sense of community' and 'Sense of isolation' indicators. The original data used in the *State of the Doughnut* assessment to measure 'Sense of isolation' were available at a sub-county level from GP Patient Survey data 2019. This dataset measures the proportion of respondents who answered 'Yes' to the question: "Have you experienced feelings of isolation in the last 12 months?". Data were reported at a GP practice level and collated based on the CNA they fall within. The proportion of respondents who felt isolated were then calculated for each CNA, though certain GP practices were excluded from the dataset due to small samples and data privacy.

Proportion (%) survey respondents 'Feeling isolated from others' 2019

1.4 - 3.6
3.7 - 5.7
5.8 - 7.9
8.0 - 10.1
10.2 - 12.2

Community Network Area rank
Worst — Best
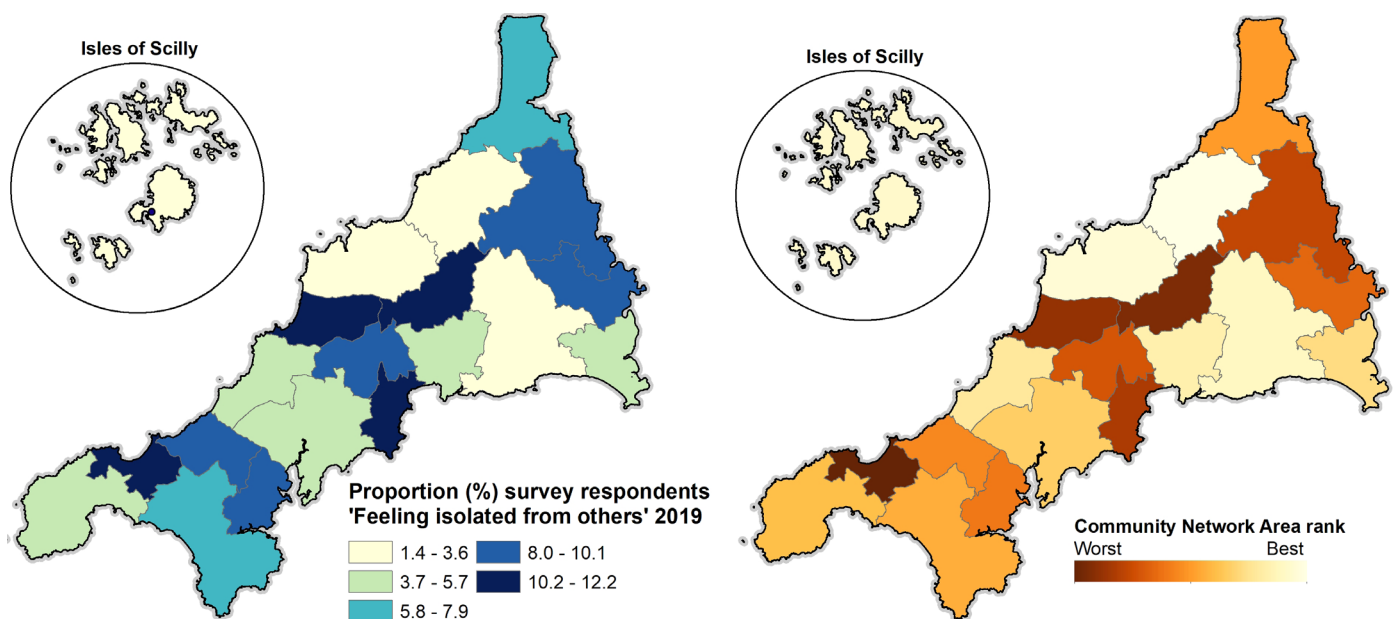
FIGURE 22

Proportion of the respondents who felt isolated from others at a CNA resolution. Whilst practices are assigned to a CNA based on spatial location, respondents may travel across CNA boundaries from home location. Survey sample size was variable between CNAs (range: 125–726).

FIGURE 23

Proportion of respondents who felt isolated from others at a CNA resolution, ranked best to worst. Whilst practices are assigned to a CNA based on spatial location, respondents may travel across CNA boundaries from home location.

Work

The Work domain was a direct measure of people unwillingly out of work. The original data (Office for National Statistics) used in the *State of the Doughnut* assessment to measure unemployment were not available at a sub-county level. The Indices of Deprivation 2019 'Employment Deprivation' domain measures the proportion of the working-age population 'people who would like to work but are unable to do so due to unemployment, sickness or disability, or caring responsibilities', using indicators supplied by the Department for Work and Pensions. It is therefore considered a comparable proxy to the original assessment.
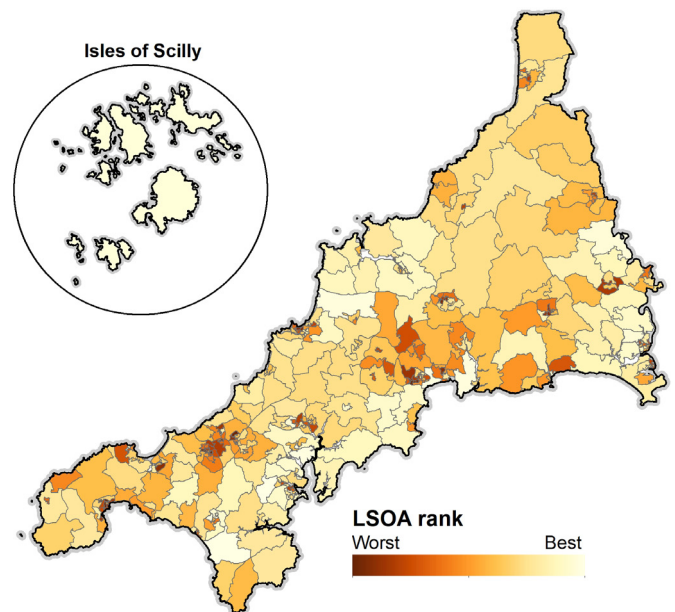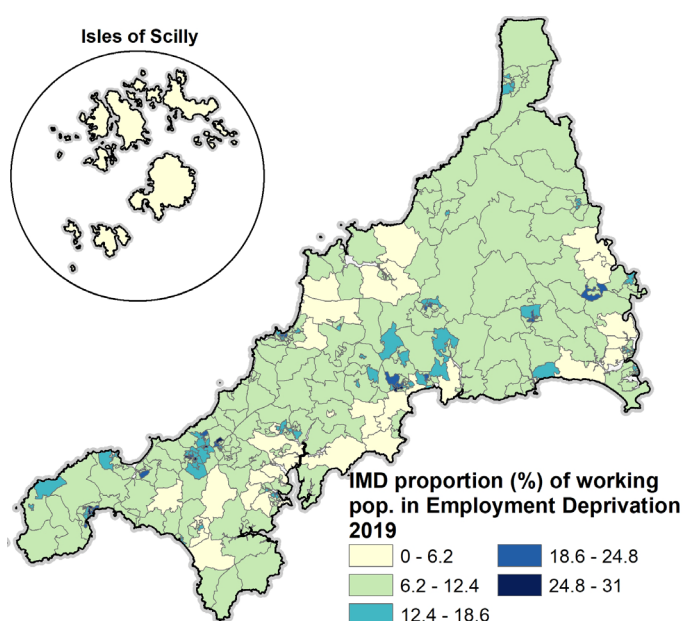
FIGURE 24

Proportion of the working-age population in Employment Deprivation displayed at an LSOA resolution.

FIGURE 25

Proportion of the working-age population in Employment Deprivation displayed at an LSOA resolution, ranked best to worst.

Spatial variation in the environmental ceiling domains

Air Pollution

The Air Pollution domain was a direct measure of 'Annual mean NO_2 (nitrogen dioxide)'. The original data used in the *State of the Doughnut* assessment to measure air pollution were available at a sub-county level from the Cornwall Council Air Quality Annual Status 2018 reports. This dataset measures the concentration of NO_2 at monitoring sites, including Air Quality Management Areas. The Clean Air of Cornwall Strategy has set a target for 0% of sites to exceed annual mean NO_2 of 40µg/m^3 by 2030.
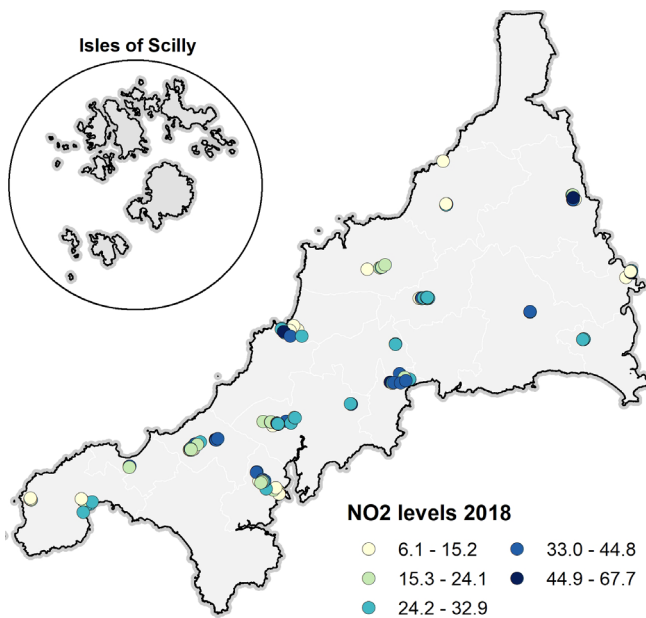
FIGURE 26

Mean annual NO_2 concentration for both automatic and non-automatic monitoring sites.
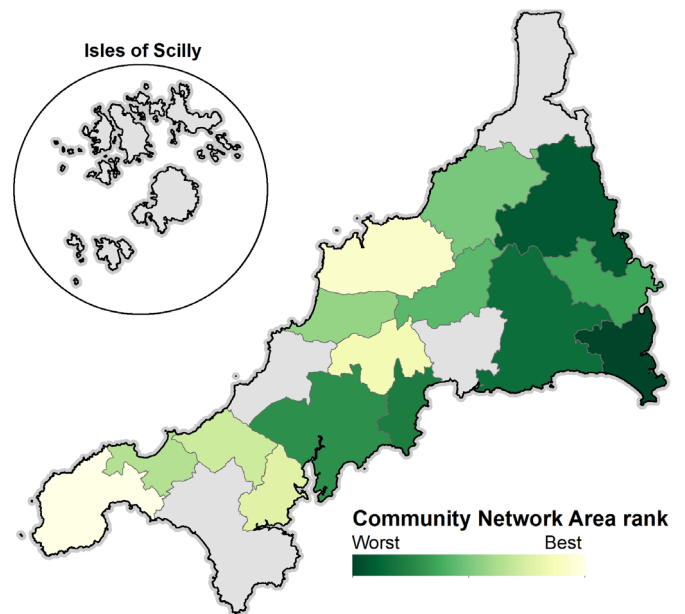
FIGURE 27

Mean annual NO_2 concentration aggregated to a CNA resolution and ranked best to worst. Certain CNAs have a limited number of sample sites (range: 3-37).

Chemical Pollution

The Chemical Pollution domain was a direct measure of the 'Chemical quality of surface waters'. The original data used in the *State of the Doughnut* assessment were available at a sub-county level from the Environment Agency's Catchment Data for 2016. This dataset measures the number of sites that failed to achieve 'good' chemical water quality status. The river basin management plans for England have a target for 0% of surface waters to fail to achieve good chemical quality by 2027.
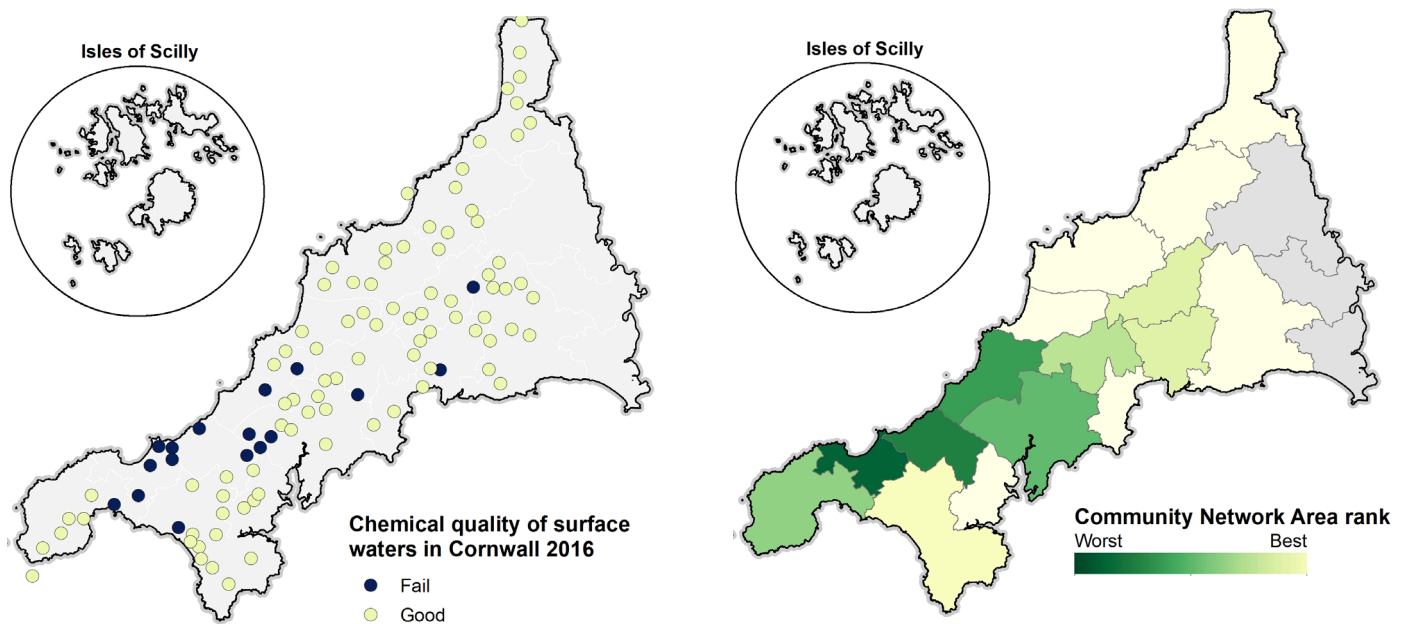
FIGURE 28

Chemical water quality status of surface waters displayed for all monitoring sites.

FIGURE 29

Chemical water quality status of surface waters aggregated to a CNA resolution and ranked best to worst. To rank the categorical source data by CNA, status values were scaled, with 'Good' assigned a score of 1 and 'Fail' a score of 0.1. The mean score of all sites for each CNA was then calculated and ordered from highest to lowest. Certain CNAs have a limited number of sample sites (range: 3-11).

Land Use Change

The Land Use Change domain was a direct measure of 'Land use for environmental growth'. The original data used in the *State of the Doughnut* assessment to measure positive land management were available from a variety of sources. This dataset measures the proportion of total area (km^2) under positive management for environmental growth as of year-end 2020.

Proportion (%) of land under environmental management

7.4 - 10.3	18.9 - 22.5
10.4 - 14.4	22.6 - 29.5
14.5 - 18.8	

Community Network Area rank
Worst — Best
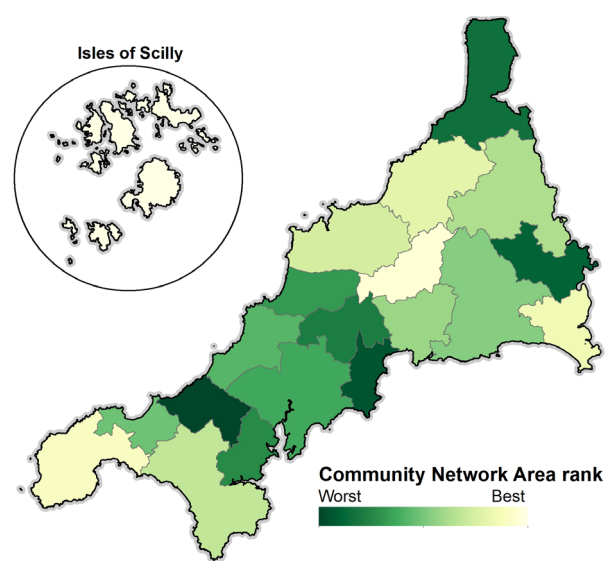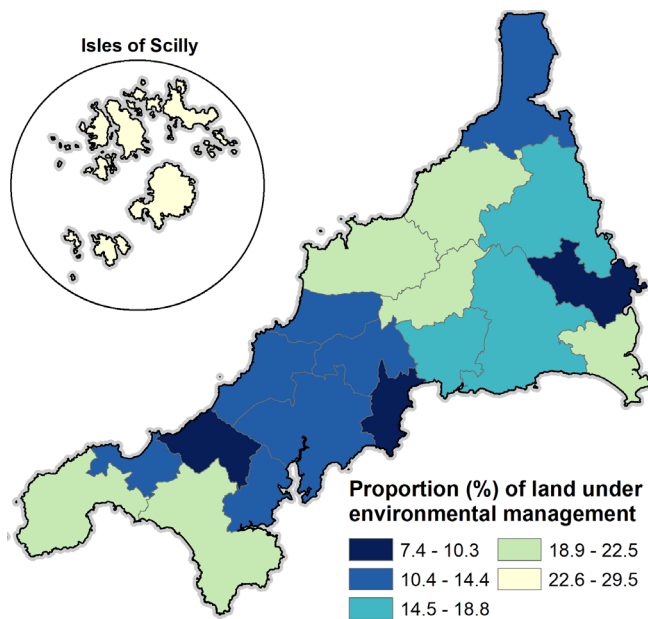
FIGURE 30

Proportion of total land area (km^2) under positive management for environmental growth for each CNA. The following designations were included as providers of positive management: Sites of Special Scientific Interest, mid-tier and higher-level stewardship (or equivalent) agri-environment schemes, County Wildlife Sites, and National Trust, RSPB, and Cornwall Wildlife Trust reserves. Areas with more than one overlapping designation were only considered once.

FIGURE 31

Proportion of total land area (km^2) under positive management for environmental growth for each CNA, ranked best to worst.

Ocean Health: Sustainably harvested fish stocks

The Ocean Health domain measured 'Sustainably harvested fish stocks' and 'Bathing water ratings' indicators. The original data used in the *State of the Doughnut* assessment to measure sustainably harvested stocks were available at a sub-county resolution from the South West England Ocean Health Index. This dataset measures the proportion of landings made up of under-fished species, species with a good stock status, and those deemed 'sustainable' by the Marine Conservation Society's Good Seafood Guide in 2018. The data were based on stocks at port level, with landings attributed to vessels' home port. The methodology considered recommended species as binary, 'over/avoid' or 'under/ recommended' and does not account for levels of overfishing or sustainability.
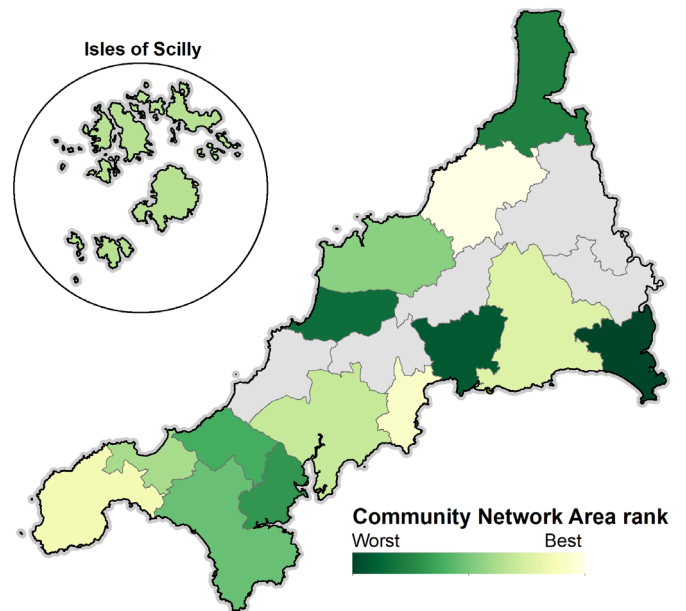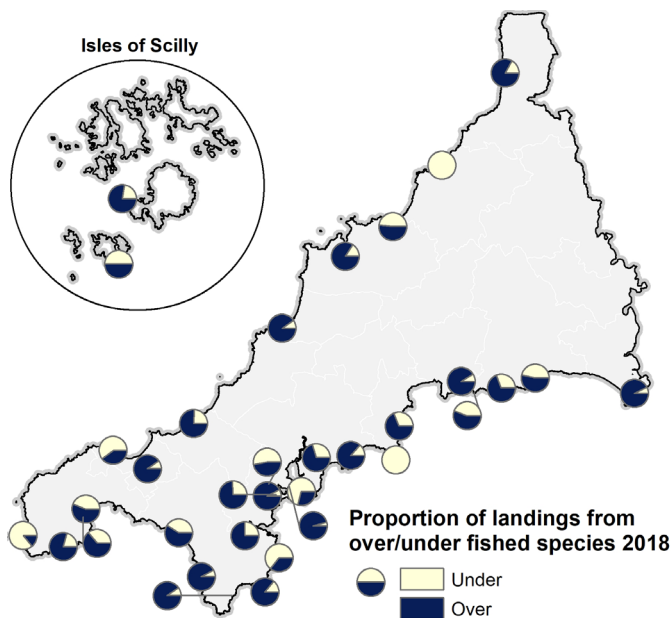
FIGURE 32

Proportion of landings at port level made up of under-fished/ recommended species.

FIGURE 33

Proportion of landings made up of under-fished/ recommended species aggregated (proportion of summed landings) to a CNA resolution, ranked best to worst.

Ocean Health: Bathing water quality

The Ocean Health domain measured 'Sustainably harvested fish stocks' and 'Bathing water ratings' indicators. The original data used in the *State of the Doughnut* assessment to measure 'Bathing water ratings' were sourced from the Environment Agency (2019). This dataset measures the quality of water against bacteriological criteria at beaches or inland waters that are popular for bathing between May and September each year, assigning a rating of Poor, Sufficient, Good or Excellent. To rank the categorical source data by CNA, status values were scaled with 'Excellent' assigned a score of 1, 'Good' 0.5 and 'Sufficient' 0.1. The mean score of all sites for each CNA was then calculated and ordered from highest to lowest. Certain CNAs have a limited number of sample sites (range: 1-10).
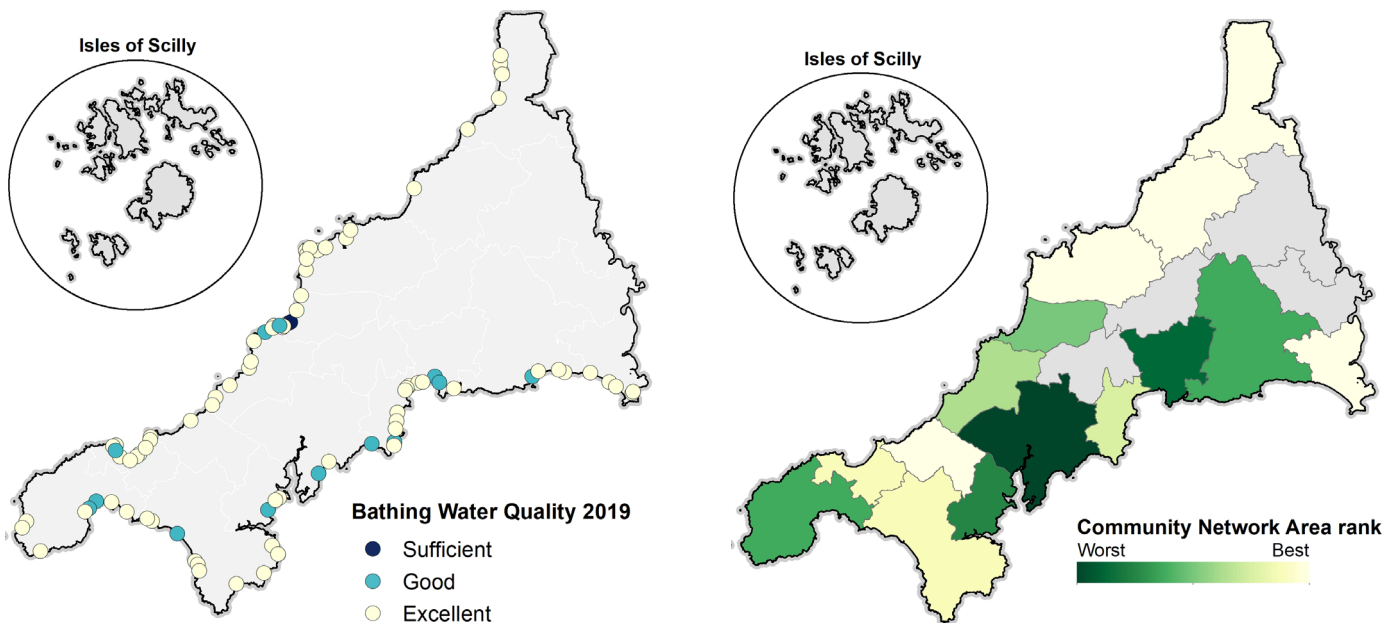
FIGURE 34

Bathing water quality status displayed for all monitoring sites. Highly clustered monitoring sites may overlap.

FIGURE 35

Bathing water quality status aggregated to a CNA resolution and ranked best to worst.

Soil and Waterway Health

The Soil and Waterway Health domain was a direct measure of the 'Ecological quality of water bodies'. The original data used in the *State of the Doughnut* assessment were available from the Environment Agency (2016) at a sub-county level. This dataset measures the number of sites that failed to achieve good ecological (nitrogen and phosphorus pollution) water quality. To rank the categorical source data by CNA, status values that were 'High' were assigned a score of 1, 'Good' 0.75, 'Moderate' 0.5 and 'Poor' a 0.25 (no sites received a 'Bad' status in 2016). The mean score of all sites for each CNA was then calculated and ordered highest to lowest. The number of sample sites within each CNAs was highly variable (range: 7-27).
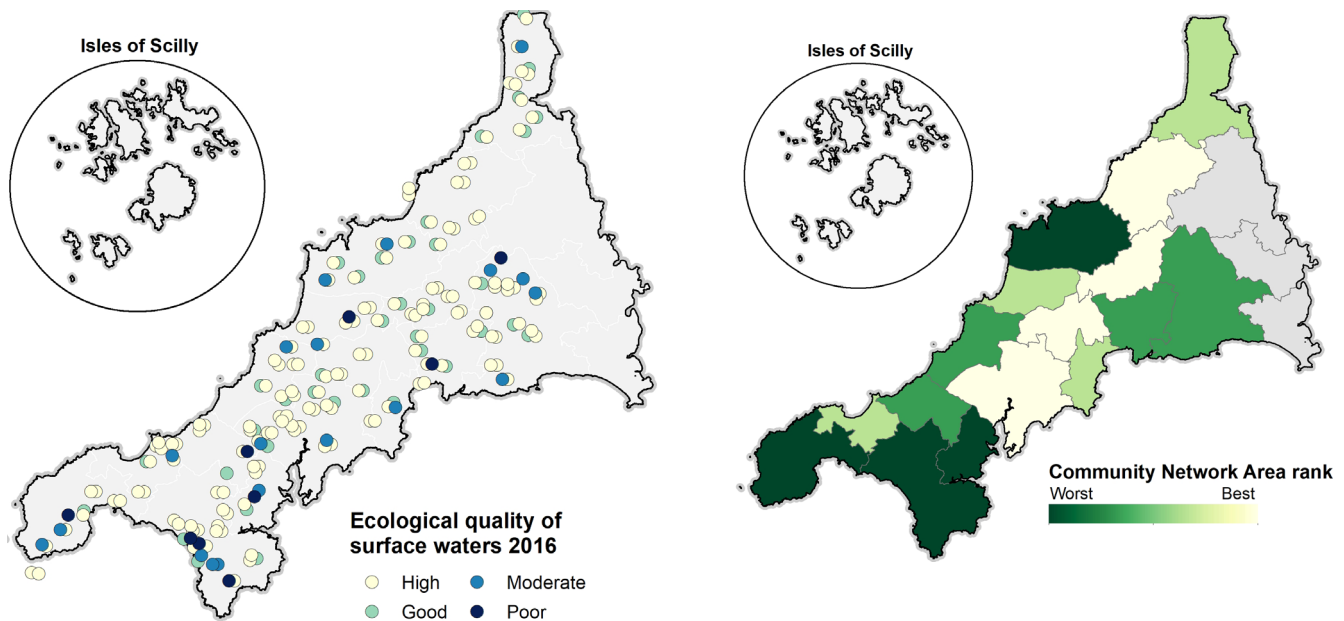
FIGURE 36

Ecological quality status of water bodies displayed for all monitoring sites. Site location is approximate to reduce overlap.

FIGURE 37

Ecological quality status of water bodies aggregated to CNA resolution and ranked best to worst.

Waste

The Waste domain was a direct measure of 'Household waste disposal'. The original Defra dataset used in the *State of the Doughnut* assessment was not available at a sub-county level. Cornwall Council Recycling Facts data 2016/17 are displayed as proxy. This dataset measures the mean kerbside recycling rate (recycling per property (kg) as a proportion of the total waste per property (kg) for each Community Network Area in 2016/17. Using ratios such as the recycling rate are not considered a good metric, as they do not reflect progress towards reducing total waste and non-recycled waste.
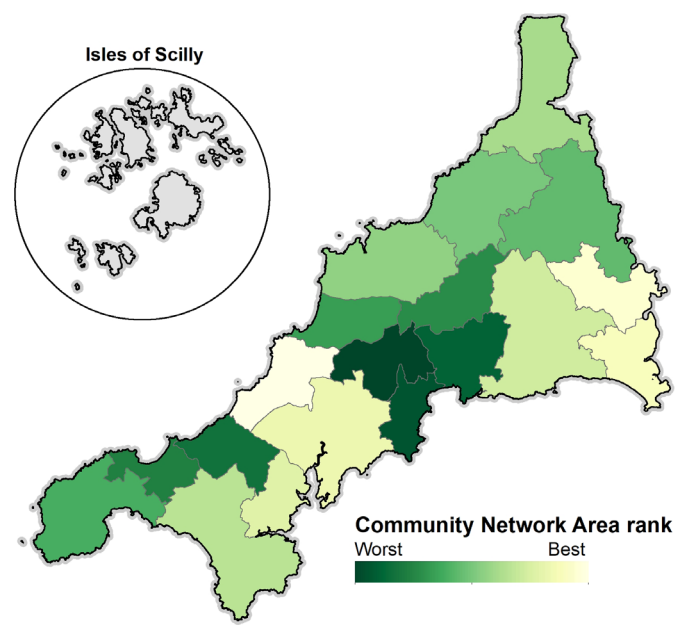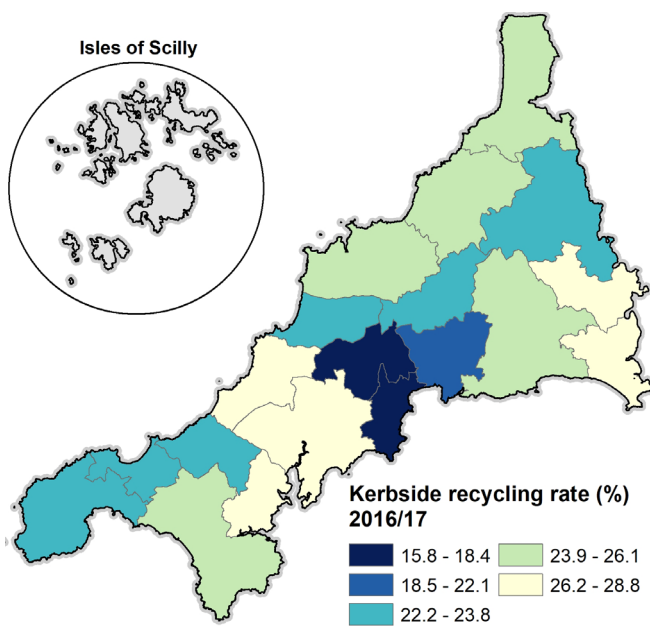
FIGURE 38

Proportion of total kerbside waste recycling per property at a CNA resolution.

FIGURE 39

Proportion of total kerbside waste recycling per property at a CNA resolution and ranked best to worst.

Compiling an aggregated indication of spatial variation at the sub-county scale

To provide an additional layer of variation to the analysis of social foundation and environmental ceiling across Cornwall, we produced a new aggregate indicator that comprises all source datasets. The data were standardised to CNA resolution, ranked from best to worst, with an average 'score' calculated (mean rank). This score was then used to reveal which regions of Cornwall performed better or worse across the entire suite of indicators.

These figures are intended to be used as a baseline understanding of spatial trends in the data. They are informed (where possible) by the source data from the original *State of the Doughnut* assessment and may therefore be reliant on small sample sizes. The figures are not intended to be representative at a CNA resolution. Caveats, including issues of sample size and representativeness, are detailed in relation to each mapped domain above, and must be acknowledged when interpreting the aggregate maps.

To calculate the mean rank scores, all available indicator data were standardised to a CNA resolution. CNAs were selected as they were the most common resolution when mapping individual indicators, and represented a compromise between fine (LSOA, point source data) and coarse (i.e. Parliamentary constituency, regions (East, Mid, West)) resolutions. Where source data were available at a finer resolution, the mean of all intersecting data was calculated for each CNA. Where source data were available at a coarser resolution, all intersecting CNAs were assigned the same value. Parliamentary constituencies did not directly match CNA boundaries, resulting in a subset of CNAs that transected multiple constituencies. In these cases, the mean of all relevant data was used. Once data were standardised, CNAs were ranked 'best' to 'worst' (1 -19) for each indicator, and the mean of these ranks calculated. If multiple CNAs had the same source data value, they were assigned the same rank.

The Isles of Scilly were excluded from the final rankings as spatial data were not available for five of the area's seven environmental domains, and four of the area's 13 social domains.

Social Foundation

1. Cornwall Gateway
2. Wadebridge & Pads.
3. Bude
4. Caradon
5. Bodmin
6. Camelford
7. Liskeard & Looe
8. St Agnes & Perran.
9. Hayle & St Ives
10. Falmouth & Penryn
11. St Blazey, Fowey & Lostwithiel
12. Truro & Roseland
13. Camborne, Pool, Illogan & Redruth
14. Helston & South Ker.
15. Launceston
16. West Penwith
17. Newquay & St Col.
18. St Austell & Mevag.
19. China Clay

Community Network Area
Worst — Best

FIGURE 40

CNAs ranked from 'best' (1) to 'worst' (19) by mean social indicator ranking. Mean rankings are the average of all ranks calculated for individual indicators in the social foundation (Table 1). Details of the indicator ranks that inform this mean are detailed in relation to the individual maps presented above. CNA names are displayed to the right of the figure.

Environmental Ceiling

1. Camelford
2. Wadebridge & Pads.
3. Bodmin
4. Cornwall Gateway
5. Bude
6. West Penwith
7. Liskeard & Looe
8. Helston & South Ker.
9. Falmouth & Penryn
10. St Agnes & Perran.
11. Newquay & St Col.
12. Hayle & St Ives
13. St Austell & Mevag.
14. Truro & Roseland
15. Caradon
16. China Clay
17. Camborne, Pool, Illogan & Redruth
18. Launceston
19. St Blazey, Fowey & Lostwithiel

Community Network Area
Worst — Best

FIGURE 41
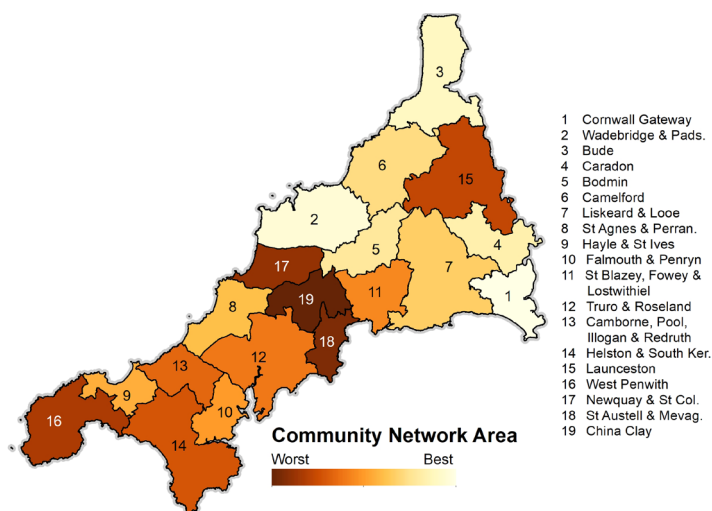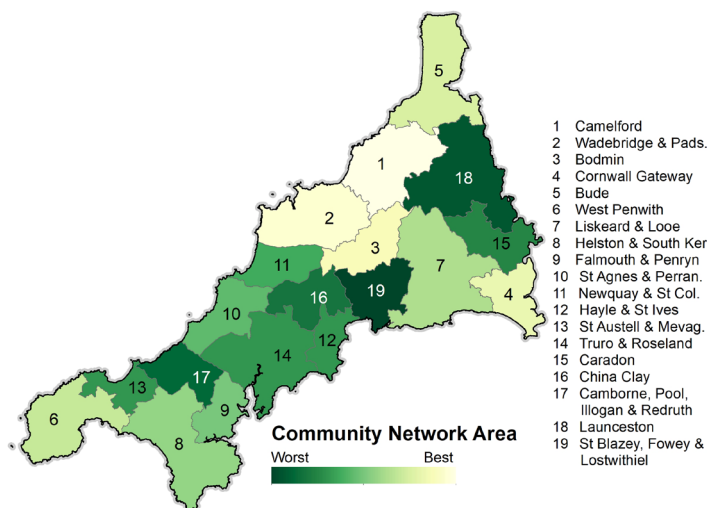
CNAs ranked from 'best' (1) to 'worst' (19) by mean environmental indicator ranking. Mean rankings are the average of all ranks calculated for individual indicators in the environmental ceiling (Table 1). Details of the indicator ranks that inform this mean are detailed in relation to the individual maps presented above. CNA names are displayed to the right of the figure.

Summary

Mapping the indicators identified in the *State of the Doughnut* at a sub-county level highlights a number of key points. First, considerable data gaps exist. Many of the county-wide indicators were not available at a sub-county level, and for those that were, the spatial resolution was variable and often did not correspond to the jurisdictional boundaries of city, town and parish councils. Where the original data were unavailable and alternative data were used, the replacement data were typically not directly comparable. For example, in the sub-county assessment, both access to housing and access to essential services are measured under the same indicator, making it difficult to disentangle these issues. In other instances, it was not possible to source alternative data, something which posed a particular challenge for the Isles of Scilly.

The mapped data show that the status of both social and environmental domains varies across Cornwall, with almost all of the maps showing disparities between geographical areas at all spatial scales. While the *State of the Doughnut* report provided a means to consider which domains may be falling short of the social foundation or exceeding the environmental ceiling at a county scale, this report illustrates the sub-county variation, suggesting that different domains are likely to be of higher or lower priority in different localities within the county. Examining these differences is critical to identify important issues that may be masked by aggregated data at a county level.

Aggregated maps of the social foundation and environmental ceiling suggest that there is some correspondence between social and environmental issues. For instance, several east Cornwall CNAs (including Bude, Camelford, Wadebridge and Padstow, and Cornwall Gateway) are among the best-performing areas for both categories. Others, including Launceston, China Clay, and Camborne, Pool, Illogan and Redruth, are ranked among the lowest for both social and environmental domains. In other cases, however, rankings diverge. Caradon ranks highly in social domains but low in environmental ones, while the opposite is true for West Penwith.

These overviews should be interpreted with caution given the limitations of underpinning datasets, the spatial resolutions at which they are measured, and the complexities of aggregation. More comprehensive data are available for social deprivation through the Index of Multiple Deprivation (IMD; MHCLG 2019), though some domains of the Doughnut, such as social networks, are not captured by this index. For the environmental ceiling, where regional indices tend to focus on particular domains (such as the 'State of Nature' report, which focuses on species and habitats), this report presents a first attempt at exploring spatial inequalities across all environmental domains outlined in the Doughnut Economics model. Although there is considerable scope to refine and improve this assessment, it gives an initial idea of the variability across Cornwall, and can form the basis of further discussions to explore local and Cornwall-wide priorities.
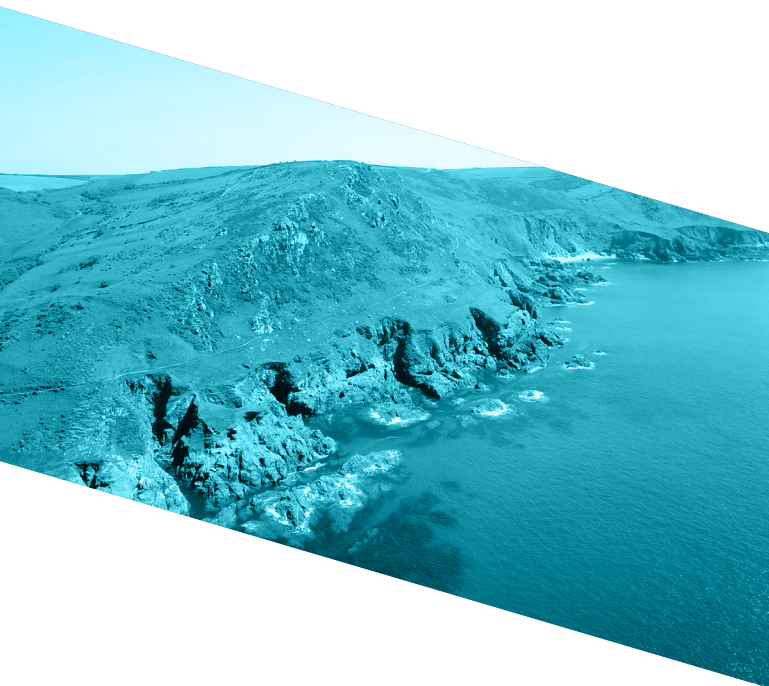
> **"The status of both
> and environmental domains
> varies across Cornwall."**

Perspectives of city, town and parish

Introduction

Cornwall's city, town and parish councils offer an opportunity to connect with the needs and priorities of local people, enabling mobilisation of local communities in addressing sustainability challenges. Place-based policy and practice formulated at the lowest (or first) tier of government can help to respond to the diversity of challenges and priorities identified in Section 3 of this report. The institutional architecture of town and parish councils also provides a ready-made vehicle for systematically connecting local voices to county-wide discussions, agenda-setting, policy, and practice. However, jurisdiction, capacity, resources, and the issues associated with operating as part of a multi-level governance system can present challenges for governance and innovation at this hyper-local scale. This section of the report presents the findings of a survey of town, parish, and city councils in Cornwall. We examine respondents' perceptions and priorities for sustainability across Cornwall, capture actions currently being taken, and document the reported constraints to taking action at this scale.

City, town and parish councils in Cornwall

Cornwall has retained a patchwork of 213 town and parish councils, including one with city status (Truro). These range in size from just 19 voters (St Michael's Mount) to almost 17,000 electors (Newquay), with an average population size of 2,000 adults. These councils comprise elected representatives (councillors), with a precept on the council tax paid to Cornwall Council providing a budget to employ a clerk to administer meetings, provide communications to councillors and voters, and support local developments. These local councils have a very long pedigree, and their boundaries reflect the social geography of life in the pre-modern era. While they used to play a critical role in local governance, their role has been gradually diminished over time, and in many areas of England they no longer exist (Wills, 2016). However, Cornwall Council has been making progress towards an improved working relationship with its town and parish councils for more than a decade (Wills, 2020).

This journey began with the council's bid for unitary status, submitted in 2007, which outlined alternative ways for working with local people, given that the six intermediate District Councils were to be abolished. The would-be Unitary Council envisaged a greater role for the lowest tier of local government saying that: *"The new authority for Cornwall will, in consultation with the relevant councils, consider the case for the delegation of certain responsibilities to the local councils"* (Cornwall County Council, 2007: 40). These early efforts were subsequently boosted by Cornwall's nationally-agreed devolution agreement in 2015 that declared: *"We are committed to the idea of double devolution; many of the increased powers and freedoms that we are seeking will allow us to work with partners to empower local communities to address their needs"* (Cornwall Council, 2015: 8; Willett, 2016).

This concept of 'double-devolution' gained traction once austerity measures started to take effect after 2010. An ambitious ongoing programme of asset transfer was developed to shift management and financial responsibility to local councils for important non-statutory services, such as public toilets, libraries, parks, and community centres (Wills, 2020). These councils have, in turn, been able to raise their council tax precept to pay for such services, moving the financial burden away from the unitary authority. This institutional switching has saved almost all public toilets, parks, and libraries from closure and sale. Whereas austerity has forced councils to take drastic action in other parts of the country (Locality, 2018), the existence of local councils in Cornwall, and the willingness of their councillors and officers to take on responsibility for assets and services, has preserved their position and provided new revenue streams for them. As such, there has been a revitalisation of the role of town and parish councils in Cornwall, and they are a key part of a broader strategy to foster localism, not least around finding solutions to sustainability challenges and responding to the impacts of the COVID-19 virus (Cornwall Council, 2021b).

Methods

A survey was distributed online, via newsletters and individual emails, to representatives from city, town and parish councils across Cornwall during March and April 2021. The survey was not extended to the Isles of Scilly due to the unique nature of the Council of the Isles of Scilly which, despite its small size and income, has a wide-ranging set of responsibilities more commonly associated with a unitary authority (like Cornwall).

The survey consisted of 11 closed- and 13 open-ended questions and was designed to: i) capture perceptions of social and environmental sustainability progress and priorities within the local area, using the domains already identified in *The Cornwall Plan 2020-50* as a framework for the questions; ii) identify actions being taken to improve sustainability; and iii) identify both challenges and opportunities for taking action at a local level. Likert-style scale questions were used to identify perceptions of the state of and priorities for domains within the social foundation and environmental ceiling.

A total of 76 responses were received from 58 cities, towns, and parishes (hereafter referred to as "locations"). Of these, 60 responses were sufficiently complete to be included in the analysis. These included responses from 50 unique locations of a possible 213 city, town, and parish councils (23% coverage, with strongest representation from larger towns and communities) (Figure 42). Respondents were asked to complete the survey to the best of their ability on behalf of the local government body that they represented. However, the views expressed in the report reflect individual perceptions and may not be wholly representative of the views of local government at each location. The majority of respondents were clerks (49%) and councillors (44%), with the remainder comprising other roles (7%).
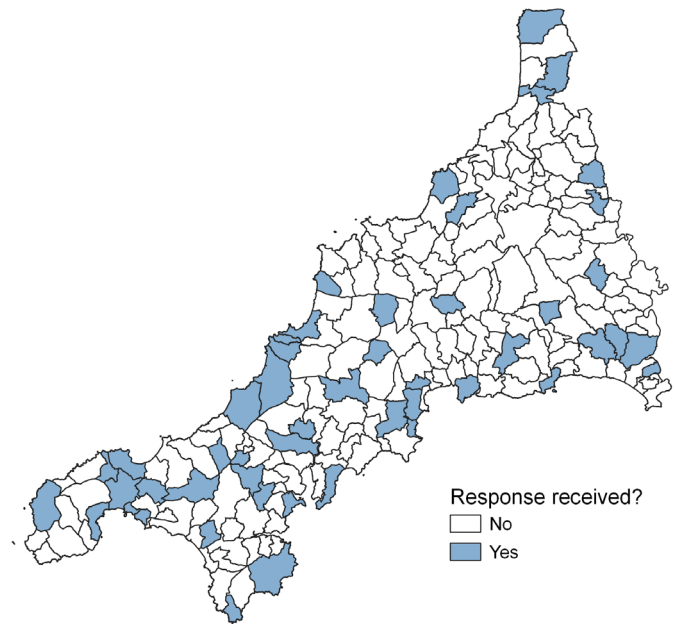
FIGURE 42

Map showing geographical coverage of survey responses across Cornwall (blue indicates at least one usable survey response was received).

Multiple representatives from a single city, town, or parish responded to the survey in nine locations. In order to capture a single perspective from each location, it has been necessary to select only one answer to some of the questions. A decision was made to use only the most complete response, or the first response received if all were complete. Figures, tables, and data indicate whether they represent responses from all participants (n=60), or unique locations (n=50). In cases where data were missing, results are presented as a percentage of the total number of respondents or locations who answered the question.

To identify key themes in the qualitative data collected through open-ended questions, an inductive approach to thematic analysis was used; a process through which codes are generated by identifying themes based entirely on the data (Auerbach and Silverstein, 2003; Miles et al., 1994). Codes were then refined in order to capture the breadth and depth of the data in regard to each question.

Survey results

Engagement with The Cornwall Plan 2020-50

Among all locations (n=50), there was a relatively high engagement with *The Cornwall Plan 2020-50*, with 68% (n=34) of locations aware of the public engagement process that occurred. Fourteen percent (n=7) responded that they had discussed the plan during council meetings, and 26% (n=13) replied that they had read it. One participant explained that aspects of the plan, and the issues it raised, have been discussed in various council-related meetings, while another explained that they have been used to guide funding application processes. There were 12 locations (24%) that were not aware of or had not read the plan.

Environmental sustainability

Perceptions of environmental sustainability issues within local areas, using the framework established by the environmental ceiling domains of the Doughnut approach, were variable. Some domains, including management of carbon emissions and the sustainable management of coasts and seas, were perceived to be in a worse state than others (Figure 43). For example, 51% (n=24) of locations disagreed or strongly disagreed that carbon emissions are being managed to minimise climate change impacts. Such negative perceptions of certain issues, such as carbon emissions, may be partly linked to the perceived cause and scale of the problems. In open comments, participants stated that some issues needed tackling at a higher level and that local efforts would only have a relatively minor effect. Some participants also raised concerns about continued housing development, without mitigation of foreseen environmental impact, or investment in transport infrastructure. This means that the region remains highly reliant on cars and, consequently, emissions remain a key challenge. Such housing developments can also adversely affect the environment in particular locations. In a similar vein, participants voiced concerns about the management of coasts and seas due to the influence of continued influx of untreated sewage across the region.

Cornwall's industrial history also appeared to affect perceptions of chemical pollution levels, as many participants cited historical pollution from mining as having a negative impact on their local area. Perceptions of waste management were also relatively negative, with only 52% (n=26) of locations agreeing or strongly agreeing that waste is sustainably managed and recycled. Participants linked this to decisions made at higher levels of government, including decisions made by the unitary authority to change recycling services, alongside decisions made at national level to permit continued use of non-recyclable materials within industry, both of which were seen to hamper local efforts to improve waste management.

Overall, comments reflected a perception that environmental sustainability issues were nuanced and differentiated even within small local areas. These differences were partly attributed to conflicting interests of stakeholders within the local area. For example, one respondent stated that some landowners are trying their best to conserve biodiversity, while new housing developments are simultaneously destroying local areas of ecological importance. In addition, there was a sense that local efforts to improve environmental sustainability were often overshadowed or thwarted by regional or national-level plans. One respondent remarked that, *"emerging Neighbourhood Development Plans direct good practice, (whereas) emerging national guidance appears detrimental to sustainability and improvement"*. Similarly, 33% (n=6) of participants who provided additional detail for their answers cited continued unsustainable development, mostly for housing, as negating local efforts towards environmental sustainability.

"Environmental sustainability issues were nuanced and differentiated even within small local areas."

FIGURE 43

Response from individual locations (n=50) when asked "To what extent do you agree with the following statements about environmental sustainability in your city, town or parish?"

When asked whether there were elements of environmental sustainability missing from those reflected in the Doughnut model and *The Cornwall Plan 2020-50*, 31% (n=19) of participants raised further issues. Proactive action on habitat restoration, including planting trees and rewilding, was raised in 26% (n=5) of these comments. Transport was also raised by participants (31%; n=6) as a key issue but with some uncertainty as to whether it falls under air pollution or carbon emissions. The tension between the limited availability and affordability of housing (see Social Sustainability) and the environmental impacts of new developments also emerged as an important matter, which some participants (21%; n=4) felt was missing from the Doughnut model and *The Cornwall Plan 2020-50*.

Aspects of environmental sustainability that were perceived to be in a poor state, such as management of carbon emissions, were not necessarily those identified as the highest priority for improvement (Figure 44). This may be due to the perceived need for this to be tackled at a higher level of government and the overall scale of the issue. Accordingly, amongst participants that provided additional information for their priorities, 56% (n=9) explained that they often feel they don't have the mandate or resources to take action. Protecting land for nature and safeguarding areas from unsustainable development were identified as high priorities for improvement at a local level in the majority (76%, n=37) of surveyed locations. Several participants (n=7) provided further detail about why they felt that responsible land use is a key priority, explaining there is a need to ensure guidelines for development are followed. One respondent commented that, *"the planning system does not enforce conditions applied to development in terms of habitat removal"*. Maintenance of natural flora and fauna was deemed a high priority across 55% (n=26) of locations, closely followed by waste management, highlighted as a high priority by 51% (n=24) of locations. Other specific priorities identified by participants included reducing the impact of traffic on air pollution (n=4), as well as management of waste and inadequate sewage systems (n=1).
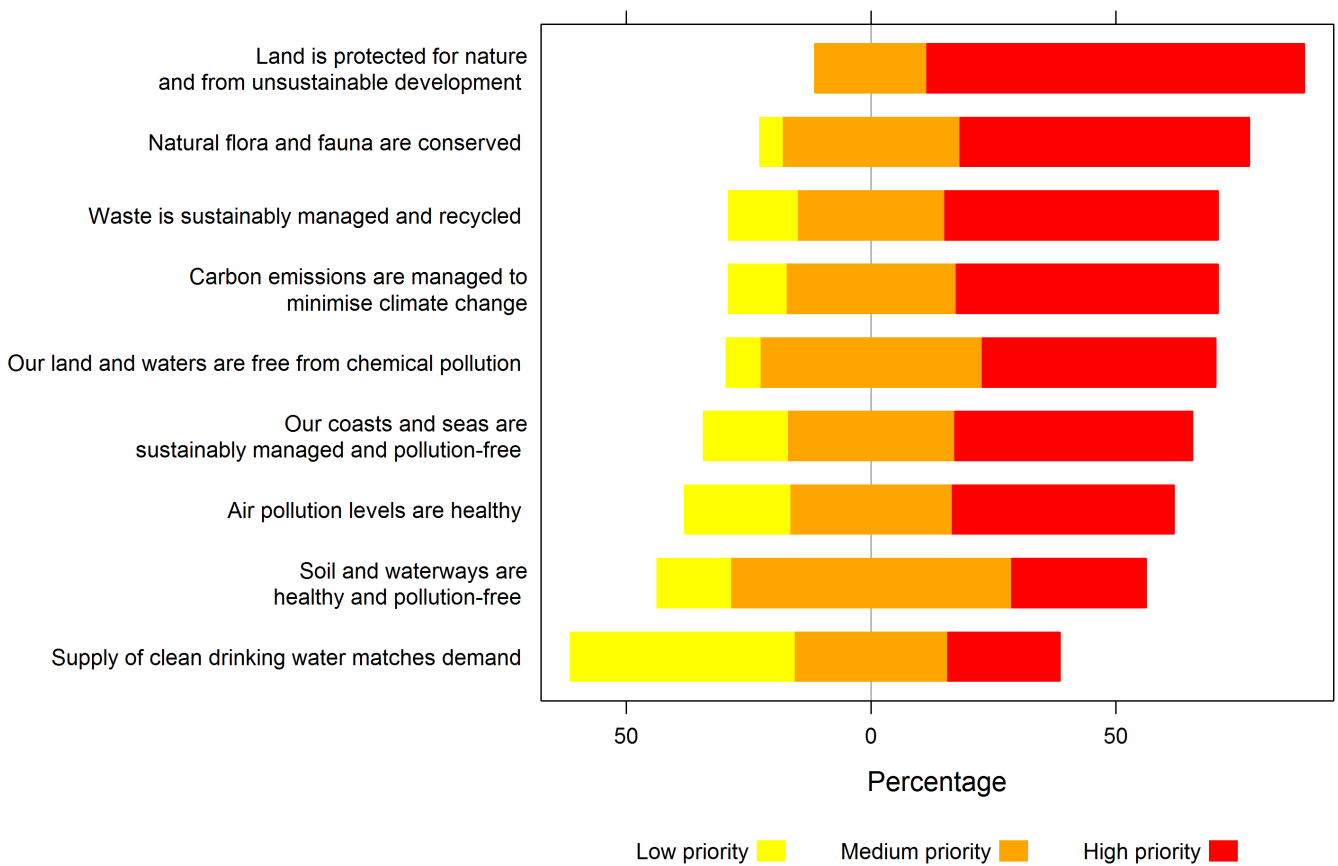
FIGURE 44

Response of individual locations (n=50) when asked "How much of a priority for your council is improving these aspects of environmental sustainability?"

Social sustainability

Perceptions of local social sustainability issues were also variable (Figure 45). Most respondents felt that poverty was a problem in their location, with many disagreeing or strongly disagreeing with statements concerning low poverty rates, including overall poverty (47%, n=23) and fuel poverty (45%, n=22). Connectivity was also perceived as an issue in many locations, with 45% (n=22) disagreeing with the statement that transport and internet connections are sufficient for people to access work, services, and social opportunities.

Thirteen respondents provided additional qualitative information in this section and, of these, 62% (n=8) explained that access to suitable housing was an issue, with limited stock of good housing, high property prices, and a lack of social housing contributing to the issue. Respondents explained that people living and working within their area were not always able to buy a house. However, perceptions appeared to be split across locations, with 41% (n=20) agreeing or strongly agreeing that access to decent, affordable homes was possible for all, compared with 43% (n=21) who disagreed or strongly disagreed. This may represent the diverse picture of housing availability and prices across the region, or the personal opinion of participants. For example, one participant explained that they felt people needed to be more flexible in their aspirations of where they could buy a house.

The issue of limited type and availability of employment opportunities was also raised by participants, highlighting Cornwall's reliance on tourism, which was especially apparent during the COVID-19 pandemic when hospitality was hardest hit. However, 54% (n=26) agreed or strongly agreed that work opportunities are available for all who want to work.
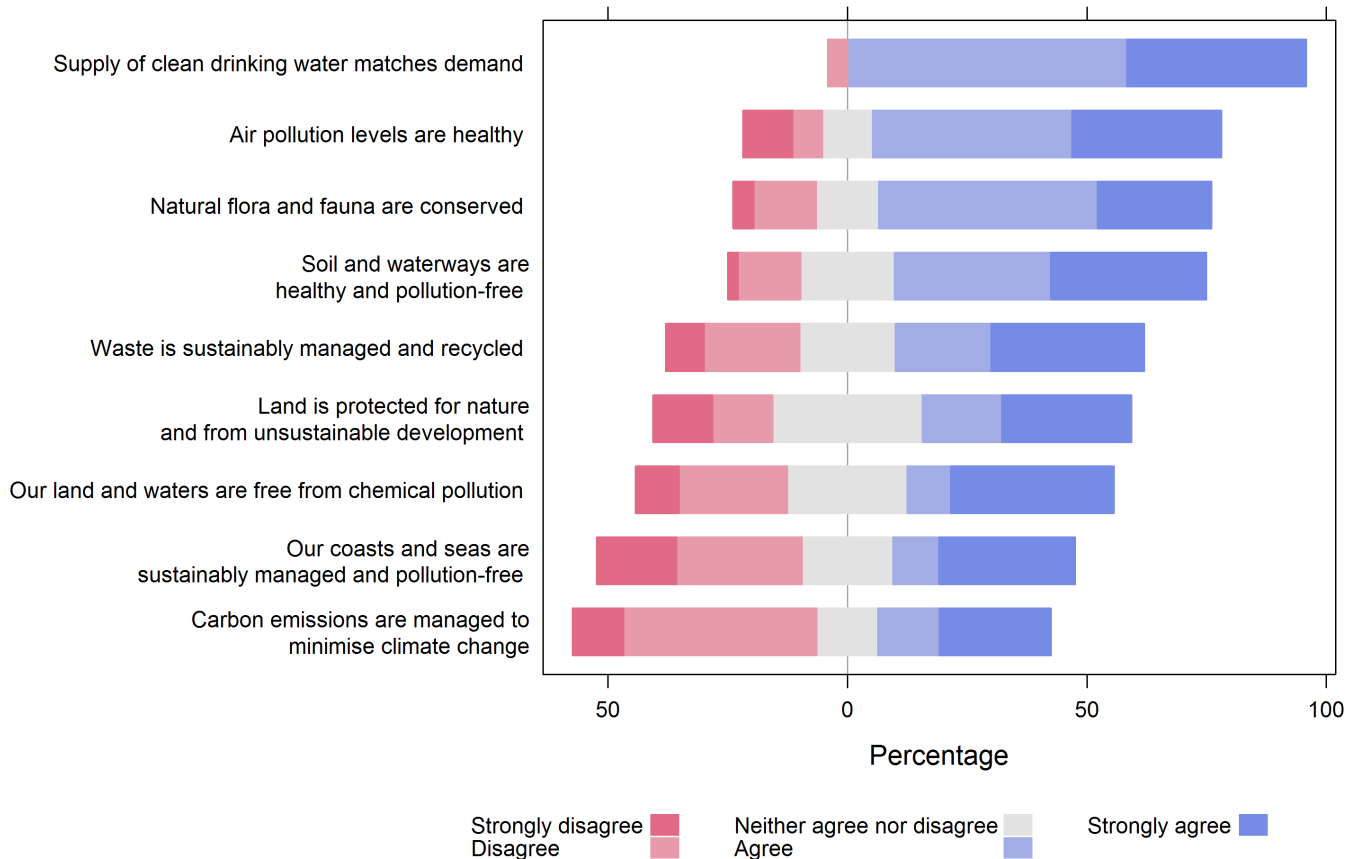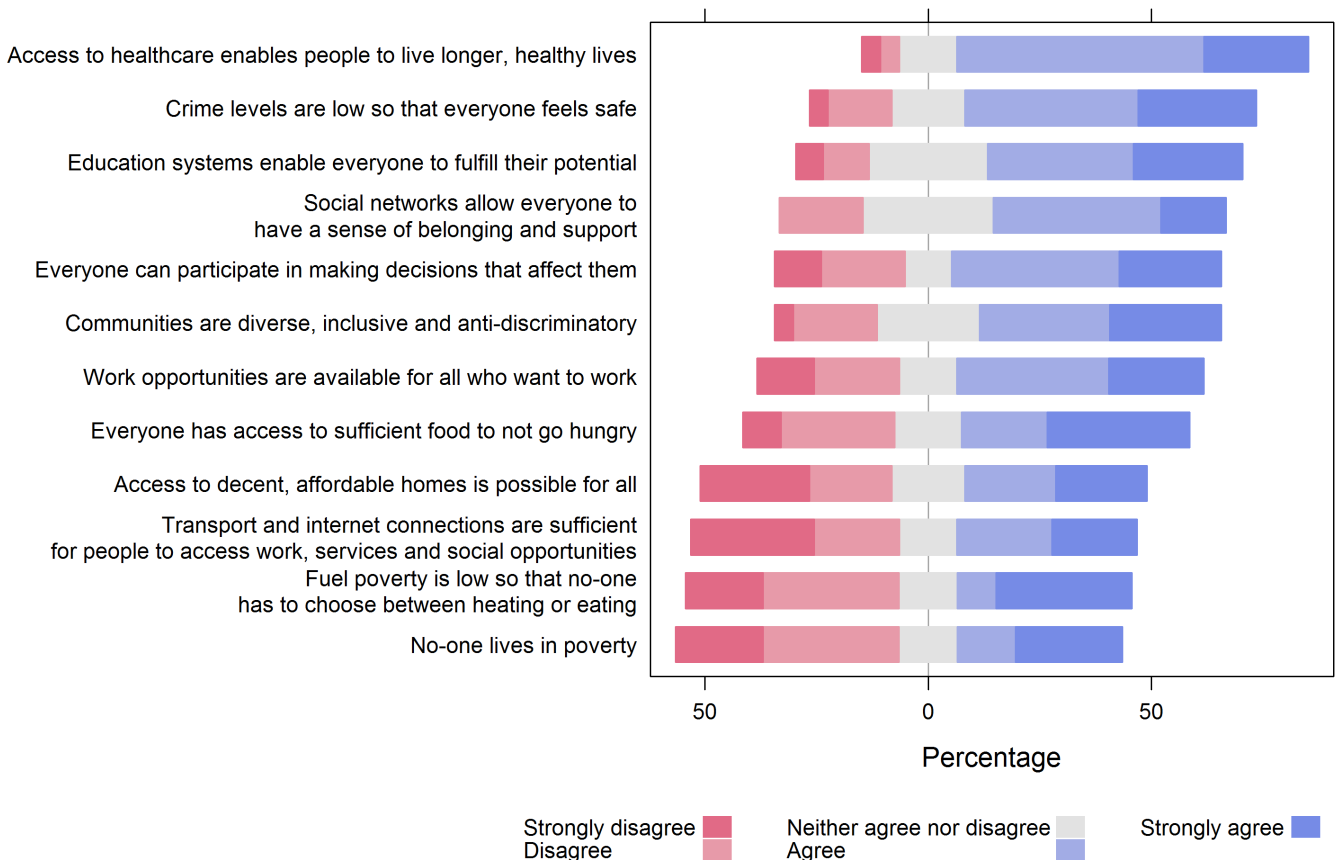

FIGURE 45

Response of individual locations (n=50) when asked "To what extent do you agree with the following statements about social sustainability in your city, town or parish?"

Common priorities for progress in social sustainability included ensuring everyone has access to enough food to not go hungry and ensuring participation in decision making, both of which were deemed to be of high priority by 52% (n=25) of locations (Figure 46). Other priorities included access to decent, affordable homes (a high priority for 50%, n=24) and improving transport and internet connections so that people can travel to work and social events easily (a high priority for 48%, n=23). These priorities link closely with the perceptions of social sustainability issues.

Ten locations provided additional detail regarding priorities. The majority of these (90%, n=9) related to the ability of local councils to effect change, even in cases where issues are perceived to be of high priority. Participants related this to limited mandate and authority, as well as lack of resources in terms of staff and funds (additional information about which is provided below). One participant also highlighted the need to ensure that residents could access initiatives set by higher levels of government, such as national government schemes to maximise the energy efficiency of homes. Another highlighted the existence of conflicting priorities, with the need to provide increased local, affordable housing being traded off against the improvement of local health and education infrastructures. The need for local non-governmental groups and organisations to bridge the gap between local needs and the capacity of local government was highlighted by one participant, further emphasising the need to facilitate community action for change.
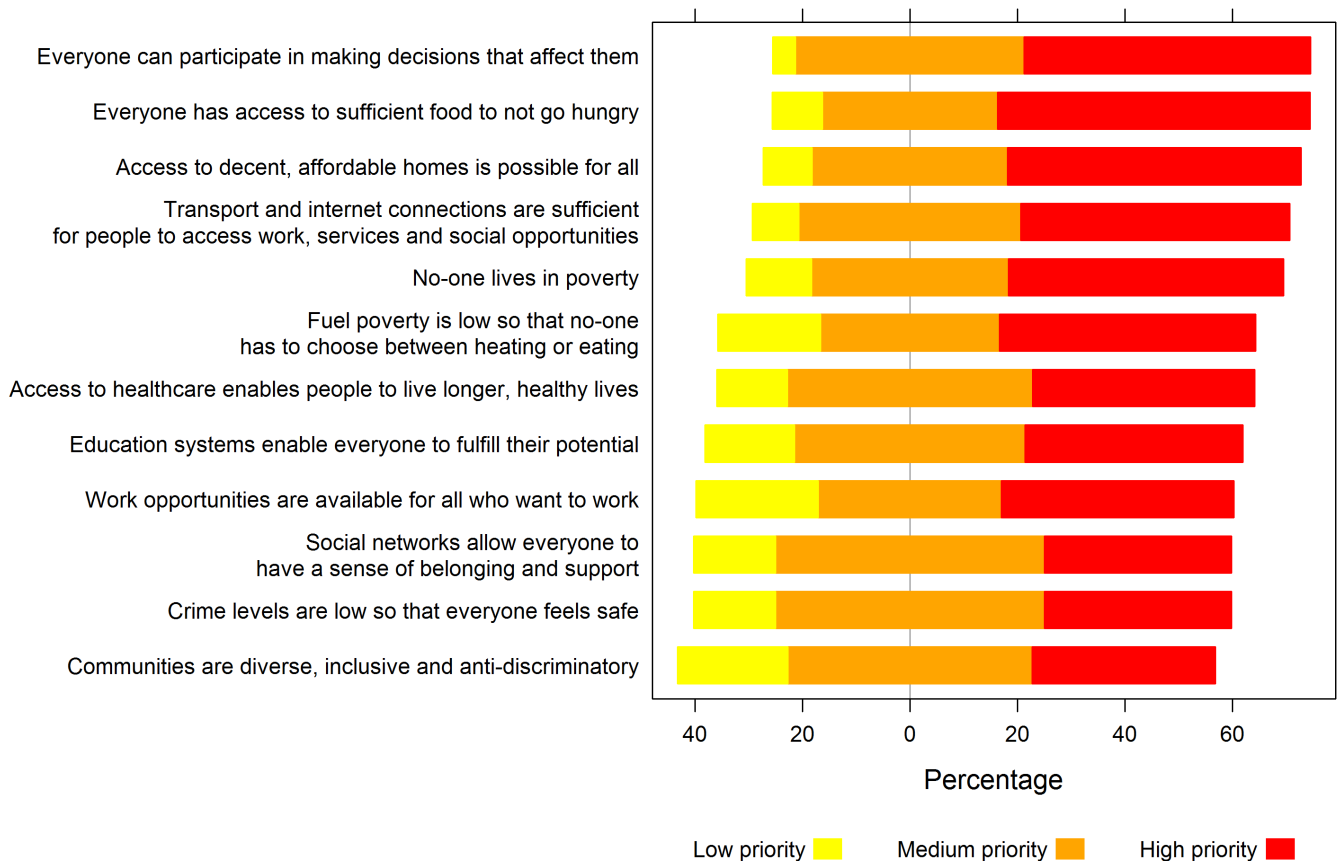
FIGURE 46

Response of individual cities, towns and parishes (n=50) when asked "How much of a priority for your council is improving these aspects of social sustainability?"

Actions being taken to address sustainability

Results suggest a wide variety of actions being taken at a local level to progress social and environmental sustainability by local government and by non-governmental groups and organisations (hereafter "groups") (Table 2). The most detail was provided for actions taken by local councils, likely because of higher awareness and knowledge of internal actions compared with those taken by other local groups.

Sustainability actions in the form of modifications to internal policies, such as using recycled materials or changing energy use, were the most frequently mentioned form of action by local government (mentioned by 38%, n=19, of locations). Aligning internal policies and plans with wider sustainability goals, such as those set at unitary government level, was also discussed. The second most frequently mentioned action (34%, n=17, of locations) was increased engagement with community members in planning and decision-making processes. This included development of Neighbourhood Development Plans (NDPs), mentioned by 24% (n=12) of locations, and the establishment of community working groups for the environment and climate action. One respondent explained that developing their NDP had been done to help *"protect the environment and help shape acceptable development"*.

Changes to the management of public infrastructure were also mentioned across 30 locations (n=15), including newly devolved assets that were now being managed locally after transfer from Cornwall Council. Examples included taking on management of local libraries and expanding available services and support, as well as buying areas of land for community purposes such as meadows or orchards.

The majority of locations (74%, n=37) reported that support had been given to local groups to advance social and environmental sustainability, with 30% (n=15) of locations mentioning specific local groups. The level of interaction and support between such groups and local government appeared variable, with some councils being actively engaged in setting up community groups,

and others assuming a more supporting role following their establishment. Specific types of support included funding, provision of spaces for activities or projects, training and provision of education materials, and organising events. Funding was mentioned specifically by 14% (n=7) of locations, including the provision of both one-off grants and ongoing support. Working collaboratively was mentioned, and one participant explained *"[the] local school, members of the public and the local churches (all of us) work together on various projects"*. The types of action taken by local groups with support from local authorities varied, but actions designed to improve social wellbeing were most common, mentioned by 36% (n=18) of locations. This included support for social events, support packages of food, and offering spaces for recreation and play. Supporting local groups engaged in waste management, including litter picks, and improving public infrastructure, such as community garden projects, were also frequently mentioned by 28% (n=14) and 24% (n=12) of locations respectively.

Forty-four percent (n=22) of locations provided detail about actions taken by local groups without any form of support from local authorities. These activities commonly focused on social wellbeing (14 locations), mostly concerning foodbanks and social networks. For example, the creation of local community communication networks, such as newsletters or social media groups, were mentioned for 10% (n=5) locations. In some instances, these actions had been motivated by the effect of the COVID-19 pandemic on increasing social isolation and poverty. One participant said that *"Existing community support networks (and) organisations (were) extended to provide additional practical and telephone outreach support for the vulnerable and those isolating due to COVID-19"*. These activities reflect only those reported by local council respondents and may therefore underestimate the full range of activities conducted by local groups and organisations in relation to local sustainability.

TABLE 2 Actions taken in individual locations (n=50) by city, town and parish councils and local groups with and without support from local authorities.

ACTION	BY LOCAL COUNCILS	BY LOCAL GROUPS WITH LOCAL COUNCILS SUPPORT	BY LOCAL GROUPS WITHOUT LOCAL COUNCILS SUPPORT
Biodiversity restoration	24% (12) mentioned taking actions to support biodiversity. Specific actions include tree-planting programmes and managing open spaces for wildlife e.g. creating meadows or orchards.	20% (10) mentioned supporting actions, including creation of community green spaces, habitat management, and tree planting.	10% (5) stated various groups were engaged in biodiversity restoration, including rewilding and reintroduction programmes.
Carbon emissions	6% (3) specifically mentioned carbon reduction programmes, including the creation of community energy programmes.	2% (1) mentioned that support had been given to a group to raise awareness of the carbon footprint of community members.	2% (1) mentioned that renewable energy projects were in action to reduce community carbon emissions.
Charity and fundraising	6% (3) had led fundraising initiatives or set up funds for local causes.	4% (2) mentioned support of local charities and fundraising projects.	4% (2) mentioned that charities were active in contributing to local causes.
Community engagement and consultations	34% (17) had initiated community consultation processes, including NDPs, and had taken steps to improve community engagement with decision making and planning.	10% (5) mentioned supporting engagement of groups through consultation processes or setting up new community groups.	2% (1) stated that a group had organised a campaign for greater transparency and accountability by decision makers.
Economic development	4% (2) had engaged in plans to attract business to local areas, including bidding for funding to improve viability of business.	2% (1) mentioned that action was being taken through the chamber of commerce to improve local business.	Not mentioned
Land use and development	24% (12) had taken action to ensure more sustainable development, mostly focusing on providing affordable housing and opposing unsustainable plans.	4% (2) mentioned supporting local groups by providing council land or properties for various projects.	Not mentioned
Public infrastructure	30% (15) participants mentioned changes to public assets, including streets, parks, and recreational facilities. Some mentioned taking on wider responsibilities for their management.	24% (12) stated that groups had been supported to improve community assets or to become more engaged in their management.	4% (2) described support for community assets, including farmers' markets.
Social wellbeing	20% (10) had engaged in support for the local community, including helping with food and medical deliveries, and creating teams of volunteers to combat social isolation.	36% (18) described supporting actions such as social clubs and activities. Foodbanks, deliveries, and meal services were mentioned for 13 locations.	28% (14) described activities for social wellbeing. Community-run foodbanks and meal deliveries were mentioned for 5 locations. Other activities included mental health initiatives and social activities.
Waste management	22% (11) mentioned action taken on waste. This included taking the lead on plastic-free schemes, maintaining community recycling facilities, and litter picks.	28% (14) mentioned supporting initiatives designed to raise awareness of litter management, organise litter picks, and provide recycling services.	8% (4) mentioned waste management, including beach cleans and recycling initiatives.
Lobbying and campaigning	14% (7) had advocated and campaigned for changes at higher levels of governance, including improved public transport and recycling policies.	Not mentioned	Not mentioned
Internal policies	38% (19) mentioned changing internal policies to improve sustainability of local government, including waste reduction, energy use changes, and the adoption of climate-friendly policies in decision making.	Not applicable	Not applicable

Challenges to taking action

The most commonly reported challenge facing local authorities in their environmental and social sustainability efforts was lack of funding, followed by limitations to human resources and capacity (Figure 47). The limited engagement of businesses, landowners, residents, and local organisations was also commonly mentioned, while limited support from local councillors was less commonly perceived as a challenge. A quarter of respondents 25%, (n=15) mentioned lack of statutory power or formal mandate as a challenge, while 37% (n=22) cited the lack of available knowledge or expertise as a constraint. 'Other' challenges included the difficulty of retaining committed volunteers long-term and ensuring that they have the correct training and expertise to help (n=2), as well as barriers to effective interaction and engagement with Cornwall Council (n=2). The impact of the COVID-19 virus on limiting possible activities was also mentioned by one respondent.
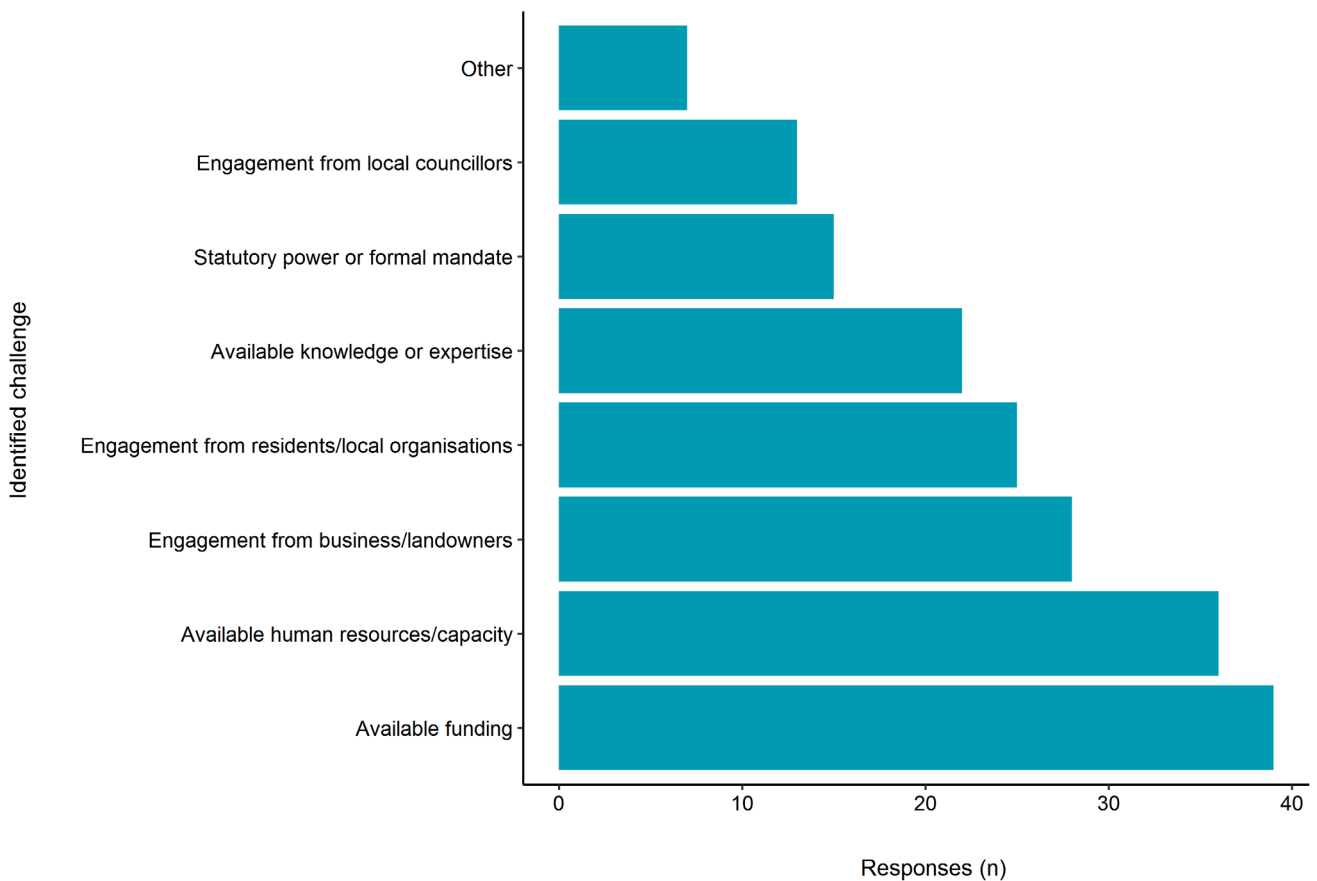

FIGURE 47

Perceived challenges among all respondents (n=60) in relation to taking action on social and environmental sustainability issues.

When asked what changes could solve these challenges, improvements in the way funding is allocated and managed at the local level was a key theme (14%, n=7). Some respondents identified specific projects that could be funded to solve identified issues, whereas others advocated for a wider restructuring of how local government receives funds. Increased human resources, in terms of staffing, and increased availability of data and expertise to make decisions were also suggested. One participant explained that they didn't feel they had the information to decide what action to take, stating that *"we don't necessarily know what approaches we could take that would be appropriate for our size and wouldn't overwhelm the council. Good information and guidance/support on exactly how to act on some of these issues aimed specifically at very small councils could help"*.

A perceived need for changes in decision making at the local level was also identified, with 10% (n=5) of participants explaining that increased engagement from communities and stakeholders, such as businesses and landowners, is key. One respondent explained "With all things in a parish council, good community engagement is needed. We don't always get much interest from the parishioners". Issues concerning the limited mandate of local authorities and the difficulty in influencing decisions made at a higher level were raised by 14% (n=7) of participants.

Participants listed a variety of actions they would like to take in the absence of existing challenges (Table 3). While some participants listed specific projects that they would like to carry out at a local level, such as social clubs or the provision of water taps in public areas, others outlined broader actions, such as having a greater influence over decisions regarding transport and development.

TABLE 3

Response of individual locations (n=50) to the question "What key actions would you like to do to improve the social and environmental sustainability of your city, town or parish if you had more resources, capacity, or autonomy?"

ACTION TYPE	EXAMPLES	NUMBER OF LOCATIONS
Public infrastructure	Increased provision of public spaces for recreation and play that suit local needs. Increased presence of sustainable infrastructure, e.g. electric charging points.	13
Decision making and community asset management	Increased devolution of community assets and increased mandate/authority to influence decisions, e.g. development.	9
Land use and development	Action to increase affordability and sustainability of housing, including ensuring they are carbon neutral.	8
Biodiversity restoration	Creating spaces for wildlife, including grass verges, community nature reserves, and rewilding projects.	5
Transport	Improved affordability and provision of public transport.	5
Carbon emissions	Community energy projects, e.g. wind turbines, and carbon neutral development.	5
Social wellbeing and events	Increased variety of social events, e.g. for certain age demographics, and support networks. Support for vulnerable groups with complex needs.	4
Waste management	Improved recycling facilities and waste-reduction initiatives.	3
Economy	Training programmes to improve employability and diversification of available jobs.	2
Internal sustainability policies	Improved sustainability of local government buildings, e.g. solar panels.	2

Making decisions regarding social and environmental sustainability

The findings of this report highlight the importance of personal experience and feedback from parishioners in shaping local government priorities and perspectives on the state of social and environmental sustainability (Figure 48). When asked what informed their responses to questions about environmental sustainability, one participant stated: *"I witness the pollution first-hand"*. Participants further explained that they used information gained from community engagement and consultation processes, including NDPs and the actions of working groups or local groups addressing sustainability matters. For example, one participant said their priorities for environmental sustainability were informed by *"Engaging with the public, as a council it is important that we engage with the public and the environment is the issue where we get [the] most response"*. Overall, it was identified that discussions at council meetings are more often used for making decisions about priorities, rather than for informing perspectives on the state of social and environmental sustainability. One participant explained that budgets are also important when it comes to discussing priorities. Analysis of local data was deemed more useful for assessing priorities and perspectives on social sustainability than environmental sustainability. One participant also stated that the actions of local groups, notably those working to reduce food poverty, were key in shaping social sustainability priorities.
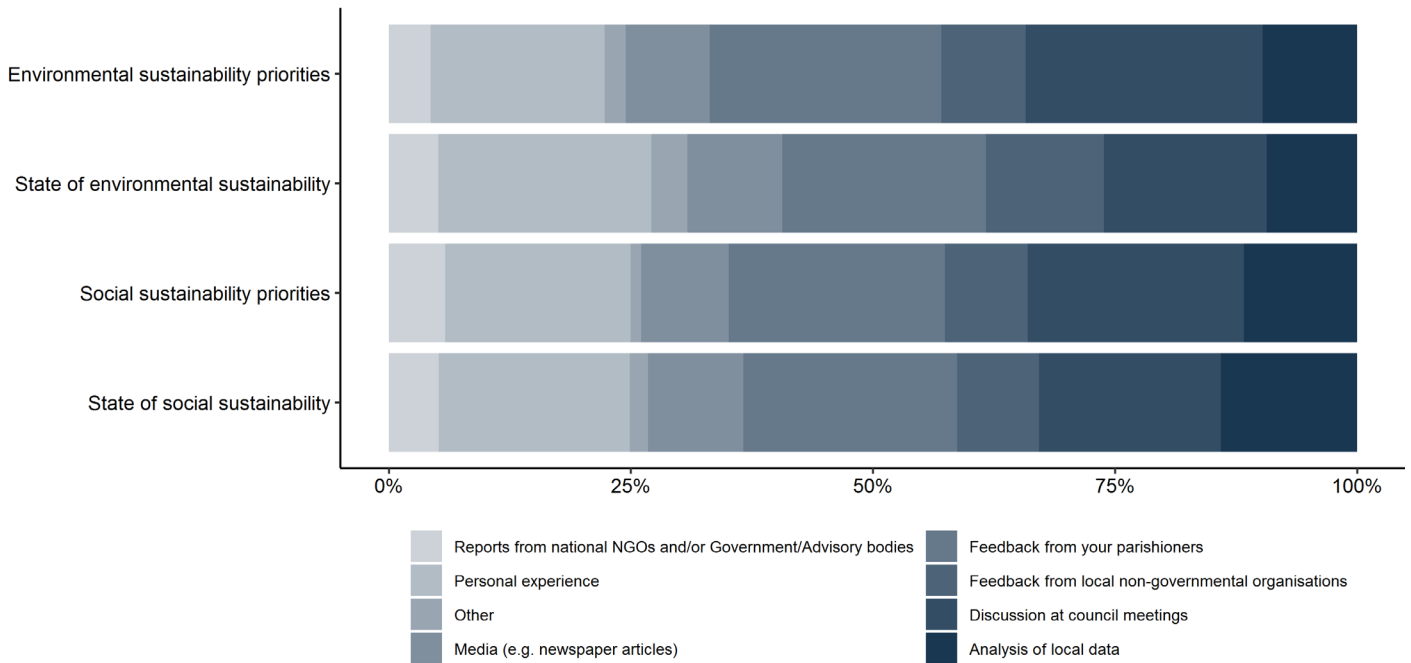
FIGURE 48

Sources of data and information used to inform perceptions on the state of social and environmental sustainability, and to make assessments about sustainability priorities in local areas.

Overall, survey responses gave the sense that respondents would like an increase in the provision of targeted data and knowledge to help them make assessments about sustainability and identify potential actions. One participant noted that *"these are serious issues and I believe many need addressing. We would benefit from support in making assessments about the issues highlighted"*. When asked about their perceptions about environmental and social sustainability for this survey, an average of 3% were unsure how to score social sustainability issues in their area, while an average of 6% did not know what priority to assign to given social or environmental issues.

Summary

The survey results revealed a wide variety of perspectives concerning social and environmental sustainability at the town and parish scale within Cornwall. We found that perceived problems did not necessarily translate into priorities for the local council. This may be partially due to the mismatch between the scale of problems and the perceived (in)ability to control them at the local scale, particularly in relation to issues such as carbon emissions. Key environmental issues that emerged as priorities for improvement included stopping unsustainable development and conserving natural flora and fauna. Concerns about the management of new and existing development and land use change was repeatedly raised in the survey. Ensuring affordable housing for all was a key priority highlighted by many participants; however, current development was also a cause for concern. These issues represent the potential conflicts that can arise when trying to make progress under different domains, and such challenges highlight the need to monitor the combined effect across all domains when seeking to understand change and determine action.

Overall, the survey findings identified a wide variety of action taking place at a local level to support sustainability. Positive examples of change were given by almost all participants, from improved internal processes to action taken by local groups. There was strong interest in supporting local groups in recognition of their role in meeting emerging community needs, reflected in one participant's statement that *"Given more funding it would be fantastic if we were able to support the work of more community organisations who do so much to help people within the town"*. Examples of action taken to improve social wellbeing by local groups were frequently mentioned, particularly in community-based support to reduce social isolation and food poverty. Some of these actions were directly linked to increased need due to the COVID-19 pandemic, highlighting the extent to which communities can offer a quicker response to emerging needs, compared to action taken at a higher level, which participants noted was much slower. Environmental actions were also frequently mentioned, especially those focused on waste management and biodiversity restoration. However, an overriding factor that was continuously stressed throughout the survey process was the importance of understanding and meaningfully incorporating community needs in future decision making and planning.

> **"Positive examples of change were given by almost all participants, from improved internal processes to action taken by local groups."**

Stakeholder perceptions and priorities in Helston

Introduction

In order to further develop our understanding of the ways in which sustainability challenges are experienced and perceived by local communities, and how multi-level governance shapes responses to local challenges, further research was undertaken to explore these issues at the urban scale. An in-depth case study identified the range of perspectives on sustainability challenges amongst stakeholders in one locality, Helston, further examining the locally-specific opportunities and challenges for organisation and action.

With an estimated population of 12,160, Helston is the largest town in the 'Helston and The Lizard Community Network Area (CNA)', which encompasses eighteen parishes (Local Insight, 2021) in West Cornwall. The most south-westerly point of mainland Britain and seasonally popular with tourists, the Lizard Peninsula is an area of biological and geological importance, classified as an Area of Outstanding Natural Beauty (AONB) with eight Sites of Special Scientific Interest (SSSI). Helston is home to one of Cornwall's largest single-site employers, Royal Naval Air Station (RNAS) Culdrose. The town also neighbours the National Trust's Penrose estate, which is home to the county's largest natural lake, Loe Pool, and links Helston with the nearby coastal town of Porthleven.

Community groups and local authorities have been actively engaged in addressing climate change and sustainability issues for many years. Helston Town Council declared a climate emergency on 21 March 2019, and Helston Climate Action Group (HCAG) published the *Helston Climate Action Plan* in September 2019. This audited the town's carbon footprint and outlined a number of projects that would contribute to social and environmental goals by generating six 'co-benefits': carbon reduction, sustainable economy, equity, health and wellbeing, nature restoration, and resilience (HCAG, 2019). Raworth's Doughnut model was used in the design and planning process to ensure projects contributed to creating a socially just and environmentally safe space.

This initial experimentation with the application of Doughnut Economics makes Helston an interesting case study to explore how aspects of social wellbeing and environmental health are prioritised by local stakeholders, and to identify opportunities and constraints to initiating and sustaining action on sustainability at the urban scale.

Methods

A broad range of stakeholders with interests in social, economic and environmental aspects of sustainability in Helston were identified through discussions with Helston Climate Action Group and desk-based research into community groups and organisations working within the town. In total, 39 unique groups or organisations were identified, spanning community groups and charities, local authorities, arts and cultural organisations, local businesses and industries, community institutions such as schools, and religious institutions. Twenty-four individuals were asked to participate in an interview with one of two researchers. Schools, healthcare providers, and law enforcement organisations, though identified as important local stakeholders, were not contacted because of the pandemic-related pressures facing these sectors. In total, semi-structured interviews were conducted with 16 individuals representing 14 local groups and organisations (Table 4). Two representatives occupying different roles were interviewed from both Helston Climate Action Group and Helston Town Council. Quotes attributed to these representatives are identified uniquely as either A or B in the results. Interviews were conducted via Zoom and typically lasted 45-60 minutes. They were recorded with permission and transcribed using Otter.ai.

Interviews covered perceived social and environmental sustainability issues in the locality, perceptions of collaboration among stakeholder groups and engagement in local governance, and the challenges and opportunities perceived around further action towards improving local sustainability. Questions put to interviewees were framed by the Doughnut Economics model, and also by principles outlined in Cornwall Council's *Localism Strategy*, which guides their approach to *"unlock the power of community"* (Cornwall Council, 2021b) by focusing on community assets and services, community decisions, community action, and community support. Interview questions were framed in this way to understand how residents and community groups within Helston felt able to drive changes that would meet community needs and enhance local resilience through local-level action towards sustainability goals.

TABLE 4

Interviewees and their role in Helston.

GROUP / ORGANISATION	ROLE	ABBREVIATION*
CAST	Chair of Trustees	CAST
Cornwall Council	Community Link Officer	CLO
Helston CIC	Director	CIC
Helston Climate Action Group (A)	Co-founder and volunteer	HCAG-A
Helston Climate Action Group (B)	Volunteer	HCAG-B
Helston Local Food Hub	Founder	HLFH
Helston Museum of Cornish Life	Museum Director	HMCL
Helston Rotary Club	Member	HRC
Helston Town Council (A)	Deputy Mayor	HTC-A
Helston Town Council (B)	Town Clerk	HTC-B
National Trust	Lead Ranger	NT
RNAS Culdrose	Deputy Public Relations Officer	RNASC
Social Prescribing Cornwall	Social Prescribing Officer	SPC
South Kerrier Alliance	Director	SKA
St Michael's Church	Vicar	SMC
Volunteer Cornwall	Community Maker	VC

*Abbreviation indicates the reference used to attribute quotes and data in the rest of this report.
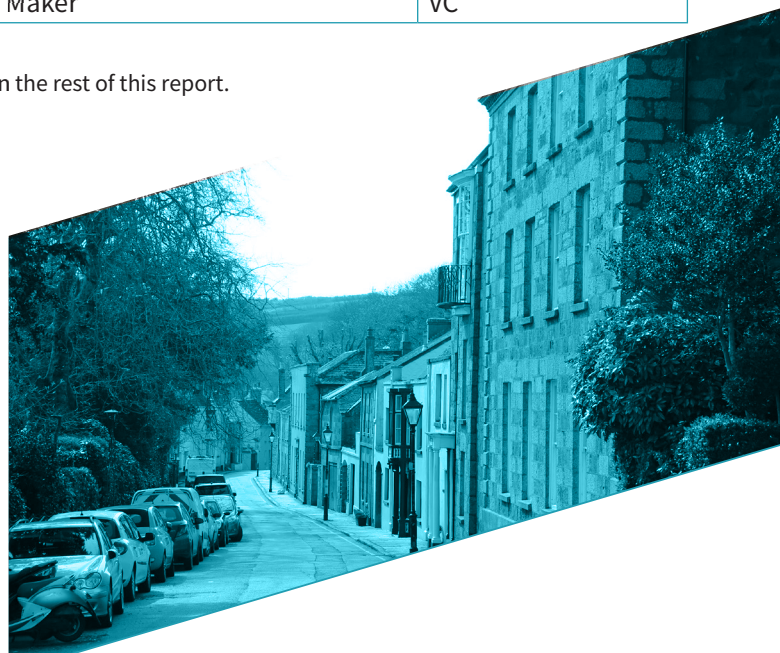
Transcripts were analysed in NVivo, using an iterative method to thematically code responses. The development of a coding framework was informed by Raworth's Doughnut Economics model, *The Cornwall Plan 2020-50* vision (Cornwall and Isles of Scilly Leadership Board, 2020), Cornwall Council's *Localism Strategy* (2021b), and previous research on the application of Doughnut Economics in Cornwall (Turner et al., 2020). One set of codes captured social and environmental sustainability priorities related to Doughnut Economics domains, which included key words identified prior to the interviews, as well as emergent terms being identified in the transcripts, which often involved issues at the intersection of domains and priorities (for example, the decline of the town centre) (Table 5). Of these codes, six related to domains of the environmental ceiling of the Doughnut model, 11 related to the social foundation, and five related to additional priorities that emerged from the interviews. A second set of codes was used to analyse the themes underlying the challenges and opportunities discussed by interviewees. These codes were drawn from themes already identified in *The Cornwall Plan 2020-50* and *Localism Strategy*, as well as emergent codes reflecting stakeholders' priorities, such as issues of trust and transparency. This coding resulted in 36 additional codes, which were grouped under six themes: four themes reflected 'challenges' and two captured perceived 'opportunities' (Table 5).

TABLE 5
Categories, themes and codes generated through qualitative data analysis of interview transcripts. Frequency of codes indicates the number of interviewees mentioning each topic.

CATEGORY	THEME	CODE (FREQUENCY)
Sustainability priorities	Social	Connectivity (Internet) (2); Connectivity (transport) (11); Education (1); Food (5); Health (3); Housing (3); Income (6); Political voice (1); Safety (1); Social network (6); Work (8)
	Environmental	Air pollution (4); Biodiversity (10); Climate Change (6); Land use change (4); Soil and waterway health (4); Waste (2)
	Additional	Culture and heritage (3); Decline of town centre (6); Energy (5); Local environment (access to nature) (7); Planning and development (4)
Challenges	Communication and decision making	Connecting with the public (11); Differing priorities (5); Lack of involvement in decision making (8); Need for wider range of stakeholder voices (9); Pace of change due to decision-making process (5); Power imbalance between stakeholders (5)
	Democracy and governance	Issues of trust (4); Lack of community representation or diversity (9); Limitations of governing structures (8); Lack of action following climate emergency declaration (4); Policies, plans, regulations, bureaucracy (5)
	Resources and support	Access to funds/funding (12); Collective responsibility around climate change (9); For young people (7); From local government (8); From within community (6); Knowledge or understanding (9); Staff or time (7); Suitable spaces to meet needs of community (5)
	Spatial and temporal scales	Landscape or physical geography (4); Scale and urgency of issues (7); Translating broad actions and targets at a local scale (5)
Opportunities	Building community resilience	Gaining wider social, environmental, and economic benefits (7); Improving access to resources (10); Networking within and outside local community (8); Planning for adaptation and sustainability (5); Supporting other community groups (11); Investment and regeneration (6)
	Collective action and collaborative governance	Encouraging collective action and/or collaborative governance (5); Improvements through devolution/localism (5); Participatory decision making (3); Working in partnership with other actors/stakeholders (9); Working towards local, regional or national goals (7); Engagement and outreach (10); Linking different stakeholders (5); Learning from other actors/stakeholders (3)

Results

Priorities for social wellbeing

Of the 12 priorities for monitoring social wellbeing identified within Cornwall (Turner et al., 2020), 10 were identified by interviewees as a priority for Helston as either an issue to be addressed, or an opportunity whereby action for progress was already in effect or being planned (Table 6). The extent to which each was discussed varied across the interviewees.

TABLE 6

Heatmap of identified issues and opportunities relating to social priorities in Helston. Frequencies show the number of interviewees mentioning each social priority. Shading reflects frequency mentioned (darker shades = more commonly discussed by interviewees).

SOCIAL PRIORITIES	ISSUES	OPPORTUNITIES
Connectivity (internet)	2	0
Connectivity (transport)	11	1
Education	1	0
Equality	0	0
Food	3	2
Fuel poverty	0	0
Health	5	1
Housing	3	0
Income	5	1
Political voice	1	0
Safety	1	0
Social network	5	2
Work	7	1

Connectivity (transport)

Transport connectivity was a key issue, mentioned by 11 interviewees. Issues included the infrequency and expense of public transport, poor transport networks, reliance on cars, and insufficient support for cyclists, a combination of which was seen to be making the town *"a bit of an island"* (HMCL). A lack of adequate infrastructure and planning in Helston were perceived to have led to high volumes of traffic running through town along the main road (A394) and high dependency on cars. One respondent stated:

"As a town, we're very isolated. Our transport networks aren't good, we've got no rail link. It's a traditional old market town, it's a hub town for a lot of people in surrounding villages and parishes but the public transport networks aren't good. It's not easy for people to get in and out." (HCAG-A).

Interviewees expressed a desire for cycling to be promoted as an alternative, greener mode of transport: *"You would imagine that public transport and people being able to access places by bike would be increased, but I don't know anyone that would want to cycle to Helston currently"* (HMCL). Some noted opportunities for improving connectivity, including plans for cycle routes between Porthleven and Helston (HTC-B). However, safety concerns and the hilly terrain were perceived as barriers to achieving this:

"Helston is by far the most cut-off town in terms of cycle routes in Cornwall, the only one that doesn't have a cycle route connecting the Cornwall cycle network. It's a very difficult town to cycle out of, with dangerous roads as it's traffic dominated. There's nothing here to encourage people to be more sustainable in their transport." (SKA).

"It's a traditional old market town, it's a hub town for a lot of people in surrounding villages and parishes but the public transport networks aren't good. It's not easy for people to get in and out." *(HCAG-A)*

Cornwall Council's vision for towns that are *"well-connected with safe walking and cycling paths, good quality roads and affordable public transport"* (Cornwall and Isles of Scilly Leadership Board, 2020: 29) is evidently some way off in Helston. Efforts to improve transport links were highlighted by Helston Town Council (HTC-A), whose respondent stated that measures to reduce traffic flow were being considered, in addition to the creation of new cycle routes and a feasibility study to connect the town to the mainline railway.

Work and income

Work and income were commonly discussed social issues (Table 6), particularly the precarious nature of work opportunities. Seven interviewees mentioned a shortage of high-value work opportunities, a reliance on seasonal employment, or lack of support for people to better their employment opportunities through re-education or learning new skills:

"There's a lot of people that are working, but they really can't make ends meet. And they want to get out and they want to get a new job or upskill. But they just can't, because if they stopped, they've got no money. And the threat of not being able to get another job, they just can't deal with that." (SPC)

A lack of job opportunities, and particularly limited high-value work, was seen to have knock-on social consequences: *"We seem to lose [people] from about the age of 18-30 ...[they are] a generation that are almost missing, they have to go away, because there isn't the employment here."* (HTC-A). Helston is home to RNAS Culdrose, which employs around 3,000 people and is a significant contributor to the Cornish economy: *"I think we're one of the largest single-site employers in Cornwall, probably only the hospital in Truro is bigger. We've got about 3,000 members of staff."* (RNASC). However, some interviewees felt that the area's statistics on employment and wages were skewed by this single employer, masking disparities in wealth and opportunity, and issues of poverty and deprivation connected with low wages and the prevalence of low-skilled jobs: *"We have some quite severe areas of deprivation in the town but they're masked in the general statistics."* (SKA).

Housing

Access to decent, secure, and affordable housing within Helston was also perceived as a significant issue, with houses of *"low-quality stock"* (HTC-A), high rental prices and concerns about rising homelessness being mentioned by interviewees. As one interviewee told us: *"Increasingly, what we're seeing is ... people who are struggling with homelessness and rough sleeping"* (NT).

Health

Although issues of physical mobility were mentioned in relation to residents' ability to access nature (see Local environment), five interviewees had concerns about mental health, particularly among young people, and the difficulties surrounding people's ability to access support: *"I'd say the biggest [issue] is mental health. I don't think I have anyone on my caseload that isn't struggling with their mental health."* (SPC). Helston Climate Action Group noted the opportunities for synergies with health when addressing other sustainability challenges: *"So much of what we're trying to do is addressing health, and wellbeing underlies everything that we're trying to do."* (HCAG-A).

Social networks

Social networks were seen as both a challenge and an opportunity for action. Volunteer Cornwall noted the high prevalence of loneliness in the community: *"One of the big things that we're coming across is loneliness. We take calls about that on a daily basis."* (VC). They highlighted that reports of isolation and loneliness were emerging through their work to provide other support:

"What we're finding is that an awful lot of people come to us as a referral for support with shopping. And we make contact and have a conversation with an individual, and that starts to break down into a lot more mental health and loneliness issues." (VC).

Interviewees also saw opportunities to address social isolation through their position in the community or by improving the town: *"Youth engagement, the involvement of older people in clubs, reducing loneliness, reducing isolation, all of that can be done by having a thriving town centre with the right facilities in it."* (SKA).

"So much of what we're trying to do is addressing health, and wellbeing underlies everything that we're trying to do." *(HCAG-A)*

Connectivity (internet)

The issue of internet connectivity was also raised in relation to social challenges, and two interviewees stated that access to the internet and apprehension or lack of knowledge about technology were barriers to use. This may reinforce a digital divide and exacerbate other inequalities within the social foundation, potentially increasing the sense of isolation reported among some residents.

Food

Food poverty was mentioned by four interviewees, with discussion around the need for foodbanks and similar services: *"...people do need the support of groups like foodbanks, which is brilliant that they're there but the fact that they need them in the first place is shocking, really."* (HTC-B). Food was the most commonly mentioned area of opportunity for local community action and interviewees identified plans to set up a new community larder, which had a *"remit to tackle food waste, but [would] be indirectly addressing food inequality and food poverty"* (HCAG-A). Helston Local Food Hub was similarly promoting access to local food for residents: *"To have access to local food [has] been quite transformational to a number of people. And potentially [it] could be transformational further into the future for more people."* (HLFH).

Safety, political voice, and education

Safety, political voice, and education were each identified by a single respondent. Anti-social behaviour was seen by Helston Town Council to be an issue that affected perceptions of safety amongst the community: *"There are a few individuals that do [things] that make people feel there's a problem, which can ... affect people's comfort of going out and doing stuff around town."* (HTC-B). The Rotary Club voiced concerns about a lack of representative democracy in electing town councillors and suggested that local residents could influence change by voting. The Community Link Officer mentioned education as a key social issue, alongside jobs and skills.

Equality and fuel poverty

Several issues were not discussed explicitly. There were no specific mentions of equality as a social priority during the interviews conducted. This could be because disparities are not reported, interviewees did not have this knowledge, or it is considered to pertain to other aspects of social wellbeing. Fuel poverty was not mentioned as a unique social priority, however related issues pertaining to energy were raised by six interviewees (see further discussion in the Energy and Additional Local Priorities sections).

Priorities for environmental health

Six of the nine domains identified for monitoring the environmental ceiling within Cornwall (Turner et al., 2020) were raised by interviewees as priorities for Helston (Table 7), either as an issue that needed addressing, or an opportunity whereby progress was already in motion or being planned.

TABLE 7

Heatmap of identified issues and opportunities relating to social priorities in Helston. Frequencies show the number of interviewees mentioning each priority. Shading reflects frequency mentioned (darker shades = more commonly discussed by interviewees).

ENVIRONMENTAL PRIORITIES	ISSUES	OPPORTUNITIES
Air pollution	4	0
Biodiversity	6	7
Chemical pollution	0	0
Climate change	6	3
Land use change	4	1
Ocean health	0	0
Soil and waterway health	4	2
Waste	2	1
Water resources	0	0

Biodiversity

Biodiversity was the most frequently mentioned priority for environmental health in Helston. Eight interviewees discussed this topic, with issues and opportunities brought up in equal measure. Biodiversity decline, both in Helston and across Cornwall more broadly, was raised as a key concern, with interviewees additionally pointing to continued threats from planning and development, the use of pesticides and fertilisers, and the active discouragement of wildlife by some residents and stakeholders. There was a sentiment that more needed to be done at a greater scale to prevent further decline:

"A lot of the biodiversity indicators are still going down. [...] We've been working really hard for the last 30 years, quite often with tenant farmers, to try and change that, to stop it, halt it, put it in reverse and improve things. It's worked in lots of ways. But what we're very aware of now is [...] it needs to be bigger, it needs to be better, it needs to be more joined up, it needs to be a landscape scale." (NT).

Opportunities to improve the state of nature were evident in the projects and ambitions that interviewees raised. Helston Climate Action Group and the National Trust were perceived by interviewees to be leading on improvements through planting (trees and wildflowers), outreach and education, and partnering with other stakeholders to deliver projects aimed at improving biodiversity in the area. South Kerrier Alliance implied that more needed to be done as, currently, efforts were, *"tinkering at the edges"* of addressing these environmental issues. Opportunities were also mentioned to develop greater engagement and nature connection among local residents:

"We wanted to increase nature within Helston town and just around it, nature recovery, but also get people closer to nature, in the hope that by so doing you get more people caring about it." (HCAG-B).

Climate change

Climate change was the second most commonly discussed environmental priority (Table 7). The National Trust described the effects of climate change in the area including extreme rainfall events and storms leading to accelerated coastal erosion. Helston Town Council (HTC-A) also noted that flooding remains a concern even after millions have been invested in flood prevention. Helston Climate Action Group (HCAG-A) highlighted the challenge of working towards carbon neutrality by 2030, which the town has set as a target in their climate action plan. Opportunities for a collective approach to working towards local and regional targets were emphasised:

"We have been meeting regularly with a carbon neutral team at Cornwall Council to look at how we can best work together. A lot of my work has been focused in Helston, but we can't do this in isolation. We need to be linking up and working collaboratively with people elsewhere in Cornwall as well." (HCAG-A).

This collaborative approach was highlighted by three interviewees who emphasised the need for joined-up thinking, greater community engagement, and support of wider strategies through acting locally to change behaviour and prioritise environmental issues:

"They've [Helston Climate Action Group] also got their footprint project where they're trying to engage with residents to get involved in awareness of the climate emergency and do steps to reduce their carbon footprints. So they're doing a heck of a lot with that." (HTC-B).

"We need to be linking up and working collaboratively with people elsewhere in Cornwall." *(HCAG-A)*

Soil and waterway health

Five interviewees discussed soil and waterway health. Three interviewees highlighted the detrimental impact of agricultural run-off and sewage on the ecological quality of Loe Pool, Cornwall's largest natural lake. Though efforts to improve this are ongoing, there is evidently a need to communicate them within the community:

"Loe Pool is an amazing place but it's massively degraded. And it's degraded as a result of what's going on in Helston and further upstream. [...] If you go down to Penrose and look at the pool, it's beautiful and clear and sunny and all of that, but actually, it's dead underwater. And it's dead because of Helston and sewage coming from the valley and all of that." (HLFH).

Land use change

Land use change was mentioned as an issue by five interviewees: *"The Lizard Peninsula is mostly a farm, 80% of it is farmed and it's a huge source of regret to me that that is the case because it could adapt itself so easily to being much wilder"* (HCAG-B). Making more space for nature was seen to be hindered by the control that farmers and landowners had over their land, with both Helston Climate Action Group (B) and Helston Food Hub mentioning the limited power that communities had to influence land use and its wider impacts: *"It's astonishing how most people have no say whatsoever on what goes on our land, what goes on in our land, and sea. It's left to a few people to just do what they think is their right."* (HCAG-B).

Opportunities for change were noted, particularly tree planting programmes promoted by Helston Climate Action Group and, at a larger scale, by Cornwall Council. However, progress towards making more space for nature was also seen to be hindered by decisions around planning and development. The National Trust highlighted partnerships as an area of opportunity to address these challenges:

"The answers for the future are all in the catchment, where we have very little influence, hence the need to work through a partnership to try and reduce the impacts of sediment loss and fertiliser runoff." (NT; see also Figure 37).

Air pollution

Air pollution was mentioned by five interviewees, who described the impact of air pollution from traffic on air quality within the town, interlinked with issues around transport connectivity (see Connectivity). This priority aligns with the indicator underpinning Cornwall Council's vision for everyone in Cornwall to breathe clean air (Cornwall and Isles of Scilly Leadership Board, 2020), though responses suggested that greater action may be needed to address air pollution within Helston in particular:

"Public spaces within Helston are generally poorly managed safely for the environment. I think traffic movements around Helston are pretty poor so in terms of air pollution, it doesn't feel great." (HLFH).

Quantitative indicators of air pollution shed limited light on this issue as there are no monitoring points in the vicinity of Helston (Figure 27).

Waste

Waste was raised as an issue by two interviewees, with problems of fly-tipping and proliferation of single-use plastic given as examples: *"There's been a lot of fly-tipping that's been left for years and nobody seems to have been able to find the owner of the land, which has made it very difficult for it to get moved."* (HCAG-A). Frustration over lack of action by local authorities was expressed: *"as a community we need to pull together and if none of the statutory authorities can help, then we just get on and do it ourselves"* (HCAG-A). In contrast, local authorities expressed concerns about the timing of asking for action to be taken: *"it just didn't feel like the right time to harass businesses about changing the ways they're doing stuff when they've got enough problems just surviving"* (HTC-B). Waste was also seen as an area of opportunity to engage the wider community.

> **"Public spaces within Helston are generally poorly managed safely for the environment. I think traffic movements around Helston are pretty poor so in terms of air pollution, it doesn't feel great."**
> (HLFH)

Chemical pollution, ocean health, and water resources

Three environmental domains identified for monitoring the environmental ceiling within Cornwall were not mentioned by interviewees: chemical pollution, ocean health, and water resources. Presumably, access to adequate clean water is not considered an issue in Helston, though the framework indicator monitoring the supply-demand balance of freshwater in Cornwall is influenced by household consumption and the impact of climate change. Though chemical pollution was not specifically mentioned, concerns about water quality informed the discussions about Loe Pool, which we identified as an issue relating to soil and waterway health based on the information given by interviewees. The impact of pesticides and fertilisers, which contribute to chemical pollution, was also raised as an issue but specifically in relation to the impact on biodiversity. Ocean health was not addressed by interviewees, perhaps because Helston is not a coastal town. The local economy and livelihoods are not dependent on fishing or coastal tourism in the same way that towns of a similar size may be (for example, Penzance or St Ives). Furthermore, the nearest beach, Loe Bar, has strong currents that have led to fatalities in the past, meaning that bathing and water sports at this site are not encouraged, perhaps reducing local concern about the water quality there.

Additional local priorities

Five additional sustainability priorities emerged in the interviews: culture and heritage, the decline of the high street/town centre, energy, local environment (access to green space), and planning and development (Table 8). These priorities do not in themselves reflect aspects of the social foundation (meeting people's basic needs) nor the environmental ceiling (reflecting environmental limits); rather, they capture issues at the intersection of different factors that are important influences on both local social wellbeing and environmental health.

TABLE 8

Heatmap of identified issues and opportunities relating to other local sustainability priorities in Helston. Frequencies show the number of interviewees mentioning each priority. Shading reflects frequency mentioned (darker shades = more commonly discussed by interviewees).

LOCAL PRIORITY	ISSUES	OPPORTUNITIES
Culture and heritage	1	2
Decline of town centre	5	2
Energy	3	2
Local environment (access to nature)	3	5
Planning and development	4	0

Decline of the town centre

Seven interviewees raised the decline of the town centre as an issue: *"The town has suffered all the classic kind of attrition that follows the development of large supermarkets on the outskirts, and its decline has actually been terrifyingly rapid."* (CAST). Lack of funding support, high business rates, and out-of-town developments were all perceived to be causes for this decline, and are recognised as persistent threats to its future development:

"One of the main things that we're trying to do at the minute is to look at empty premises in the town and repurpose those empty premises. [...] If the town centre isn't addressed, then that's the fundamental base on which you build everything else around the community. To me, that is priority one really. And that is big enough to be priority one, two, three, four and five, because there's so much to do there and the impact would be so positive. Every other aspect, be it youth engagement, the involvement of older people in clubs, reducing loneliness, reducing isolation. All of that can be done by having a thriving town centre with the right facilities in it." (SKA).

The decline of the town centre captures multiple priorities for social wellbeing, including work, income, and connectivity. However, interviewees suggested that addressing this challenge could provide multiple benefits to social wellbeing for the community. Interviewees were eager for investment in the town centre, which Helston Climate Action Group (HCAG-A) remarked would also help build local resilience, one of the three intended outcomes of delivering the town's climate action plan.

Local environment and access to nature

The local environment and access to nature was mentioned as an issue impacting social wellbeing in Helston, particularly under restrictions related to the COVID-19 virus: *"In lockdown we received a lot of feedback from people around Penrose saying it is what kept us going, that access to green space on your doorstep has been a bit of a lifesaver."* (NT). The National Trust's Penrose Estate, Loe Pool and Coronation Park were local assets identified by interviewees as valuable sites facilitating access to nature, whilst challenges of social inequalities such as physical mobility or car ownership created barriers to access:

"We live in such an amazing part of the world but there are a lot of people that just can't access it, whether they can't drive, or a lot of people have physical, mobility issues, where going for a walk down to the beach is just too difficult, they might be in a wheelchair or they haven't got anyone to take them in the car. I think a lot of people won't have gardens and they might live in the middle of a housing estate. There's not particularly a lot of nature around them." (SPC).

Other reports applying Doughnut Economics at national scales, including Scotland (Sayers et al., 2014), Wales (Sayers, 2015), and the UK (Sayers and Trebeck, 2015), have included indicators of access to the natural environment or satisfaction with local area as a place to live. The contribution of the local environment to other indicators of social wellbeing, including health, was also acknowledged when applying Doughnut Economics to Cornwall. However, quality of and access to the local environment were considered as factors that influence social outcomes, rather than social outcomes in themselves, and are therefore not represented in the set of indicators selected to assess the social foundation (Turner et al., 2020).

"We live in such an amazing part of the world but there are a lot of people that just can't access it, whether they can't drive, or a lot of people have physical, mobility issues." *(SPC)*

Planning and development

Planning and development were raised by four interviewees, stating that the current planning system and existing infrastructure of the town has failed to deliver effective changes that would benefit the community: *"Helston has sort of failed to develop over the last few decades. It's always fallen in the shadows of funding, and therefore development opportunities"* (Helston CIC). As with the decline of the town centre, planning and development is a cross-cutting issue that influences social wellbeing and environmental health. Interviewees drew attention to the limited means by which local authorities can influence planning decisions, which are governed centrally in the UK: *"there's a real contradiction between what Cornwall says about its desires and principles and the way it acts when it comes to planning"* (CAST). This is a challenge for communities that have declared a climate emergency and agreed upon a climate action plan working towards carbon neutrality, but it also reflects the limitations of governing structures and how higher-level policy making can lead to negative impacts at the local scale.

Energy

In relation to energy, a lack of financial support to make improvements and a reliance on gas mains were identified as significant challenges to tackling the energy inefficiency of Helston's housing stock. According to the RNAS Culdrose, more than 200 properties owned by the Ministry of Defence in Helston are undergoing retrofitting as part of a £6.7 million programme to improve energy efficiency, demonstrating the significant cost of making homes more sustainable. The challenge of retrofitting new homes and specifications of planned new builds were also raised as issues that may hinder progress towards carbon neutral commitments:

"There's an awful lot of work that needs to be done around retrofitting. I'm really, really shocked that two years after declaring a climate emergency that new homes are being built, every single one of which is going to have to be retrofitted [...] there's over 1,000 homes being built here, none of them are to the kind of specifications we need if we're going to make meet our climate emergency commitments. [...] The challenge that we have to meet our carbon net zero targets is high and is hard enough anyway so to be continuing with that is just irresponsible." (HCAG-A).

It is perhaps unsurprising that energy efficiency of houses was a prominent priority amongst interviewees, given that housing accounts for 14,467t CO_2e (territorial carbon dioxide equivalent), the greatest proportion (28%) of Helston's total annual territorial emissions (52,159t CO_2e) (CSE, 2021). Efforts to create a community energy project are underway: *"We're working on a rural community energy fund to see if we can find ways of generating enough green energy locally to provide benefits to the local community."* (HTC-A). Such projects, if realised, can help local communities generate community-led renewable energy and reduce energy demand, which could potentially alleviate households from fuel poverty and reduce Helston's contribution to climate change.

Culture and heritage

The Cornubian Arts & Science Trust (CAST) and Helston Museum of Cornish Life provide access to education and social spaces for residents and visitors to the town: *"We provide somewhere local within Helston that people can walk to, that doesn't involve travel and where things happen socially, and culturally."* (CAST). Cultural heritage is not explicitly identified as a domain within the Doughnut Economics social foundation, or its application to Cornwall (Turner et al., 2020). In The Amsterdam City Doughnut tool however, culture was chosen as a component of social wellbeing to measure connectedness (DEAL, 2020). Finding a meaningful indicator for culture is problematic since it impacts all areas of social life and, in some cases, environmental quality.

Whilst culture and heritage were considered important aspects of community life, tension between preservation and progress was raised as an issue by Helston Climate Action Group (B), whereby the *"traditions of Cornish towns"* presented an obstacle to addressing the climate and ecological crises:

"The traditions of Cornish towns can be very rigid and not very realistic about the climate crisis and the ecological crisis. [...] They're very much more concerned with preserving what they think is precious because they've always thought it was precious." (HCAG-B).

Identified challenges

Four themes characterised barriers for improving social wellbeing and environmental health in Helston: communication and decision making; democracy and governance; resources and support; and challenges of geography and scale (Table 9).

TABLE 9

Heatmap of challenges to local sustainability action identified in Helston. Frequencies show the number of interviewees mentioning each priority (n=16). Shading reflects frequency mentioned (darker shades = more commonly discussed by interviewees).

THEME	CODE	FREQUENCY
Communication and decision making	Connecting with the public	11
	Differing priorities	5
	Lack of involvement in formal decision making	8
	Need for wider range of stakeholder voices	9
	Pace of change due to decision-making process	5
	Power imbalance between stakeholders	5
Democracy and governance	Issues of trust	4
	Lack of community representation or diversity	9
	Limitations of governing structures	8
	Lack of action following declaration of climate emergency	4
	Policies, plans, regulations, bureaucracy	5
Resources or support	Access to funds/funding	12
	Collective responsibility around climate change	9
	For young people	7
	From local government	8
	From within community	6
	Knowledge or understanding	9
	Staff or time	7
	Suitable spaces to meet needs of community	5
Challenges of geography and scale	Landscape or physical geography	4
	Scale and urgency of issues	7
	Translating broad actions and targets at a local scale	5

Communication and decision making

Communication and decision making were significant challenges that emerged. Difficulties of effectively engaging with the public (mentioned by 11 interviewees), either through active outreach or within formal decision making, meant that citizens were sometimes excluded from local-level decision making. Since legitimacy of decision making is understood to be key to resilience and adaptation (Adger et al., 2006), as well as the health of democracy, it is perhaps not surprising that interviewees raised this concern. A number of interviewees argued that whilst some citizens were engaged, the majority were not:

"It's very hard to engage with people that are happy with things. It's usually the people that aren't happy with a situation that you engage with, which does make it difficult to actually make sure that you're acting on the views of the majority, not the very small vocal minority." (HTC-B).

"The challenge is that half a dozen people are fully engaged with it, there are a few other people who are sort of engaged with it, and then 10,000 people in Helston who might support it but aren't going to do anything. The challenge is to get more people to do stuff, and to grow that community interest." (HLFH).

Interviewees gave examples of their own experiences of being excluded from wider decision making within the community, as well as instances of the community being left out of wider decision-making processes that would affect the town. A recent example of a new development was highlighted by several interviewees:

"The issues of this new out-of-town development that is proposed for Helston that actually involves the town council selling land, that's been a pretty divisive one. And there has been no involvement from anybody in those decisions from any of the community, which is frustrating, because it's been the only thing they've not consulted on." (SKA).

In this regard, interviewees spoke of the need for participatory decision making within the community, and how citizen involvement in participatory decision making offered opportunities for the community to feel, *"involved and have some sort of ownership over what happens"* (HCAG-A).

This need for a wider range of voices to be included in community decision making was perceived to be a priority by nine interviewees, particularly in relation to certain groups in the town. A number of interviewees highlighted the weak representation and voice of young people in the town. Similarly, five interviewees highlighted power imbalances between stakeholders, and how these impacted local action: *"It seems that in this town, we do have a noisy minority of businesses that hold sway a lot but I'm really keen to give people the voice"* (CIC).

Five interviewees highlighted how differing values, goals and priorities can cause challenges in communication and decision making at the community scale. Interviewees suggested that such challenges could be overcome by, *"everyone [being] transparent about what their values are"* (HMCL), but it is also true that stakeholder practices will sometimes collide:

"We made a commitment that we didn't want to leave anyone behind, but all the time we're coming up against other organisations and groups, and statutory authorities that have very different ways of working, which is often undermining what we're trying to do and what we know needs to happen given where we're heading if we keep going in this way." (HCAG-A).

Five interviewees noted that different organisations also work at different speeds, making it hard to align expectations when working together. Comments reflected a general acceptance that this was unlikely to change, and that it represented the *"thorough"* ways in which decisions were made (CIC) although others argued that there was scope for trying things out such that: *"some of it works, and some of it doesn't, but at least we do something"* (SKA).

Democracy and governance

Issues of democracy and governance emerged as an important theme during the interviews, reflecting a common understanding that local problem solving required diverse perspectives from the full range of actors in the local community (Baird et al., 2019). However, some people were mistrustful of the local governing institutions (both in the town and at a regional level). There were concerns about transparency and opportunities for local engagement:

"It doesn't feel like there's much transparency. It feels like all decision making remains rather obscure, which I'm sure is not particular to this town council. I think it's a characteristic of many." (CAST).

"We've had real issues with democracy here ... and the openness and transparency around some of the big decisions that are being taken for Helston without the knowledge of the people of Helston." (HCAG-B).

As with the need for a wider range of stakeholder voices to be included within the decision-making process, nine interviewees stated how a lack of community representation meant that certain groups within the community were not being represented: *"often those people that are missing either just don't have time or they don't have the confidence"* (HMCL). The limitations of governing structures were also seen as a challenge, with eight interviewees calling for greater responsiveness and flexibility of government, and highlighting the disconnect between local and national politics that obscures and even undermines the interest of local communities:

"We are a small segment of a wider decision-making process so we want to achieve something but we don't have the money or the resources or the ability to make that decision. We quite often have to go to Cornwall Council to get them to do it. And of course, at Cornwall Council level it becomes far more politicised between different political groups than at our town council level. You get to a county level and people are making political decisions, political policies, rather than what is necessarily best for their local community." (HTC-A).

The challenges of trying to work proactively within the parameters of established policies, plans and regulations were mentioned by five interviewees, who stated that such complexity impacted the rate at which actions towards improving social wellbeing and environmental health could be delivered, or even prevented change altogether:

"Trying to understand the environment within which we're working, the political [and] social environment, and then trying to be able to be relatively fleet of foot to get things done is a real challenge. Because we live in a more compliance-based world there are more regulations, which is good but, equally, it can take time." (NT).

Another point of contention amongst four interviewees was the perceived lack of action being taken by other stakeholders who were felt to have particular responsibilities. As an example, Helston Town Council and Cornwall Council had declared climate emergencies, but did not then act as quickly as was hoped. *The Helston Climate Action Plan* (HCAG, 2019) was one of the first to be adopted in Cornwall, in September 2019, within six months of the town council declaring a climate emergency, yet some interviewees felt the town council was slow to respond:

"They've adopted Helston Climate Action Group's climate action plan but there seems to be a huge contradiction between that and what appears to be happening." (CAST).

"The challenge, always, is not just to talk the talk but to walk the walk as well, and to actually do it. And that's where community groups must have a role to play in keeping the people who make the decisions up to the mark." (SMC).

Helston Climate Action Group received funding from Helston Town Council to fund two part-time self-employed positions – a Climate Emergency Outreach Officer and a Communications Officer – but it was felt that the town council could have done more to communicate their support of the climate action plan:

"They could have done much more to publicise that, to let people know what they've done. Looking back, that was a fundamental mistake. If they had done a lot more in those very early stages, when they made those commitments, to let people know, then it would have helped bring more people along. We couldn't do that for them." (HCAG-A).

Resources and support

A lack of resources and support was perceived as a barrier to realising actions that would facilitate progress towards local social and environmental priorities. Community support is one of the four principles underpinning Cornwall Council's approach to localism, whereby the local authority supports *"communities to be self-sufficient and resilient by harnessing the talents and resources they already have"* (2021b:8). However, the main challenge raised by 12 interviewees under this theme was a lack of access to funding: *"[despite a] huge amount of aspiration and enthusiasm, we all have to work within the budgets that are available"* (CLO). Local authorities noted that the means to generate the necessary funds were limited, and increasing council tax would only further disadvantage citizens who struggle financially (HTC-B). Several interviewees remarked how Helston had historically suffered a lack of financial support, particularly compared to other towns in the county:

"Helston's not had the same investment as some areas within Cornwall. If you look at the investment that has been brought into the area… I feel it's quite disadvantaged compared to other places within Cornwall that have definitely had more of a focus on them." (HMCL).

"We're too big for some funding, too small for other funding. And we've been missed year after year after year. We've had historical underinvestment in this town." (HTC-B).

"If you look at the last six, seven, eight rounds of funding that Cornwall Council have announced, all have gone to other towns. We've been substantially let down in terms of support for Helston. And that's on a European basis and on a local council basis." (SKA).

Resources of staff or time were also noted as being in short supply by seven interviewees. Several interviewees signalled that they would do more to support other groups within the community if they had greater capacity and time. In addition, a lack of knowledge or understanding was identified by nine interviewees as a barrier for some members of the community, and it was proposed that the community needed 'joining up' to access support from other groups within Helston or Cornwall more broadly:

"I think that's why they [Cornwall Council] employed link workers, so we could pull together all the resources in one place for people to access because I think a lot of people just don't know that they're out there." (SPC).

Five interviewees noted that suitable spaces for the community to meet were lacking in Helston, with a need for community spaces where, *"everybody is welcome"* (HCAG-B). Seven interviewees felt that young people in particular were lacking support: *"there's very little to do in the town"* (CIC), and *"there definitely seems [to be] less opportunities for them"* (HMCL).

In this regard, the lack of resources and support from local government (at both town and county levels) and from other stakeholders or groups within the local community, were perceived as barriers to positive action by eight and six interviewees, respectively. In addition, a low sense of collective responsibility was seen as a barrier to community engagement and action on climate change: *"if you don't have good support networks around you of course you're not going to want to look at it"* (HCAG-A).

Challenges of geography and scale

Processes operating across different spatial and temporal scales were mentioned by five interviewees as a challenge for realising change on the ground. The interviewee from St Michael's Church noted how the drivers and impact of climate change are "wide ranging", with the effects felt differently at various scales, making it difficult to motivate action in Helston. This reluctance to act was further reinforced by the pressures of everyday life, such as poverty acting as a barrier to making 'higher level' decisions: *"it is a problem … because when you are looking for your next meal, you're not looking at saving the planet"* (SMC).

For larger organisations, however, there was also the challenge of converting broader goals down to local specifics:

"We're trying to carve out a bit of time to step back and say, right, nature, sustainable land management … climate, carbon. What will be the vision for the place? What is it going to look like in 50 years' time? How is Trust land delivering public benefit? And we know it needs to be around nature, resilience to climate change, carbon, flood risk management, public access and enjoyment, engagement, all those broad things. But you then have to translate it and put it down locally, even as a broad vision." (NT).

Interviewees recognised the challenges that lie ahead in delivering action at a local level but, overall, there was a shared ambition to create positive change:

"The remit of what we're trying to do – if you read the Climate Action Plan … [is] just huge. So I'm very keen now to really, actively involve many, many more people in this." (HCAG-A).

"The scale of the challenge at the moment is really significant. And the kind of timescales that we've got. But potentially that's our biggest opportunity, I think, to get stuck in and try and sort it out." (NT).

Identified opportunities

Two key areas were identified as opportunities for improving social wellbeing and environmental health in Helston: building community resilience; and collective action and collaborative governance (Table 10).

TABLE 10

Heatmap of opportunities for local sustainability action identified in Helston. Frequencies show the number of interviewees mentioning each priority (n=16). Shading reflects frequency mentioned (darker shades = more commonly discussed by interviewees).

THEME	CODE	FREQUENCY
Building community resilience	Gaining wider social, environmental and economic benefits	7
	Improving access to resources	10
	Investment and regeneration	6
	Networking within and outside the local community	8
	Planning for adaptation and sustainability	5
	Supporting other community groups	11
Collective action and collaborative governance	Encouraging collective action and/or collaborative governance	5
	Engagement and outreach	10
	Improvements through devolution / localism	5
	Learning from other actors or stakeholders	3
	Linking different stakeholders	5
	Participatory decision making	3
	Working in partnership with other actors/stakeholders	9
	Working towards local, regional or national goals	7

Building community resilience

Cornwall Council's Localism Strategy states that local, community-led action is essential for addressing the climate emergency and increasing community resilience (2021b:7). Community resilience is related to social support and capital (i.e., social participation and community engagement), characterised by a community's ability to identify, adapt, and organise, using *"transferable knowledge, skills, systems, and resources that affect community and individual changes"* (Brown and Westaway, 2011: 333).

When discussing opportunities for local-level action towards sustainability, 11 interviewees stressed the importance of supporting other community groups, and eight suggested how networking both within and outside the local community can provide benefits to Helston. Support for other community groups was often realised through partnerships, volunteering, or sharing knowledge, endorsements, and resources:

"We get introduced to different people and then once we get involved in those groups we might sit and talk with a group, find out what they're up [to], what's the plan, what do they need support with. And we sort of go from there; it could be that they need volunteers, support with looking at funding, to that they're struggling with funds. We've got no real access to funds, but we know where to go, where money is available." (VC).

Networking within Helston and across Cornwall enabled interviewees to spread awareness of their groups' work and ambitions. As an example, Helston Climate Action Group reported being involved in the town's Place-Shaping Board and Town Council projects group that allowed them to integrate sustainability into wider policy and practice:

"I'm there as a representative of Helston Climate Action Group, [to] be part of the wider network but also to make sure that there's someone there who is speaking up for the environment and local resilience. It comes into everything; it needs to be something that comes into all of our decision making now." (HCAG-A).

Ten interviewees frequently mentioned how improving access to resources and investment could deliver benefits for the community. Just as a lack of resources and support were identified as barriers to furthering local-level action on sustainability, the availability of resources had enabled groups to invest in their assets, deliver projects within the town, and assist other groups. Interviewees also recognised the value of the resources they had and were able to share, for example: *"the aim of the museum is really to be there for the entire community, from birth to death, because it is an asset for everybody, and it holds a heritage of everybody"* (HMCL).

Planning for adaptation and sustainability was evident in the work described by five interviewees. Helston, as an early adopter of the climate emergency approach, and one of the first councils to adopt a climate action plan, is arguably better informed than other locations in planning for mitigation, adaptation and sustainability. Raworth's Doughnut model for meeting social foundation goals within the limits of planetary boundaries was, *"very much in mind through everything we've done"* (HCAG-A).

It was argued that the community could gain wider social, environmental, and economic benefits through action on climate change: *"by working on climate change, and restoring nature … we can create somewhere that we can all lead happier, healthier lives, and create a place where people can thrive as well as nature."* (HCAG-B). Similarly, other interviewees highlighted how projects led by Helston Climate Action Group had delivered wider social, environmental, and economic benefits to the town's community:

"Not only is there produce at the end of it, but community cohesion and bringing people together, and social interaction and the benefits of that social interaction for people, which gathers more opportunity than just the job that you're doing." (CLO, speaking about Incredible Edible Helston).

"They've had their repair cafe, encouraging people to actually repair stuff and teach them how to repair stuff, instead of just throwing it away and getting a new one. I think that was a brilliant initiative. It was such a clever idea. And I think that also had a social impact. As people would come together, meeting and chatting." (HTC-B).

Collective action and collaborative governance

Five interviewees highlighted the importance of collective action and/or collaborative governance in driving change in the town. Whilst the ability for communities to act collectively plays a part in determining adaptation within a society, interviewees also emphasised the important role of government in facilitating such work: *"encouraging that kind of spirit of collaboration and collective effort is really, really important"* (HCAG-A). Helston Town Council reported their efforts to develop a collaborative approach to governance at the town's Place-Shaping Board, which includes *"two Cornwall council representatives, so it's got proper council representation, it's got businesses, members of the public, [and is] a fair spread"* (HTC-B).

Working in partnership with other groups was perceived by nine interviewees as providing opportunities for delivering action, but recognised to require a shift in thinking on the part of organisations: *"so it's not us telling people, 'this is what we think is good for you', it's trying to find that balance of listening and then thinking, well, how can we work together?"* (NT). Such approaches offer a more inclusive vision for decision making that can help build social capital within the community. This also facilitated information and skills sharing across civil society and political groups.

Five interviewees noted how improvements within the town had been facilitated through the devolution of assets from Cornwall Council, reflecting efforts to develop partnership working. Devolution of some assets and services to community groups had allowed them to *"access a lot more funding than what we [would be] able to access as a local authority"* (CLO). In Helston, there is strong evidence that local control and management has improved the quality and inclusion of local provision, and there are ambitions for more:

"I think we've proven now in Helston that actually transferring assets out of the public ownership and into community use makes a massive difference. We've quadrupled the visitor numbers to the museum in the seven years we've looked after it. We've doubled the number of visitors that use Coronation Park now, and it's such a better asset. It's not easy and getting funding to do it is not easy either but if you can find that funding, and you have Cornwall Council's support, then it is easy to make a difference. Because these assets at the minute aren't looked after by Cornwall Council very well, and understandably so, because they haven't got the money or the focus to be able to do that in each town." (SKA).

"It's not us telling people, 'this is what we think is good for you', it's trying to find that balance of listening and then thinking, well, how can we work together?" *(NT)*

Summary

Local priorities for social wellbeing and environmental issues in Helston, as identified by interviewees, mostly align with those reflected in the application of Doughnut Economics to Cornwall. Issues regarding connectivity (transport), biodiversity, climate change, and work were of greatest concern amongst interviewees. Cross-cutting themes that may influence both social wellbeing and environmental health were identified through the analysis, including 'decline of the town centre' and 'local environment (access to nature)'. These themes represent areas of intersection between social and environmental challenges that, if addressed, may generate positive synergies between social and environmental concerns. For a variety of possible reasons, chemical pollution, ocean health, water resources, equality, and fuel poverty were not mentioned explicitly as priorities by interviewees.

Challenges of communication and decision making, democracy and governance, resources and support, and processes operating across spatial and temporal scales were all perceived as potential barriers to local-level action. A recent report on trends in local climate action by the Place-Based Climate Network highlighted that local authorities in the UK have not been provided with additional financial or legislative capacity following climate emergency declarations (Howarth et al., 2021). Greater support from central government and higher-tier local authorities is undoubtedly required for communities to drive local-level action towards sustainability goals. Our research indicates that some challenges are already being addressed by groups operating within Helston through action that builds community resilience, encourages collective action, and develops more collaborative governance.

Further interviews with a wider range of community stakeholders would perhaps reveal a broader range of priorities. However, the extent to which priorities were identified by participating interviewees at a high frequency indicates shared awareness of the challenges and ambitions for change. The research in Helston reveals that, while the town is ahead of the curve in terms of climate action, there remains significant scope to do more through working in partnership and mobilising local groups around their shared interests.

> **"Greater support from central government and higher-tier local authorities is undoubtedly required for communities to drive local-level action towards sustainability goals."**

Discussion

This report extends the research underpinning *The Cornwall Plan 2020-50* to consider the perspectives of local governance networks. First, it has identified and mapped available indicators corresponding to the social and environmental domains of the Doughnut Economics model as applied to Cornwall (Turner et al., 2020). Second, it has examined the perceptions and priorities of city, town and parish councils regarding both these domains, and the opportunities and constraints faced by local authorities in trying to enact change within their locality. Third, through a case study of the town of Helston, the perspectives of stakeholders within one locality were explored to investigate the extent to which the Doughnut domains reflected stakeholder concerns and identify challenges and opportunities for local action. The report's findings contribute to an understanding of spatial differences that can inform county-wide discussions about sustainability priorities, and address a broader debate about the role of town and parish councils as part of multi-level governance systems. This section highlights the key findings and areas for future development of this work.

Key findings

Spatial differences

Mapping social and environmental domains at a range of spatial scales across the county reveals geographic disparities in relative progress towards meeting sustainability outcomes, suggesting that tackling different domains may be of higher or lower importance in different localities within the county. Examining these spatial differences is critical to identify important issues and inequalities that may be masked by a county-wide assessment. Furthermore, the ability to aggregate the domains to explore an overall picture of the social and environmental domains is limited by data quality and varying spatial resolution, and there remains considerable scope to refine and improve this assessment. Nevertheless, the mapping provides a starting point to identify areas that may be falling short of the social foundation, or struggling to stay within environmental limits, and as such, contributes to a broader understanding of spatial difference that can help inform the priorities, strategies, and allocation of funding and resources across the county.

Local sustainability priorities

The survey of town and parish councils provides insight into both common and divergent priorities across local communities. While some environmental issues were commonly highlighted as problems (notably climate action, waste management, and pollution), these did not necessarily correspond to the issues perceived as priorities for local authorities. Key environmental issues that emerged as priorities for action included stopping unsustainable development and conserving biodiversity, while common social priorities included addressing poverty and improving connectivity. Interviews in Helston with a wider range of stakeholders in the community also revealed transport, climate change, and work as important local priorities aligned with the Doughnut domains.

The case study of Helston revealed that the Doughnut domains may not intuitively capture local priority issues. Though the local priorities for social wellbeing and environmental issues identified by interviewees broadly aligned with those reflected in the application of Doughnut Economics to Cornwall, some domains were not mentioned at all by interview respondents. Rather than this being a reflection of their importance, it may reflect how people conceptualise the challenges. For example, interviewees commonly discussed cross-cutting issues that intersect with multiple social and environmental domains (e.g. decline of the high street, access to nature, energy, and culture). Addressing these cross-cutting issues may have more traction with local people and also provide opportunities to identify positive synergies between social and environmental concerns, increasing community resilience.

Discussion

Both the survey of town and parish councils and case study of Helston illustrated the potential contradictions and competing priorities that make the pursuit of sustainability challenging and often contested. This was notable in the case of housing, for example, as despite the need for affordable and appropriate housing being cited as an important social priority, the management of development and change in land use were also identified as important concerns, with development often perceived to threaten the local environment. Balancing these competing demands is an inherent challenge of achieving a safe and just space for sustainable development. It is also made more challenging by the spatial mismatch in governance, such that decisions taken at one spatial scale impact negatively on the scope for positive change at another. In the case of this report, this was particularly evident in relation to planning decisions that overturn local ambitions to protect the environment and improve biodiversity.

Governance challenges

The lack of correspondence between perceived challenges and priorities at a local level reveals challenges relating to the scale and magnitude of problems, as well as to the nature of multi-level governance systems. In some cases, this reflected a perceived inability to control issues at the local scale, most obviously in relation to carbon emissions, while in other cases local authorities reported frustration with decisions and policies enacted at higher levels of governance and the lack of resources to address problems that could be tackled locally. Funding, human resources and capacity, and engagement were identified as key challenges to making progress at a local level. To address these challenges, some respondents advocated improving participation in decision-making, reflecting the perceived need to 'fill the gap' between local needs and the capacity of local government. These findings were consistent with the opportunities identified in Helston to improve sustainability through partnership working, mobilising community groups into action, and collaborative governance. However, others highlighted the need for more funding from national and county-level government to enable action at the community scale, led or facilitated by town and parish councils. Examples from both the survey and case study highlighted a wide variety of action taking place at a local level, particularly to meet the needs of vulnerable groups in communities and to address local environmental challenges such as waste management and biodiversity conservation.

While such action is likely to vary across communities, the research suggests considerable scope for learning across local authorities to engage and mobilise communities and develop effective partnerships. The provision of additional resources was raised as an integral part of this work.

Areas for development

Data gaps

The report highlights a number of data gaps, including the lack of consistency in available data at the county and sub-county scales, and the varying spatial scales at which data are disaggregated. These challenges compound the existing challenges identified at county scale (Turner et al., 2020), namely that many datasets are infrequently updated, do not reflect the entirety of the issues represented in the domain, or are proxies to assess the outcomes of interest. Taking advantage of opportunities to streamline data collection efforts to align with priority areas would enable more consistent monitoring and assessment of progress.

Reference points

As in the county-wide analysis of the State of the Doughnut, many of the domains lack clear policy goals or targets, therefore the spatial inequalities explored here are relative, rather than representing whether or not the social foundation is being met or environmental limits avoided. Establishing appropriate goals or targets for each social and ecological domain would help to determine priority areas for focus in order to maintain a safe and just space for sustainable development.

Social inequalities

While this report explores spatial inequalities, challenges remain in disaggregating data to identify inequalities between social groups. The availability of socially disaggregated data that would enable an examination of these inequalities at the county scale is limited, and further work is needed in this area to meet the central goal of the Sustainable Development Goals to 'leave no one behind'.

Summary

This report identifies scope for thinking creatively about how Doughnut Economics can be integrated into planning and associated action at a local scale, making the best use of existing institutions and social organisations to achieve improved sustainability outcomes. Given the structure of representative government in Cornwall, policy and practice may be targeted at different scales, led by either the town and parish councils or the unitary authority, but this requires dialogue and ongoing partnership. The limitations of the quantitative data available to identify and monitor challenges at the very local scale highlights the importance of facilitating local voices to help shape sustainability agendas. In turn, these local actors require support from and coordination with higher-level decision making. Diversity of actions and approaches across town and parish councils provides an opportunity for experimentation and learning among localities, which can also inform policy and practice at a county scale. Engaging the potential of local action and collaborative governance can support the wider vision for Cornwall and the Isles of Scilly to meet the needs of communities whilst also safeguarding the environment.

"This report identifies scope for thinking creatively about how Doughnut Economics can be integrated into planning and associated action at a local scale."

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Appendix

TABLE 11

Data owner and link to source for all datasets mapped in this report.

INDICATOR	OWNER	LINK TO SOURCE DATA
Ease of access to essential services	Indices of Multiple Deprivation	Link
'Violence with injury' recorded crime	Devon and Cornwall Police	Link
Perceived level of safety	Cornwall Council	NA
GCSE attainment	UK Government	Link
Attainment gap	UK Government	Link
Gender pay gap	Office for National Statistics	Link
Ethnicity stop and search	Devon and Cornwall Police	Link
Fuel poverty	Indices of Multiple Deprivation	Link
Housing security	Indices of Multiple Deprivation	Link
Income	Office for National Statistics	Link
Voter turnout	UK Parliament	Link
Sense of community	Cornwall Council	NA
Sense of isolation	National Health Service	Link
People unwilling out of work	Indices of Multiple Deprivation	Link
Annual mean CO_2	Cornwall Council	Link
Chemical quality of surface waters	Environment Agency	Link
Land use for environmental growth	Various	NA
Sustainably harvested fish stocks	Ocean Health Index	NA
Bathing water ratings	Environment Agency	Link
Ecological quality of water bodies	Environment Agency	Link
Household waste disposal	Cornwall Council	Link