

Climate Vulnerability Index: Using and Understanding the CVI

This document reviews the methodology and data layers available on the Climate Vulnerability Index. [Find out more information about our climate action.](#)

The information shown on the map should be regarded as guidance only; it is subject to regular updates based on data release schedules and availability. This is particularly important when there are legal consequences arising from the information shown. If you would like further details or have any question, please contact CVI@westsussex.gov.uk.

Context & Methodology

The CVI represents a unique geospatial tool that analyses social, economic, and environmental data to identify which areas of the county are more vulnerable to climate change, and why. The CVI considers what population characteristics may influence a community's overall social susceptibility and ability to adapt and react in emergency situations.

It further identifies key environmental data on current and future climate conditions, air quality, land cover and more. The CVI includes data for each Lower Layer Super Output Area (LSOA) in West Sussex. Each LSOA, a geographic unit of measurement used in the census, comprises between 400 and 1,200 households.

Together, each LSOA in the county is ranked relative to the others across all input layers, with the results indexed to provide a Climate Vulnerability score. This score suggests which communities are more vulnerable (i.e., those with a score closer to 1) to climate change based on social susceptibility and exposure to environmental threats.

The CVI can help users make decisions with climate change and community vulnerability in mind. For example, the Climate Vulnerability Index could allow users to identify appropriate supports and interventions for climate vulnerable communities given the types of vulnerabilities they face. This tool can also be used to help build stronger business cases for investments, interventions, and funding bids in specific locations based on vulnerability, need, and anticipated impacts of climate change.

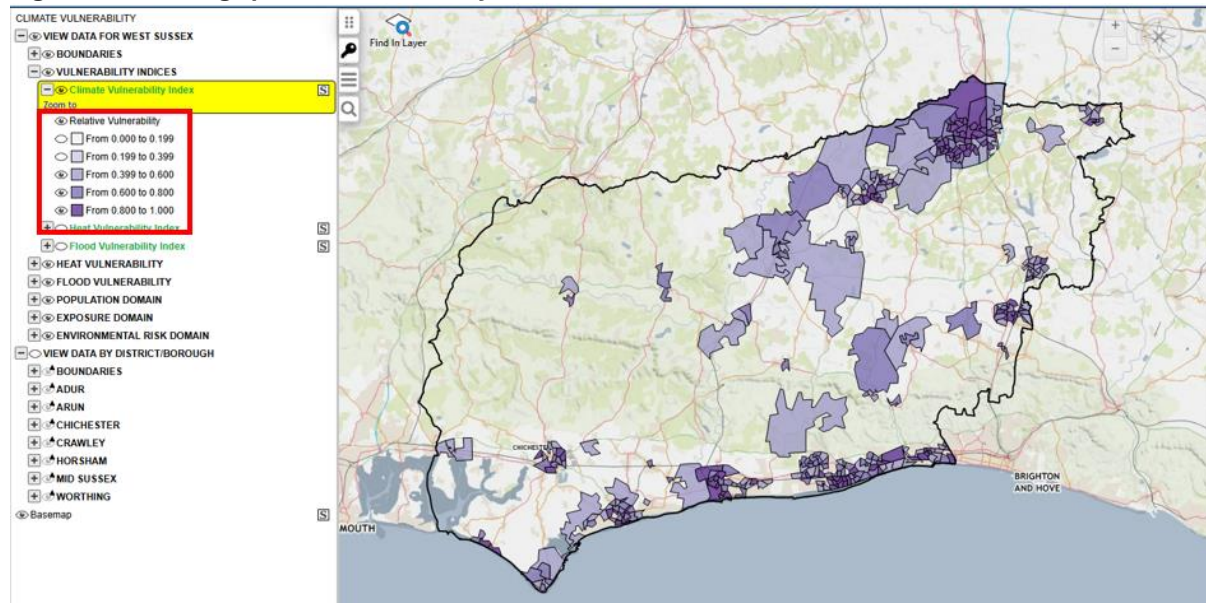
Identifying Vulnerable Areas

To isolate specific areas of vulnerability across the county, users can toggle on and off specific thresholds. To do so:

1. Select the layer and make sure that it is visible on the map.

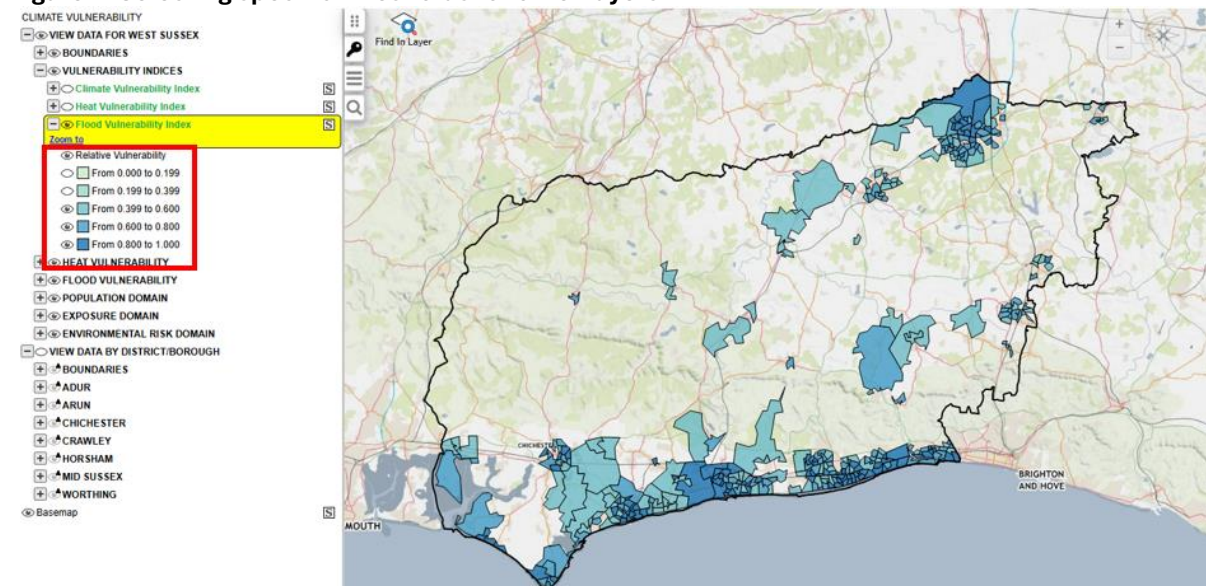
2. Click the eye icons to select and deselect visible layers.
3. In the example in Figure 1, only the LSOAs with a climate vulnerability index score greater than 0.399 are shown – these are the most climate vulnerable communities in the county.

Figure 1. Selecting specific vulnerability thresholds



This same process can be followed for any of the data layers available in the CVI. Figure 2 shows, for example, only the LSOAs that are most vulnerable to flooding.

Figure 2. Selecting specific thresholds for other layers



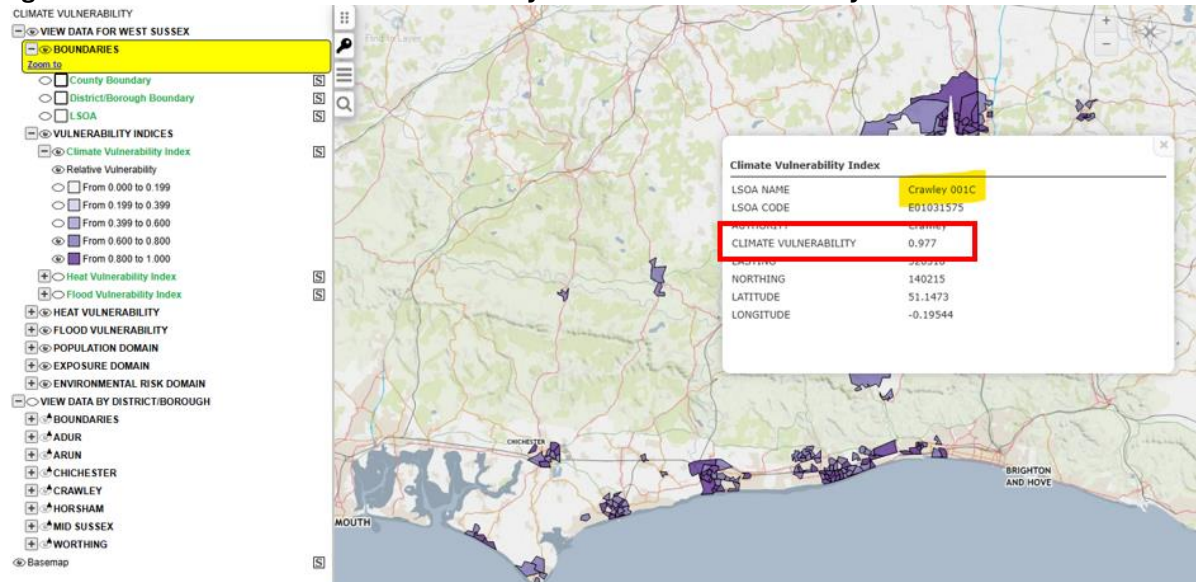
Exploring Overlapping Vulnerabilities

Once users identify their communities or areas of interest, the CVI allows them to explore what specific related vulnerabilities those areas face. This allows more specific

planning over the long term and ensures that interventions are geared toward the specific needs of those communities.

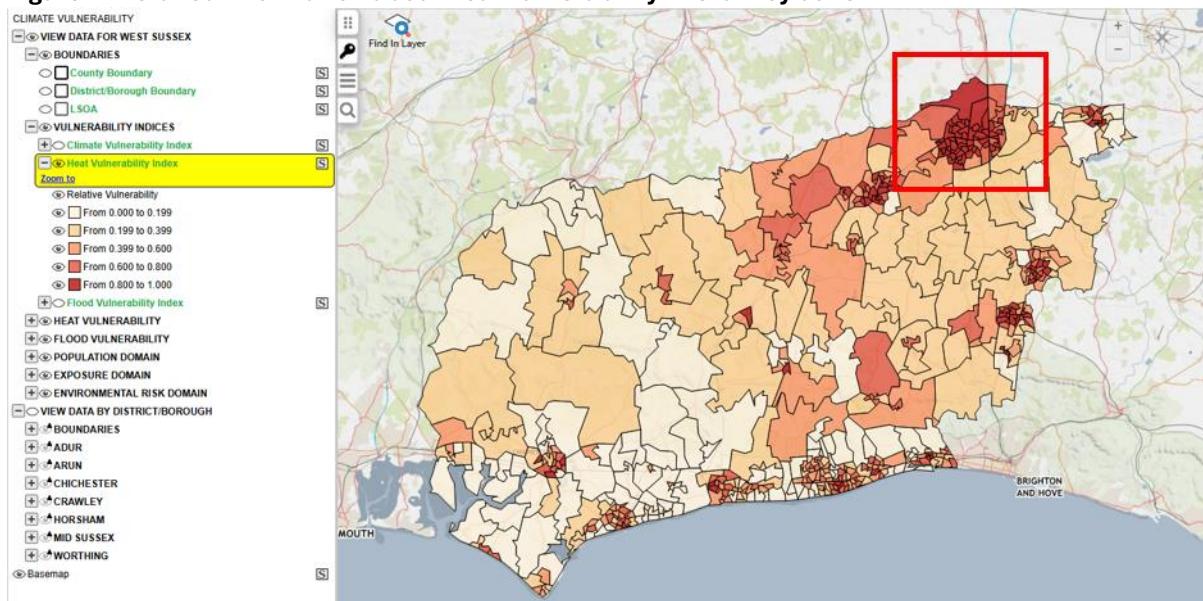
Below there is an example that isolates one relatively climate vulnerable LSOA (Figure 3) – Crawley 001C – to see the kinds of vulnerabilities that it faces.

Figure 3: Detailed information about Crawley 001C climate vulnerability



In exploring the data layers, we see that Crawley 001C has a relatively high heat vulnerability ranking. This suggests that adaptation interventions in this community should consider the impacts that heatwaves will have on vulnerable community members in the future.

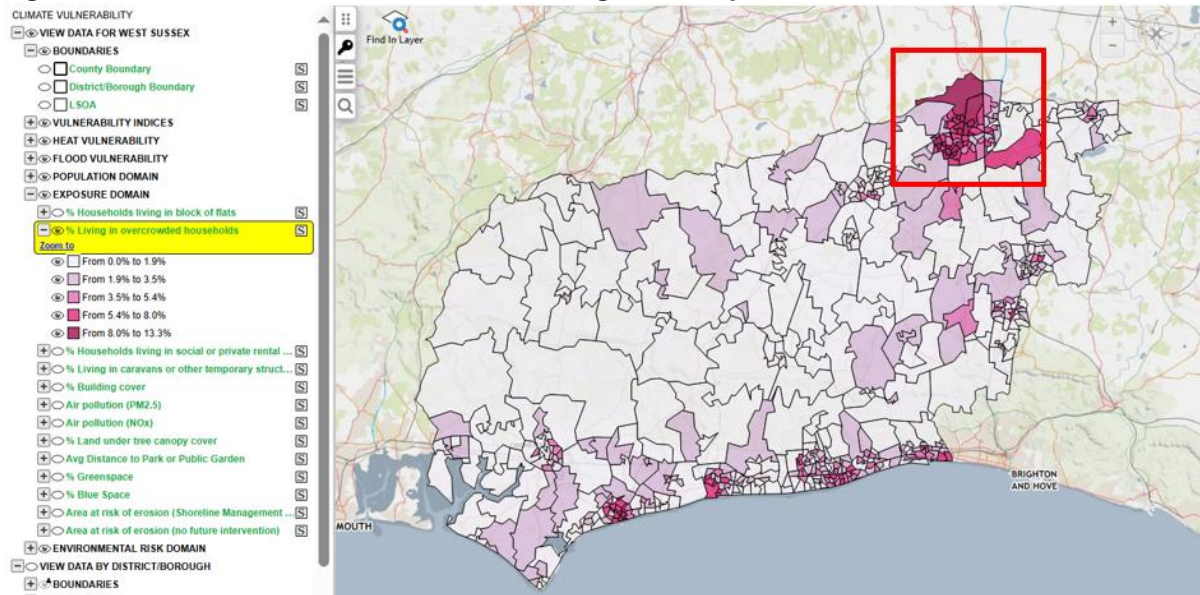
Figure 4. Detailed information about heat vulnerability in Crawley 001C



In exploring the data layers, it is also clear that Crawley 001C has a relatively high proportion of residents in living in overcrowded accommodations. Because climate

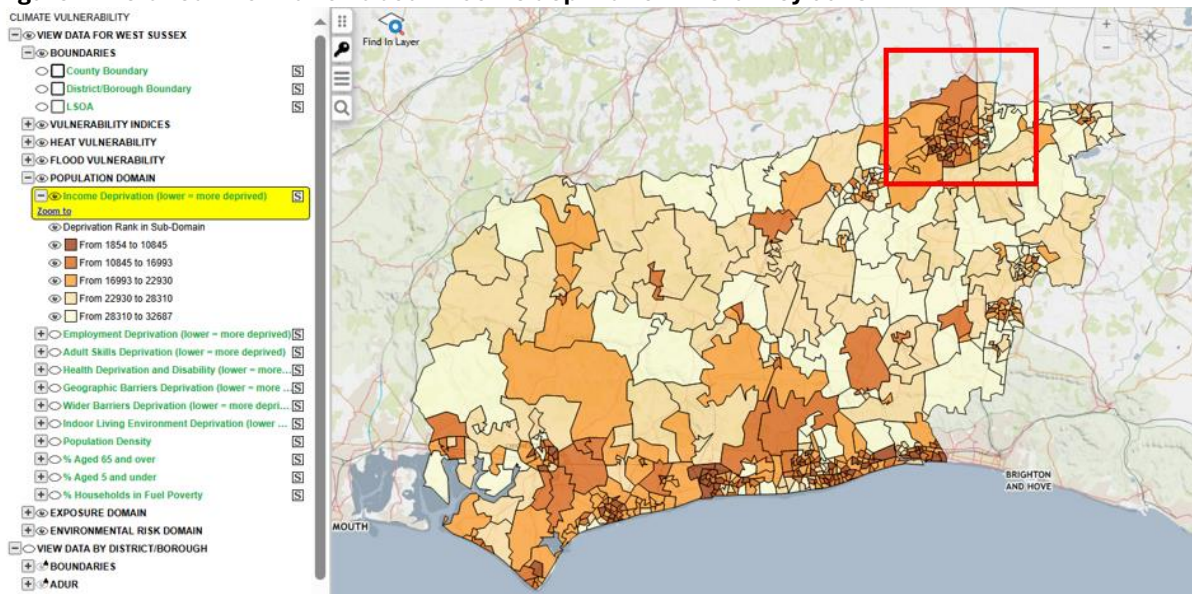
change can have a disproportionate effect on people living in these conditions, representative often of broader economic deprivation, it will be important consider how to support residents living in these conditions in long term climate adaptation and resilience planning.

Figure 4. Detailed information about overcrowding in Crawley 001C



Finally, we can also note that Crawley 001C ranks highly on the Indices of Multiple Deprivation's income deprivation category. This further suggests that resilience planning in this area should consider how lower-income individuals may need to be supported – for example, grant support for housing retrofits.

Figure 4. Detailed information about income deprivation in Crawley 001C



On the other hand, we can see that residents in Crawley 001C often have accessible parks or green spaces nearby, suggesting that interventions to address heat risk in the

area should focus on other strategies such as reflective pavements or community cooling centres.

Figure 4. Detailed information about park access in Crawley 001C

