
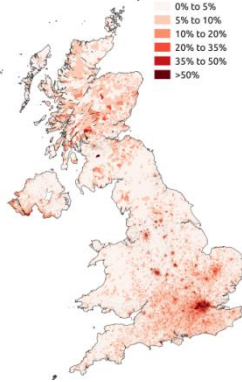
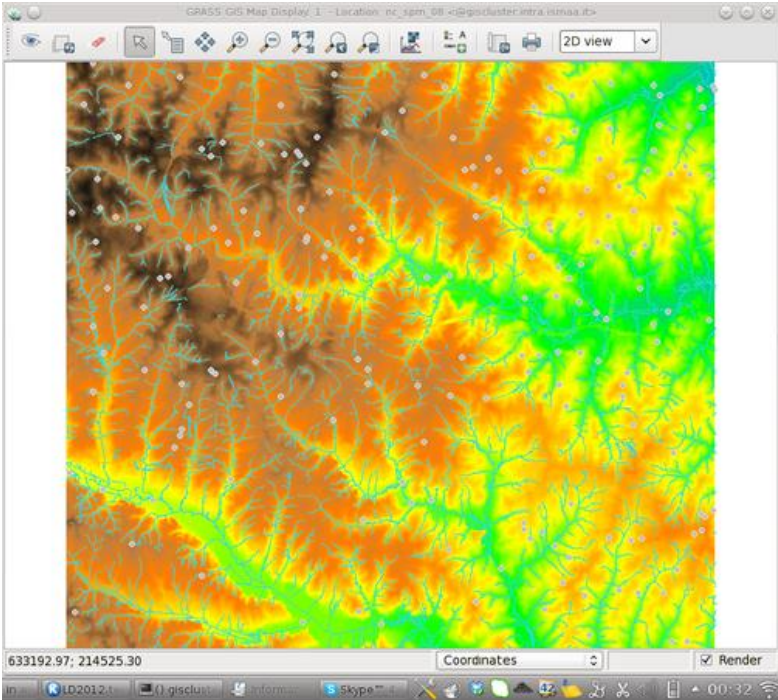


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| <p><b>Name of skill:</b> Remotely sensed data<br/><b>Category of skill:</b> ICT</p>   | <p><b>Describe how it is constructed:</b></p> <ul style="list-style-type: none"> <li>• Remote sensors collect data by detecting the energy that is reflected from Earth. These sensors can be on satellites or mounted on aircraft.</li> <li>• Remote sensors can be either passive or active. Passive sensors respond to external stimuli. They record natural energy that is reflected or emitted from the Earth's surface. The most common source of radiation detected by passive sensors is reflected sunlight.</li> <li>• In contrast, active sensors use internal stimuli to collect data about Earth. For example, a laser-beam remote sensing system projects a laser onto the surface of Earth and measures the time that it takes for the laser to reflect back to its sensor.</li> </ul> |   |
| <p><b>Advantages:</b></p> <ul style="list-style-type: none"> <li>• Can cover a huge area - global!</li> <li>• Can take measurements.</li> <li>• Can look at minute details - archaeologists use to find variations in soil to look for potential sites.</li> <li>• Can be used to track movements by geologists before and after natural hazards like floods and landslides.</li> </ul>   |  |   |
| <p><b>Disadvantages:</b></p> <ul style="list-style-type: none"> <li>• Time consuming - takes a long time to produce large high resolution images.</li> <li>• Weather conditions need to be clear and the sun needs to be in an ideal location (maximum source of light).</li> <li>• Could have to “patchwork” images (taken from different periods of time) due to the problems mentioned above.</li> <li>• Snap shot in time.</li> </ul> | <p><b>Example of skill:</b></p>   | <p><b>Justify (why use this technique?):</b></p> <ul style="list-style-type: none"> <li>• If you wanted to collect a large amount of data over a substantial area without having to visit each location and collect data yourself.</li> <li>• Could be used as a preliminary tool in order to base investigations/area of interest on.</li> </ul> |
|   | <p><b>Improvements/alternatives:</b></p> <ul style="list-style-type: none"> <li>• Street View - digital images to supplement satellite images.</li> <li>• Can now look at a variety of scales (global, national and local).</li> </ul>   | <p><b>How does this improve my geographical understanding?</b></p> <ul style="list-style-type: none"> <li>• Can investigate anywhere in the world without leaving your computer!</li> <li>• Can look at a variety of features to provide evidence for our investigations e.g. vegetation cover, relief etc.</li> </ul>                            |

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| <p><b>Name of skill:</b> Databases - census data<br/><b>Category of skill:</b> ICT</p>   | <p><b>Describe how it is constructed:</b></p> <ul style="list-style-type: none"> <li>• Every 10 years since 1801 there has been a count of all people and households.</li> <li>• The last one was in 2011.</li> <li>• All households must complete a census or risk a fine of £1,000.</li> <li>• Data is collated and published 2 years after.</li> </ul> |   |
| <p><b>Advantages:</b></p> <ul style="list-style-type: none"> <li>• Produces a national picture - very high coverage (obligation to respond).</li> <li>• Sampling variance is 0 (everyone is surveyed).</li> <li>• Can sub-divide and get detailed information about smaller groups in society.</li> </ul>  |   |   |
| <p><b>Disadvantages:</b></p> <ul style="list-style-type: none"> <li>• As soon as it's published it is out of date.</li> <li>• Only taken every 10 years due to the expense and time it takes.</li> <li>• There are amendments made at the small scale in order not to identify people.</li> <li>• Have to pay to get access to the most up to date information.</li> <li>• Can be difficult to access (census coding is not obvious).</li> </ul> | <p><b>Example of skill:</b></p> <p>By SkateTier (Own work) [CC BY-SA 3.0 (<a href="http://creativecommons.org/licenses/by-sa/3.0/">http://creativecommons.org/licenses/by-sa/3.0/</a>)], via Wikimedia Commons</p>    | <p><b>Justify (why use this technique?):</b></p> <ul style="list-style-type: none"> <li>• Provides full coverage (100%) of the population.</li> <li>• Could be used to predict future spending requirements for the government, population time bombs etc.</li> <li>• Can find out a wide variety of information about all households.</li> </ul> |
|  | <p><b>Improvements/alternatives:</b></p> <ul style="list-style-type: none"> <li>• Not consistent globally so difficult to contrast.</li> <li>• Question the reliability of LEDC census data.</li> </ul>   | <p><b>How does this improve my geographical understanding?</b></p> <ul style="list-style-type: none"> <li>• Gives us the opportunity to study data taken by professionals on a much larger scale than we would be able to collect ourselves.</li> </ul>   |

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| <p><b>Name of skill:</b> GIS<br/><b>Category of skill:</b> ICT</p>  | <p><b>What is GIS?</b></p> <ul style="list-style-type: none"> <li>• A <b>geographic information system (GIS)</b> is a computer system for capturing, storing and representing data related to the Earth's surface. <b>GIS</b> can show many different types of data on one map. This allows people to interpret and understand patterns and relationships.</li> </ul>  |   |
| <p><b>Advantages:</b></p> <ul style="list-style-type: none"> <li>• Can analyse large quantities of data and turn it into something more manageable.</li> <li>• Can layer multiple data sets to produce one map.</li> <li>• Can analyse changes over time.</li> <li>• Easy to spot trends/patterns/anomalies.</li> </ul> | <p><b>Example of skill:</b></p>  <p>By Luca Delucchi (Own work) [CC BY-SA 3.0 (<a href="http://creativecommons.org/licenses/by-sa/3.0">http://creativecommons.org/licenses/by-sa/3.0</a>)], via Wikimedia Commons</p>   | <p><b>Justify (why use this technique?):</b></p> <ul style="list-style-type: none"> <li>• Can overlay multiple data sets to see cause and effect.</li> <li>• Visually effective to present data as you can add or takeaway necessary/unnecessary data.</li> </ul> |
| <p><b>Disadvantages:</b></p> <ul style="list-style-type: none"> <li>• Its technical nature can make results appear more reliable than they are - how reliable is the data?</li> <li>• The availability of data at the required scale - global and national.</li> <li>• Expensive packages.</li> </ul>                   | <p><b>How does this improve my geographical understanding?</b></p> <ul style="list-style-type: none"> <li>• Allows us to look at multiple data sets at once - can see if there is a relationship between them. Can investigate a variety of scales, e.g. local/national/global.</li> <li>• Can make predictions for the future based on data provided, i.e. where to locate supermarkets.</li> </ul> <p><b>Improvements/alternatives:</b></p> <ul style="list-style-type: none"> <li>• Can use Google Earth as a simple GIS tool.</li> </ul> |   |